

# **Renny and Rexy's tunnelling journey**

**Eglinton Crosstown West Extension**

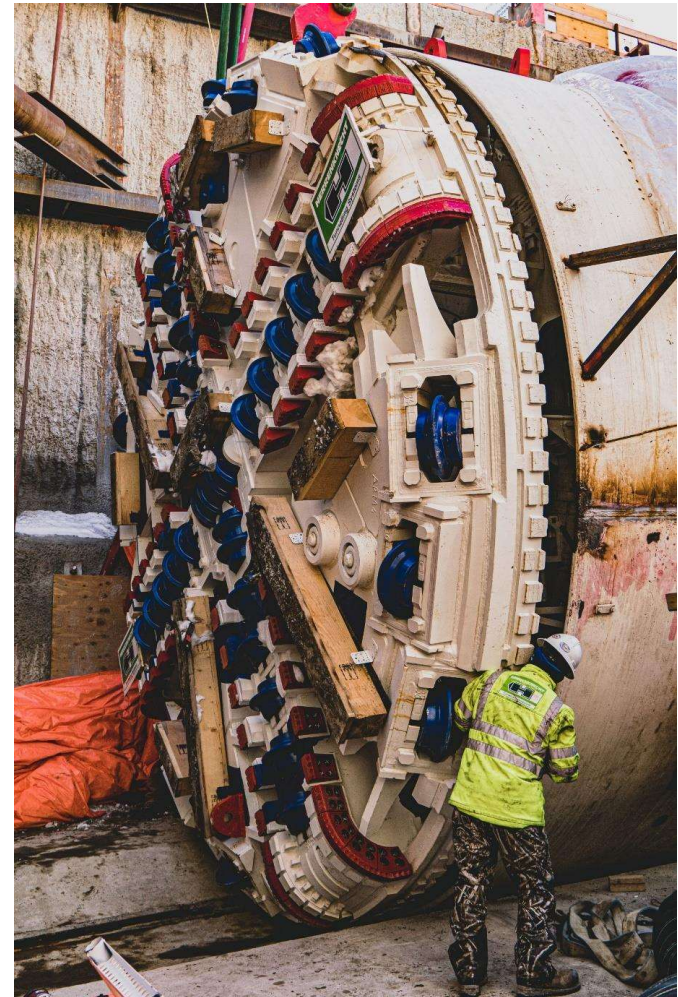
**July 13, 2024**

## Tunnel boring machine (TBM) fun facts

- Each TBM weighs about 750 tonnes each, which is about five times as heavy as a blue whale.
- TBMs travel on average 10 to 15 metres a day.
- TBMs typically collect around 2,000 tonnes of earth and rock per day as they tunnel.
- While the TBMs dig, they also install tunnel rings. Tunnel liners are made of reinforced concrete and give the tunnels their structure. It can take between 50 to 120 minutes for a TBM to excavate and install one liner ring.

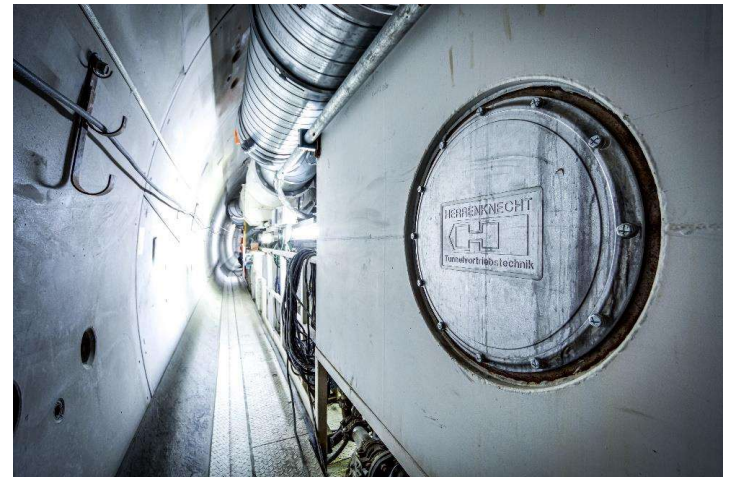
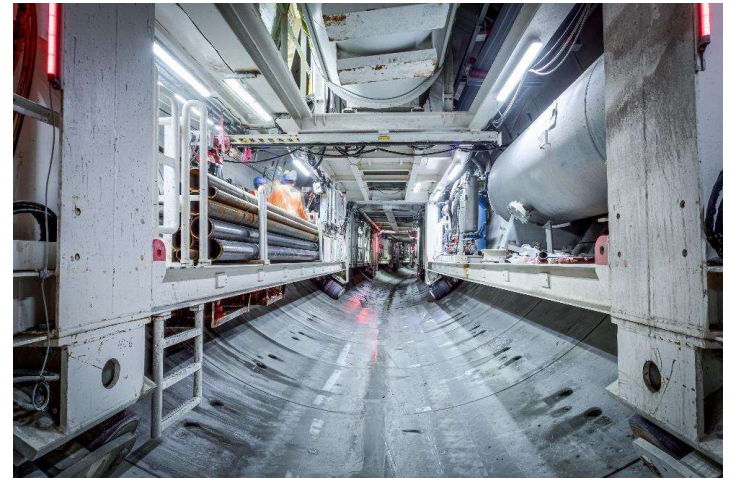
### Did you know?

