



ARDEN AND PARKVILLE COMMUNITY REFERENCE GROUP

MEETING 4

14 JUNE 2019



Construction partner:



AGENDA

1. Introductions and welcome
2. Parkville construction update
3. Creative Program update - Parkville
4. North Melbourne construction update
5. Cross Passage Ground Improvement Works (CP5)
6. Tunnelling update
7. Environmental management update
8. Stakeholder & Communications update
9. Questions
10. Meeting close

CONSTRUCTION UPDATE - PARKVILLE



PARKVILLE 2019 TIMELINE

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Open excavation (Stage 1)	█	█	█	█	█	█						
Service locating – Grattan St west		█	█	█								
Installation of gantry cranes			█	█	█	█						
Service investigations – Grattan St west			█	█	█	█	█					
Closed excavation with trucks entering excavation area underneath deck to remove material (Stage 2)						█	█	█	█	█	█	█
Service Relocations								█	█	█	█	█
Gantry cranes remove excavated material and load into trucks waiting inside acoustic enclosures (Stage 3)										█	█	█
Base slab construction commences											█	█

Dates subject to change

WHAT'S HAPPENING AT GRATTAN ST EAST

- Phase 1 excavation completed – trafficable deck installed
- Phase 2 excavation underway
- Phase 3 excavation - Q4 2019
- Work hours: Monday to Friday, 24 hours; Saturday 7am to 6pm
- Three gantry cranes installed and commissioning ongoing
- Gantry crane winch delivery scheduled – Saturday 22 June between 1am and 5am
- 40T dozer delivered to site on Sunday 16 June after 1am
- City Ford – construction of access points for truck entrances ongoing.

07-Jun-19 9:44 AM



Construction partner:
 Design & Construction







Construction partner:





WHAT'S HAPPENING AT GRATTAN ST WEST

Service investigations ongoing

- Scheduled to be complete June
- Night shift completed
- Saturday day shift to complete works

August 2019 – February 2020

- Service Relocations
 - Engagement with utility service providers underway
 - Construction Noise and Vibration Impact Assessment (CNVIA) consultation underway
 - Traffic Management Plan (TMP) consultation with relevant authorities underway

Early 2020 – 2022

- Station entrance construction

**Timing depending on design (by utility service providers),
relevant approvals for CNVIA and Traffic Management Plans**

CREATIVE PROGRAM UPDATE - PARKVILLE



PRETTY LITTLE THINGS

The artwork was awarded a prestigious gold medal at the 2019 A'Design awards

Concept by Beck Storer from design company, The Cutaway

The source images were provided by staff and students from the University of Melbourne.



VCA STUDENT ALUMNI WORKS

Creative Program worked with VCA senior management to select six recent VCA alumni

Curatorial selection panel included VCA lecturer and renowned artist Raafat Ishak

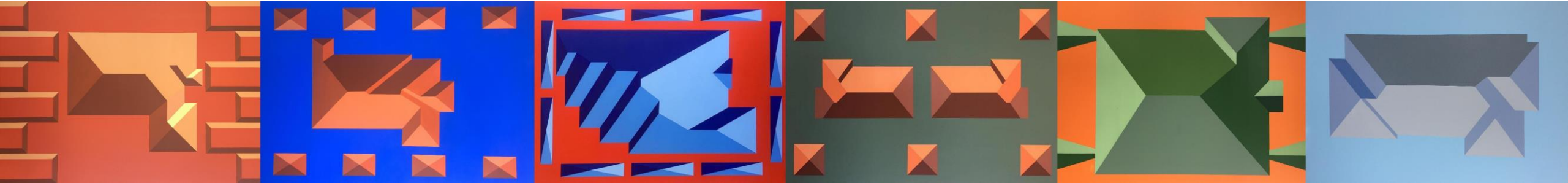
The final selections were then endorsed by the Metro Tunnel Creative Program Steering Committee

Due to the quality of the works, two extra opportunities were identified – facing the plaza in Uni Square and on the screens sitting above the concrete barriers located at Gate 10.



ARTWORK

Gate 10 - inspiration taken from aerial views of newly constructed homes in Melbourne's outer fringes, reducing the outlines to simple geometric forms.



Uni Square plaza – inspiration taken from the Brella window awnings found on many facades of inner suburban homes.



Barry Street – inspiration taken from the hustle and bustle of pedestrians moving along a narrow corridor.



