



Document Quality Assurance Statement

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Action	Personnel	Sign	Date
Prepared	Zibo Yang (Civil Engineer)	f	20/03/24
Approved	Cameron Gifford (Civil Engineer)	Called	20/03/24

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3	Issue	All	ZY	24/04/24	
4	Issue	All	ZY	10/05/24	
5	Issue	All	ZY	20/05/24	

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Contents

1	Exe	ecutive Summary	1
2	Intr	roduction	3
3	Wa	astewater	4
	3.1	Background	4
	3.2	Servicing strategy	4
	3.3	Wastewater demand	6
4	Wa	ater Supply	6
	4.1	Background	6
	4.2	Servicing strategy	7
	4.3	Water supply demand	8
5	Util	lities	9
	5.1	Power	9
	5.2	Telecommunications	9
	5.3	Gas	9
6	Cor	nclusion	9
F	igures		
	_	Plan Change Area with surrounding Zoning (Auckland Geomaps)	1
		Existing Site (Auckland Geomaps)	
		Wastewater Servicing Strategy	
	•	Drury – Opāheke Structure Plan Water Supply Servicing	
Fi	igure 5:	Proposed Water Supply Servicing	8
A	ppend	dices	
	ppendi		
	ppendi		
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1 Executive Summary

Fisher & Paykel Healthcare Properties Limited ("FPH") is preparing a Structure Plan which includes 105 ha of land under its control, and a Plan Change request to rezone approximately 87.5 ha of Future Urban land (inside the Rural Urban Boundary) to Business-Light industry in Drury West. The new campus would support Fisher & Paykel Healthcare's growth aspirations and include facilities for design, manufacture, and distribution of medical devices.

FPH has an interest in the land parcels of 300, 328, 350, 370 and 458 Karaka Road, these land parcels are on the southern side of Karaka Road, north of the North Island Main Trunk line ("NIMT") and east of Oira Creek outlined in Figure 1 below.

FPH is part of the Fisher & Paykel Healthcare group. The Fisher & Paykel Healthcare group has manufacturing facilities in East Tāmaki, Mexico and China. FPH's existing campus in East Tāmaki is approaching capacity and, to support continued growth, FPH proposes to establish a new additional campus at its Karaka site in Drury.

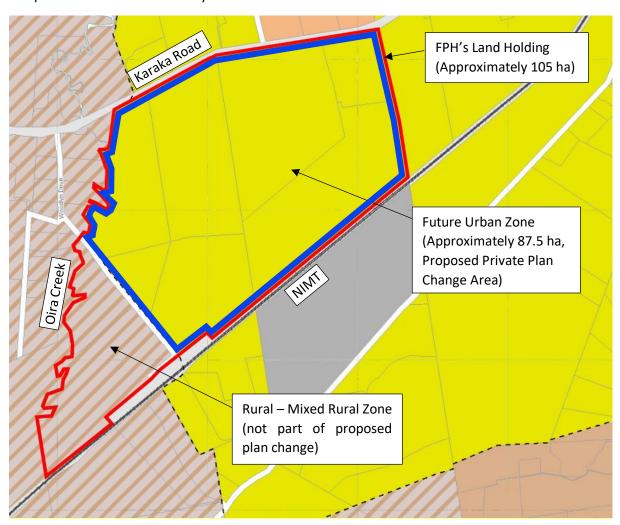


Figure 1: Plan Change Area with surrounding Zoning (Auckland Geomaps)

An infrastructure assessment and report has been prepared by Crang Consulting Ltd to support the aforementioned Structure Plan and Private Plan Change request that will be made by FPH. Infrastructure can be provided to service the proposed development area as follows:

- Wastewater servicing can be provided for the development in compliance with Watercare's
 engineering requirements. It is proposed to service the development by constructing a
 permanent pumpstation within the site and connecting it to Watercare's transmission
 infrastructure on Jesmond Road.
- Potable water can be supplied to the site by way of new public watermain from Watercare's Bulk Supply Point ("BSP") on Flanagan Road this is consistent with the watermain strategy in the Drury-Opāheke Structure Plan prepared by Auckland Council in 2019.
- Power, telecommunications and gas are available at the site frontage along Karaka Road.
 Network upgrades are likely required to support the land use, final solutions can be developed with the relevant utility service providers following successful re-zoning of the land.

It is considered that there is adequate existing infrastructure in the immediate vicinity to allow for the rezoning of the land and future developments and there are no impediments to granting the plan change in regard to infrastructure servicing.

2 Introduction

Crang Consulting Ltd ("Crang") has been commissioned by Fisher & Paykel Healthcare Properties Ltd ("FPH") to prepare an engineering report to assess proposed infrastructure solutions to support an updated Structure Plan (SP) for Drury West and a Private Plan Change (PPC) for part of FPH's landholding, for a new additional Campus at Karaka Road, Drury. The extent of the FPH's landholding encompasses the following properties – 300, 328, 350, 370 and 458 Karaka Road. The proposed PPC application seeks to rezone only the Future Urban areas of the site (ie east of the RUB) as indicated in Figure 1 above, from Future Urban to Business-Light Industry.

FPH is part of the Fisher & Paykel Healthcare group. The Fisher & Paykel Healthcare group has manufacturing facilities in East Tāmaki, Mexico and China. FPH's existing campus in East Tāmaki is approaching capacity and, to support continued growth, FPH proposes to establish a new campus at its Karaka site in Drury.

The site is bounded by Karaka Road to the North, Oira Creek to the West, the NIMT railway to the South, and the property of 250 Karaka Road to the East. The existing site is predominantly rural in nature and currently has agriculturally based activities, including a cattle farm, glass houses and associated office buildings. An aerial photo of the wider FPH land holding (Structure Plan area) is shown below in Figure 2.

