

Piling Foundation Works

Victoria Park-Canning Level Crossing Removal Project

The METRONET Victoria Park-Canning Level Crossing Removal Project is scheduled to begin piling works to secure the foundations of the site, before construction of the elevated rail.



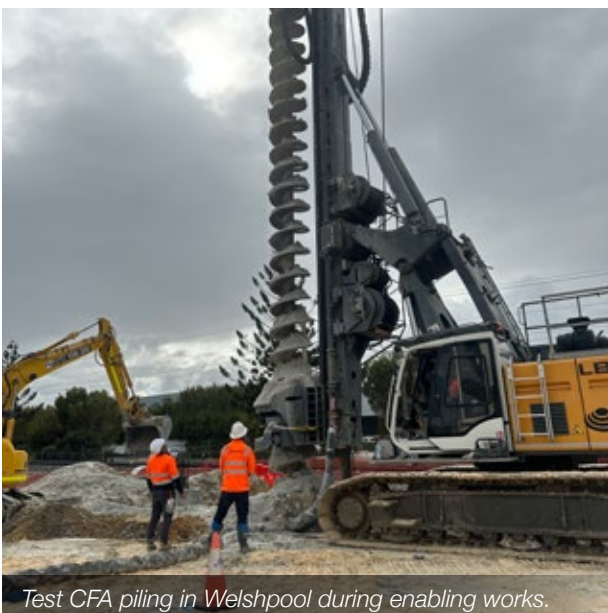
What is piling?

Piling is the process of drilling foundations (long poles made of steel or concrete) into the ground to provide structural integrity to the earth underneath. It prepares the ground to carry heavy loads and, in this case, will strengthen the ground to cater for the elevated rail structures. Essentially, piles work by distributing weight across a wider surface area.

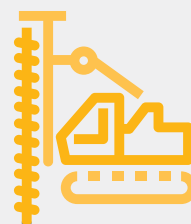
Six piling rigs each weighing 130 tonnes, will install 775 piles to lay the foundations for around 4.5km of elevated rail.

Hardstand areas will be built before piling works to provide a stable surface where drill rigs will operate. These areas are designed to withstand the load of the rigs and other heavy machinery.

Piles will be installed up to 35m into the ground to support the weight of the viaduct structure, stations, rail infrastructure and trains it will carry.



Test CFA piling in Welshpool during enabling works.



Piling methods being used

The piling methods for this project have been carefully chosen to accommodate the diverse ground composition, varying distances and the presence of different types of infrastructure along the rail line, including commercial and residential areas.

Bored piling

Bored piling involves drilling holes into the ground, which are subsequently filled with poured concrete. This method results in piles that are cast directly into their position.

Continuous Flight Auger (CFA) piling

Continuous Flight Auger (CFA) piling is a process where the pile is drilled to its total depth in one continuous operation. CFA piles are effective when piling occurs close to existing buildings or in built-up areas (due to lower vibration and noise) and are suitable for most soil conditions.

Controlled Modulus Column (CMC) piling

Piling with controlled modulus columns (CMC) is a ground improvement technique used to manage and reduce settlement and increase bearing capacity in softer soils. Considering Western Australian soils are softer than the clay soils found in the Eastern States of Australia, with larger components of sand, CMC piling is an effective solution for the region.



Piling schedule

Piling activities are scheduled to take place at specific locations crucial for the building of each of the four viaduct structures, near the five elevated stations and the new shared path bridge over Welshpool Road. Piling will occur within the rail corridor in the areas shown on the map below.

Piling works will begin in early December 2023 and are planned to be completed by mid-2024. Piling works will mostly occur during standard working hours, from Monday to Saturday, 7am to 7pm. Some out-of-hours works may be required for certain locations with road closures, to mobilise drill rigs to site and on high-temperature days, with concrete pouring done earlier in the morning.

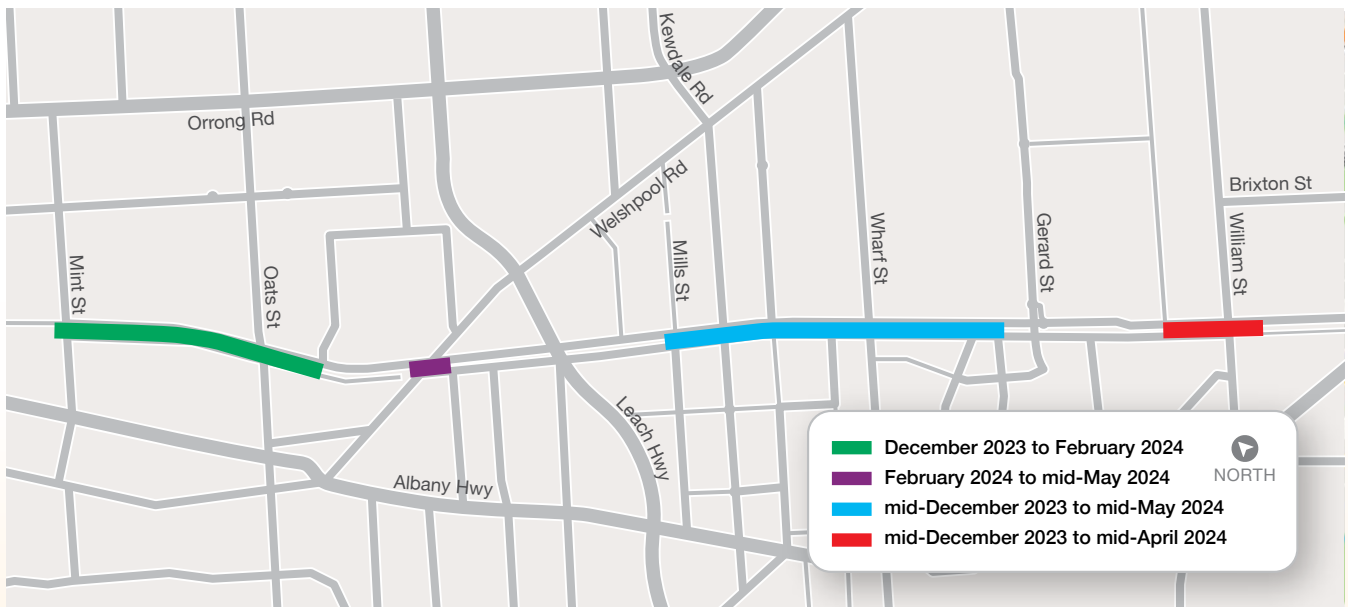


Managing impacts

Data gathered during enabling works, including test piling, has informed piling methods and expected levels of noise and vibrations that may be felt. These will continue to be monitored throughout the project to adapt methods and reduce impacts as much as possible.



For more information, please see the 'Managing Works Impacts' fact sheet on the project page at metronet.wa.gov.au



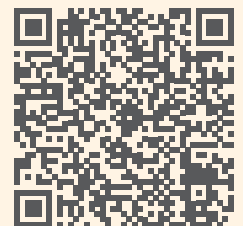
Piling works planned within the project areas.



How to stay informed

Visit the website for the latest project works information or contact the project team directly by email info@metronet.wa.gov.au or calling our 24/7 infoline on **9326 3666**.

You can also sign up to project **Works Alerts** by **email or SMS** for immediate updates on works impacts happening near you, such as changes to traffic detours and out-of-hours works.



MORE INFORMATION

☎ 9326 3666

✉ info@metronet.wa.gov.au

🌐 metronet.wa.gov.au

📱 @metronetperth



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