



## **3.1. Option 1: Protected cycle lane with reduced traffic**



# Protected cycle lane with reduced traffic



Option 1 is the implementation of a protected bi-directional bike lane along Melon Street. The proposed bike lane is located on the west side of Melon Street except between Cremorne Street and Ballarat Road.

The design proposes to make Melon Street a one-way street in southbound direction south of Elizabeth Street as well as a one-way northbound between Cremorne Street and Ballarat Road

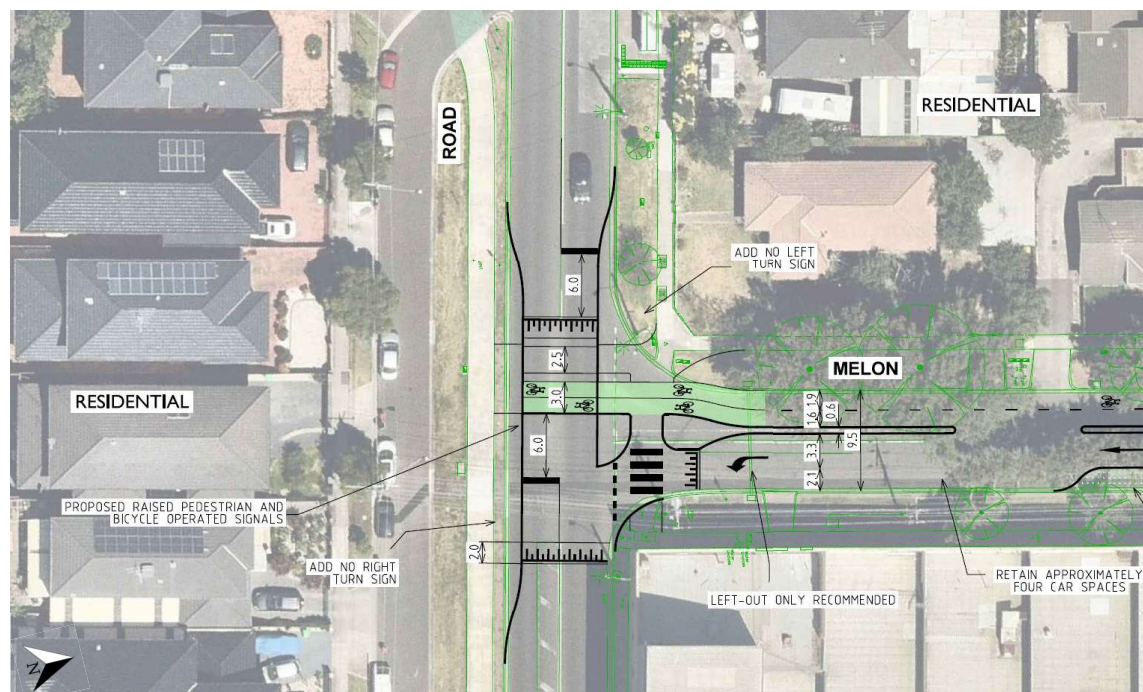
The designs are presented over the following pages, in the order outlined below and as reflected on the map to the left:

1. South Rd intersection
2. Joy St roundabout
3. Melon St cross-section (south)
4. Churchill Ave roundabout
5. Melon St cross section (north)
6. Cremorne St intersection
7. Ballarat Rd intersection



# 1. Melon Street & South Road

## Part Closure with exit only from Melon Street



The protected bi-directional bike lane starts on the west side of Melon Street and connects to the already existing separated bike lane on South Road.