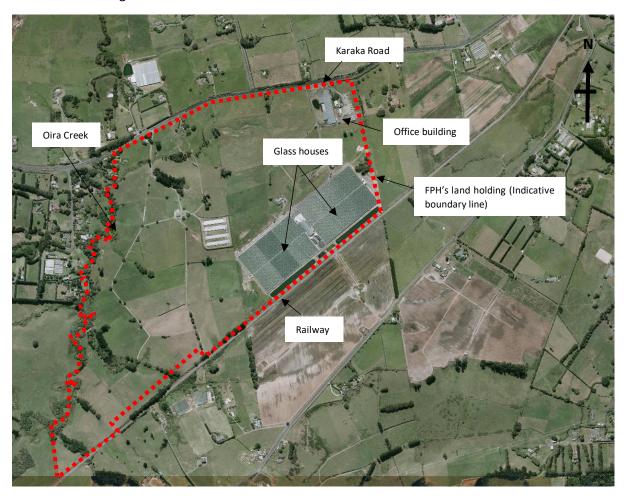


Figure 2: Existing Site (Auckland Geomaps)

The majority of the site is in pasture, it has a rolling topography with a network of natural gullies distributed on the northern and western portions of the site. The existing ground profile consists of a ridge line running through the central portion of the site in a northeast to southwest direction with the height elevations ranging from 35 mRL to 8 mRL.

In addition to Oira Creek, several manmade natural ponds and wetland-like features are also identified throughout the site. These hydrological features are discussed further in the Stormwater and Ecological technical reports.

The key infrastructure considerations associated with developing the land are related to confirming the ability to provide adequate services for the development, including wastewater reticulation, water supply and utility services. These matters are addressed in this report.

3 Wastewater

3.1 Background

The Drury-Opāheke Structure Plan 2019 was developed to support the strategic growth anticipated in Drury and Opāheke regions. It proposed a network of local gravity wastewater pipes supported by a number of pumpstations and rising mains which ultimately discharged to the Bremner Road Pumpstation.

However, based on consultation with Watercare Services Ltd (WSL), the latest wastewater design in Drury has changed from the Auckland Council Drury-Opāheke Structure Plan in relation to the PPC area. Watercare has signalled that a gravity transmission line is proposed to service the wider Drury West area.

The proposed gravity transmission pipeline is planned to be constructed in stages. The first stage is complete and links the Bremner Road pumpstation with the live zoned Auranga development. The second stage is due for completion in 2028 and traverses through the live zoned land associated with the Auranga development and south along Jesmond Road before terminating in "Manhole 13" at the frontage of 221 Jesmond Road. Watercare has proposed a third stage through the Waipupuke (PC61) zoned site however this stage has not yet been progressed to detailed design.

3.2 Servicing strategy

The servicing strategy has been carefully considered to ensure the entirety of the 105ha contiguous development area (i.e. the SP Area) can be serviced with a reticulated wastewater supply. The servicing strategy proposed for the PPC consists of a permanent public pumpstation located on the western portion of the site which pumps flows via a public rising main along Karaka Road and Jesmond Road to Manhole 13 where it connects with Watercares' transmission network – refer to Figure 3 below. It is noted that whilst the entirety of the SP site can be serviced in this manner, the PPC is limited to the area of land which is currently Future Urban Zone (i.e. approximately 87.5 ha).

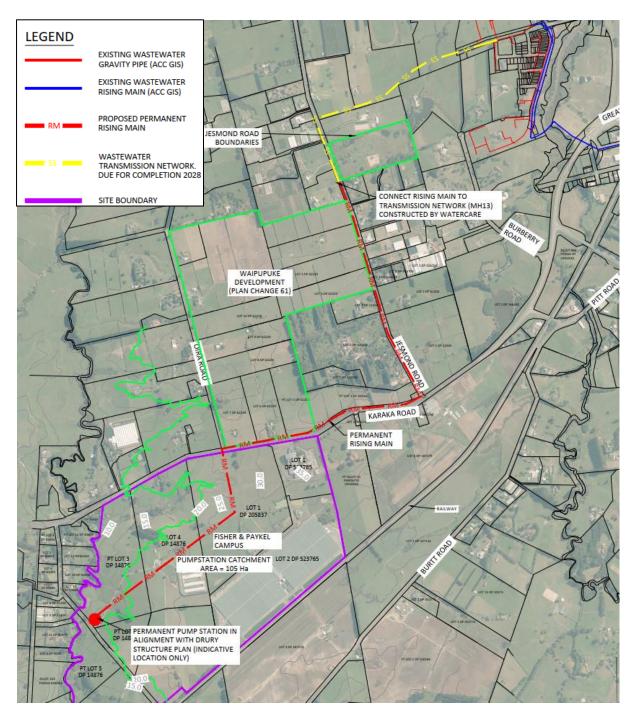


Figure 3: Wastewater Servicing Strategy

This proposed solution addresses the key constraint associated with the site. As detailed in Section 2 above, the landform is variable across the site with contour levels ranging from 35 mRL to 8 mRL. The pumpstation placement on the western boundary of the site aligns with the lowest elevations on site which ensures that the full development area can be serviced without extensive land modification. Further it is noted that the proposed pumpstation aligns with that of the Auckland Council Drury-Opāheke structure plan.

Consultation has occurred over a 12-month period with Watercare where this solution has been presented. Watercare has confirmed that capacity has been allocated for the Plan Change area within the transmission network downstream of Manhole 13. Formal consultation was ongoing with Watercare at the time of writing. This consultation is expected to yield a memorandum that will be

appended to this report outlining agreement that the Business-Light Industry zone has a similar discharge rate as that which was proposed through the Drury-Opāheke structure plan. Upon receipt, a copy of the memorandum will be appended to this report.

Veolia Water is the franchisee operating the retail water and wastewater network in the vicinity of the plan change area. Veolia Water controls the "retail" assets, while Watercare retains control of the transmission assets. The proposed pump station and rising main would be considered a retail asset. Consultation with Veolia Water has occurred over a 12-month period and continues at the time of writing. A copy of the meeting minutes and email correspondences with Watercare and Veolia Water is included in Appendix C.

The proposed solution complies with Watercare's code of practice and serves the full extent of natural catchment.

3.3 Wastewater demand

The Auckland Council Drury-Opāheke Structure Plan anticipated residential development in the area of the proposed FPH campus. In order to confirm that wastewater demand for the proposed Business-Light Industry zoning does not exceed the originally anticipated demand, wastewater demand calculations have been completed. The results of this analysis demonstrate that the residential and industrial wastewater demands are similar, with the residential demand being slightly higher. It is therefore expected that the capacity of the proposed wastewater transmission pipeline and existing downstream pumpstation proposed by Watercare will have sufficient capacity to support the development.

4 Water Supply

4.1 Background

The existing PPC area is currently not serviced by public reticulated water supply. The current agricultural activities and daily demand of the dwelling on site are supported by a combination of rainwater harvesting and ground water extraction.

