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FRANKLIN 2 PRECINCT PROPOSED PLAN CHANGE

Franklin 2 Precinct Infrastructure Report

Grafton Downs Limited (GDL)
15/08/2025
Final

DOCUMENT CONTROL

Project Number	P24-316
Project Name	Franklin 2 Precinct Infrastructure Report
Client	Grafton Downs Limited (GDL)
Date	15/08/2025
Version	5
Issue Status	Final
Originator	Justin Kang - Associate Engineer
Reviewer	Glenn Wright - Senior Associate Engineer
Approval	Mark Williams - General Manager, Major Projects - Land Developments
Consultant details	Woods (Wood & Partners Consultants Ltd) Level 1, Building B, 8 Nugent St, Grafton, Auckland 1023 PO Box 6752 Victoria St West, Auckland 1142
	E: info@woods.co.nz P: 09-308-9229
	woods.co.nz
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1. INTRODUCTION

This report has been prepared on instruction from Grafton Downs Limited to undertake a Civil Infrastructure assessment to support a Proposed Plan Change to the Franklin 2 Precinct (the Precinct) under the Auckland Unitary Plan: Operative in Part (AUP:OP).

This report assesses the impact of the proposed amendments to the zoning within the Franklin 2 precinct and to evaluate any impacts to the infrastructure as a result of the proposed changes to the zoning. This report investigates and confirms the suitability of the existing infrastructure to provide adequate servicing for the progressive development of the site to accommodate the ultimate yield of approximately 5,150 dwellings, enabled by a change of zoning.

2. BACKGROUND

In 2023, GDL sought consent from Auckland Council to develop a commercial centre at the northern end of the Precinct. Auckland Council declined to consent to the application. The decision was appealed by GDL. In the subsequent Environment Court Mediation process, GDL has agreed with Auckland Council to lodge a Private Plan Change Request to the Auckland Unitary Plan Operative in Part (“AUP(OP)”) to update the zoning applied to the Franklin 2 Precinct in the Auckland Unitary Plan.

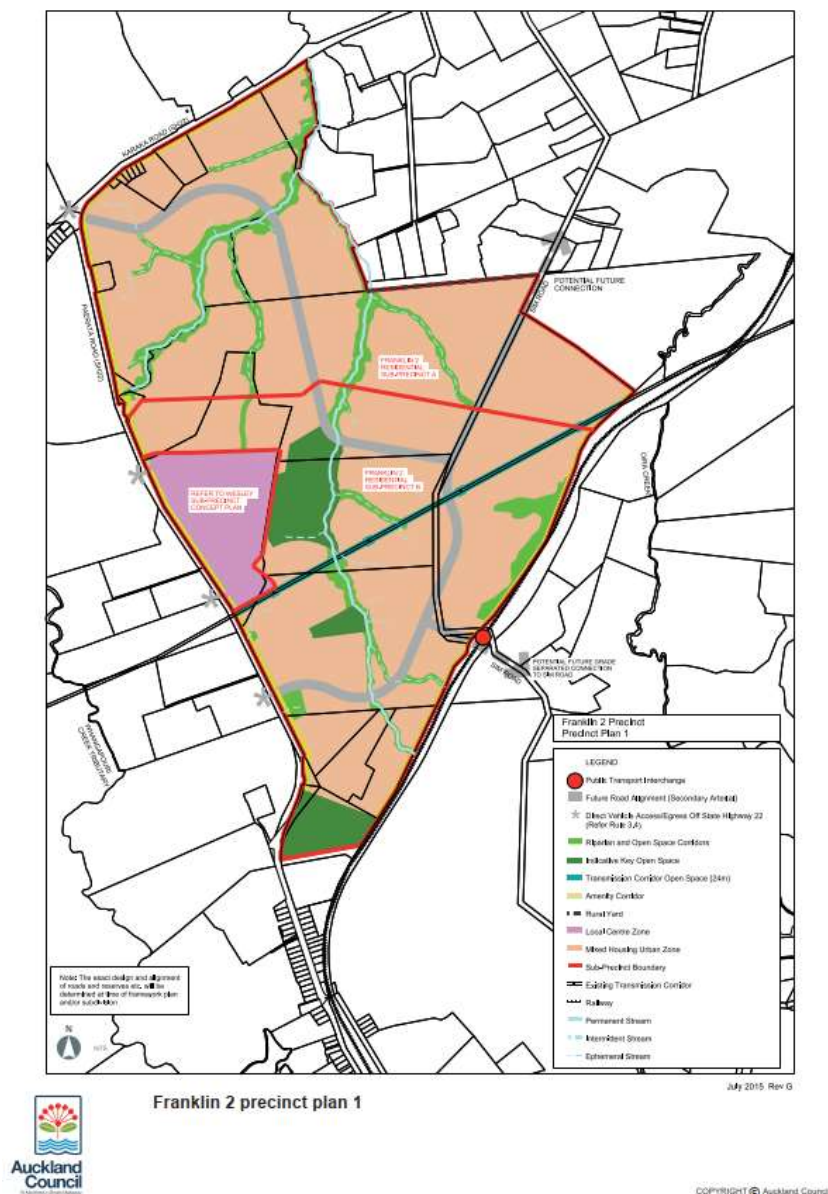


Figure 1: Existing Zoning

The original Infrastructure Assessment Report (2014) prepared by Woods and submitted in support of the original Franklin 2 Plan Change, provided an overview of the proposed infrastructure design to service the proposal. This infrastructure report demonstrated how urbanisation within the site could be fully serviced and how this infrastructure would be incorporated into the proposed Structure Plan. The Infrastructure Assessment report was designed to provide a guide for the further detailed design necessary for engineering approvals and consent applications.

2.1. Site Description

The site sits north of Paerata township and is bounded by Stage Highway 22 (SH22) to the north and west (Karaka and Paerata Roads respectively) and the North Island Main Trunk (NIMY) rail line to the east as shown in Figure 2 below. Prior to 2014, the site was occupied by Wesley College and the associated dairy farm.

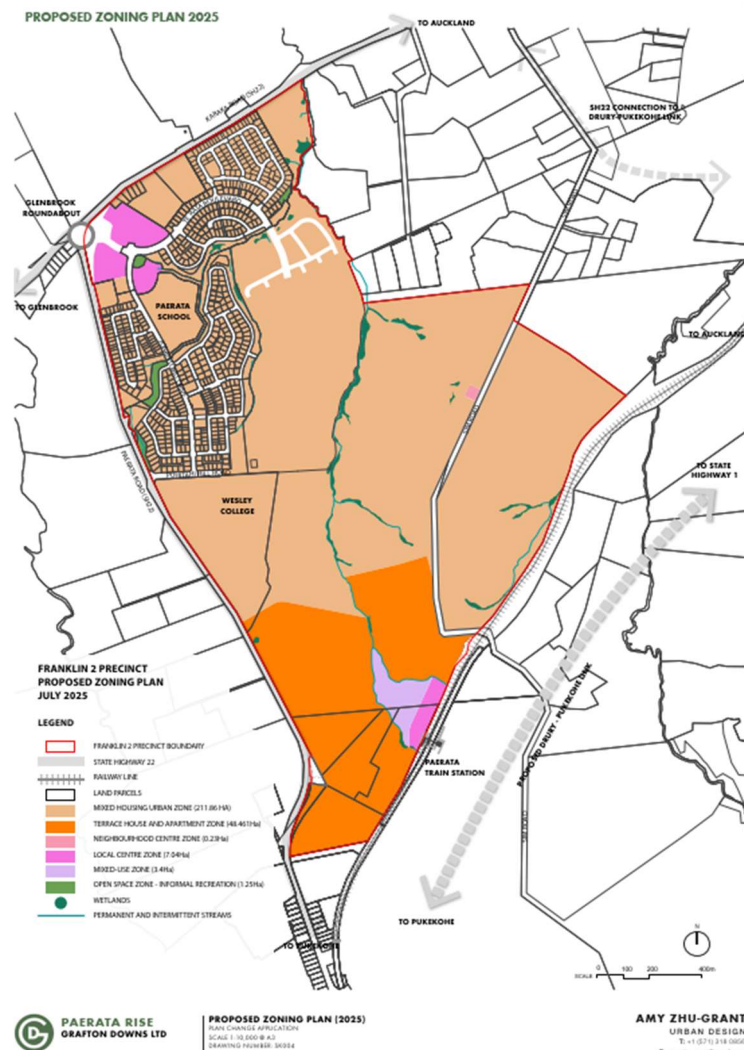


Figure 2 - Site Location and Proposed Zoning Plan

2.2. Development Since 2014

Since 2016 GDL has been developing Paerata Rise, moving north from Wesley College. To date there are approximately 648 individual titles issued and a further 299 that are consented and ready to be constructed. This totals 947 lots that have been granted consent. Further details of the approved consents to date are included in the subdivision report accompanying the Plan Change.

NZTA has upgraded the SH22 and Glenbrook Road intersection to a roundabout which has created an additional entrance into the Paerata Rise Development.

Kiwirail have started constructing a railway station, access road and a roundabout on SH22 at the southern end of the development.

3. THE PROPOSAL

The proposal is to redistribute the commercial zoning within the precinct and to update the zoning to align with the NPS-UD and the Medium Density Residential Standards. This will result in an increase in the intensity of residential development permitted in the vicinity of the train station (currently under construction) through the introduction of Terrace and Apartment Building zone to this area.

With the Wesley College's desire to retain the College within the Franklin 2 Precinct (largely on its existing location), there has been a need to revisit the location of the Business Local Centre zone. The Proposed Plan Change seeks to relocate the existing Business Local Centre zone to create 3 smaller commercial areas, next to the Glenbrook roundabout and the site entrance, next to the train station, and a neighbourhood area adjacent to Sim Road. These changes can be seen in **Figure 2**.

Wesley College will remain in its current location and will remain as a school.

4. CIVIL INFRASTRUCTURE

The Proposed Plan Change involves amending the Precinct zoning and increasing the density in the areas of the development close to the train station. The increase in density has not changed the number of proposed dwellings, rather redistributing them over a smaller area.

The purpose of this report is to assess the infrastructure impacts of the revised Master Plan, proposed changes to the zoning pattern, and amendments to the Franklin 2 Precinct provisions. It aims to demonstrate that future development undertaken in accordance with the provisions of the Precinct can be fully serviced. It also assesses the adequacy of the operative Franklin 2 infrastructure provisions and makes recommendations on the retention or modification of these provisions.

The engineering works assessed in this report includes Earthworks, Internal Roads and Traffic, Services and Utilities, Stormwater, Internal Sanitary Sewer, Internal Water Supply, Power & Gas Supply and Telecommunications. Each of these matters will be addressed below.

4.1. Earthworks

In order to develop the remaining areas of the site it will be necessary to undertake bulk earthworks on the undeveloped area. These earthworks are necessary to provide suitable gradients for development, platforms, roading, and service installation and to provide long-term geotechnical stability while preserving streams and gully systems. The extent and scale of the remaining bulk earthworks anticipated are illustrated on sheets P24-316-00-1200-EW, P24-316-00-1201-EW, and P24-316-00-1202-EW, found in **Appendix A** of this report.

To achieve suitable gradients for the development it is anticipated that approximately 2.3 million m³ of cut-to-fill earthworks remain. Earthworks will be designed to achieve an earthworks balance within the development to minimise the number of vehicles coming to and leaving the site. The preliminary design shows that the remaining cut of up to 10m in depth and filling of up to 7m will be required. Earthworks are anticipated to be completed on a stage-by-stage basis as required.

The amendment to the zoning on the development does not have an impact on the earthworks controls for this development.

4.2. Roads and Transport

An integrated transport assessment has been prepared by Commute Transportation and concludes that the proposed rezoning has a negligible effect on traffic compared to the existing zoning.

4.2.1. Roads

Several road typologies are proposed and a copy of the typical cross sections can be found in **Appendix B**. These cross-sections have been used successfully throughout Paerata Rise and will provide continuity and similarity throughout the development.

4.2.2. External Roads

The trigger points and requirements for upgrading external roads are discussed in the Commute report and clearly outline when each of the triggers are activated.

4.2.3. Internal Transport

A public roading network will be constructed to provide access to all new lots, proposed railway station, open space, and recreational areas.

Walking and cycling are key principles for the masterplan, and provision have been made to accommodate this into the transport network. The indicative pedestrian and cycle network plan detailed in the Urban Design Report and Plans shows a network of footpaths and separated cycleways throughout the development. These can indicatively be seen in **Figure 3** below. The Commute report states that the PPC site has accessibility to walking, cycling, public transport and private vehicle.

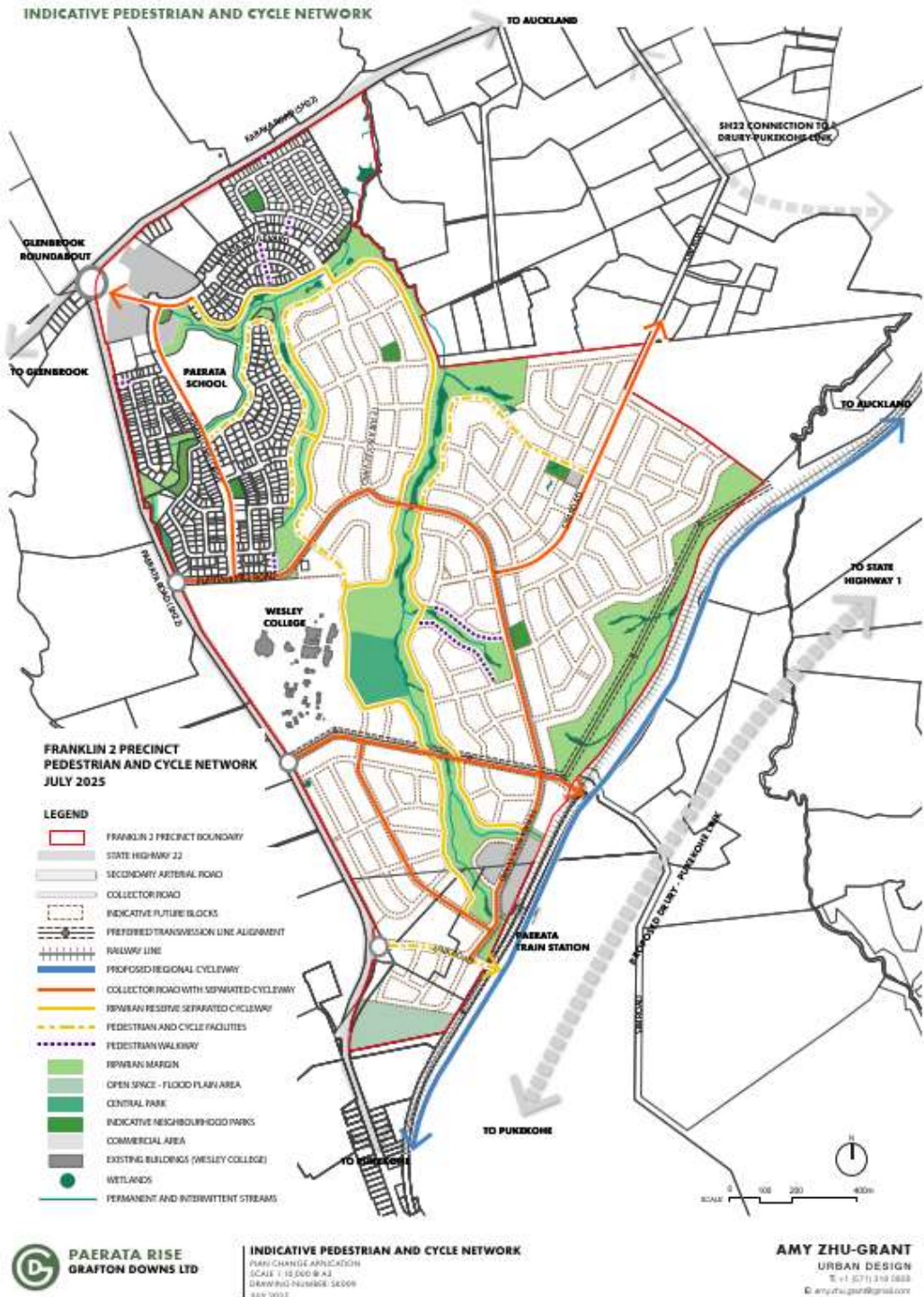


Figure 3. Indicative Pedestrian and Cycle Network.

4.3. Services and Utilities

4.3.1. Stormwater

There is currently an approved Stormwater Management Plan (SMP) for the site (Wesley College Paerata North Stormwater Management Plan, Version G dated 05-10-2016 prepared by Woods) that details the stormwater management requirements for the Precinct and subsequent development. The SMP outlines the required attenuation, detention and treatment requirements for the development that is currently being adopted on site.

Woods has undertaken a flood assessment (Franklin 2 Plan Change Flooding Assessment dated 4 October 2024) to assess the impact of the zoning change on the flood level. Refer to **Appendix C**. The conclusion of the report states that there is no flood depth increases outside of the Proposed Plan Change area for the 3.8-degree scenario and that the zoning change will result in less impervious areas.

Flood modelling was undertaken as part of the assessment where two model scenarios (base and Plan Change scenarios) were developed:

- The base model scenario considers impervious coverage as per the current AUP zoning;
- The Plan Change model scenario considers impervious coverage as per the new plan change zoning, specifically considering impervious coverage of 60% for THAB; and
- The model scenarios were simulated for 2, 10 and 100 year ARI storm events with allowance for 2.1°C and 3.8°C future temperature increase.

The flood assessment shows that the impervious areas reduced by 1.2% and the pervious areas will increase by 2.13%. This change is negligible in terms of stormwater runoff and will reduce stormwater runoff by a small margin.

The Proposed Plan Change does not intend to change the location of the streams or upstream inflow points or the downstream points. The impervious and pervious percentages are approximately the same and the flow patterns have not changed since the SMP was implemented. As the changes have been negligible in terms of the stormwater runoff, the current SMP is considered relevant and can remain underlying stormwater document for the development.

4.3.2. Wastewater

The underlying wastewater assessment was based on 5000 residential lots, 16.7 hectares of commercial land and 1000 school students. The current assessment is based on 5,143 residential lots, 10.65 hectares of commercial land, and 400 school students - of which 300 are boarding students and 100 are day students. In addition, an allowance for 98 staff has been included in the assessment. This includes 16 staff with onsite accommodation. All staff have been accounted for in the wastewater calculations, consistent with Watercare Wastewater Code of Practice. The net impact of the change in zoning has decreased the wastewater design flows and will therefore have no negative impact compared to the underlying zoning. The change in flows can be seen in **Table 1** below. Detailed calculations of the dry weather and peak wet weather flows are included in **Appendix D**.

