



2020
BikeSpot

Project Report

June 2020



Prepared by

Anthony Aisenberg
Director, CrowdSpot
anthony@crowdspot.com.au

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Partners

CrowdSpot is an award-winning digital consultancy specialising in map-based community engagement and data collection. Their mission is to help create quality spaces in a social, inclusive and engaging process. They do this by connecting decision makers with targeted community groups as citizen participation in projects is an important part of the urban planning process. CrowdSpot's interactive, visual and intuitive map-based tool has been carefully designed to reduce barriers to participation and complement other methods of engagement such as community meetings or workshops. This unique combination of web map technology, community engagement and quality design helps to increase participation and deliver insightful spatial data for effective analysis and communication.



Amy Gillett Foundation is Australia's leading cycling safety charity. Each year, approximately 38 people die while riding a bike on Australian roads. One in five people injured on Australian roads is a person riding a bike. The Amy Gillett Foundation's mission is for safe cycling in Australia. Our vision is for zero deaths and a reduction in the serious injury of people riding bikes. The Amy Gillett Foundation (AGF) was born out of the tragic death of Amy Gillett, killed while on a training ride with the Australian Women's Cycling Team in 2005. As Australia's leading cycling safety charity, we champion an evidence-based approach to safe cycling. We support research, create education programs and advocate for safe cycling. We work with all levels of government, road authorities, corporate, motoring, cycling and community road safety organisations and the public to create a safer cyclist environment in Australia.



Government

Department of Transport, City of Greater Dandenong, City of Yarra, City of Stonnington, City of Port Phillip, City of Monash, City of Monash, City of Moreland, City of Maribyrnong, City of Banyule, City of Whittlesea, City of Kingston.

Executive Summary

A lack of safety is widely recognised as the major barrier to people getting on their bikes. How it feels to ride a bicycle has an impact on people's willingness to ride. BikeSpot 2020 provided the opportunity for all Victorians to share their perceptions of cycling safety at different locations (adding Safe or Unsafe Spots to the map) via a web-based interactive map and help develop new insights for the prioritisation of cycling safety improvements. BikeSpot 2020 was developed by CrowdSpot in close collaboration with the Amy Gillett Foundation and 12 official Government project partners.

The map was open for submissions (spot, comments or 'likes') for 2 months between 31 March - 31 May 2020 and attracted just under 6,000 individuals to add over 30,000 overall submissions. Along with providing their Safe or Unsafe Spot, users were also able to provide location specific information that included the spot category (cycle lane ends, traffic speed, etc.), a cycling stress rating (only for Unsafe Spots) in addition to personal information such as the individuals level of cycling confidence, age and gender.

Overall, key insights uncovered from the crowdsourced data set include:

Cyclists want space from other transport modes

- 75% of Unsafe Spots relate to insufficient or unsafe cycling infrastructure
 - 'No bicycle lanes' being the top category of unsafe spots (18% of total)
- 76% of safe spots relate to establishing distance from motor vehicle traffic
 - 'Off-road path' is the top category for safe spots (28% of total)
- 65% of 'Unsafe' spots submitted by drivers wanted more space from cyclists when driving

Most stressful for cyclists

- 'Traffic Speed' on average is highest stress-related experience, rating 3.5 out of 4 (4 = *High Stress*) for riders of all experience levels
- 'High Vehicle Traffic' rated 3.4 out of 4 and 'Car dooring' rated 3.38 out of 4.
- For 'Very Confidant' (68%) and 'Somewhat Confidant' (27%) riders, the biggest issue is 'Traffic Speed'.

Building a connected network will give new cyclists more confidence

- 'Interested but concerned' cyclists' rate 'Cycle lane ends' (3.90 out of 4) on average as their most stressful experience.

Fear of 'Car-dooring', a daily concern

- 82% of riders who made a submission relating to 'Car dooring' experience it 'Daily' or 'A few times a week'.
- 'Poor driver behaviour' was next with 78.4%.

Transport corridors and intersections surrounding the Melbourne CBD are the biggest issues

- Chapel St, St Kilda Rd, Haymarket Roundabout and Yarra/Southbank Promenade are all in the top 10 Unsafe Spots list.

Perception of cycling safety data, in addition to crash data, is valuable in validating and understanding cycling risk and behaviour

- Perceptions of cycling safety (BikeSpot data) varies considerably from crash data (VicRoads CrashStats).
- Safety perceptions and crash history both have a considerable impact on people's willingness to cycle more often.