In accordance with the Drury-Opāheke Structure Plan 2019, a new water supply main along Karaka Road is planned to enable the growth potential in this area, see Figure 3 below.

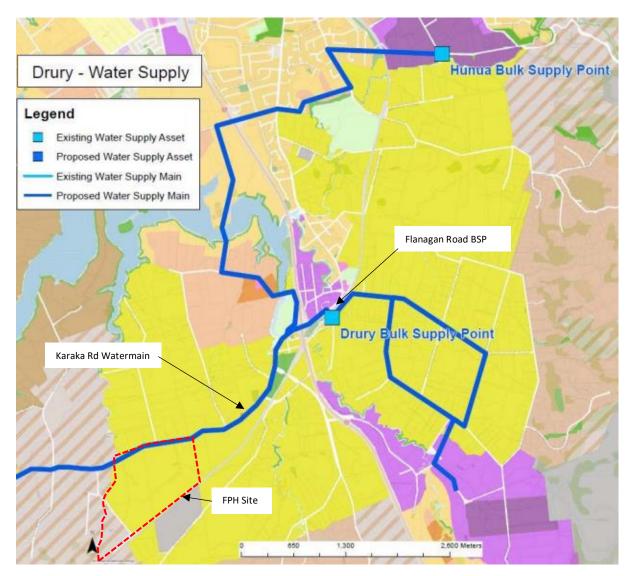


Figure 4: Drury - Opāheke Structure Plan Water Supply Servicing

4.2 Servicing strategy

Similar to wastewater, Veolia Water (Veolia) is the franchisee for retail network distribution, whilst Watercare remains responsible for the transmission networks in the Drury area. The pipeline shown in Figure 4 above has been confirmed to be retail infrastructure. Veolia has advised that the water supply required for the development will be extended from the Bulk Supply Point (BSP) on Flanagan Road to the site frontage on Karaka Road. A loop back to the Flanagan BSP through Bremner Road and Jesmond Road is also required to be completed as part of the network to provide resilience. An indicative alignment of the proposed service network is shown in Figure 5 below. A copy of the meeting minutes and email correspondences with Watercare and Veolia Water is included in Appendix C.

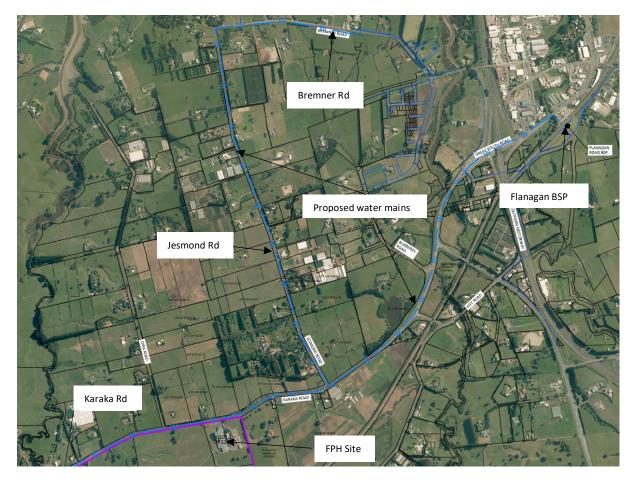


Figure 5:Proposed Water Supply Servicing

The future watermain network will provide for adequate flow rates and pressures for domestic use and firefighting including provision for hydrants.

The internal public reticulation network within the site will be designed in accordance with the Watercare Code of Practice for Land Development and Subdivision in future resource consent and engineering plan approval stages.

4.3 Water supply demand

The Auckland Council Drury-Opāheke structure plan anticipated residential development in the area of the proposed FPH campus. In order to confirm that potable water demand for the proposed Business-Light Industry zoning does not exceed the anticipated demand, potable water demand calculations have been completed. The results of this analysis suggest the proposed PPC will generate a peak water supply demand of approximately 74 L/s based on the forecast build out. Similar to the wastewater assessment, the proposed industrial activities will require less water demand than the residential land use previously identified for the site. Details of the calculations are included in Appendix B of the report.

The predicted peak water supply mentioned above has also been evaluated in comparison to the water consumption levels recorded at FPH's campus at East Tamaki, confirming its adequacy to meet the future demand at the new campus at Karaka Road.

5 Utilities

5.1 Power

Power supply is currently available in this area for servicing in the form of overhead lines along Karaka Road. It is anticipated that upgrades will be required to the network to support FPH's Karaka Campus. Counties Energy will be engaged to provide these designs to ensure power infrastructure will be available for the site. Consultation will be undertaken with the relevant service provider to determine the extent of upgrades to support the proposed development following successful rezoning of the site.

Additionally, a letter of support has been received from Counties Energy which confirmed the power supply in this area would meet the growth envisaged for the development proposed by FPH. A copy of the letter is included Appendix D for reference.

5.2 Telecommunications

Telecommunications infrastructure is present fronting the plan change site along Karaka Road. It is anticipated that upgrades will be required to the network to support FPH's Karaka Campus. Chorus will be engaged to provide these designs which will ensure adequate telecommunications infrastructure will be available for the site following successful rezoning of the site.

5.3 Gas

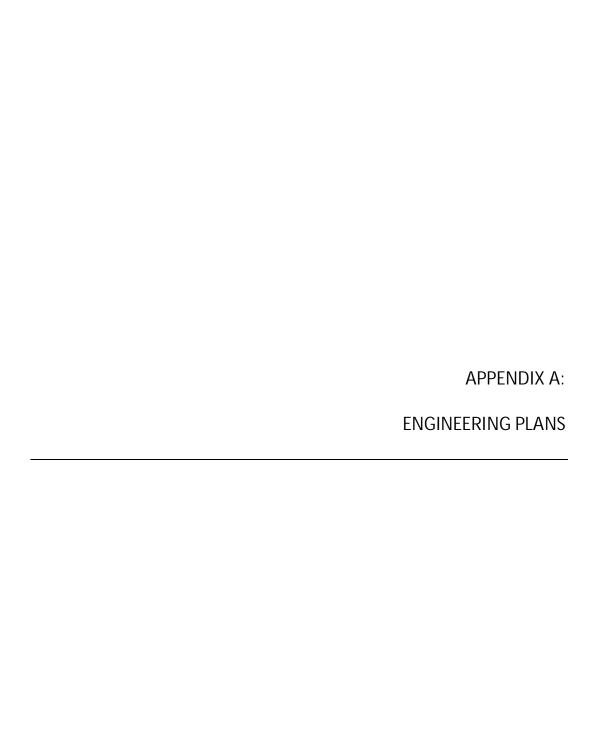
Gas reticulation is available on Karaka Road. The reticulation is classified as MP4, which has a pressure level of 210 – 420 kPa. Further consultation with the service provider to understand the network capacity and extent of upgrade if required by FPH following successful rezoning of the site.

