

BLACKBURN ROAD

# LEVEL CROSSING REMOVAL UPDATE

ISSUE #04 MAY 2016


Removing 50 dangerous and congested level crossings will transform the way people live, work and travel across metropolitan Melbourne and improve safety for drivers and pedestrians.

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## Foundation works begin for new rail cutting

**The Blackburn Level Crossing project reached a major milestone in April when piling works get underway.**

To remove the level crossing at Blackburn Road, the Belgrave-Lilydale rail line will be lowered by up to nine metres to run underneath Blackburn Road. (See pages 2 and 3 for a drawing of how the new rail line cutting will look.)

While major excavation works for the cutting that will house the new rail line will not begin until the end of December 2016, structural foundations along both sides of the corridor need to be constructed first.

Critical to these foundation works is the installation of the piles that will form the walls of the cutting. A pile is a vertical structure similar to a giant underground concrete column.

Piles will be bored on both the north and south side of the rail line between Blackburn station and Metropolitan Avenue.

Tayne Evans, Project Area Manager explains that concrete piles will be used to stop the cutting's walls from collapsing inwards.

"Over one thousand piles of up to 1m in diameter will be bored along the length of the cutting, there will be one pile bored every 2.7 metres."

"Each pile hole will be up to fifteen metres deep and will be dug using a piling rig. A steel reinforced cage will then be lowered into each bore hole and then concrete will be poured or pumped into the holes and allowed to cure to reach design strength."

"The piling rigs will be positioned at some locations extremely close to fences and nearby trees. In some locations we will need to further trim trees in order to get the rigs into position and not damage the trees."



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## Piling works ramp up into full swing

During the July works, the piling rigs will be operating 24 hours a day. Residents and businesses most impacted by these works will be contacted to discuss the options during this time and we encourage anyone concerned to give us a call.

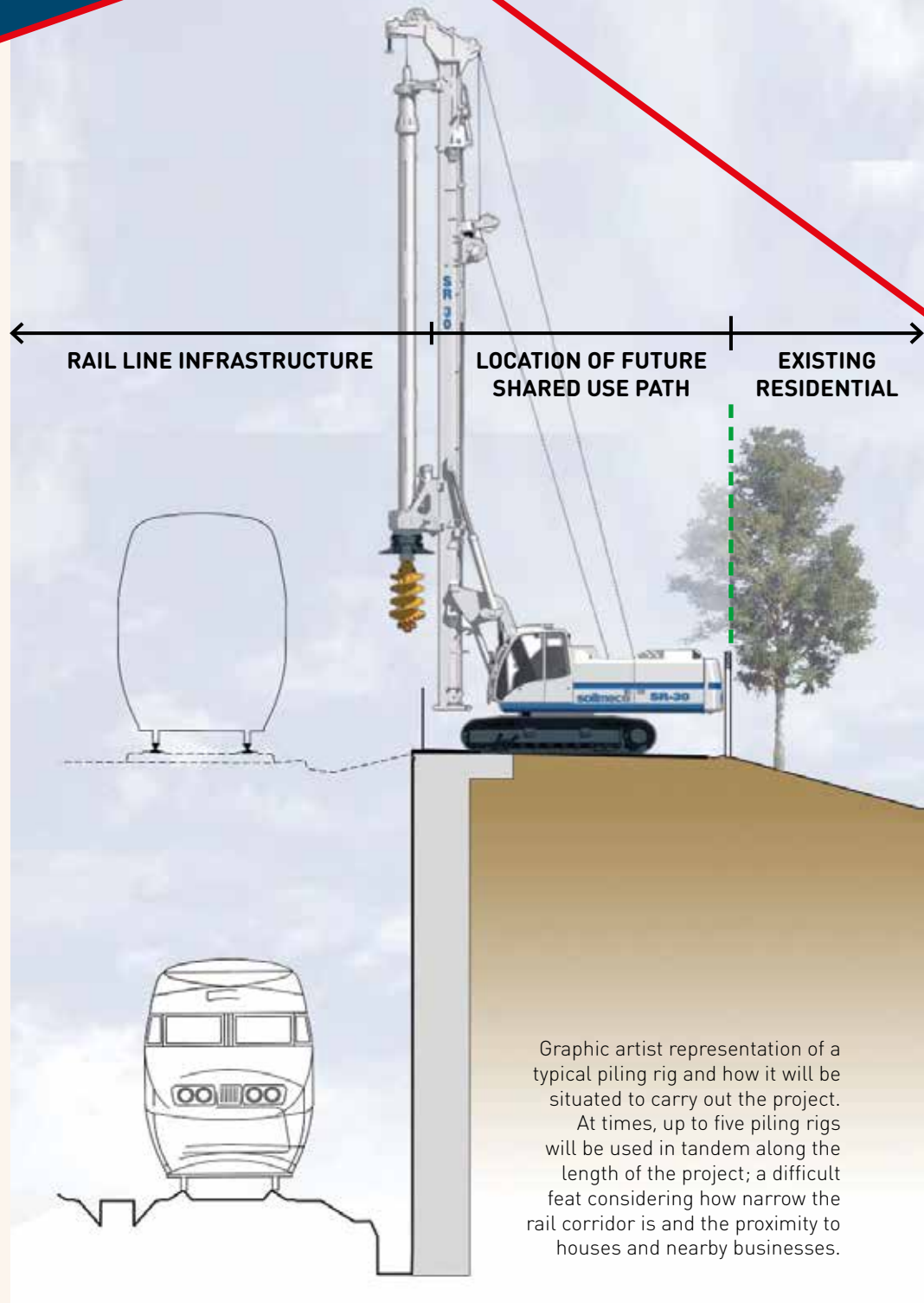
According to Project Area Manager, Tayne Evans, the large scale of the project and the constraints of building it in a narrow, operating rail corridor have been a challenge, but one he was prepared for.

