Issue 3 | July 2026

HERNE BAY COLLECTOR BULLETIN

The Herne Bay Collector tunnel will collect wastewater overflows from the lower Herne Bay area and take it to the Central Interceptor tunnel beneath Point Erin Park. From there, it flows on to Watercare's Māngere Wastewater Treatment Plant for safe treatment.

The project forms part of Watercare's broader Western Isthmus Water Quality Improvement Programme (WIWQIP), a joint initiative with Auckland Council's Healthy Waters department. Its goal is to significantly reduce wastewater overflows and improve stream and beach water quality in the city's western isthmus.

Project update

On 6 May Watercare signed a contract with Italian tunnelling specialists Ghella to construct the Herne Bay Collector (HBC), a nearly 1.7km long, 2.1m diameter wastewater tunnel. On Friday 8 May, a karakia and cultural induction led by Ngāti Whātua Ōrākei was held for the site team to acknowledge the contract signing and help ensure a strong official start to the project.

The team from Ghella has been working on early enabling works for several months, at various sites. These works help to prepare for construction stretching from the southwest corner of Point Erin Park and along Sarsfield Street to Marine Parade. The future construction sites are largely in the roadway along the alignment of the tunnel. Final project construction is expected to be completed in late 2028.

There are 10 shafts, with depths of between 10m and 23m. Seven of these shafts are launch and/or retrieval shafts for the micro-Tunnel Boring Machine (mTBM) and three are intermediate shafts between 10m and 23m deep. Most of the shafts, referred to as manholes (MH) on our drawings and maps, will connect to existing engineered overflow points (EOPs), which discharge wastewater into the environment in wet weather events.

Each site and shaft is unique in some way and the average time for construction will be some two years. You will notice several different stages in the construction process and our timelines are approximate as there are many factors that can impact the programme. These include unknown below-ground services and conditions, specialist workforce availability and wet weather.

What construction looks like – the different stages

Service relocations: all the services at our shaft sites need to be relocated around the excavation area. There are many different services including fibre, gas, electricity, water and stormwater. This work can be quite disruptive as the relocated services are often moved to the road berms. While Ghella carries out excavation and duct installation for the services, the services operators (Chorus etc) are responsible for completing the final connections. We are reliant on their work schedules and availability and often this work needs to be carried out at night to minimise service disruptions to customers.

Removal of blue stone kerbing: involves concrete cutting, individually marking each stone and confirming the GPS co-ordinates before storing them off-site ready for reinstatement when construction is complete. The stone kerbs must be reinstated in their current locations to maintain the historical context of the area as per our Resource Consent.

Site establishment: involves installing temporary fences and access which may include removing the raised speed tables and constructing new alternate roads using the berms. These temporary roads are necessary to ensure property owners have vehicle access. We also install water treatment plants, muck bays and other site facilities for our workforce.

Temporary works: include scaffold installation, guide wall construction, pile cage delivery and secant bored piling. The latter is drilling overlapping reinforced concrete piles to form a retaining wall around the shaft for safe excavation. These are temporary piles and are removed when tunnelling and construction have been completed.

Permanent works: involve tunnelling excavation, installation of tunnel liners and constructing any permanent chambers. We also install mechanical and electrical systems with the bulk of these in the permanent plant room in the southwest corner of Point Erin Park.

Site reinstatement: this final stage includes removing temporary services and backfilling and reinstating any excavations. We re-install the blue stone kerbing and disconnect any services used only for construction. We then replace the permanent kerb and channelling and berm areas, and re-asphalt and repaint road markings as needed.

Main works

Ghella will construct a tunnel for approximately 1.7km using several tunnelling methodologies. These are: a micro-Tunnel Boring machine, a nano-Tunnel Boring machine, HDD (horizontal directional drilling) and hand digging.

The main 2.1m-diameter tunnel will pass beneath the streets at depths ranging from 9 to 22 metres. We will also install smaller pipelines along Marine Parade (600mm in diameter) and local connections to the existing engineering overflow points (between 200mm to 450mm in diameter).

The 10 tunnel shafts vary in diameter depending on their purpose e.g. launch and/or retrieval shaft or intermediate shaft. Some shafts are also intercepting shafts to enable connections to existing engineered overflow points (EOPs) - these are manholes in the roadway or on private property.

We are building a permanent control chamber (named MH01) in the southwest corner of Point Erin Park. This contains large gates controlling the wastewater flow into the Central Interceptor tunnel. Its operations are controlled by the permanent plant room nearby.

Auckland Council's Healthy Waters department is seeking consent to install a 375mm-diameter stormwater pipeline connection between St Mary's Pump Station and the Pt Erin control chamber. This will be constructed using horizontal trenchless drilling. From there it will discharge into the Central Interceptor. (See project map.) Watercare and Ghella will deliver these works as part of the Herne Bay Collector project, working within the existing site compounds at 94A and 94B Shelly Beach Road and the south-west corner of Pt Erin Park.