6 Conclusion

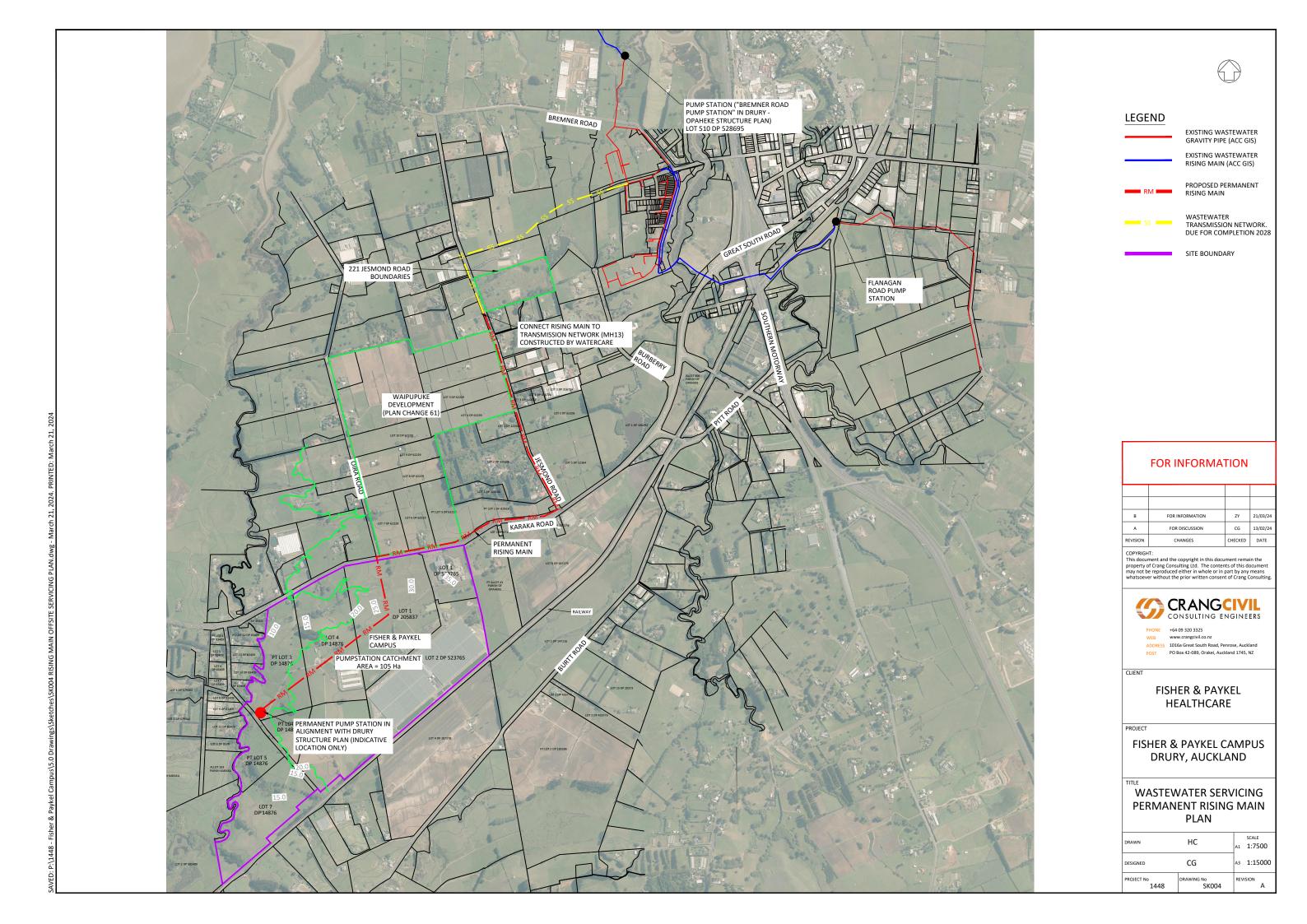
The civil engineering for the proposed plan change to rezone approximately 87.5ha of Future Urban zoned land to Business-Light Industry under the AUP at 300, 328, 350, 370 and 458 Karaka Road in Drury can be summarised as follows:

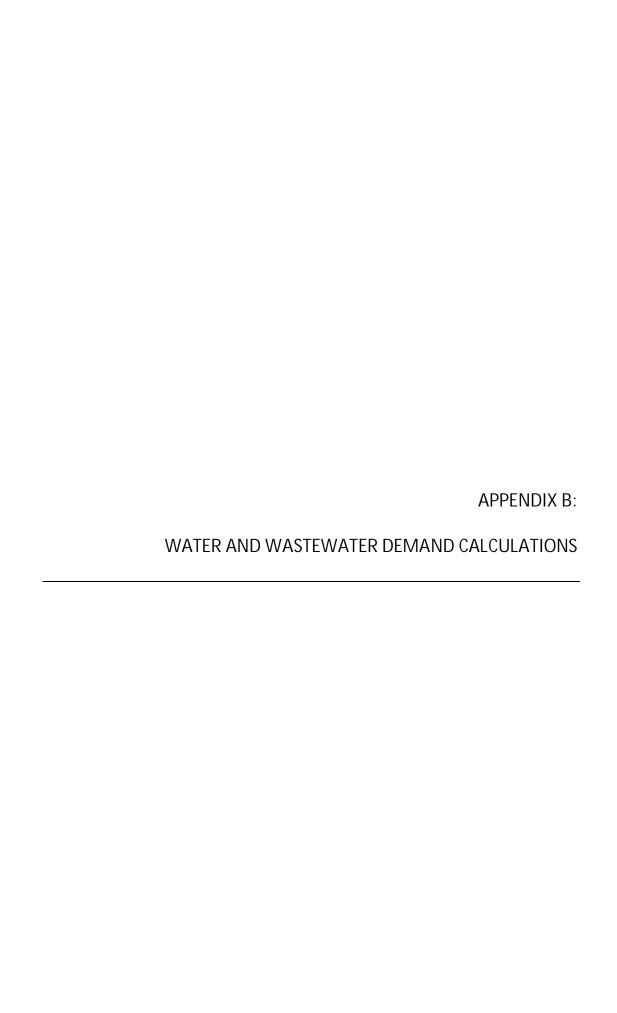
- Wastewater servicing can be provided to the site via a new permanent raising main originating from a pump station located in the western portion of the site and connects to Watercare's transmission network.
- Potable water can be supplied to the development by way of a new public watermain along Karaka Road which originates from and loops back to Watercare's BSP at Flanagan Road.