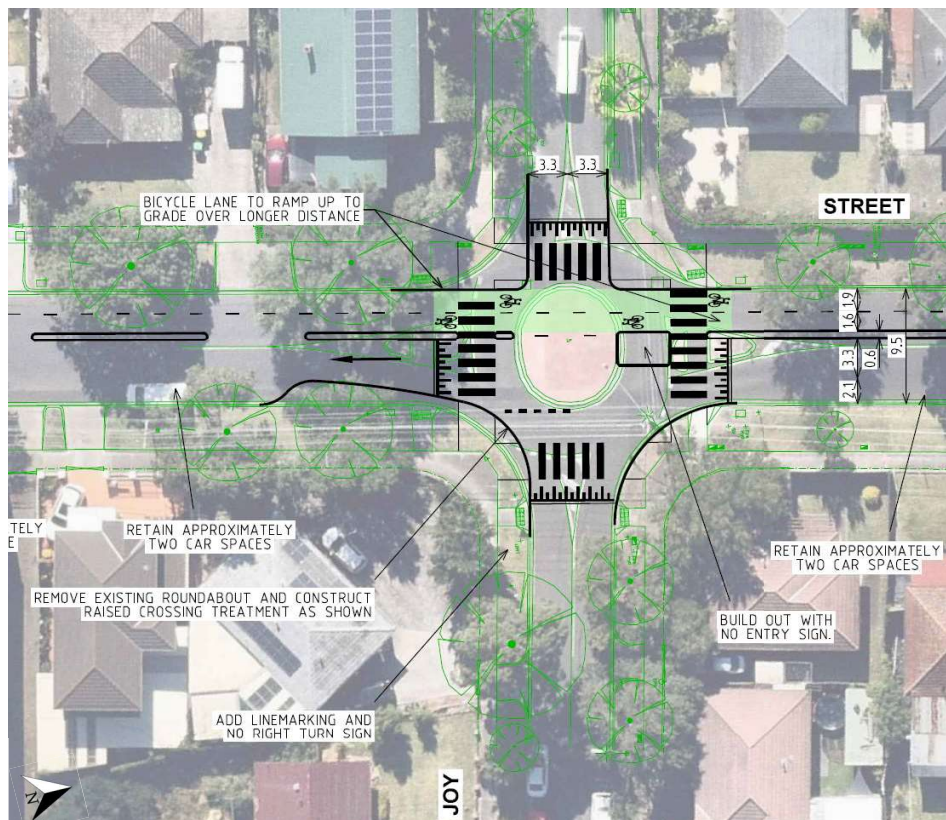
The entire intersection of Melon Street and South Road could be raised to slow traffic. This would create a safer crossing for pedestrians and cyclists which is important for this location as the Dinjerra Primary school is nearby. This option requires speed a reduction on South Road.

Option 1 also includes traffic calming treatments such as the exit only from Melon Street onto South Road. Without an alteration to South Road access, it would be difficult to establish a crossing point and any protected facility would need to start further north once turning vehicles have completed their turns.





## 2. Joy Street Roundabout

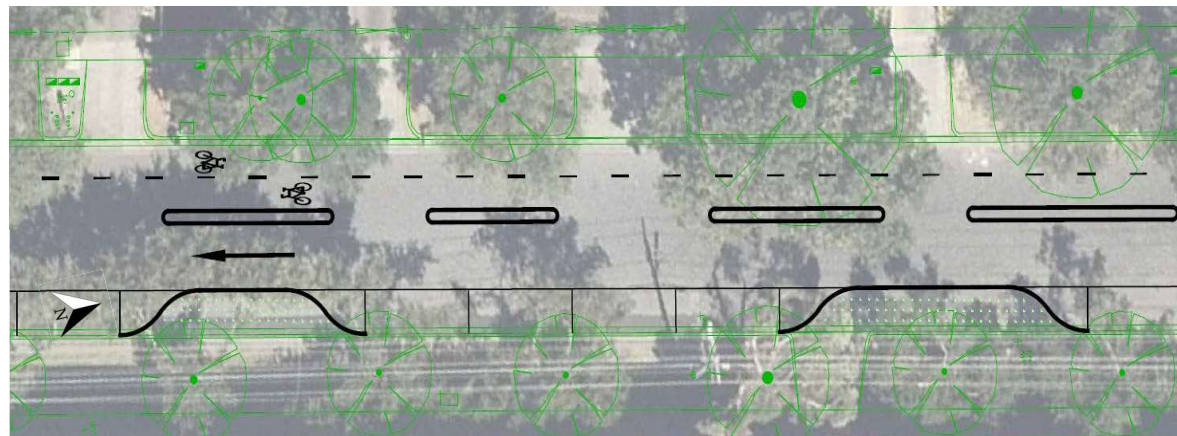


The design transforms the Joy Street roundabout into an intersection where vehicles can only travel southbound on Melon Street. The entire intersection is raised and zebra crossings are provided on all four legs. Existing islands and roundabout will be removed.

The bi-directional bike lane is partly protected on the intersection and the green surface treatment makes drivers aware that they are crossing a bike lane.