Table of Contents

- 1. Introduction..... 7
- 2. The Project Map 8
- 3. Participation Data 11
- 4. Submissions..... 15
- 5. Spatial distribution of Spots 17
- 6. Unsafe Spots..... 22
- 7. Safe Spots 29
- 8. Top 10 Unsafe Spots 32
- 9. The Top 10 Safe Spots 39
- 10. The Top 10 Unsafe Spots Vs CrashStats 42
- APPENDIX A – Top Spots in each partnering LGA 44
- APPENDIX B – Media 55

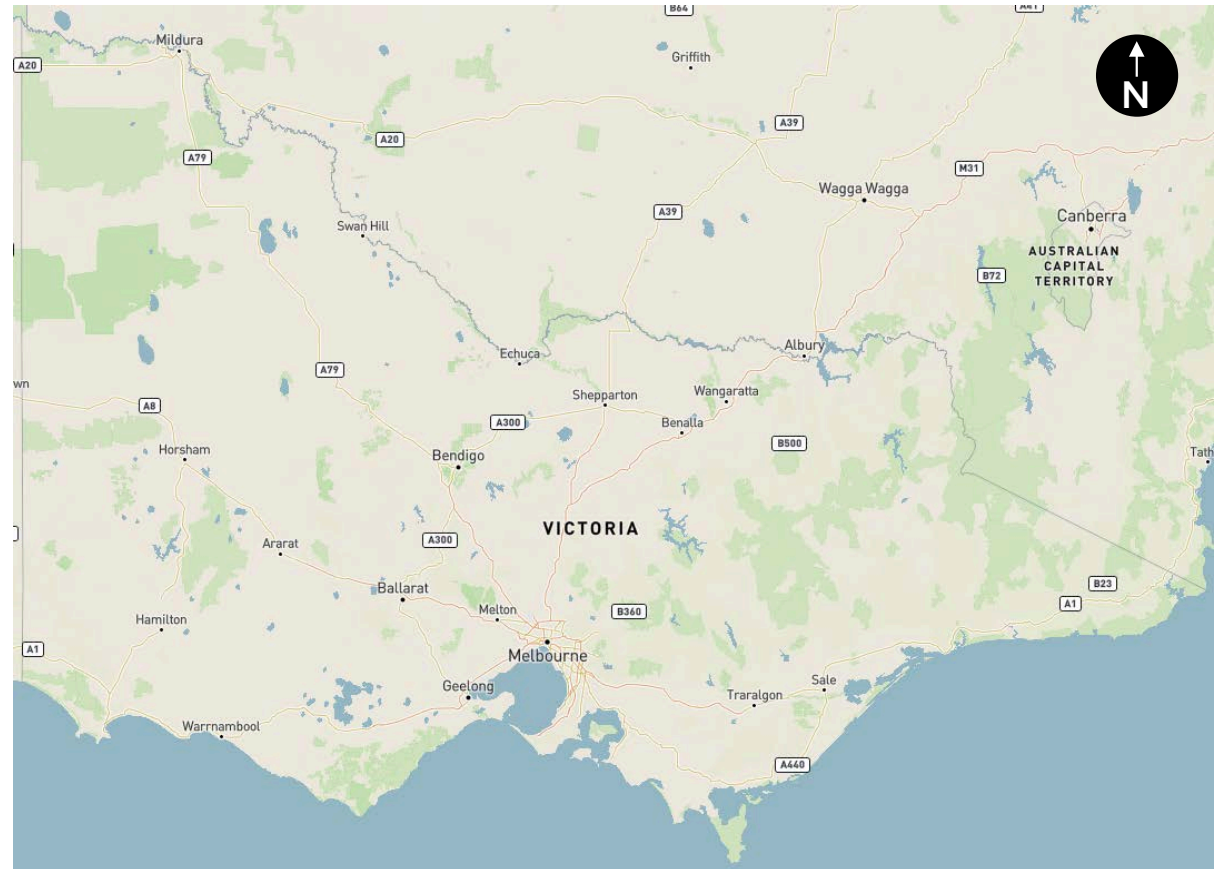
1. Introduction

Victoria is striving to become a world-class cycling location. A lack of safety is widely recognised as the major barrier to people getting on their bikes. How it feels to ride a bicycle has an impact on people's willingness to ride.

BikeSpot 2020 provides the opportunity for all Victorians to share their perceptions of cycling safety via an web-based interactive map and help develop new insights for the prioritisation of cycling safety improvements.

The original BikeSpot project took place in February and March 2016 and collected perceptions of cycling safety data throughout Metropolitan Melbourne. BikeSpot 2020 is a collaboration between CrowdSpot and The Amy Gillett Foundation, commenced data collection throughout Victoria (Figure 1) on the 31st of March 2020 until the 31st of May 2020.

Figure 1 – Project Study Area



2. The Project Map

The interactive online map was accessed either via the central landing page (bikespot.org) or via the domain <https://bikespot2020.crowdspot.com.au> (Figure 2).

Contributing to the map

The survey form contained a combination of location specific questions (type of spot, spot category, etc.). There were three ways people were able to actively contribute their input to the map.