“We always knew that the Blackburn project would test us in terms of the planning and construction of the project.”

“Other level crossing removals – such as the one in Mitcham – were able to be built to the side of the operating rail line because they had enough room to do that.”

“We, on the other hand, have a very narrow corridor with houses and businesses in very close proximity to the tracks. We can do some works while the trains are running, but the majority of the major works can only be done when trains have been stopped.”

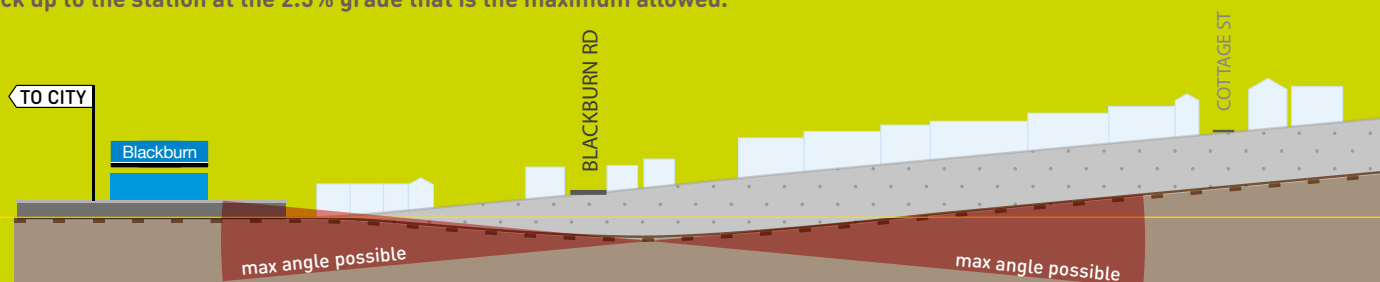
Each pile takes several hours to be installed. In general they are 15 metres deep, just over a meter in diameter and are placed every 2.7 metres along the cutting.



Graphic artist representation of a typical piling rig and how it will be situated to carry out the project. At times, up to five piling rigs will be used in tandem along the length of the project; a difficult feat considering how narrow the rail corridor is and the proximity to houses and nearby businesses.

## Artists impression of new railway cutting

At one end is the station and at the other, Metropolitan Avenue. You can see that ground level at Blackburn station is significantly lower than at Metropolitan Avenue; making it possible for the train line to drop underneath Blackburn Road and get back up to the station at the 2.5% grade that is the maximum allowed.



# Major works scheduled for this July

By the time you receive this project update, piling works to install the twelve hundred concrete piles required for the project will have begun. This marks a major milestone in the project.

To make sure we can excavate the new rail cutting in January next year, the team needs to carry out an intensive works period in the July school holidays.

