



DOMAIN COMMUNITY REFERENCE GROUP

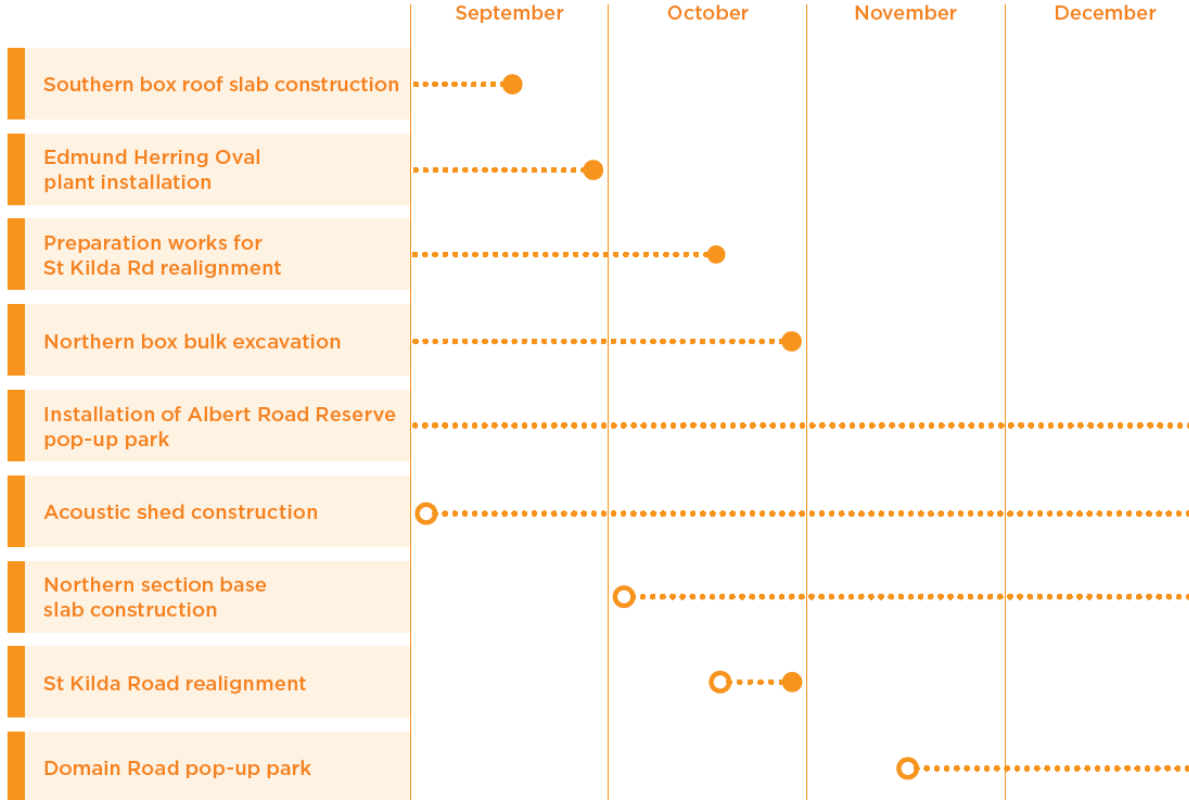
Meeting #17

Wednesday 4 September, Seasons Botanic Gardens



WORKS UPDATE

ANZAC STATION PROGRAM 2019





PROGRESS UPDATE NORTHERN SECTION

NORTHERN SECTION – TIME-LAPSE

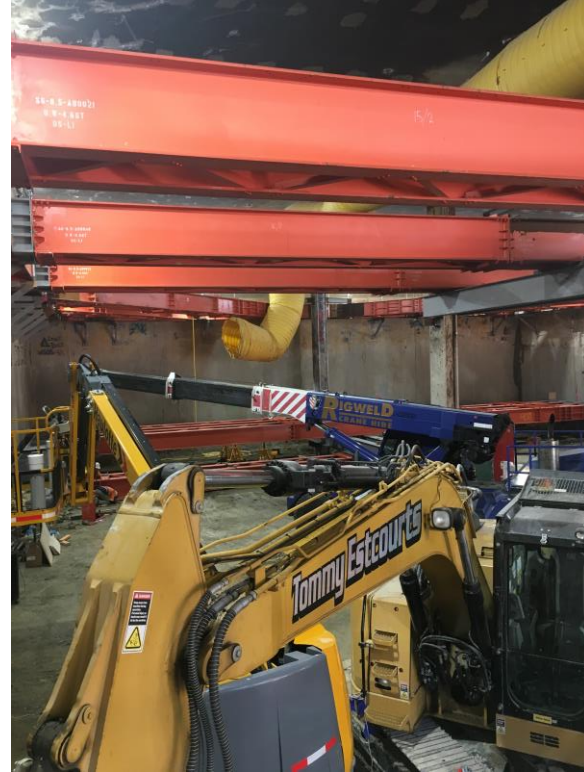
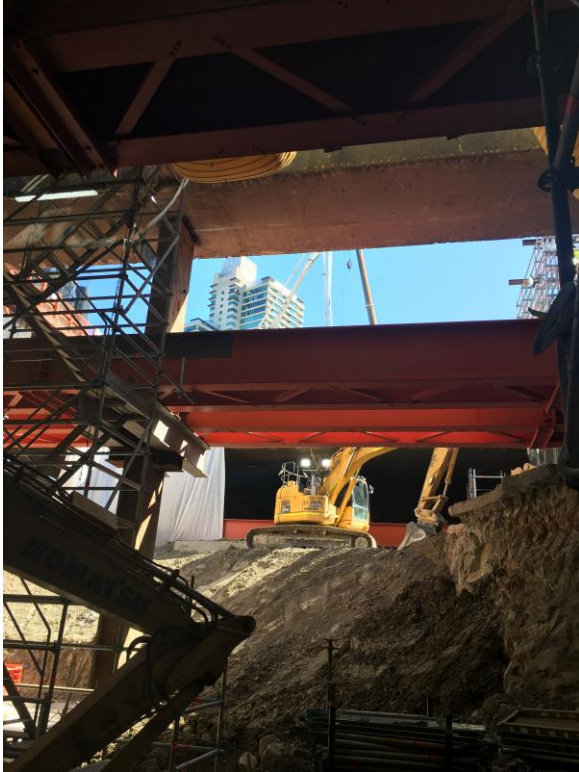


