



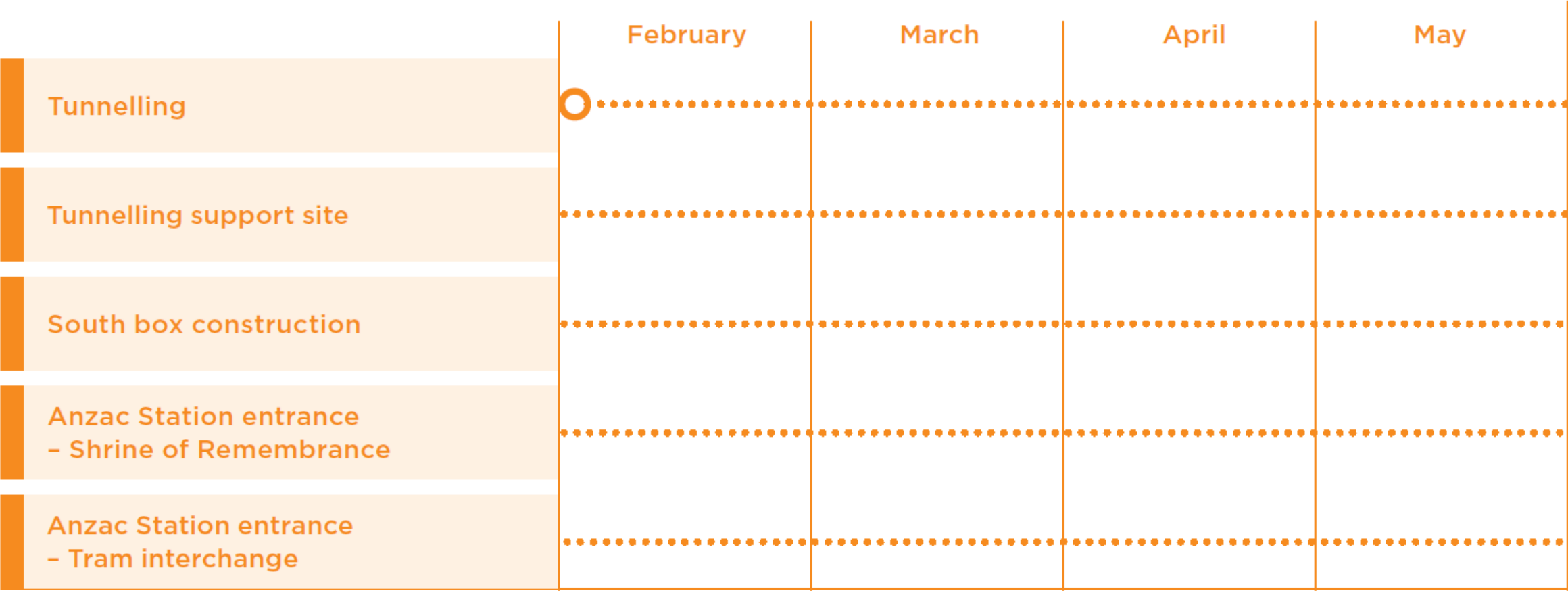
# DOMAIN

## COMMUNITY REFERENCE GROUP

10 February 2021

# WORKS UPDATE

2021 LOOK AHEAD



# WORKS UPDATE: TUNNELLING

# WORKS UPDATE

## TUNNELLING



- TBM Alice was launched on 21 January 2021
- TBM Alice has now completed 180m of tunnel
- TBM Millie has now completed 700m of tunnel
- Alice's launch will see more frequent deliveries of pipe sections and tunnel segments, 24/7