This includes:

Figure 2 – BikeSpot 2020 Interactive Map

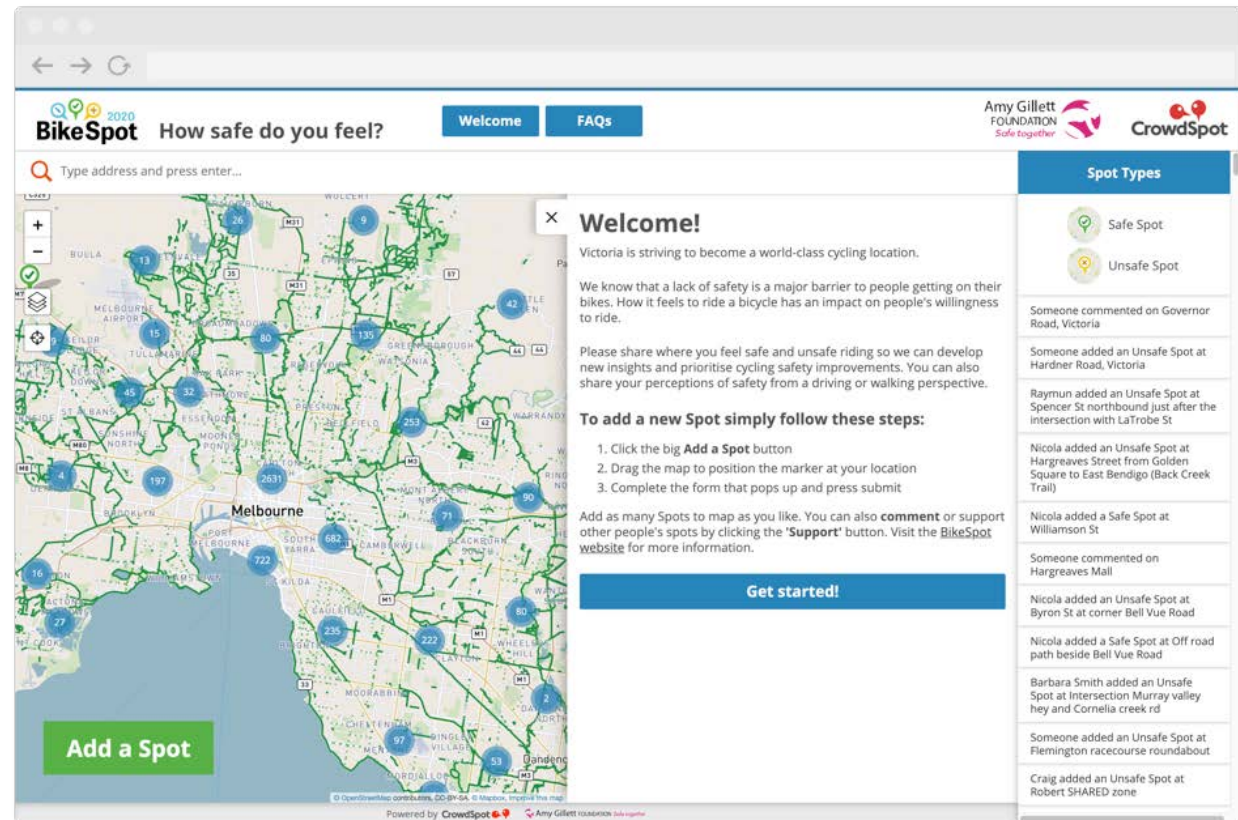
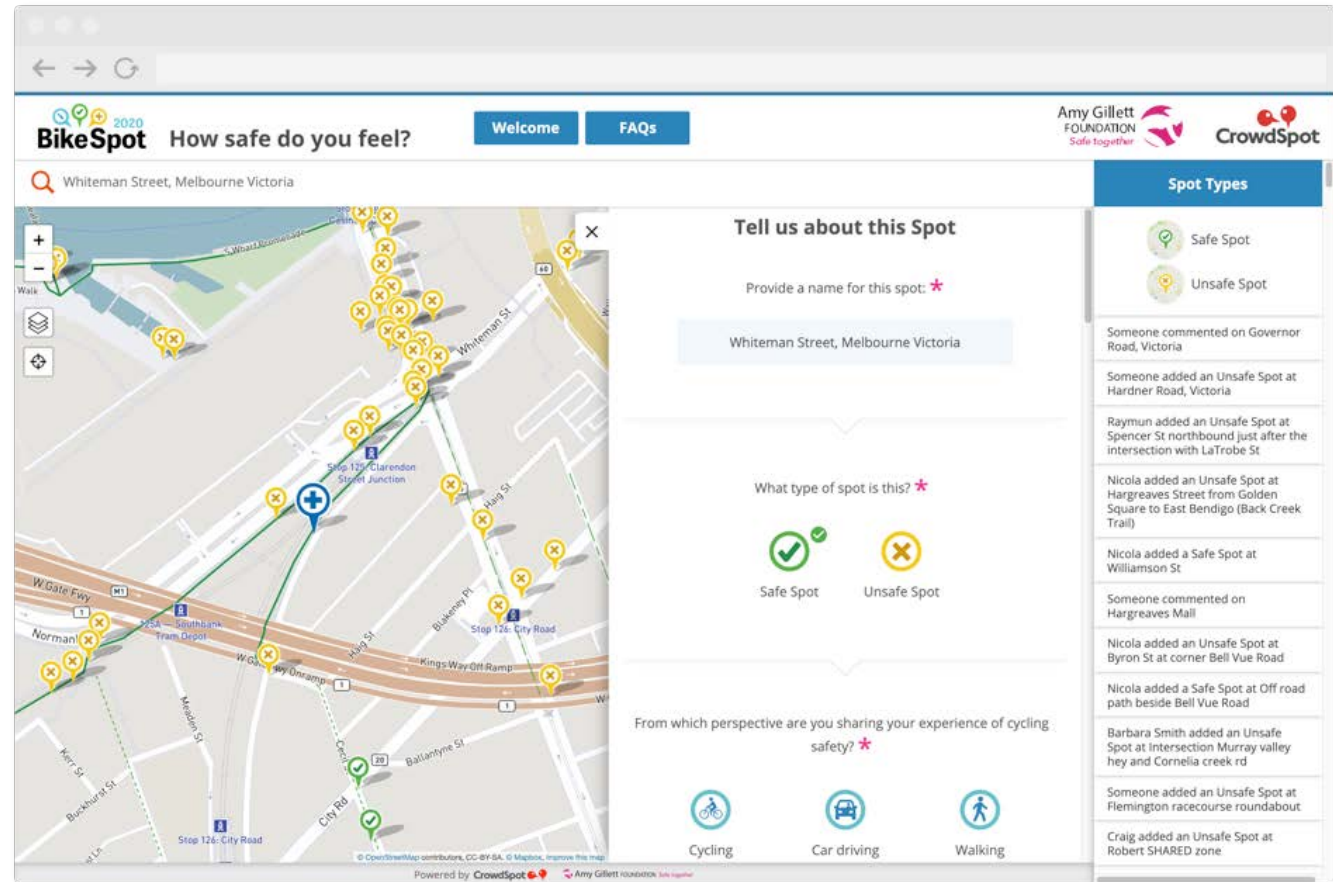


