



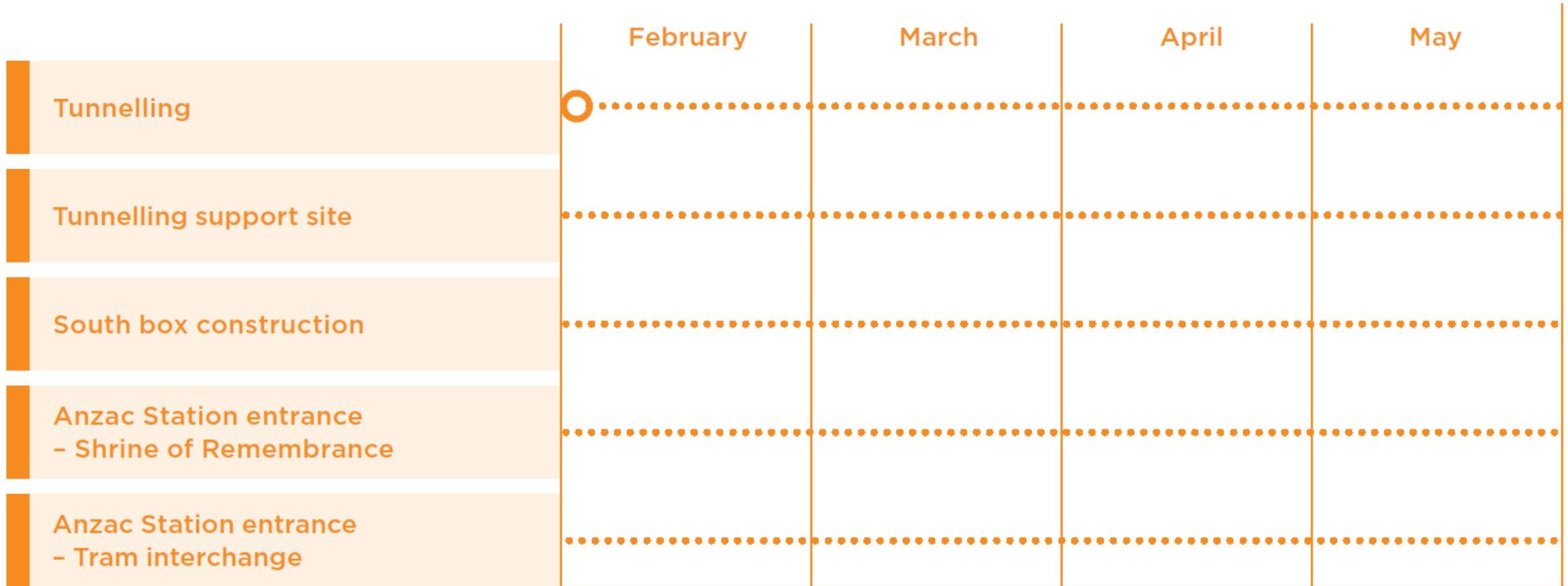
DOMAIN

COMMUNITY REFERENCE GROUP

10 February 2021

WORKS UPDATE

2021 LOOK AHEAD





WORKS UPDATE: TUNNELLING

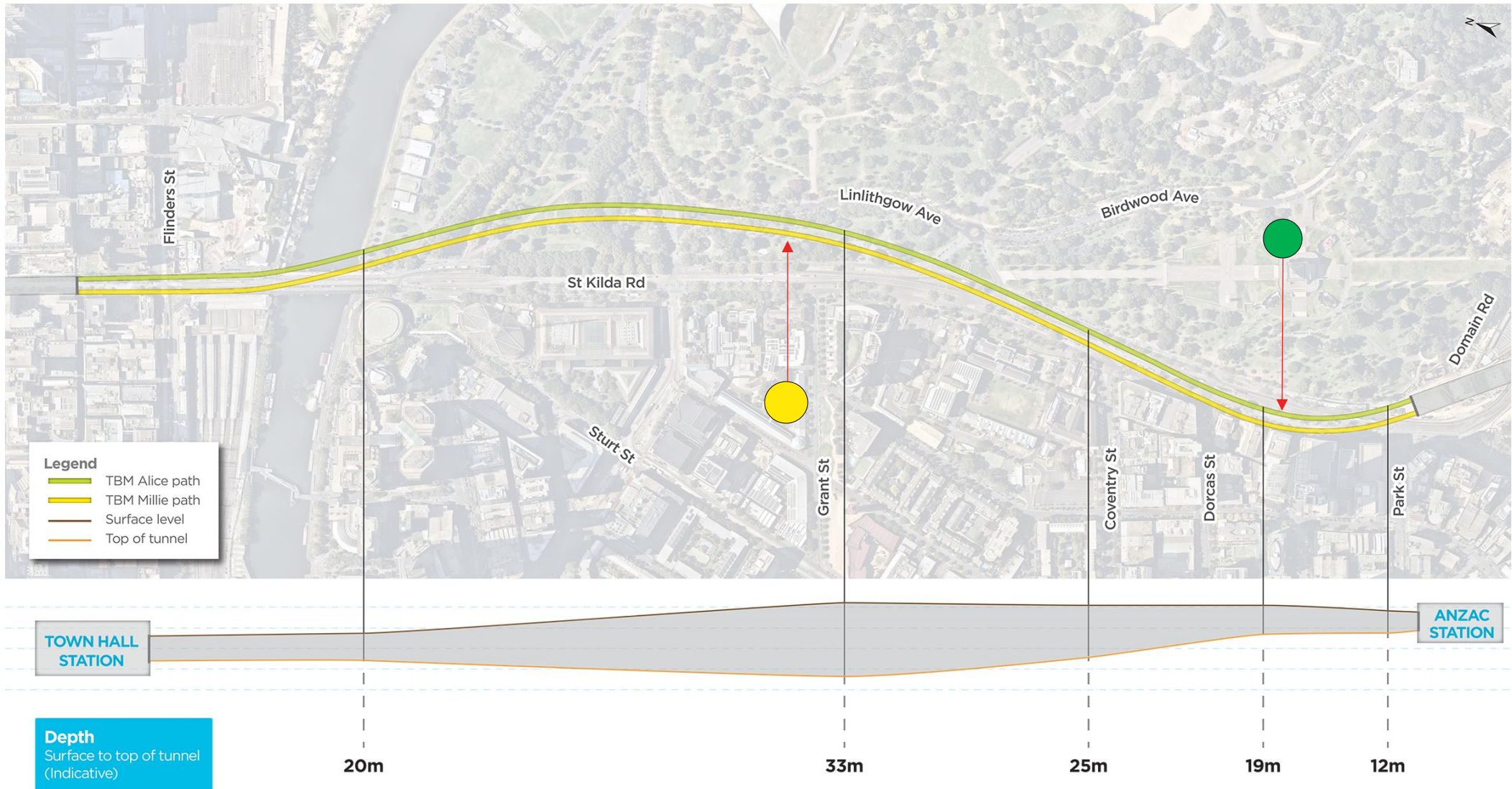
- TBM Alice was launched on 21 January 2021
- TBM Alice has now completed 180m of tunnel
- TBM Millie has now completed 700m of tunnel
- Alice's launch will see more frequent deliveries of pipe sections and tunnel segments, 24/7



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

ENVIRONMENT UPDATE

STP NOISE AND VIBRATION - 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 at Botanica (dB)

- CYP conducted in-classroom monitoring at Melbourne Grammar prior to students returning
- Data shows an increase in the levels of low frequency construction noise against ambient noise
- Overall, A-weighted levels remain similar

	Unweighted (SPL)	A-Weighted (SPL)
Construction noise level	81	44
Background noise level	70	44

Table 2: Internal low frequency noise at Nigel Peck Library (dB)

