Māngere



Population* 1,165,913



Drivers for project To service growth and mitigate impacts from Engineered Overflow Points (EOP)

Estimated investment:

\$3,2 billion (excludes Central Interceptor project) **Areas served:** Upper Harbour West, Henderson Creek, Whau River, Laingholm, Cox's Bay, Central Auckland - City Centre, Hobson Bay, Onehunga, Mangere, Lower Tamaki River, Upper Tamaki River, Cockle Bay, Puhinui, Pahurehure Inlet, Kumeu-Huapai, Western Isthmus - Central Interceptor

The Mangere wastewater catchment covers 76% of Auckland population, 70% of piped network and 90% of EOPs discharging more than 2 times per year. It is the largest network in New Zealand.

The network is a complex mixture of combined, partially separated, and separated network. In addition, the Western, and South-Western interceptors connect directly to the Mangere Wastewater Treatment Plant from Point Chevalier, the CBD, Mission Bay, Panmure, Otahuhu, and Favona to the plant.

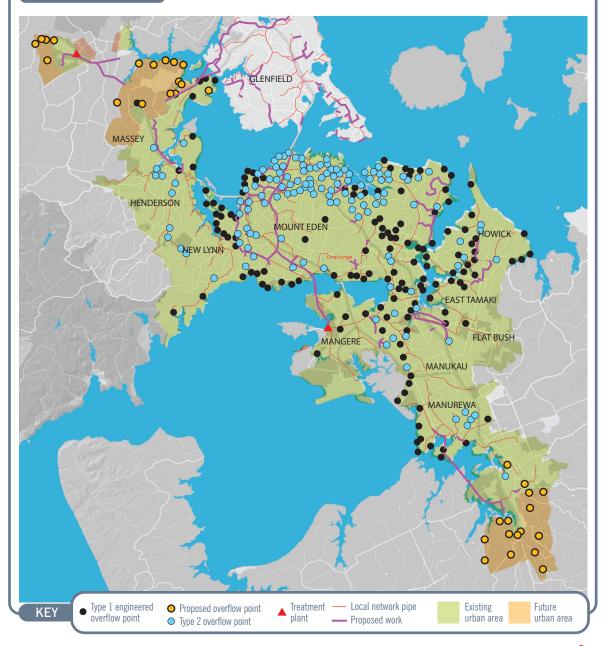
This network includes 110 EOPs which discharges diluted wastewater to the Waitemata Harbour. Almost half of these discharge more than 50 times per year.

Significant growth is expected in the south of the region.

Work proposed over the next six years

We have over 40 projects proposed over the next six years including Western Isthmus, new Opaheke pump station to Hingaia pump station, Mission Bay wastewater sewer improvements, We have over 500 EOP's across the Mangere SMA, the network includes 110 EOP's which discharges diluted wastewater to the Waitemata Harbour. Almost half of these discharge more than 50 times per year. Whenuapai wastewater sewer to Rosedale as part of the Northern Interceptor project, Kumeu - Huapai new wastewater sewer, Brighams Creek and Redhills pump station upgrade stage one and 2, Southwestern Interceptor duplication Manurewa to Mangere.

We will continue to maintain the network through renewal programmes, repairing ageing infrastructure and carrying out investigation works such as Inflow and Infiltration.



* Population: is an estimate of the population of Watercare customers in the catchment area.
* Growth forecast: population data is provided by Auckland Council and based on the latest projected information, which means that the forecasted dates may vary.



Māngere projects by type



Unsworth Heights wastewater sewer diversion To divert sewers in Rosedale Park to the Rosedale Wastewater Treatment Plant and new sewers will be built to prevent overflows.



Waterview Glade wastewater sewer diversion To reduce the uncontrolled combined sewer overflows in this area. The project will divert sewer and construct an engineered overflow point.

Whenuapai wastewater sewer to Rosedale This will divert flow to Rosedale treatment works to prevent overflows and allow for growth.



New sewers to divert flow in the Queen St area form ageing asset and prevent overflows

Whenuapai wastewater servicing - investigation to service growth. Investigation into servicing growth in Whenuapai and prevent overflows.



Kumeu - Huapai new wastewater sewer New sewers to provide for future growth in the catchment.

