50 WESTNEY RD
WATER AND WASTEWATER

TO	Watercare Services Ltd	**DATE**	27/03/2025
PROJECT NAME	50 Westney Rd	**ENVELOPE REF**	1636-02
ATTENTION	c/o Mark Benjamin MHG Ltd	**FROM**	 Andrew Jackson
EMAIL ADDRESS	MarkB@mhg.co.nz		

Hi Mark,

I understand that Watercare have requested that we assess the possible change in demand on the water supply and wastewater networks as a result of the proposed rezoning. Watercare have suggested that this is assessed by calculating the anticipated demand on the water supply and wastewater networks of development that could be expected under the current zoning and compare this to the demand calculated in the Infrastructure Report.

The calculations were carried out using Watercare design guidance. The full calculations are appended, with a summary of the results as follows:

1.1 EXISTING ZONING – WATER AND WASTEWATER DEMAND

We have based our assessment of maximum likely water and wastewater demand under the existing zoning on a scenario where 40% of the site has been developed into a 2-level building with 50% of the ground floor being wet retail and the remainder of the building being office accommodation.

Water - Peak Hourly Water Demand:	10.49l/s
Wastewater - Peak Wet Weather Flow:	11.39l/s

1.2 PROPOSED ZONING – WATER AND WASTEWATER DEMAND

As presented in our infrastructure report, with the proposed rezoning the peak demand flow rates will be:

Water - Peak Hourly Water Demand:	10.54l/s
Wastewater - Peak Wet Weather Flow:	14.12l/s

1.3 DISCUSSION

As can be seen above there is a negligible increase in potential maximum water demand associated with the rezoning. There is a slightly larger increase in Peak Wet Weather Flow (PWWF) but this is only due to the difference in peaking factor rather than an increase in average demand. In any case, as outlined in our infrastructure report we have assessed the proposed network connection points for the rezoned property and based on our calculations and understanding of the downstream network believe that there is sufficient capacity to accommodate redevelopment of the site in accordance with the proposed rezoning.

DEMAND ASSESSMENT - WATER DEMAND

Project Name:	50 Westney Road
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FLOWS - OFFICE BUILDINGS WITH 25% WET RETAIL

PROPOSED DEVELOPMENT FLOWS - OFFICE BUILDINGS		
DEVELOPMENT		**COMMENTS**
Site size (ha)	4.046	
Net floor area	25894.4	40% site coverage, 2 level office, 80% net usage
Routine Peak Daily Usage (L/m2/day)	7	65litres/15m2/day. Table 6.1.c for office and 15l/m2/day for wet retail
Average Daily Demand (L/d)	181261	
Average Daily Demand (L/s)	2.10	
Peak Day Demand (PDD) Peaking Factor	2	WSL WCOP 6.3.5.3 - 2 for population below 2000
Peak Hourly Demand (PHD) Peaking Factor	5	WSL WCOP 6.3.5.3 - 2.5 x 2
Peak Day Demand (PDD), litres/second	4.20	
Peak Hourly Demand (PHD), litres/second	10.49	

DEMAND ASSESSMENT - WASTEWATER (CURRENT ZONING)

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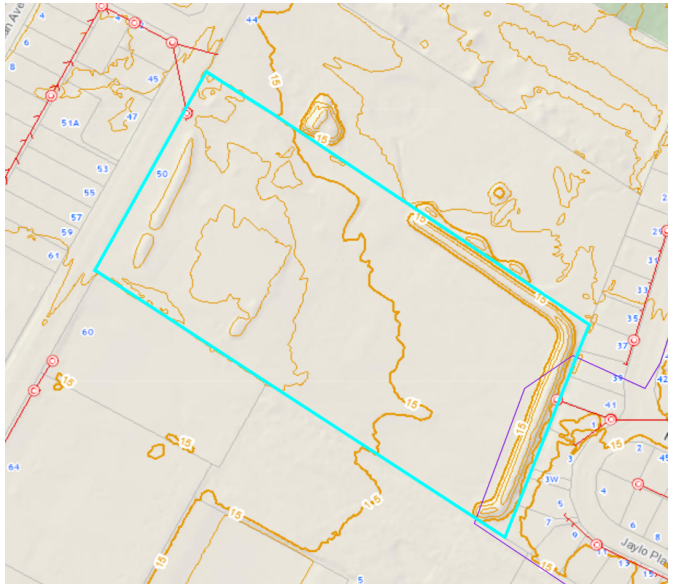
FLOWS - OFFICE WITH 25% WET RETAIL

PROPOSED PLAN CHANGE FLOWS - OFFICE BUILDING		
DEVELOPMENT		**COMMENTS**
Site Area/ha	4.0468	40468m2
Net Floor Area (ha)	2.58995	40% site coverage, 2 level office, 80% net usage
Routine Peak Daily Discharge (L/m2/day)	7	65litres/15m2/day. Table 5.1.3 and 15l/m2/day for wet retail
PDWF Peaking Factor	2	WSL WWCOP 5.1.3
PWWF Peaking factor	5.43	WSL WWCOP 5.1.3
Total ADWF, litres/second	2.10	Ave Dry Weather Flow
Total PDWF, litres/second	4.20	Peak Dry Weather Flow
Total PWWF, litres/second	11.39	Peak Wet Weather Flow



DEMAND ASSESSMENT - WATER DEMAND

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Calcs by	Jay Panchani
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FLOWS - LIGHT INDUSTRIAL (LIGHT WATER USAGE)

PROPOSED DEVELOPMENT FLOWS - LIGHT INDUSTRIAL		
DEVELOPMENT		**COMMENTS**
Light Industrial Area/ha	4.046	Assumed Building Footprint
Routine Peak Daily Usage (L/m2/day)	4.5	Up to 2 storeys, WSL WCOP Table 6.1.d
Average Daily Demand (L/d)	182070	
Average Daily Demand (L/s)	2.11	
Peak Day Demand (PDD) Peaking Factor	2	WSL WCOP 6.3.5.3 - 2 for population below 2000
Peak Hourly Demand (PHD) Peaking Factor	5	WSL WCOP 6.3.5.3 - 2.5 x 2
Peak Day Demand (PDD), litres/second	4.21	
Peak Hourly Demand (PHD), litres/second	10.54	

DEMAND ASSESSMENT - WASTEWATER

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FLOWS - LIGHT INDUSTRIAL WATER USAGE

PROPOSED PLAN CHANGE FLOWS - LIGHT INDUSTRIAL		
DEVELOPMENT		**COMMENTS**
Light Industrial Area/ha	4.0468	40468m2
Routine Peak Daily Discharge (L/m2/day)	4.5	light water usage, Table 5.1.4
PDWF Peaking Factor	5	WSL WWCOP 5.3.5.1.1
PWWF Peaking factor	6.7	WSL WWCOP 5.3.5.1.1
Total ADWF, litres/second	2.11	Ave Dry Weather Flow
Total PDWF, litres/second	10.54	Peak Dry Weather Flow
Total PWWF, litres/second	14.12	Peak Wet Weather Flow