CURRENT AND UPCOMING WORKS NORTHERN SECTION

- Backfilling
- Excavation through the voids
- Installation of strutting
- Works under the void until midnight



UNDER THE VOID



UNDER THE VOID



SURFACE WORKS LOOKING NORTH



BACKFILLING WORKS NORTHERN SECTION OF THE STATION BOX





PROGRESS UPDATE SOUTHERN SECTION

SOUTHERN SECTION – TIME-LAPSE



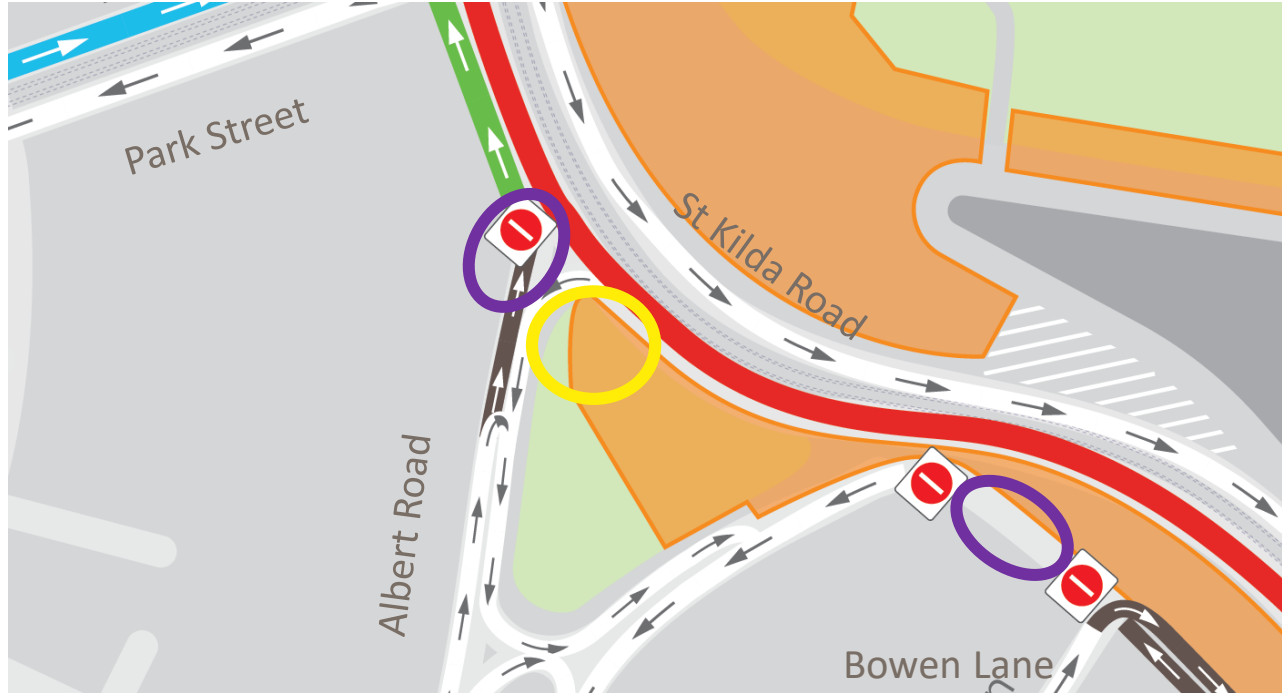
CURRENT AND UPCOMING WORKS SOUTHERN SECTION






- Final slab pour complete 28 August
- Backfilling
- Roadworks
- One small tree removed from Albert Road site shed complex
- Bowen Crescent closure drainage works



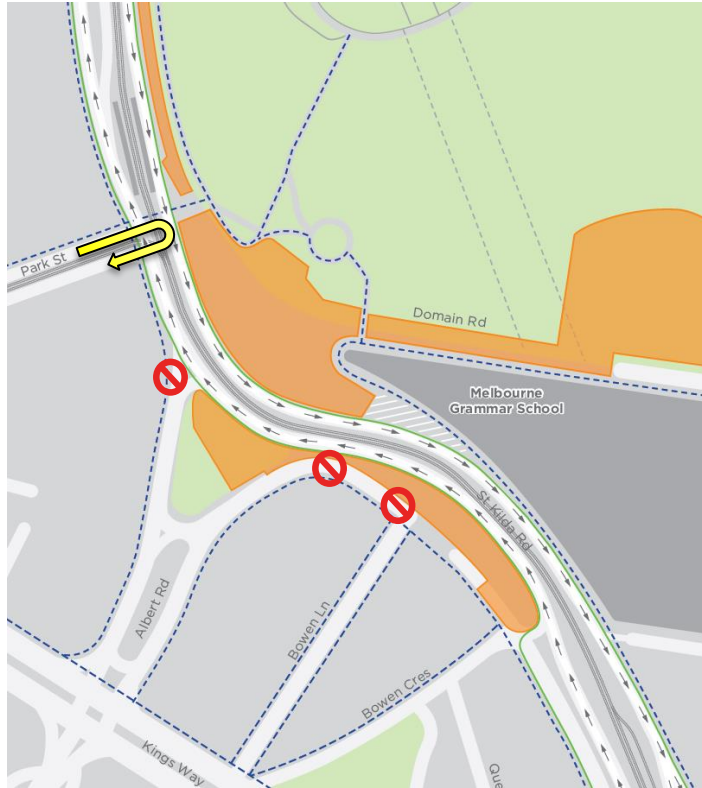
PREPARATION WORKS TRAFFIC CHANGES

WORK AREAS



-  Current works
-  Upcoming works
-  Temporary closure
-  Cyclists dismount
-  Overnight closure