We will also establish three temporary Construction Support Areas (CSAs). One is beside the Curran Street motorway on-ramp and another is in Salisbury Reserve. We will shortly confirm when we will begin the two-year consented use of the latter site. The third CSA is at the existing Central Interceptor site next to Pt Erin pool.

Proposed construction programme

Site	shaft depth	shaft diameter	Establishment date	Reinstatement date
MH01 Control Chamber			Jan 2026	Feb 2029
MH02	17m	7.4m	Jan 2026	Feb 2029
MH03	23m	7m	Jun 2026	Mar 2028
EOP 202A (indep.)			Feb 2027	Jun 2027
MH04	13m	7m	Feb 2026	Mar 2028
EOP 201A			Nov 2026	Mar 2028
MH05	18m	11m	Jan 2026	Feb 2028
MH06	20m	11m	Apr 2026	Aug 2028
MH07	10m	7m	May 2026	Sep 2028
EOP 740A			Jan 2027	Jul 2027
MH08	20m	7m	Aug 2026	Sep 2028
EOP197 (indep.)			Oct 2026	Aug 2027
MH09	23m	11m	Sep 2026	Dec 2028
MH10	12m	7m	Nov 2026	Dec 2028
EOP 198A (indep.)			Apr 2027	Jun 2028
MH11	17m	6m	Jul 2026	Oct 2028
EOP199A			Apr 2027	Dec 2027

Tunnelling

Ghella will deploy an Earth Pressure Balance (EPB) micro-Tunnel Boring Machine (mTBM) for the 2.1m diameter Collector tunnel. This well-proven methodology uses pipe-jacking, which enables trenchless (underground) installation of pipelines with minimal disruption to the surface environment.

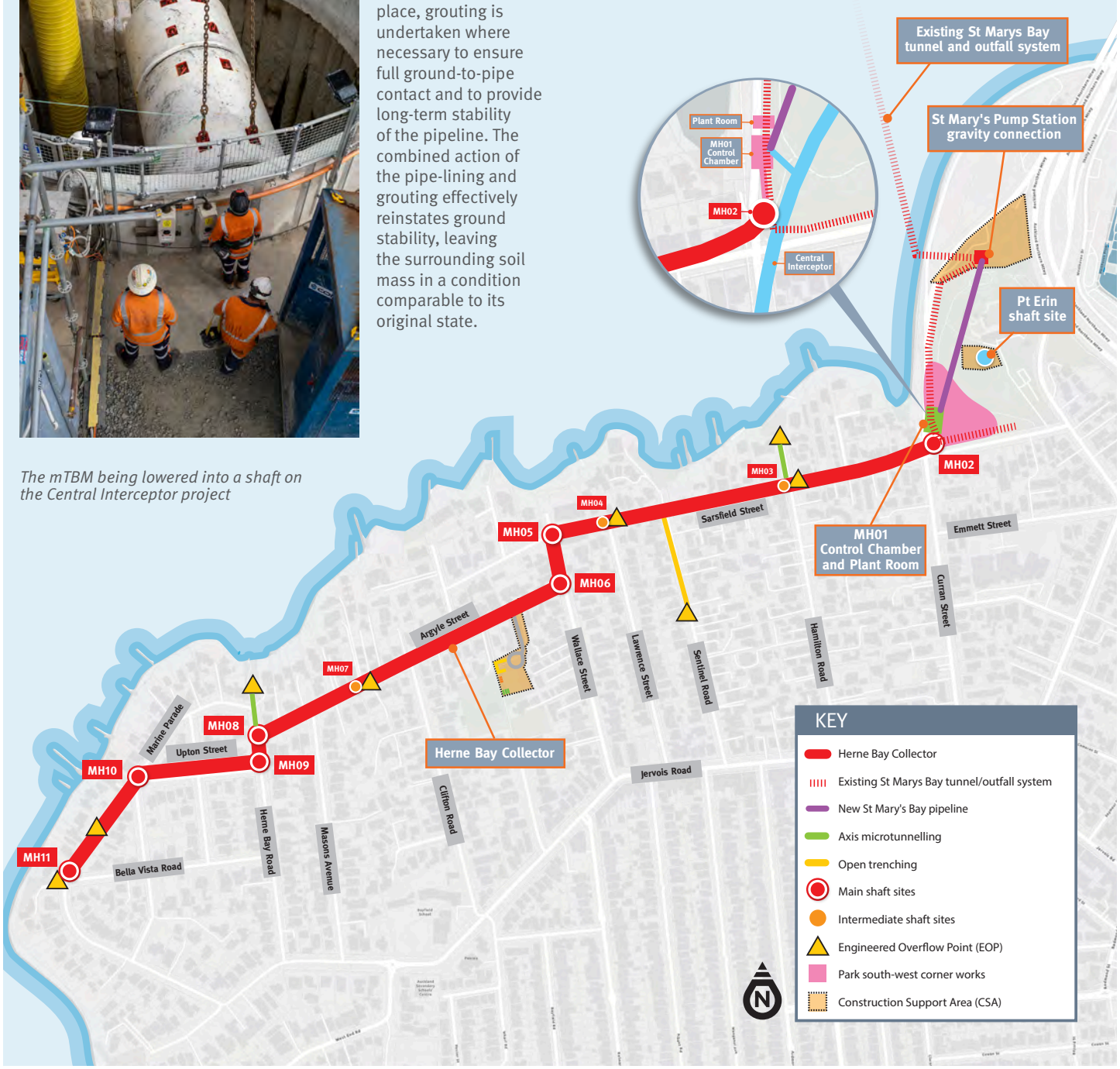
The mTBM is equipped with a rotating cutting wheel to loosen soil at the tunnel face. Then an excavation chamber mixes the loosened soil with foam to form a mouldable slurry. This is transferred by screw conveyor to a belt conveyor which transports the soil, also called spoil, into skip bins which are transported to the bottom of the shaft via an electric locomotive. These bins are then lifted out of the shaft by crane to be transported on trucks away from site.

