

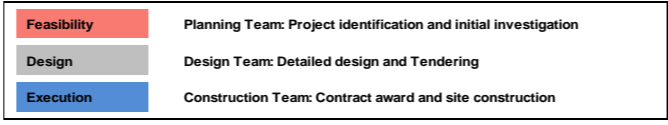
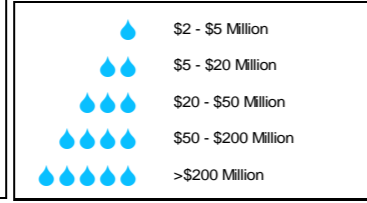
FORWARD WORKS - SIGNIFICANT PROJECTS / PROGRAMMES
> \$ 2,000,000

Project / Programme	Activity Description	Category	Cost Range	2018		2019				2020				2021				2022				2023	
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Huia WTP Upgrade	Construction of a new water treatment plant at the Manuka Road, Titirangi site.	A	🔵🔵🔵🔵																				
Ardmore WTP Treated Water Resilience	Plant modification to allow separation into two separate process streams.	A	🔵🔵																				
Waikato WTP 175MLD	Installation/ upgrade of plant processes (including sand separation, clarification and membrane unit process additions).	A	🔵🔵																				
Wellsford WTP Upgrade	Capacity and process upgrade of the existing Wellsford Water Treatment Plant.	A	🔵																				
Waiuku WTP Upgrade	Upgrade of Waiuku Water Treatment Plant to increase capacity.	A	🔵																				
Hays Creek Source Utilisation - Treatment Plant	New 7MLD package water treatment plant utilising Hays Creek Dam source in Papakura.	A	🔵																				
Ardmore WTP UV	Addition of ultra violet treatment to Ardmore Water Treatment Plant to increase resilience.	A	🔵																				
Ardmore WTP Sludge Handling Systems Upgrades	Installation of a second sludge press and centrifuge.	A	🔵																				
Onehunga WTP UV	Installation of three UV treatment trains, with capacity of up to 30 MLD, at the Onehunga Water Treatment Plant.	A	🔵																				
WTP Plant / Equipment Replacement	Programme of equipment replacements.	A	🔵																				
Rosedale WWTP RC/UV Expansion	Upgrades to the reactor/clarifiers and the ultra violet plant at Rosedale.	B	🔵🔵🔵																				
Mangere WWTP Sludge Conditioning	New sludge conditioning prior to digesters, such as thermal hydrolysis.	B	🔵🔵🔵																				
Snells WWTP Upgrade	Upgrade Waste Water Treatment Plant to service Warkworth, Snells Beach and Algies Bay.	B	🔵🔵🔵																				
Pukekohe WWTP Upgrade	Upgrade the Waste Water Treatment Plant capacity from 260/s to 520/s.	B	🔵🔵🔵																				
Rosedale WWTP Expansion Project	Expansion of treatment plant including a new primary settlement tank, secondary biological treatment reactor and new thermal hydrolysis plant.	B	🔵🔵🔵																				
Snells Algies WWTP Ocean Outfall	Replacement of existing outfall with approximately 7.6km of 0.4m diameter pipe.	B	🔵🔵																				
Army Bay WWTP Upgrade	Army Bay WWTP capacity increase to meet growth.	B	🔵🔵																				
Mangere WWTP Biogas and Cogeneration Expansion	Upgrades to the biogas and co-generation facilities at Mangere WWTP.	B	🔵🔵																				
Mangere WWTP Peak Flow Treatment	Process modifications to allow for enhanced peak flow treatment.	B	🔵🔵																				
Mangere WWTP Plant Maintenance Programme	Programmed maintenance of 10 primary settlement tanks, 7 digester tanks and 9 reactor clarifiers, including cleaning, re-coating, mechanical and civil repairs.	B	🔵																				
Wellsford WWTP Upgrade	Wellsford WWTP upgrade to cater for growth.	B	🔵																				
WWTP Plant / Equipment Replacement	Programme of equipment replacement.	B	🔵																				
Army Bay WWTP Outfall Upgrade	Construction of approximately 3km of 1.2m diameter sea discharge outfall, pump station and UV upgrades.	B	🔵																				
Mangere WWTP Solids Stream Upgrade	Upgrade of solids stream process as part of Mangere Wastewater Treatment Plant upgrades.	B	🔵																				
Rosedale Biogas and Cogeneration Expansion	Upgrade to the biogas system at the Rosedale WWTP to cater for additional capacity.	B	🔵																				
Warkworth WWTP Upgrade	Provide a side stream 250m3/d membrane bioreactor package plant and all ancillary systems.	B	🔵																				
Mangere WWTP Sludge Tanks Upgrade	Replacement of 5 sludge tanks at the Mangere WWTP.	B	🔵																				
Army Bay WWTP Inlet Screens	Upgrade to the inlet screens to provide better capture and higher throughput.	B	🔵																				
Huia 1 and Nihotupu 1 Replacement	Treated water transmission pipeline replacement.	C	🔵🔵🔵																				