Utilities such as power, telecommunication and gas are currently available along Karaka Road. Details of upgrades and extensions from the existing network are to be discussed and agreed with relevant utility providers to meet anticipated demands through the engineering design phases.









Wastewater Discharge Calculation

Fisher & Paykel Healthcare Karaka Road, Drury

CLIENT PROJECT JOB NO. CALCS BY 1448 ZY ZY CHECKED BY



23/02/2023 DATE

1 p/15 m2

Based on Watercare (Water and Wastewater Code of Practice)

Design Parameters Design Flow Commercial and Dry Industry Dry Industry Water User -Office Building -4.5 L/m2/day 65 L/p/day

K Value = 1.5

			PIPE FLO	OW CALCULATIONS				
Use	Building Area	No. of People	Routine Peak	Design Routine	Peaking Factor: Self Cleansing	Self Cleansing Design Flow	Peaking Factor: Peak	Peak Design Flow (L/s)
	(m2)	No. of Feople	Daily Discharge	Peak Flow (L/s)	Design Flow	(L/s)	Design Flow	Teak Design Flow (L/s)
BUILDING 1								
Dry Industry with Light water user (Manufacture + Distribuition)	23000		103500	1.20	5	5.99	6.7	8.03
Office	12000	800	52000	0.60	2	1.20	5	3.01
BUILDING 2								
Dry Industry with Light water user	23000		103500	1.20	5	5.99	6.7	8.03
Office	12000	800	52000	0.60	2	1.20	5	3.01
BUILDING 3								
Dry Industry with Light water user	23000		103500	1.20	5	5.99	6.7	8.03
Office	12000	800	52000	0.60	2	1.20	5	3.01
DUI DIVID								
BUILDING 4	20000		400500	4.00		5.00		
Dry Industry with Light water user	23000	000	103500	1.20 0.60	5	5.99	6.7	8.03
Office	12000	800	52000	0.60	2	1.20	5	3.01
BUILDING 5								
Dry Industry with Light water user	23000		103500	1.20	5	5.99	6.7	8.03
Office	12000	800	52000	0.60	2	1.20	5	3.01
BUILDING 6								
Dry Industry with Light water user	23000		103500	1.20	5	5.99	6.7	8.03
Office	12000	800	52000	0.60	2	1.20	5	3.01
BUILDING 7								
Dry Industry with Light water user	23000		103500	1.20	5	5.99	6.7	8.03
Office	12000	800	52000	0.60	2	1.20	5	3.01
BUILDING 8								
Dry Industry with Light water user	23000		103500	1.20	5	5.99	6.7	8.03
Office	12000	800	52000	0.60	2	1.20	5	3.01
BUILDING 9								
Dry Industry with Light water user	23000		103500	1.20	5	5.99	6.7	8.03
Office	12000	800	52000	0.60	2	1.20	5	3.01
once	12000	000	32000	0.00	2	1.20	J	3.01
SPECIALIST LABS								
Dry Industry with Light water user	20000		90000	1.04	5	5.21	6.7	6.98
SPECIALIST LABS			-					
Dry Industry with Light water user	20000	 	90000	1.04	5	5.21	6.7	6.98
or j madou j water cigite water adei	20000		70000	1.04	, ,	5.21	0.7	0.70
DISTRIBUTION HUB								
Dry Industry with Light water user	25000		112500	1.30	5	6.51	6.7	8.72
	380000	1	1692000.00	19.58	Total	81.67		122.00
	300000	J	1092000.00	19.00	10(4)	01.07	I	122.00

Wastewater Discharge Calculation

Fisher & Paykel Healthcare Karaka Road, Drury 1448 ZY ZY CLIENT PROJECT

JOB NO. **CALCS BY**

CHECKED BY DATE 23/02/2023

Based on Watercare (Water and Wastewater Code of Practice)

Design Parameters MiHU and MHS and RURAL 165 p/ha 100 p/ha 20 p/ha 180 L/p/d 180 L/p/d 180 L/p/d MHU MHS

Rural

K Value = 1.5

PIPE FLOW CALCULATIONS								
Use	Approximate Area (m2)	No. of People	Routine Peak Daily Discharge		Peaking Factor: Self Cleansing Design Flow	Self Cleansing Design Flow (L/s)	Peaking Factor: Peak Design Flow	Peak Design Flow (L/s)
Mixed Husing Urban (MHU)	460450	7597	1367537	15.83	3	47.48	5	79.14
Mixed Housing Suburban (MHS)	441233	4412	794219	9.19	3	27.58	5	45.96
Rural	203276	407	73179	0.85	3	2.54	5	4.23
	1104959				Total	77.60		129.34



Water Demand Calculation



CLIENT Fisher & Paykel Healthcare

PROJECT Karaka Road, Drury

JOB NO. 1448
CALCS BY ZY

CHECKED BY ZY DATE 24/02/2023

Based on Watercare (Water and Wastewater Code of Practice)

Design Parameters

Design Flow Commercial and Dry Industry

Dry Industry Light Water User Office Building 4.5 L/m2/day 65 L/p/day

Daily Peaking Factor (PF) 1.5 Peak Hourly Peaking Factor (PF) 2.5

Use	Building Area	No. of People	Average Day	Average Day	Peak Day Demand	Peak Hourly	Peak Demand (L/s)
030	(m2)	No. of Feople	Demand (L/day)	Demand (L/s)	(L/day)	Demand (L/h)	Teak Demand (L/3)
Dry Industry with Light water user	272000		1224000	14.2	1836000	191250.0	53.1
Commercial Activity - Office Buildings (651/p/15m2)	108000	7200.0	468000.0	5.4	702000	73125.0	20.3
			Site Demand:	19.58			73.4