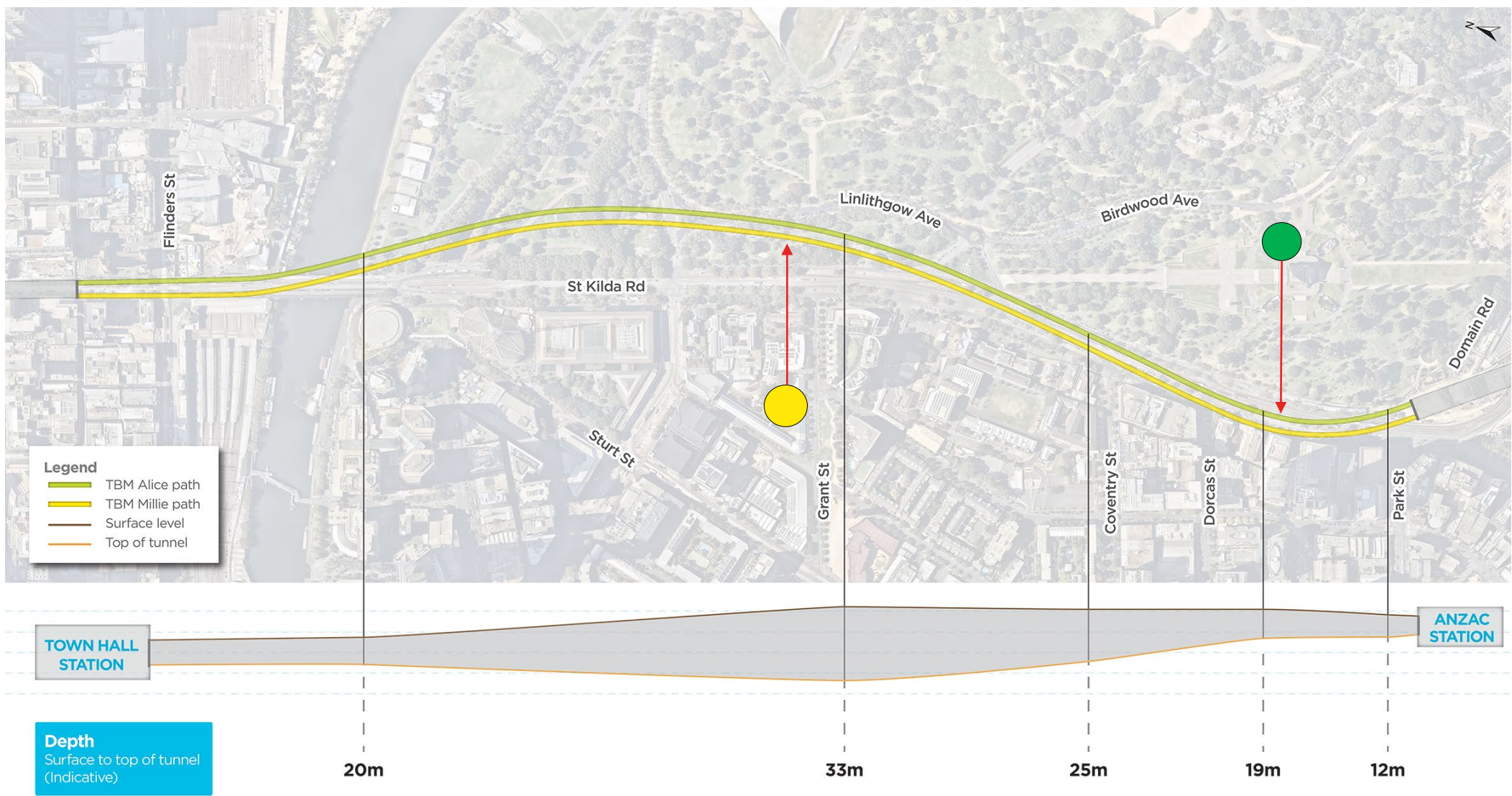


*TBM Alice leaves the Anzac Station on her way to Town Hall Station*



# WORKS UPDATE

## TUNNELLING PROGRESS



# WORKS UPDATE

## CROSS PASSAGES



- Work has commenced on cross passages in the East
- To construct a cross passage, a concrete saw is used to cut through the tunnel walls before using a small excavator to mine between the two tunnels
- Concrete is periodically sprayed on the excavation to provide stability as excavation progresses
- A waterproofing membrane is installed followed by steel reinforcement and concrete



*Partially constructed cross passage in Western Precinct, waterproofing membrane and steel fixing*

# ENVIRONMENT UPDATE: TUNNELLING



- Following the completion of the second TBM drive CYP has been working with Herrenknecht reviewing data in preparation for launch of TBM4

