

Whangarei District Council
PO Box 9023
Whangarei 0148

9 May 2022

Attention: Whangarei District Council's Consents Department

Dear Hearing Commissioner,

Fire and Emergency New Zealand – letter to be tabled at SL2100046 Hurupaki Holdings Hearing

Fire and Emergency New Zealand (Fire and Emergency) made a submission on Hurupaki Holding's publicly notified resource consent application for a 76 lot subdivision and cafe located at 131 – 189 Three Mile Bush Road. Following discussion between Fire and Emergency and the applicant, an agreement has been reached involving the applicant incorporating within their proposal Fire and Emergency's requested additional fire hydrants and conditions of consent relating to firefighting water supply and access. Based on this agreement, Fire and Emergency no longer wish to be heard in support of their submission.

Accordingly, if the Commissioners are minded to grant consent to the applicant, Fire and Emergency seeks that the additional fire hydrants and consent conditions in regard to firefighting water supply and access detailed in the attached applicant's report (Firefighting Summary Report, March 2022) be imposed on the consent as part of the decision.

Should you have any queries or seek clarification on the above, please contact me on the details below.

Yours sincerely,



Nola Smart – Authorised on behalf of Fire and Emergency

on behalf of

Beca Limited

Phone Number: +6493009278
Email: Nola.Smart@beca.com



Hurupaki Holdings Limited


FIREFIGHTING SUMMARY REPORT

131 and 189 Three Mile Bush Road, Whangarei

Project Reference: 18733
March 11, 2022

DOCUMENT CONTROL

Version	Date	Comments
B	11/03/2022	Initial version

Version	Issued For	Prepared By	Reviewed & Authorised By
B	Issued for Information	Aaron Holland CPEng	 Aaron Holland CPEng

CONTENTS

1	INTRODUCTION	1
2	EXISTING WATER SUPPLY	1
3	TEMPORARY FIREFIGHTING SUPPLY PROPOSAL.....	3
4	ADDITIONAL FIRE HYDRANTS	4

APPENDIX A:

Updated water supply drawings, with additional hydrants.

1 INTRODUCTION

This supplementary report provides additional information with regards to the fire fighting flows to service the subdivision development at 131/189 Three Mile bush Road. The Whangarei District Council has plans in the next two years to upgrade its water reservoir, which will fit into the developments program, however the NZ fire service is concerned that should this not occur within the developments timeframe there maybe insufficient flow available at some of the more elevated hydrants and have suggested that an additional temporary solution be provided in the form of an additional tank water supply, until such a time as the flows in the council water main increases above the minimum requirements of SNZ/PAS4509:2008. The following outlines the steps that will be implemented including a consent condition that enables the development to occur and addresses the concerns raised by the Fire service in the resource consent submissions. This will allow the development to proceed without being tied into the councils water reservoir upgrade timing.

The development is residential, requiring FW2 or higher flows for firefighting in accordance with SNZ/PAS 4509:2008.

2 EXISTING WATER SUPPLY.

Figure 1 below shows the existing fire hydrants and testing that has been undertaken.



Figure 1 Testing locations existing

The levels within the development are up to RL212 for the two most elevated lots at the rear being lots 62 and 63. It is anticipated that the flows in the watermains and hydrants will be similar to those two undertaken in the flow testing attached within this report as figure 2. The flow and pressure within those rear sections maybe less than desirable with static pressures expected to be 200kPa and hydrant flow testing below 25l/s if two adjacent hydrants are tested. It is expected that the flow from a single hydrant test would exceed the 12.5l/s flow rate. Once the new more elevated council reservoir is constructed (within 2 years is current plan) the system will have increased pressure and the flow problem will be mitigated.

14-09-2021

Dyle Widdup
 Project Civil Ltd
 PO Box 16
 RUAKAKA 0151

Flow Test at: Lake Ora Road and Pukemiro Road
 Completed by: Gordon McKay

Detail	Valve	Main Size	Spindle Depth	Make	Residual	Static Pressure	Lps	Lpm	Turns
FH test Lake Ora	80 FH	150id	-	DIRS	180 – 190kpa	210kpa	25.6	1540	-
FH test Pukemiro	80 FH	150id	-	DIRS	225kpa	275kpa	22.3	1340	-