The TBMs excavated approximately 1.2 million tonnes of soil and rock and installed a total of more than 52,000 pre-cast concrete segments to build 7,433 rings to support the tunnel walls.

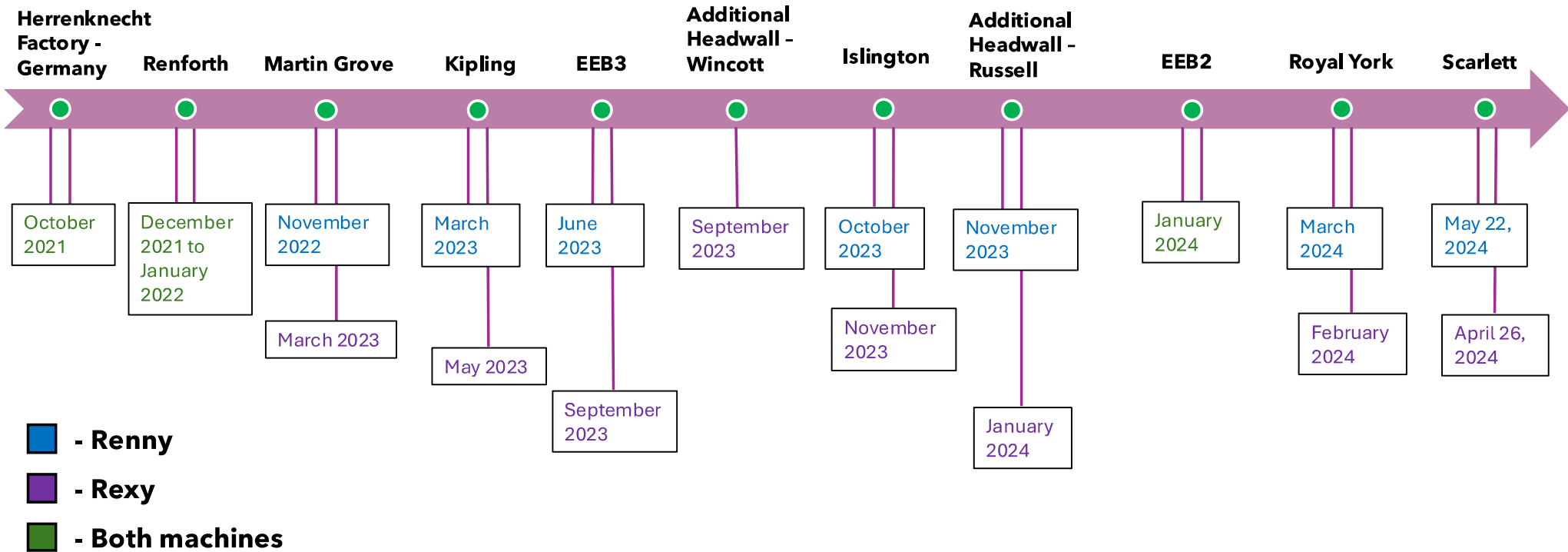


Eglinton Crosstown West Extension

## The inside of a tunnel boring machine



## Renny and Rexy's tunnelling timeline



## Herrenknecht Factory - Germany

- Metrolinx's contractors, WestEnd Connectors visited the Herrenknecht factory in Germany in October 2021 to inspect Renny and Rexy.
- This was an important milestone, as the WEC team witnessed the tests of the tunnel boring machines (TBMs) to ensure they worked as designed.



## Renny and Rexy's arrival - Launch Shaft (Renforth Drive)

- Our TBMs arrived piece by piece at our Launch Shaft site at Renforth Drive, Mississauga in December 2021 - January 2022.
- Renny and Rexy's cutterheads arrived in December 2021.

### Did you know?

- Renny and Rexy's cutterheads travelled from Germany to Antwerp, Belgium, then across the Atlantic Ocean, to Hamilton via the St. Lawrence River to reach the Launch Shaft.