North Harbour Watermain Duplication - Northern	Approximately 10km of 900mm concrete lined steel pipework for new North Harbour no. 2 watermain connecting Greenhithe Bridge and Albany Reservoirs	C	🔵🔵🔵																				
North Harbour Watermain Duplication - Southern	Approximately 22km of 1200mm ID concrete lined steel pipework for new North Harbour no. 2 watermain connecting proposed Woodlands Park reservoirs to Greenhithe Bridge.	C	🔵🔵🔵																				
Hunua 1 Watermain Replacement	Replacement of the Hunua no. 1 watermain.	C	🔵🔵🔵																				
Hunua 4 Section 11	Installation of 4km x 1.5m pipeline from Market Road to the Khyber Reservoir complex.	C	🔵🔵🔵																				
North Harbour Watermain Duplication - Greenhithe Bridge Section	Approx. 2.5km of 1200mm ID concrete lined steel pipework for the new North Harbour 2 watermain Greenhithe Bridge section.	C	🔵🔵																				
Woodlands Watermain to Titirangi Reservoir	Pipe tunnelled between Huia WWTP and Titirangi Reservoir.	C	🔵🔵																				
Orewa Number 1 Replacement Stage 3	4.6 Km of 507mm OD concrete lined steel pipework of the Orewa 1 watermain from Hibiscus Coast Highway through to connection with Maire Road Reservoir.	C	🔵																				
North Harbour No. 2 Watermain – Northern Corridor	Design and early works (NZTA and rail crossings).	C	🔵																				
Hays Creek Source Utilisation - Transmission	Integrating new WTP utilising Hays Creek Dam source into the Papakura transmission and network, also including 1km of 500mm ID transmission watermain renewal.	C	🔵																				
Waitakere No.1	Upgrade the Waitakere No. 1 watermain for growth.	C	🔵																				
Reservoir - Birkenhead No. 1	Renewal of the Birkenhead No. 1 reservoir.	C	🔵																				
Northcote Reservoir to Glenfield	Transmission water pipe between Northcote reservoir and Glenfield.	C	🔵																				
East Coast Bays 2 Watermain Renewal	Replacement of 1.2km of 390mm ID CLS transmission watermain.	C	🔵																				
Howick Watermain Upgrade	Renewal of 1km of 450mm ID CLS transmission watermain.	C	🔵																				
Hunua No. 2 Watermain (Ti Rakau Bridge)	Structural strengthening of the Hunua 2 watermain - 165m pipebridge across Pakuranga Creek (Trugood Drive to Ti Rakau Drive).	C	🔵																				
Local Water Network Renewals and Upgrades	Local water network renewals and upgrades.	D	🔵🔵																				

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Water Service Connections & Meters	Water service connections and new meters.	D	☹☹☹																				
Meter Replacement	Water meter replacement programme.	D	☹☹☹																				
Clevedon Water Servicing	Installation of reservoir and local network distribution system to service Clevedon.	D	☹☹																				
Valve and Hydrant Renewals	Valve and hydrant renewal programme.	D	☹☹																				
Newton Road Watermain	Upgrade 1km of 810mm ID CLS pipework in Newton Road, Auckland City.	D	☹																				
Redoubt Road Upgrades (watermain & reservoir outlet)	Redoubt water network augmentation for growth. Install 2 pressure reducing valve chambers and 2.5km of 250mm ID PE pipework in the Flatbush network.	D	☹																				
Pukekohe Area Water Supply Upgrade	Water network upgrades to service Pukekohe growth. Bulk Supply Point construction and 1.5km of 300mm ID PE or CLS pipework to feed growth areas within Pukekohe.	D	☹																				
Central Interceptor	Construction of large diameter wastewater tunnel, shafts, pump station and associated link sewers.	E	☹☹☹☹☹																				
South West Wastewater Servicing	To provide wastewater servicing to Waikuku, Clarks Beach and Kingseat in the long term.	E	☹☹☹☹																				
Wastewater Transmission and Pumpstation Renewal Programme	A programme of wastewater renewals including concrete sewer relining, pump station internal pipework upgrades, switchboard upgrades, pipe bridge upgrades and rising main renewals.	E	☹☹☹☹																				
Northern Interceptor - Stage 1	Capacity upgrade and strategic northern diversion with a long rising main from Hobsonville to Rosedale.	E	☹☹☹☹																				