Figure 2 Flow testing

Table 2 – Method for determining firefighting water supply

Fire water classification	Reticulated water supply			Non-reticulated water supply	
	Required water flow within a distance of 135 m	Additional water flow within a distance of 270 m	Maximum number of fire hydrants to provide flow	Minimum water storage within a distance of 90 m (see Note 8)	
				Time (firefighting) (min)	Volume (m ³)
FW1	450 L/min (7.5 L/s) (See Note 3)	–	1	15	7
FW2	750 L/min (12.5 L/s)	750 L/min (12.5 L/s)	2	30	45
FW3	1500 L/min (25 L/s)	1500 L/min (25 L/s)	3	60	180
FW4	3000 L/min (50 L/s)	3000 L/min (50 L/s)	4	90	540
FW5	4500 L/min (75 L/s)	4500 L/min (75 L/s)	6	120	1080
FW6	6000 L/min (100 L/s)	6000 L/min (100 L/s)	8	180	2160
FW7	As calculated (see Note 7)				

NOTE –

- Table 1 lists the minimum requirements for firefighting water supplies. In developing towns' main reticulation systems, a water supply authority needs to cater for domestic/industrial water usage in addition to the above. This procedure is outlined in Appendix K.
- Special or isolated fire hazards which have higher requirements in an area of lower water supply classification must determine measures to mitigate the hazard or increase the water supply (see 4.4).
- Where houses have a sprinkler system installed to an approved Standard, the distance to a fire hydrant or alternative water supply may be negotiated by agreement with the Fire Region Manager.
- The water requirements for fire protection systems must be considered in addition to the firefighting water supplies, as detailed in table 1 (FW2), the fire protection system demand plus 1500 L/min (25 L/s) at 1 bar residual pressure.
- The minimum flow from a single hydrant must exceed 750 L/min (12.5 L/s), except for those cases where a home sprinkler is installed, in which case the minimum is 450 L/min (7.5 L/s) while the maximum design flow, for safety reasons, is limited to 2100 L/min (35 L/s).
- If the minimum water storage requirement as listed in the above table is not available from the reticulated system (reservoir), water can be sourced from an 'alternative supply' as approved by the Fire Region Manager. This water supply must always be within 90 m of the fire risk.
- FW7 is for either special or isolated hazards or where the fire hazard due to the size of the largest firecell and its fire hazard category make specific fire engineering assessment necessary. Appendix H and J must be used as the basis for calculating this required firefighting water supply.
- See Appendix B.

Figure 3 Flow requirements

3 TEMPORARY FIREFIGHTING SUPPLY PROPOSAL

Following discussions with Craig Bane, Advisor Risk Reduction, we propose a temporary solution, to be installed until such time as the hydrant flow testing exceeds the minimum requirements. It is not expected as part of this development that the pressure within the water main will ever drop below the minimum 100kPa requirement during its normal operation including hydrant flow testing. Once the water mains are installed hydrant flow testing will be undertaken, checking the systems flow rates. Should the hydrant testing not produce the required flow and pressure results that are recommended under SNZ/PAS 4509:2008, then the following will be implemented by way of a consent condition.

The consent condition would read as follows

Engineering and Services

- a. The consent holder shall provide certification that the reticulated water supply to all lots will achieve sufficient pressure/flow to comply with the firefighting water supply requirements of SNZ/PAS4509:2008.

2. Prior to issue of a section 224 (c) certificate:

Engineering and Services

- a. Where reticulated water supply cannot achieve compliance with firefighting water pressure/flow requirements of SNZ/PAS4509:2008 in accordance with condition 1a. The consent holder shall install an additional firefighting supply consisting of water tanks containing at least 50,000 litres located within Lot 58 with suitable hydrant connections to an additional water supply to the hydrants that will be installed.
- b. The consent holder shall provide an easement in gross to the fire service provide on-going rights to access the water.

Consent Notice

Pursuant to Section 221 of the Resource Management Act 1991, a consent notice must be prepared and be registered on the Computer Freehold Register of Lots 58 at the consent holder's expense, containing the following conditions which are to be complied with on a continuing basis by the subdividing owner and subsequent owners:

Applying to lot with water tanks

- c. Any water tanks installed in accordance with condition 2a shall remain in place and be maintained to comply with SNZ/PAS4509:2008 until such time as reticulated water supply can achieve sufficient press pressure/flow requirements of SNZ/PAS4509:2008, FW2. The water tanks shall only be removed once the consent holder has provided hydrant flow testing proving that the firefighting water supply requirements of SNZ/PAS4509:2008, FW2 have been met. The approval of the Council's Water Services Manager or delegated representative shall be obtained as part of this process.
- d. No residential activity shall occur onsite until water tanks are removed in accordance with condition 2c once the testing results are approved by Council's Water Services Manager or delegated representative.