# Headwall overview

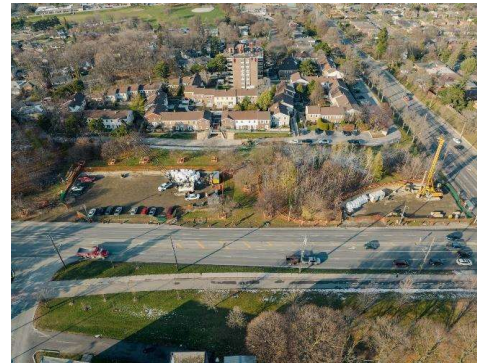
**Future Stations, Emergency Exit Buildings (EEBs) and Additional Headwalls:**



**Martin Grove**



**Kipling**



**Islington**



**Royal York**



**EEB #3 (Wincott Drive)**



**EEB #2 (Russell Road)**



**Additional Headwall (Russell Rd)**

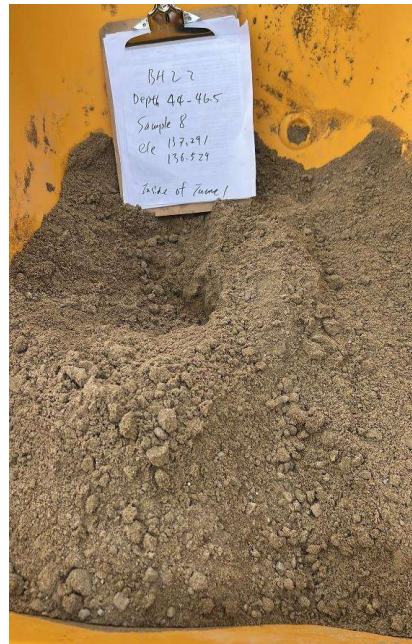


**Additional Headwall (Wincott Dr)**

## Ground conditions - Soil types encountered



**Shale**



**Sand**



**Boulders**



**Cobbles**



## Renny and Rexy's 6-kilometre milestone

- Before reaching our extraction shaft on Eglinton Avenue West, just west of Scarlett Road, our tunnelling crew celebrated Renny and Rexy's 6-km milestone.
- Rexy reached the 6-km mark on April 24 and Renny on May 24.

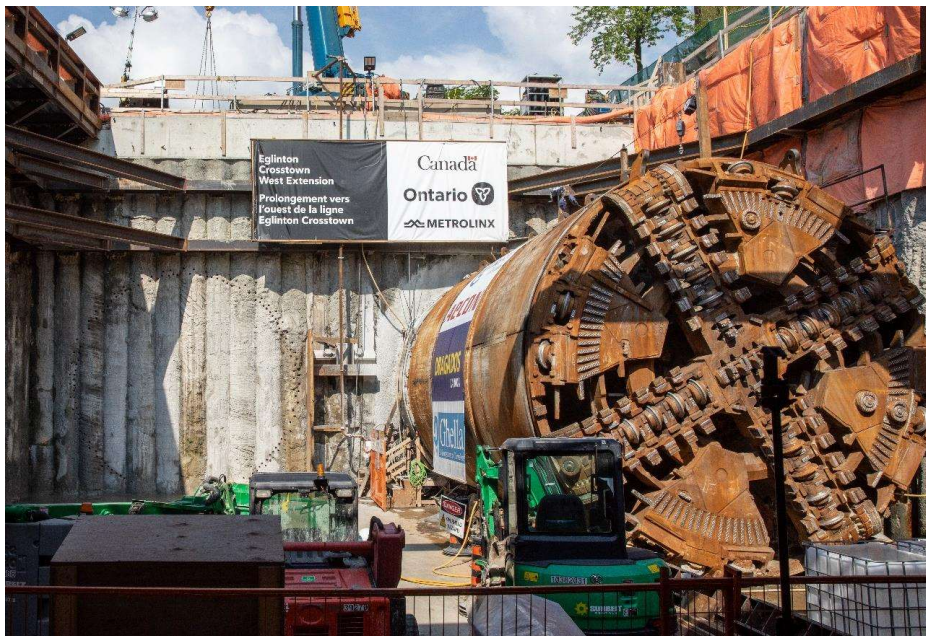


## Rexy's Breakthrough - April 26, 2024



- After two years of tunnelling, Renny and Rexy finished their 6.3-km journey along Eglinton Avenue West at the extraction shaft, just west of Scarlett Road.
- Rexy was the first to reach the finish line and break through on April 26, 2024.