	July 20'	Shaker Screen Frequency change	PSS Aug 20'	PSS Feb 21'
16hz	83.4	84.8	87.1	86
20hz	86.1	74.1	71.9	71.1

Table 1: External low frequency noise @ Botanica (dB)

- CYP conducted in-classroom monitoring at Melbourne Grammar prior to students returning
- Data shows a moderate increase in the levels of low frequency noise



Table 2: Internal low frequency noise @ MGS (dB)



# ENVIRONMENT UPDATE

## STP NOISE AND VIBRATION - TUNNELLING



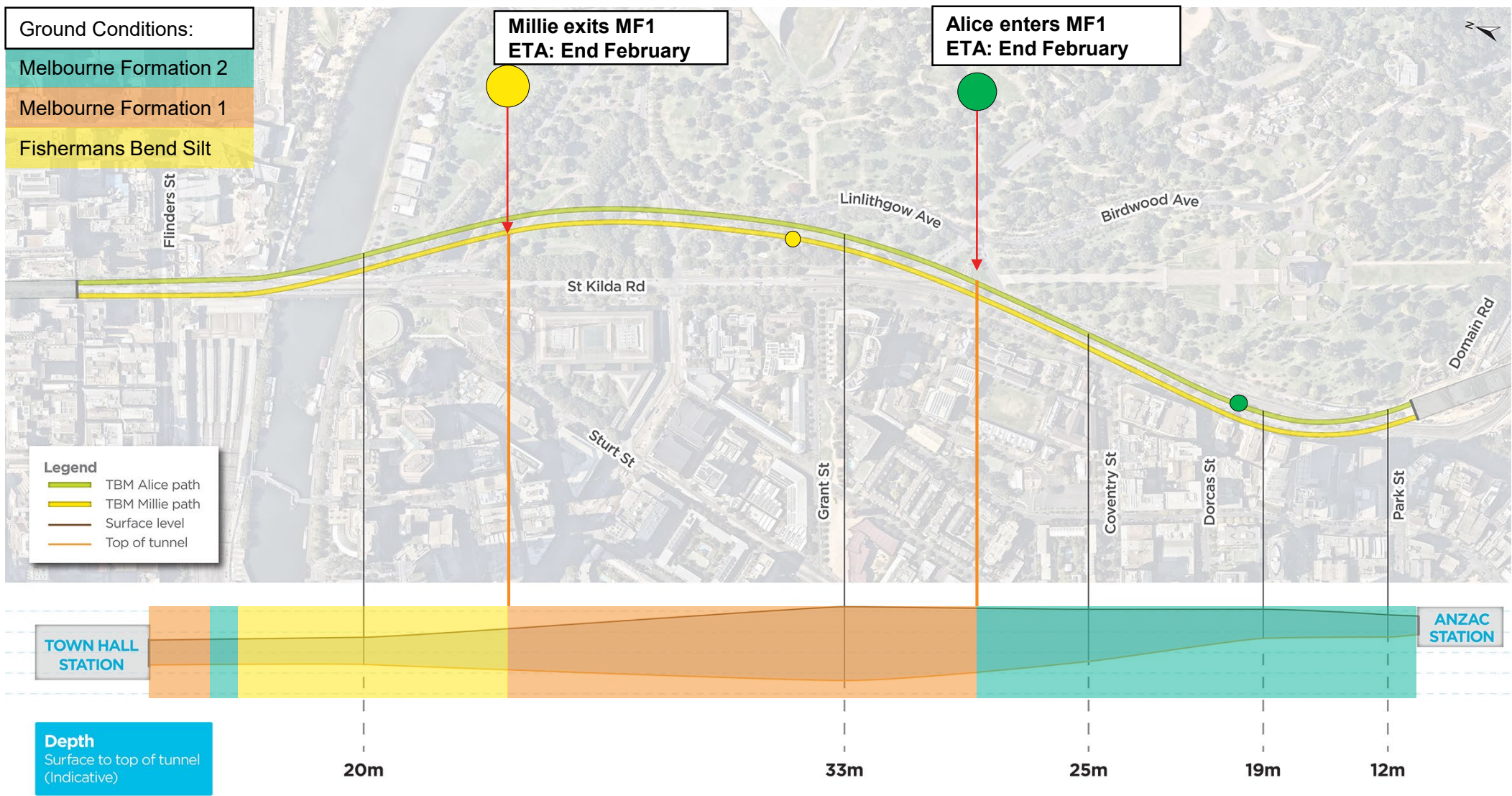
- Geological conditions for the second drive to Town Hall Station consist of
  - Melbourne Formation 1 (hard rock)
  - Melbourne Formation 2 (rock + some clay)
  - Fishermans Bend Silt (soft soil)
- Tunnelling to date has been in Melbourne Formation 1 (Millie) and Melbourne Formation 2 (Alice)
- The most likely conditions for low frequency noise appear to be when both TBMs are travelling through the harder rock of Melbourne Formation 1