Items	Zoning amendment (2024)								Plan Change (2014)			
Description	#DUE	Cum. DUE	Persons per DUE	Population (p)	Daily Flow (l/p/day)	Peaking Factor	ADWF (l/s)	PWWF (l/s)	#DUE	Cum. DUE	ADWF (l/s) *	PWWF (l/s) *
Residential Lots 3 stories or less	3824	3824	3	11472	180	6.7	23.90	160.13	5000	5000	26.60	177.30
Residential Lots 4 stories or more	1319	5143	3	15429	180	5.0	8.24	41.22	5000	5000	12.50	83.10
Schools (300 students Boarding)	100	5243	3	15729	140	6.7	0.49	3.26	666	5666	1.30	8.70
Schools (100 students day students)	34	5277	3	15831	20	6.7	0.02	0.16		5666		
Schools (98 Staff)	33	5310	3	15930	45	6.7	0.05	0.35		5666		
Schools (16 Staff with onsite accomodation)	6	5316	3	15948	180	6.7	0.038	0.25		5666		
Commercial areas (7.25+3.4 = 10.65 Ha) (1l/s/ha)(Peaking factor PWWF = 6.7) ADWF Flow = 1 x 10.65=10.65l/s~ 1700 DUE	1704	7020	3	21060	180	6.7	10.65	71.36	1296	6962	8.10	11.70
Total							43.39	278.72			48.50	280.80

Table 1. Summary of the effect of the plan change on wastewater flows.

The current wastewater reticulation and pump station was supplied and constructed by GDL in accordance with the contract between GDL and Watercare. The agreement was to construct a pump station to service the first 1000 residential lots of Paerata Rise, and Watercare would then provide the necessary capacity for the remaining 4000 lots. The pump station constructed on Te Paea Ave is currently operational and

services the current catchment. The reticulation servicing the development has been designed and constructed with the capacity to convey and service the entire precinct.

Watercare has confirmed that they can increase the capacity of the existing pump station to 2000 development equivalent units after 2028, and are close to completing a design for the upgrade of the pumpstation and network. Correspondence with Watercare can be found in **Appendix D**.

An extension of the wastewater network will be designed and constructed in accordance with Watercare Water and Wastewater Code of Practice for Land Development and Subdivision.

4.3.3. Water Supply

The underlying water assessment was based on 5000 residential lots, 16.7 hectares of commercial land and 1000 school students. The current assessment is based on 5,143 residential lots, 10.65 hectares of commercial land and 400 school students - of which 300 are boarding students and 100 are day students. In addition, an allowance for 98 staff has been included in the assessment. This includes 16 staff with onsite accommodation. All staff have been accounted for in the water calculations, consistent with Watercare Water Code of Practice. The net impact of the change in zoning has decreased the water peak design demand, and will therefore have no negative impact compared to the underlying zoning. The change in flows can be seen in **Table 2** below. Detailed calculations of the peak demand flows are included in **Appendix D**.

Watercare have confirmed that they on track to construct a new pipeline from Drury by 2026 to service the remaining development. Correspondence with Watercare can be found in **Appendix E**.

Items	Zoning amendment (2024)						Plan Change (2014)		
	#DUE	Cum. DUE	Persons per	Population	Daily Flow	Peaking Factor	Peak Demand (L/S)	#DUE	Cum. DUE
Residential Lots 3 stories or less	3824	3824	3	11472	220	6.7	146.06	5000	5000
Residential Lots 4 stories or more	1319	5143	3	15429	220	5.0	50.38	5000	5000
Schools (300 students Boarding)	100	5243	3	15729	160	6.7	2.78	5666	5666
Schools (100 students day students)	34	5277	3	15831	25	6.7	0.15	666	5666
Schools (98 Staff)	33	5310	3	15930	50	6.7	0.29	5666	5666
Schools (16 Staff with onsite accommodation)	6	5316	3	15948	220	6.7	0.23	5666	5666
Commercial areas (7.25+3.4 = 10.65 Ha)		5316	3	15948	220	6.7	8.88	5666	5666
Total							208.75		269.40

Table 2. Summary of the effect of the plan change on peak water demand

The current water reticulation network, reservoir and pump station were supplied and constructed by GDL in accordance with the contract between GDL and Watercare. The agreement was to construct a water network to service the first 1000 residential lots and Watercare would then provide the capacity for the remaining 4000 lots. This reservoir constructed on Puhitahi Hill Road is currently operational and servicing the existing catchment and has been designed to service the remaining consented development.

An extension of the water network will be designed and constructed in accordance with Watercare Water and Wastewater Code of Practice for Land Development and Subdivision.

4.3.4. Power Supply

It is proposed that a new network of Low Voltage and High Voltage underground cables will provide each lot with a suitable connection for power reticulation. These cables will be typically located within the berm of the new roading network.

The change in zoning has increased the number of residential lots and decreased the area of commercial land. These changes will result in minor differences in the power network. The exact difference will be dependent on the exact land use in each of the commercial areas. This could change the demand either up or down from the original application.

Counties Power Ltd have confirmed previously that there would be sufficient capacity to supply power and services to the proposed development.

4.3.5. Gas Supply

Vector have assessed for the provision of gas and has confirmed that gas is not readily available, and if the existing network were to be extended it would require a significant network upgrade. It is therefore considered that the provision of gas is not a viable option for this development and has not been installed to date.

4.3.6. Telecommunications

It is proposed that a new network of underground cables will provide each lot with a suitable connection for telecommunication reticulation. These cables will be typically located within the berm of the roading network and shall connect to the existing communications network.

The change in zoning has increased the number of residential lots and decreased the area of commercial land. These changes will result in minor differences in the telecommunication network. The exact difference will be dependent on the land use in each of the commercial areas. This could change the demand either up or down from the original application.

Chorus Ltd have confirmed previously that there would be sufficient capacity to supply power and services to the proposed development.

5. CONCLUSION AND RECOMMENDATION

As detailed in this report, Woods has investigated the earthworks, infrastructure, and services required to support the Proposed Plan Change to the Franklin 2 precinct. The report compares the proposed zoning to the previously approved zoning, and it is concluded the change in zoning has very minor to no impact to the infrastructure and servicing requirements. The change in zoning will reduce impervious areas, wastewater flows, and the peak water demands for the overall development. Our investigation has not identified any major constraints that would prevent the change to the zoning of the development. The finding of this report is therefore in favour of the Proposed Plan Change.

Overall it is considered that there is sufficient infrastructure available to support the Proposed Plan Change either by extension of existing networks or construction of new infrastructure. This is summarised as follows:

- New stormwater infrastructure can be installed in accordance with the approved SMP;
- Wastewater servicing can be provided to service the Plan Change area to Watercare engineering requirements;
- Water supply can be provided from the existing Watercare network to their engineering standards;
- Power and telecom infrastructure (provided or planned) is available.

Therefore there is adequate infrastructure in the immediate vicinity to support the proposed rezoning of the land. On this basis of the above assessment, it is recommended that:

- The Proposed Plan Change impose a Precinct specific standard that limits the maximum impervious area in the Terraced Housing and Apartment zone (THAB) to 60% of site area.

Appendix A: Earthworks Plans

NOTE
1. MAJOR CONTOURS ARE AT 1.0m INTERVAL

LEGEND

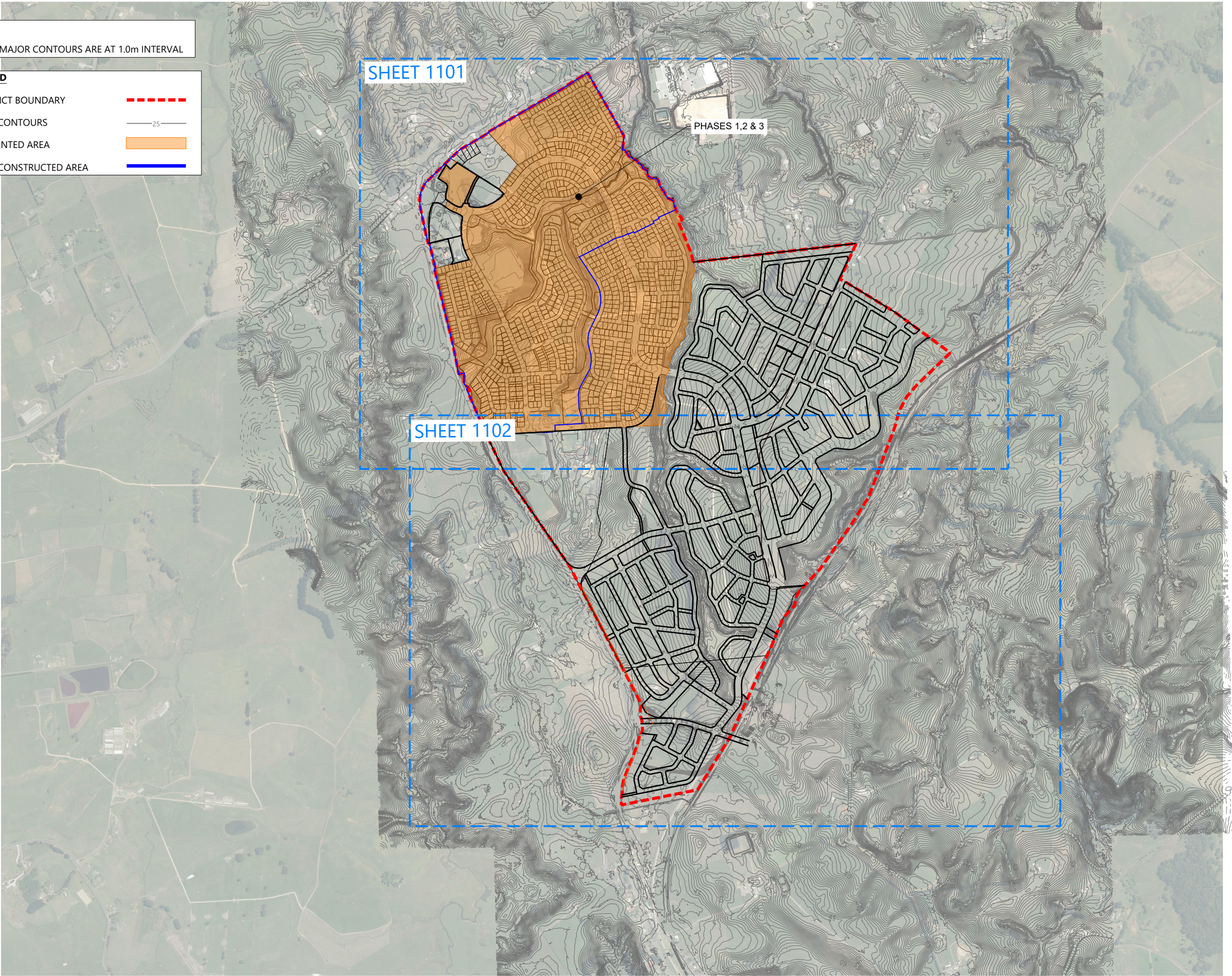
PRECINCT BOUNDARY

FINAL CONTOURS

CONSENTED AREA

BUILT/CONSTRUCTED AREA

25



REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR DISCUSSION	NS	31/07/24	DESIGNED	NS
				DRAWN	NS
				CHECKED	GW
				APPROVED	CD



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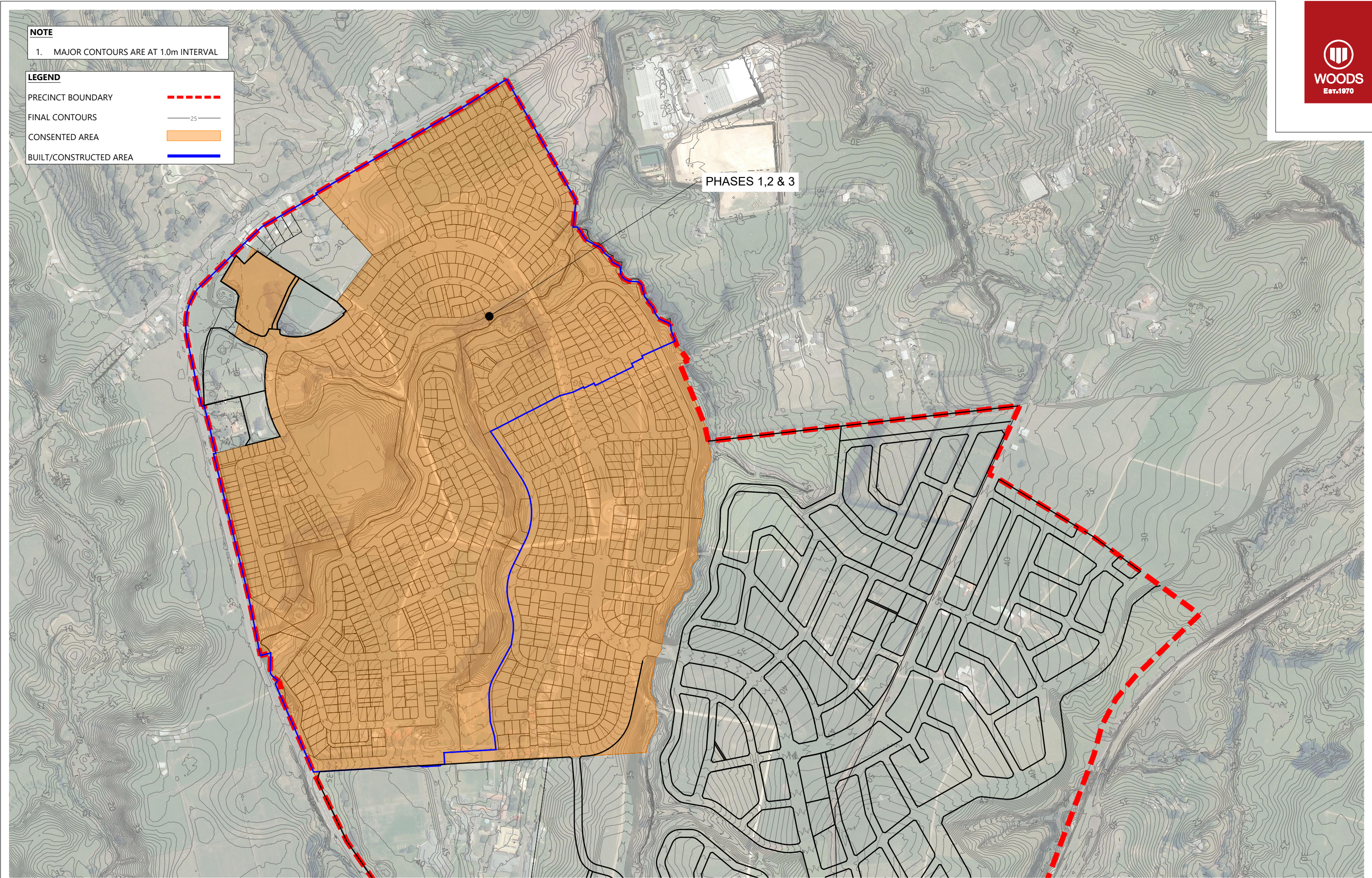


FRANKLIN 2 PRECINCT PLAN CHANGE

FINAL CONTOURS OVERALL PLAN



STATUS	FOR DISCUSSION	REV
SCALE	1:15,000 @ A3	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-1100-EW	



NOTE
1. MAJOR CONTOURS ARE AT 1.0m INTERVAL

LEGEND
PRECINCT BOUNDARY
FINAL CONTOURS
CONSENTED AREA
BUILT/CONSTRUCTED AREA



PHASES 1,2 & 3

REVISION DETAILS		INT	DATE	SURVEYED	
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				DRAWN	NS
				CHECKED	GW
				APPROVED	CD



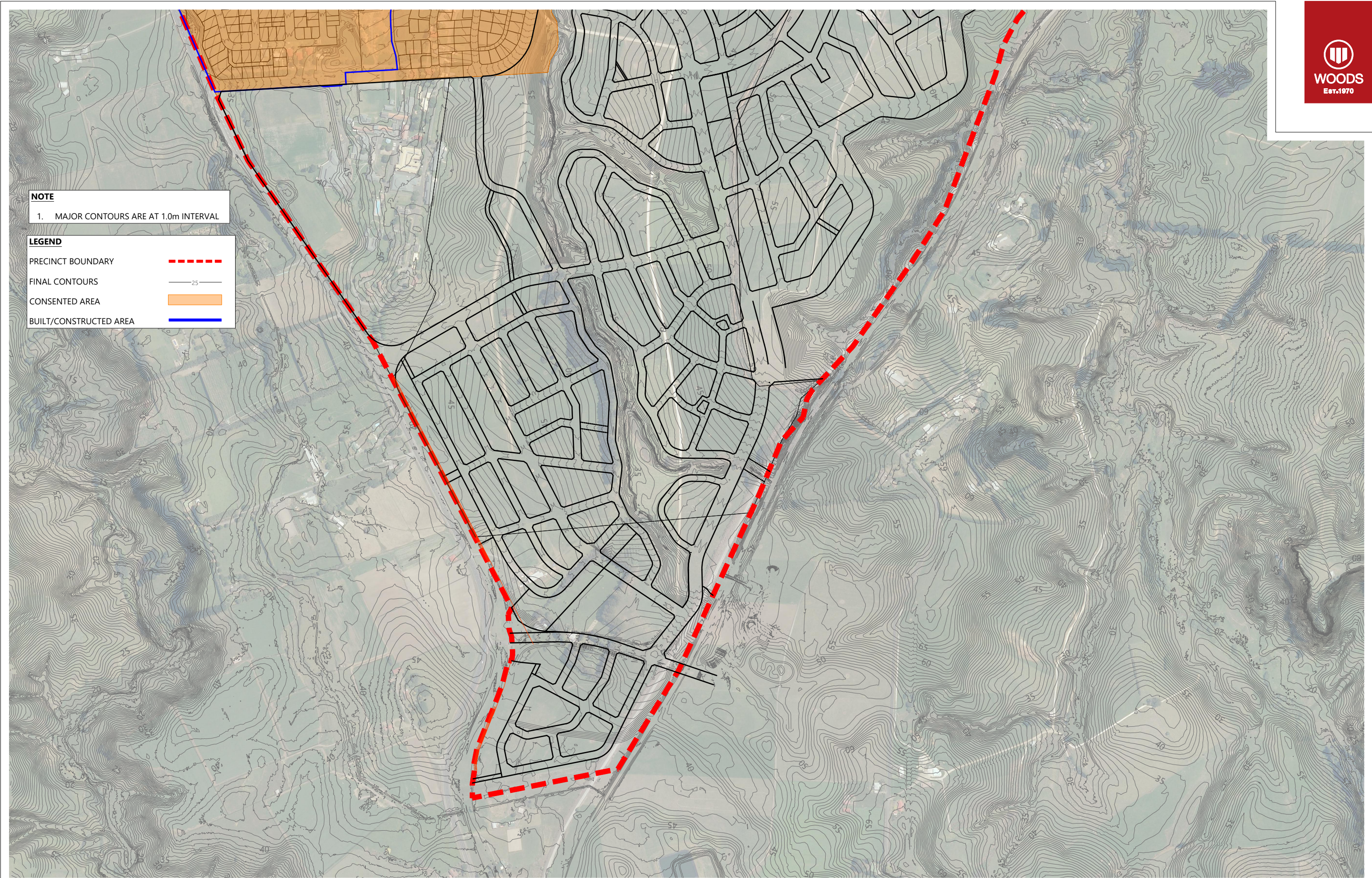
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FRANKLIN 2 PRECINCT PLAN CHANGE
FINAL CONTOURS PLAN
(SHEET 1 OF 2)