2019/2020 STORYTELLING EXAMPLES

Metro Tunnel Creative Program theme for 2019: *Storytelling*

Parkville subtheme: **People, belonging & diversity**

Dr Lucy Bryce – University of Melbourne medical graduate who was a pioneering woman in medicine and medical research at the Walter and Eliza Hall Institute and was the founding director of Australia’s first blood bank at the Royal Melbourne Hospital.



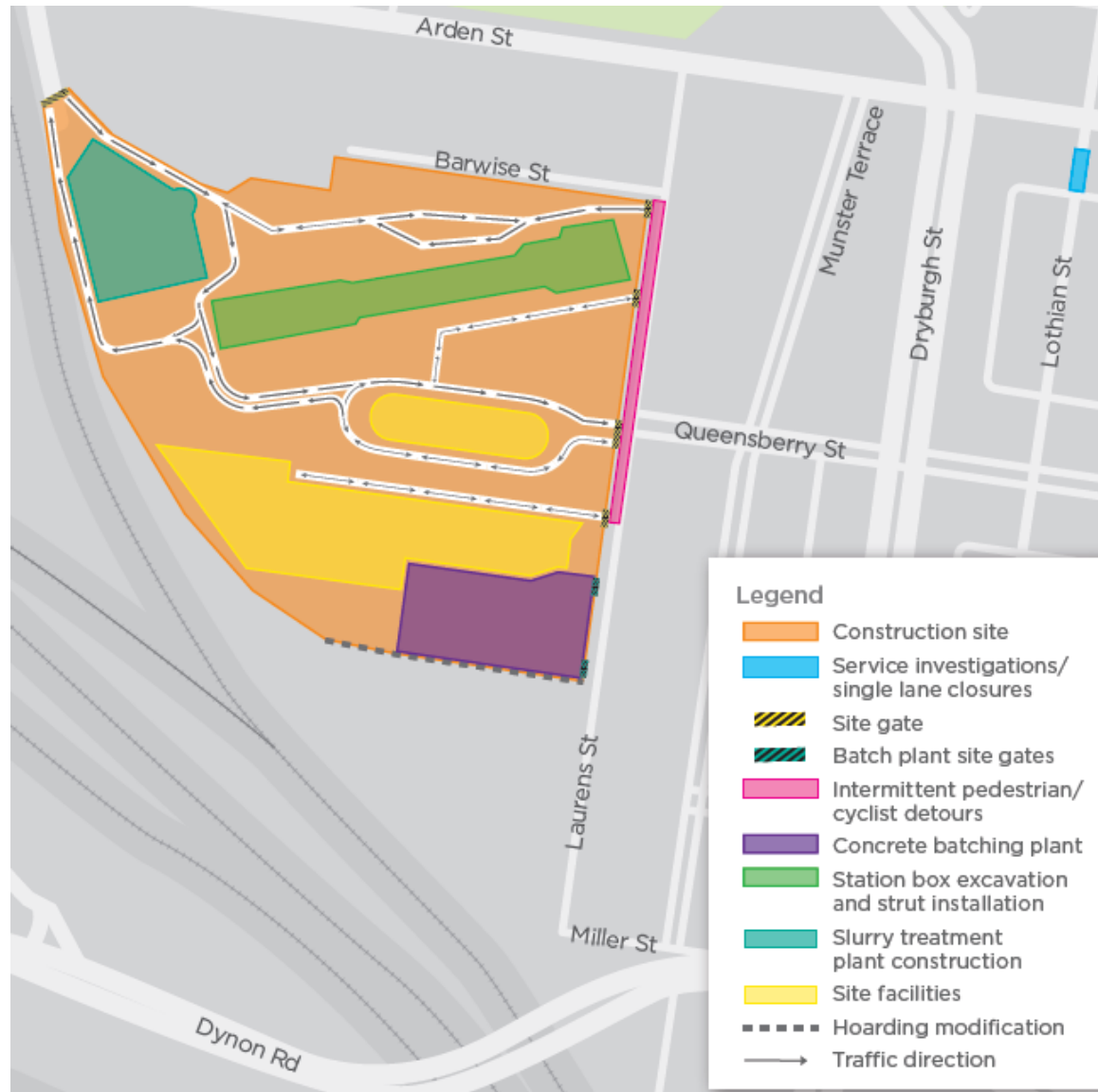
Laureate Professor Peter Doherty, and the stories of PhD students currently at the Doherty Institute.