Maybury wastewater sewer upgrade New pump station and associated pipework to unlock capacity for the Northern Pukekohe developments.

New gravity sewerage in Wynyard Quarter New sewers to provide capacity in the Wynyard Quarter to reduce local overflows.

Hingaia pump station and associated pipework To service growth in southern areas without causing overflows.

Otara pump station and associated pipeworks Upgrade of pump station and associated pipework to prevent overflows.

Western Isthmus programme – Extending the Central Interceptor tunnel and separation of combined sewers to mitigate overflows. Part of the Western Isthmus programme of

works to separate combined sewers and reduce overflows.

Eastern Isthmus programme

Part of the Eastern Isthmus programme of works to separate combined sewers and reduce overflows.

New gravity sewerage in Wynyard Quarter

To provide capacity in the Wynyard Quarter to reduce local overflows.

Newmarket Gully

To construct a large sewer between Hells Gate and Hobson Bay tunnel to reduce wet weather overflows.



5

PS30 Howick wastewater sewer upgrade

To deliver new pump stations and associated network upgrades in Aviemore and Millhouse Parks to provide for growth and mitigate sewer overflows.

Takapu Street upgrade upgrade sewer to mitigate overflow

Upgrade of sewers to prevent overflow in Takapu St.

Tamaki wastewater sewer upgrade

Upgrade of sewers to prevent overflows and provide for growth in Tamaki.

Upgrade

Wendover Rd & Bryant Place wastewater sewer upgrade

Upgrade sewers to increase capacity and prevent overflows.

Wesley branch 9 wastewater sewer upgrade Upgrade of Wesley sewers to prevent overflows.

Wesley wastewater sewer upgrade Upgrade of Wesley sewers to prevent overflows.



Clevedon pump station pipeworks upgrade Upgrade of rising main pipe. Glen Eden wastewater sewer upgrade

and sewer upgrade stage 1 and 2 Upgrade of sewers and pump station to service developments and prevent overflows in the catchment.

To cater for growth in Tamaki. The project includes the upgrade of the

Upgrade of sewers in the Mt Roskill area to prevent overflows and allow

Upgrade of Celsmere Lane sewer to reduce overflow and protect

Brighams Creek and Redhills pump station and

PS14 upgrade Tamaki

Celsmere Lane upgrade

sewer upgrade 1 and 2

Glendowie sewer upgrade

properties from overflows.

for growth

Pump Station and sewers to the pump station.

Mt Roskill wastewater improvements



Upgrade local sewers to relieve capacity constraint and prevent local overflows.

To provide storage and cater for growth and reduce overflows in the catchment. This project will also replace ageing assets.

Currently under investigation, project will resolve local capacity constraint and overflows in the Mangere network.

Currently under investigation, project will resolve local capacity constraint and overflows in the Mangere West network.





Opaheke Wastewater sewer upgrade To remove capacity constraints and prevent overflows and provide for

Mangere West wastewater sewer upgrade

Mangere wastewater sewer upgrade

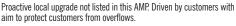


growth.

Otara local wastewater sewer upgrade To remove capacity constraints and prevent overflows.



Proactive local wastewater sewer upgrade





St Heliers wastewater sewer upgrade Upgrade of local sewers to prevent overflows.



Archboyd Avenue and associated pipeline to mitigate sewer overflow and provide growth.

Capacity constraint in the Buckland, Wickham and Cottingham sewers in Mangere areas have resulted in downstream overflow. This project will divert flow in these constrain sewers to a new pump station in Archboyd Road. This will remove the downstream overflows and providing growth in the catchment.



Constitution Hill pump station and associated pipework

This project is to mitigate the impact of the Northern Interceptor and to remove overflow in the Wairua Valley branch sewer, new sewers to be constructed to allow for growth in this area.

Felton Mathew Ave wastewater sewer upgrade As per Constitution Hill pump station and associated pipework.



Southwestern Interceptor duplication Manurewa to Mangere Duplication of sewers to prevent overflows and allow for growth.

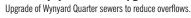


Central Interceptor This project is excluded from the Wastewater Network Strategy as it has its own consent and its own strategy



Diversion of

Future Wynyard Quarter upgrades







Increase capacity