HALLMARK ACCESS



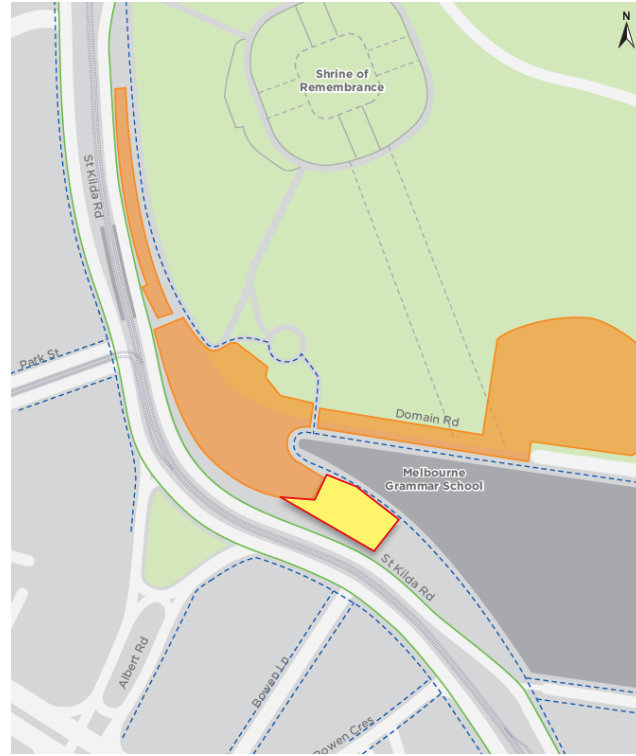
- Access from Albert Road onto St Kilda Road will be shut for approximately three weeks from the 13 September.
- This will require a detour for residents of the Hallmark who would normally approach their carpark via Kings Way - Albert Road - St Kilda Road - Park Street.
- During this closure, access would be via Kings Way - Bowen Crescent - St Kilda Road – Park Street.
- Residents should also note that a U-turn at the Park Street/St Kilda road traffic lights is not an illegal manoeuvre.

ST KILDA ROAD REALIGNMENT

- Currently the Anzac Station site is split into the northern and southern sections
- St Kilda Road runs through the middle of these two sections.



- St Kilda Road needs to be realigned to allow the construction of the middle box.
- This will connect the northern and southern sections of the station box.
- From 13 October to 27 October, buses will replace trams while St Kilda Road is realigned
- St Kilda Road will remain open to vehicles and cyclists



WORKS AREA



WORKS AREA



PROGRAM OVERVIEW (CYP WORKS)

Day	Daytime/evening works 7am – 10pm	Nighttime works 10pm-6am	Nighttime Noise
Sunday 13	None (Melbourne marathon)	<ul style="list-style-type: none"> Decommissioning of tram wires Traffic barrier installation Line marking/removal 	< 65 dB
Monday 14	<ul style="list-style-type: none"> Breakout asphalt and tram tracks 	<ul style="list-style-type: none"> Removal of materials from site Earthworks and compaction Drainage works 	> 75 dB
Tuesday 15	<ul style="list-style-type: none"> Breakout asphalt and tram tracks Earthworks and compaction Drainage works Asphalting (road works) Tram sleepers/track installation 	<ul style="list-style-type: none"> Earthworks and compaction Drainage works Asphalting (road works) Tram sleepers/track installation 	
Wednesday 16	<ul style="list-style-type: none"> Drainage works Tram sleeper/track installation Asphalting (road works) <i>Breakout tram tracks (middle box)</i> 	<ul style="list-style-type: none"> Drainage works Tram sleeper/track installation 	
Thursday 17	<ul style="list-style-type: none"> Tram sleeper/track installation Asphalting (road works) <i>Breakout tram tracks (middle box)</i> 	<ul style="list-style-type: none"> Tram sleeper/track installation 	65-75 dB
Friday 18	<ul style="list-style-type: none"> Tram sleeper/track installation Asphalting (road works) 	<ul style="list-style-type: none"> Tram sleeper/track installation Asphalting (road works) 	
Saturday 19	<ul style="list-style-type: none"> Asphalting (road works) 	<ul style="list-style-type: none"> Asphalting (road works) 	
Sunday 20	<ul style="list-style-type: none"> Asphalting (road works) 	<ul style="list-style-type: none"> Barrier shifting and line marking/removal 	

PROGRAM OVERVIEW (YARRA TRAM WORKS)

Day	Daytime works	Nighttime works	Noise
Monday 21	<ul style="list-style-type: none"> Tram pole dressing (overhead wires) Breakout asphalt and tram tracks (middle box) 	Cable pulling (park street)	65-75 dB
Tuesday 22	<ul style="list-style-type: none"> Tram pole dressing (overhead wires) Breakout asphalt and tram tracks (middle box) 	<ul style="list-style-type: none"> Minor finishing works 	< 65 dB
Wednesday 23	<ul style="list-style-type: none"> Tram pole dressing (overhead wires) <i>Breakout asphalt (middle box)</i> 	<ul style="list-style-type: none"> Minor finishing works 	
Thursday 24	<ul style="list-style-type: none"> Tram pole dressing (overhead wires) <i>Breakout asphalt (middle box)</i> <i>Hardstand construction (pile pad)</i> 	<ul style="list-style-type: none"> Minor finishing works 	
Friday 25	<ul style="list-style-type: none"> Tram pole dressing (overhead wires) Piling platform construction 	<ul style="list-style-type: none"> Over road tram pole dressing (overhead wires) 	
Saturday 26	<ul style="list-style-type: none"> Tram pole dressing (overhead wires) Piling platform Test tram 	<ul style="list-style-type: none"> Traffic barrier removal Line marking/removal 	
Sunday 27	Trams resume		

