

NELSON ROAD CORRIDOR STUDY

COMMUNITY CONSULTATION ON TREATMENT PLAN

26 JULY 2023

NELSON ROAD CORRIDOR STUDY

COMMUNITY CONSULTATION ON TREATMENT PLAN

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1 INTRODUCTION

1.1 PROJECT OBJECTIVE AND APPROACH

The recent *Nelson Road Pedestrian and Cyclist Safety Investigation* [1](August 2022) investigated pedestrian and cyclist safety along Nelson Road between Whitehorse Road and Severn Street. The project involved development of a number of concept options that sought to improve pedestrian and cyclist safety, access and amenity along the corridor, whilst also considering other key principles and objectives (Alignment with Council's strategic objectives, environment, parking impacts, buildability and cost). Two workshops were held with key stakeholders and community representatives on issues along the corridor and considerations for potential designs. The preferred option (Pedestrian Staging + Separated Cycling concept) had greatest alignment with the objectives for the corridor. This option allows flexibility in implementation, with works able to be staged over time (and may be coordinated with other planned improvements in Box Hill). The option also:

- improves pedestrian safety and amenity, noting the range of pedestrian mobilities along the route (including able-bodied and mobility impaired)
- improves cyclist safety and amenity through separated cycling facilities (latter phases)
- supports a lower speed environment through reduced traffic lane widths
- improves safety at the Arnold St intersection through provision of a roundabout
- provides an opportunity to increase the tree canopy
- retains on-street parking (early phases).

This current project sought to communicate the approach for development of the proposed 'Pedestrian Staging + Separated Cycling' concept to the community and seek wider community feedback and support.

The project approach involved:

- creation of visualisations in order to support communication of the vision and plans for the future of Nelson Road
- preparation of a short summary document summarising the *Nelson Road Pedestrian and Cyclist Safety Investigation* project report which could be distributed to the project stakeholder group and other interested parties
- community consultation
- preparation of a report summarising project outcomes (this report).

[1] O'Brien Traffic 2022, *Nelson Road – Pedestrian and Cyclist Safety Investigation*, 21314 Report, 15 August 2022

2 VISUALISATIONS

A project meeting was held to determine the best views (along the route) and number of visualisations that would best support communication of the 'Pedestrian Staging + Separated Cycling concept' vision to the wider community. It was agreed that preparation of five visualisations at key locations would be suitable. These entailed:

- On the approach to Arnold Street (looking south) showing Box Hill hospital, Epworth hospital, Box Hill gardens and the Arnold Street intersection

Image 1 depiction Phase 2A of the 'Pedestrian Staging + Separated Cycling' concept	Features: wider footpaths, painted median, southbound bicycle lane, roundabout (mountable dome), zebra crossings and sharrows at Arnold Street intersection.
Image 2 depiction Phase 3 of the 'Pedestrian Staging + Separated Cycling' concept	Features: wider footpaths, painted median, protected bike lanes (both directions), roundabout (mountable dome), zebra crossings and sharrows at Arnold Street intersection.

- Approximately 200m north of Whitehorse Road (looking south) showing the RSL, Box Hill Institute and Whitehorse Road in the distance

Image 3 depiction Phase 1 of the 'Pedestrian Staging + Separated Cycling' concept	Features: wider footpaths, painted median with planters, midblock zebra crossing and sharrows.
Image 4 depiction Phase 3 of the 'Pedestrian Staging + Separated Cycling' concept	Features: wider footpaths, painted median with tree planting, protected bike lanes (both directions), midblock zebra crossing, removal of on-street parking.

- On the approach to Arnold Street (looking south) showing Box Hill hospital and the Thames Street intersection

Image 5 depiction Phase 3 of the 'Pedestrian Staging + Separated Cycling' concept	Features: zebra crossings and sharrows at Thames Street intersection, painted median, protected bike lanes (both directions), midblock zebra crossing, removal of on-street parking.

'Before' photos of each location were also included. The visualisations are included in the final pages of the project summary document (Appendix B).

3 PROJECT SUMMARY DOCUMENT

A short (7-page) summary document was prepared that summarised the *Nelson Road Pedestrian and Cyclist Safety Investigation* project report to clearly and concisely articulate the approach and outcomes of the investigation project, supported by photos, the visualisations, a map, and graphic of the concept plan 'phases'. This was distributed along with the online survey to the project stakeholder group and other interested parties. The summary document is included in Appendix B.

4 CONSULTATION

Community consultation involved (1) an online survey, and (2) listening posts. The consultation was promoted via email / letterbox drop, pavement decals installed on footpaths and posters along the route and social media/Council's website (Figure 1).



FIGURE 1: NELSON ROAD SURVEY PAVEMENT STICKER

4.1.1 Online survey

Whitehorse City Council hosted a community survey on its online engagement platform ('*Your Say*') from 30 March 2023 to 30 April 2023. Over 260 people provided input and feedback. Findings from the survey are presented in Section 5 with further detail provided in Appendix A.

4.1.2 Listening posts

Listening Posts were held at Box Hill Gardens (near the Arnold St intersection) on Thursday 30 March 2023. Two Council officers and two O'Brien Traffic engineers hosted the Listening Posts, which ran from 12 noon – 2 pm and 5 – 7pm. The listening posts facilitated direct engagement with the community, including people who travel to/along the route.



FIGURE 2 (A & B): TALKING TO PASSERS-BY AT THE LISTENING POSTS

5 COMMUNITY FEEDBACK ON CONCEPT PLAN

A summary of community interaction with the online survey is presented in Table 1. It is noted that the project had high level of community engagement.

Aware (Project page visits)	873
Informed (clicked on or downloaded something)	484
Engaged (completed a survey)	267
QR code scans: • Footpath decals • Signage • Letters	 52 16 12
Project link clicks via 'Your Say' newsletter (29 March 2023)	65 (1092 subscribers, 700 newsletter opens)
Listening posts	At Box Hill Gardens on Thursday 30 March 2023 from 12 noon – 2 pm and 5 – 7pm

TABLE 1: COMMUNITY CONSULTATION INTERACTION SUMMARY

Outcomes from the online survey are presented below with further detail provided in the *Survey Response* section in Appendix A. Key findings include:

- The highest proportion of respondents were local residents (57%), followed by people working in the vicinity (36%) or visiting the hospital/health providers (36%)
- Travelling as a driver/passenger along Nelson Road was the most popular mode for survey respondents (79%), although walking was also very popular (61%), followed by cycling (25%) and public transport (17%)
- When travelling along Nelson Road, respondents generally felt (Figure 3):
  - Unsafe/very unsafe when riding a bicycle (40% vs 4% who selected safe/very safe)
  - Safe/very safe when travelling via bus (24% vs 3% who selected unsafe/very unsafe)
  - Safe/very safe when travelling by car (47% vs 24% who selected unsafe/very unsafe).

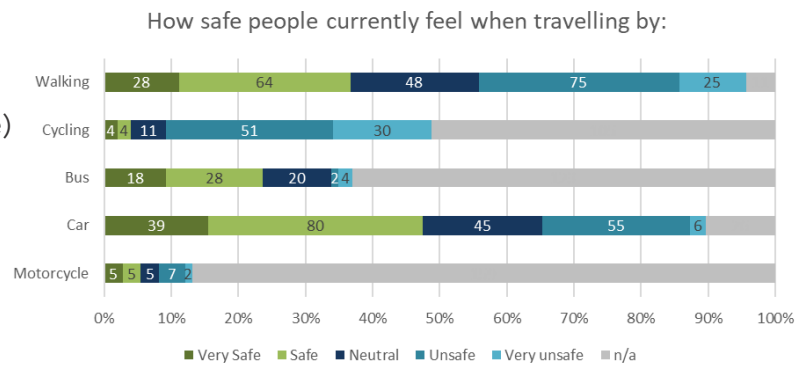


FIGURE 3: CURRENT PERCEPTION OF SAFETY BY TRAVEL MODE

Responses were mixed for those that walked. A similar proportion felt safe/very safe (37%) to those that indicated they felt unsafe/very unsafe (40%) when walking along Nelson Road.

Only a small proportion of respondents were motorcyclists (9%). Of those, 42% felt safe/very safe compared to 38% that they felt unsafe/very unsafe.

- Over half of respondents indicated that they never use on-street car parking on Nelson Road, while a third indicated they use it 1-2 times per month. Only a small proportion of respondents indicated that they utilised on-street parking more frequently.
- Almost 55% of respondents indicated they would be satisfied using alternative nearby parking in the future, while 25% indicated that they would not be satisfied with using alternative parking.
- 56% of respondents indicated they would be more likely to walk if walking infrastructure was improved (Figure 4).

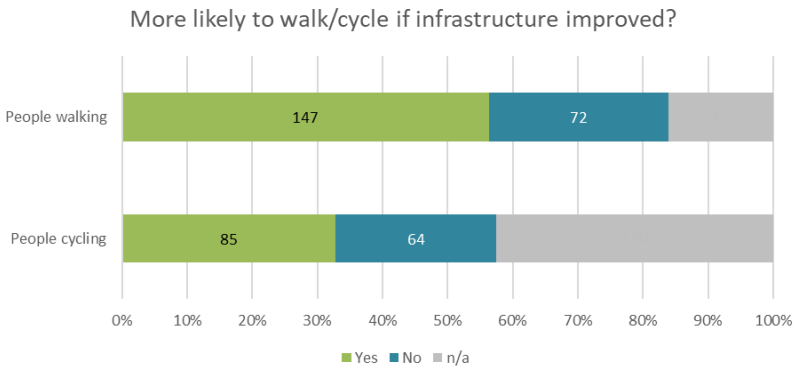


FIGURE 4: MORE LIKELY TO WALK/CYCLE FOLLOWING IMPROVEMENTS

- Almost 33% of respondents indicated they would be more likely to ride if cycling infrastructure was improved (Figure 4).
- 88% of respondents indicated they would ride a bicycle more frequently if a physically separated bicycle lane was introduced (Figure 5).

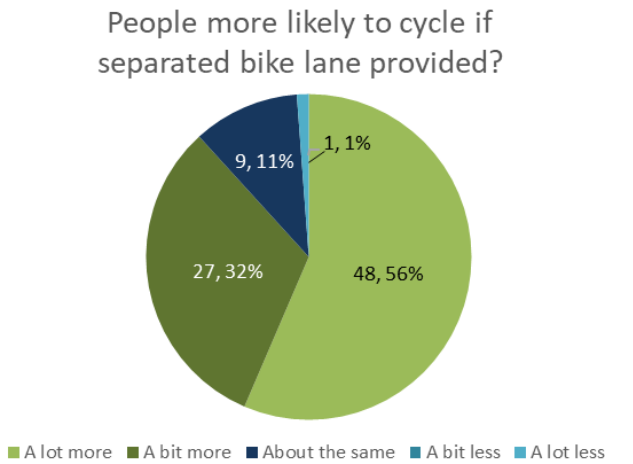


FIGURE 5: CYCLING PARTICIPATION WITH SEPARATED FACILITY

- Respondents generally felt the proposed works would improve safety for all road users (Figure 6):
  - 54% agreed that the plan would improve safety for pedestrians, with 25% indicating pedestrian safety would improve 'somewhat'
  - 44% agreed that the plan would improve safety for cyclists, with 24% indicating cyclist safety would improve 'somewhat'
  - 40% agreed that the plan would improve safety for everyone, with 30% indicating safety would improve for everyone 'somewhat'.

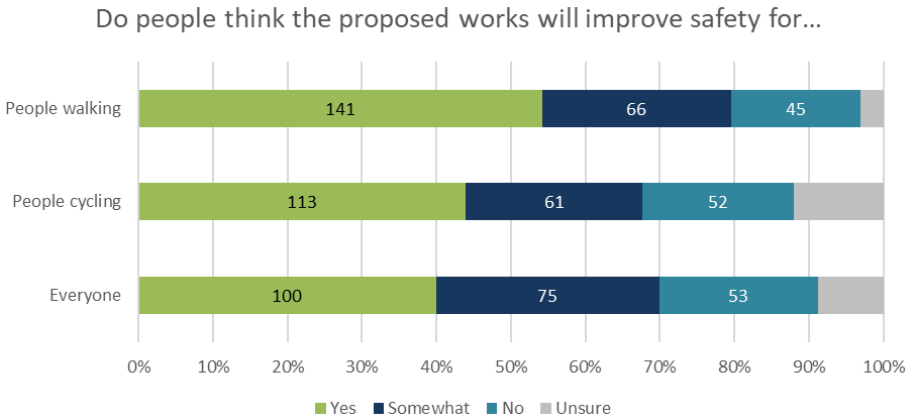


FIGURE 6: PERCEPTION OF SAFETY FOLLOWING IMPROVEMENTS

- Most respondents agreed that works along Nelson Road should be phased over time to enable coordination with other projects.
- The highest priority safety improvements were:
  - New pedestrian zebra crossings
  - Arnold Street mini-roundabout
  - Lower speed limit
  - Painted median
  - Separated bicycle lanes
  - Bicycle link through Box Hill Gardens
  - Narrower traffic lanes
  - Sharrows.

Over half (52%) of respondents provided additional comments during the consultation. These are summarised below with further detail provided at the end of the *Survey Response* section in Appendix A:

- In relation to traffic operation and safety:



  - A number of comments were in support of the changes proposed in the concept plans
  - Concerns regarding current risks due to inattention, turning drivers not giving way, pedestrians emerging from between vehicles, people getting in/out of parked vehicles without looking, impatient drivers, parked vehicles near crossings, intersections and major accesses causing visibility issues
  - View that majority of people will continue to drive here
  - Mixed response regarding proposed roundabout at Arnold St / Nelson St. Some support for the roundabout while some requests for a signalised intersection. There is also concern about bus turning movements at this intersection.
  - Some concern that the proposed changes may exacerbate frustration for drivers, pedestrians and cyclists (which could lead to additional safety concerns)
  - Concern that the median will lead to increased congestion, potentially inhibit access for emergency vehicles (by prohibiting vehicles from overtaking if needed)
  - Mixed response regarding proposed speed limit reductions (noting that “lower speed limit” was the third highest priority improvement identified during the survey)
  - Concern that reducing lane withs will inhibit access for larger vehicles and inhibit parking and through traffic movements
  - Feedback that traffic should be discouraged along Nelson Road, and requests and suggestions for measures to restrict movement and traffic in the area (including one-way operation or closure to traffic). In addition there were suggestions for measures in other locations (e.g. Severn Street / Elgar Road) to help reduce traffic demand along Nelson Road.