Figure 3 – Submitting a spot

1. 'Adding a Spot' to the map via the survey form. The form contains a mix of pre-determined responses and one open text description field (See APPENDIX C for full survey design and structure).
2. Commenting on existing spots already on the map
3. Voting on existing spots already on the map by clicking the 'Like' button



← → ↻

BikeSpot 2020 **How safe do you feel?** [Welcome](#) [FAQs](#) **Amy Gillett FOUNDATION** Safe Together **CrowdSpot**

🔍 Whiteman Street, Melbourne Victoria

Clarendon Street, Melbourne Victoria
 Richard added this Unsafe Spot 2 months ago
 15 Like [Twitter](#) [Facebook](#)
 Category: No bicycle lanes
 Description: The bike path disappears here and there is no alternative to get off your bike and walk on the foot path as the road is too dangerous
 5 comments [Leave a Comment](#)

Very dangerous. Agree.

Belinda
 around 2 months ago
 For anyone who hasn't installed the KnightBus feature from Harry Potter onto their bicycle, making it able to squeeze through gaps of less than 3cm, this is a death trap.

Slim
 around a month ago
 Agree, bicycle lane essential to feel safe especially as road narrows and cars travelling at high speed

Spot Types

- Safe Spot
- Unsafe Spot

Someone commented on Governor Road, Victoria

Someone added an Unsafe Spot at Hardner Road, Victoria

Raymun added an Unsafe Spot at Spencer St northbound just after the intersection with LaTrobe St

Nicola added an Unsafe Spot at Hargreaves Street from Golden Square to East Bendigo (Back Creek Trail)

Nicola added a Safe Spot at Williamson St

Someone commented on Hargreaves Mall

Nicola added an Unsafe Spot at Byron St at corner Bell Vue Road

Nicola added a Safe Spot at Off road path beside Bell Vue Road

Barbara Smith added an Unsafe Spot at Intersection Murray valley hey and Cornelia creek rd

Someone added an Unsafe Spot at Flemington racecourse roundabout

Craig added an Unsafe Spot at Robert SHARED zone

Powered by **CrowdSpot** **Amy Gillett foundation** Safe Together

Figure 4 - Example of an existing spot

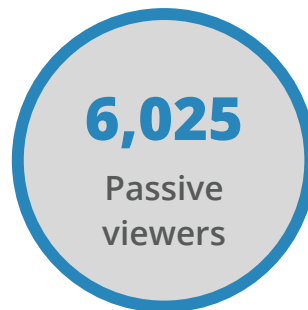
3. Participation Data

The data analytics collected includes a combination of both active and passive participation. Active participation refers to user interactions where people have submitted their input by either adding a spot, comment or 'Like'. Passive participation refers to cases where users have explored the map, viewing and reading various contributions without actively making a submission.