Total Demand (I/s) 73.4

Water Demand Calculation



CLIENT Fisher & Paykel Healthcare

PROJECT Karaka Road, Drury

JOB NO. 1448
CALCS BY ZY

CHECKED BY ZY DATE 24/02/2023

Based on Watercare (Water and Wastewater Code of Practice)

Design Parameters

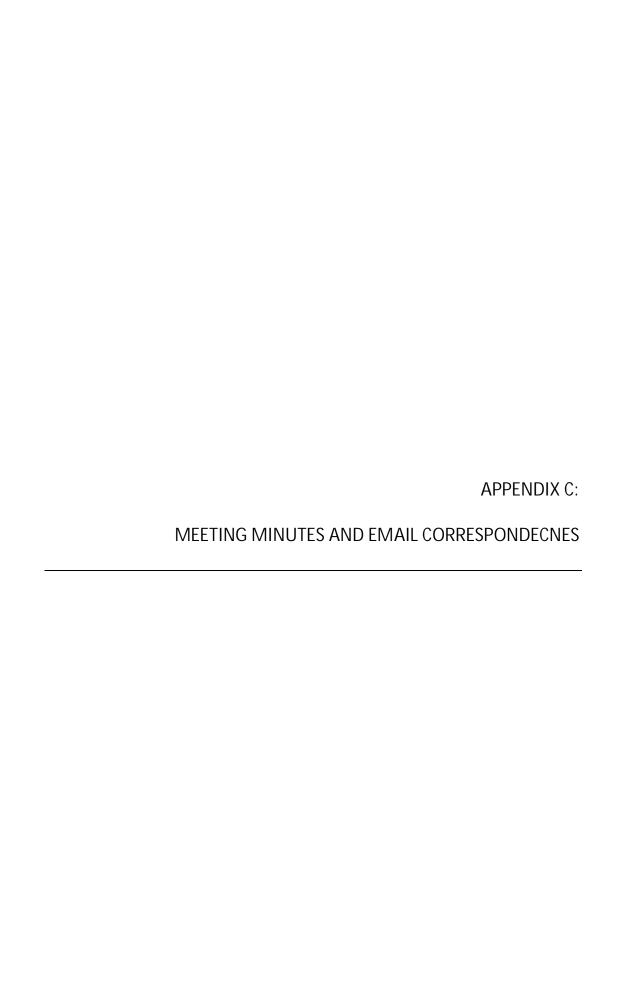
MiHÜ and MHS and RURAL MHU 165 p/ha 220 L/p/d

MHS 100 p/ha 220 L/p/d Rural 20 p/ha 220 L/p/d

Daily Peaking Factor (PF) 1.5 Peak Hourly Peaking Factor (PF) 2.5

Use	Zonning Area (m2)	No. of People	Average Day Demand (L/day)	Average Day Demand (L/s)	Peak Day Demand (L/day)	Peak Hourly Demand (L/h)	Peak Demand (L/s)
Mixed Husing Urban (MHU)	460450	7597	1671433.5	19.3	2507150.3	261161.5	72.5
Mixed Housing Suburban (MHS)	441233	4412	970712.6	11.2	1456068.9	151673.8	42.1
Rural	203276	407	89441.4	1.0	134162.2	13975.2	3.9
			Site Demand:	31.6			118.6

Total Demand (I/s)	118.6





Meeting Minutes / Action Points

Subject: Fisher & Paykel Healthcare (FPH) – Veolia Engagement – Karaka Road Campus Water Supply

Date: February 16, 2023

Time: 13:00pm

Venue: Teams

Attendees: Sanjeev Morar (SM) Veolia

James Hui (JH) FPH

Cosette Saville (CS)

Cameron Gifford (CG)

Zibo Yang (ZY)

Barker and Associates

Crang Consulting

Crang Consulting

Apologies: Nick Roberts

Marry Wong Mary Wong

Wong Barker and Associates

Barker and Associates

modified by CG 24/04/2024

Matt Comery FPH
Dave Cuff FPH
Jonathan Sng FPH

Item	Note	Action	By When
1.1	CS and JH presented the development vision of FPH's proposed campus at Karaka Road Drury west, and mentioned the following features: • The FULSS has this land development ready between 2028 and 2032		
	The current structure plan has this land zoned as a mixture of mixed housing urban and mixed housing Suburban. A structure plan change and private plan change will be sought to rezone the site in support of light industrial land use		
	 Existing campus in East Tamaki expects to reach its full capacity in 2030 Site in Drury to be developed in stages, with construction planning to start in 2025 and the first building to be occupied in 2030 		
	Preliminary masterplan indicates potential for 12 buildings		
1.2	ZY discussed the current understanding of water supply in this area: • The Drury – Opaheke structure indicates a new watermain proposed along Karaka Road from the Bulk Supply Point (BSP) on Flanagan Road		



Item	Note	Action	By When
1.3	 Cameron Gifford (CG) discussed: FPH suggested the Drury Campus will likely operate a closed loop water supply. Therefore water demand is expected to be no more than previously anticipated residential zoning. ZY to share Water Demand calculations with Veolia for review 	ZY	
1.4	 SM spoke to Veolia's current infrastructure position and direction in relation to the proposed development as follows: Water There is an existing catchment plan showing details of the water supply network, including indicative pipe sizes and locations. SM to confirm indicative pipe size on Karaka Road (understood to be 450 mm dia) and seek permission from Watercare to share the detailed wastewater and watersupply catchment plans The watermain on Karaka Road is classified as retail infrastructure and is to be developer funded. The water supply required for the development will be extended along Karaka Road from the Bulk Supply Point on Flanagan Road, and ended at the development frontage. Veolia also expects a loop back to Flanagan Bulk Supply Point via Bremner Road and Jesmond Road to be completed as part of the network to provide resilience Lomai property and developer of 221 Jasmond Rd will also require the infrastructure for their developments, potential cost share agreement to be formed. KiwiRail plans to utilise on-site water supply servicing and is therefore unlikely to contribute to new watermain ZY to provide preliminary calculations of water supply demands Wastewater SM notes that there will also be retail infrastructure required to service the FPH Karaka Campus. 	SM	



Meeting Minutes / Action Points

Subject: Fisher & Paykel Healthcare – Watercare Engagement

Date: December 13, 2022

Teams

Time: 12:00pm

Venue:

Attendees: Dave Cuff FPH

Jonathan Sng FPH James Hui FPH

Cosette S Barker and Associates
Mary Wong Barker and Associates
Cameron Gifford Crang Consulting
Kerryn Swanepoel Watercare
Suresh Mudliar Watercare

Apologies: Nick Roberts Barker and Associates

Matt Comery FPH

Item	Note	Action	By When
1.1	Cuff modified by CG 24/04/2024 Dave Cull-(DC) presented the vision for the FPH second campus at Drury and discussed the following features of the development compared to their existing campus:		
	Existing Campus in East Tamaki to remain		
	Site in Drury to be developed in stages modified by CG 24/04/2024		
	• First building to be occupied 2030, with a new building approximately every 5 years to 2060 – subject to actual growth modified by CG 25/03/2024		
	Masterplan for site indicates potential for 10 buildings		
	 Staffing numbers could range between 14,000 and 18,000 (FTE?) 		
	• Staff work shifts. Assume 100% in morning shift, 60-80% in afternoon shift and 20-50% for overnight shifts		
	• Existing Campus operates a closed loop water supply and therefore does not consume a lot of water.		
	Water consumption on current campus further reduced by rainwater harvesting		
	Main water use is toilet flushing, handwashing and for on-site cafes		
1.2	Cosette (CS) discussed the planning framework around proposal		
	The site is located in future urban zone		



Item	Note	Action	By When
	The FULSS has this land development ready between 2028 and 2032. The proposed development will be ahead of the FULSS.		
	Initially the team will engage/consult with relevant stakeholders and work to update the existing structure plan modified by CG 24/04/2024		
	Once updated, a private plan change will be lodged mid 2023- 2024		
	The structure plan is non statutory		
	The structure plan has this land zoned as a mixture of mixed housing urban and mixed housing Suburban		
	The land zoning sought to support the FPH application will be light industry.		
1.3	Cameron Gifford (CG) discussed:		
	the location of the site in the context of the infrastructure upgrades indicated through the structure plan		
	the location of the site relative to existing infrastructure		
1.4	Kerryn Swanepoel (KS) & Suresh Mudliar (SM) spoke to Watercare's current infrastructure position and direction in Drury as follows:		
	<u>Wastewater</u>		
	Engagement is timely. Watercare is looking to make decisions around provision of future infrastructure in this area		
	Proposed servicing strategy has changed significantly from structure plan		
	The proposed development area is now proposed to be serviced by gravity line (as opposed to pumpstation)		
	 Watercare are currently in design for this gravity pipeline through the zoned land to the north (Waipupuke – PC61). The design is underway to MH13 (~221 Jesmond Road). 		
	 Works beyond MH13 are not yet designed nor have a firm completion date but could be 2032. Works are later in Watercare's AMP 		
	Any infrastructure ahead of sequence to be funded by developer		
	Out of sequence infrastructure is typically funded by the developer who requires it first.		
	KS suggests discussing infrastructure provisioning with Lomai Properties Ltd. The proposed pipeline traverses their site and a funding arrangement could be discussed directly with them		
	This infrastructure (wastewater only) would need to be delivered by Watercare as it is transmission infrastructure.		

Item	Note	Action	By When
	Watercare note that their capacity to undertake designs of this nature are under pressure due to forward workload on other projects. This would need to be discussed further to confirm capacity.		
	The site is at the head of the proposed gravity sewer catchment. It is therefore important that Watercare receive guidance on expected wastewater flows		
	 The effect on wastewater flows from the proposed change in land use will need to be confirmed. Currently infrastructure is planned on the assumption of mixed housing urban and mixed housing Suburban. 		
	 CG to provide calculations demonstrating flow rates for light industry compared to housing. 	CG	Jan 23
	 Dave Cuff to review and confirm water use for Tamaki Campus to infer likely peak wastewater flow rates and peak time for Drury development – noting that no flow meter exists in wastewater so wastewater flows will be inferred from water use. 	DC	Jan 23
	• It is noted by CS that flow rate profile for light industry could be complementary when considering the surrounding housing as the peaks are not likely to coincide.		
	 Hingaia pumpstation will require upgrade in the future. The timing of upgrade is not clear and will be subject to timing on demand from the wider area. 		
	<u>Water</u>		
	The development is within Veolia Waters management area	CG	Jan 23
	 Water servicing will need to be discussed with Veolia (Sanjeev) 		
	The extension is likely required from the Bulk Supply Point on Flanagan Road		
	Meeting closed at 1:00pm before discussion could conclude on Water matters		
	Further meetings to be scheduled for the early in the new year		

Cameron Gifford

From: Cameron Gifford

Sent: Tuesday, 13 February 2024 3:15 pm

To: Morar, Sanjeev

Cc: Cosette Pearson; Matt Comery; James Hui; Nick Roberts

Subject: RE: FPH - Veolia Plan Change Discussion

Attachments: SK004 RISING MAIN OFFSITE SERVICING PLAN.pdf

Hi Sanjeev,

Thanks for meeting earlier this afternoon.

As requested, please find enclosed sketch plan SK004 showing the pumpstation and rising main proposed to service the FPH Plan Change area.

Key points to note:

- The proposed pumpstation is in alignment with the Drury Structure Plan
- The proposed rising main discharges to MH13 on Jesmond Road
- Capacity has been allocated for the FPH Plan Change within the transmission network downstream of MH13
- The proposed plan change area is at the head of the catchment and constitutes a large contiguous land holding of 105 Ha.
- The site topography generally falls east to west from RL 35 to RL10.
- The proposed pumpstation ensures that the full plan change area can be serviced without major land modification

Can you please follow up with Watercare.

Regards Cam

CAMERON GIFFORD SENIOR ENGINEER | CPEng MOB 021 0343995 | cameron@crangcivil.co.nz



AUCKLAND | 1016A Great South Road, Penrose QUEENSTOWN | 2/70 Glenda Drive, Frankton PO Box 42-089, Orakei, Auckland 1745

From: Cameron Gifford

Sent: Thursday, February 8, 2024 4:35 PM

To: Morar, Sanjeev <sanjeev.morar@veolia.com> Cc: Cosette Pearson <CosetteP@barker.co.nz>

Subject: FPH - Veolia Plan Change Discussion [Filed 08 Feb 2024 16:35]

Importance: High

Hi Sanjeev,

I hope you're well.

We were looking to pick up the conversation around servicing the proposed Fisher and Paykel Campus on Karaka Road in Drury in advance of technical reporting being prepared to support the plan change.