- In relation to **pedestrian** movement, access, amenity and safety:



  - Mixed response regarding proposed zebra crossings (noting that "new pedestrian zebra crossings" was the highest priority improvement identified during the survey). There were some requests that the crossings be enhanced to wombat crossings and/or include flashing lights
  - Mixed responses regarding the proposed median (noting that the median was the fourth highest priority improvement identified during the survey)
  - Strong concern for pedestrian safety at Arnold St / Nelson St intersection. There were mixed responses regarding the proposed roundabout with zebra crossings here, with some support while others advocated for a signalised intersection (noting that the "Arnold St mini-roundabout" was the second highest priority improvement identified during the survey, although it is likely that this priority reflects the safety concern for all road users at this location)
  - Concern that drivers often do not give way to pedestrians at the existing zebra crossing
  - Concern that the proposed bike lanes and bike/shared paths in Box Hill Gardens could increase risks and affect amenity for pedestrians
  - Mixed responses regarding proposed widening of footpaths, ranging from wider paths "not needed", to support for wider paths to better accommodate people with mobility impairments, as well as requests for improved lighting
  - Concern about risks due to distracted pedestrians (e.g. looking at phones).
- In relation to **cyclist** movement, access, amenity and safety:



  - Concern that the area is dangerous for cyclists due to congestion, driver inattention and impatience, including 'dooring' risk, vehicles emerging from side streets and properties
  - Mixed responses regarding proposed bicycle facilities, with strong support for separated facilities, including through the intersections (and avoiding sharrows). Although there were some perspectives that sharrows and/or wider traffic lanes are safer than narrower traffic lanes and separated bicycle lanes. There was a request for off-road shared paths. It is noted that "separated bicycle lanes" was the fifth highest priority improvement identified during the survey, compared to "sharrows" which was the lowest priority improvement.
  - Feedback that the bike route needs to take into consideration other routes/bike lanes in the area, and strategic priorities, and perhaps alternate bike routes should be considered
  - Some feedback that cyclist volumes are low (and so bicycle facilities are not needed)
- In relation to **parking**:



  - Parking demand is already a big issue in the area, due to hospitals and medical suites, athletics track with demand exacerbated by 'insufficient' on-site parking requirements for new developments. Feedback indicated that current high parking demand leads to vehicles blocking/impinging on residential driveways, parking too close to intersections, and restricting visibility of existing zebra crossing.

- Concern regarding poor availability of sufficient convenient parking, particularly noting the high number of mobility impaired people
- Concern that removal of parking on Nelson Road will exacerbate parking issues and migrate parking demand to other residential streets
- Feedback that additional parking in area is needed
- Feedback that extended/additional parking restrictions are needed
- Concern regarding the cost of off-street parking
- Concern that Nelson Road (north of Thames St) as well as surrounding residential streets are too narrow for parking on both sides
- Requests for improved wayfinding to hospital parking and provision of drop-off zones.

In addition to the comments provided via the online survey, a number of additional submissions were provided to Council, summarised below with further detail provided at the end of the *Survey Response* section in Appendix A:

- Metro East Bicycle User Group (MeBUG) advocated to proceeding directly to Phases 2a and 2b to improve both cycling and pedestrian safety (expressed safety concerns for cyclists associated with Phase 1)
- local resident (retired civil engineer) advocated for separated cycling lanes to be implemented from outset along with Arnold St roundabout, median treatment and additional zebra/wombat crossings and 30 km/h speed limit (expressed safety concerns for cyclists associated with earlier Phases).

A summary of key concerns and the project response is presented in Table 2.

KEY CONCERN/SUGGESTION	PROJECT RESPONSE
Arnold St / Nelson St intersection: • Signalised intersection design suggested	• Signalised intersection not recommended in this instance due to (1) increased potential for rat-running and (2) close proximity to existing pedestrian signal Note, if intersection signalisation was considered, a raised platform would be recommended to manage speeds, as well as additional measures on Arnold St to account for existing pedestrian signals and discourage rat-running.
• Accommodating buses / emergency vehicles	• Larger vehicles will be able to traverse the mini-roundabout
• Wombat crossings rather than zebra crossings (whole project but particularly at Arnold St / Nelson St intersection)	• Wombat crossings are preferred to achieve lower vehicle speeds when pedestrians and cyclists present. Wombat crossings may be incorporated into the design (rather than zebras), as shown in the 'Phase 3' concept plan drawings
• Avoid sharrows (whole project but particularly at Arnold St / Nelson St intersection)	• An alternate concept design has been prepared that enables separation for cyclists through Arnold St / Nelson St intersection (Appendix C)

KEY CONCERN/SUGGESTION	PROJECT RESPONSE
Concerns regarding current risks including inattention, turning drivers not giving way, pedestrians emerging from between vehicles, people getting in/out of parked vehicles without looking, impatient drivers	A road environment that encourages lower vehicle speeds (via reduced lane withs and vertical deflection at wombat crossings), and safer pedestrian and cyclist facilities will help mitigate these risks.
Phase 1 design may increase congestion, inhibit access for emergency vehicles and driver frustration (unable to safely overtake due to planters in median)	Revision to Phase 1 to exclude planters to enable emergency vehicle access and drivers to safely overtake cyclists when required.
Concern for cyclist safety on Nelson Road and in wider area (traffic speeds and volumes, narrow carriageways, dooring risks from parked vehicles)	The proposed design seeks to improve cyclist safety and amenity along the Nelson Road corridor. Future projects may consider cyclist connection to the Bushy Creek trail as well as measures to discourage rat-running and improve cyclist safety in surrounding streets.
Currently very high demand for on-street parking, and concern that proposed design results in loss of on-street parking	Phase 1 would involve loss of 10 parking spaces. Council will explore opportunity to increase parking supply within walking distance (to offset this loss). Later phases to be implemented over time may enable new parking opportunities to come online (such as paid off-street parking).
Reduced lane widths may inhibit access for larger vehicles, through traffic movements and parking	Lane widths are suitable for expected vehicle types (including emergency vehicles and buses).
Through-traffic volumes and rat-running a concern (dangerous for pedestrians and cyclists)	In future, traffic management may be reviewed in surrounding streets to discourage rat-running and improve cyclist safety in surrounding streets.

TABLE 2: SUMMARY OF KEY ISSUES AND PROJECT RESPONSE

6 RECOMMENDED AMENDMENTS TO CONCEPTS

Following community feedback regarding the proposed initial phased design, the following amendments to the concept design are recommended:

- Implement wombat crossings rather than zebra crossings. Wombat crossings provide vertical deflection for motor vehicle traffic and support lower travel speeds along the corridor more consistent with Safe System objectives when vulnerable road users present. The wombat crossing ramps can be designed to accommodate public transport and emergency vehicle comfort. Depending on funding resources and other staging considerations, zebra crossings may be implemented during earlier phases and wombat crossings incorporated during later phases.

  Note, if wombat crossings are not incorporated, alternate measures to support speed reduction on the approach to crossings is recommended, such as a textured

(e.g. brick) and/or coloured surface treatment on approach (e.g. skid-resistant coloured or pattern treatment).

- Maintain separated cycling facility through Arnold St/Nelson Rd intersection (see Appendix C). Note, due to the very high pedestrian volumes at this intersection, separate pedestrian and cyclist crossings are recommended.
- Amend Phase 1 and 2 median design to include the painted median without planters to facilitate emergency vehicle access and enable drivers to safely overtake cyclists (by encroaching into the median when required). Note that in the Phase 3 design, cyclists are separated from the traffic lane, and emergency vehicles can encroach into the cycling lane to overtake general traffic if required.

Further to the above, it is recommended that:

- Traffic management approaches be explored in the future to discourage rat-running through residential streets as well as along Nelson Road (Station St and Elgar Rd are preferred for north-south through traffic)
- Consideration be given to implementing latter Phases from outset (to provide safer cycling facilities and better support strategic cycling corridor objectives), and identify more definite timeframe for implementation
- Council encourage development of private off-street (paid) public parking opportunities (such as at Wellington Road medical centre), opportunities for shared parking and potential Council sites. This would help accommodate the current very high demand for parking, and to off-set the loss of on-street parking associated with implementation of the latter phases of the proposed design
- Council explore trial of 30 km/h speed limit, particularly when new development & SRL station works encourage additional active transport in area.

7 CONCLUSIONS AND RECOMMENDATIONS



Nelson Road is a key transport corridor within the Box Hill Metropolitan Activity Centre providing connection and access to the medical precinct, education precinct, recreational, residential areas and nearby retail. The route is an increasingly important active transport corridor. Whitehorse City Council recognises the importance of providing safe travel and supporting active transport for the community. Whitehorse City Council also recognises the importance of consulting with the community regarding proposed changes to local streets. This project built on previous community feedback and consultation that informed development of the corridor treatment plan[2]. Consultation undertaken for this stage of the project sought to communicate the approach for development of the proposed 'Pedestrian Staging + Separated Cycling' concept to the community and seek wider community feedback and support.

[2] Outlined in the *Nelson Road Pedestrian and Cyclist Safety Investigation* project report (August 2022)

Community feedback (online survey response) indicated that people generally felt the proposed works would improve safety for all road users. A high proportion of respondents indicated that they would be more likely to walk or cycle if infrastructure was improved. Additional comments and feedback received indicated:

- Likely continued ongoing high parking demand, and need for loss of on-street parking to be offset by new off-street opportunities
- Mixed response regarding proposed roundabout at Arnold St / Nelson St. Some support for the roundabout while some requests for a signalised intersection
- Some concern that the proposed changes may exacerbate frustration for drivers, pedestrians and cyclists (which could lead to additional safety concerns)
- Support for wombat pedestrian crossings
- Strong support for separated cyclist facilities from outset (some safety concerns noted for earlier phases)
- Concern regarding high traffic volumes and rat-running along Nelson Road and surrounding residential streets
- Concern that some streets are too narrow for parking on both sides (noting high traffic volumes and cyclists on streets)
- Concern that the area is dangerous for cyclists.

Taking on board community feedback, it is recommended that:

- Wombat crossings (rather than zebra crossings) be implemented along the route to maximise safety outcomes
- Separated cycling facilities be provided along whole route (avoiding sharrows at Arnold St intersection)
- Phase 1 and 2 median design include painted median (only) to facilitate emergency vehicle access and enable drivers to safely overtake cyclists
- Consideration be given to proceeding to latter Phases from outset to provide safer cycling facilities
- Council encourage development of private off-street public parking opportunities
- Explore traffic management approaches to discourage rat-running through the area and also support cyclist safety improvements
- Council consider a future trial of 30 km/h speed limit.



APPENDIX A

COMMUNITY CONSULTATION ON DRAFT TREATMENT PLAN

- ONLINE SURVEY
- SURVEY RESPONSES

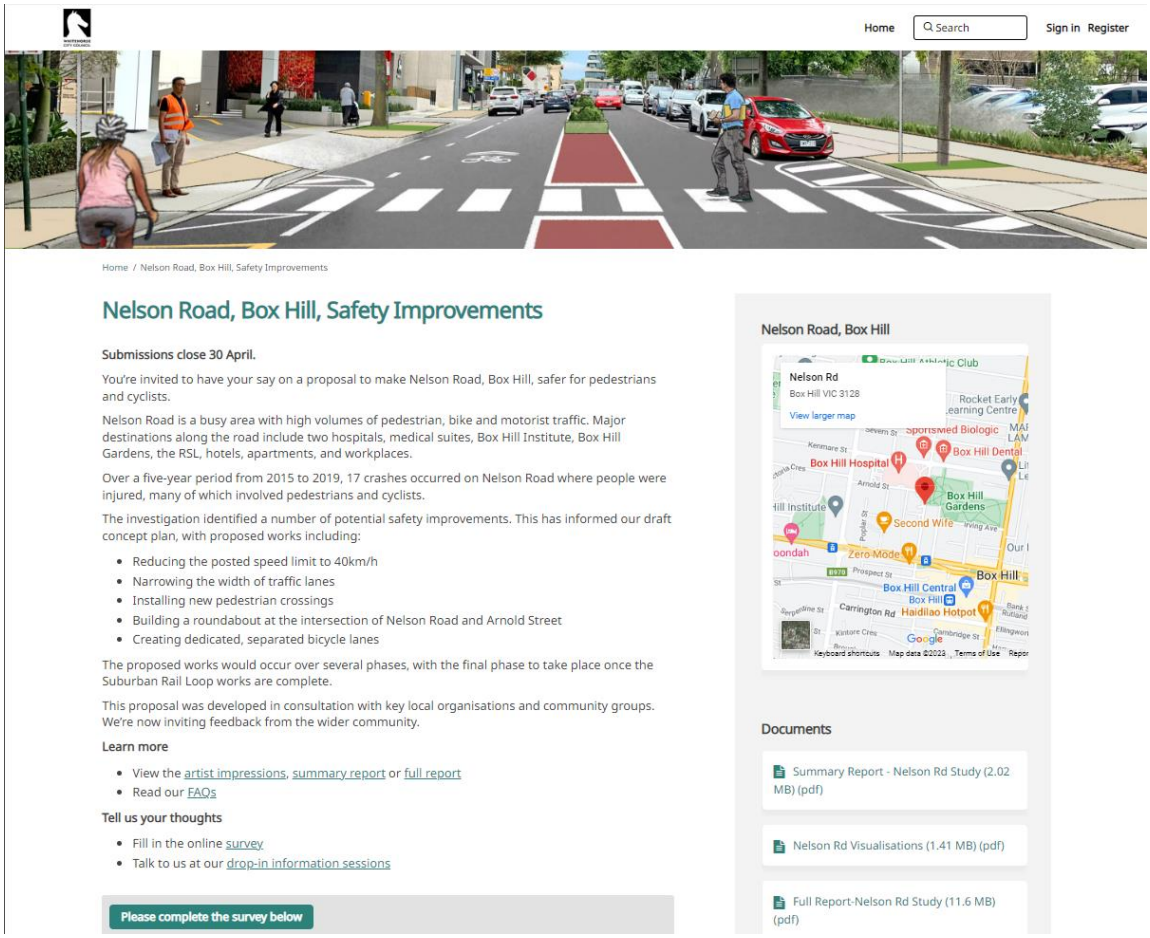
COMMUNITY CONSULTATION

An online survey was developed for community feedback.