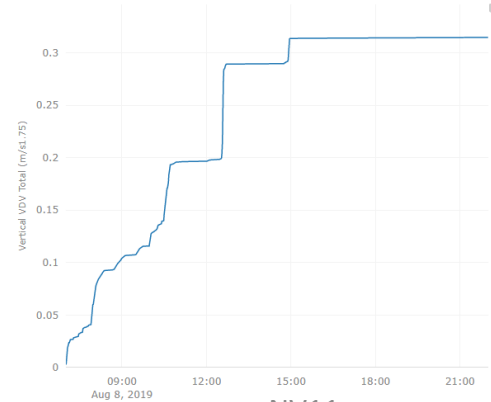
VIBRATION MONITORING



	Limit	Monitored Results
NV8	5mm/s	0.62mm/s
NV11 Day	0.4	0.31
NV11 Night	0.2	Will be monitored

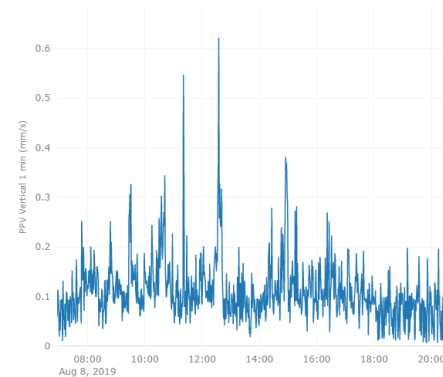
Vibratory roller monitoring conducted in the northern section

DEVICE DATA



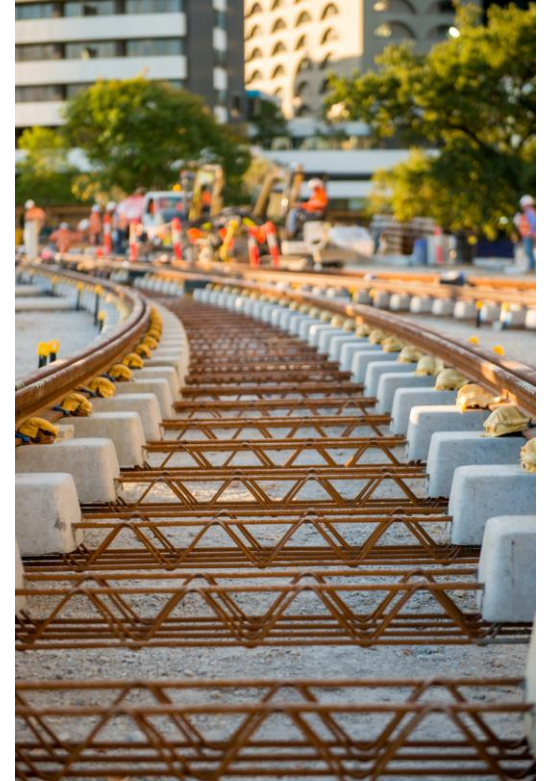
NV11

DEVICE DATA



NV8

- No right turn from St Kilda Road into Dorcas Street (as per April 2018 occupation)
- Left turn only from Park Street into SKR (local access only)
- Hallmark Driveway access point enabled at Park Street
- *Albert Road North closed to traffic, local access only*



Laying of new tram tracks April 2018

NEW ROAD ALIGNMENT AND WORK AREA



- St Kilda Road and tram lines now running over the former southern station box
- New construction area now incorporates the new 'middle box' (yellow section)
- Access to the middle box will remain via St Kilda Road
- Albert Reserve will remain in its current configuration, however some site sheds will be removed.



QUESTIONS?

ST KILDA ROAD REALIGNMENT TRAM CHANGES

St Kilda Road Diversion Stage 2



Presented by: Leah Bygraves, Project Manager, MTP Tram Works
Date: 4 September 2019



PROUD OPERATOR OF

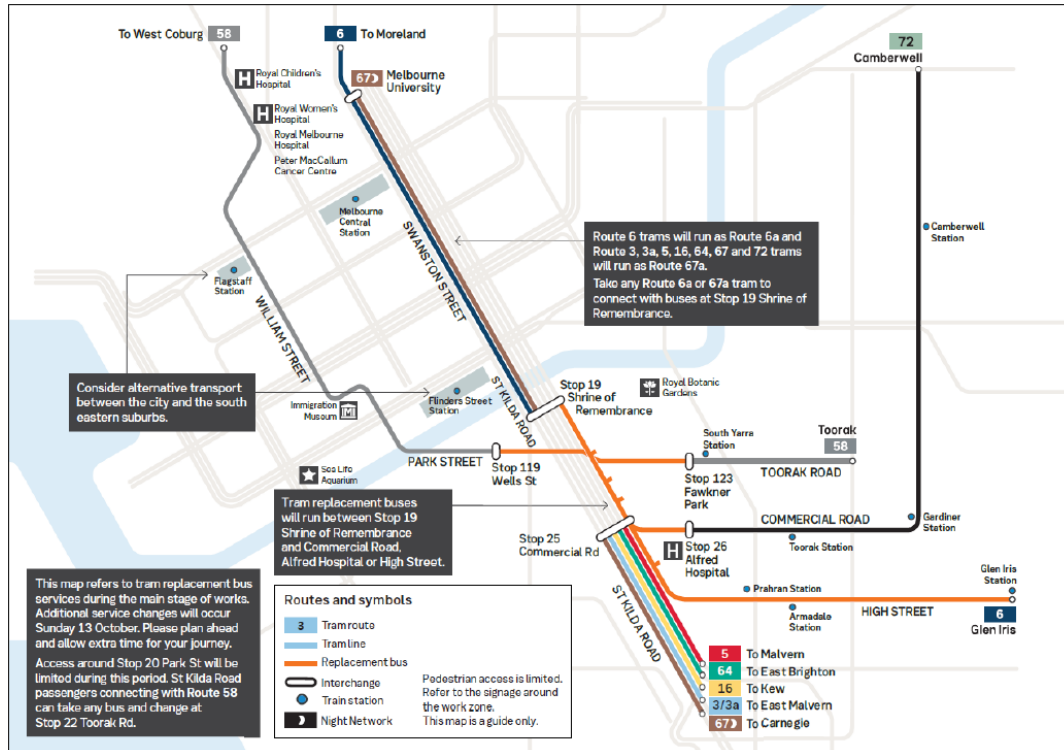
St Kilda Road Diversion Stage 2 – Overview