CONSTRUCTION UPDATE – NORTH MELBOURNE



CONSTRUCTION SITE – NORTH MELBOURNE



CONSTRUCTION PROGRAM

Activity	Jun	July	Aug	Sept	Oct	Nov
Site development	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Slurry treatment plant construction	Light Grey	Light Grey	Light Blue	Light Blue	Light Blue	Light Blue
Excavation of station box	Dark Grey	Dark Grey	Dark Grey	Light Blue	Light Blue	Light Blue
Base slab construction	Light Grey	Light Blue	Light Blue	Light Grey	Light Grey	Light Blue
Hoarding/gate modification	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
TBM assembly	Light Grey	Light Grey	Light Grey	Light Grey	Light Blue	Light Blue
Tunnelling towards Kensington	Light Blue	Light Blue	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Cross passage ground improvement - Lothian St (CP5)	Light Blue	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey

Program is indicative and subject to change

WHAT'S HAPPENING IN NORTH MELBOURNE

- Ongoing site development activities
- Slurry treatment plant commissioning
- Station box excavation and installation of station box frame (steel struts) (east box)
- Removal of steel struts (west box)
- Station box base slab construction
- Surveying, and sampling and testing of groundwater and soil
- Modifications to hoarding, fencing and gates
- Short-term lane closures on Laurens Street for utility design investigations
- Short-term lane closures on Lothian Street for cross passage ground improvement service investigations
- Road cleaning on Arden and Laurens streets to minimise the spread of dirt on local roads.

WHAT'S HAPPENING IN NORTH MELBOURNE

Out of hours works

- 6pm – 10pm, Monday to Friday
 - Station box excavation, steel strut welding and installation inside the excavated station box
 - Over-size equipment deliveries to and from site and use of a crawler crane to unload deliveries
 - Base slab construction
- 10pm – 7am, Monday to Friday
 - Station box excavation, steel strut welding and installation inside the excavated station box
 - Over-size equipment deliveries to and from site and use of a crawler crane to unload deliveries
 - Concrete deliveries for base slab construction
 - Road cleaning on Arden Street as required

After 6pm, construction vehicles will enter and exit via Arden Street wherever possible.

WHAT'S HAPPENING AT NORTH MELBOURNE (ARDEN)



Construction partner:



CROSS PASSAGE GROUND IMPROVEMENT WORKS (CP5)



WORKS LOCATION – LOTHIAN STREET



Location of initial service investigation works to be undertaken

CROSS PASSAGE GROUND IMPROVEMENT WORKS

- Cross passages are short tunnels that connect the two main tunnels. They form a key part of the tunnel's underground rail evacuation and emergency management system
- 26 cross passages are located across the project, with one (CP5) in North Melbourne
- At some locations, ground improvement works are required to strengthen the ground composition
- Works involve injecting grout into the ground prior to the Tunnel Boring Machines (TBMs) tunnelling through.