The survey was open on Council's *Your Say* website from 20 March 2023 to 30 April 2023. Residents, the hospitals, Box Hill Institute and community groups were contacted (via email or letterbox drop) to promote the survey. The survey was also promoted via pavement stickers installed on footpaths and posters along the route.

The corridor study summary (Appendix B) was provided for respondents to download, as well as the visualisations (shown in the final pages of the corridor study summary).

ONLINE SURVEY



Nelson Road Safety Improvements

All fields marked with an asterisk (*) are required.

1. What brings you to Nelson Road? Select all that apply.

- ☐ I am a local resident
- ☐ I work near here
- ☐ I study near here
- ☐ I visit the hospital/health providers near here
- ☐ I visit family/friends near here
- ☐ I visit here for sport/recreation
- ☐ Other (please specify)

2. How do you travel on Nelson Road? Select all that apply.

- ☐ Walk
- ☐ Ride/cycle
- ☐ Drive/passenger
- ☐ Public transport
- ☐ Motorcycle
- ☐ Other (please specify)

3. How safe do you currently feel when travelling on Nelson Road by:

	Very Safe	Safe	Neutral	Unsafe	Very Unsafe	N/A
Walking	○	○	○	○	○	○
Bicycle	○	○	○	○	○	○
Bus	○	○	○	○	○	○
Car	○	○	○	○	○	○
Motorcycle	○	○	○	○	○	○

4. How often do you use the on-street car parking on Nelson Road?

- ○ Daily
- ○ 3-4 times per week
- ○ 1-2 times per week
- ○ 1-2 times per month
- ○ Never

5. To what extent do you agree with this statement?

I would be satisfied using alternative nearby parking in the future (for example, nearby streets or potential new off-street car parking).

- ○ Strongly agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree

Key Dates

Drop-in Information Session
30 March 2023

FAQs

- What are the safety issues at Nelson Road, Box Hill?
- What features are proposed in the draft concept plan?
- Does Council propose to remove any trees?
- What consultation has been undertaken up to this point?
- What is the timeframe for this project?

Who's Listening

Chris Hui
Strategic Transport Planner
Whitehorse City Council
CH
Phone 9262 6134
Email chris.hui@whitehorse.vic.gov.au

6. If walking infrastructure (i.e. wider footpaths, pedestrian crossings, etc.) were improved, would you be more likely to walk?

- ○ Yes
- ○ No
- ○ This doesn't apply to me

7. If cycling infrastructure were improved, would you be more likely ride?

- ○ Yes
- ○ No
- ○ This doesn't apply to me

8. Do you think the proposed works in the draft concept plan would improve safety for the following groups? (Here's a link to the artist impressions)

	Yes	Somewhat	No	Unsure
People walking	○	○	○	○
People cycling	○	○	○	○
Everyone	○	○	○	○

9. Do you support the phased implementation of works along Nelson Road? This would enable us to coordinate with other projects, such as the Suburban Rail Loop Project.

- ☐ Yes
- ☐ No
- ☐ Unsure
- ☐ Other (please comment)

10. From our concept plan, what do you think are the highest priority improvements for Nelson Road?

Please rank the identified proposed works, with 1 being the most important.

- Median in the centre of the road (helps walkers stage their crossing, supports lower vehicle speeds)
- Wider footpaths
- New pedestrian 'zebra' crossings
- Sharrows (shared bicycle/car lane markings)
- Bicycle link through Box Hill Gardens
- Separated bicycle lanes
- Narrower traffic lanes
- Arnold Street mini-roundabout
- Lower speed limit

11. Would you like to provide any other comments?

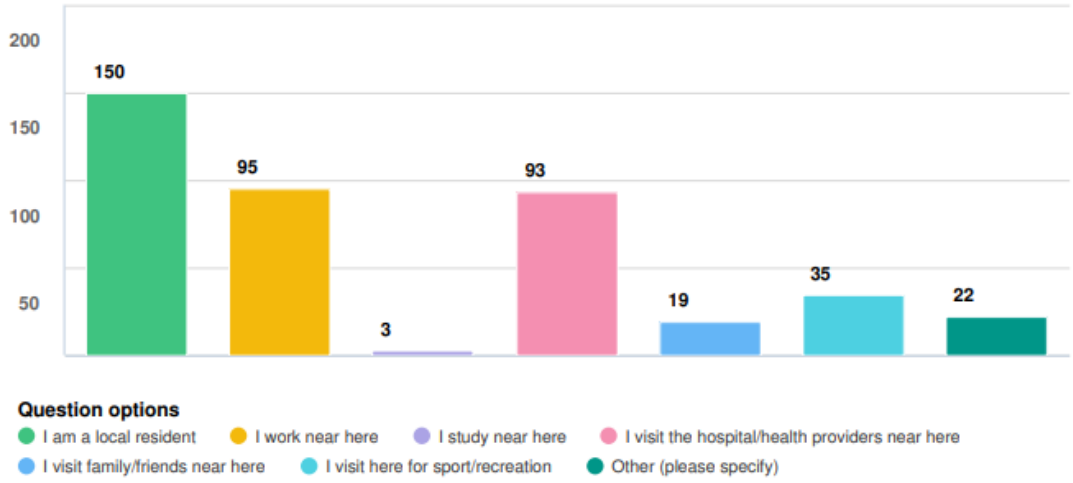
- ○ Yes
- ○ No

SUBMIT

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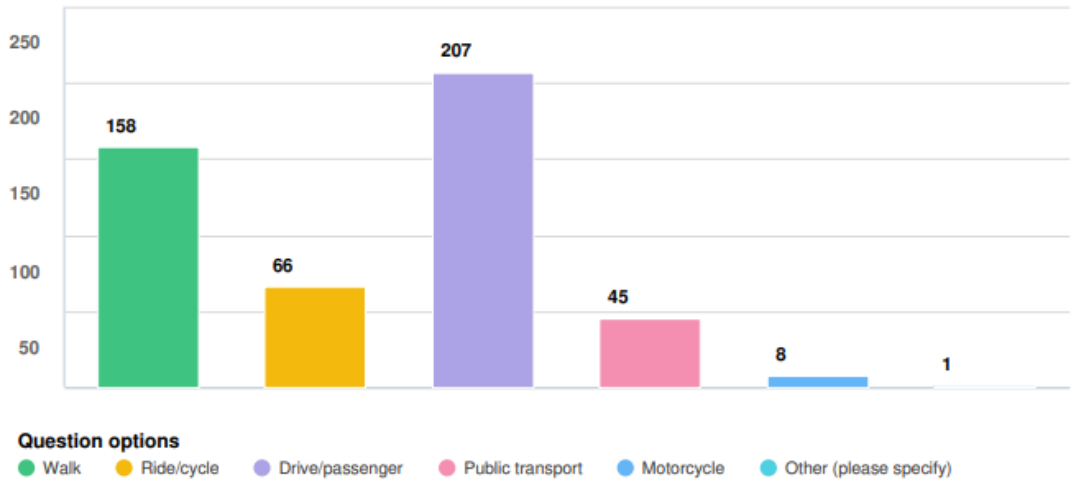
SURVEY RESPONSES

Q1 What brings you to Nelson Road? Select all that apply.



Optional question (261 response(s), 2 skipped)
Question type: Checkbox Question

Q2 How do you travel on Nelson Road? Select all that apply.



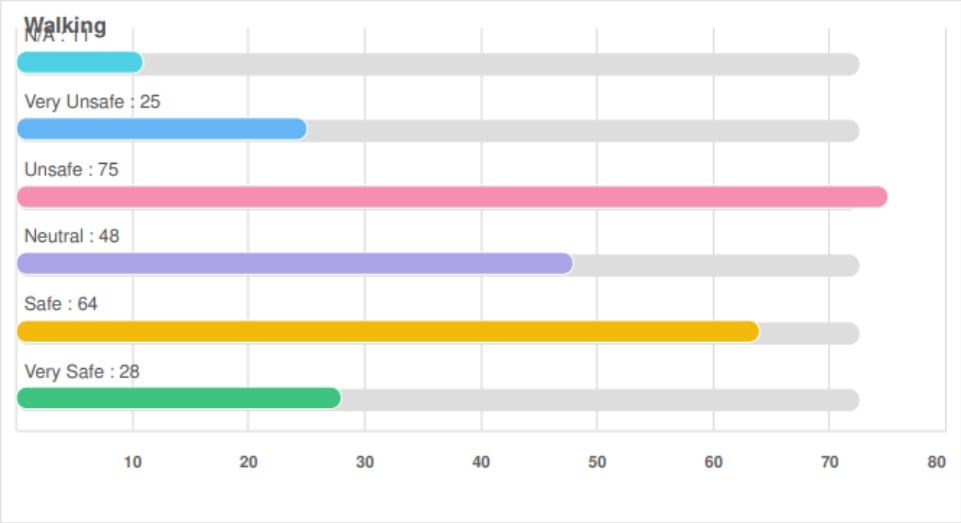
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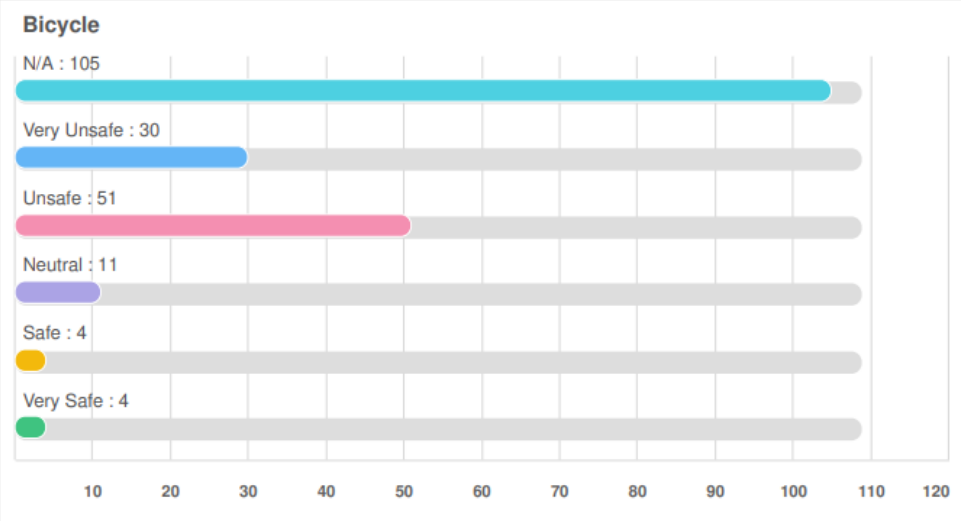
Q3 How safe do you currently feel when travelling on Nelson Road by:

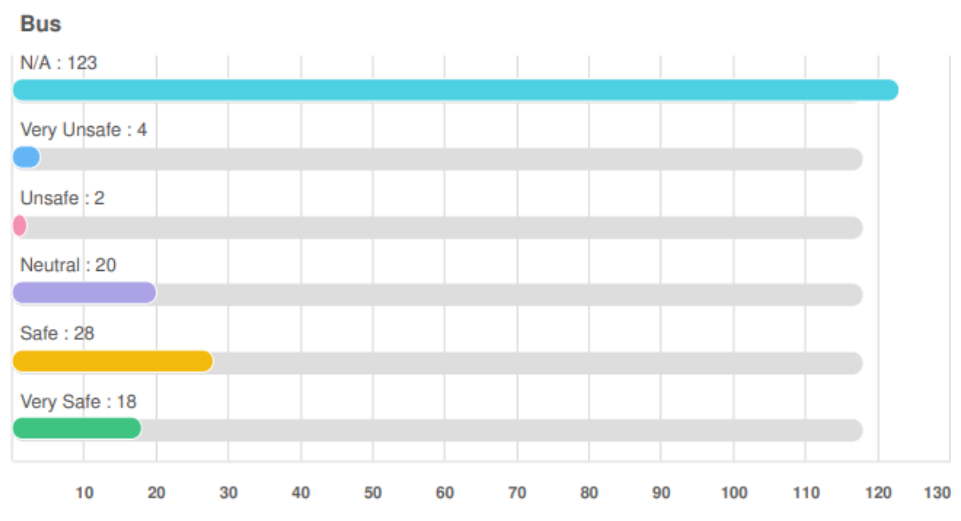


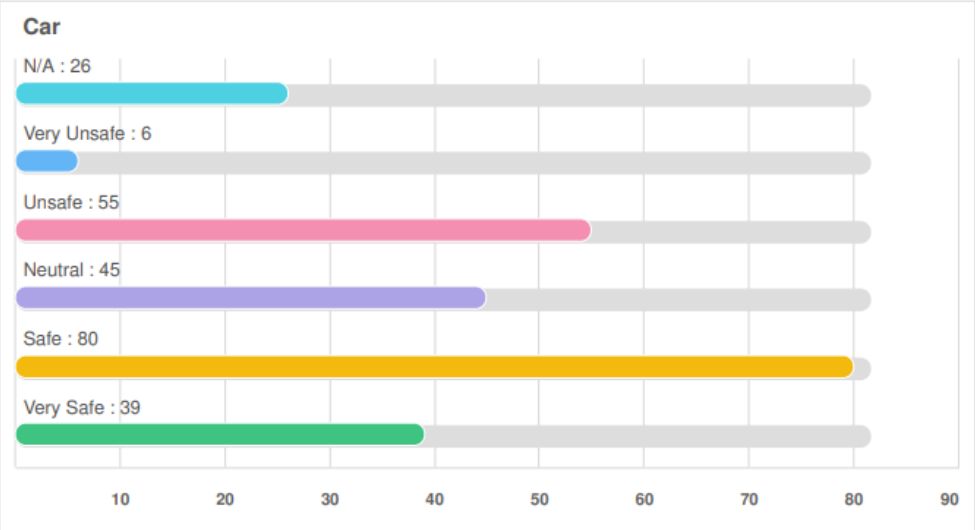
Optional question (261 response(s), 2 skipped)
Question type: Likert Question