- Buses will replace trams on St Kilda Road between Stop 19 – Shrine of Remembrance and Stop 25 – Commercial Road from 2030 Sunday 13 October to last tram Saturday 26 October
- Additional service changes will occur on the first and last nights of the diversion, with buses replacing trams all the way down to Stop 30 – St Kilda Junction
- Alternative bus stops will apply south of Toorak Road

Tram and Bus Service Changes

- Buses will replace **Routes 3, 3a, 5, 16, 64 and 67 (Route 67A)** between Stop 19 – Shrine of Remembrance and Stop 25 – Commercial Road
- Buses will replace **Route 6** between Stop 19 – Shrine of Remembrance and Stop 53 – Malvern Road
- Buses will replace **Route 58** between Stop 119 – Wells Street and Stop 123 – Fawkner Park
- Buses will replace **Route 72** between Stop 19 – Shrine of Remembrance and Stop 26 – Alfred Hospital

Tram Service Changes Map



Stop 19 – Shrine of Remembrance

- **Key bus/tram connection point**
- Traffic controllers will manage pedestrian crossings
- Bus-only outer lane, southbound
- Bus-only inner lane, northbound
- PA system will be in operation at this location
- Buses will U-turn under traffic management near Government House Drive/Anzac Avenue
- Anzac Avenue will be closed to traffic under traffic management, with buses stabled in the area

Stop 20 – Park Street

- **No tram or bus service**
- Southern pedestrian crossing will remain open
- Trams will be stabled at this location during the day and overnight
- Minor tram maintenance/cleaning activities will take place
- Temporary driver/staff facilities will be in place

Within the Works Zone

- Buses will merge prior to one lane arrangement, under traffic management, in both directions

Stop 22 – Toorak Road

- **No tram service, buses only**
- Southbound bus location has been selected to reduce impact to local traders and parking
- Close proximity to Melbourne Grammar school
- Traffic controllers will be placed at the north pedestrian crossing to assist students
- Traffic management will manage bus/cyclist interface
- Stop arrangements have been simplified from Stage 1

Stop 23 – Arthur Street/24 – Leopold Street

- **No tram service**
- Buses will operate on tram tracks at these locations
- Centre carriageway will be occupied for bus stabling activities (no access for vehicles)
- There will be no right turn from St Kilda Road into Arthur/Slater/Leopold/Armadale streets
- Toorak Road northbound right-hand turn will remain open

Stop 25 – Commercial Road

- **Key bus/tram connection point**
- Temporary crossover to be installed between 2030 and 0200 Sunday 13 October and removed between 0230 and 0600 Sunday 27 October, comprising minor construction activities and overhead work
- Central carriageway to be used for buses only
- Median islands to be utilised for bus stops and temporary facilities
- Lighting towers to be in place
- All generators will have noise blankets to reduce noise

Stop 25 – Commercial Road

- Route 6 and Route 72 replacement buses will use the outer carriageway TransDev bus stop
- The replacement bus turnaround will be just south of the intersection, under traffic management
- Right-hand turn northbound into Commercial Road will remain open

Stop 119 – Park/Wells Street

- **Key bus/tram connection point**
- Trams will be shunting at the intersection of Park/Wells streets under traffic management and YT supervision
- Route 58 buses will turn around via Dorcas/Wells streets
- Park Street between Wells Street and St Kilda Road eastbound will be closed to general traffic. Local access will be maintained
- Temporary facilities and one kerbside bus stop will be placed at this location

Stop 123 – Fawkner Park

- **Key bus/tram connection point**
- Trams will terminate at this location
- Minor traffic management will be in place
- There will be minimal removal of parking spaces to facilitate bus stop locations
- Replacement buses will turn around through the gardens

Commercial Road

- Temporary traffic management arrangements will be in place for tram termination at St Kilda Road (in Commercial Road)
- Replacement buses will service Stop 26 – Alfred Hospital and turn around under traffic management
- Replacement buses on High Street will operate via Commercial Road to Glen Iris terminus due to High Street Renewals (to be held concurrently). High Street will be fully closed in stages

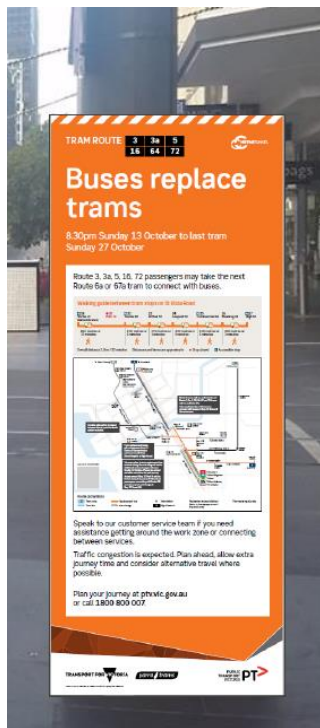
Tow-Away Arrangements

- Yarra Trams will have tow-away powers on certain sections of St Kilda Road; we are working closely with City of Melbourne, City of Port Phillip and Department of Transport on this
- Appropriate signage will be installed and notifications issued
- Towed cars will be available for collection at Government House Drive

Passenger Experience

- A suite of passenger information is being developed to communicate tram service changes – including signage, brochures, digital media and passenger engagement activities
- An extensive number of Customer Service Employees has been allocated to assist passengers at tram/bus stops
- Wheelchair-accessible vehicles and low-floor replacement buses will be available for passengers with accessibility needs