Active Participation



Passive Participation

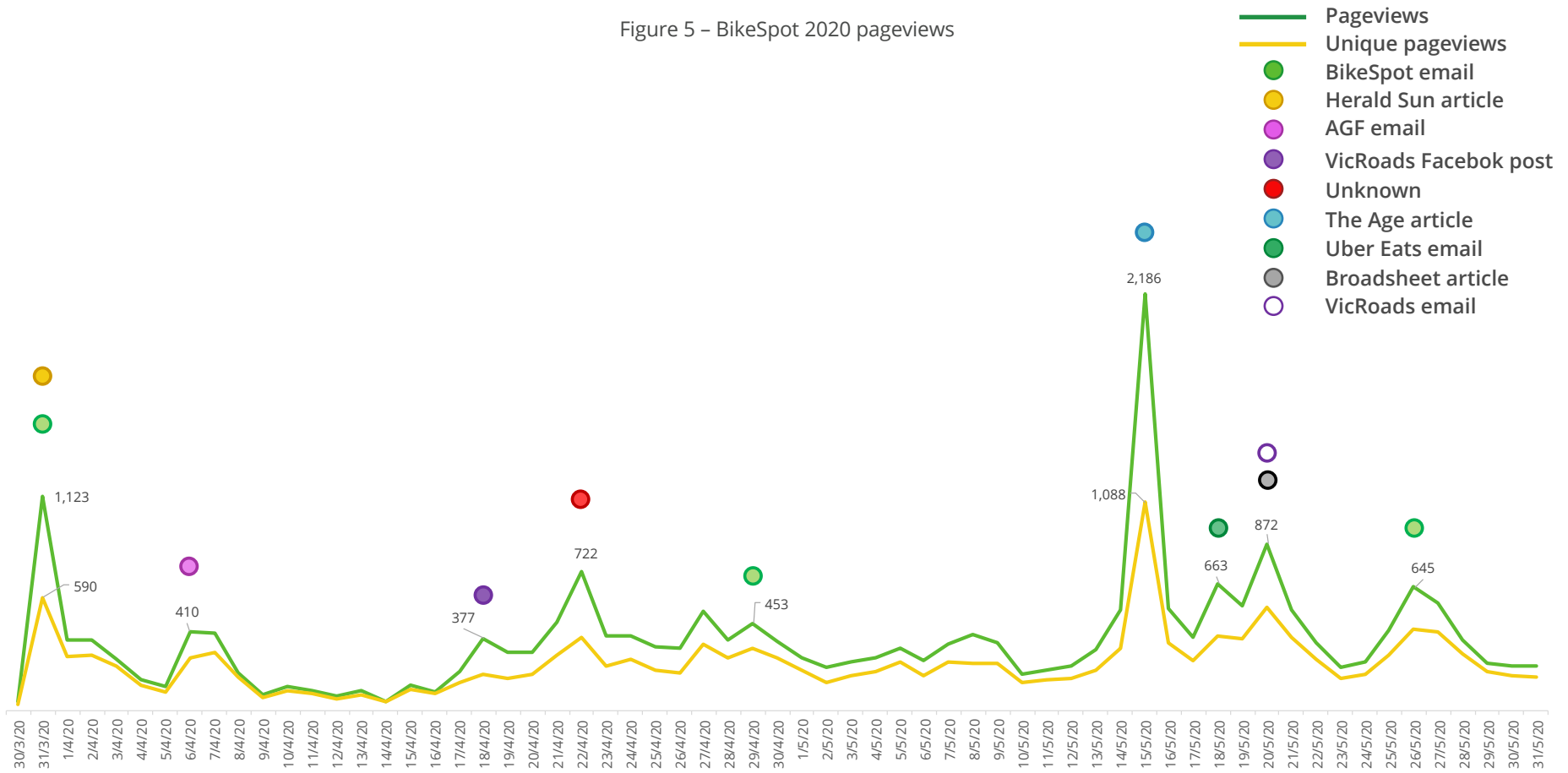


Pageviews



In total, there were 5,908 active participants and 15,310 unique pageviews. As a result, we can determine that there were 6,025 passive participants, those who came to the website but did not make a submission. The figure on the following page outlines the total number of pageviews per day over the engagement period. There were 241 average daily page views and the peak of 2,186 pageviews occurred on the 14th of May due to interim results being published in The Age (APPENDIX B). In addition to recruiting participants through media outlets, the self-selected cohort were targeted via the social media channels and email lists of Government partners and supporters.