4 ADDITIONAL FIRE HYDRANTS

As part of the development the additional hydrants suggested will be installed at the northern end of the development. These hydrants are shown in the following figure 4, and the complete watermain drawing attached as an appendix.

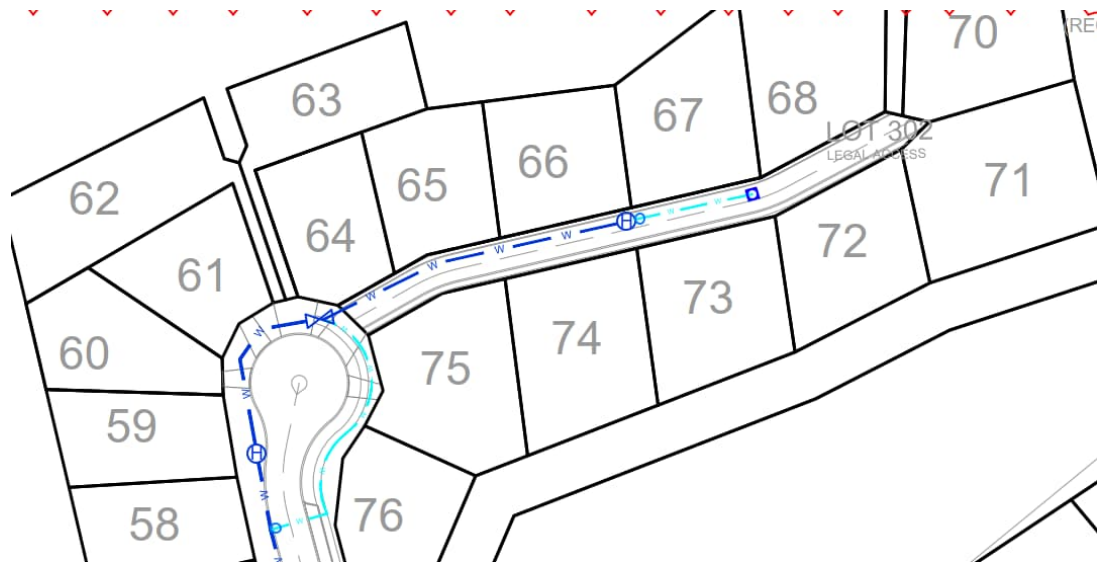
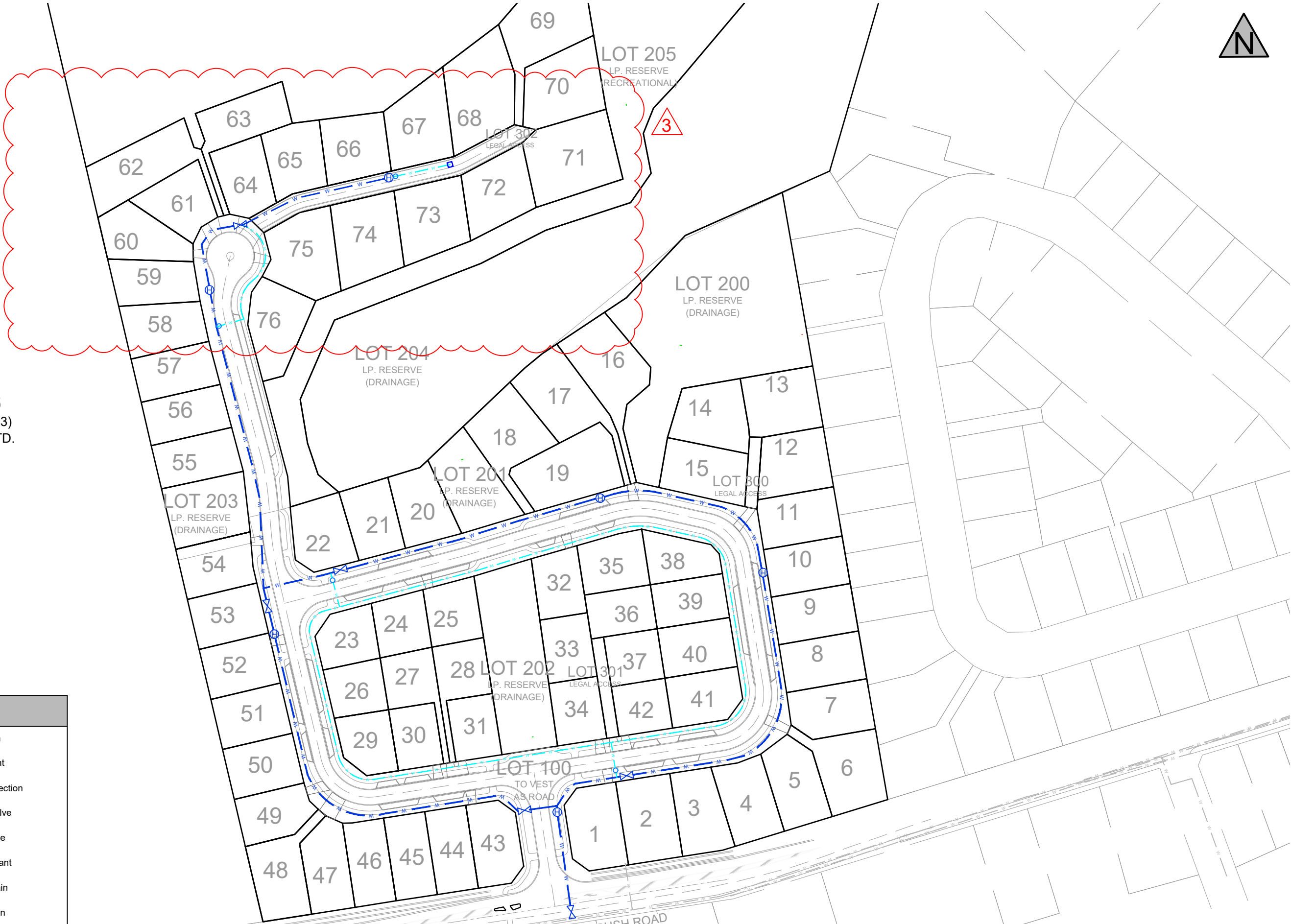