STATUS	FOR DISCUSSION	REV
SCALE	1:7000 @ A3	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-1101-EW	



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				APPROVED	CD



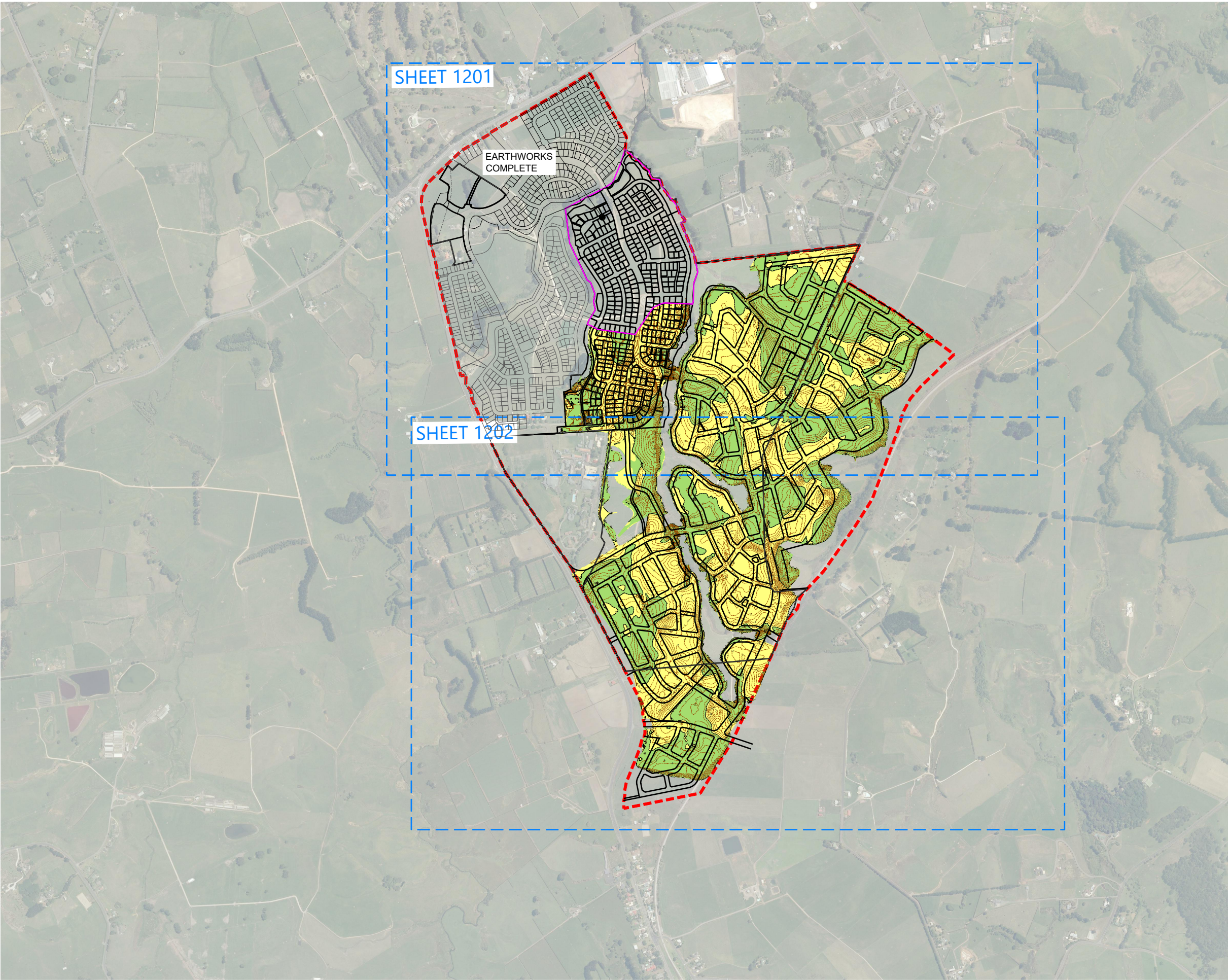
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FRANKLIN 2 PRECINCT PLAN CHANGE
FINAL CONTOURS PLAN
(SHEET 2 OF 2)



STATUS	FOR DISCUSSION	REV
SCALE	1:7000 @ A3	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-1102-EW	



LEGEND

AREA OF CUT 

AREA OF FILL 

CUT CONTOUR  -2

FILL CONTOUR  2

ZERO CONTOUR 

PRECINCT BOUNDARY 

NOTES:

EARTHWORKS IS COMPLETE IN PHASES 1 & 2.
SOME OF PHASE 3 IS APPROXIMATELY 50Ha
AND THE REST IS NOT FINISHED, INCLUDING
PHASE 4.

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR DISCUSSION	NS	31/07/24	DESIGNED	NS
				DRAWN	NS
				CHECKED	GW
				APPROVED	CD



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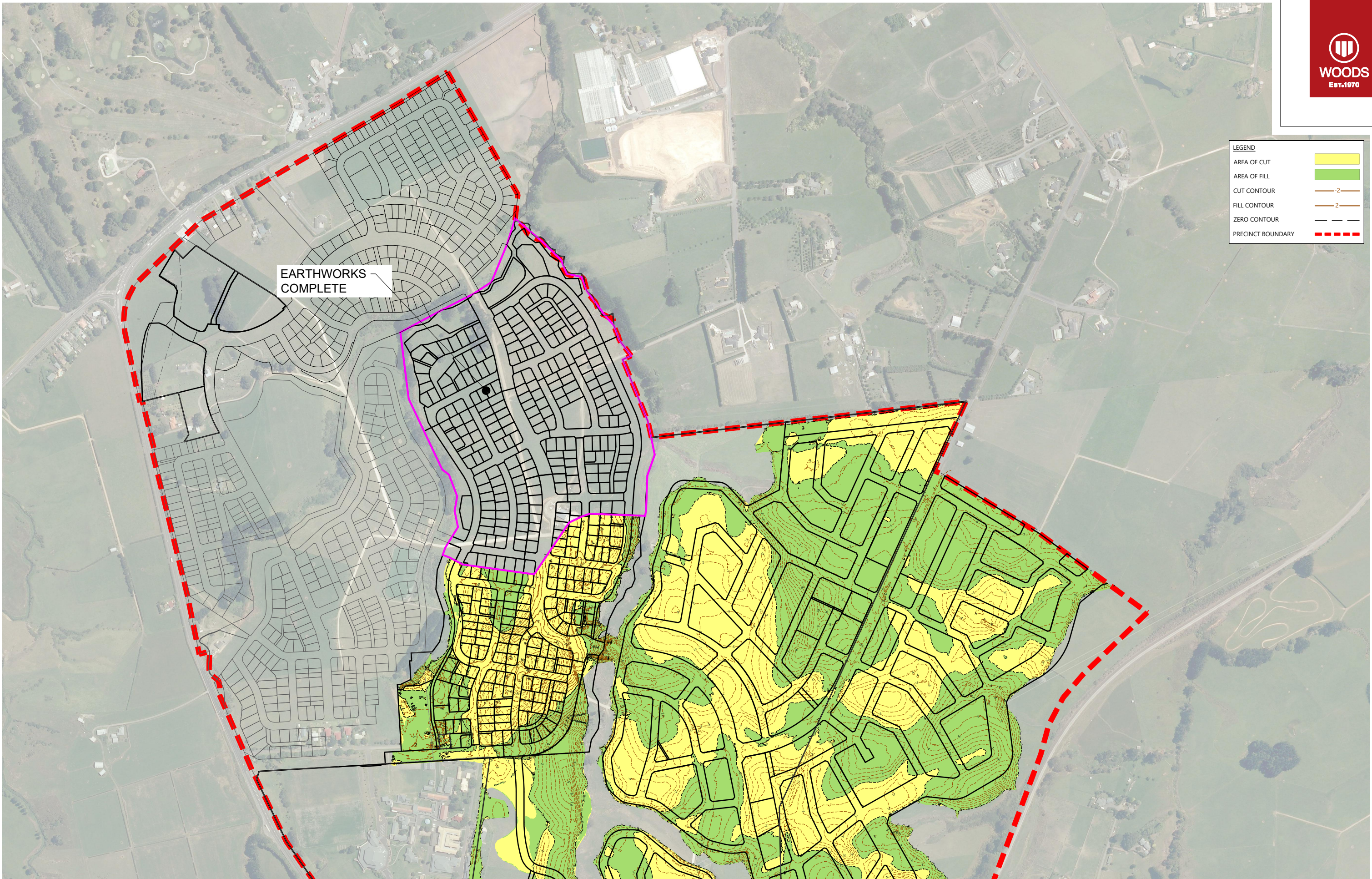


FRANKLIN 2 PRECINCT PLAN CHANGE

CUT AND FILL OVERALL PLAN



STATUS	FOR DISCUSSION	REV
SCALE	1:15000 @ A3	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-1200-EW	



LEGEND	
AREA OF CUT	
AREA OF FILL	
CUT CONTOUR	
FILL CONTOUR	
ZERO CONTOUR	
PRECINCT BOUNDARY	

REVISION DETAILS		INT	DATE	SURVEYED	
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				DRAWN	NS
				CHECKED	GW
				APPROVED	CD



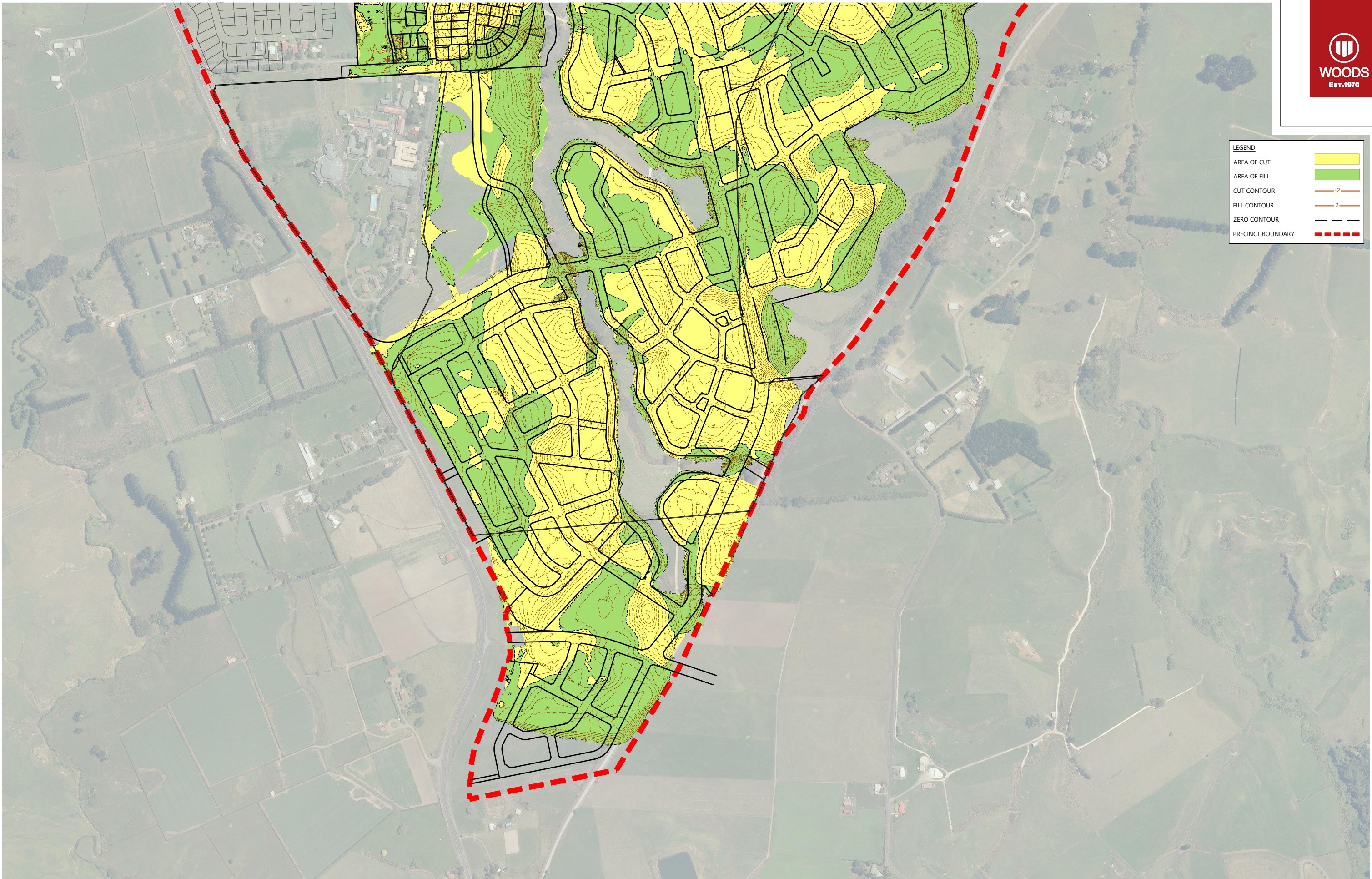
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FRANKLIN 2 PRECINCT PLAN CHANGE
CUT AND FILL PLAN
(SHEET 1 OF 2)



STATUS	FOR DISCUSSION	REV
SCALE	1:7000 @ A3	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-1201-EW	



LEGEND

AREA OF CUT

AREA OF FILL

CUT CONTOUR

FILL CONTOUR

ZERO CONTOUR

PRECINCT BOUNDARY

-2

2

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR DISCUSSION	NS	31/07/24	DESIGNED	NS
				DRAWN	NS
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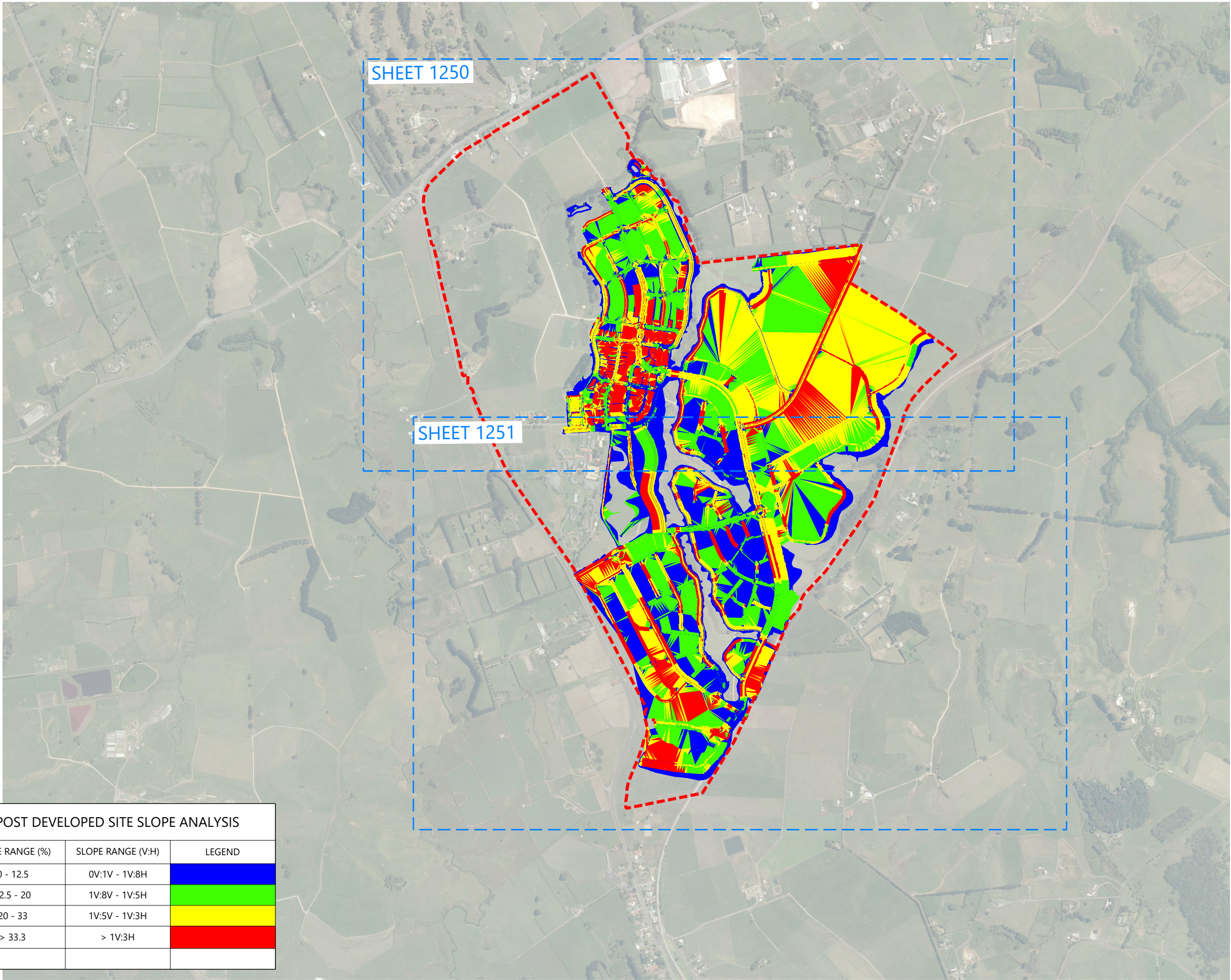


FRANKLIN 2 PRECINCT PLAN CHANGE

CUT AND FILL PLAN
(SHEET 2 OF 2)



STATUS	FOR DISCUSSION	REV
SCALE	1:7000 @ A3	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-1202-EW	



POST DEVELOPED SITE SLOPE ANALYSIS		
SLOPE RANGE (%)	SLOPE RANGE (V:H)	LEGEND
0 - 12.5	0V:1V - 1V:8H	
12.5 - 20	1V:8V - 1V:5H	
20 - 33	1V:5V - 1V:3H	
> 33.3	> 1V:3H	

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				DRAWN	NS
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				APPROVED	CD



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FRANKLIN 2 PRECINCT PLAN CHANGE
FINAL GROUND SLOPE ANALYSIS
OVERALL PLAN



STATUS	FOR DISCUSSION	REV
SCALE	1:15,000 @ A3	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-1250-EW	



POST DEVELOPED SITE SLOPE ANALYSIS		
SLOPE RANGE (%)	SLOPE RANGE (V:H)	LEGEND
0 - 12.5	0V:1V - 1V:8H	
12.5 - 20	1V:8V - 1V:5H	
20 - 33	1V:5V - 1V:3H	
> 33.3	> 1V:3H	

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR DISCUSSION	NS	31/07/24	DESIGNED	NS
				DRAWN	NS
				CHECKED	GW
				APPROVED	CD