*Recent soil samples of Melbourne Formation 1 (top) and Melbourne Formation 2 (bottom)*

# WORKS UPDATE

## TUNNELLING PROGRESS





# ENVIRONMENT UPDATE

## PIPE NOISE - TUNNELLING



- During the first tunnel drive there were reports of ‘pinging’ sounds as harder rocks moved through the pipes
- Millie entered into the harder Melbourne Formation 1 rock on 12 January
- Noise monitoring data and site visits have shown that the noise from pipes would not disrupt classes at MGS
- CYP will continue to monitor as the TBMs progress



*Pipes transporting excavated material*

# WORKS UPDATE: STATION CONSTRUCTION



# WORKS UPDATE

## SOUTH BOX EXCAVATION AND CONCOURSE



- Excavation down to the tunnel and base slab has now commenced
- Works have been ongoing under the roof slab all night since Monday 1 February
- The team has drilled into the sacrificial tunnel and begun breaking it out
- The fifth and sixth sections of the concourse level were poured on 14 January and 1 February



*Sacrificial tunnel removal works*



# WORKS UPDATE

## SOUTH BOX LOOK AHEAD



- Stage 1 will continue for three weeks
- This will be followed by the next stage of works on the concourse level slab
- Stage 2 excavation will then commence
- Final Stage 3 excavation is anticipated to commence in June 2021
- All work will be 24/7



Stages of South Box Excavation

# WORKS UPDATE

## SHRINE STATION ENTRANCE



- The base slab was completed at the end of 2020
- Works are well underway on the inner walls for the station progressively steel fixing and pouring.
- Falsework (scaffolding) is now being installed to support the first pour of the roof slab in the north section.
- Early March the first section of the roof in the Shrine Entrance will be poured
- Majority of Shrine entrance works will be complete by April



*Internal columns poured in the Shrine entrance*



# WORKS UPDATE

## TRAM INTERCHANGE



- Excavation and blinding is complete in the exposed areas of the tram interchange.
- Excavation is now well underway under the roof slab at either end of the tram interchange
- This month the installation of the bored piles commences within the exposed area of the box
- The bored piles will eventually be tied into the base slab and provide the stability for the tram interchange entrance
- Following piling and excavation, the main concrete structure works will commence



*Piling has begun as excavation continues under the suspended slab*

# WORKS UPDATE

## NORTH BOX



- Alice has now left the northern station box
- Work in the north box has now started on demolishing the TBM shifting way
- Demolition will begin in the southern end of the north box, leaving the northern end to the tunnel team to support Millie and Alice



*Alice and Millie have both exited the north box*

# **ENVIRONMENT UPDATE: STATION CONSTRUCTION**



# ENVIRONMENT UPDATE

## MONITORING - EVENING LOADOUT SOUTH BOX



- Environment team has been regularly monitoring the loadout works
- Spikes in noise have been generated by street sweeping and diesel generators

Building	Unmitigated predicted noise level dB LAeq(15min)	Measured noise level dB LAeq(15min) *	Measured noise levels dB LAeq(15min) (no evening works)
The Domain	69	65.26	63.5
The Botanica	67	61.35	58.9
Hallmark	61	57.1	54.81