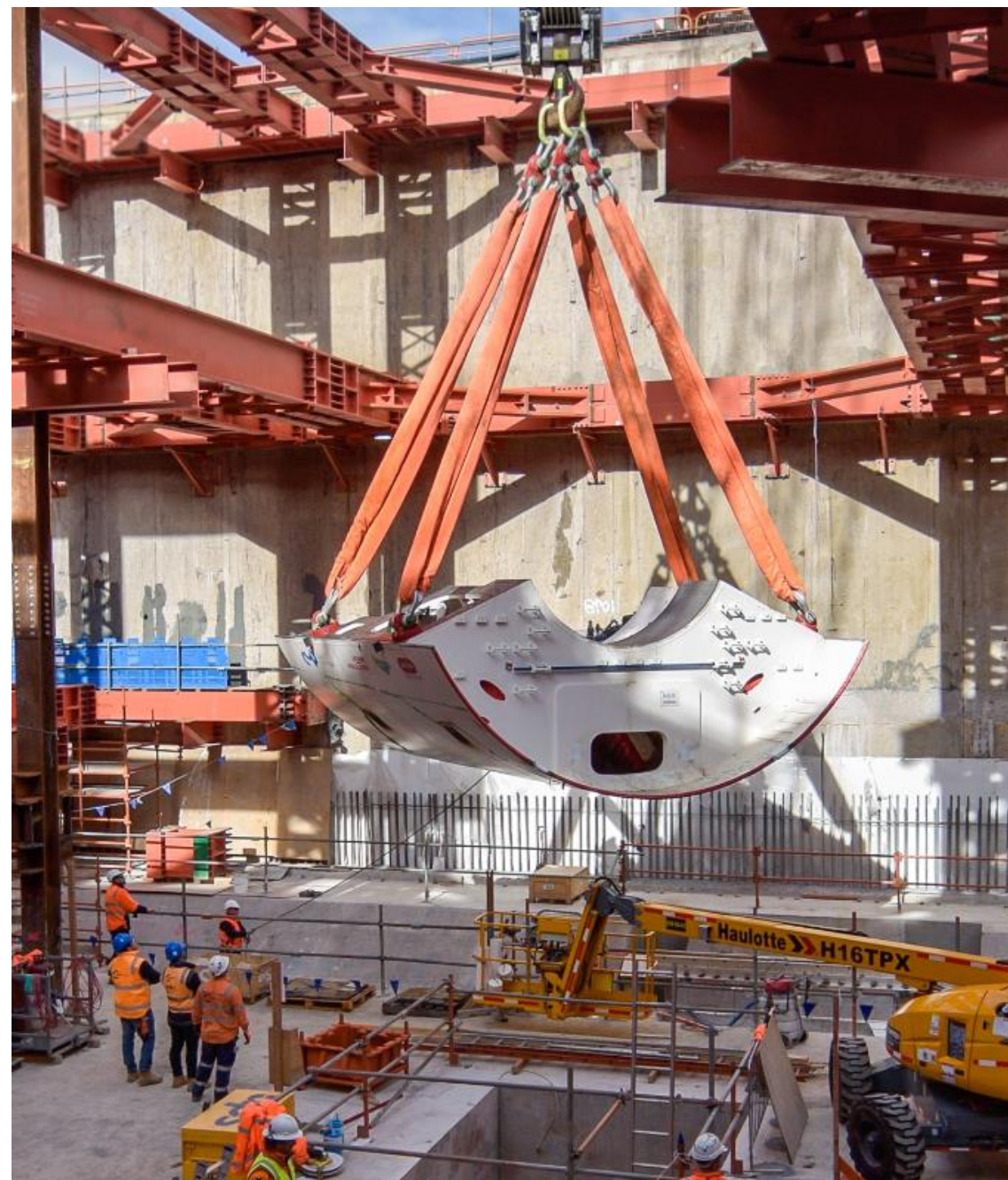
COMMUNICATIONS & ENGAGEMENT

- Notification of initial service investigations distributed in June/July notification
- Communications and engagement strategy being finalised, and to include:
 - Meetings with directly impacted residents and businesses
 - Meetings with City of Melbourne
 - Meetings with/presentations to Community Interest Groups
 - Provision of construction update notifications
 - Regular health check door knocks
 - Progress presentations to future CRG meetings.

