

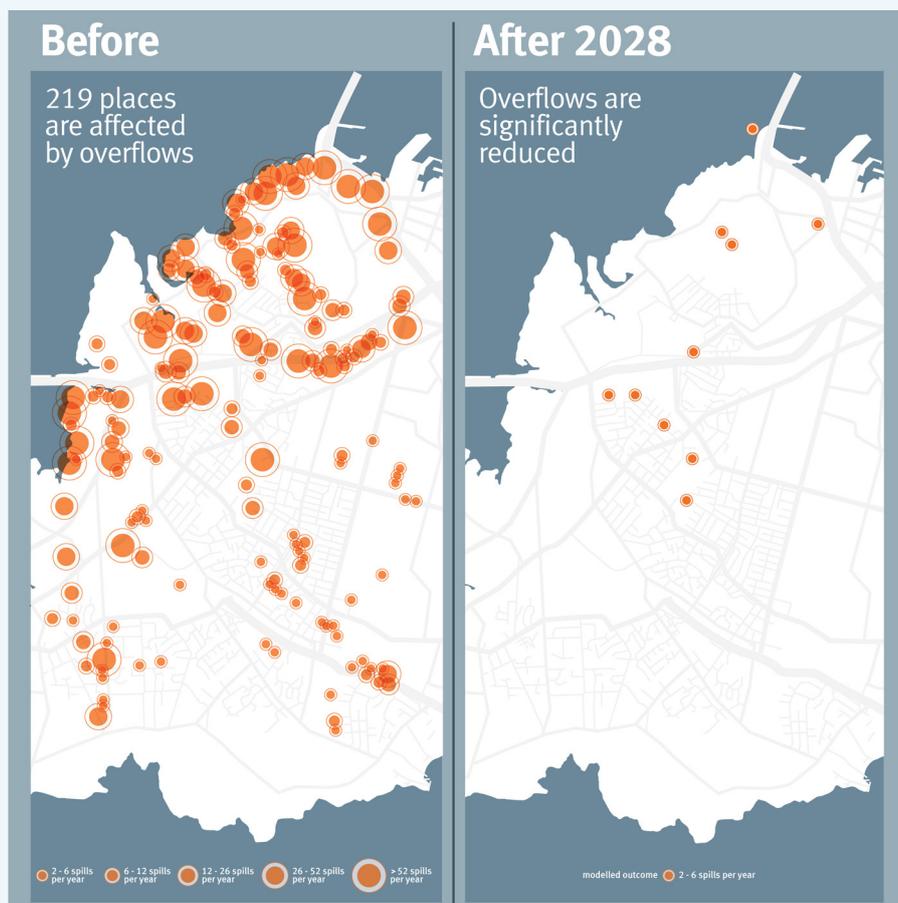
Q & As on the Herne Bay wastewater trunk sewer upgrade



What is the Western Isthmus Water Quality Improvement Programme? (WIWQIP)

The Western Isthmus Water Quality Improvement Programme is a joint initiative between Watercare and Auckland Council aimed at reducing wastewater overflows and improving stream and beach water quality across the city's central western isthmus, including the Safeswim beaches of Herne Bay, Home Bay, Sentinel Beach, Masefield Beach, and St Marys Bay.

The programme includes the Herne Bay wastewater trunk sewer upgrade and the Central Interceptor extension from Western Springs to Grey Lynn, along with local network upgrades and catchment-based sewer separation projects. It aims to significantly reduce the frequency and volume of overflows in the Western Isthmus from 239 to 10 wastewater spill locations as demonstrated below.



The total programme cost, including the Central Interceptor, was \$1.825 billion (2017 dollars) made up of Watercare costs of \$1.5 billion and Auckland Council costs of \$325 million.

What were the original St Marys Bay and Herne Bay separation projects?

These projects were part of the earlier works focused on separating the old, combined stormwater and wastewater pipes directing stormwater to the environment and wastewater to the Māngere Wastewater Treatment Plant via the Ōrākei main. The project included a new public wastewater network, storage and a new pump station at Point Erin as well as private property drainage separation and connections. Work has been progressing for the past 18 months on the design and approvals for the St Marys Bay separation works.

Why has a change in programme been proposed?

Like most infrastructure projects, the St Marys Bay and Herne Bay wastewater and stormwater separation projects have been heavily impacted by escalating material, labour and traffic management costs. These increases, coupled with further costs identified in the design stage to accommodate geotechnical risks, and further learnings taken from the recent separation project at Okahu Bay, put our most recent cost estimates for the project at \$278m, double the original forecast of \$136m. This scale of change is unaffordable and as a result Watercare and Auckland Council have been exploring a new, more cost-effective way to deliver the same water quality outcomes within the agreed timeframe.

What is the new proposal?

Fortunately, an alternative more affordable option is available. This involves an extension of the Central Interceptor wastewater conveyance and storage tunnel from Tawariki Street in Grey Lynn to a new connection shaft in Point Erin. This will be supported by the new Herne Bay wastewater trunk sewer upgrade and a revised programme of sewer separation. The tunnel extension will ensure combined overflows are picked up and conveyed to Māngere Wastewater Treatment Plant for safe treatment, reducing overflows to the environment and improving the quality of waterways and swimmable beaches by 2028.

The diagram below demonstrates the new proposal.



What is the Herne Bay wastewater trunk sewer upgrade?

Planning is underway for a new Herne Bay trunk sewer upgrade and revised programme of combined sewer separation.

The proposal will support the extension of the Central Interceptor (CI) wastewater conveyance and storage tunnel from Tawariki Street in Grey Lynn to a new drop shaft in Point Erin.