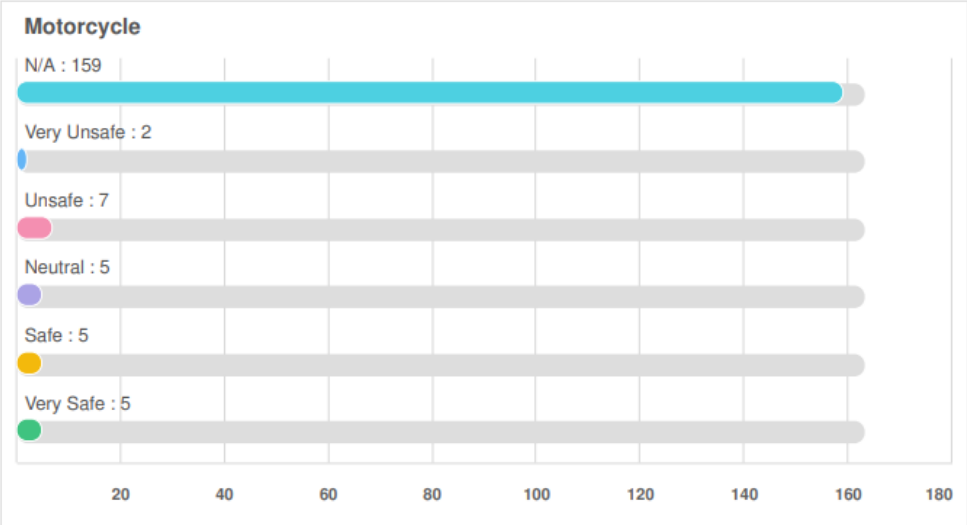
Q3 How safe do you currently feel when travelling on Nelson Road by:



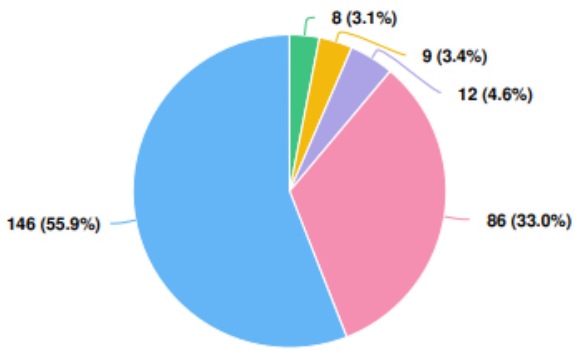








Q4 How often do you use the on-street car parking on Nelson Road?

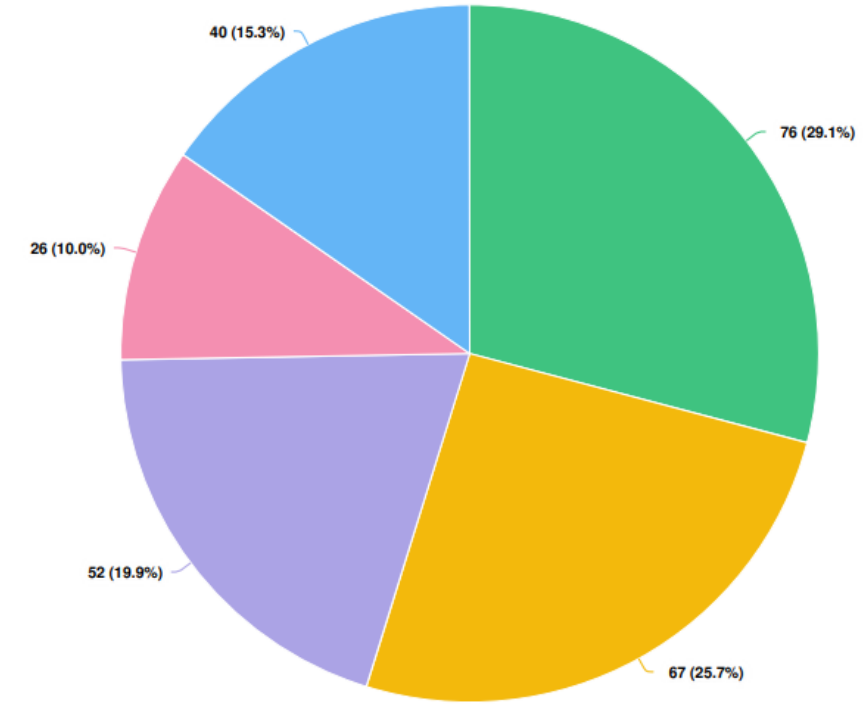


Question options

Never | 1-2 times per month | 1-2 times per week | 3-4 times per week | Daily

Optional question (261 response(s), 2 skipped)
Question type: Radio Button Question

Q5 To what extent do you agree with this statement?I would be satisfied using alternative nearby parking in the future (for example, nearby streets or potential new off-street car parking).

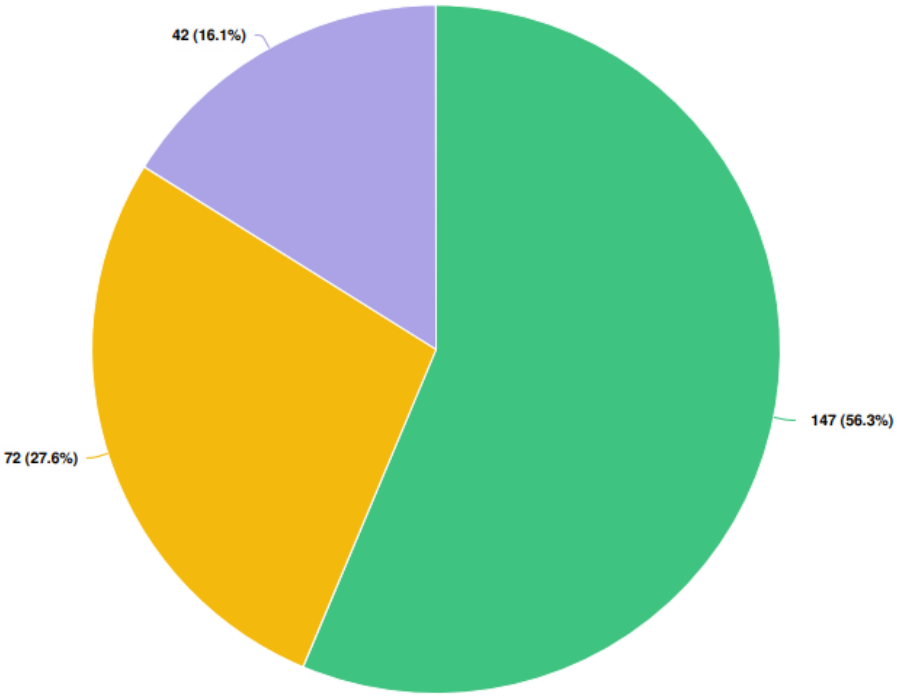


Question options

Strongly disagree Disagree Neutral Agree Strongly agree

Optional question (261 response(s), 2 skipped)
Question type: Radio Button Question

Q6 If walking infrastructure (i.e. wider footpaths, pedestrian crossings, etc.) were improved, would you be more likely to walk?

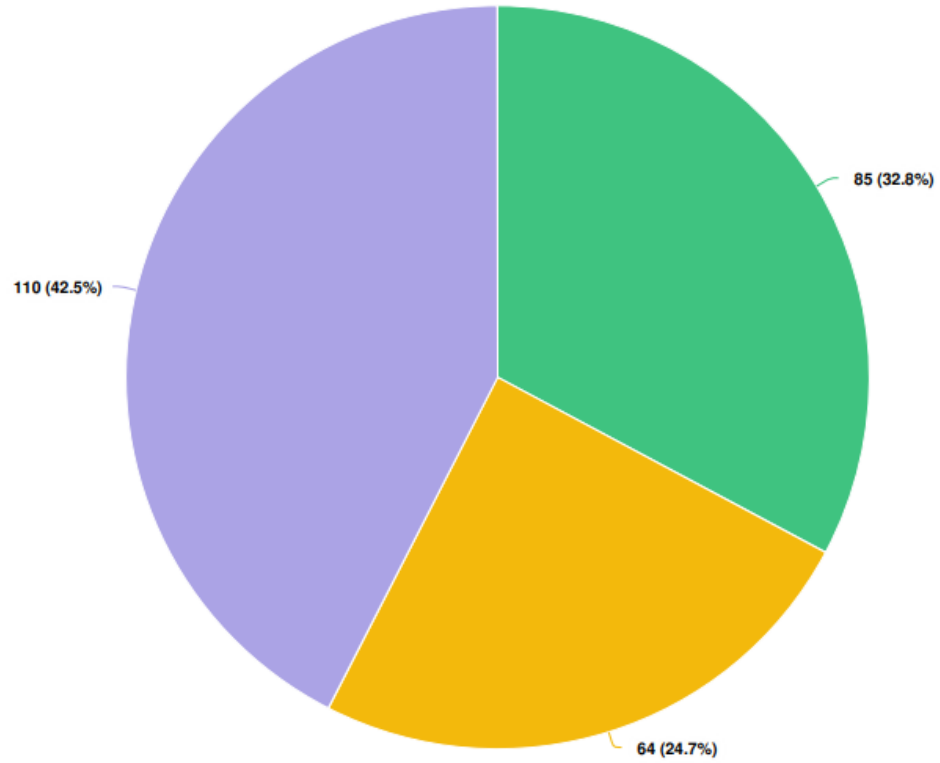


Question options

This doesn't apply to me No Yes

Optional question (261 response(s), 2 skipped)
Question type: Radio Button Question

Q7 If cycling infrastructure were improved, would you be more likely ride?

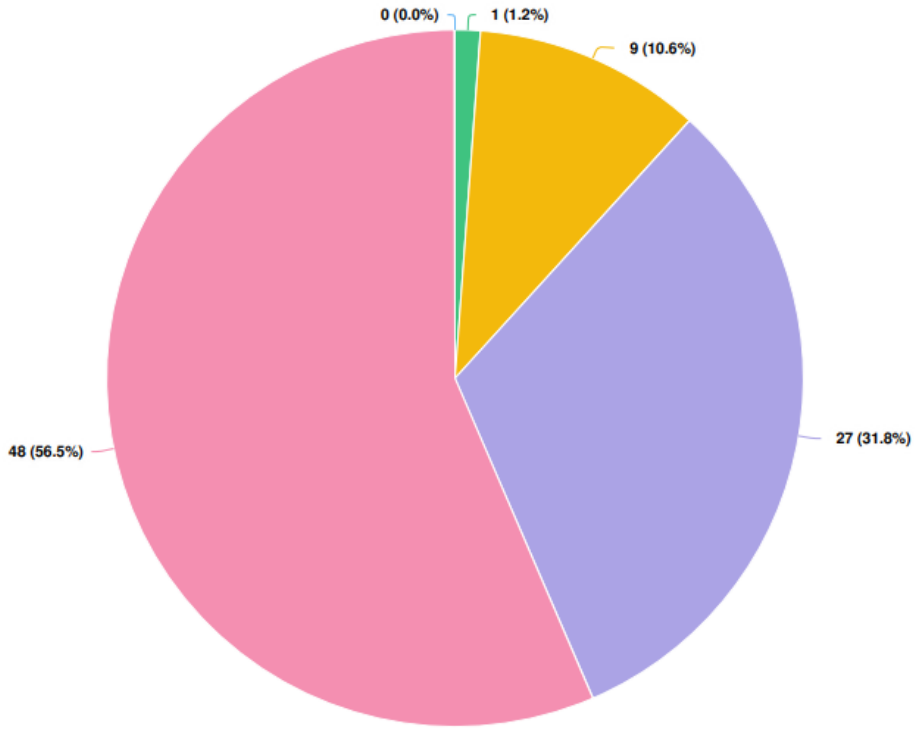


Question options

This doesn't apply to me No Yes

Optional question (259 response(s), 4 skipped)
Question type: Radio Button Question

Q8 How much more would you ride your bike if a physically separated bike lane was introduced?