### 3. Melon Street cross-section (south)

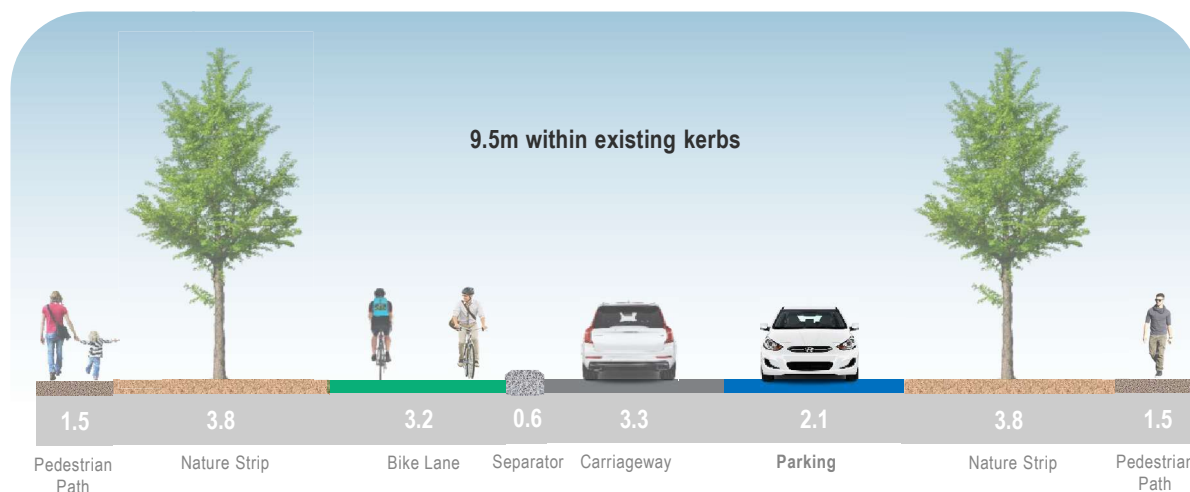


South of Elizabeth Street this option proposes a one-way one-lane southbound traffic flow. The road carriageway is reduced to 3.3m.

**On-street parking is retained at 2.1m** and kerb extensions with trees are introduced.

A 3.2m wide protected bi-directional cycle lane is proposed on the western side of the carriageway.

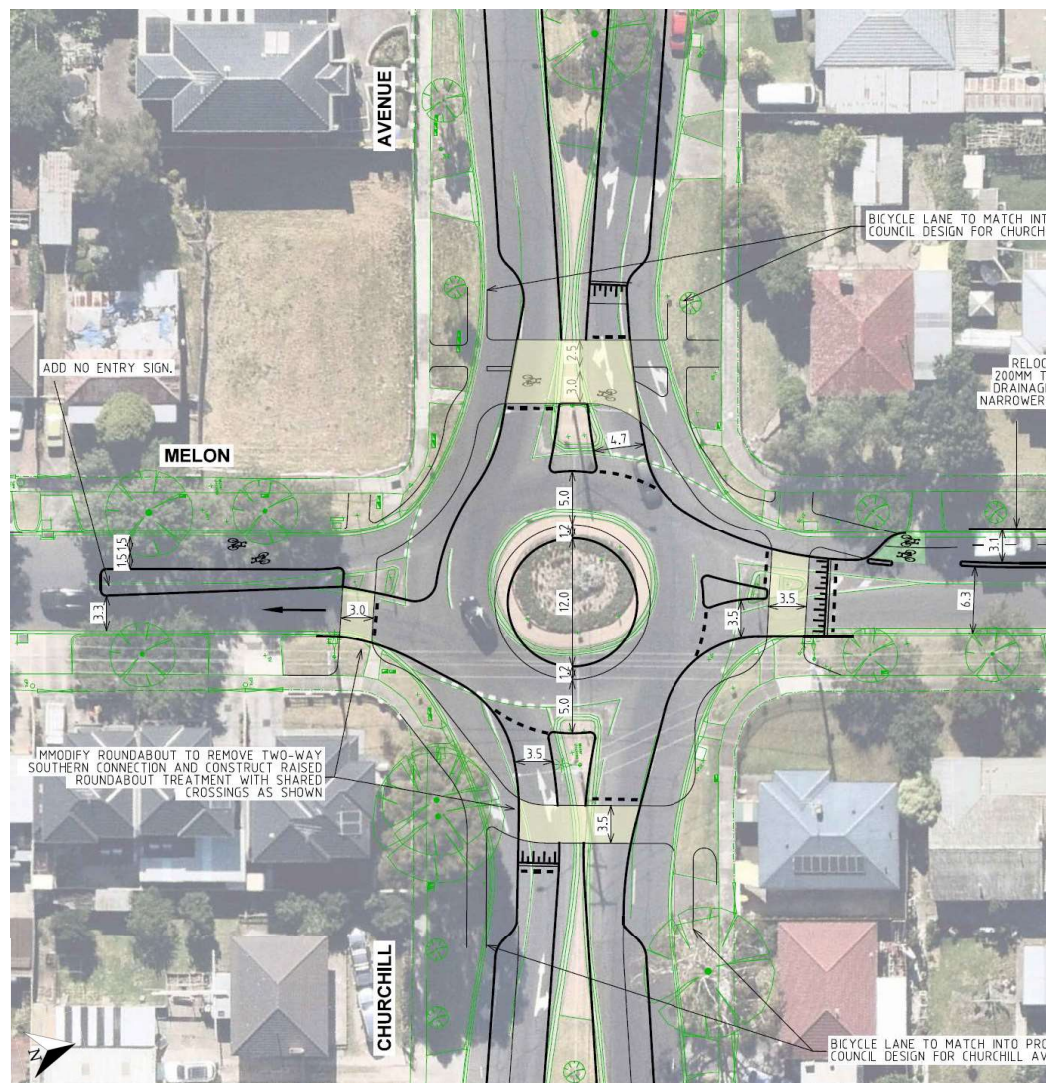
The gaps in protection still **allow residents to enter and exit their driveways.**