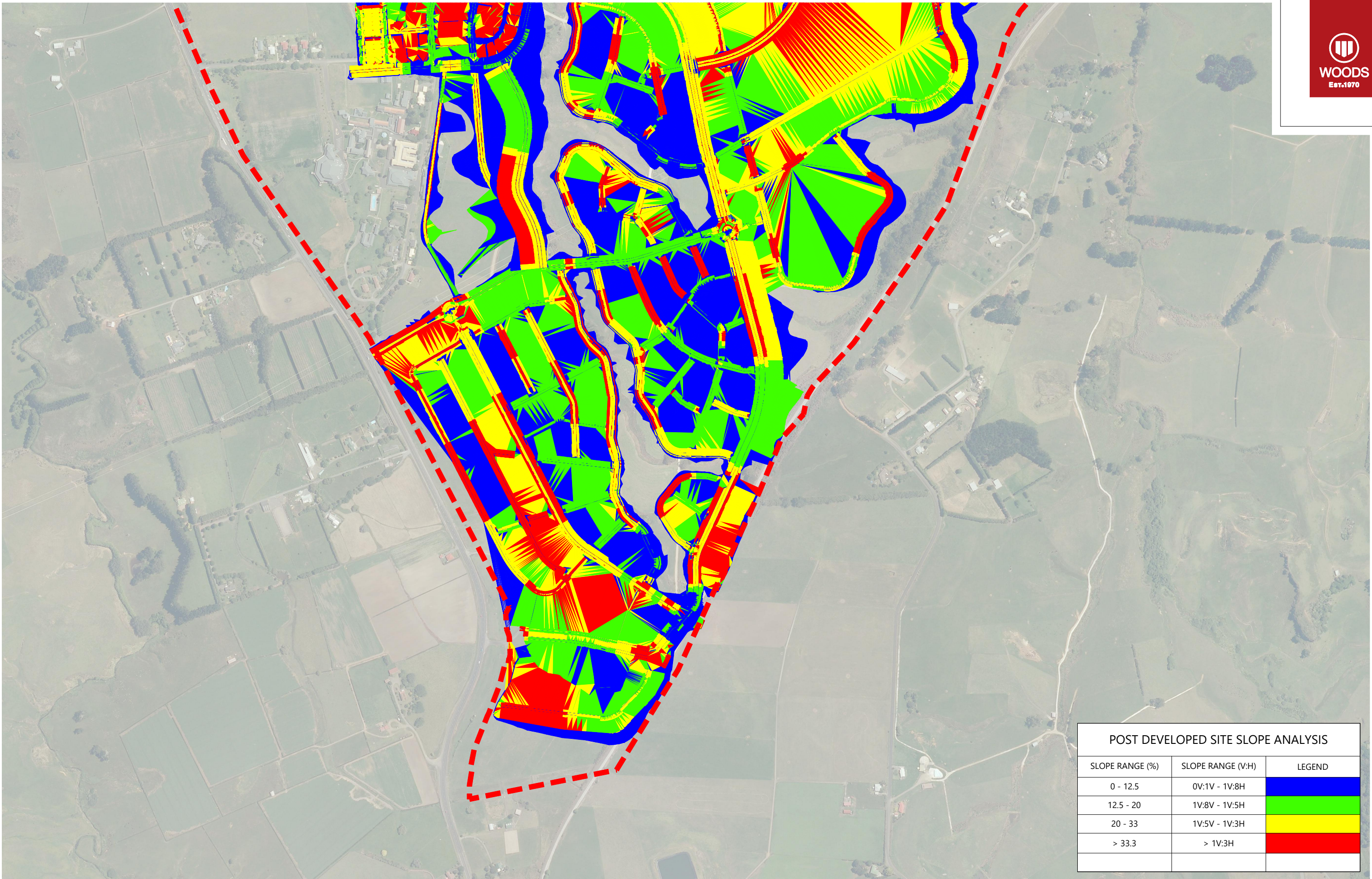
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FRANKLIN 2 PRECINCT PLAN CHANGE
FINAL GROUND SLOPE ANALYSIS PLAN
(SHEET 1 OF 2)



STATUS	FOR DISCUSSION	REV
SCALE	1:7000 @ A3	1
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-1251-EW	



POST DEVELOPED SITE SLOPE ANALYSIS		
SLOPE RANGE (%)	SLOPE RANGE (V:H)	LEGEND
0 - 12.5	0V:1V - 1V:8H	
12.5 - 20	1V:8V - 1V:5H	
20 - 33	1V:5V - 1V:3H	
> 33.3	> 1V:3H	

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR DISCUSSION	NS	31/07/24	DESIGNED	NS
				DRAWN	NS
				CHECKED	GW
				APPROVED	CD



BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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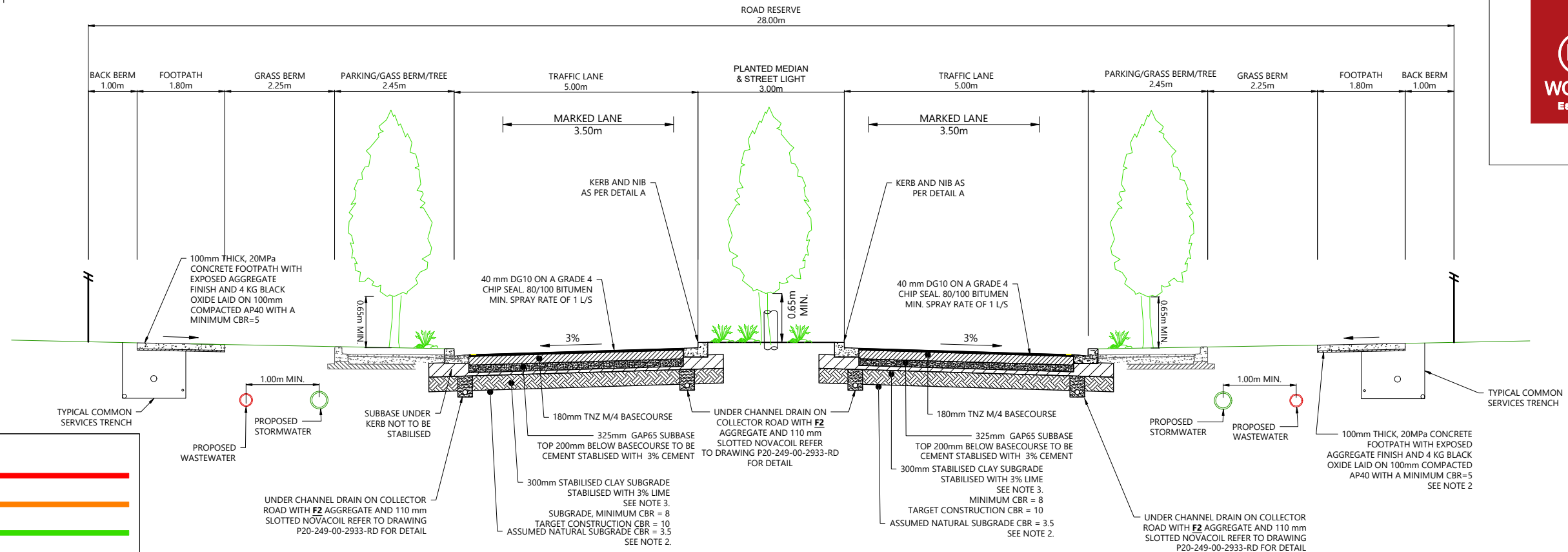


FRANKLIN 2 PRECINCT PLAN CHANGE
FINAL GROUND SLOPE ANALYSIS PLAN
(SHEET 2 OF 2)

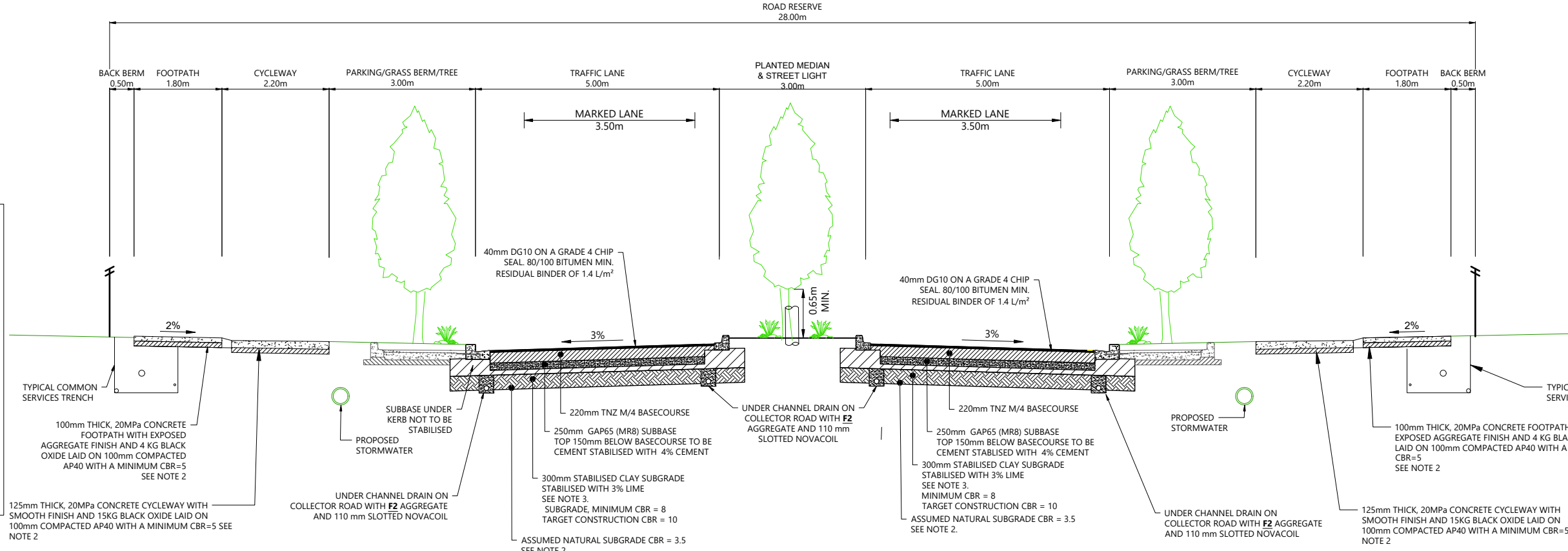


STATUS	FOR DISCUSSION	REV
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COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-1252-EW	

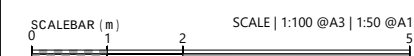
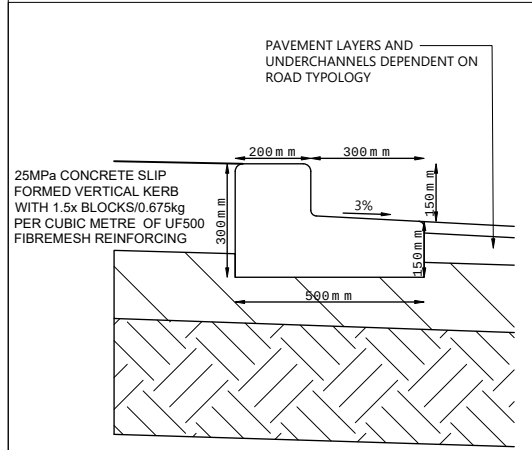
Appendix B: Roding Cross Sections



SECTION 1 - COLLECTOR ROAD (TE RATA BOULEVARD/SIM ROAD WITHOUT CYCLEWAY)



SECTION 2 - COLLECTOR ROAD (TE RATA BOULEVARD/SIM ROAD WITH CYCLEWAY)



REVISION DETAILS						Grafton Downs Ltd.	FRANKLIN 2 PRECINCT PLAN CHANGE			STATUS FOR DISCUSSION SCALE 1:100 @ A3 COUNCIL AUCKLAND COUNCIL DWG NO P24-316-00-2200-RD	REV		
1	FOR DISCUSSION	GW	17/10/24	DESIGNED			TYPICAL ROAD CROSS SECTION - (SHEET 1 OF 5)						
2	SECTION 5 ALTERED	MK	04/07/25	DRAWN									
				CHECKED									
				APPROVED									

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- NOTES:
1. AUCKLAND TRANSPORT APPROVED ASPHALT MIXES ARE TO BE USED
 2. CONTRACTOR TO CONFIRM TO ENGINEER INSITU SUBGRADE CBR PRIOR TO TRIMMING TO FINAL SUBGRADE LEVELS TO CONFIRM PAVEMENT DEPTHS
 3. CONTRACTOR TO UNDERTAKE REACTIVITY TESTING ON SUBGRADE AND SUBMIT RESULTS TO ENGINEER TO CONFIRM QUANTITY AND TYPE OF STABILISING AGENT. DEFLECTION AND CURVATURE ON ROAD PAVEMENT TO BE AS FOLLOWS:
BOULEVARD ROADS
DEFLECTION 1.0mm CURVATURE 0.15mm
PRECINCT ROAD
DEFLECTION 1.0mm CURVATURE 0.15mm
LOCAL AND RESERVE EDGE ROADS
DEFLECTION 1.4mm
 4. NO REQUIREMENT TO TEST FOR CURVATURE ON LOCAL AND RESERVE EDGE ROAD
 5. ALL WORKS AND MATERIALS ARE TO COMPLY WITH AUCKLAND TRANSPORT STANDARDS. ANY AMBIGUITY BETWEEN DRAWINGS AND COUNCIL STANDARDS ARE TO BE REPORTED TO THE ENGINEER FOR CLARIFICATION.
 6. PRAM CROSSINGS ARE TO BE CONSTRUCTED AS PER AUCKLAND TRANSPORT STANDARDS.
 7. SERVICE TRENCHES SHOWN ARE INDICATIVE ONLY. ALL DUCTS/PIPES ARE TO BE POSITIONED AS PER RELEVANT SERVICE PROVIDER STANDARDS
 8. ALL UNDERCHANNELS AND SUBSOIL DRAINS ARE TO COMPLY WITH TNZ/F2 SPECIFICATIONS
 9. ALL LANE MARKING AND ROAD SIGNAGE IS TO BE CONSTRUCTED AS PER THE NEW ZEALAND TRANSPORT AGENCY (NZTA) MANUAL OF TRAFFIC SIGNS AND MARKINGS
 10. CONCRETE SAWCUTS ON FOOTPATHS AND KERBS TO BE AT 3m CENTRES.

LEGEND:

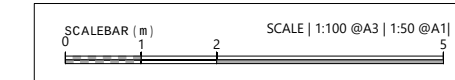
28.00m COLLECTOR ROAD (TE RATA BOULEVARD)	
24.00m PRECINCT ROAD	
15.90m LOCAL ROAD	
16.20m RESERVE EDGE ROAD	

REVISION DETAILS					
1	FOR DISCUSSION	GW	17/10/24	DESIGNED	
2	SECTION 5 ALTERED	MK	04/07/25	DRAWN	
				CHECKED	
				APPROVED	

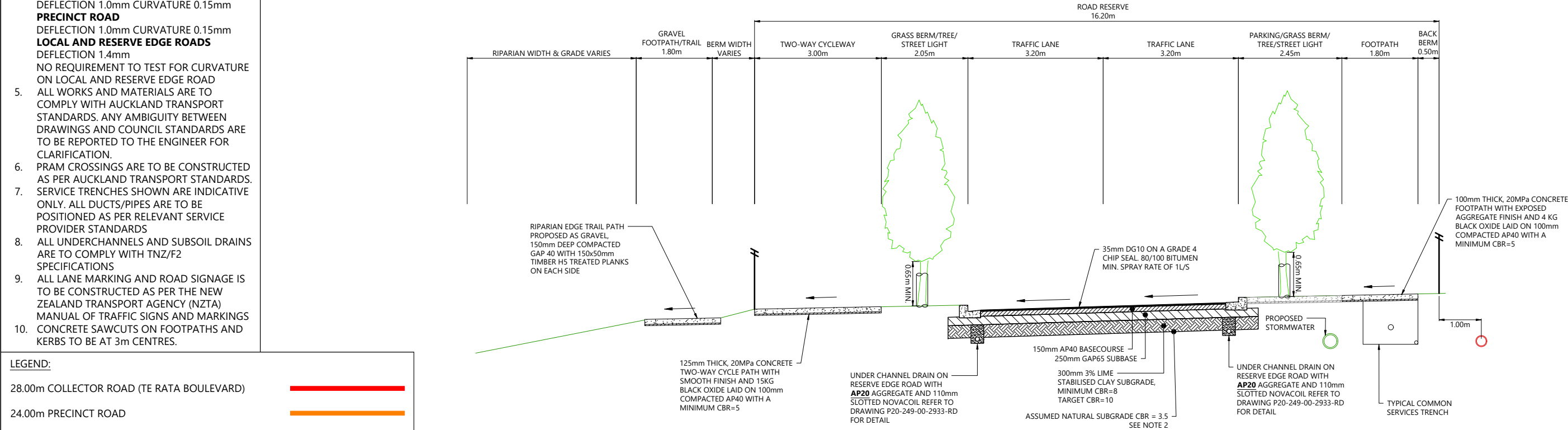
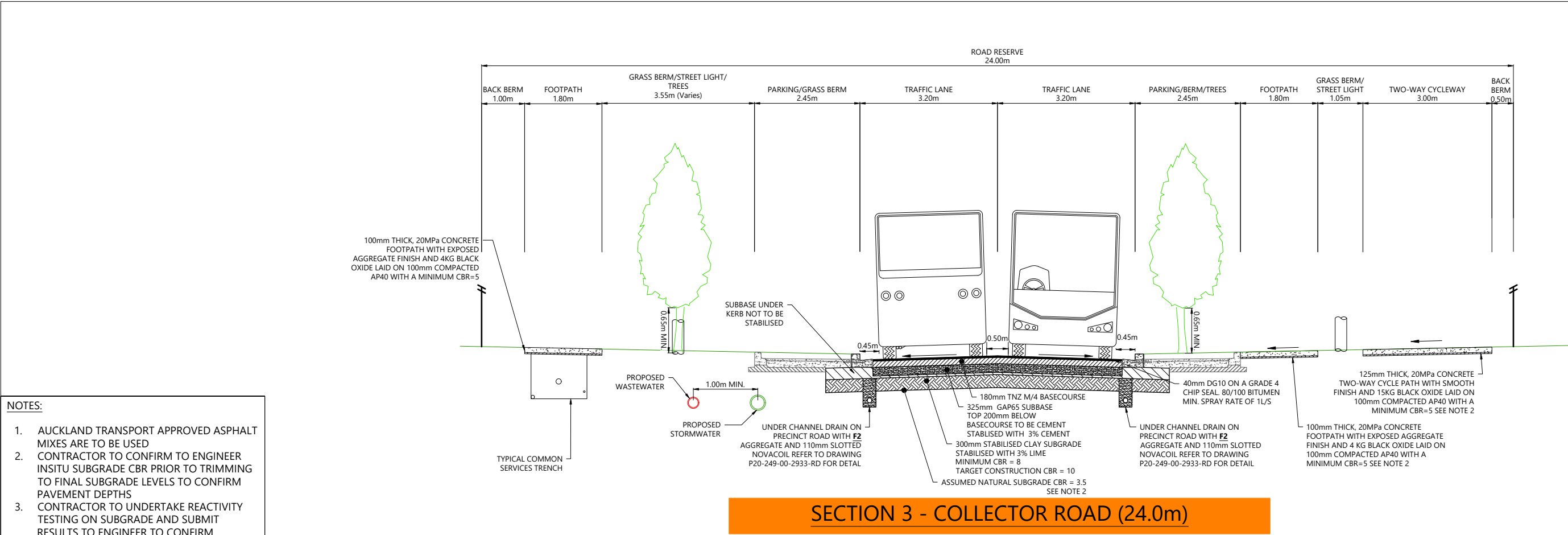
BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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FRANKLIN 2 PRECINCT PLAN CHANGE
TYPICAL ROAD CROSS SECTION - (SHEET 2 OF 5)