Figure 4 Additional fire hydrants



PT LOT 4
DP 99045
(RT. NA93D/53)
HURUPAKI LTD.

Legend

-  Existing Water Main
-  Existing Fire Hydrant
-  Proposed Lot Connection
-  Proposed Sluice Valve
-  Proposed Peet Valve
-  Proposed Fire Hydrant
-  Proposed Water Main
-  Proposed Rider Main

Size	A3	Scale	1:1500	Date	May 2021		
No.	Amendment	Init.	Date	Designed	Drawn	JMC	
1	Issued For Resource Consent	JMC	17/05/21	Drawn	JMC		
2	Services Locations Updated,	JMC	19/08/21	Checked			
3	Added fire hydrants	JMC	16/02/22	Approved			

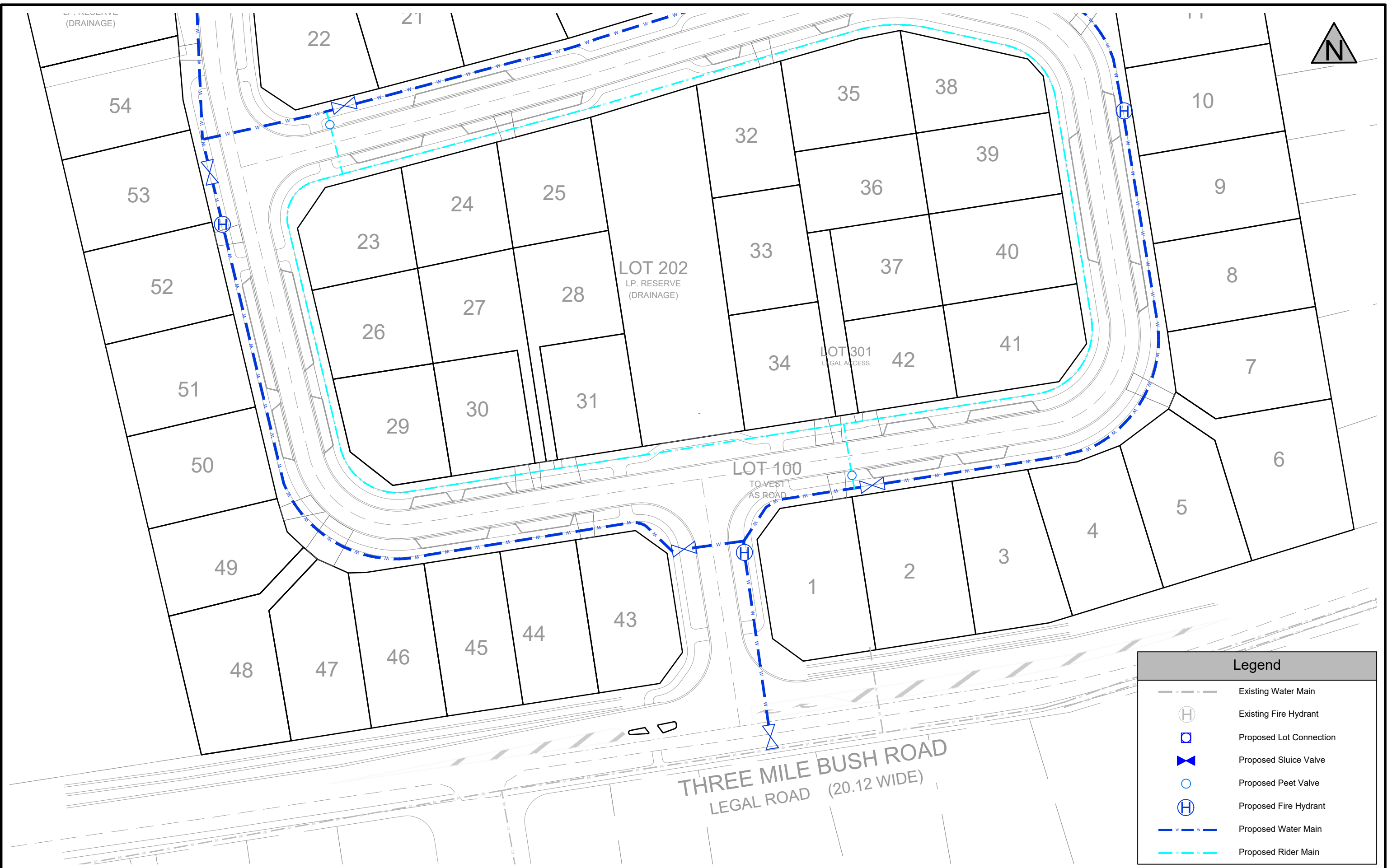
Resource Consent Plan
Water Reticulation
 Three Mile Bush Road, Kamo, Whangarei
 Prepared for: TMB Limited



Blue Wallace
Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
.....	
BW Ref.	Stg. Purp. Dwg. # Revision:
20183-01-RC-600	3

S:\2020\20183-01-RC-600-WS.DWG



Legend	
	Existing Water Main
	Existing Fire Hydrant
	Proposed Lot Connection
	Proposed Sluice Valve
	Proposed Peet Valve
	Proposed Fire Hydrant
	Proposed Water Main
	Proposed Rider Main

Size	A3	Scale	1:750	Date	May 2021
No.	Amendment	Init.	Date	Designed	JMC
1	Issued For Resource Consent	JMC	17/05/21	Drawn	JMC
2	Services Locations Updated,	JMC	19/08/21	Checked	
3				Approved	

Resource Consent Plan
Water Reticulation
 Three Mile Bush Road, Kamo, Whangarei
 Prepared for: TMB Limited





Blue Wallace Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20183-01-RC-601	2

S:\2020\20183-01-RC-601-EN-01-600-WS.DWG

Legend

-  Existing Water Main
-  Existing Fire Hydrant
-  Proposed Lot Connection
-  Proposed Sluice Valve
-  Proposed Peet Valve
-  Proposed Fire Hydrant
-  Proposed Water Main
-  Proposed Rider Main



Size **A3** Scale **1:750**

Date **May 2021**

No.	Amendment	Init.	Date	Designed	JMC
1	Issued For Resource Consent	JMC	17/05/21	Drawn	JMC
2	Services Locations Updated,	JMC	19/08/21	Checked	
3				Approved	

Resource Consent Plan
Water Reticulation
 Three Mile Bush Road, Kamo, Whangarei
 Prepared for: TMB Limited