\* average taken at 9:45pm over four nights of work



# **METRO TUNNEL CREATIVE PROGRAM**



# CREATIVE PROGRAM

## ALBERT RESERVE POP UP PARK – BEFORE AND AFTER



*Before*



*After*

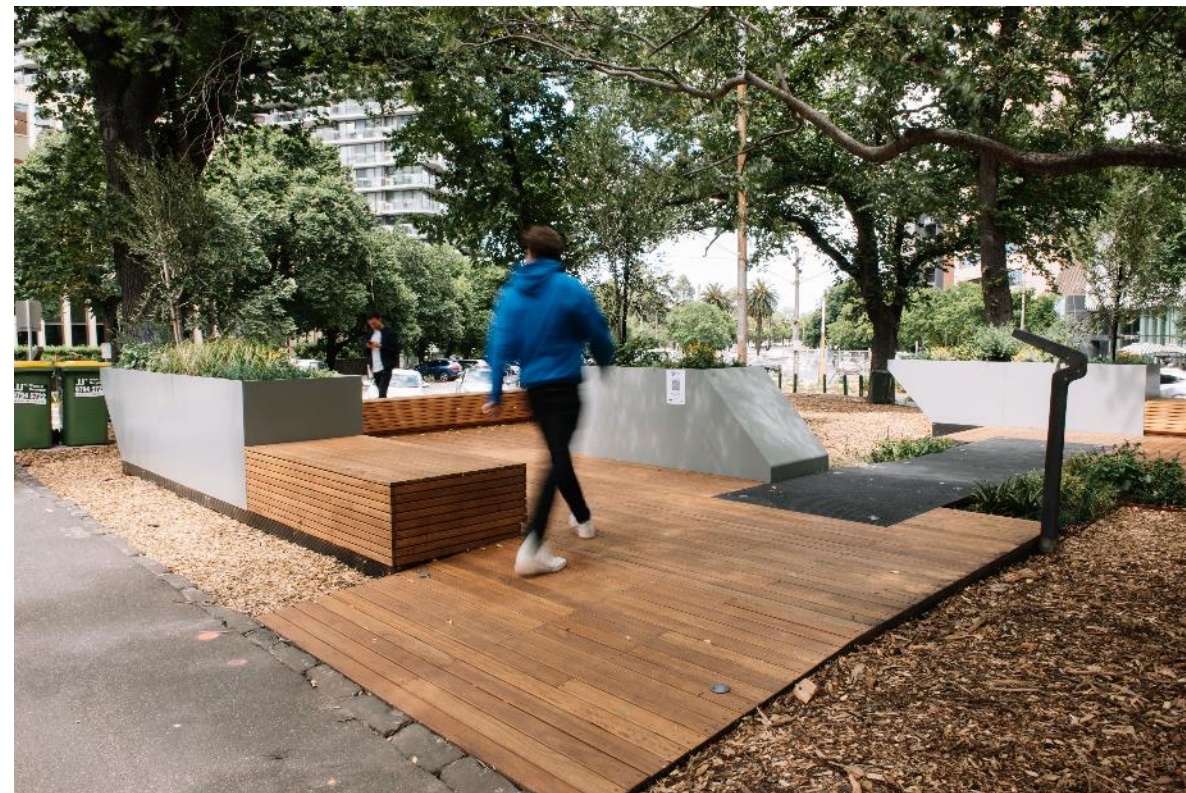


# CREATIVE PROGRAM

## ALBERT RESERVE POP UP PARK – BEFORE AND AFTER



*Before*



*After*



# CREATIVE PROGRAM

## ALBERT RESERVE POP UP PARK – LAUNCH



*Pop up park launch*





# CREATIVE PROGRAM

ALBERT RESERVE POP UP PARK – LAUNCH



*Pop up park launch*





# CREATIVE PROGRAM

## ALBERT RESERVE POP UP PARK – LAUNCH



*Pop up park launch*



# CREATIVE PROGRAM

## ALBERT RESERVE POP UP PARK – PROGRAMMING ACTIVITIES



- Creative Program planning a range of community activities in the park
- Keen to hear your views on what you think will be engaging and appropriate
- Online survey link will be sent to CRG members to share with residents