STATUS	FOR CONSTRUCTION	REV
SCALE	1:100 @ A3	2
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-2201-RD	



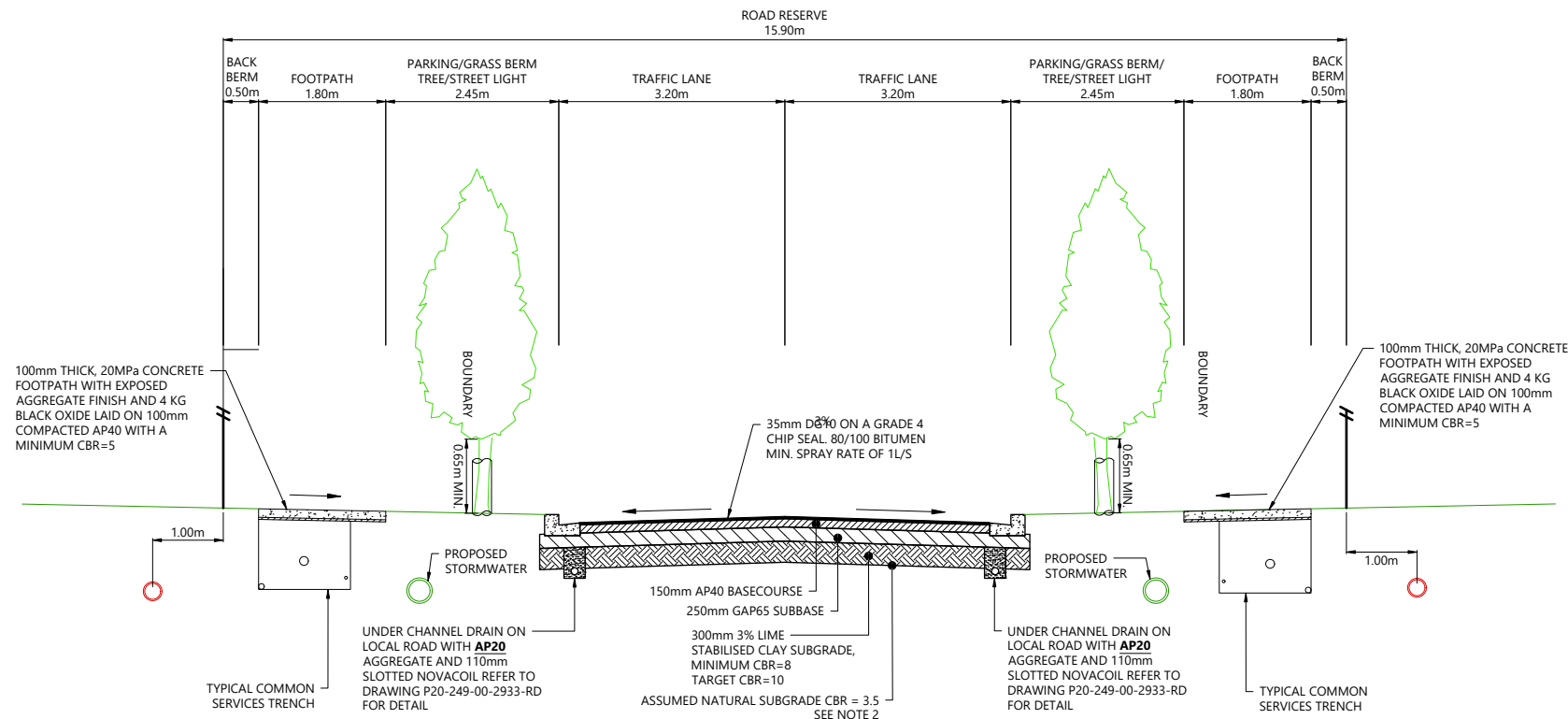
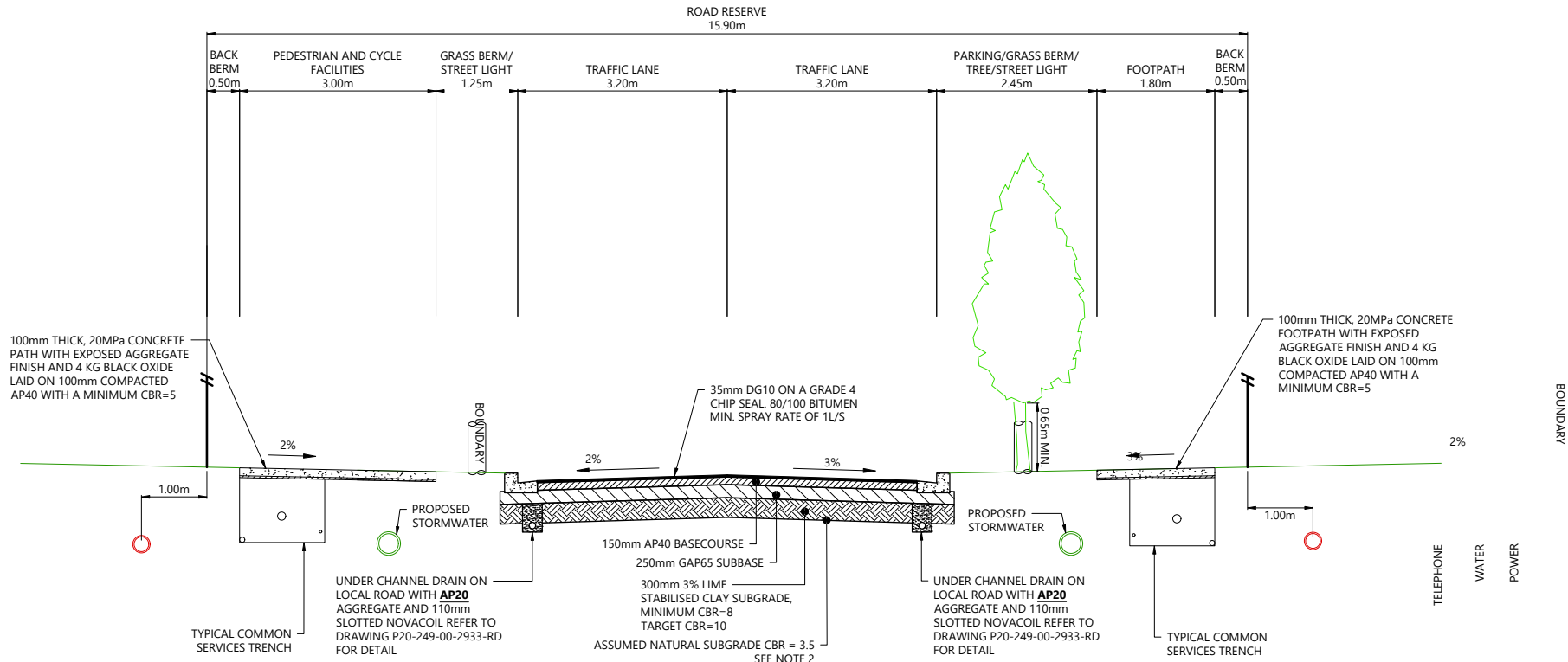
SECTION 4 - RESERVE EDGE ROAD (16.20m)

- NOTES:
1. AUCKLAND TRANSPORT APPROVED ASPHALT MIXES ARE TO BE USED
 2. CONTRACTOR TO CONFIRM TO ENGINEER INSITU SUBGRADE CBR PRIOR TO TRIMMING TO FINAL SUBGRADE LEVELS TO CONFIRM PAVEMENT DEPTHS
 3. CONTRACTOR TO UNDERTAKE REACTIVITY TESTING ON SUBGRADE AND SUBMIT RESULTS TO ENGINEER TO CONFIRM QUANTITY AND TYPE OF STABILISING AGENT.
 4. DEFLECTION AND CURVATURE ON ROAD PAVEMENT TO BE AS FOLLOWS:
BOULEVARD ROADS
DEFLECTION 1.0mm CURVATURE 0.15mm
PRECINCT ROAD
DEFLECTION 1.0mm CURVATURE 0.15mm
LOCAL AND RESERVE EDGE ROADS
DEFLECTION 1.4mm
NO REQUIREMENT TO TEST FOR CURVATURE ON LOCAL AND RESERVE EDGE ROAD
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 10. CONCRETE SAWCUTS ON FOOTPATHS AND KERBS TO BE AT 3m CENTRES.

LEGEND:

28.00m COLLECTOR ROAD (TE RATA BOULEVARD)	
24.00m PRECINCT ROAD	
15.90m LOCAL ROAD	
16.20m RESERVE EDGE ROAD	

REVISION DETAILS	INT	DATE	SURVEYED	
1 FOR DISCUSSION	GW	17/10/24	DESIGNED	JK
2 SECTION 5 AMENDED	MK	04/07/25	DRAWN	GW
3 SECTION 5 AMENDED	GW	01/08/2025	CHECKED	
			APPROVED	



FRANKLIN 2 PRECINCT PLAN CHANGE

TYPICAL ROAD CROSS SECTION - (SHEET 3 OF 5)

STATUS	FOR DISCUSSION	REV
SCALE	1:100 @ A3	3
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-2202-RD	



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8 NUGENT ST, GRAFTON,
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NOTES:

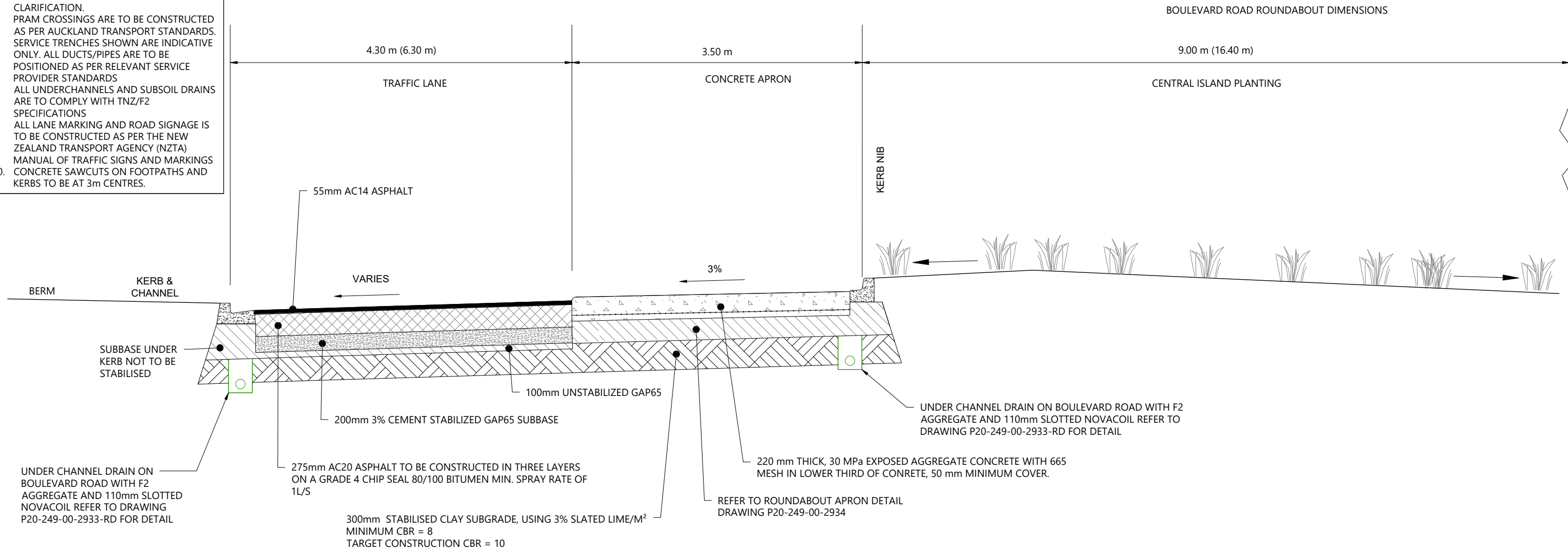
1. AUCKLAND TRANSPORT APPROVED ASPHALT MIXES ARE TO BE USED
2. CONTRACTOR TO CONFIRM TO ENGINEER INSITU SUBGRADE CBR PRIOR TO TRIMMING TO FINAL SUBGRADE LEVELS TO CONFIRM PAVEMENT DEPTHS
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4. DEFLECTION AND CURVATURE ON ROAD PAVEMENT TO BE AS FOLLOWS:

BOULEVARD ROADS
DEFLECTION 1.0mm CURVATURE 0.15mm

PRECINCT ROAD
DEFLECTION 1.0mm CURVATURE 0.15mm

LOCAL AND RESERVE EDGE ROADS
DEFLECTION 1.4mm

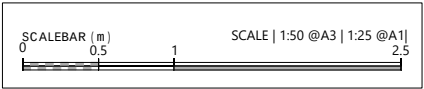
NO REQUIREMENT TO TEST FOR CURVATURE ON LOCAL AND RESERVE EDGE ROAD
5. ALL WORKS AND MATERIALS ARE TO COMPLY WITH AUCKLAND TRANSPORT STANDARDS. ANY AMBIGUITY BETWEEN DRAWINGS AND COUNCIL STANDARDS ARE TO BE REPORTED TO THE ENGINEER FOR CLARIFICATION.
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10. CONCRETE SAWCUTS ON FOOTPATHS AND KERBS TO BE AT 3m CENTRES.



TYPICAL BOULEVARD ROAD ROUNDABOUT SECTION

SCALE 1:50 @A3 1:25 @A1

0 500mm



REVISION DETAILS					INT	DATE	SURVEYED	
1	FOR DISCUSSION	GW	17/10/24	DESIGNED	JK			
2	SECTION 5 ALTERED	MK	04/07/25	DRAWN	GW			
				CHECKED				
				APPROVED				



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+64 9 308 9229

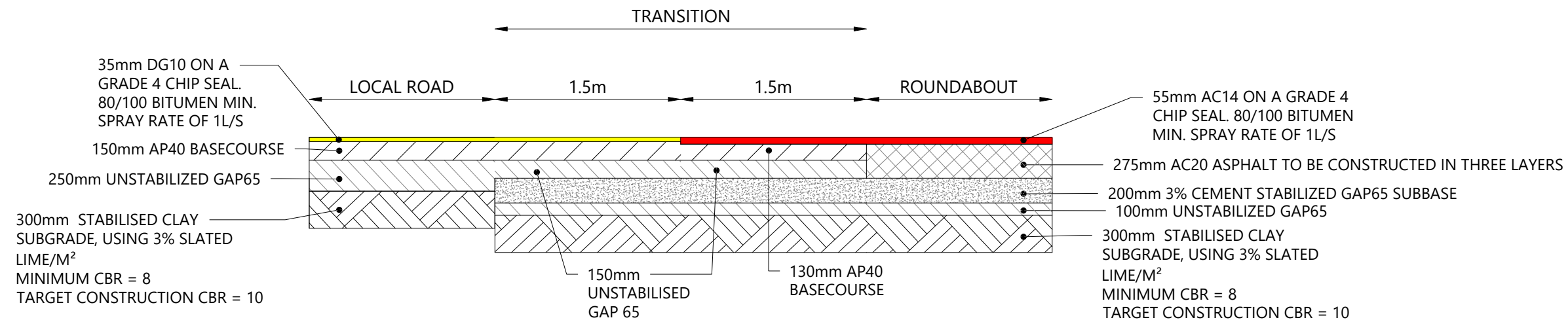
WOODS.CO.NZ



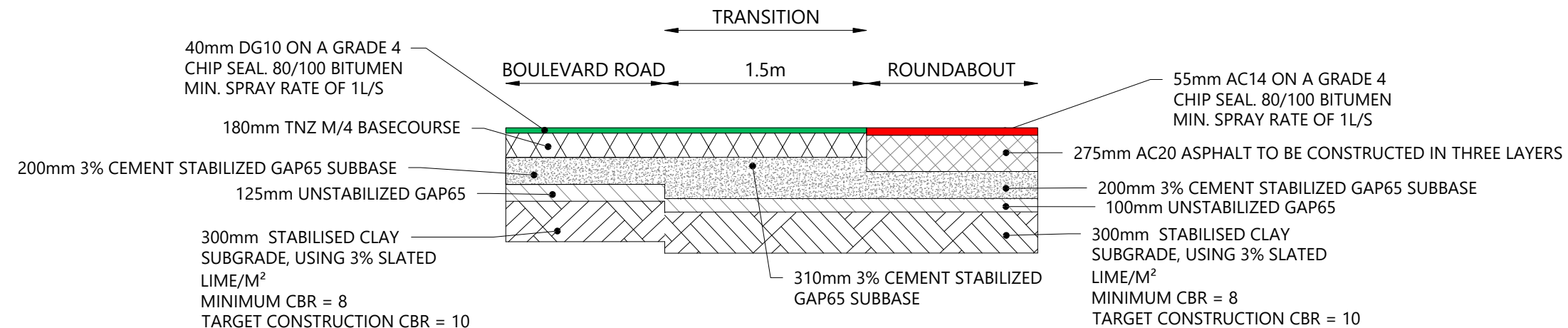
FRANKLIN 2 PRECINCT PLAN CHANGE

TYPICAL ROAD CROSS SECTION - (SHEET 4 OF 5)

STATUS	FOR DISCUSSION	REV
SCALE	1:50 @ A3	2
COUNCIL	AUCKLAND COUNCIL	
DWG NO	P24-316-00-2203-RD	



PROPOSED LOCAL ROAD & BOULEVARD ROAD ROUNDABOUT TIE-IN DETAIL



PROPOSED BOULEVARD ROAD & BOULEVARD ROAD ROUNDABOUT TIE-IN DETAIL

REVISION DETAILS						BUILDING B, LEVEL 1 8 NUGENT ST, GRAFTON, AUCKLAND 1023 +64 9 308 9229 WOODS.CO.NZ		FRANKLIN 2 PRECINCT PLAN CHANGE			STATUS			REV
1	FOR DISCUSSION	GW	17/10/24	DESIGNED							SCALE	1:50 @ A3	2	
2	SECTION 5 ALTERED	MK	04/07/25	DRAWN							COUNCIL	AUCKLAND COUNCIL		
				CHECKED							DWG NO	P24-316-00-2204-RD		
				APPROVED										

Appendix C: Woods Franklin 2 Plan Change Flooding Assessment

To

Grafton Downs Limited (GDL)

From

Woods

Shakti Singh – Three Waters Engineer

Jam Ortega – Graduate Three Waters Engineer

W-REF: P24-316 Franklin 2 Precinct

4 October 2024

Reviewer: Sakti Gounder – Senior Associate Engineer

Franklin 2 Plan Change Flooding Assessment

1. Introduction

Grafton Downs Limited are proposing a new plan change for Franklin 2 precinct area. This memorandum has been prepared to detail the flood assessment undertaken in support of the proposed plan change. The flood assessment has been undertaken to evaluate any adverse flood effects that may be caused by the proposed plan change on areas upstream and downstream of the proposed plan change extent.