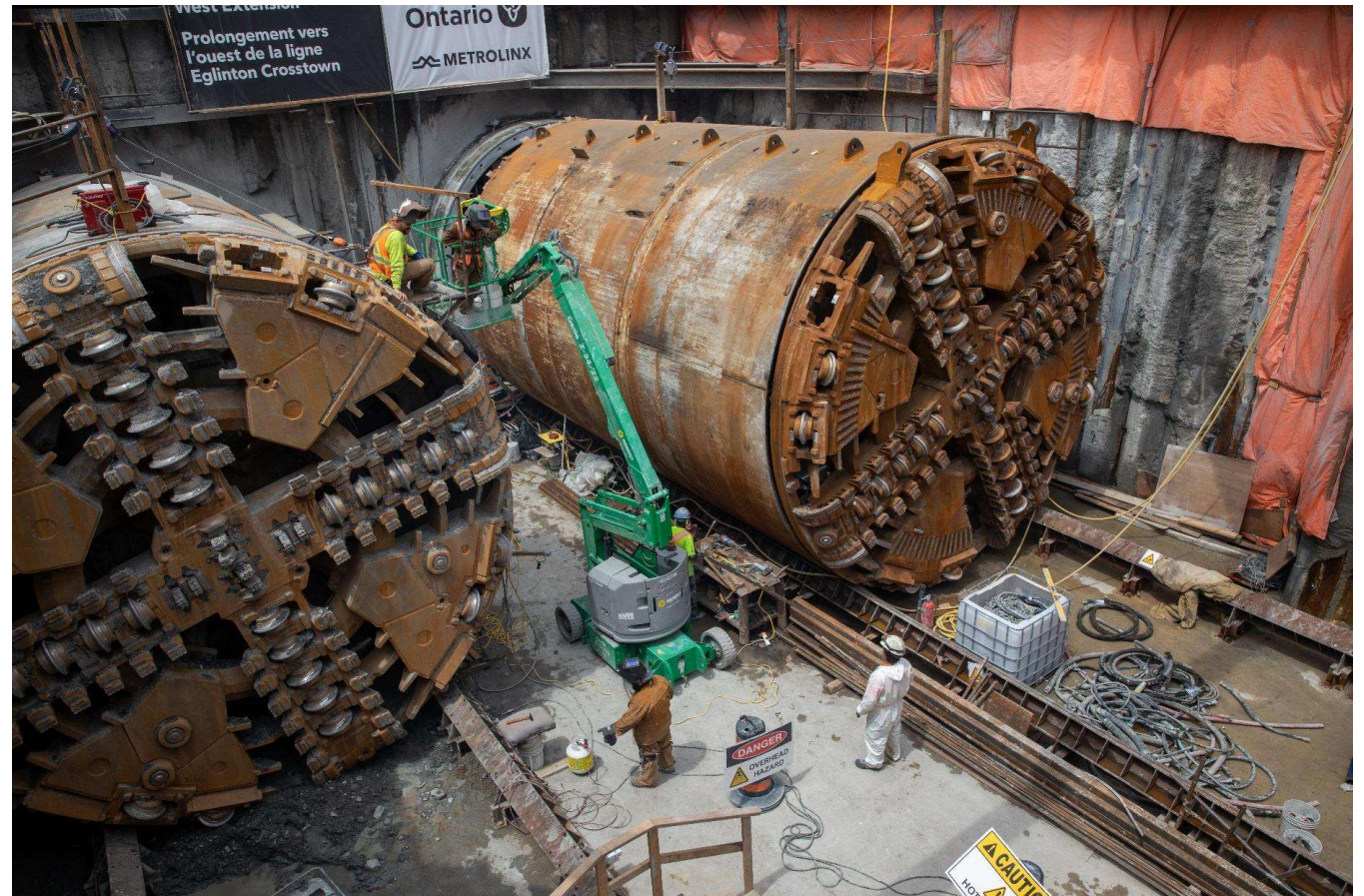
## Renny's Breakthrough - May 22, 2024



- After two years of tunnelling, Renny and Remy finished their 6.3-km journey along Eglinton Avenue West at the extraction shaft, just west of Scarlett Road.
- Renny officially broke through on May 22, 2024.

## Renny and Rexy out of the tunnel

- Renny and Rexy were reunited after their 6.3-km journey.
- The 750-tonne TBMs waited to be disassembled and hoisted up piece by piece out of the extraction shaft.



## TBM disassembly

- Remy's disassembly began on June 10, 2024, and Renny on June 24, 2024.
- Both TBMs are expected to complete disassembly by the end of Summer 2024.
- TBM parts will be stored at WEC's Renforth Drive site.



## Renny and Rexy back at Renforth Drive

- Renny and Rexy's cutterhead, shield, and other components were brought back to the Launch Shaft site at Renforth Drive, Mississauga.