## 4. Churchill Avenue Roundabout



Cyclists cross Churchill Avenue on the west side of the roundabout. The design allows for one vehicle to store after the bike lane crossing and before the roundabout. The approach and exit sides on Churchill Avenue are reduced to one lane to make crossing safer. Drivers give way to pedestrians and cyclists on all four legs of the roundabout where raised shared crossings are in place.

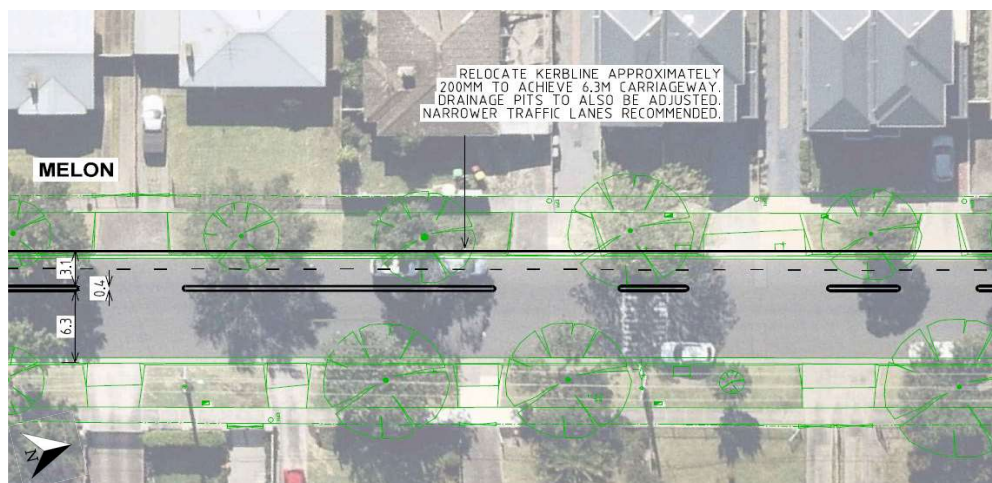
This proposed design is in line with the overall strategic thinking for Churchill Avenue.



Power poles on the east side of Melon Street vastly reduce the opportunity for crossing.