Question options

A bit less | A lot more | A bit more | About the same | A lot less

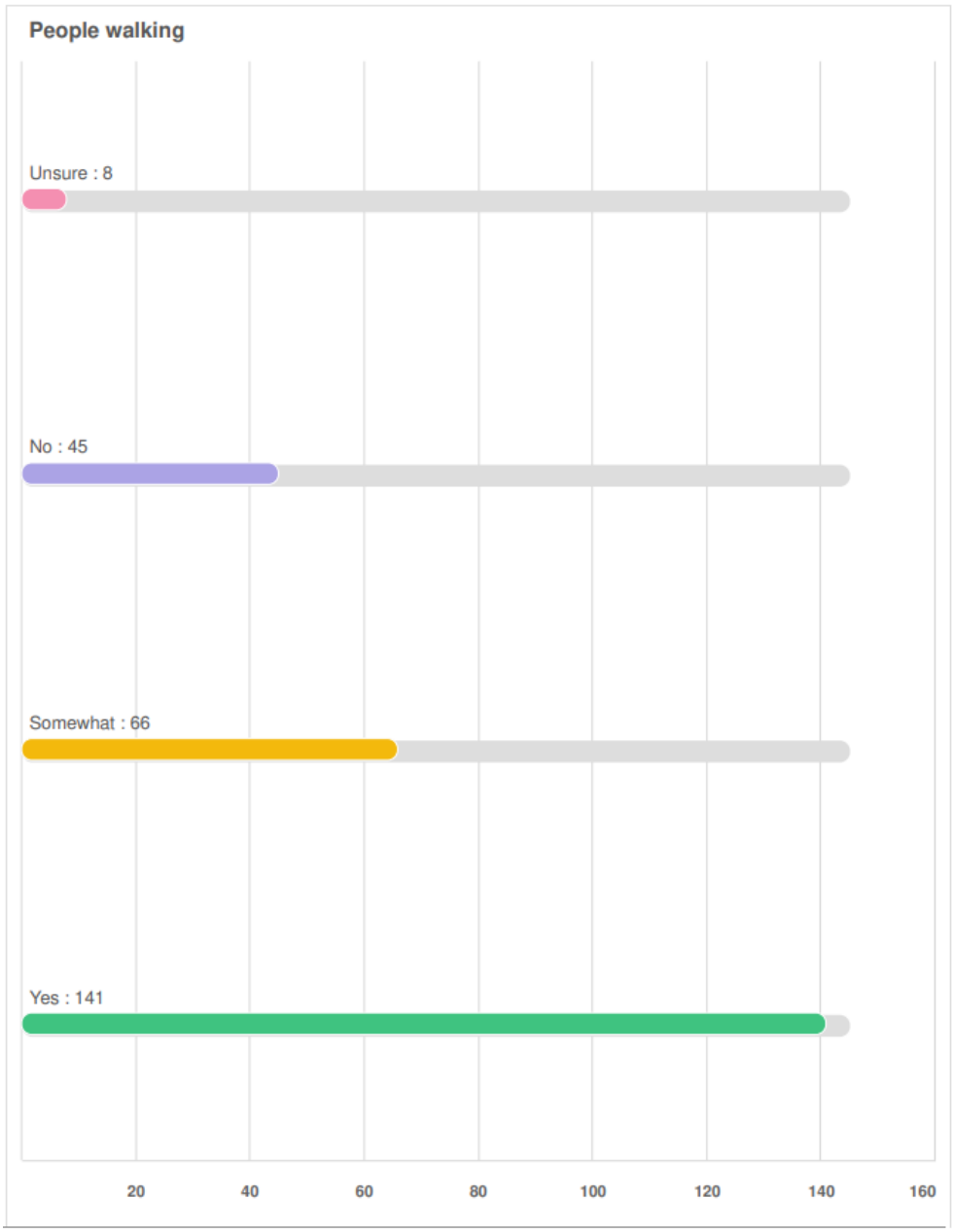
Optional question (85 response(s), 178 skipped)
Question type: Radio Button Question

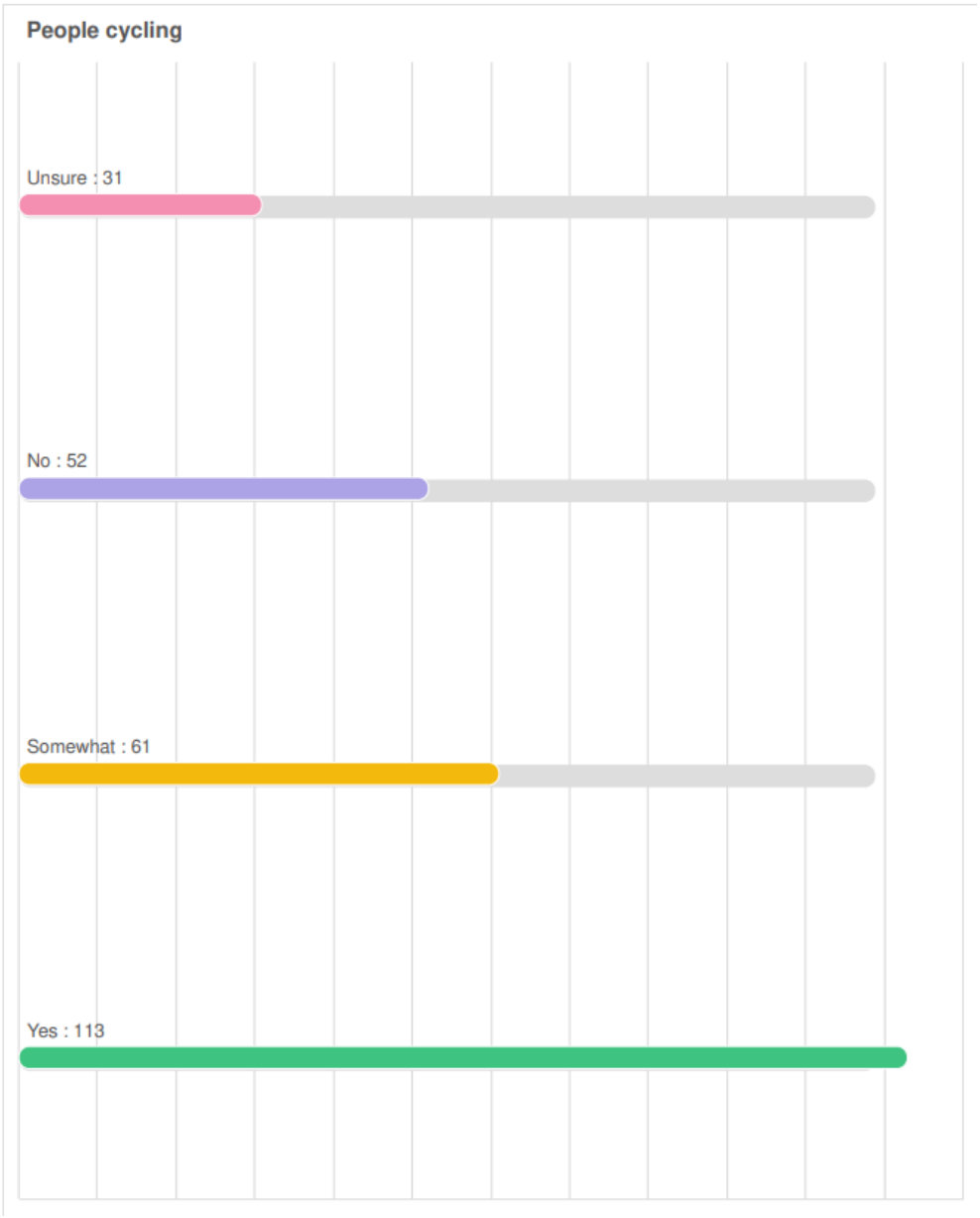
Q9 Do you think the proposed works in the draft concept plan would improve safety for the following groups? (Here's a link to the artist impressions)

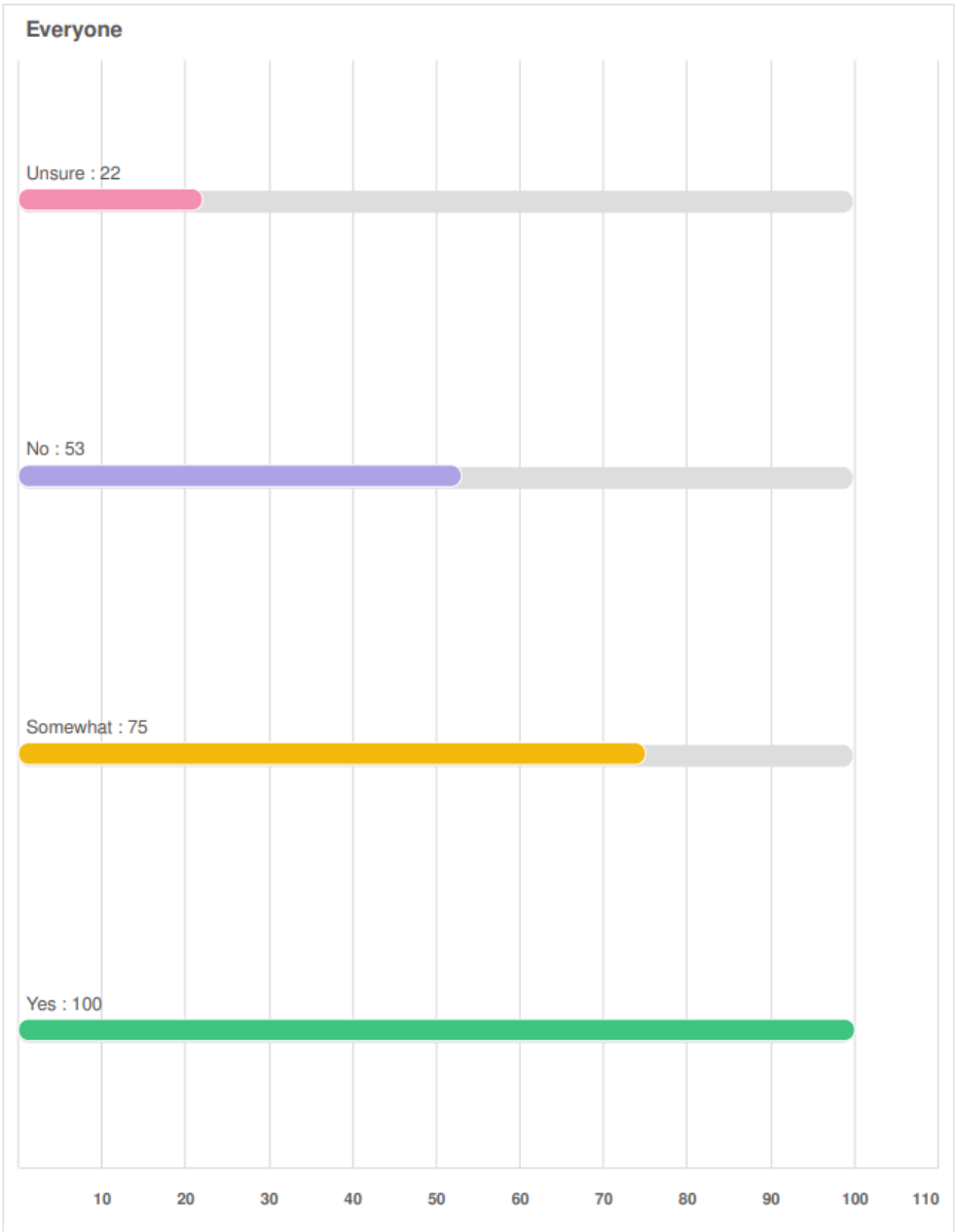


Optional question (261 response(s), 2 skipped)
Question type: Likert Question

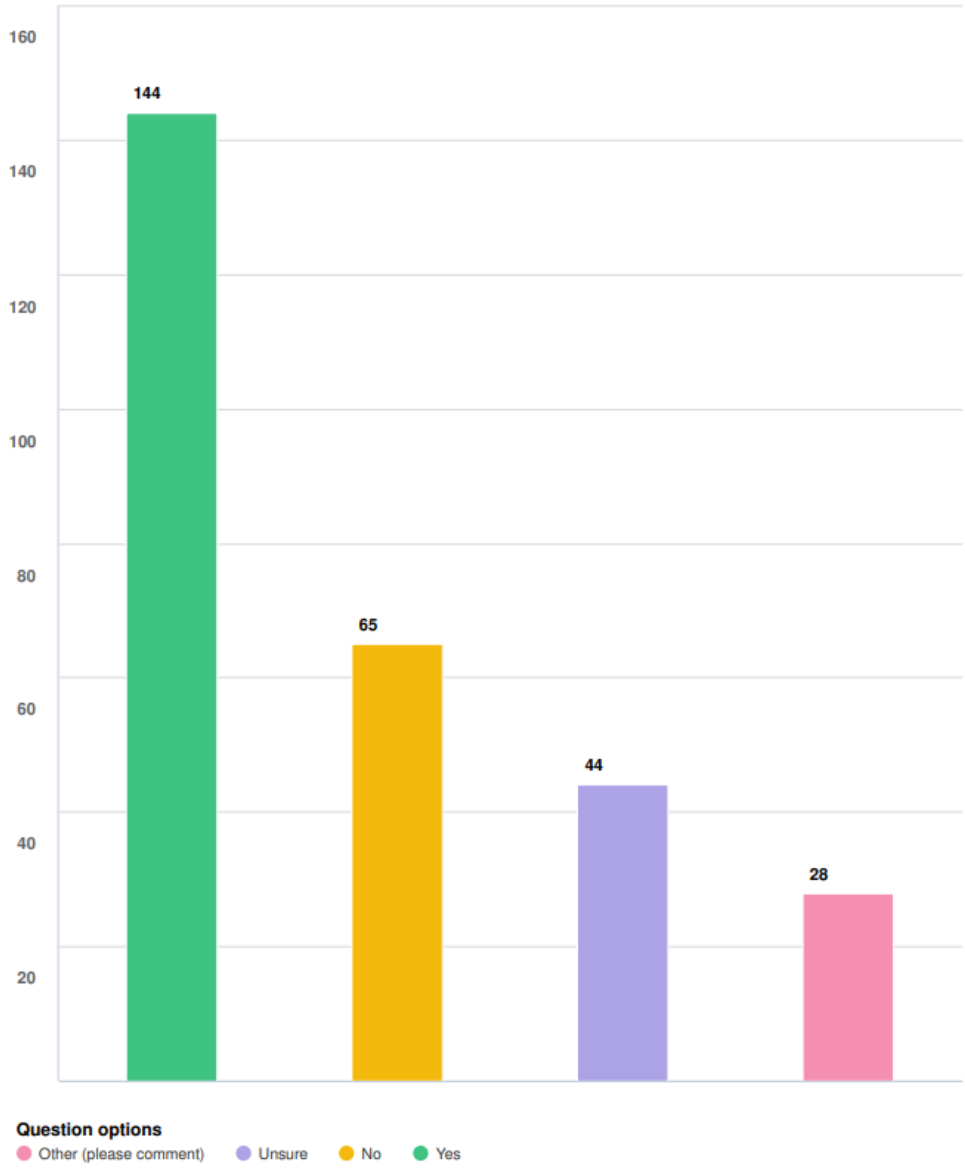
Q9 Do you think the proposed works in the draft concept plan would improve safety for the following groups? (Here's a link to the artist impressions)




People cycling
Unsure : 31
No : 52
Somewhat : 61
Yes : 113


Everyone
Unsure : 22
No : 53
Somewhat : 75
Yes : 100
10
20
30
40
50
60
70
80
90
100
110

Q10 Do you support the phased implementation of works along Nelson Road? This would enable us to coordinate with other projects, such as the Suburban Rail Loop Project.