It is noted that there is an SMP prepared by Woods for the Wesley College Precinct area, named 'Wesley College Paerata North Stormwater Management Plan', version G, dated 05-10-2016 (referred to as Paerata North SMP). The flood modelling undertaken for the proposed Plan Change further builds on the flood models developed during the preparation of the Paerata North SMP. The details regarding the flood model build can be found in the 'Wesley College Paerata North Flood Model', version A, dated 31-05-2016. This memorandum provides details of the updates made to the flood model to undertake the flood assessment.

2. Plan Change

2.1. Existing zoning

Majority of the area within the precinct is zoned Mixed Housing Urban (MHU) under the Auckland Unitary Plan. There is also a Local Centre Zone towards the western boundary of the precinct and a new business centre (Local Centre Zone) has been established towards the northern boundary of the precinct area.

Figure 1 shows the existing zoning within the precinct area. Table 1 provides a summary of impervious coverages within the precinct area.

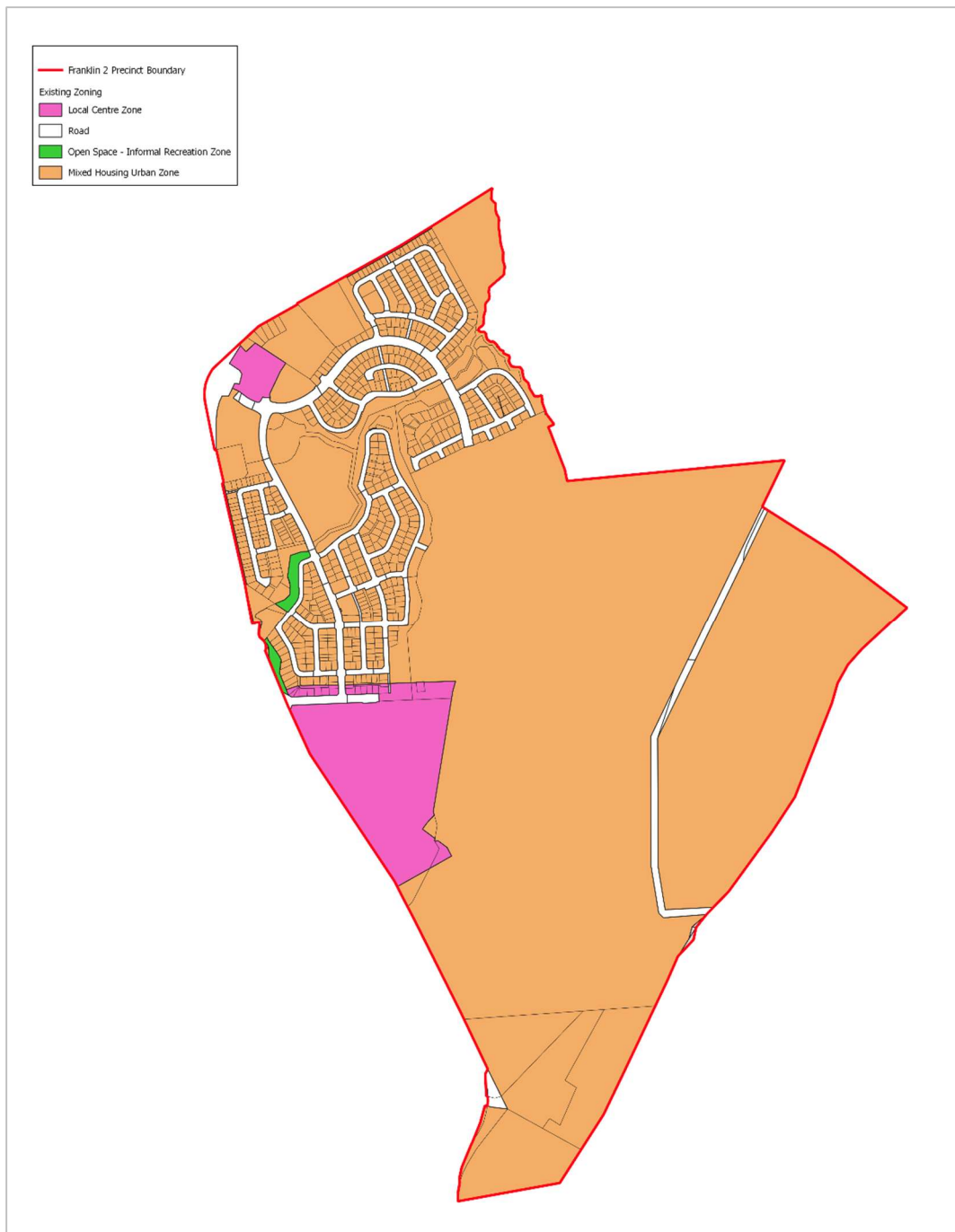


Figure 1: Existing Zoning (as per AUP)

Table 1: Existing zoning

Zone Description	Total area (ha)	Impervious area (ha)	Pervious area (ha)	Impervious %
Business - Local Centre Zone	17.79	17.79	0	100%
Business - Metropolitan Centre Zone	1.73	1.73	0	100%
Water	0.03	0.03	0	100%
Strategic Transport Corridor	0.17	0.17	0	100%
Road	21.75	19.58	2.17	90%
Open Space - Informal Recreation Zone	0.91	0.091	0.819	10%
Residential - Mixed Housing Urban Zone	251.6	150.96	100.64	60%
Total	293.98	190.35	103.63	

2.2. Proposed zoning

The plan change puts forward the proposal of establishing new Terrace Housing and Apartment Building zone (THAB) and Mixed-Use Zone, and a rearrangement of the Local Centre Zone land area towards the south-eastern and northern boundary of the precinct.

Figure 2 shows the proposed zoning within the precinct area. Table 2 provides a summary of the areas for each proposed zone and the change in the total impervious coverage within the precinct.

It is noted that there is 1.2% decrease in net impervious coverage from the new proposed plan change within the precinct.

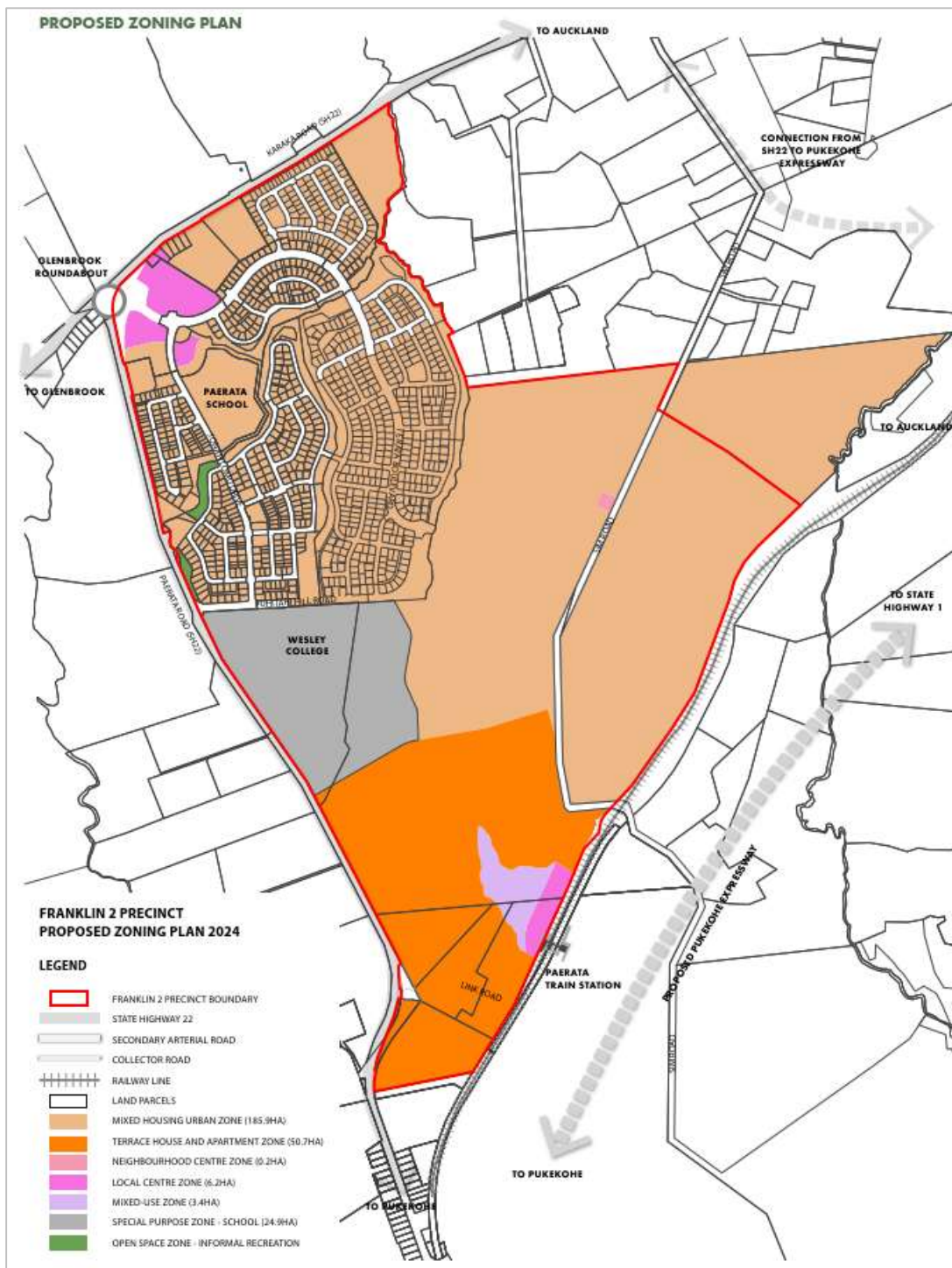


Figure 2: Proposed zoning

Table 2: Proposed zoning

Zone Description	Total area (ha)	Impervious area (ha)	Pervious area (ha)	Impervious %
Business - Local Centre Zone	6.14	6.14	0	100%
Residential - Terrace Housing and Apartment	50.53	30.32	20.21	60%
Business - Mixed Use Zone	3.44	2.75	0.69	80%
Residential - Mixed Housing Suburban Zone	1.88	1.13	0.75	60%
Water	0.03	0.03	0	100%
Strategic Transport Corridor	0.17	0.17	0	100%
Road	21.62	19.45	2.16	90%
Open Space - Informal Recreation Zone	0.91	0.09	0.82	10%
Residential - Mixed Housing Urban Zone	184.30	110.58	73.72	60%
Special Purpose - School Zone	24.96	17.47	7.49	70%
Total	293.98	188.14	105.84	
Net Change from existing zoning	0.0%	-1.2%	2.13%	

3. Model updates

3.1. Model scenarios

3.1.1. Base model

The flood modelling undertaken for the Paerata North SMP aligned with the concept land use plan at the time, which proposed an impervious coverage increase from 5% to 50%. Following the adoption of Auckland Unitary Plan (AUP), the flood modelling was revised as per the AUP zoning.

The revised flood modelling has been considered as the 'base' model scenario to evaluate the flood effects that may result from the new proposed plan change.

3.1.2. Plan change model

The 'plan change' model builds on the 'base' model scenario and updates subcatchment imperviousness based on the proposed zoning within the precinct area.

Table 3 provides a summary of the total model catchment area and the net change in imperviousness from the base model scenario to the Plan Change model scenario.

It should be noted that the plan change scenario models assume that the areas zoned 'THAB' in the zoning plan (Figure 2) are modelled at 60% impervious coverages to minimise any upstream effects resulting from the development.

Table 3: Summary of model catchment area

	Base model		Plan Change model (THAB at 60%)		Net Change	
	Impervious area (ha)	Pervious area (ha)	Impervious area (ha)	Pervious area (ha)	Impervious area (ha)	Pervious area (ha)
All model catchments	333.8	228.9	331.6	231.1	-2.3	2.3
				% Change	-0.7%	1.0%

3.2. Storm events

The model scenarios have been simulated for 2-, 10- and 100-year ARI storm events with allowances for a future temperature increase of 2.1°C and 3.8°C. The increased 24-hour rainfall depth and changed dimensionless TP108 rainfall profile has been accounted for in the flood model as per the information provided in Auckland Council's Stormwater Code of Practice, Version 3.

Table 4 provides a summary of the existing and future 24-hour rainfall depths.

Table 4: 24-hour modelled rainfall depths

	ARI storm event	Existing rainfall depth (mm)	Rainfall depth with allowance for 2.1°C temperature increase (mm)	Rainfall depth with allowance for 3.8°C temperature increase (mm)
Rainfall depth	2-year	55	60	70
	10-year	100	113	131
	100-year	160	187	212

3.3. Model scenario summary

Table 5 provides a summary of all the model scenarios simulated for the purposes of the assessment.

Table 5: Simulated model scenario summary

Scenario number	Model Scenario	Storm event	Climate Change allowance
1	Base Model	2-year	2.1°
2			3.8°
3		10-year	2.1°
4			3.8°
5		100-year	2.1°
6			3.8°
7	Plan Change Model (THAB at 60%)	2-year	2.1°
8			3.8°
9		10-year	2.1°
10			3.8°
11		100-year	2.1°
12			3.8°

4. Model results

The model results (maximum flood depth) for each scenario have been used to prepare afflux plots. Afflux plots, also known as difference plots, are created by calculating the difference in flooding between two model scenarios. They help assess whether there are increases or decreases in flood depths or extents. These plots have been used to assess if there is any flood effect caused by the proposed plan change on areas upstream or downstream of the plan change extent. It is noted that differences less than 50mm have been filtered.

For the purposes of discussion, only 100-year 2.1°C and 100-year 3.8° ARI storm event have been included in the body of this memo. For the afflux plots for all modelled scenarios, please refer to Appendix A.

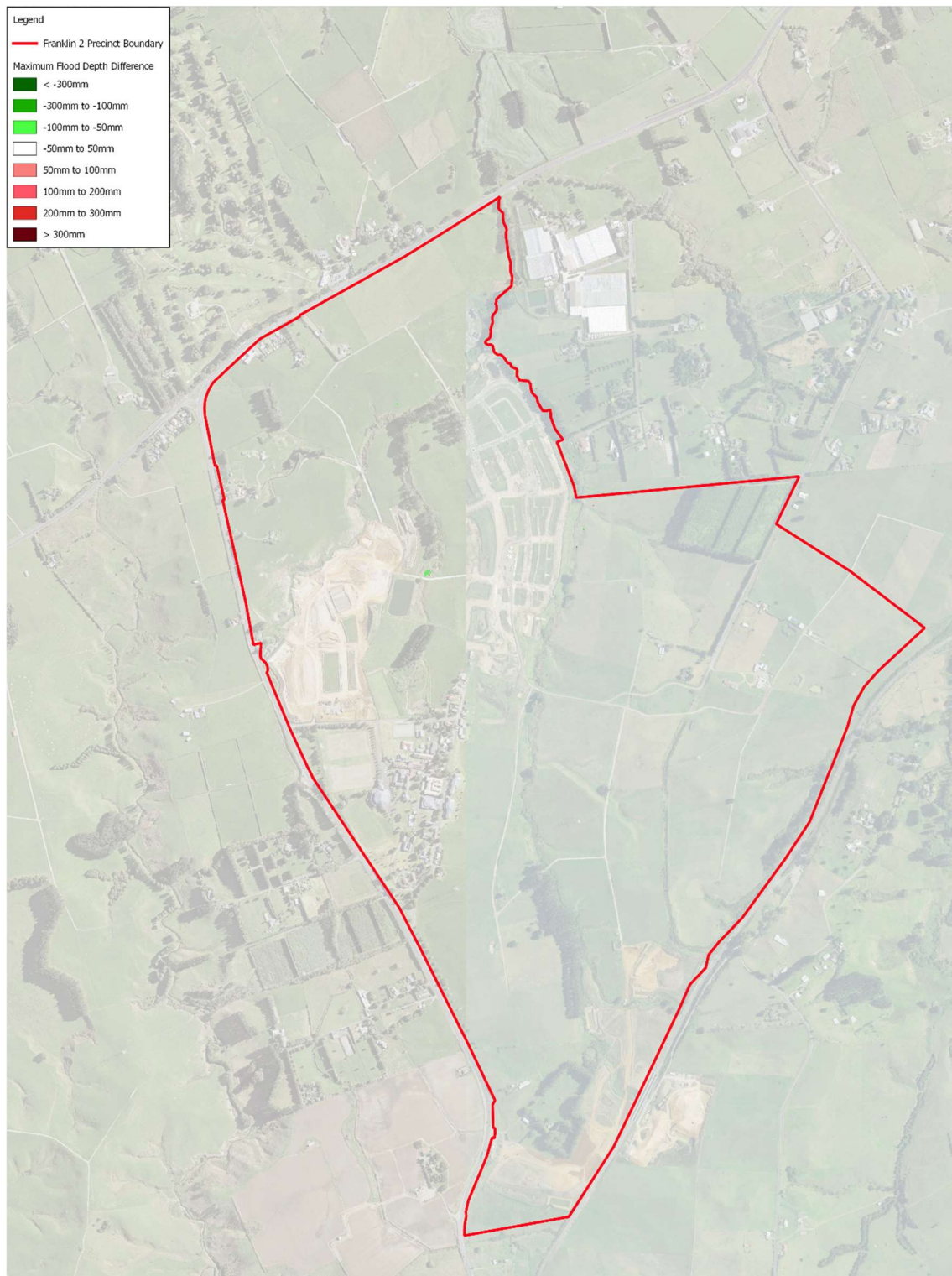


Figure 3: Afflux plot - Scenario 11 (plan change model, THAB at 60%) vs Scenario 5 (base model) (100-year 2.1°C storm event)