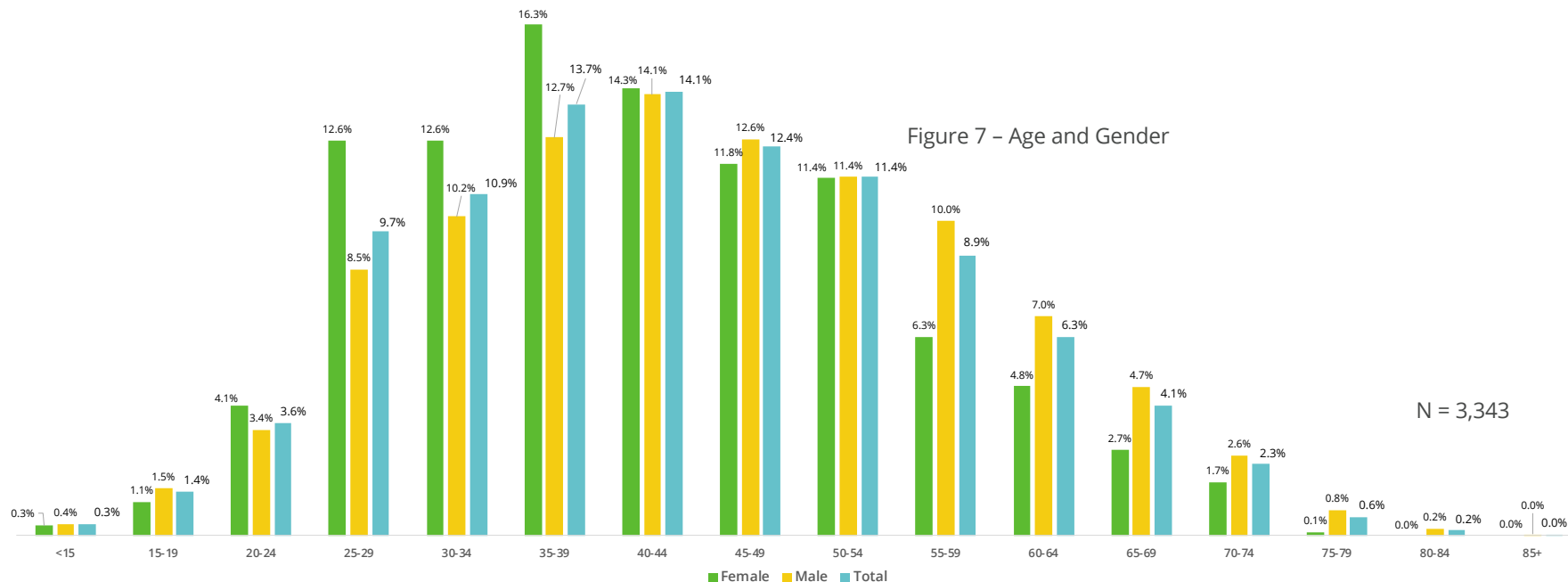
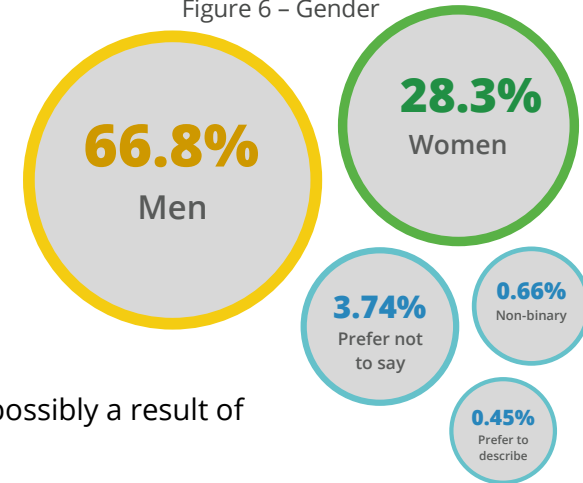
Figure 5 – BikeSpot 2020 pageviews



Age and gender

Men represented the majority of spots submitted on the map with 66.8% (Figure 6). Women submitted 28.3% of spots and remaining 4.85% was made of other preferences and identities. This tends to be representative of cycling participation in cities. The most active age group was the 40-45 range, which represented 14.1% of spots submissions (Figure 7). The two most active age ranges (35-39 and 40-44) represented a combined total percentage of 27.8%. Interestingly, women are more represented in younger age groups (25-39) whilst men have more representation in older age ranges (55-69). This is possibly a result of women no longer continuing to ride after having children.

Figure 6 – Gender



Riding confidence

Participants were asked to select their level of riding confidence. The vast majority (68%) of submitters described themselves at 'Very confident' (Figure 8), followed by 'Somewhat confident' (27%) and 'Interested but concerned' (4%). With 96% of participants indicating a degree of confidence it would suggest that the vast majority of BikeSpot participants were existing riders. Figure 9 confirms that women are more cautious riders than men. 46% of women selected 'Very confident' compared with were men, where 77% selected 'Very confident' as their level of confidence.