ENVIRONMENT UPDATE

STP NOISE AND VIBRATION - TUNNELLING



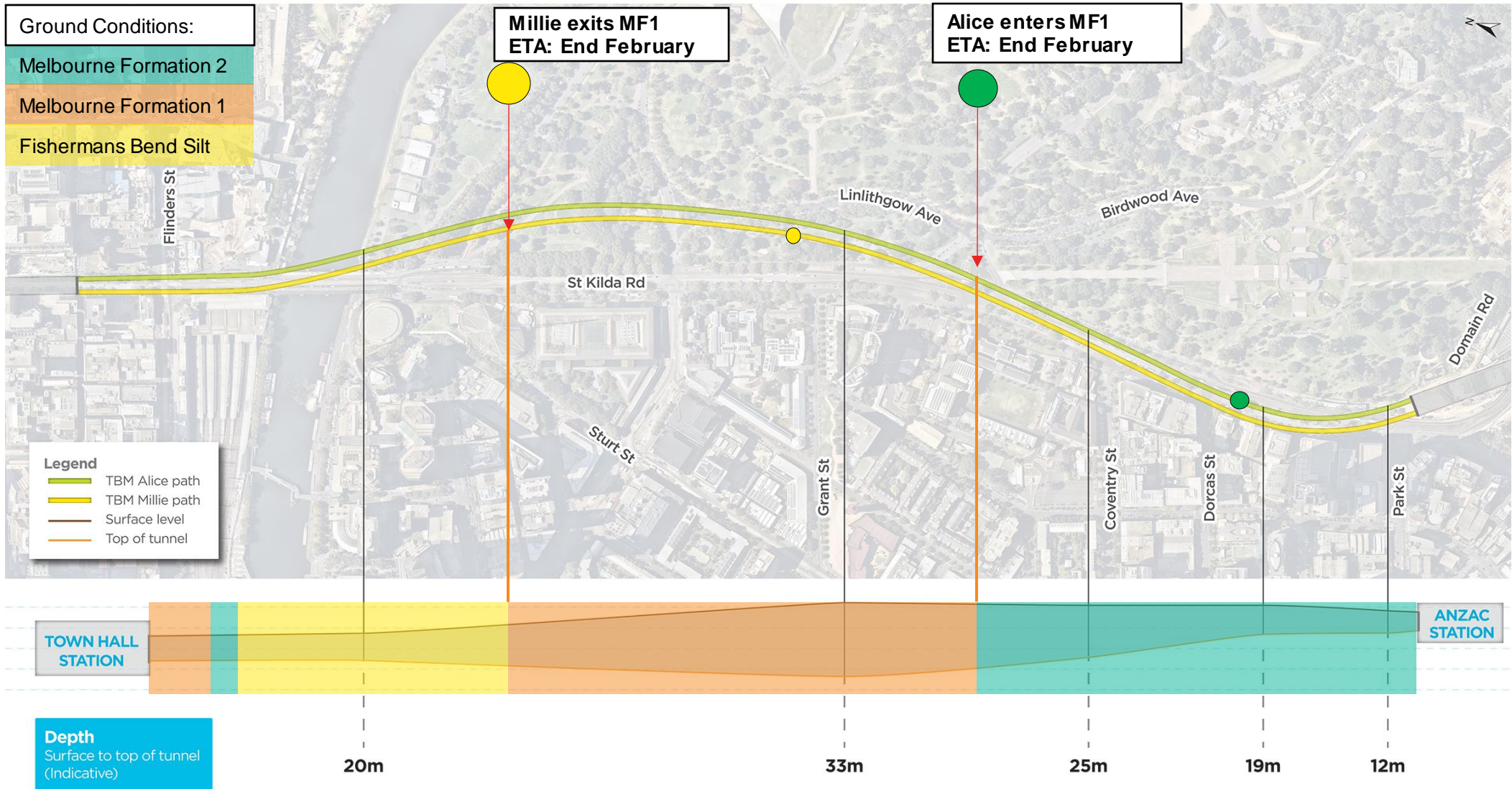
- Geological conditions for the second drive to Town Hall Station consist of
 - Melbourne Formation 1 (hard rock)
 - Melbourne Formation 2 (rock + some clay)
 - Fishermans Bend Silt (soft soil)
- Tunnelling to date has been in Melbourne Formation 1 (Millie) and Melbourne Formation 2 (Alice)
- The most 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

- 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	63
The Botanica	67	61	58
Hallmark	61	57	54