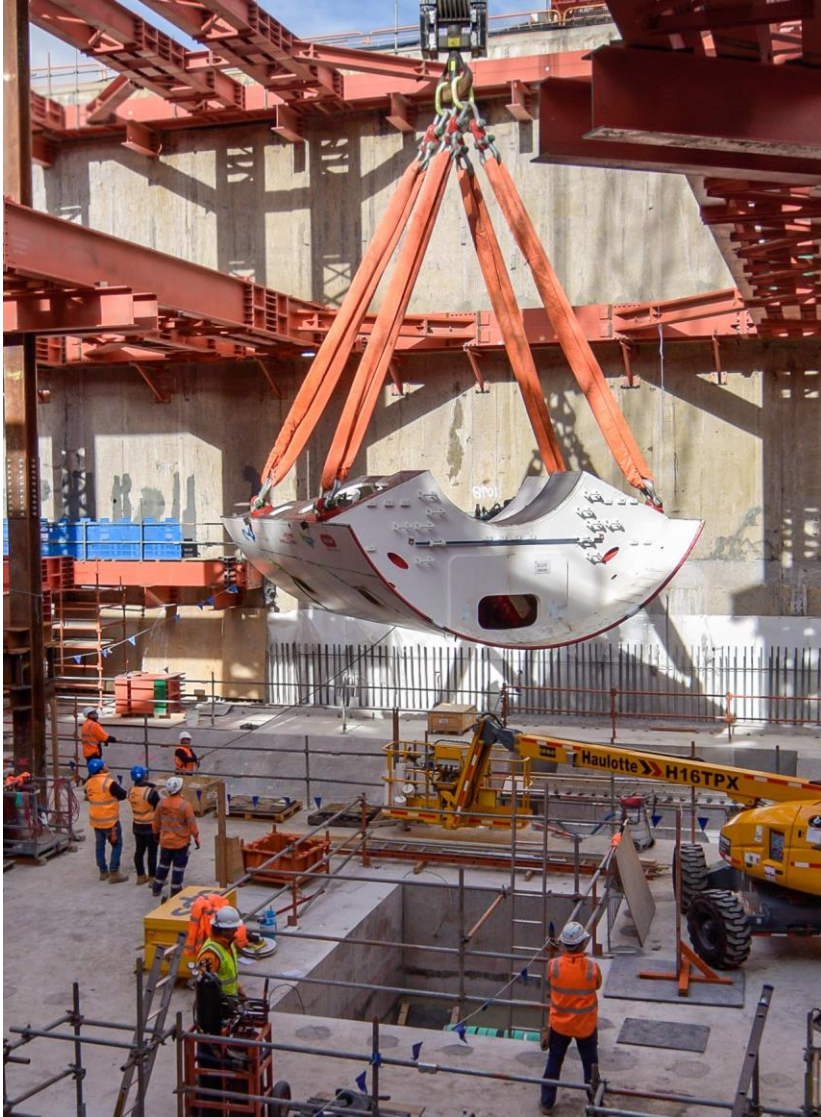
TUNNELLING



TBM ASSEMBLY



TBM ASSEMBLY



TBM ASSEMBLY



TUNNELLING TIMELINE

Indicative timing	Activity
Q1 2019 – Q3 2019	TBM 1 & 2 arrive at Arden and assembled
Q3 2019 – Q4 2019	TBM 1 & 2 tunnelling Arden to Western Portal
Q1 2020	TBM 1 & 2 retrieved and transported back to Arden
Q1 2020 – Q4 2020	TBM 1 & 2 tunnelling Arden to Parkville

Program is indicative and subject to change

ENVIRONMENT UPDATE



ENVIRONMENT – CONSTRUCTION NOISE & VIBRATION

- TBM Ground borne Noise and Vibration Model Process
 1. Model project wide impacts
 2. Validate in stages (Arden to Kensington; Arden to Parkville) - attended monitoring
 3. Update model with attended monitoring data
- Consultation will be undertaken with potentially affected residents.

ENVIRONMENT – CONSTRUCTION NOISE & VIBRATION

Human Comfort

Location	VDV (m/s ^{1.75})			
	Day 7:00am to 10:00pm		Night 10:00pm to 7:00am	
	Preferred Value	Maximum Value	Preferred Value	Maximum Value
Residences	0.20	0.40	0.10	0.20
Offices, schools, educational institutions, places of worship	0.40	0.80	0.40	0.80
Workshops	0.80	1.60	0.80	1.60

- (VDV) Vibration Dose Value = vibration over time
- Guideline targets are the goals that CYP are setting out to achieve

Ground borne noise

Time Period	Internal L _{Aeq,15min} , dB
Evening, 6pm to 10pm	40
Night, 10pm to 7am	35

- Internal levels
- Levels are only applicable when ground-borne noise levels are higher than airborne noise levels
- The noise levels are assessed at the centre of the most affected habitable room.

ENVIRONMENT – OPERATIONAL NOISE & VIBRATION

- Interim design was complete in June
- Additional inputs associated with the High Capacity Metro Trains (HCMT) added to model
- Certified design issued late July

STAKEHOLDER & COMMUNITY ENGAGEMENT



ENGAGEMENT & COMMUNICATIONS UPDATE

ARDEN AND PARKVILLE

Notifications and communications

- Strut removal and TBM assembly OOHW updates – 16 May and 23 May
- June/July Parkville Construction Update issued – 31 May
- June/July Arden Construction Update – 6 June

Door knocks, meetings, briefings and events

- Health check door knocks – Laurens Street, Munster Terrace and Arden Street businesses - 16 and 23 May
- City of Melbourne fortnightly progress meetings - 29 May
- Media event – TBM assembly - 5 June
- Arden site visit by French Ambassador – 11 June

Community issues/enquiries

- Noise and vibration
- Tunnel alignment enquiries & property condition survey requests

Upcoming engagement

- Discussion ongoing with hospitals in relation to engagement and collateral for service relocation works
- Cross passage ground improvement notification and meetings with residents and businesses.

QUESTIONS?



NEXT MEETING

Friday 2 August 2019





Western Portal

North Melbourne

Parkville

State Library

Town Hall

Anzac

Eastern Portal

The existing 'North Melbourne' station will be renamed West Melbourne.

Sunbury Line

South Kensington

West Melbourne

Melbourne Central

Flagstaff

Parliament

Southern Cross

Flinders Street

Richmond

South Yarra

Cranbourne / Pakenham Line