Examples of Passenger Information



Buses replacing trams
Shrine of Remembrance – Commercial Rd or Glen Iris

Banners placed at Flinders St Station and St Kilda Rd stops

Buses replacing trams
Wells St – Fawkner Park

Banners placed from Casino to Fawkner Park



Trams to city depart here

Pedestrian crossing → ← **Route 58 replacement buses from footpath**

→ **Tram replacement buses to City** ← **Trams to suburbs** →

Pedestrian crossing wayfinding corflutes

TRAM ROUTE 3 3a 5 6 16 64 67 72

Buses replace trams

8.30pm Sunday 13 October to Sunday 27 October
Stop 19 Shrine of Remembrance – Commercial Road or Glen Iris

TRAM ROUTE 58

Buses replace trams

8.30pm Sunday 13 October to Sunday 27 October
Stop 119 Well St – Stop 123 Fawkner Park

Friction Modifier

- Early works around Albert Rd including the relocation of Friction Modifier Tank to the final Stage 2 location occurred in mid-August
- The Friction Modifier will be reinstalled on the southbound track opposite Albert Rd during the occupation, with the existing system on the northbound track near Stop 22 will be retained
- The Friction Modifier will be operational upon re-commencement of tram services at 0630 Sunday 27 October 2019
- Changed tram track alignment, including shallower curves will also aid in reducing potential for track squeal

Thank you

ENVIRONMENT UPDATE

Building	Unmitigated Predicted Noise Level dB <small>L_{Aeq}(15min)</small>	Evening noise guideline target (NV6)	Measured Tuesday 27 August (first day of extended hours)
The Domain	67	63	63
The Botanica	47	63	59
Hallmark Apartments	65	63	58
Domain Hill	67	63	58
Albert Tower	65	63	58

ENVIRONMENTAL MONITORING – NOISE

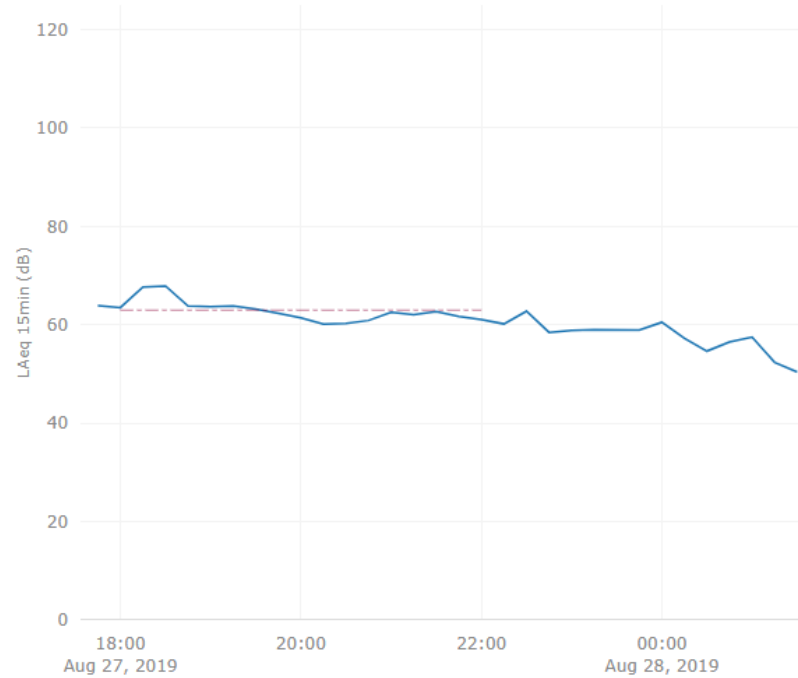


10pm to midnight works



Lights out at midnight

DEVICE DATA



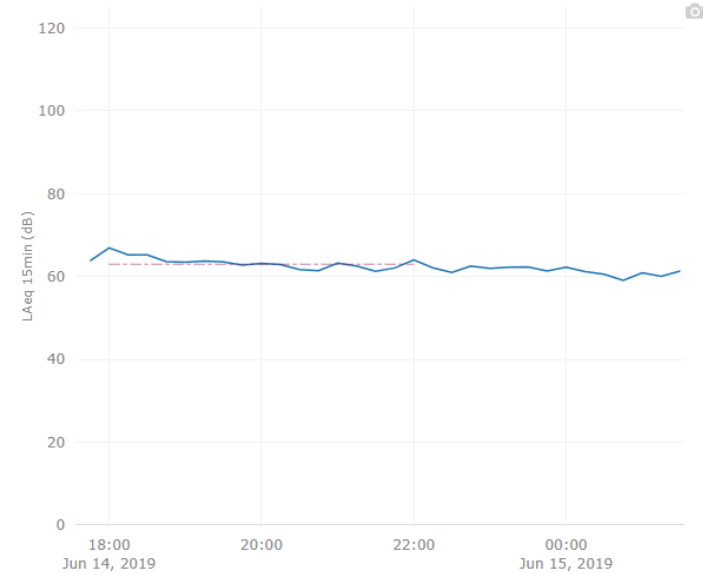
North Box Excavation: 10pm-12am

EXAMPLE OF NOISE WITH NO WORKS



No CYP works underway

DEVICE DATA



NORTH BOX EXCAVATION: EVENING



Lighting up to 10pm (excavation from surface)