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



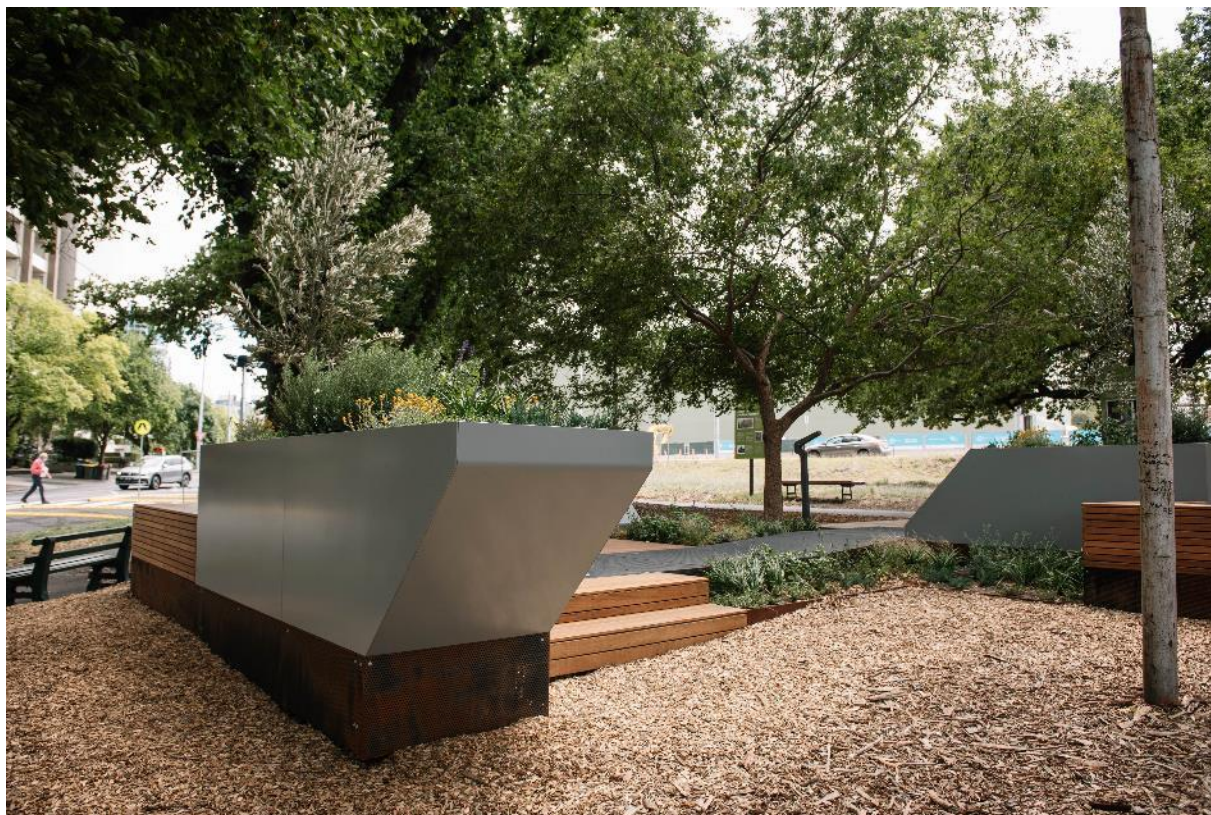
METRO TUNNEL CREATIVE PROGRAM

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

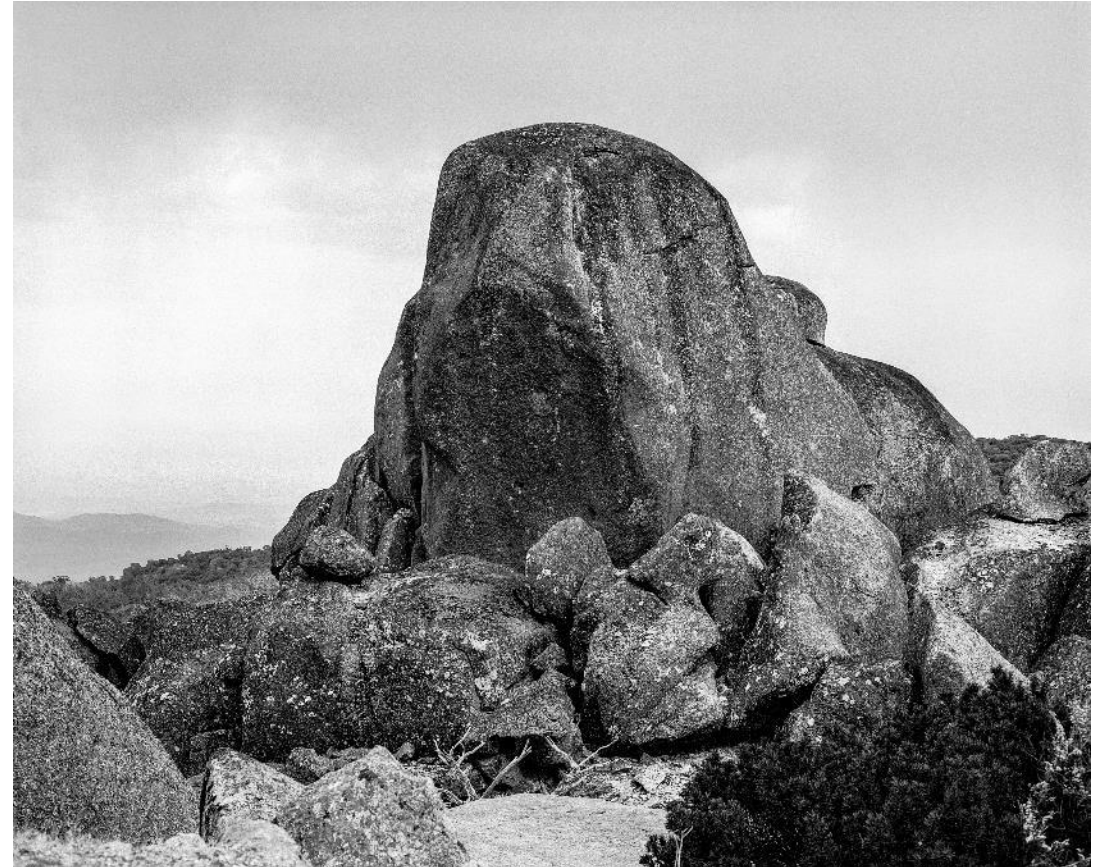
PHOTO 2021 EXHIBITION – HOARDING ARTWORK

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.



CREATIVE PROGRAM

PHOTO 2021 EXHIBITION – HOARDING ARTWORK

JAMES TYLOR



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?