Figure 8 – Riding confidence

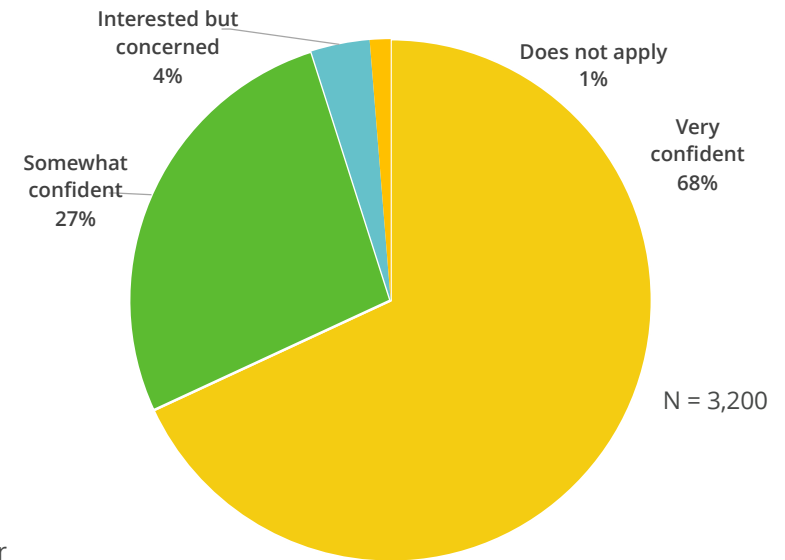
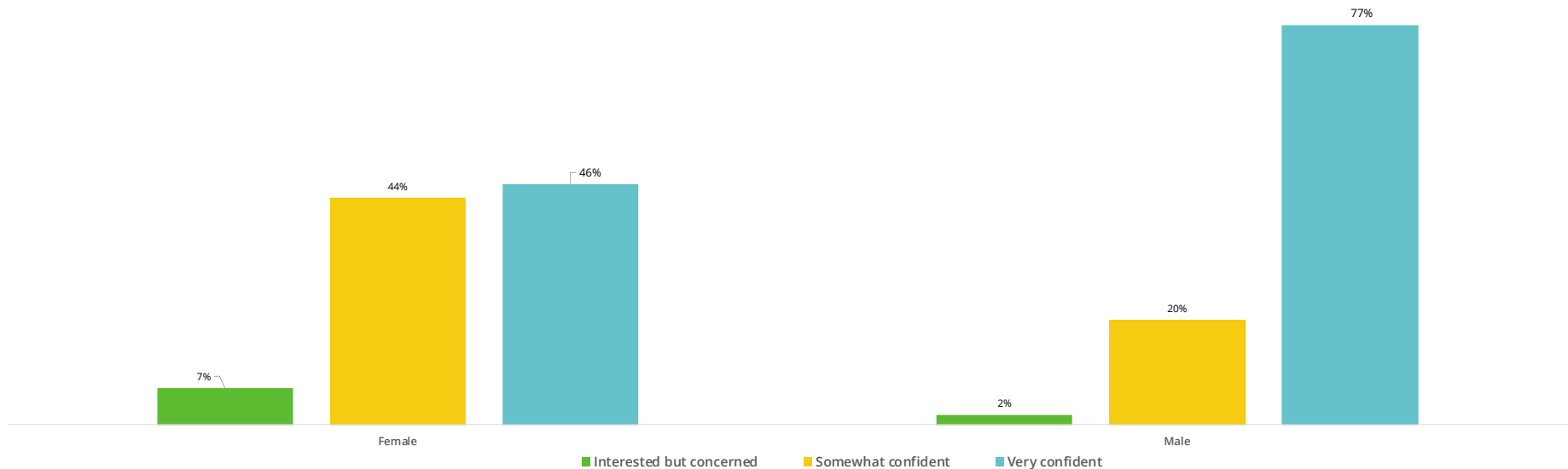


Figure 9 – Riding confidence by gender



4. Submissions

There was a total of 31,150 submissions made up of spots, comments and 'Likes'.