## 5. Melon Street- cross section (north)

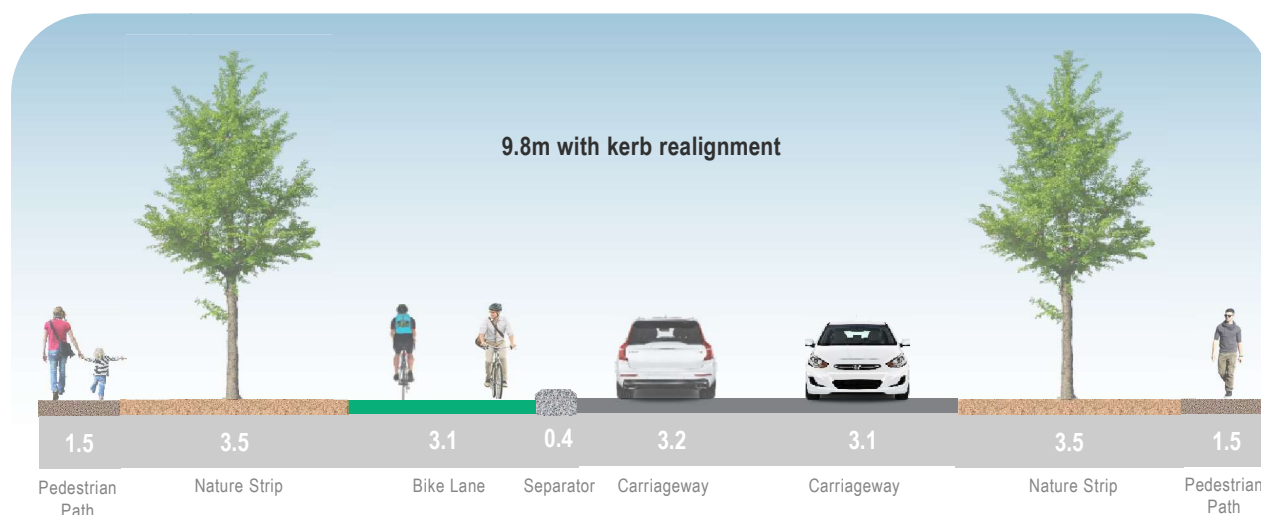


Between Churchill Avenue and Cremorne Street, Melon Street is proposed to be a two-way street with a 3.1m bi-directional bike lane on the west side of Melon Street.

This option is based on a 9.8m wide road space (kerb to kerb). The road carriageway will be reduced from 9m to 6.3m.

This option sees the removal of all on street parking.

Residents are still able to access their driveways.