Northern Interceptor - Hobsonville to Westgate	Northern Interceptor gravity tunnel from Westgate to Hobsonville pump station.	E	☹☹☹☹																				
Warkworth to Snells Transfer Pipeline	Installation of new conveyance sewer from Warkworth to Snells Wastewater Treatment Plant, including intermediate pump station.	E	☹☹☹☹																				
Southern Auckland Wastewater Servicing Scheme	Interim Hingaia pump station and rising main upgrade to the Southern Interceptor; then new 1.3m ³ /s Hingaia pump station and 600mm and 1,000mm dia. rising mains to the Manurewa pump station.	E	☹☹☹☹																				
Newmarket Gully	Pipe tunnelled between Hells Gate and Hobson tunnel.	E	☹☹☹☹																				
Glendowie Branch Sewer Upgrade	The project involves construction of a new 500 l/s pump station, 4000m ³ of on-line storage and various branch sewer upgrades.	E	☹☹☹																				
East Coast Bays Link Sewer Upgrade	Installation of link sewer between Windsor Park and Rosedale treatment plant (part of Rosedale expansion project).	E	☹☹☹																				
Howick Wastewater Catchment System Upgrades	Two 200 l/s pump stations, 3.1km 450mm rising mains, 1km 600mm gravity sewer.	E	☹☹☹																				
Rodney Hibiscus Coast Servicing	Whangaparaoa wastewater transmission augmentation.	E	☹☹☹																				
Clevedon Wastewater Servicing	Installation of network pump station and rising main to service Clevedon.	E	☹☹																				
Red Hills Wastewater Upgrade	Installation of transmission sewer and pump station to service growth.	E	☹☹																				
Drury South Trunk Sewer Development	130l/s package pump station and 1,110m ³ storage, approximately 1.5km of 450mm gravity sewer and dual rising main approximately 1km.	E	☹☹																				
Grey Lynn Wastewater Tunnel	A new 4.5m (initial estimate only) diameter tunnel 1.6km long.	E	☹☹																				
Waitakere Northern & Kumeu Huapai Riverhead Servicing	Additional wastewater transmission capacity to service Whenuapai Future Urban Zoned land.	E	☹☹																				
Wastewater Transmission Plant/Equipment Replacement	General plant replacements which are not included in the Transmission Plant Renewal Programme.	E	☹																				
Lawsons Creek Branch Sewer Duplication	Lawsons Creek Branch Sewer duplication to cater for growth in West Harbour.	E	☹																				
Siphon Replacements	Construction of siphons in Massey and Swanson.	E	☹																				
Upgrade of North Shore Trunk Sewer 8	Upgrade / replacement of trunk sewer.	E	☹																				
Meola Wastewater Catchment Improvement Works	Programme of work to enable growth and reduce wet weather overflows.	F	☹☹☹☹																				
Avondale_Whau Wastewater Catchment Improvements	Programme of work to enable growth and reduce wet weather overflows.	F	☹☹☹☹																				
Oakley Wastewater Catchment Improvements	Programme of work to enable growth and reduce wet weather overflows.	F	☹☹☹☹																				
Motions Wastewater Catchment Improvements	Programme of work to enable growth and reduce wet weather overflows.	F	☹☹☹☹																				
Pt Chevalier Wastewater Catchment Improvements	Programme of work to enable growth and reduce wet weather overflows.	F	☹☹☹☹																				
Otara Catchment Wastewater Capacity Upgrades	Provide 2,500m ³ storage tank, 400 l/s pump station (with 500m ³ storage), 2,500m of relining 625mm and 1,800m of 625mm rising main.	F	☹☹☹☹																				
St Marys Bay Wastewater Catchment Improvements	Programme of work to enable growth and reduce wet weather overflows.	F	☹☹☹☹																				
Warkworth Growth Servicing	Warkworth wastewater network expansion for growth.	F	☹☹☹																				
Herne Bay Wastewater Catchment Improvements	Programme of work to enable growth and reduce wet weather overflows	F	☹☹☹																				
Forrest Hill Wastewater Catchment Diversion	Provide 1,100m of 310mm rising main, 60 l/s pump station, 350m of 250/335mm rising main and 600m of 300/375/525mm gravity.	F	☹☹☹																				