## What does this mean?

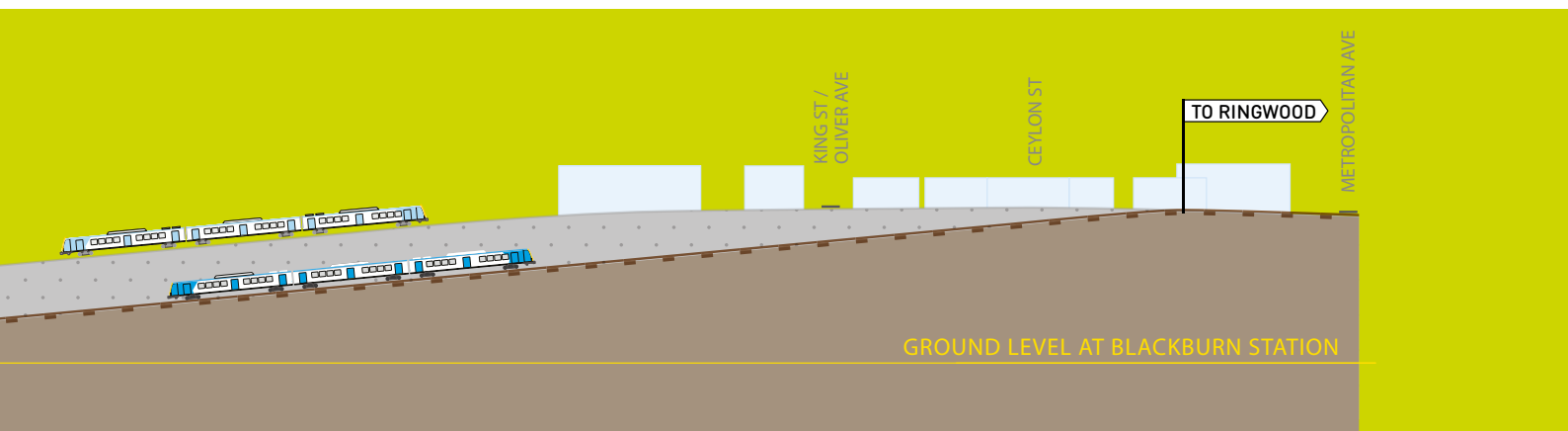
From 2 July we are going to close the Belgrave-Lilydale rail line between Box Hill and Ringwood for nine days. When we do this, we will have multiple piling rigs working around the clock to get as many piles installed as possible.

We will also be closing Blackburn Road during this time and for the week prior to the rail closures.

## Before we start piling works

Lots of work has been done to prepare for the start of piling. Please refer to the table below to see what this has included:

Works	Status
Identifying the underground services (electricity, gas, telecommunications, water, sewerage) to document where they are all located to ensure we don't damage them.	80% completed
Installing over 2.0km of temporary safety fencing.	100% completed
Moving the underground services that currently sit in the rail corridor into temporary conduits or into new, permanent conduits. But before we could do that, we needed to first dig out trenches or install the surface level troughing for those services to sit in.	100% completed (east of station) 80% completed (west of station)
Ensuring the overhead electrical 22kV and 1,500V cables were clear of the works area while still making sure they were able to run train services reliably.	100% completed by end of April
Creating safe and accessible areas for the piling rigs to sit and for other construction vehicles to access the corridor.	50% completed





Pictured, Casey Hansen, Environmental Representative on the Blackburn and Heatherdale Level Crossing Removal Projects, inspecting a DustTrak monitor.



# Managing Dust

**As the Blackburn Level Crossing Removal Project moves closer to major construction commencing, we thought this was a great opportunity to start talking about how we manage dust.**

Over the duration of the project, we will be working hard to maintain air quality. Already we have installed dust monitoring equipment.

To monitor dust levels close to the project area, we use dust deposition monitors. Three of these will be installed at Blackburn. The project will also host one DustTrak unit which has the ability to send us real time data for dust and weather conditions including wind, rain and temperature. The DustTrak is portable so can be moved depending on where works are occurring.

***Next issue: How we are minimising dust***

A big thanks to the Blackburn community for your patience and understanding while we carry out weekend works. Here are some photos of our activities that weekend.