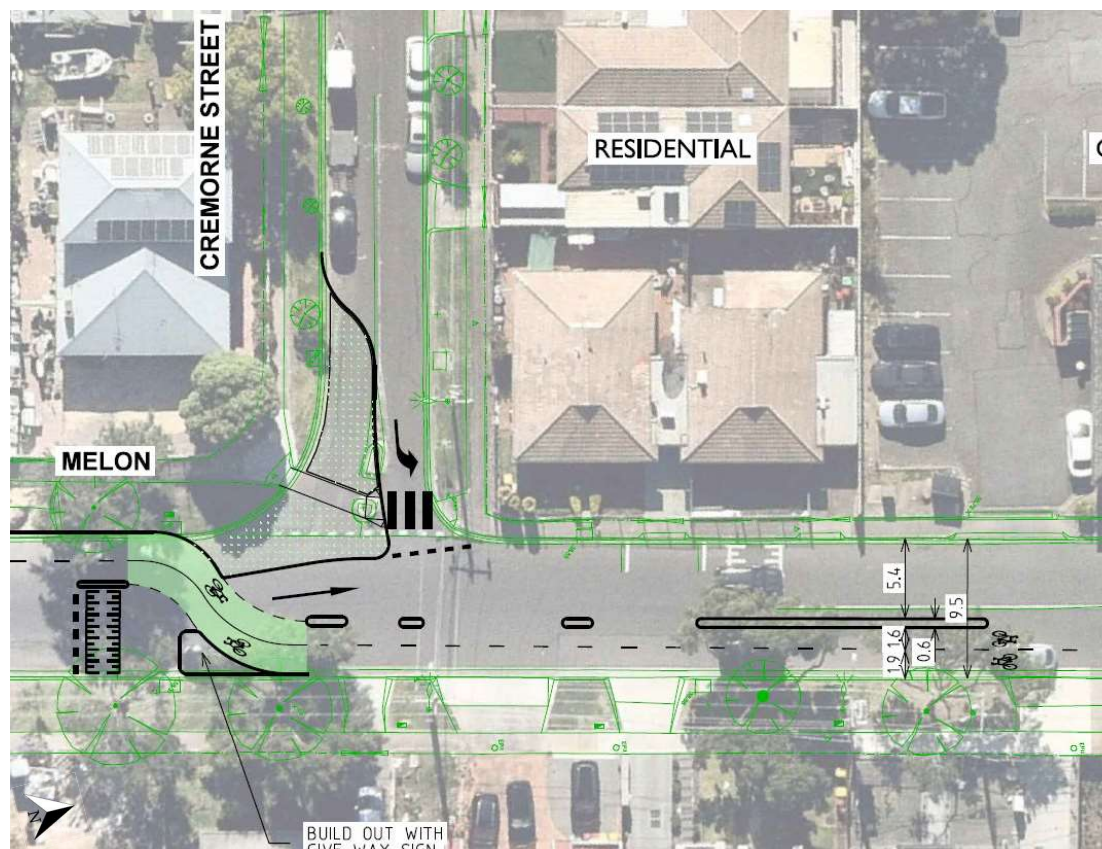






## 6. Melon Street & Cremorne Street

### Cycle track transition – left out from Cremorne Street



At the intersection of Melon Street and Cremorne Street, the bi-directional bike lane changes from the west side of Melon Street to the east side of Melon Street to connect with Ballarat Road. A speed hump makes drivers slow down before crossing the bike lane.

The proposed kerb build outs allow cars to only exit Cremorne Street with a left turn. Melon Street becomes a one-way northbound road between Cremorne Street and Ballarat Road.

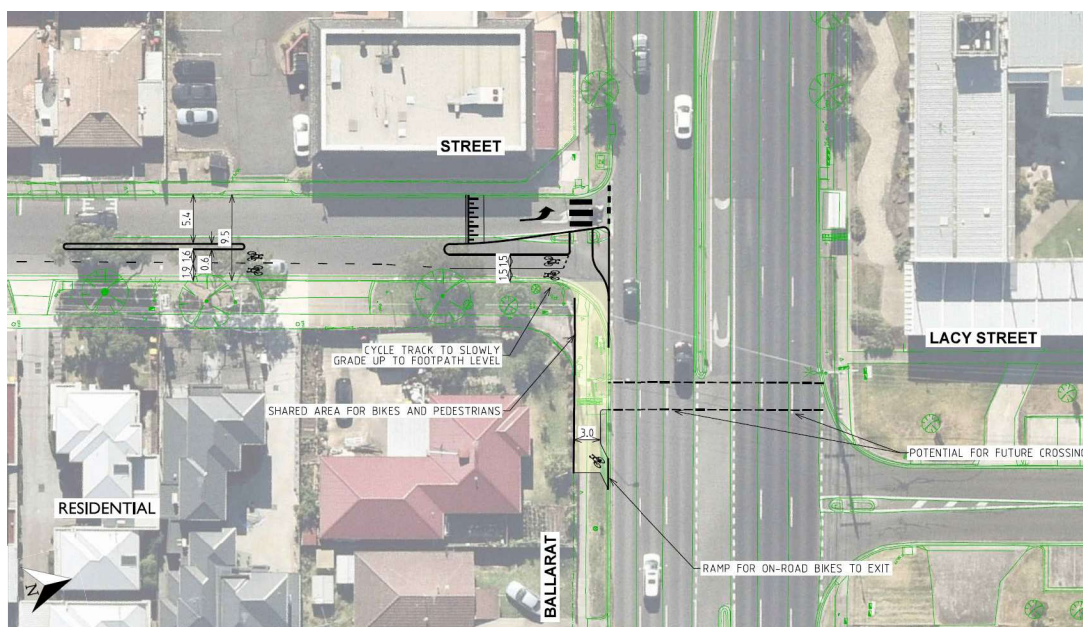
Kerb build outs provide landscaping opportunities and shorten the crossing for pedestrians on Cremorne Street.





## 7. Melon Street & Ballarat Road

### Left out only



A left out only treatment on Melon Street is proposed for the intersection of Melon Street and Ballarat Road. This treatment reduces traffic volumes on Melon Street.

The bi-directional bike on the east side of Melon Street connects with a proposed shared path section on the south side of Ballarat Road. There is a future opportunity for a signalised bike and pedestrians crossing. A ramp is suggested to access Melon Street for westbound travelling cyclists on Ballarat Road.



#### Left Exit Only

A modal filter is installed on a side road that still allows all cycling movements, but only permits drivers to turn left out of the side road onto the main road. This improves the flow of traffic on the main road, makes cycling on the main road safer, and makes cycling more direct and faster compared to driving.