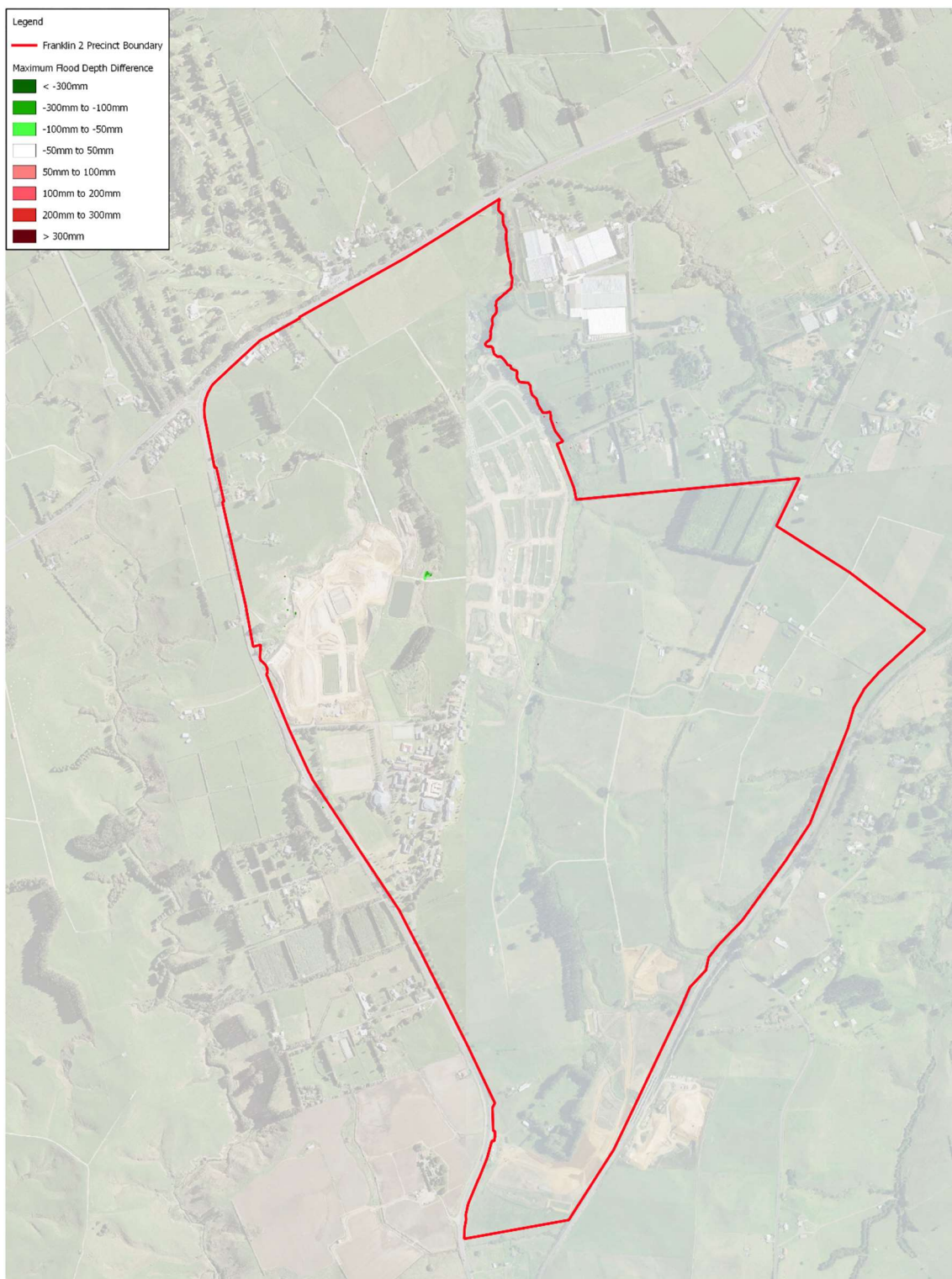


Figure 4: Afflux plot - Scenario 12 (plan change model, THAB at 60%) vs Scenario 6 (base model) (100-year 3.8°C storm event)

The afflux plots between the base model scenario and Plan Change model scenario (with THAB at 60%) show that:

- There is no major flood increase observed within and outside the precinct area for the 2.1°C and 3.8°C climate change scenario.
- It is concluded that with THAB areas at 60% impervious coverages, the proposed plan change is not anticipated to have any adverse flood effects on areas upstream or downstream of the proposed plan change extent.

5. Conclusion

Grafton Downs Limited are proposing a new plan change within the Franklin 2 Precinct area. Woods have undertaken a flood assessment to evaluate if there are any adverse flood effects caused by the proposed plan change on areas upstream or downstream of the proposed plan change extent.

The net change in impervious coverage caused by the proposed plan change is calculated to be 1.2% which is considered negligible.

Flood modelling was undertaken as part of the assessment where two model scenarios (base and Plan Change scenarios) were developed:

- The base model scenario considers impervious coverage as per the current AUP zoning
- The Plan Change model scenario considers impervious coverage as per the new plan change zoning, specifically considering impervious coverage of 60% for THAB.
- The model scenarios were simulated for 2, 10 and 100 year ARI storm events with allowance for 2.1°C and 3.8°C future temperature increase.

Model results were extracted for each simulation and afflux plots were produced between the base model scenario and Plan Change model scenario.

The 100 year afflux plots show that there are no major increases observed within the precinct area for the 2.1°C and 3.8°C climate change scenarios.

APPENDIX A – AFFLUX PLOTS



REVISION DETAILS					INT	DATE	SURVEYED	-	BUILDING B, LEVEL - 1, NUGENT STREET, GRAFON, AKL - 1023		WOODS Est. 1970		P24-316 FRANKLIN 2 PLAN CHANGE PLAN CHANGE MODEL SCENARIO 7 vs BASE SCENARIO 1 - (2YR 2.1°C STORM EVENT) MAXIMUM FLOOD DEPTH DIFFERENCE		STATUS	ISSUED FOR INFORMATION	REV
1.0	FOR INFORMATION	-	03/10/2024	DESIGNED	SS										SCALE	NTS	1.0
-	-	-	-	DRAWN	JO										COUNCIL	AUCKLAND COUNCIL	
-	-	-	-	CHECKED	SG										SHEET	SHEET 1 OF 6	
-	-	-	-	APPROVED	-												

Legend

Franklin 2 Precinct Boundary

Maximum Flood Depth Difference

< -300mm

-300mm to -100mm

-100mm to -50mm

-50mm to 50mm

50mm to 100mm

100mm to 200mm

200mm to 300mm

> 300mm

REVISION DETAILS					INT	DATE	SURVEYED	-	BUILDING B, LEVEL - 1, NUGENT STREET, GRAFON, AKL - 1023		STATUS		ISSUED FOR INFORMATION	REV
1.0	FOR INFORMATION	-	03/10/2024	DESIGNED	SS				WOODS Est. 1970	P24-316 FRANKLIN 2 PLAN CHANGE PLAN CHANGE MODEL SCENARIO 8 vs BASE SCENARIO 2 - (2YR 3.8°C STORM EVENT) MAXIMUM FLOOD DEPTH DIFFERENCE	SCALE	NTS	AUCKLAND COUNCIL	1.0
-	-	-	-	DRAWN	JO			COUNCIL		SHEET 2 OF 6				
-	-	-	-	CHECKED	SG									
-	-	-	-	APPROVED	-									



REVISION DETAILS					INT	DATE	SURVEYED	-	BUILDING B, LEVEL - 1, NUGENT STREET, GRAFTON, AKL - 1023		WOODS Est. 1970		P24-316 FRANKLIN 2 PLAN CHANGE PLAN CHANGE MODEL SCENARIO 9 vs BASE SCENARIO 3 - (10YR 2.1°C STORM EVENT) MAXIMUM FLOOD DEPTH DIFFERENCE				STATUS	ISSUED FOR INFORMATION	REV
1.0	FOR INFORMATION	-	03/10/2024	DESIGNED	SS												SCALE	NTS	1.0
-	-	-	-	DRAWN	JO												COUNCIL	AUCKLAND COUNCIL	
-	-	-	-	CHECKED	SG														
-	-	-	-	APPROVED	-												SHEET	SHEET 3 OF 6	

Legend

Franklin 2 Precinct Boundary

Maximum Flood Depth Difference

< -300mm

-300mm to -100mm

-100mm to -50mm

-50mm to 50mm

50mm to 100mm

100mm to 200mm

200mm to 300mm

> 300mm

REVISION DETAILS					INT	DATE	SURVEYED	-	BUILDING B, LEVEL - 1, NUGENT STREET, GRAFTON, AKL - 1023 WOODS Est. 1970	P24-316 FRANKLIN 2 PLAN CHANGE PLAN CHANGE MODEL SCENARIO 10 vs BASE SCENARIO 4 - (10YR 3.8°C STORM EVENT) MAXIMUM FLOOD DEPTH DIFFERENCE				STATUS	ISSUED FOR INFORMATION	REV
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-	-	-	-	CHECKED	SG	SHEET	SHEET 4 OF 6									
-	-	-	-	APPROVED	-											

Legend

Franklin 2 Precinct Boundary

Maximum Flood Depth Difference

< -300mm

-300mm to -100mm

-100mm to -50mm

-50mm to 50mm

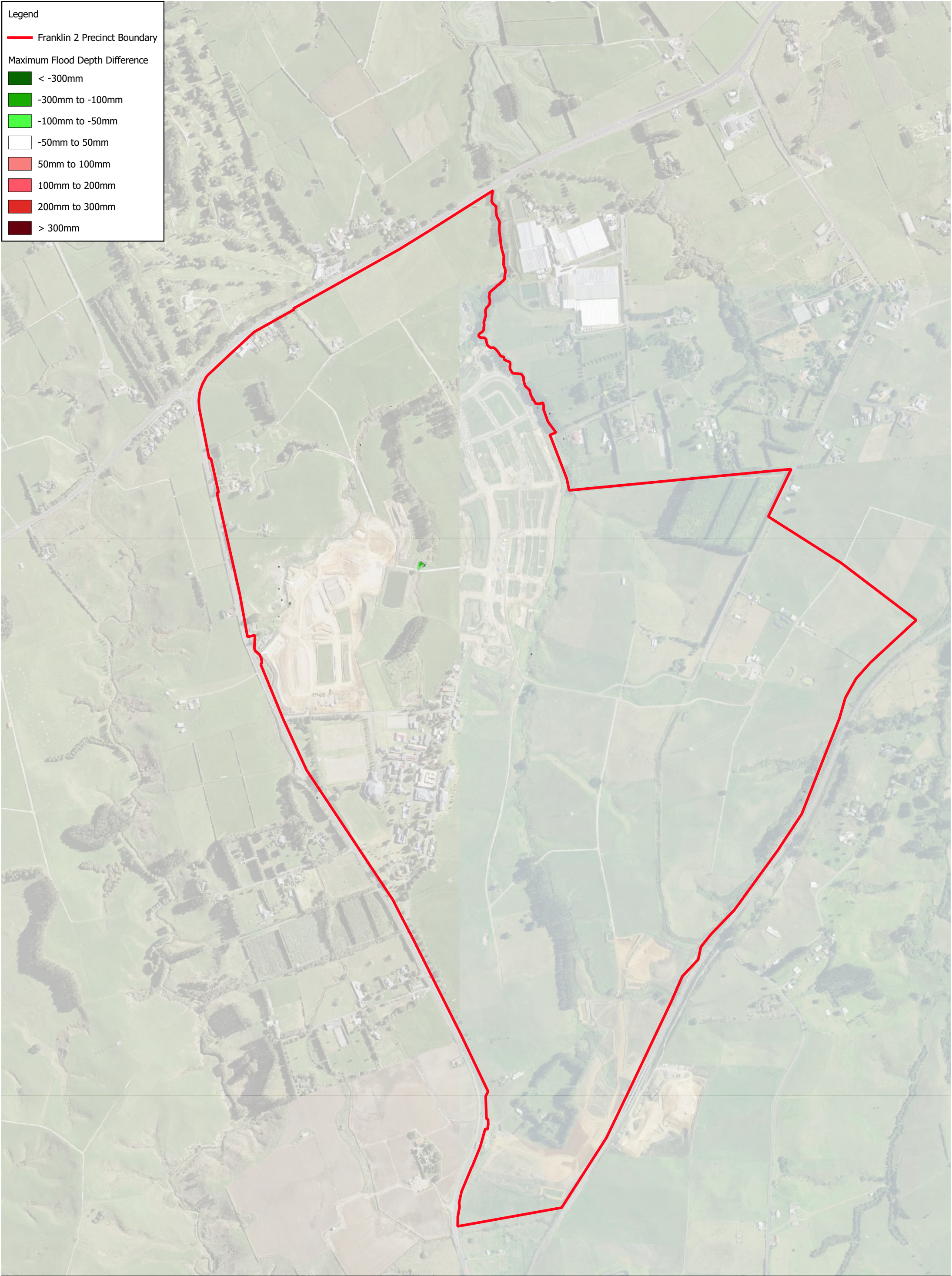
50mm to 100mm

100mm to 200mm

200mm to 300mm

> 300mm

REVISION DETAILS					INT	DATE	SURVEYED	-	BUILDING B, LEVEL - 1, NUGENT STREET, GRAFTON, AKL - 1023 WOODS Est. 1970	P24-316 FRANKLIN 2 PLAN CHANGE PLAN CHANGE MODEL SCENARIO 11 vs BASE SCENARIO 5 - (100YR 2.1°C STORM EVENT) MAXIMUM FLOOD DEPTH DIFFERENCE		STATUS	ISSUED FOR INFORMATION	REV
1.0	FOR INFORMATION	-	03/10/2024	DESIGNED	SS							SCALE	NTS	1.0
-	-	-	-	DRAWN	JO							COUNCIL	AUCKLAND COUNCIL	
-	-	-	-	CHECKED	SG							SHEET	SHEET 5 OF 6	
-	-	-	-	APPROVED	-									



REVISION DETAILS		INT	DATE	SURVEYED	-	 WOODS Est. 1970	P24-316 FRANKLIN 2 PLAN CHANGE PLAN CHANGE MODEL SCENARIO 12 vs BASE SCENARIO 6 - (100YR 3.8°C STORM EVENT) MAXIMUM FLOOD DEPTH DIFFERENCE		STATUS	ISSUED FOR INFORMATION	REV
1.0	FOR INFORMATION	-	03/10/2024	DESIGNED	SS				SCALE	NTS	1.0
-	-	-	-	DRAWN	JO				COUNCIL	AUCKLAND COUNCIL	
-	-	-	-	CHECKED	SG				SHEET	SHEET 6 OF 6	
-	-	-	-	APPROVED	-						

Appendix D - Wastewater and Water Calculations

PAERATA RISE

Sheet #: 1 of 1

Project #: P24-316

By: JK

Date: 22/07/2025

Wastewater Calculations

1. Flow Calculations

Items	Inputs							Calculations - Combined	
Description	#DUE	Cum. DUE	Persons per DUE	Population (p)	Daily Flow (l/p/day)	Peaking Factor	ADWF (l/s)	ADWF (l/s) Cumulative	PWWF (l/s)
Residential Lots 3 stories or less	3824	3824	3	11472	180	6.7	23.90	23.90	160.13
Residential Lots 4 stories or more	1319	5143	3	15429	180	5.0	8.24	32.14	201.35
Schools (300 students Boarding)	100	5243	3	15729	140	6.7	0.49	32.63	204.61
Schools (100 students day students)	34	5277	3	15831	20	6.7	0.02	32.65	204.76
Schools (98 Staff)	33	5310	3	15930	45	6.7	0.05	32.71	205.11
Schools (16 Staff with onsite accomodation)	6	5316	3	15948	180	6.7	0.038	32.74	205.36
Commercial areas (7.25+3.4=10.65 Ha) (1l/s/Ha) (Peaking factor PWWF = 6.7) ADWF Flow = 1x10.65=10.65l/s~ 1700 DUE	1704	7020	3	21060	180	6.7	10.65	43.39	276.72

Notes

1. Flow based on WSL CoP Section 5.3.5.1
2. Average Dry Weather Flow based on WSL CoP Section 5.3.5.1
3. Peak Wet Weather Flow peaking factor based on WSL CoP

PAERATA RISE**Water Calculations****1. Flow Calculations**

Sheet #: 1 of 1

Project #: P24-316

By: JK

Date: 22/07/2025



Items	Inputs				Calculation				
Description	#DUE	Cum. DUE	Persons per DUE (2-4 bedroom)	Population (p)	Daily Demeand (l/p/day)	Average Daily Demand (L/d)	Peak Day demand (2 x Average) (l/d)	Peak hour demand (2.5 x average) (l/h)	Peak demand (l/s)
Residential Lots 3 stories or less	3824	3824	3	11472	220	2523840	5047680.00	525800.00	146.06
Residential Lots 4 stories or more	1319	5143	3	3957	220	870540	1741080.00	181362.50	50.38
Schools (300 students Boarding)	100	5243	3	300	160	48000	96000.00	10000.00	2.78
Schools (100 students day students)	34	5277	3	102	25	2550	5100.00	531.25	0.15
Schools (98 Staff)	33	5310	3	99	50	4950	9900.00	1031.25	0.29
Schools (16 Staff with onsite accomodation)	6	5316	3	18	220	3960	7920.00	825.00	0.23
Commercial areas Dry Retail (see calculations below)		5316				9373	18746.00	1952.71	0.54
Commercial areas Office Building (see calculations below)		5316				9815	19630.00	2044.79	0.57
Commercial areas Wet Retail Retail (see calculations below)		5316				134175	268350.00	27953.13	7.76
Total				15948		3607203.00	7214406.00	751500.63	208.75

Notes

1. Flow based on WSL CoP Section 5.3.5.1
2. Average Dry Weather Flow based on WSL CoP Section 5.3.5.1
3. Peak Wet Weather Flow peaking factor based on WSL CoP

Commercial area				
	Business - local Centre Zone (Northern Commercial)	Business - Neighbourhood Centre Zone	Business - local Centre Zone (Paerata Station)	Business - Mixed Use Zone
Gross Area Zoned (Ha)	5.29	0.23	1.75	3.4
Net Developable Area	4.64	0.23	1.24	0.91
Land Which wil profice GFA	29%	32%	39%	12%
GFA (Ha)	1.3456	0.0736	0.4836	0.1092
GFA by Mixture of use				
Dry Retail				
				Design Water flow allownace
				total design water flow
Retail	4725	365	1595	525
				1 person per 50m2 floor area at 65 litres per person per day
				9373 l/day
Office				
office	2265			
				1 person per 15m2 floor area at 65 litres per person per
				9815 l/day
Wet Retail				
Supermarket	3200			
Food and Beverage	1060	365	1595	525
Medical Centre	2200			
				15l/day per m2 of floor area
				134175 l/day
Total	13450	730	3190	1050
				153363 l/day
Average daily water flow				153363 l/day
Peak day factor				x 2 306726 l/day
Peak hourly factor				x 2.4 31950.625 l/hour
Peak flow				8.875173611 l/s

Appendix E - Correspondence with Watercare

MEETING MINUTES – 4th OCTOBER 2024:

FRANKLIN 2 PRECINCT PLAN CHANGE VARIATION (PAERATA RISE)

BETWEEN: WATERCARE (WSL) & GRAFTON DOWNS LIMITED (GDL)

LOCATION: WATERCARE OFFICES, REMUERA RD, NEWMARKET

PRESENT: OLIVER MACKINNON, WSL
AMBER TAYLOR, WSL
MARK WILLIAMS, WOODS
ROSS TAYLOR, GDL
TRAVIS COFFEY, GDL

INTRODUCTION:

GDL explained that in 2023 Grafton Downs Ltd sought consent from Auckland Council to develop a commercial centre at the northern end of the Precinct. The main reason for the commercial centre's revised location was due to the decision made by the Wesley College Trust Board that the existing college were to remain at its current site (which is currently zoned for Commercial Activities) therefore an alternative site within the Precinct had to be found to service town's commercial activities.