Wastewater Sewer Replacement	Network wastewater pipe renewal.	F	☹☹☹																				
Westmere Wastewater Catchment Improvement Works	Programme of work to enable growth and reduce wet weather overflows.	F	☹☹☹																				
Queen Street Diversion	Provide 800m of 450mm micro-tunnelled pipeline, to provide for growth and divert wastewater flows from a suspended sewer.	F	☹☹☹																				
Waiwera Diversion to Hatsfield	Provide a 20 l/s pump station, 2,100m of 180mm rising main and 2,500m of 250mm gravity.	F	☹☹☹																				
Waterview Wastewater Catchment Improvement Works	Programme of work to enable growth and reduce wet weather overflows.	F	☹☹☹																				
Wynyard Quarter Gravity Sewer	Replacement of the sewer network as part of area upgrade. Entrusted works through Auckland Transport.	F	☹☹☹																				
Waikato Boost Pumping	Water pump station to boost pump the Waikato 1 watermain.	G	☹☹☹																				
Wairau Wastewater Pump Station	Replacement of Pump Station. The project installs a new pump station with a peak flow capacity of 1,400 l/s.	G	☹☹☹																				
Northcote-Chatswood Wastewater Network Upgrades	Provide 60 l/s pump station, 900m of 315mm rising main and 700m of 450mm gravity.	G	☹☹☹																				
Sidmouth Wastewater Pump Station Mairangi Bay Upgrade	Sidmouth wastewater pump station upgrade and storage tank construction.	G	☹☹☹																				

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Boost Pumping Westhaven	Boost pumping of the North Shore 1 and 2 water mains - boost pumping from 40MLD to 90MLD.	G	💧💧																				
Hibiscus Coast Boost Pump Station	New Hibiscus Coast boost pump station to boost flows on the Orewa 2 watermain.	G	💧💧																				
West boost pumping	Water pump station to provide security of supply to Huia WTP.	G	💧💧																				
Albany Pinehill Watermain & Pump Station	New pump station, chlorine booster station and a water main from Albany to Pinehill reservoirs	G	💧💧																				
Redoubt Road Reservoir Expansion	New 50ML reservoir at Redoubt Road reservoir complex.	H	💧💧💧																				
Woodlands Park Reservoir	25ML Reservoir Storage associated with the proposed Huia WTP.	H	💧💧💧																				
Pukekohe East Reservoir	New 50ML water reservoir in Pukekohe East.	H	💧💧💧																				
Khyber Reservoir No 2 Reinstatement	Building of a new 12.5 ML reservoir in the Khyber Reservoir complex.	H	💧💧																				
Local Networks SCADA System Programme	Replacement SCADA, radio communications and remote terminal unit for approximately 800 local network sites.	K	💧💧💧💧																				
Control Upgrade Programme	Control system upgrades for small treatment plants.	K	💧💧																				
Rosedale WWTP Control Upgrade	Replacement of control system at Rosedale WWTP.	K	💧💧																				
Security System Replacements	Upgrade of security and access systems on operational sites.	K	💧💧																				
North Shore Transmission Control Upgrade	Replacement of radio and remote terminal unit for 20 wastewater sites.	K	💧																				
Mangere WTP Fire Alarm System Upgrade	Automated fire suppression and building containment.	K	💧																				
Electrical Infrastructure Upgrade Rosedale WWTP	New 11kV supplies and switchgear.	K	💧																				
Mangere Digester Electrical Upgrade 2A	Upgrade of 11kV and 400V distribution for digester area at Mangere WWTP.	K	💧																				
Wastewater Monitoring / Modelling Programme	Wastewater Monitoring / Modelling.	L	💧💧																				
Water Modelling	Water Monitoring / Modelling.	L	💧																				

Reference	Category
A	Water Plant Construction
B	Wastewater Plant Construction
C	Water Main Transmission
D	Water Main Networks
E	Sewer Line Transmission
F	Sewer Line Networks
G	Pump Station Construction
H	Storage Tank and Reservoir Construction
I	Dam Construction
J	Cogeneration Plant Construction
K	Electrical and Controls
L	Planning and Water Resource Development
M	Consenting



DISCLAIMER
The Forward Works Programme is indicative only and subject to change at any time.
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