Optional question (261 response(s), 2 skipped)
Question type: Checkbox Question

Q11 From our concept plan, what do you think are the highest priority improvements for Nelson Road?Please rank the identified proposed works, with 1 being the most important.

OPTIONS	AVG. RANK
New pedestrian 'zebra' crossings	2.67
Arnold Street mini-roundabout	4.01
Lower speed limit	4.10
Median in the centre of the road (helps walkers stage their crossing, supports lower vehicle speeds)	4.17
Separated bicycle lanes	5.07
Wider footpaths	5.14
Bicycle link through Box Hill Gardens	5.57
Narrower traffic lanes	6.38
Sharrows (shared bicycle/car lane markings)	6.54

Optional question (253 response(s), 10 skipped)
Question type: Ranking Question

People were invited to provide additional comments. Responses are summarised below:

- In relation to traffic operation and safety:



  - Concerns regarding current risks due to inattention (multiple responses), turning drivers not giving way, pedestrians emerging from between vehicles, people getting in/out of parked vehicles without looking, impatient drivers
  - View that majority of people will continue to drive here (multiple responses)
    - "An ageing population will use more car and public transport facilities", and so "reducing on road parking and introducing separate bicycle lanes" is not supported
    - "Easy car access is our high priority" given needs of people travelling to medical precinct
  - Traffic should be discouraged along Nelson Road (multiple responses), for example through use of "speed humps along Nelson Road to reduce and slow traffic"
  - Improving the "parking situation" would improve safety, noting that dangerous driving is frequently associated with people looking for parking spots
  - Support for the proposal included:
    - "Changes look excellent - progress quickly please!"
    - "Roundabouts always assist. Another great idea"

- "High volume of cars use Nelson Road in peak hour. Restricting speed excellent idea"
- Support for speed limit reduction, Nelson Road/Arnold St roundabout and additional zebra crossings

- A 30 km/h speed limit should be considered – "Science shows that road trauma for pedestrians and cyclists is minimised below 30"
- At the intersections:
  - "Traffic lights at Thames / Nelson would work better in managing stream of traffic on Nelson Rd"
  - "I don't think the roundabout will help at the Thames St/Arnold St" intersection"
  - The Arnold St / Nelson St intersection requires signals rather than a roundabout (multiple responses) as "there are too many distractions and drivers not concentrating (as looking for car parking spots, etc)" creating risk for all road users
  - "I like the idea of the roundabout at Arnold Street but pedestrian crossings at roundabouts causes more issues as it causes confusion and congestion"
  - "A roundabout at Nelson Road and Arnold Street would also help with a safer flow of traffic"
  - "There does need to be a control for traffic at the corner of Arnold and Nelson, but it is likely that the roundabout is better than nothing" …. although it "does not make it safer for pedestrians and often holds up traffic"
  - Replace all roundabouts and the zebra crossing outside the hospital entrance with signals
- Request for no changes to Nelson Road
- "The proposed changes will not make the area safer, I believe it will make it more dangerous"
- Proposed changes may exacerbate "frustration for all whether walking, riding or driving"
- The median will lead to increased congestion due to vehicles travelling to roundabout to do U-turns (multiple responses)
- Disagree with reducing speed limit (multiple responses)
- Disagree with reducing lane widths (multiple responses)
  - Space is needed for delivery trucks
  - A number of comments noted that the lanes are already too narrow for two cars to pass each other with on-street parking. One comment that narrowing "would create one lane and cause traffic chaos"
  - "Widen the lanes. Parked cars always case traffic mayhem. Take half a metre on each side of the street and make it a better and safer driving experience. Two cars barely fit down Nelson Rd when cars are parked on both sides"
  - Narrowing of lanes at Arnold Street intersection would create further congestion. "Traffic traveling south must be able to get around cars turning right into Arnold"

    - Narrower lanes may inhibit “larger emergency vehicles to access the two major hospital emergency departments”
- “Narrowing the road and adding bicycle lanes just adds further frustration and difficulty for drivers”
- “Median lanes for staged pedestrian crossings sounds like an invitation to mayhem”
- Planter boxes / trees in the centre median could cause issues (multiple responses) due to “reduced visibility, limits ability for 'overtaking' when required (e.g. emergency vehicles moving past, gridlock potential if an accident or obstruction on one side of the road and would be unable to move across to other side of road to pass)”, and an obstacle/object for drivers to hit
- Suggestions for restrictions to movement and traffic:
    - “Would council consider making it a one-way street coming in from Whitehorse Rd and exiting from the side streets”
    - Consider “one-way traffic south to north from Whitehorse Rd to Arnold St” whilst maintaining access for emergency vehicles and “access for most car traffic to the hospitals and other health facilities, and car parks should be via Elgar Rd and Arnold St and Thames St”
    - Consider “reduce car traffic almost completely Arnold to Whitehorse Rd with it just being open for use by public transport & the RSL”
- There are some concerns regarding public transport and emergency vehicle access (multiple responses):
    - “please consider public transport access” particularly for buses turning into Arnold Street from either from Elgar Road / Nelson Road. The current spacing often caused unsafe turning”
    - Providing a roundabout at Arnold street would cause difficulties for buses and ambulances
    - There is currently insufficient space for buses turning right out of Arnold Street due to oncoming traffic and parked vehicles. Space is also insufficient for “athletics track” buses
    - “The intersection of Whitehorse Rd and Station St is wild”
    - “The plan does not address the issue of this area being a bus route as well as a high car usage area. Narrower lanes with buses will make for even more congestion”
- Adding too many pedestrian crossings “will be chaos” and that “total two crossings are enough, maximum three” (suggestion for one crossing at Arnold Street)
- Traffic lights at Severn Street would allow vehicles to turn right onto Elgar Road, and reduce traffic on Nelson Road and Arnold Street
- Vehicles parking near intersections and major accesses (e.g. hospital driveways) cause challenges:
    - “They create a huge blind spot whilst trying to do a right hand turn out from Epworth Eastern”
    - “It is very difficult to turn from residential streets onto Nelson Road” due to vehicles parking so close to intersection corners

- In relation to **pedestrian** movement, access, amenity and safety:



  - Support for zebra crossings in proposed plan (multiple responses) and that flashing lights would be beneficial
  - Requests for the crossings to be raised (wombats) (multiple responses)
  - Suggestion for additional zebra crossings along length
  - Concern that zebra crossings are dangerous
  - Request for pedestrian signals rather than zebra crossings (throughout)
  - Concern that location of the proposed zebra crossing near the RSL vehicle access "could be a problem with cars concentrating on entering the covered RSL entry area and not looking out for pedestrians" and that an alternate location could be considered
  - Support for the proposed zebra crossing near the RSL
  - Request for fencing to also be installed to ensure pedestrians cross at preferred locations (and reduce risk elsewhere)
  - In relation to the median
    - Comment that both median and zebras are not needed
    - The median could be dangerous for pedestrians (multiple responses), "who should be encouraged to use the pedestrian zebra crossings"
    - Support for the median
  - Pedestrian safety is of concern at the Arnold Street intersection (multiple responses)
    - Support for proposed roundabout with zebras (multiple responses)
    - Pedestrian crossing is needed (multiple responses)
    - Preference for traffic lights rather than roundabout (multiple responses)
    - Concern that roundabouts are unsafe for pedestrians (multiple responses)
    - Concern that the proposed design is "introducing further distractions" and would be more dangerous than current arrangement
    - Suggestion that Arnold St POS be changed to zebra with signals installed at Arnold St/Nelson St intersection
  - Concern for pedestrian safety with proposed bike lanes ("pedestrians will be at greater risk of being hit by cyclists")
  - Drivers often do not give way at current pedestrian crossing on Nelson road (multiple responses)
  - Comment that existing zebra crossing is redundant (multiple responses)
  - Request for parking close to pedestrian crossing be removed to improve visibility of pedestrians (multiple responses)
  - Request for a "bigger and safer" pedestrian crossing on the southern side of the Thames Street intersection
  - Request for a pedestrian overpass to "allow traffic to flow and people to walk without slowing everyone down"
  - "An improved bus stop w/ zebra crossing opposite the forecourt at Box Hill Institute's Nelson Campus would greatly benefit students connecting to and from buses"

- Concern regarding cyclists in the Box Hill Gardens (multiple responses):
  - "Ban bikes riding through the park"
  - a bike path through the gardens would "negatively impact the pedestrian and recreational utility of the park without any meaningful benefits over the existing shared pathway"
  - the park "gets a lot of use by elderly people (strolling, tai chi, etc) and people with children. (bikes, pushers, ball games, just running free) none of which mix well with fast moving bikes"
- Mixed responses in relation to footpaths
  - Comments that wider foot paths are not needed (multiple responses)
  - "Wider footpaths will assist people with disabilities to reach the parking ticket machines - currently difficult with them being off-path"
  - Request for a plaza 'shared space for pedestrians and cyclists' between Arnold St and Whitehorse Rd with no gutters or other trip hazards
  - "The nature strips need to be levelled and then maintained". Concern for injury due to current uneven condition
  - Needs of people with mobility impairments need to be taken into consideration (including need for smooth paths, parking, access, TGSIs, lighting, POS vs zebra)
  - Request for more lighting along footpaths (multiple responses)
  - Request for "additional planting to increase environmental comfort for pedestrians and cyclists"
- Comment that the current issues are due to distracted pedestrians (e.g. looking at phones) (multiple responses)
- Concern risks for pedestrian risk associated with the high number of driveway accesses (particularly towards southern end of corridor) exacerbated by no surface distinction between driveways and paths.
- Concern that international drivers do not understand Australian road rules regarding zebra crossings.

• In relation to **cyclist** movement, access, amenity and safety:



- Parking needs to be reduced or prevented north of Thames St and surrounding streets for cyclist safety
- Bike lanes are preferred to sharrows; sharrows are considered dangerous for cyclists (multiple responses). It is noted that there are some requests for separated (protected) bike lanes to be implemented as part of phase 1 (rather than phase 3)
- Consider similar approach to Thames St ("where parking is banned on the south side") to provide separated bike lanes along Nelson Road to provide a "safe cycle route … given it is a Strategic Cycling Corridor"
- Maintain cyclist separation through intersections. Particular concern at busy Arnold St intersection that drivers may not "allow cyclists to join safely into the car lane". Some suggestions that it would be better to avoid sharrows at the intersection through modification of pedestrian ramp (raise and continue cycle lane over island or lower pedestrian path) (multiple responses)
- Car drivers do not understand cyclists' entitlements at sharrows

- Sharrows are safer than bike lanes due to unobservant pedestrians and “people loading stuff on bike lane”
- “Currently there is sufficient space for intrepid cyclists to ride in the wide traffic lanes between motor traffic and parked cars. But as soon as construction starts traffic lanes will be narrowed, eliminating the cycling space, preventing all cyclists from using Nelson Road until continuous protected cycle lanes are completed on both sides of the road”
- “Narrowing Nelson road and installing a roundabout (Nelson/Arnold) will not keep cyclists safe”
- Providing a “median strip without widening roads will mean people are driving closer to cyclists, making more dangerous conditions for cyclists” … and if roadside parking is also maintained “cars would be closer to people getting in and out of their cars”
- Provide off-road shared paths and retain parking
- “The bike routes should be integrated into other bike lanes”
- While designated an ‘easy ride route’, Nelson Road is “anything but easy at present. There is no convenient link across the railway until the bridge noted in the Box Hill structure plan is built”
- A bike path from Nelson Road to the Box Hill Gardens playground needs to be maintained “given the number of families that need to safely cycle to the playground”
- Concern that the area is dangerous for cyclists (multiple responses) due to congestion, driver inattention and impatience, including ‘dooring’ risk
- This road is too narrow, busy and dangerous for bike lanes, “using the park for dedicated bike lanes would be the safest option all round”
- The section between Shannon St and Severn St is narrow such that “bike riding (particularly up hill)” is “a little dangerous and …. cars moving in opposite directions often need to wait rather than squeeze through”
- “Bike lanes are not appropriate in this area and should be diverted around the Nelson Rd the area through Box Hill Gardens”
- Disagree with provision of a dedicated bicycle lane (multiple responses)
- Bicycle lanes on Elgar Road and Station Street would be better
- Bike lanes may cause issues particularly “for elderly drivers and pedestrians”, particularly given the busy, complicated environment
- “Most people use wheelchairs or walking sticks to these hospitals and medical centres. No more bicycle lanes in our streets. Do not make narrow lanes”
- Not many cyclists use the route. Bicycle lanes are “a waste of time and effort”
- The greatest ‘danger’ for cyclists is “cars pulling out from side streets”
- Additional bicycle parking needed
- Consider road surface maintenance for cyclist safety (“There are lots of dangerous patches and holes”)

- In relation to **parking**:



  - Parking demand is already a big issue in the area (multiple responses)
    - "As this area is a major health precinct with two major hospitals and other health suites, parking will always be of a premium" (multiple responses)
    - "All side streets are parked out all day everyday"
    - "Parking should be resident permit only on one side and the other 2 hr" on Nelson Road as well as surrounding streets (multiple responses)
    - Parking restrictions need to apply in the evenings ("after 7pm") and on the weekends as the "athletic track parking causes unreasonable congestion" (multiple responses)
    - During athletics events at nights and weekends people are "illegally parking knowing they won't be booked"
    - "Health care workers have to pay ridiculous prices to park off site from our work"
    - "Our patients are late because they already struggle to find parking"
    - "Finding suitable parking in the vicinity of the hospitals (Box Hill Public and Epworth Private) can be an arduous task, particularly for non-ambulant or elderly individuals"
    - "Stop allowing new developments exemptions to the council's on site parking requirements" … the requirements are "already way too low to reduce the need for on street parking" (multiple responses)
    - "Please get council officers to book people who park within 10m of an intersection and less than 3 m from a solid white line as this parking is illegal and dangerous, it is also frequently happening"
    - Current high parking demand leads to vehicles blocking/impinging on residential driveways (multiple responses)
    - "The current private car parks are always full"
    - "As noted the area is to explode with a large number of developments coming online in the near future. I see that the separate bicycle lane, a good idea, would see the removal of a large number of on road parking spaces. As a local resident I note that parking in Nelson Road and the surrounding area is already heavily burdened by the current level of completed development, with more pressure to bear once new proposed developments are completed. So therefore I do not support the removal of the parking, being replaced by the separate bicycle lane."
  - Removal of parking on Nelson Road will exacerbate parking issues and migrate parking demand to other residential streets (multiple responses)
    - "Parking on Nelson Road should stay"
    - "Taking away an 66 extra parking spaces puts more pressure on businesses, residents and parking in the nearby streets which are already at full capacity. Do not take away the parking for bike paths"
    - "Taking out parking along those streets would have a massive impact on people's ability to make appointments, drop friends at medical centres, get

accessible parking, and stressing drivers out on time constraints and confusing zones”

- “I am concerned that the new plan does not adequately consider the parking needs of the community” … “where will local residents park and where their visitors will park?”
- The plan provides no on-street “parking for residents at Nelson Road from 58 to 68 premises. It’s huge inconvenience for residents. Suggest to have permits parking areas in front of premises for those residents” (between Severn & Thames St)
- “Removal of parking will be a huge impact with already strained parking options and new builds coming up around the area. There must be a way to retain parking AND make the road safer for all users”
- “Although the potential introduction of shared spaces, parking spots and bike lanes (sharrows) may be helpful, it is possible that these amenities could be occupying valuable space that would otherwise be designated for parking”

- Additional parking is needed in the area (multiple responses)
  - “more parking [is needed] for hospital workers or resident permit parking to force workers to use paid parking”
  - “Additional off road parking that is close to the hospitals is desperately required in this area for visiting patients/healthcare recipients”
  - “Multi story carpark next to RSL or somewhere in the close vicinity a must, especially with new train hub and box hill hospital upgraded”
  - “Multiple, multi story car parks created in the vicinity of Nelson Road for hospital workers and Hospital, park and TAFE visitors” is needed
  - “Perhaps concentrate on a car park that provides free or reasonable rates for hospital staff and patients”
  - Additional car and bicycle parking is needed “Its tedious with the 2 hr” parking restrictions which leads to people needing to “move their car in between working hours”
  - There needs “to be more parking options in the area at an affordable rate... we have to stop making money out of vulnerable people who need to park in the area to receive care”
  - Off-street parking “immediately adjacent to, or under, my destination on Nelson Road (maximum 5 minute walk)” is needed to facilitate taking elderly patients to medical appointments, and “because they need assistance, parking needs to be close by so they are not left unassisted while I park. Ideally I could park where I could help them from the car straight into a lift to access the building”
- Concern that Nelson Road (north of Thames St) as well as surrounding residential streets are too narrow (multiple responses)
  - Nelson Road north of Thames St as well as surrounding streets are too narrow for parking on both sides, which leads to safety issues for cyclists, and cyclists riding on footpaths.

- Better wayfinding to parking facilities is needed (multiple responses)
  - "I also think the hospital parking sign directions need to be bigger and indicate "public parking" - especially for Box Hill so that there is somewhere easily identifiable for elderly patients and visitors to actually park that isn't miles away from the hospital"
  - "The absence of clear parking drop-off zones and proper signage further exacerbates the parking issue in the area. It is imperative that such designated zones are established to allow for more efficient and safer parking practices"
  - "The installation of clear street signage distinguishing the hospitals would also be beneficial in directing drivers to available parking areas and reducing confusion and congestion"
- Current parking arrangement means cars parked near existing pedestrian crossing restrict visibility of pedestrians (multiple responses)
- "Not all people with mobility challenges have a disabled parking permit. In addition, hospital appointments already incur expenses for the attendee without having to cope with the additional expense of very expensive private car parks"

Finally, in addition to the comments provided via the online survey, a number of additional submissions were provided to Council in response to the proposed concept plans. Responses are summarised below:

- From Metro East Bicycle User Group (MeBUG):
  - "We consider that Phase 1 should not occur. It has no advantage for cyclists and is in fact more dangerous for them than the existing conditions". The submission outlines a range of supporting comments regarding safety and operational issues regarding Phase 1
  - The submission notes concern that early/intermediate phases "may be operational for an extended period such as several years. There is also the potential that latter phases will not be implemented; hence interim stages may become the ultimate state. Such uncertainty is unacceptable from a cycling point of view."
  - The MeBug submission advocates for "proceeding directly to Phases 2a and 2b to improve both cycling and pedestrian safety on this designated Easy Ride and Strategic Cycling Corridor route"
- From local resident (retired civil engineer):
  - **Submission 1** outlines challenges experienced along Nelson Road including narrow carriageway, high traffic volumes and congestion, high demand for on-street parking, cycling route, pedestrian crossing demand along corridor
  - Nelson Road is "not fit for purpose" as a cycling route, however "there's no other alternative low stress route for cyclists". Suggest it would currently be categorised as a "high stress" cycling route
  - "Improving outcomes for Cycling and Pedestrians will require quite significant changes to the function and operation of Nelson Road, within this local area"

- Concern that residential side streets are “rat-run routes to Nelson Road and Whitehorse Road, and should be discouraged” (reiterated in submission 2, with suggestions to discouraging through traffic management treatments)
- A range of suggested treatment options are proposed to improve operations and safety (particularly for cyclists)
    - Option 1 Traffic management, remove on-street parking (both sides) install Sharrows, and protected bike lanes (both sides)
    - Option 2 Traffic management, remove on-street parking (both sides for northern section, one side south of Thames St), install Sharrows, and southbound protected bike lanes
    - Option 3 Traffic management, remove on-street parking (both sides), install Sharrows, shared zone between Thames St and RSL, and protected bike lanes (both sides)
    - Option 4 Traffic management, widening of Nelson Road carriageway to 14m, traffic management install bike lanes (parking to be retained)
- The cost of carriageway widening for Option 4 was acknowledged as a barrier.
- Suggestion for on-street parking loss (associated with Options 1 – 3) could be offset by provision of additional off-street parking (reiterated in Submission 2).
- Improvements to pedestrian crossing opportunities are suggested including:
    - Widening of existing zebra or upgrade to wombat
    - Additional zebra or wombat crossing or pedestrian signals located near RSL (note a POS “would allow PTV buses to initiate a call to the signals and enable a bus to turn safely out of Arnold St”)
    - Threshold treatment on western leg of Arnold St intersection (and recommendation for intersection to not be signalised due to likely encouragement of additional rat-running, space requirement for signalised intersection, likely long phase times that would limit “serviceability to pedestrians”
    - Widening of footpaths along corridor
    - Pedestrian crossing improvements at Thames St and Severn St.
- Submission 2 view that “interim works undertaken for Phase 1, 2A and 2B result are a sub - standard and create more danger for cyclists”
- Concern that timing for interim phases is “vague”, meaning “dangerous conditions for cyclists remain for an indefinite period” until “separated bicycle lanes are implemented”
- “The proposed separated bicycle lanes will substantially increase safety for cyclists riding between Severn St and Whitehorse Road. However, there will be a need to improve safety for cyclists on the northern section of Nelson Road”
- The proposed bike route through Box Hill Gardens / Bruce St will “not be available when Vicinity commences construction of its two approved developments”
- “Nelson Rd, with separated bike lanes, is a much better route, consistent with basic Transport Planning principles”
- Concern that sharrows may not be compatible with (narrow) 3m width lanes particularly on high traffic volumes routes

- Phase 1 would result in increased driver frustration “vehicles will NOT be able to safely overtake” cyclists
- Advocates for raised (wombat) crossings rather than zebra crossings.
- Advocates for separated cycling lanes to be implemented from outset along with Arnold St roundabout, median treatment and additional zebra/wombat crossings (rather than Phased as per proposed concept plans)
- Suggest 30 km/h speed limit along route

APPENDIX B

NELSON RD CORRIDOR STUDY SUMMARY

NELSON ROAD – EVOLVING TO MEET OUR CHANGING TRANSPORT NEEDS

We are looking into future changes to Nelson Road to support Box Hill's evolving transport needs as it develops into Melbourne's second CBD. Box Hill's commercial precinct is growing, as are the number of dwellings (with new apartment complexes), and public and active transport infrastructure – with upgrades for the Box Hill train station, tram route 109 and the new Box Hill Suburban Rail Loop (SRL) train station.

Nelson Road is an important corridor providing connection and access to the Health and Education precincts as well as providing an important north-south active transport corridor.

The *Box Hill MAC Integrated Transport Strategy*, *Whitehorse Integrated Transport Strategy*, *Cycling Strategy*, and *Box Hill Structure Plan* all recognise and identify the importance of active transport, as well as community safety, accessibility and amenity. Nelson Road is a 'primary walking and cycling north-south route' (Box Hill MAC ITS). It is identified by the Department of Transport and Planning (DTP) as a Strategic Cycling Corridor, and part of an Easy Ride (low stress) Cycling Route through the municipality. Nelson Road also provides connection and access to:

- Box Hill Hospital, Epworth Eastern Hospital and a range of medical suites and services
- Box Hill Institute
- residential and hotel developments
- Box Hill train station, the new Box Hill SRL train station, tram route 109, local bus routes, Box Hill Central shopping centre, and the city centre located to the south
- open spaces (including Box Hill Gardens and Hagenauer Reserve via Hagenauer Walkway to the north).

Vision for Box Hill

Box Hill is the pre-eminent urban centre for Melbourne's east. The centre supports a regionally significant focus for health, education and employment serviced by a major public transport hub. It provides a diverse and growing range of business, retail, entertainment, community and living opportunities.

An interconnected network of complementary and distinctive, accessible and vibrant neighbourhoods respond to the diverse community's desire for sustainable, engaging, safe, caring and healthy places. Future change in Box Hill will deliver a people-friendly environment with open and welcoming public spaces for all.

- Box Hill Metropolitan Activity Centre to 2036

The Nelson Road corridor study recently investigated pedestrian and cyclist safety between Whitehorse Road and Severn Street and identified potential improvements outlined in this document.



NELSON RD / ARNOLD ST INTERSECTION



NELSON RD LOOKING NORTH TOWARDS WHITEHORSE RD

Community insights



Community feedback during development of the Box Hill MAC ITS[1] indicated that:

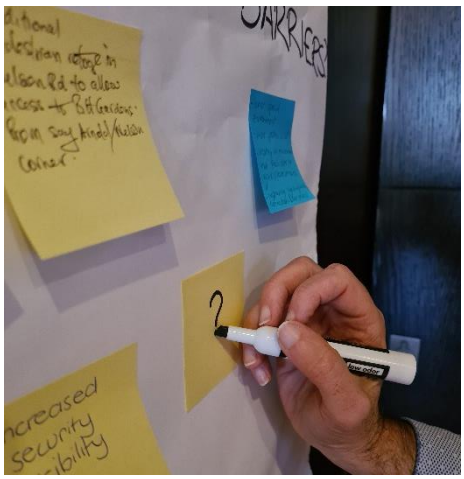
- *89% support prioritised walking infrastructure*
- *74% support a decrease in the speed limit to 40 kilometres per hour where there is a mix of pedestrians and cyclists*
- *75% support increasing footpath widths and public space to allow for more outdoor dining, seating, planting and places to meet others, even if it means removing some on-street car parking.*

A Place Experience (PX) Assessment[2] identified the community's highest and lowest rated attributes. The research found that improvements for Nelson Road should focus on:

- Priority 1 – Ease of walking around (including crossing the street, moving between destinations)
- Priority 2 – Maintenance of public spaces and street furniture
- Priority 3 – Interesting things to look at (people, shops, views etc.)

During the Nelson Road corridor study, two workshops were held with key stakeholders and community representatives on issues along the corridor and considerations for potential designs. It was recognised that types and needs for walking and cycling trips along Nelson Road were quite varied, and proposed improvements should take into account:

- range of walking abilities, needs and demographics
- range of bicycle riders' experience and competencies
- pedestrian and cyclist volumes will continue to grow with future growth and development.
- range of walking or riding trips to key destinations:
  - Residents and local employees to public transport stops (train, tram, bus)
  - Residents and local employees to Box Hill city centre
  - Hospital staff and patients to hospitals and medical suites
  - Other employers and commuters
  - Students and staff to Box Hill Institute
  - Parks and recreation.



Design Principles

Design principles take into consideration community feedback and directions from Council strategic documents. They seek to:

- improve safety and access for people walking and cycling, including people with a range of walking abilities
- increase safety by encouraging lower traffic speeds and reduced through traffic
- enable incremental infrastructure changes to align with other projects in Box Hill
- align with Box Hill strategic objectives.