The project includes:

- The proposed new pipelines are primarily 2.1 metres in diameter and will be constructed by a tunnel boring machine underneath the road. Approximately eight shaft locations are required for this trenchless construction method. Please refer to the map above showing the exact location of the proposed alignment and drop shaft locations.
- For smaller diameter pipelines as part of the proposal, Marine Parade (600mm in diameter) and local connections to existing overflow points (between 200mm to 450mm in diameter), these pipelines will be constructed via open trenching.
- Construction will occur sequentially over different road sections. The total construction period is anticipated to take approximately 18 months with the tunnel being constructed between **2024-2026**.

Four interception pipelines are proposed, as shown in the figure below, to connect the new trunk sewer to existing engineered outflow points ('EOP's) being:

1. An 80m long, 300mm diameter extension to the north beneath Hamilton Road
2. A 190m long, 300mm diameter extension to the south beneath Sentinel Road
3. A 220m long, 450mm diameter extension that extends west along Stack Street, turns north along Wairangi Street, and turns west along River Terrace; and
4. A 75m long 300mm diameter extension that extends north within Herne Bay Road.

Please refer to the map below showing the interception pipelines (in yellow).



Are you abandoning stormwater and wastewater separation altogether?

Separation will remain an important tool to improve water quality. A revised and more targeted programme of separation based on a catchment-by-catchment assessment will take place over a longer period. Ultimately, the total number of properties requiring separation is estimated to be 3841, down from the original forecast of 4911. Separation in the St Marys and Herne Bay catchments will be undertaken in later decades (post 2028).

What other benefits are there from the new proposal?

The main 2.1 metre tunnel will be constructed by a tunnel boring machine underneath the road. While the project involves 8 shaft location sites construction will occur sequentially.

The proposed construction works within the road corridor will generate temporary disruption to traffic, property access and street parking in the area. In addition to the above, construction works will generate construction traffic effects, however these will be temporary and localised around the construction sites.

The project will reduce engineered overflow spill volumes into the Waitematā Harbour by at least 80%, particularly during significant wet weather events, by diverting flows away from the existing combined sewer. This is expected to lead to improvements in bathing water quality conditions at the beaches in the Herne Bay area, along with a reduction of odour from stormwater catchpits.

The project will also increase the capacity of the wastewater system in the Herne Bay catchment.

What will happen to the water quality targeted rate?

The water quality targeted rate is very important to beach and water quality improvement initiatives. The portion of the targeted rate dedicated to the Western Isthmus programme will continue to be collected and spent on improving local stream and beach water quality in the area.

Does the change impact the Manukau Harbour?

The proposed Herne Bay trunk sewer will ensure combined overflows are picked up and conveyed to Māngere Wastewater Treatment Plant for safe treatment, reducing overflows to the environment and improving the quality of waterways and swimmable beaches by 2028.

Resource consent conditions and compliance will continue to be met at the Māngere discharge point to the Harbour. Our calculations indicate that by adding the combined flows of St Marys Bay and Herne Bay, we would increase the yearly flow to the Māngere Wastewater Treatment Plant by about 0.2%. The Māngere discharge consent expires in 2032 and there will be an ongoing discussion around how we manage discharges from the Māngere Wastewater Treatment Plant.

Is the underlying motivation for the Herne Bay project and extension of the CI to allow for greater intensification as per the National Policy Statement on urban density?

No, the primary driver is to deliver water quality and bathing beach outcomes at a more reasonable cost by 2028.

How do we know if the new proposal is a good solution?

The project, in partnership with the CI extension will reduce engineered overflow spill frequencies into the Waitematā Harbour, particularly during wet weather events, by diverting flows away from the

existing combined sewer. This is expected to lead to improvements in bathing water quality conditions at the beaches in the Herne Bay area, along with a reduction of odour from stormwater catchpits and improved overall amenity.

In consultation with the residents' associations, we have also agreed to engage independent Engineer and reviewer Ian Wallis. Ian provided the community with constructive feedback on the Council's recent stormwater outfall project. Our aim is to work collaboratively with all parties to ensure we achieve the best water quality outcomes in a timely manner.

How will noise and vibration effects of the proposal be managed?

The project team are currently still busy with investigations regarding construction effects and long-term effects of the project on the existing environment, including properties in proximity to the project works.

Following these investigations, we will be identifying properties that may be affected and will be communicating with the owners to arrange pre-condition inspections well in advanced of any construction works taking place.

Watercare's standard process includes pre-condition surveys of structures in the proximity of the works, continuous monitoring of noise, vibration, settlement etc. during construction as well as engagement with residents to ensure that our works are within the resource consent conditions.

What contingencies does Watercare have in the event of works creating damage to buildings?

Watercare holds public liability insurance as well as project specific insurance to cover any damage that may occur as a direct result of our works.

What is the process in the event of any damage being made to a building?

Through investigations, design and considerate construction and monitoring, Watercare does everything it can to avoid causing damage to property. Should your property show signs of damage, please contact Watercare immediately to ensure all works in proximity to your property are stopped, preventing any further damage until an assessment can be made.

The property and the source of the damage will be assessed (against the pre-condition survey, construction monitoring evidence, settlement markers etc.) upon which a further course of action can be decided upon.

Will the proposed works have effects on traffic in the Herne Bay area?

The proposed construction works within the road corridor will generate temporary disruption to traffic, properties access and street parking in the area. Watercare will work with Auckland Transport through the Corridor Access Request process to ensure appropriate traffic management measures are in place to minimise disruption to property owners, the roading network and public transport.

Closer to the construction date, we will be providing the community with more specific information about road closures and traffic management in place.

Will there be any separation works within Herne Bay before 2028?

No separation works are planned in the Herne Bay catchment prior to 2028.