*Pop up park launch*



# CREATIVE PROGRAM

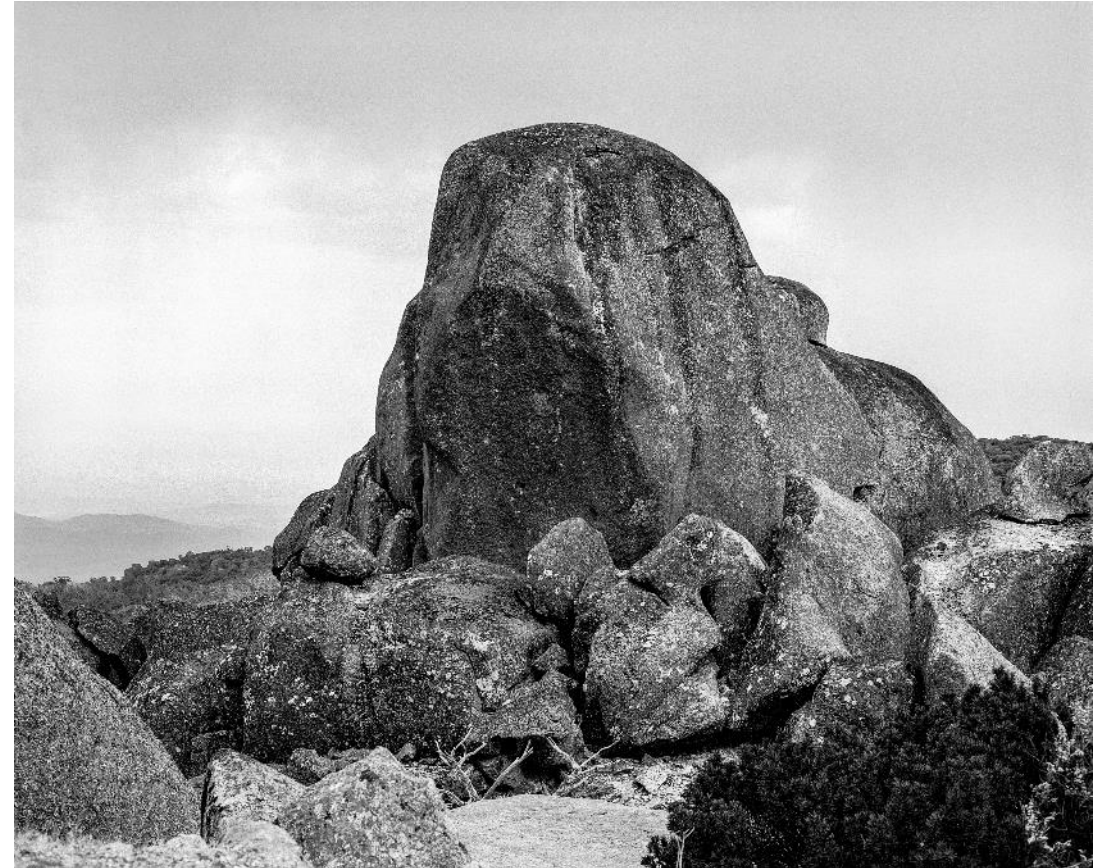
PHOTO 2021 EXHIBITION – HOARDING ARTWORK

AMANDA WILLIAMS



## The Alpine Moth

This project is inspired by resting sites of the Bogong moth (aka the Alpine moth) in Victoria's North East Alpine Region. Due to climate change and urban development along their migration route, moth numbers have been declining drastically.





# CREATIVE PROGRAM

PHOTO 2021 EXHIBITION – HOARDING ARTWORK

ANN SHELTON



## An invitation to dance

Lola Montez (formerly Eliza Gilbert) was a radical and mercurial figure who toured Australian gold rush towns during the 1850s as a performer—and was notably the first woman ever photographed smoking.

Drawing upon Montez's own use of photography to promote her self-image, Shelton has created a new series of works. An Instagram feed (@elizagilbertandlolamontez) created by the artist allows audiences to engage with archival material relating to Montez.





## Economics of Minerals

Economics of Minerals highlights the environmental impact of mining on Australia. This photographic series depicts the barren landscapes around Broken Hill, overlaid with silver geometric shapes that represent mine shafts, slag dumps and the infrastructures of mining.



**QUESTIONS?**