Previously we'd discussed water supply only however we would also like to discuss our proposal to service the site with a retail network pumpstation and rising main which connects to Watercare's transmission network at MH13 (outside 201 Jesmond Road) which is forecast to be complete in 2028.

We've had a meeting with Kerryn earlier in the week who deferred comment on this to Veolia given that the infrastructure would be a retail asset.

Can we please arrange a brief Teams meeting to discuss the proposal at your earliest convenience?

Regards Cam

CAMERON GIFFORD SENIOR ENGINEER | CPEng MOB 021 0343995 | cameron@crangcivil.co.nz



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Cameron Gifford

From: Cameron Gifford

Sent: Thursday, 15 February 2024 9:27 am

To: KSwanepoel (Kerryn) 1

Cc: Matt Comery; Cosette Pearson; Nick Roberts; James Hui

Subject: FPH Plan Change - Wastewater Servicing

Attachments: SK004 RISING MAIN OFFSITE SERVICING PLAN.pdf

Hi Kerryn,

Thanks for the chat up yesterday afternoon.

It was a good opportunity to go through the updates we provided to Sanjeev earlier in the week.

The key features of the wastewater servicing strategy discussed were that:

- The proposed pumpstation is in alignment with the Drury Structure Plan
- The proposed rising main discharges to MH13 on Jesmond Road
- Capacity has been allocated for the FPH Plan Change within the transmission network downstream of MH13
- The proposed plan change area is at the head of the catchment and constitutes a large contiguous land holding of 105 Ha.
- The site topography generally falls east to west from RL 35 to RL10.
- The proposed pumpstation ensures that the full plan change area can be serviced without major land modification

Please find enclosed sketch plan SK004 to assist your discussions with Sanjeev and the network team.

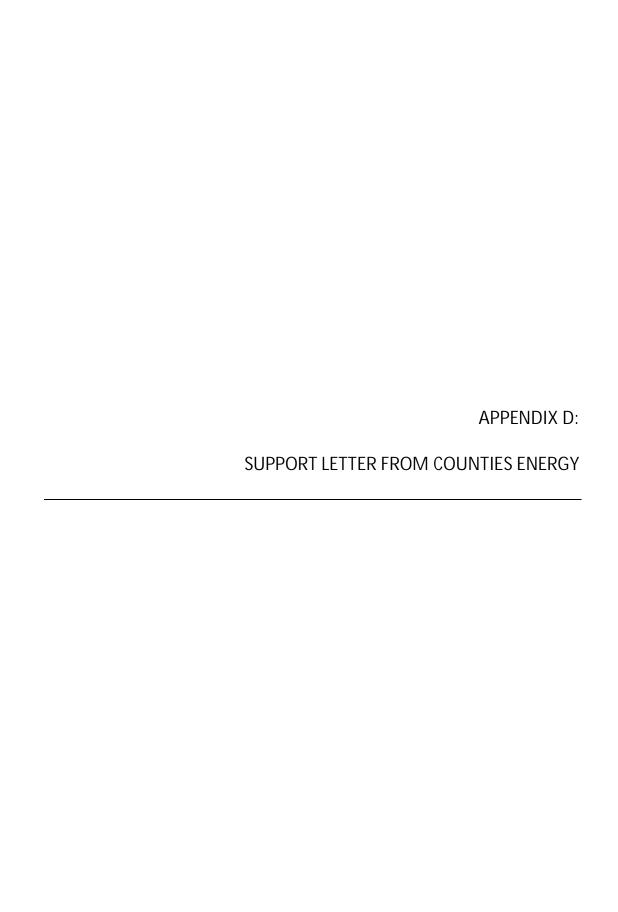
Let's reconvene once this has occurred. I'll send a meeting invite for mid next week to ensure we keep up momentum.

Regards Cam

CAMERON GIFFORD SENIOR ENGINEER | CPEng MOB 021 0343995 | cameron@crangcivil.co.nz



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5 March 2024



James Hui
Project Manager
Fisher & Paykel Healthcare Properties Limited
15 Maurice Paykel Place
East Tāmaki
Auckland 2013

Dear James,

Letter of Support for the Fisher & Paykel Healthcare Drury Private Plan Change Application

Counties Energy are in support of the Fisher & Paykel Healthcare (FPH) plan change application, to rezone their Karaka Road site to business light industry zone, to enable the future development of a second New Zealand campus.

Counties Energy is the electricity distribution business that owns and operates the electricity reticulation infrastructure in the south Auckland region around Drury. This region is one of the fastest growing regions of the country in terms of both electricity connections and demand growth from industrial, commercial and residential developments. In addition, Counties Energy's wider network is seeing growth from new renewable generation and decarbonisation. All of this growth is supporting the economic growth of Auckland through providing new jobs and houses while reducing the regions greenhouse emissions.

Counties Energy understands that FPH are the landowners of the site at 300, 328, 350 and 458 Karaka Road, Karaka. Furthermore, FPH purchased the site for the purpose of developing a second New Zealand campus to enable the growth of their research and development and manufacturing activities, similar to their operations at their existing campus in East Tāmaki. To enable the development of the site, an operative zone in required to be applied to the site under the Auckland Unitary Plan. The site is currently zoned Future Urban zone, and Counties Energy support the request on behalf of FPH to Auckland Council, to rezone the site to Business – Light Industry zone, to enable the future development of the site.

We confirm that power supply for this area to meet the growth envisaged for this development and the larger area is not an issue because Counties Energy has significant electricity capacity. This includes high voltage 22kV distribution feeders that have twice the capacity of typical New Zealand 11kV distribution feeders. This is fed from a Counties Energy 110kV sub-transmission network, which has more than twice the capacity of typical New Zealand line company 33kV sub-transmission networks.













Counties Energy is also investing for future growth in the Drury area. This includes the purchase and rezoning of land close by to the FPH site, on the corner of Whangapouri Road and Karaka Road for a future 110/22kV substation plus design is underway for a large 60MVA 110kV substation on Quarry Road. This is supported through a newly completed Counties Energy 110/22kV substation at Bombay, along with a new Transpower 220/110kV substation at Bombay.

Consequently, supplying power to FPH's Karaka Road Campus will not be an issue at any stage of the Campus development.

Yours Faithfully

Counties Energy Limited

Andrew Toop GM Commercial