Blue Wallace
Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

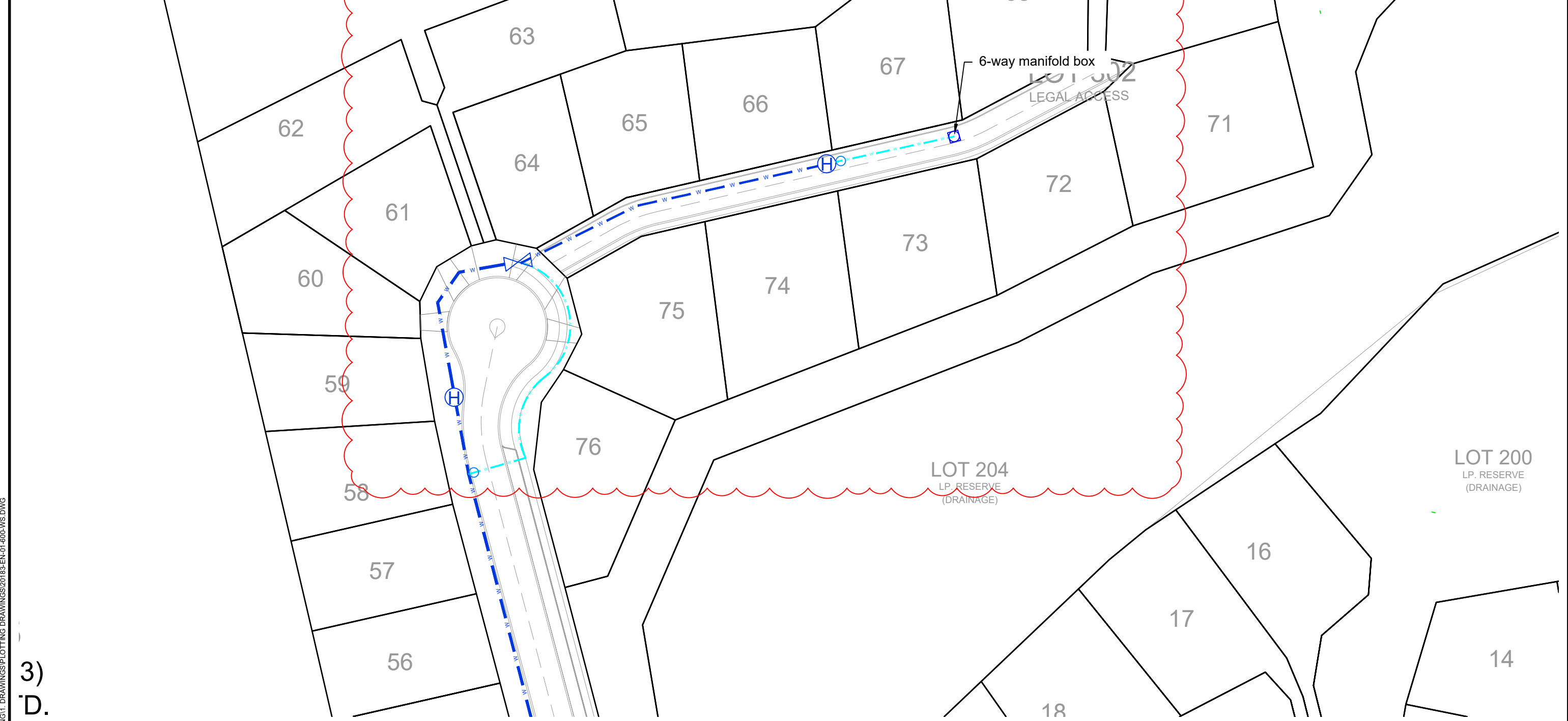
Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
.....	
BW Ref.	Stg. Purp. Dwg. # Revision:
20183-01-RC-602	2

S:\2020\20183\2. ENGINEERING\1. DRAWINGS\PLOTTING DRAWINGS\20183-EN-01-600-WS.DWG

LOT 200
LP. RESERVE
(RECREATION)



Legend	
	Existing Water Main
	Existing Fire Hydrant
	Proposed Lot Connection
	Proposed Sluice Valve
	Proposed Peet Valve
	Proposed Fire Hydrant
	Proposed Water Main
	Proposed Rider Main



3)
D.

Size	A3	Scale	1:750	Date	May 2021
No.	Amendment	Init.	Date	Designed	JMC
1	Issued For Resource Consent	JMC	17/05/21	Drawn	JMC
2	Services Locations Updated,	JMC	19/08/21	Checked	
3	Added Fire Hydrants	JMC	16/02/22	Approved	

Resource Consent Plan
Water Reticulation
 Three Mile Bush Road, Kamo, Whangarei
 Prepared for: TMB Limited



Blue Wallace Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
.....	
BW Ref.	Stg. Purp. Dwg. # Revision:
20183-01-RC-603	3

S:\2020\20183\2. ENGINEERING\1. DRAWINGS\1. PLOTTING DRAWINGS\20183-EN-01-600-WS.DWG