The mTBM being lowered into a shaft on the Central Interceptor project

Thrust cylinders push the mTBM forward and install precast concrete pipes. Once the pipe string is pushed into place, grouting is undertaken where necessary to ensure full ground-to-pipe contact and to provide long-term stability of the pipeline. The combined action of the pipe-lining and grouting effectively reinstates ground stability, leaving the surrounding soil mass in a condition comparable to its original state.

Tunnelling drives

Drive 1	(Hand excavation)	MH02-Control Chamber	February to August 2027
Drive 2	mTBM	MH05 – MH02	October 2026 to June 2027
Drive 3	mTBM	MH05 – MH06	May 2027 to July 2027
Drive 4	mTBM	MH06 – MH08	July 2027 to January 2028
Drive 5	mTBM	MH09 – MH08	December 2027 to February 2028
Drive 6	mTBM	MH09 – MH10	February 2028 to May 2028
Drive 7	nanoTBM	MH10 – MH11	December 2027 to March 2028



Traffic Management

Traffic management is one of the most obvious activities as it impacts most of the streets in the area, due to the road network layout in the suburb. Our traffic management is organised in a staged approach to suit the activities on site whilst minimising the impact to pedestrians and road users as much as possible. This means a lot of dynamic changes for the different construction stages. Once the sites have been fully set up traffic controls will be more settled. These largely focus on keeping the public safe, managing traffic flow, truck movements and space constraints around the site.

To reduce the number of signs across the Herne Bay area and reduce confusion about speeds near our sites, a 30km speed limit is in force for the duration of the project. Other temporary changes include removing on-street parking around sites and providing changed pedestrian and vehicle access using berms and roadways. Property access will be maintained for all residents. If your vehicle access is affected at any time, we will be in touch with you directly. Please follow all traffic signs and instructions and adhere to the road code, for your safety and ours.

Residents will be informed of traffic management closures and changes. The traffic team is there to protect both the public and our workers - please treat them with respect.

Monitoring

Seasonal movement can lead to building and ground settlement as the soil naturally shrinks and swells as moisture content changes between seasons. Settlement due to construction can occur due to the drawdown of groundwater as water seeps into an excavation. There are several controls in place to track possible settlement.

Our settlement monitoring includes using satellite data which regularly monitors settlement across Herne Bay with a database of readings over the past two years as a baseline. We also carry out conventional monitoring using stickers and survey markers to monitor the ground levels.

Stakeholder engagement

We will work closely with anyone affected by the construction of the Herne Bay Collector. Following this major update bulletin, which is distributed by mail drop and email, regular bulletins will be distributed via Watercare's automated email system. We encourage you to sign up for these. (See below)

In addition, more focussed notices will be delivered to those impacted by activities and changes around individual shaft sites. From time to time, we will also hold drop-in sessions at our construction sites to provide an opportunity to find out more about our work in person.

Any questions?

For up to date information please see our website:
www.watercare.co.nz/home/projects-and-updates

You can also email us at:
hbc@ghella.com

Or phone:
0800 GHELLA (0800 443 552)

We encourage you to receive these updates electronically - send us your email, your current mailing address and quote "Sign me up: Herne Bay Collector bulletin" to hernebayproject@water.co.nz

Watercare