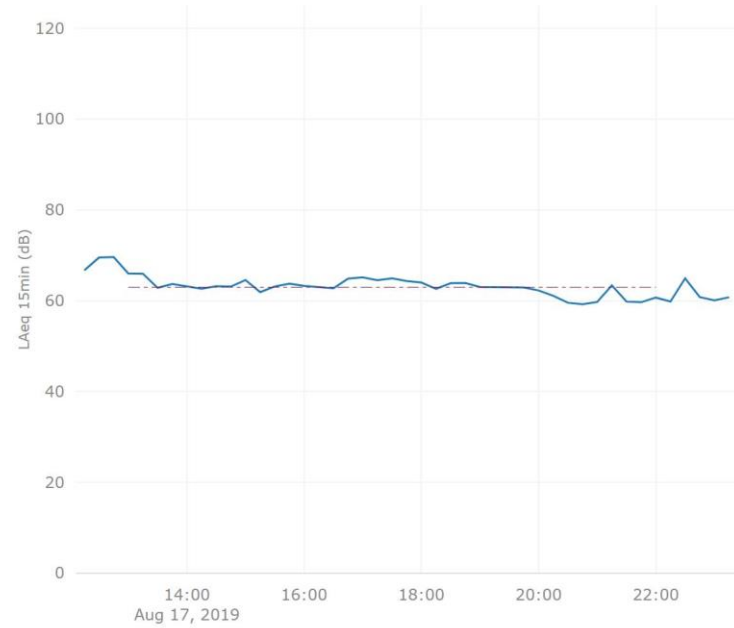


Lighting 10pm to midnight (excavation and strutting below ground)

NORTH BOX EXCAVATION: EVENING



DEVICE DATA



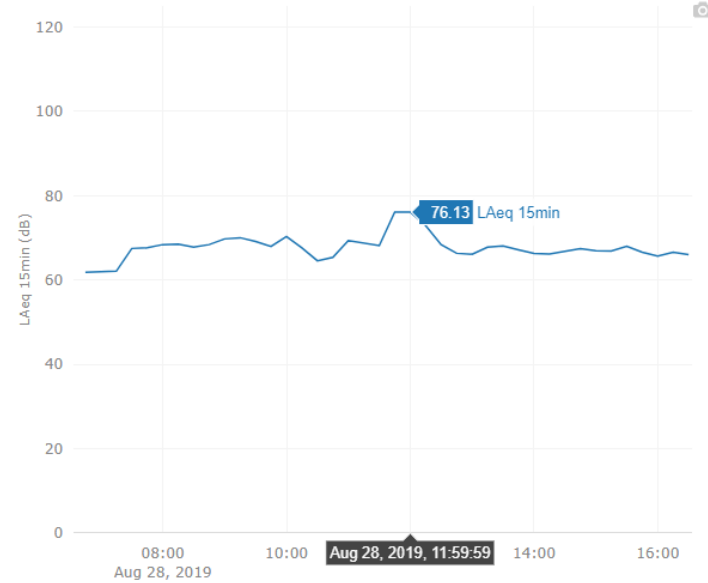
North Box excavation on surface until 8pm (3 excavators working)

SOUTH BOX ROOF WORKS



Final Pour and D-Wall Breakout

DEVICE DATA

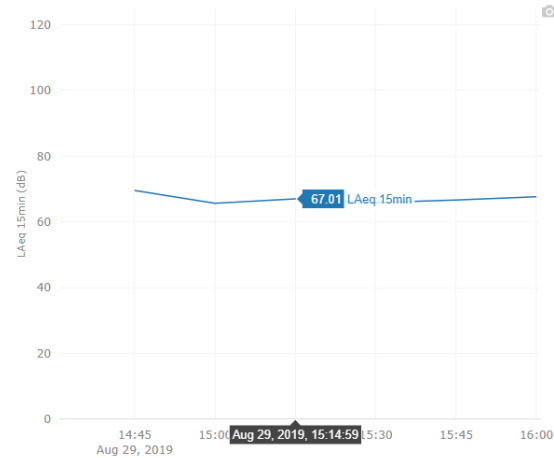


NORTH BOX ROOF SLAB NOISE REDUCTION

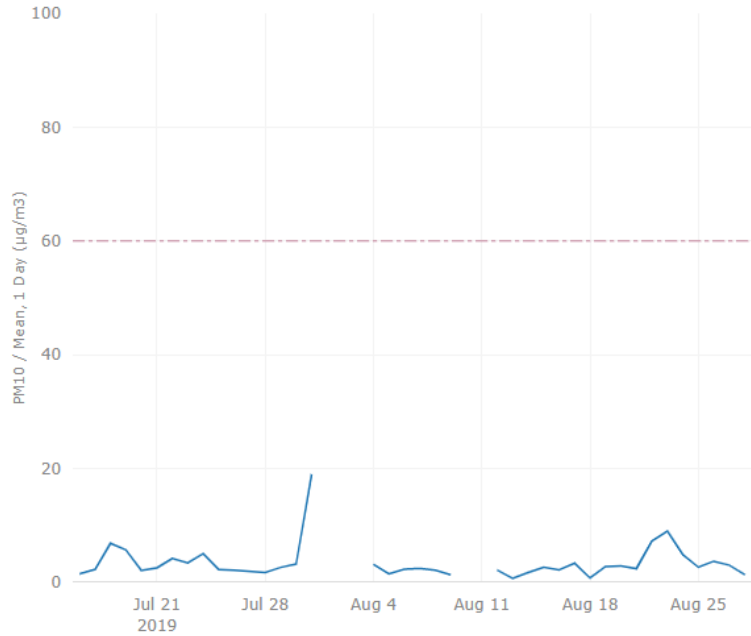


	LAeq15	Reduction	LAeqMax	Reduction
Inside Box	88.5		104.3	
Surface of Box	71.2	17.3	83.0	21.3
Domain	67.0	21.5	69.1	35.2
Hallmark	62.2	26.3	65.9	38.4