The commissioners of the publicly notified consent declined the application, with GDL appealing the decision. In the subsequent Environment Court mediation process Auckland Council agreed to the development of the supermarket at 3 Te Rata Boulevard and that GDL would lodge a Private Plan Change request to update the zoning applied to the Franklin 2 Precinct in the Auckland Unitary Plan.

GDL advised WSL that it was preparing a private plan change application which would include the redistribution of the commercial areas within the Precinct. GDL was also to review the appropriateness of the existing zoning applied to the surrounding area of the new rail station and seek to give effect to the NPS-UD.

It was confirmed the scale of Paerata Rise would not differ from that originally intended and that the parties would continue its communication in regard to timing of development stages.

Glenn Wright

From: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>
Sent: Thursday, 13 June 2024 4:20 pm
To: Marcel Bear
Cc: Glenn Wright; Mark Williams
Subject: RE: Major developments in South Auckland

Hi Marcel,

I can confirm the watermain from Drury is on track for the below date. On the wastewater side, there may be some movement on those projects. I'll need to confirm with our delivery team and get back to you.

Ngā mihi

Oliver MacKinnon | Development Lead

Watercare Services Limited
Mobile: +64 21 224 2097
Customer service line: +64 9 442 2222
Postal address: Private Bag 92 521, Wellesley Street, Auckland 1141, New Zealand
Physical address: 73 Remuera Road, Remuera, Auckland 1050, New Zealand
Website: www.watercare.co.nz



From: Marcel Bear <marcel.bear@woods.co.nz>
Sent: Wednesday, June 12, 2024 1:55 PM
To: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>
Cc: Glenn Wright <Glenn.Wright@woods.co.nz>; Mark Williams <mark.williams@woods.co.nz>
Subject: RE: Major developments in South Auckland

Hi Oliver

Thanks for reaching out, Woods has several active developments in the south that we have regular interactions with Watercare about, concerning water and wastewater servicing. This includes Paerata township and Drury Centre. Our questions concern the Paerata development:

- Paerata Township for GDL Ltd: A 5000 lot development at Wesley College serviced out of Pukekohe, some 10 km away.
- Initial stage of 1000 lots underway, with some 400 houses occupied as at March 2024.
- Water supply is currently from Pukekohe via a 250mm OD line into a local on ground reservoir. Supply is guaranteed by Watercare for up to 1000 lots. Future servicing confirmed by Watercare to be from a new pipeline from Drury/Flanagans Rd by 2026.
- Wastewater currently drains into the local Te Paea pumpstation that has capacity for 1000 lots, which pumps back to Pukekohe, via a 280 OD PN16 PE pipeline, some 7 km long. This discharges into the Pukekohe network. A new rising main and pumpstation is planned to service the future flows.

We would like an update on the water and wastewater servicing, specifically:

- *Confirmation that Watercare will install the new water supply pipeline from Drury in the timeframe previously stated (2026)*

- Confirmation that Watercare will install a new pumpstation at Paerata by 2026 with rising main to Pukekohe and complete the receiving pumpstation at Isobel reserve, Pukekohe.

When would be a good time to meet up and get an update on Paerata township servicing.

Thank you

Marcel



Marcel Bear

BE(Civil)Hons CPEng

Principal 3 Waters Engineer

☎ +64 9 308 9229 | 📱 +64 21 102 5485

✉ marcel.bear@woods.co.nz

woods.co.nz



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From: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>

Sent: Wednesday, June 12, 2024 7:56 AM

To: Marcel Bear <marcel.bear@woods.co.nz>

Subject: RE: Major developments in South Auckland

Hi Marcel,

My name is Oliver and I am the new programme lead for southern developments. Please let me know how I can be of assistance.

Ngā mihi

Oliver MacKinnon | Development Lead

Watercare Services Limited

Mobile: +64 21 224 2097

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Postal address: Private Bag 92 521, Wellesley Street, Auckland 1141, New Zealand

Physical address: 73 Remuera Road, Remuera, Auckland 1050, New Zealand

Website: www.watercare.co.nz



From: Michelle Whitaker <Michelle.Whitaker@water.co.nz>

Sent: Tuesday, June 11, 2024 3:48 PM

To: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>; Mark Iszard <Mark.Iszard@water.co.nz>

Subject: FW: Major developments in South Auckland

Hi @Oliver MacKinnon@Mark Iszard,

Marcel Bear is wanting to get in touch, will leave you to respond?

Ngā mihi (kind regards),

Michelle Whitaker

Development Programme Lead – Major Developments

Kaihautū Mataamua, Hōtaka Whakapakari l Ngā Hanganga Matua

MSc Environmental Management, ANZPI

Watercare Services Limited

Mobile: +64 21 574 266

Customer service line: +64 9 442 2222

Postal address: Watercare, Private Bag 92 521, Victoria St West, Auckland 1142, New Zealand

Physical address: 73 Remuera Road, Remuera, Auckland 1050, New Zealand

Website: www.watercare.co.nz

<http://www.waterforlife.org.nz/water-saving-tips>

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From: Marcel Bear <marcel.bear@woods.co.nz>

Sent: Tuesday, June 11, 2024 3:37 PM

To: Michelle Whitaker <Michelle.Whitaker@water.co.nz>

Cc: Glenn Wright <Glenn.Wright@woods.co.nz>

Subject: Major developments in South Auckland

Hi Michelle

I understand Kerryn is no longer looking after major developments in the south, having accepted a position at the DPO.

Please let me know who we can ask about southern developments, I am thinking about water and wastewater in the Paerata development.

Thanks

Marcel



Marcel Bear

BE(Civil)Hons CPEng

Principal 3 Waters Engineer

☎ +64 9 308 9229 | 📱 +64 21 102 5485

✉ marcel.bear@woods.co.nz

woods.co.nz



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Underground Service Location

Reveal depth & location of underground assets for designs and excavations



Glenn Wright

From: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>
Sent: Friday, 21 June 2024 4:17 pm
To: Marcel Bear
Cc: Glenn Wright; Mark Williams; Travis Coffey; Ross Taylor
Subject: RE: Major developments in South Auckland

Hi Marcel,

Current forecasts:

Pukekohe North PS – 2028

Te Paea PS Upgrade – can be completed once the Pukekohe North PS has been completed, so sometime after 2028 depending on coordination between our delivery teams for each project.

Rising mains – in coordination with the Paea upgrade.

We are close to completing the concept design for the te Paea upgrade and associated rising main, however constraints downstream at the Franklin Road PS has affected the timeline of these projects.

Te Paea is currently operating at 20l/s. Once Pukekohe North PS is complete, it can operate at 36l/s and accommodate about 2000 DUEs. So I think we should be okay in terms of servicing the Grafton Downs development. Communication will be key to ensure we are aligned in terms of timing.

Could you please provide me with your current staging plan, and if possible, confirm when the development will hit 1300 DUEs, 2200 DUEs and 2600 DUEs. I appreciate this will be an estimate, but it will be useful information for our project team, as these triggers line up with key project milestones.

Also, in a previous discussion with Travis and Ross, they mentioned some potential adverse ground conditions at the te Paea PS when it was constructed. Are you able to elaborate on that?

Ngā mihi

Oliver MacKinnon | Development Lead

Watercare Services Limited

Mobile: +64 21 224 2097

Customer service line: +64 9 442 2222

Postal address: Private Bag 92 521, Wellesley Street, Auckland 1141, New Zealand

Physical address: 73 Remuera Road, Remuera, Auckland 1050, New Zealand

Website: www.watercare.co.nz



From: Marcel Bear <marcel.bear@woods.co.nz>
Sent: Thursday, June 20, 2024 11:45 AM
To: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>
Cc: Glenn Wright <Glenn.Wright@woods.co.nz>; Mark Williams <mark.williams@woods.co.nz>
Subject: RE: Major developments in South Auckland

Hi Oliver

I was wondering if there is an update on the wastewater servicing for Paerata that I can share with the wider them.

Thanks

Marcel



Marcel Bear

BE(Civil)Hons CPEng

Principal 3 Waters Engineer

☎ +64 9 308 9229 | 📱 +64 21 102 5485

✉ marcel.bear@woods.co.nz

woods.co.nz



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From: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>

Sent: Thursday, June 13, 2024 4:20 PM

To: Marcel Bear <marcel.bear@woods.co.nz>

Cc: Glenn Wright <Glenn.Wright@woods.co.nz>; Mark Williams <mark.williams@woods.co.nz>

Subject: RE: Major developments in South Auckland

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When would be a good time to meet up and get an update on Paerata township servicing.

Thank you

Marcel



Marcel Bear

BE(Civil)Hons CPEng

Principal 3 Waters Engineer

☎ +64 9 308 9229 | 📱 +64 21 102 5485

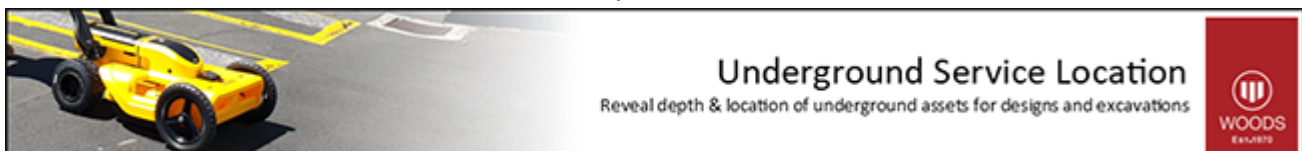
✉ marcel.bear@woods.co.nz

woods.co.nz



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From: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>

Sent: Wednesday, June 12, 2024 7:56 AM

To: Marcel Bear <marcel.bear@woods.co.nz>

Subject: RE: Major developments in South Auckland

Hi Marcel,

My name is Oliver and I am the new programme lead for southern developments. Please let me know how I can be of assistance.

Ngā mihi

Oliver MacKinnon | Development Lead

Watercare Services Limited

Mobile: +64 21 224 2097

Customer service line: +64 9 442 2222

Postal address: Private Bag 92 521, Wellesley Street, Auckland 1141, New Zealand

Physical address: 73 Remuera Road, Remuera, Auckland 1050, New Zealand

Website: www.watercare.co.nz



From: Michelle Whitaker <Michelle.Whitaker@water.co.nz>

Sent: Tuesday, June 11, 2024 3:48 PM

To: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>; Mark Iszard <Mark.Iszard@water.co.nz>

Subject: FW: Major developments in South Auckland

Hi @Oliver MacKinnon@Mark Iszard,

Marcel Bear is wanting to get in touch, will leave you to respond?

Ngā mihi (kind regards),

Michelle Whitaker

Development Programme Lead – Major Developments

Kaihautū Mataamua, Hōtaka Whakapakari l Ngā Hanganga Matua

MSc Environmental Management, ANZPI

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<http://www.waterforlife.org.nz/water-saving-tips>

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From: Marcel Bear <marcel.bear@woods.co.nz>

Sent: Tuesday, June 11, 2024 3:37 PM

To: Michelle Whitaker <Michelle.Whitaker@water.co.nz>

Cc: Glenn Wright <Glenn.Wright@woods.co.nz>
Subject: Major developments in South Auckland

Hi Michelle

I understand Kerry is no longer looking after major developments in the south, having accepted a position at the DPO.

Please let me know who we can ask about southern developments, I am thinking about water and wastewater in the Paerata development.

Thanks

Marcel



Marcel Bear

BE(Civil)Hons CPEng

Principal 3 Waters Engineer

☎ +64 9 308 9229 | 📱 +64 21 102 5485

✉ marcel.bear@woods.co.nz

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Glenn Wright

From: Mark Williams
Sent: Thursday, 19 September 2024 1:45 pm
To: Glenn Wright
Subject: FW: Paerata Rise

Nothing as yet from WSL – SEE BELOW



Mark Williams | Bsurv, RPSurv, MNZIS

Manager - Major Projects - Land Development / Director
Land Development

☎ +64 9 308 9229

☎ +64 27 498 1188

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From: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>
Sent: Wednesday, 18 September 2024 10:42 am
To: Mark Williams <mark.williams@woods.co.nz>
Cc: Ross Taylor <ross@graftondowns.co.nz>; Travis Coffey <travis@phoenixproperty.co.nz>
Subject: RE: Paerata Rise

Hi Mark,

I've referred this to our development planners for comment and will update you shortly.

Cheers,

Oliver MacKinnon | Development Lead

Watercare Services Limited
Mobile: +64 21 224 2097
Customer service line: +64 9 442 2222
Postal address: Private Bag 92 521, Wellesley Street, Auckland 1141, New Zealand
Physical address: 73 Remuera Road, Remuera, Auckland 1050, New Zealand
Website: www.watercare.co.nz



From: Mark Williams <mark.williams@woods.co.nz>
Sent: Tuesday, September 17, 2024 11:48 AM
To: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>
Cc: Ross Taylor <ross@graftondowns.co.nz>; Travis Coffey <travis@phoenixproperty.co.nz>
Subject: RE: Paerata Rise

Morning Oliver,
Any progress or update on this?
cheers



Mark Williams | Bsurv, RPSurv, MNZIS

Manager - Major Projects - Land Development / Director
Land Development

☎ +64 9 308 9229

☎ +64 27 498 1188

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From: Mark Williams

Sent: Thursday, 29 August 2024 2:33 pm

To: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>

Cc: Ross Taylor <ross@graftondowns.co.nz>; Travis Coffey (<travis@phoenixproperty.co.nz>
<travis@phoenixproperty.co.nz>

Subject: Paerata Rise

Afternoon Oliver,

I hope that the information supplied by Marcel is of assistance.

On a slightly different note, in 2023, Grafton Downs Limited sought consent from Auckland Council to develop a commercial centre at the northern end of the Precinct. Auckland Council declined consent to the application. The decision was appealed by GDL. In the subsequent Environment Court Mediation process, Auckland Council agreed to the development of a 3,850m² supermarket at 3 Te Rata Boulevard and that GDL would lodge a Private Plan Change Request to the Auckland Unitary Plan Operative in Part ("AUP(OP)") to update the zoning applied to the Franklin 2 Precinct in the Auckland Unitary Plan.

The terms of the consent order require GDL to prepare and lodge a private plan change application which will include the redistribution of the commercial zones within the Precinct. As part of this process GDL will also seek to rationalise the zoning of the Precinct and bring the residential and commercial zonings applied to the land within the Precinct in line with the standard zoning provisions of the plan. With the establishment of the rail station at Paerata Rise, GDL will also seek to review the appropriateness of the existing zoning applied to the surrounding area the rail station and seek to give effect to the National Policy Statement – Urban Development ("NPS-UD").

Ultimately the scale of the Paerata Rise development will not differ from that originally intended, as evidenced by the attached **Indicative Density Plan** that will be lodged as part of the Private Plan Change. We now seek WSL support for the Private Plan Change.

Are you able to either advice who we need to contact at WSL or are you able to push this along through WSL. If there is any additional information you require please advise.

As always am happy to discuss if further clarification is needed.

cheers

Mark

From: Marcel Bear <marcel.bear@woods.co.nz>

Sent: Thursday, 22 August 2024 4:41 pm

To: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>

Cc: Ross Taylor <ross@graftondowns.co.nz>; Travis Coffey <travis@phoenixproperty.co.nz>; Mark Williams <mark.williams@woods.co.nz>; Glenn Wright <Glenn.Wright@woods.co.nz>

Subject: Paerata Rise staging plan and lot schedule

Hi Oliver

Staging Plan update

The updated staging plan and schedule is attached.

1300 DUE July 2029 from the table.

2200 DUE approx. July 2035

2600 DUE approx. July 2037.

Note, as per the consent the overall development size (Phase 1 to 7) is approximately 5000 DUE.

Update on Watercare plans for bringing water and wastewater servicing to Paerata.

Are you able to provide an update on your forecasts shared with us on 21 June (copied below), re wastewater upgrading and the new water supply from Drury.

- Is the Pukekohe North pumpstation design complete, out for tender and when is it expected to be online?
- What is the status of the new watermain from Drury. Is it in design, out for tender and when is the expected commissioning date?

Thanks

Marcel



Marcel Bear | BE(Civil)Hons CPEng

Principal Engineer - 3 Waters

Water Infrastructure & Planning

☎ +64 9 308 9229

☎ +64 21 102 5485

Warkworth | **Auckland** | Hamilton | Tauranga | Napier |

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Marcel Bear | BE(Civil)Hons CPEng

Principal Engineer - 3 Waters
Water Infrastructure & Planning

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From: Oliver MacKinnon <Oliver.MacKinnon@water.co.nz>

Sent: Friday, June 21, 2024 4:17 PM

To: Marcel Bear <marcel.bear@woods.co.nz>

Cc: Glenn Wright <Glenn.Wright@woods.co.nz>; Mark Williams <mark.williams@woods.co.nz>; Travis Coffey <travis@phoenixproperty.co.nz>; Ross Taylor <ross@graftondowns.co.nz>

Subject: RE: Major developments in South Auckland

Hi Marcel,

Current forecasts:

Pukekohe North PS – 2028

Te Paea PS Upgrade – can be completed once the Pukekohe North PS has been completed, so sometime after 2028 depending on coordination between our delivery teams for each project.

Rising mains – in coordination with te Paea upgrade.

We are close to completing the concept design for the te Paea upgrade and associated rising main, however constraints downstream at the Franklin Road PS has affected the timeline of these projects.

Te Paea is currently operating at 20l/s. Once Pukekohe North PS is complete, it can operate at 36l/s and accommodate about 2000 DUEs. So I think we should be okay in terms of servicing the Grafton Downs development. Communication will be key to ensure we are aligned in terms of timing.

Could you please provide me with your current staging plan, and if possible, confirm when the development will hit 1300 DUEs, 2200 DUEs and 2600 DUEs. I appreciate this will be an estimate, but it will be useful information for our project team, as these triggers line up with key project milestones.

Also, in a previous discussion with Travis and Ross, they mentioned some potential adverse ground conditions at the te Paea PS when it was constructed. Are you able to elaborate on that?

Ngā mihi

Oliver MacKinnon | Development Lead

Watercare Services Limited

Mobile: +64 21 224 2097

Customer service line: +64 9 442 2222

Postal address: Private Bag 92 521, Wellesley Street, Auckland 1141, New Zealand

Physical address: 73 Remuera Road, Remuera, Auckland 1050, New Zealand

Website: www.watercare.co.nz