Image: Moor St and Nicholson St, Fitzroy



# Example of a future Melon Street with protected cycle track and one - way traffic.







# Option 1 Assessment

## Protected bike lane with reduced traffic



Images: Drummond Street, Carlton (top); Kavanagh Street, Melbourne (bottom)

### Benefits:

- Physical protection from vehicles
- No impact on trees
- Lowers traffic volumes
- Improves walkability simultaneously

### Issues:

- Some residents affected by slightly less accessibility by car
- Kerb reconstruction required for this option
- Sections of car parking removal
- Commercial premises on Ballarat Road slightly less accessible

### Further opportunities:

- Raise cycle lanes across side roads
- Signalised shared crossing on Ballarat Road





# 5. Traffic Analysis



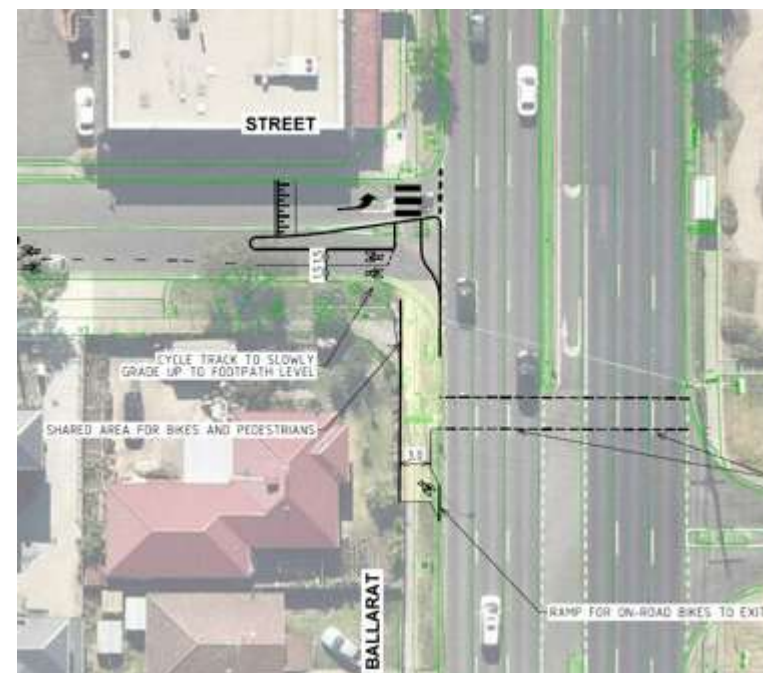
# Impact on local traffic

The following is a high level analysis of the existing traffic movements based on data collected in March 2022.

## **Ballarat Road - Left Out Only (Applies to Option 1 & 2)**

The data shows that on top of the vehicles turning left from Ballarat Road there is at times up to 40% more vehicles joining Melon Street from other side roads before arriving at Churchill Avenue Roundabout. It appears that at the busiest time 30% of this additional traffic is joining Melon Street from Hargreaves Avenue.

If the left turn ban from Ballarat Road to Melon Street was implemented it is assumed that additional traffic may use Lawn Crescent or Castley Crescent. Looking at the data this could approximately be up to two additional vehicles per minute in the peak hour. It should be noted that this number may be split between the two streets.