1. City of Whitehorse, 2020, *Box Hill MAC Integrated Transport Strategy*
2. Placescore, 2019, *Box Hill Metropolitan Activity Centre Town Centre Community Insights Report*

Proposed design

It is important that changes on Nelson Road can be staged in coordination and alignment with other transport changes in Box Hill. Key aspects of the proposed design include:



Walking improvements, taking into consideration current high numbers of people walking along Nelson Road (with increasing pedestrian movements with new/ expanding developments planned along and near Nelson Road). People walking along Nelson Road exhibit a broad range of abilities and needs, including fit able-bodied people, people with prams, elderly, ill, infirm or disabled (who may require use of mobility aids). The design incorporates:

- A median to enable people to stage their crossing (shorter crossing distance per movement and crossing one traffic direction at a time). The median may feature planter boxes during early phases which provides a low-cost opportunity to trial – and adapt if required – before planting trees in cut-outs in a latter phase
- Wider footpaths which will provide additional space for people walking along Nelson Rd. This increases pedestrian amenity by creating greater space for pedestrians (who often already walk on the grass) and also reduces trip hazards at edge of footpath and grass. The current grass nature strip would be paved, with garden areas added for trees and plants
- Zebra crossings to provide priority crossing opportunities at key locations:
  - Two new midblock crossings (+ existing crossing near gardens / hospital)
  - New crossings at Arnold St and Thames St intersections
- Separate spaces for people walking and those riding would be maintained (bicycle lanes provided in latter phases)



Cycling safety and amenity improvements phased over time while allowing coordination with other works surrounding/adjacent to the corridor, including:

- Sharrows
- Cycle link through Box Hill gardens
- Separated bicycle lanes.



Improved safety and amenity for all road users by:

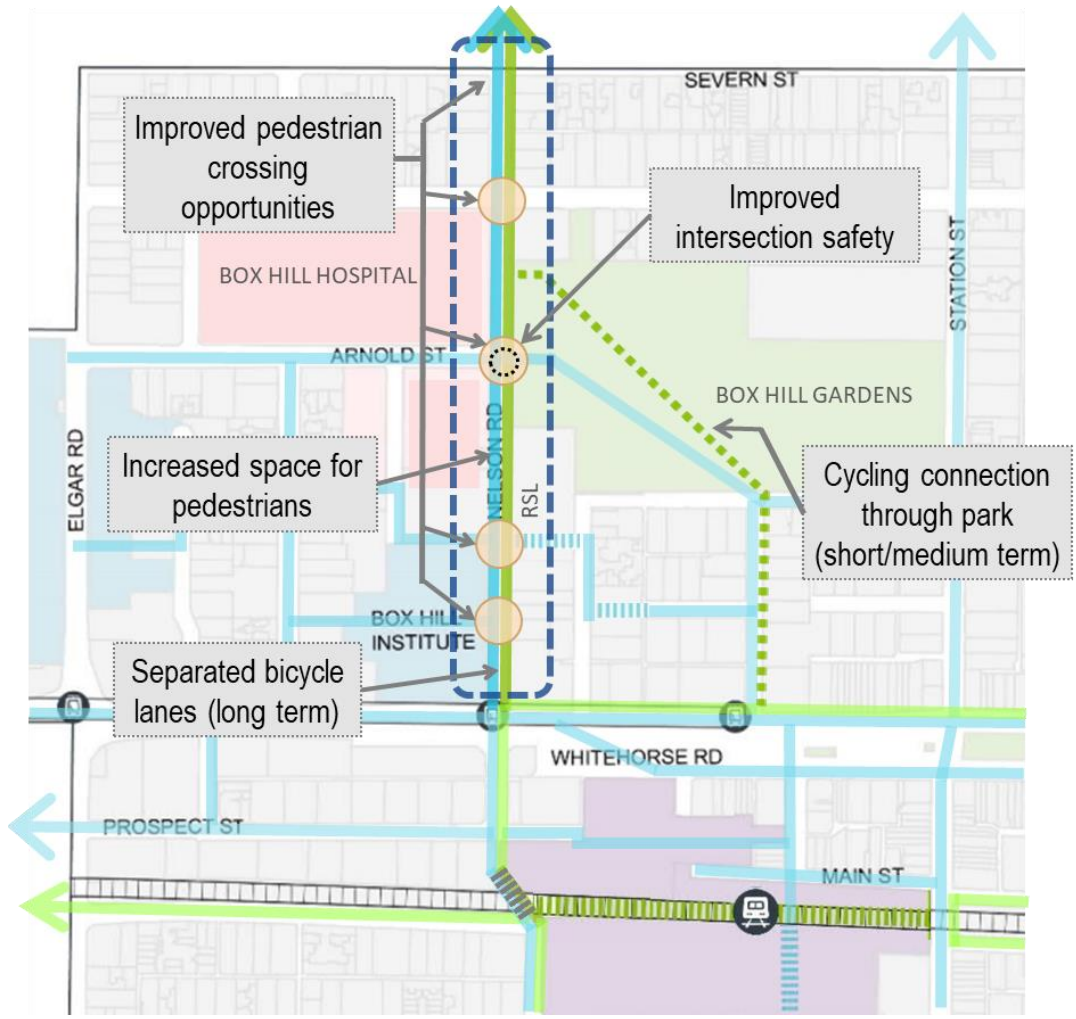
- Encouraging lower vehicle speeds (reduced width of traffic lanes, enclosed avenue environment supported by median planting, consider speed limit reduction)
- Increasing environmental comfort through provision of additional planting / trees
- Safer intersection operation at Arnold Street through roundabout with zebra crossings (a mountable dome will accommodate buses & ambulances).
- Retaining on-street parking in early phases.

Nelson Road design objectives:

- ✓ pedestrian safety & amenity
- ✓ cyclist safety & amenity
- ✓ lower speed environment
- ✓ increased planting / tree canopy
- ✓ streetscape improvements
- ✓ maintain vehicle access
- ✓ support Box Hill strategic objectives
- ✓ staged implementation

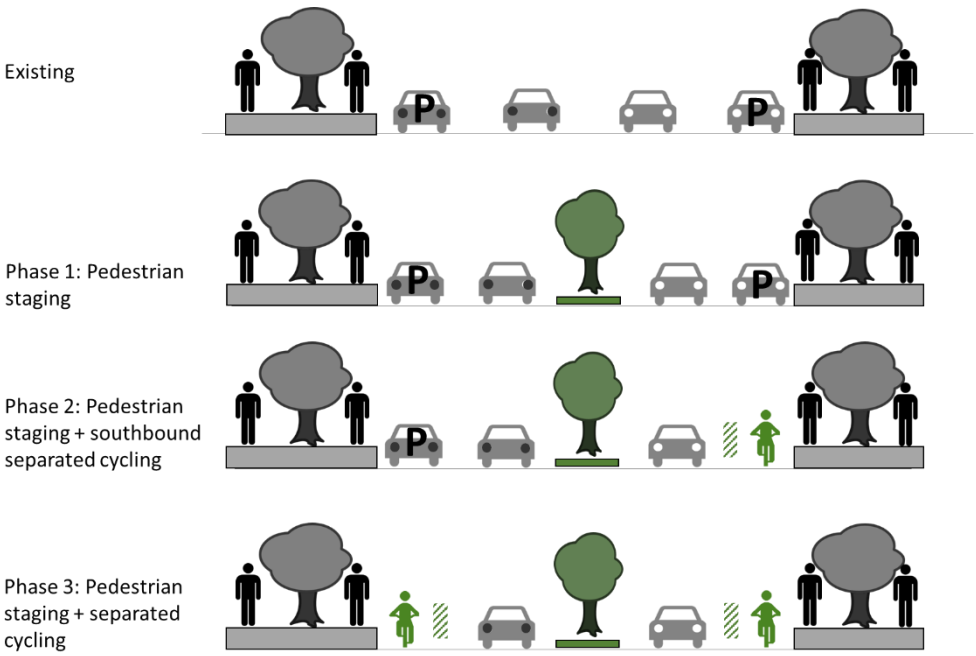
There are trade-offs to balance the needs of everyone travelling along and to Nelson Road. The proposed design was considered to have the greatest alignment with most objectives, while minimising the impact to on-street parking in the short- to medium-term. While the final phase results in loss of on-street parking, the phased implementation enables opportunities for increased off-street parking to be accommodated as part of adjacent and nearby developments [3].

3. See Action 14.4 of Box Hill MAC Integrated Transport Strategy



SOURCE: ADAPTED FROM BOX HILL MAC INTEGRATED TRANSPORT STRATEGY (2020)

PROPOSED NELSON ROAD IMPROVEMENTS & BOX HILL WALKING AND CYCLING CONTEXT



PHASES OF PROPOSED DESIGN



Visualisations

Nelson Road at Arnold Street intersection looking towards Whitehorse Road

Existing Conditions



Phase 2A

- Wider footpaths
- Painted median
- Roundabout at intersection
- Zebra crossings
- Bicycle lane with sharrows through intersection



Phase 3

- Wider footpaths
- Painted median
- Roundabout at intersection
- Zebra crossings
- Separated bicycle lane; sharrows through intersection

Visualisations

Nelson Road near RSL looking towards Whitehorse Road

Existing Conditions



Phase 1

- Wider footpaths
- Painted median with planters
- Zebra crossing
- Sharrows



Phase 3

- Wider footpaths
- Painted median with tree planting
- Zebra crossing
- Separated bicycle lanes







Visualisations

Nelson Road at Thames Street intersection looking towards Whitehorse Road

Existing Conditions

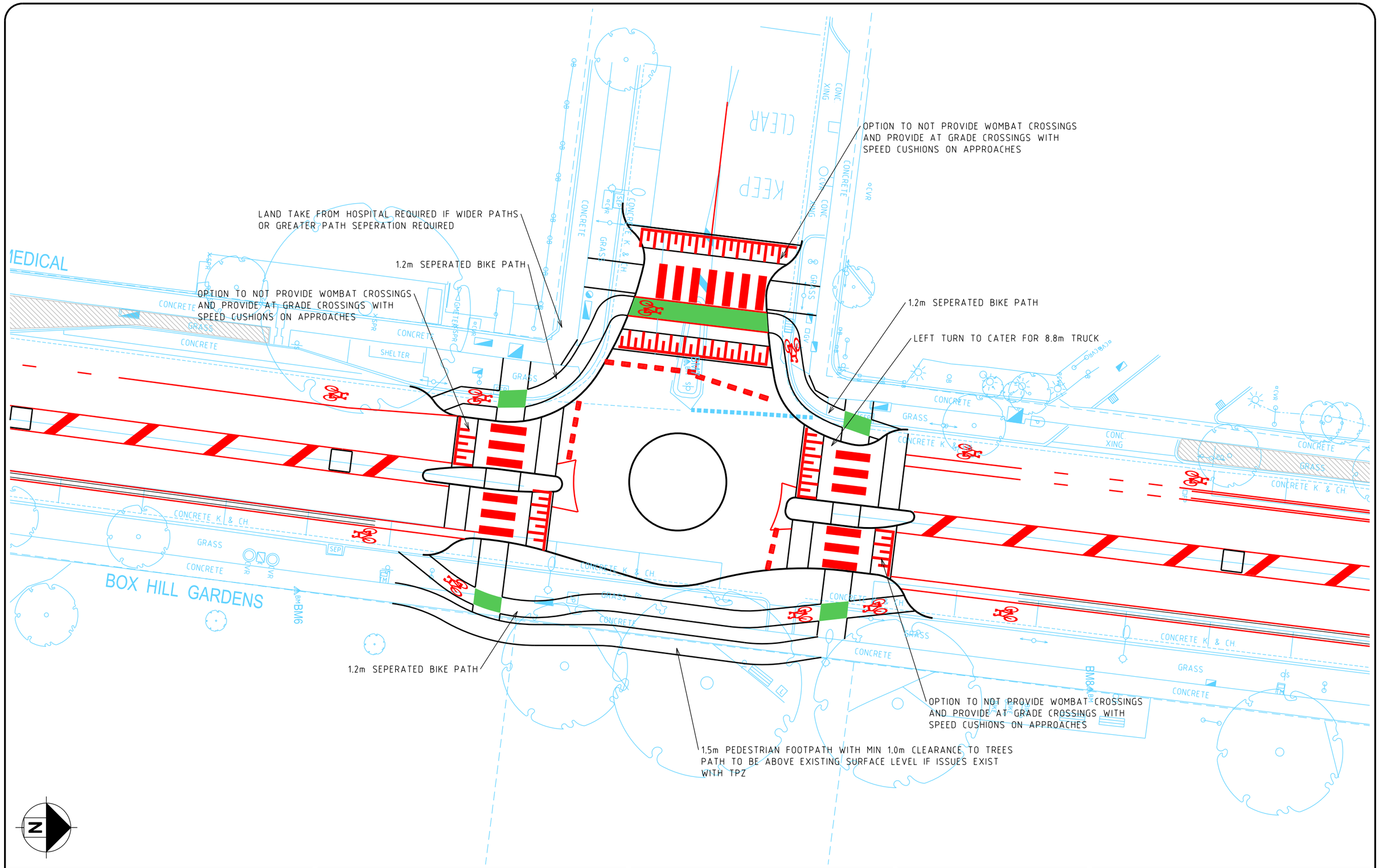
Phase 3

- Zebra crossings at roundabout
- Separated bicycle lanes; sharrows through intersection

APPENDIX C

NELSON RD/ARNOLD ST CONCEPT PLAN

- **SEPARATED CYCLING FACILITY**



ISSUE	DATE	AMENDMENTS	BY
A	19/07/23	INITIAL ISSUE	BV

NOT FOR CONSTRUCTION

NOTES:

OBT O'BRIEN TRAFFIC

• Traffic Planning • Transport Planning
• Traffic Engineering • Road Safety

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DATE: 19/07/2023	JOB NO: 23557	SCALE: 1:250	
Hor. Scale Ver. 0 2.5 5		ORIGINAL: A3	ISSUE: A

NELSON RD/ARNOLD ST, BOX HILL

ROUNDBAOUT LAYOUT
CONCEPT LAYOUT