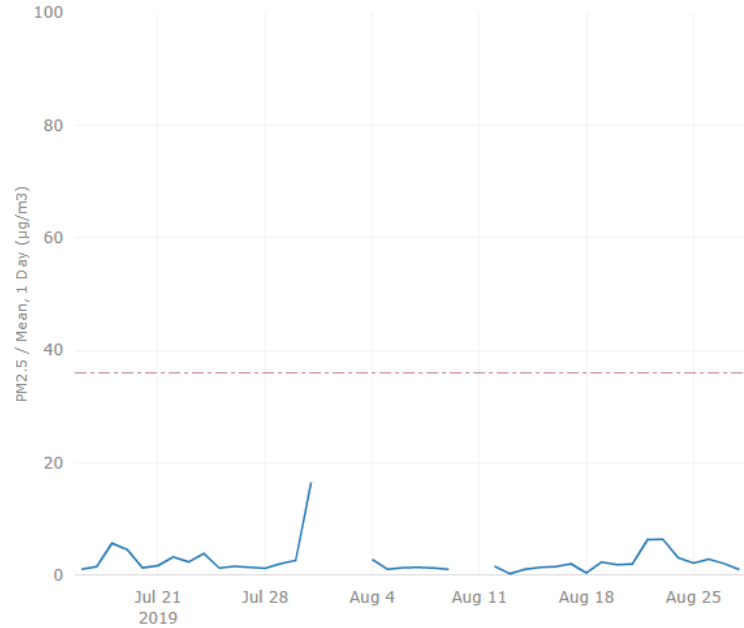
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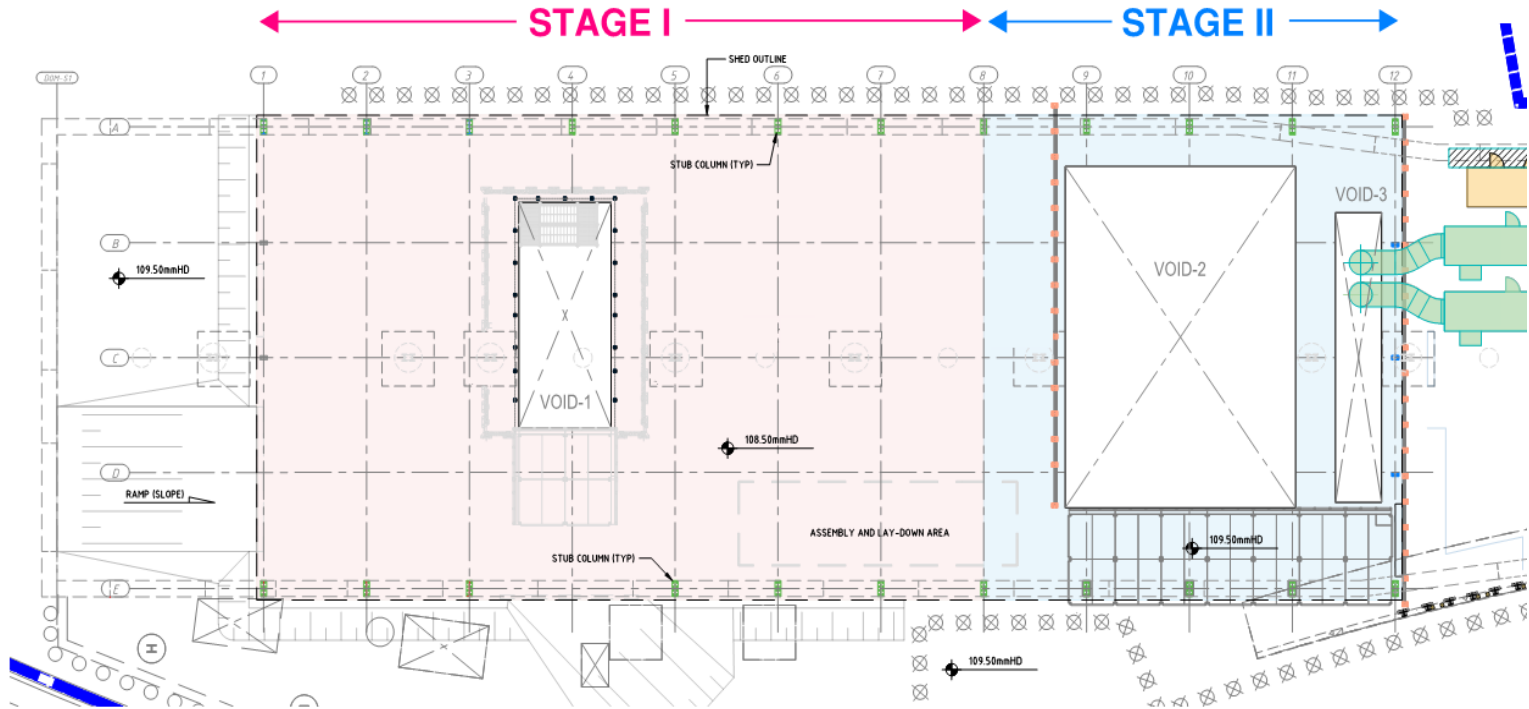




QUESTIONS?

ACOUSTIC SHED

BUILDING THE ACOUSTIC SHED





FUNCTIONS OF THE ACOUSTIC SHED

- Minimise impact of noise, dust and light spill during 24-hour tunnelling activities
- Protection from weather
- Supports three gantry cranes to lower in:
 - Tunnel boring machine pieces
 - Concrete segment pieces
 - Other tunnelling support materials



Artist's impression of inside the acoustic shed



QUESTIONS?

METRO TUNNEL CREATIVE PROGRAM UPDATE

ALBERT ROAD RESERVE POP-UP PARK

- Installation timing for late 2019, following St Kilda Road works
- Design incorporates stakeholder and business feedback
- Continuing to work with local council (CoPP); and Heritage Victoria on a tree protection plan
- Ongoing feedback loop once the park has been installed, including for programming community and arts activities.



Artists impression of Albert Road Pop-up park

DOMAIN ROAD POP-UP PARK

- Five month temporary pop-up park will be installed later this year, along part of Domain Road
- Built offsite to minimise disruption with planting to occur onsite
- Working with the Royal Botanic Gardens to guide planting
- Ongoing feedback loop once the park has been installed, to help inform other potential place making activities.



Artists impression of Domain Road Pop-up park



THANK YOU