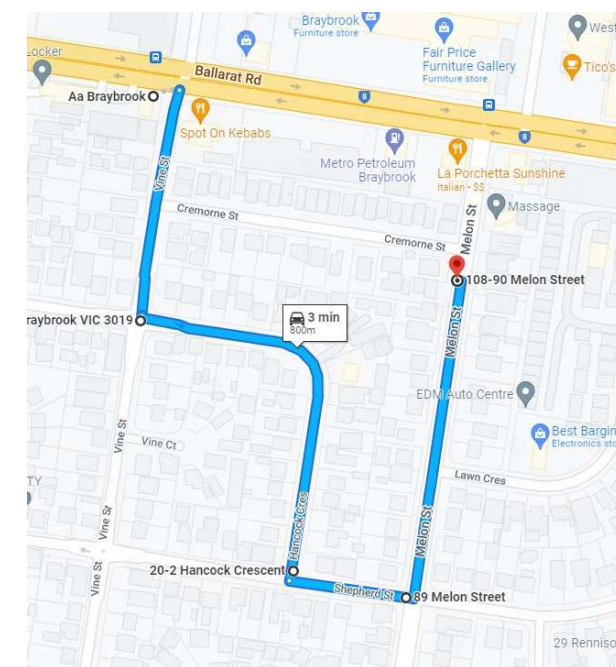
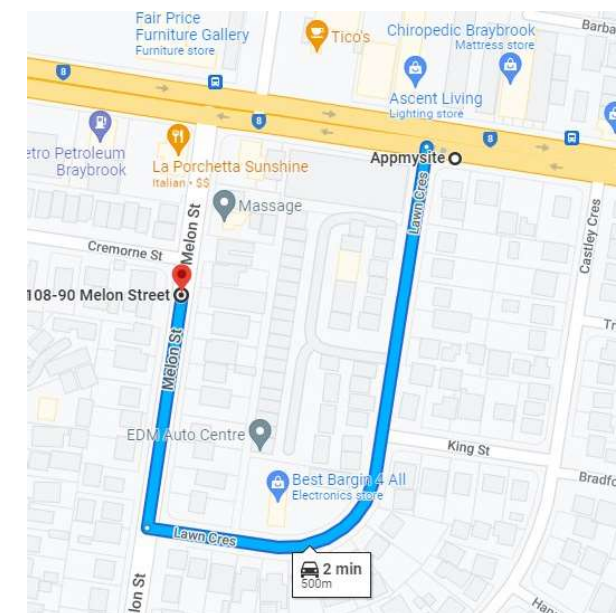


# Impact on local traffic

## Journey times (Applies to Option 1 & 2)

For residents at the northern end of Melon Street there would be an increased journey of approximately 250m for them to access their properties if travelling from Ballarat Road. This would equate to up to 1 minute additional journey time from Lawn Crescent.

Residents entering the area from Vine Street would see an increased journey of approximately 450m due to the left turn only treatment at Cremorne Street. This would equate to 2-3 minutes of additional journey time.







# Impact on local traffic

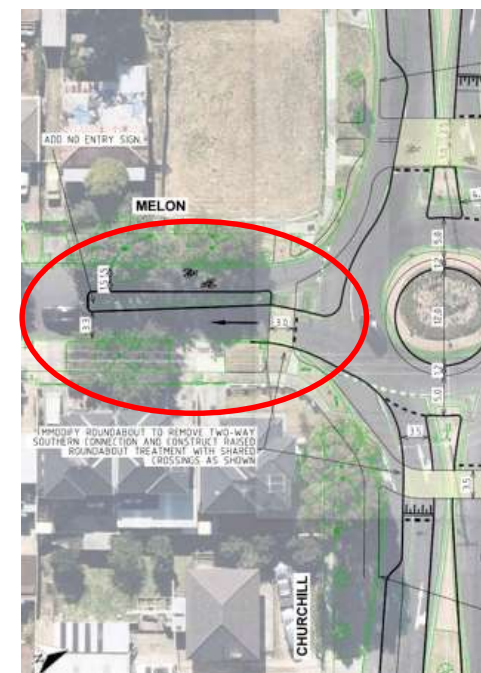
## Churchill Roundabout- Southbound only (Applies to Option 1 only)

The data shows that on top of the vehicles turning onto Melon Street from South Road there is approximately 10% more vehicles joining Melon Street from other side roads before arriving at the Churchill Avenue Roundabout.

At the roundabout about 50% of traffic that is generated between South Road and Churchill Avenue wish to carry on travelling north. There is a fairly even split of traffic wishing to turn left or right at the roundabout.

The data suggests that those turning onto Melon Street but leaving at Churchill may be doing so to avoid intersections on Ashley Street. By closing the northern approach to the roundabout an increase of up to 168 vehicles in the peak hour may use Ashley Street and Darnley Street to continue their journey.

It is assumed that some of vehicles would still access Melon Street from Churchill Avenue although as this is closer to Ballarat Road there would not be the same perceived advantage that exists today.





# Impact on local traffic

## Journey times (Applies to Option 1 only)

Residents near Elizabeth Street who may be coming from the east or west do not have any additional distance to travel to their properties although the journey may be slightly longer depending on Ashley Street traffic.

Residents at the southern end of Melon Street would have an additional distance of approximately 700m to access their properties.

This would equate to up to 2 mins additional journey time.