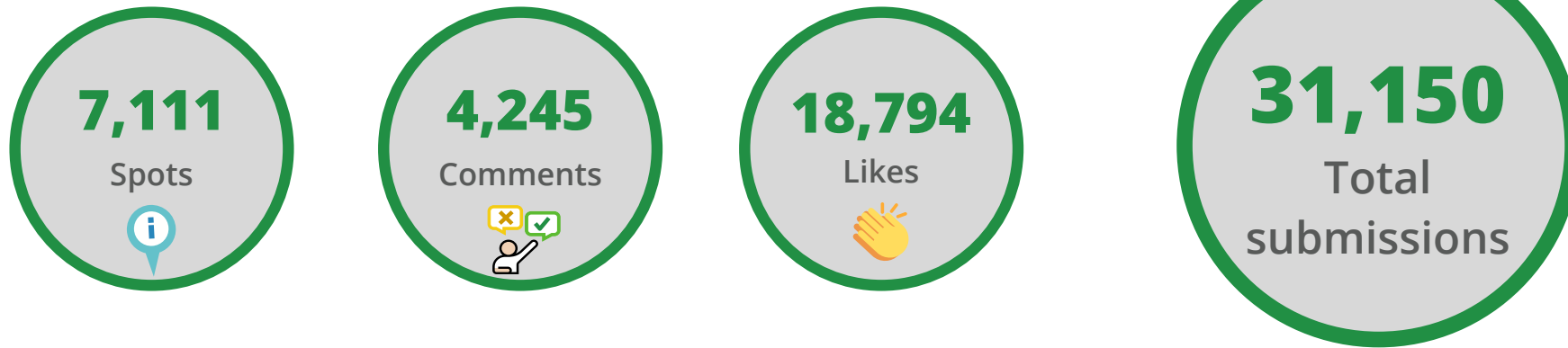
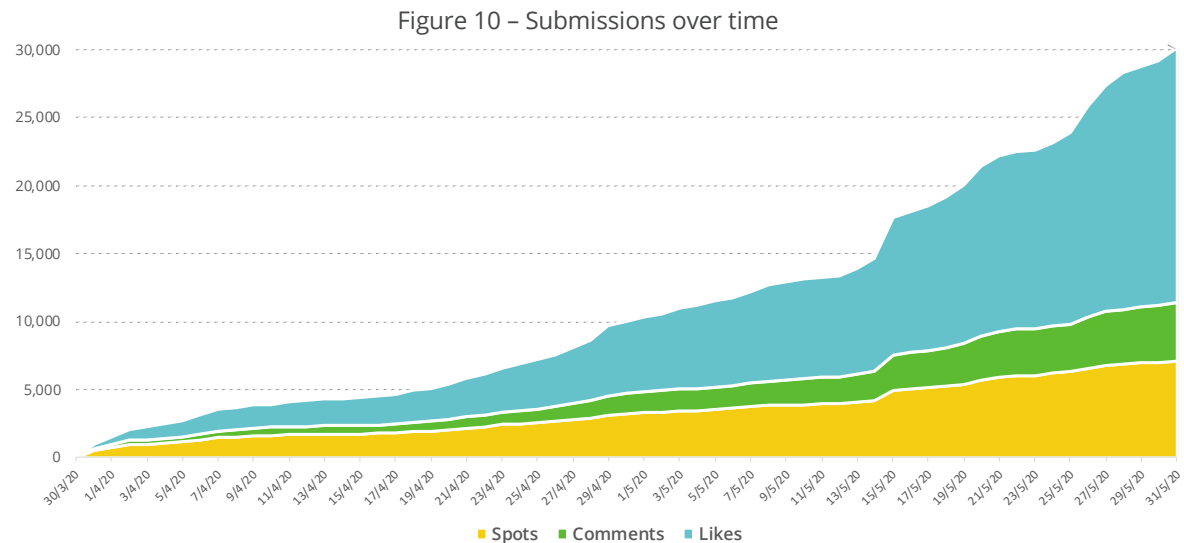


Figure 10 represented submissions over time. As the time progresses the rate of growth of for comments and 'likes' increases relative to the submission of new spots. This is largely as a result of there being existing spots on the map where people share the same sentiment and users can simply add weight to the location by pressing the 'like' button.



Spots types and user perspective

The majority of spots added to the map were 'Unsafe Spots', which accounted for 90% of all data points on the map. The remaining 10% were 'Safe Spots' (Figure 11). Participants were also able to add spots from a driving or walking perspective in addition to cycling. 95.1% of spots (6,763) were submitted from a cycling perspective, whilst driving (2.43%) and walking (2.42%) were very similar representing only 173 and 172 spots respectively.

Figure 11 – Spot types

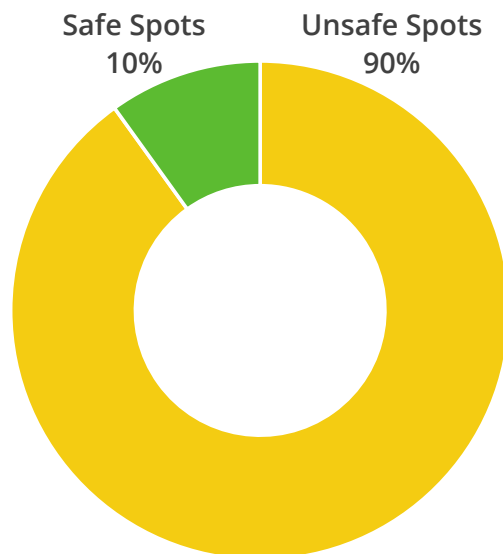
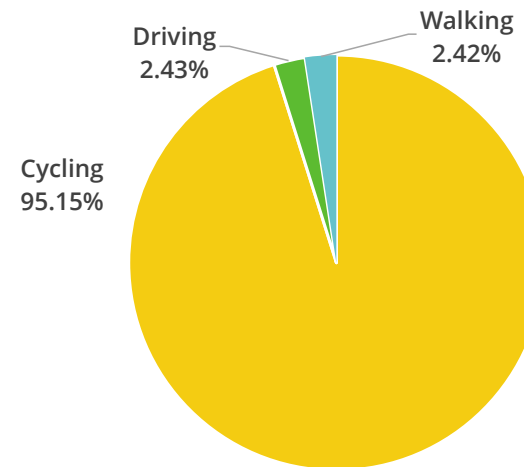


Figure 12 – User perspective



5. Spatial distribution of Spots

The image to the right includes all spots added to the map. There is clearly a concentration of data points in Metropolitan Melbourne. There are also clusters of submissions in the regional centers of Geelong, Ballarat, Bendigo, Echuca, Mildura Shepperton and throughout Victoria's high-country. There are spots submitted in 86% of all of Victoria's Local Government Areas. These patterns are also visualised with the heat map on the following page.

Figure 13 – Spatial distribution of spots

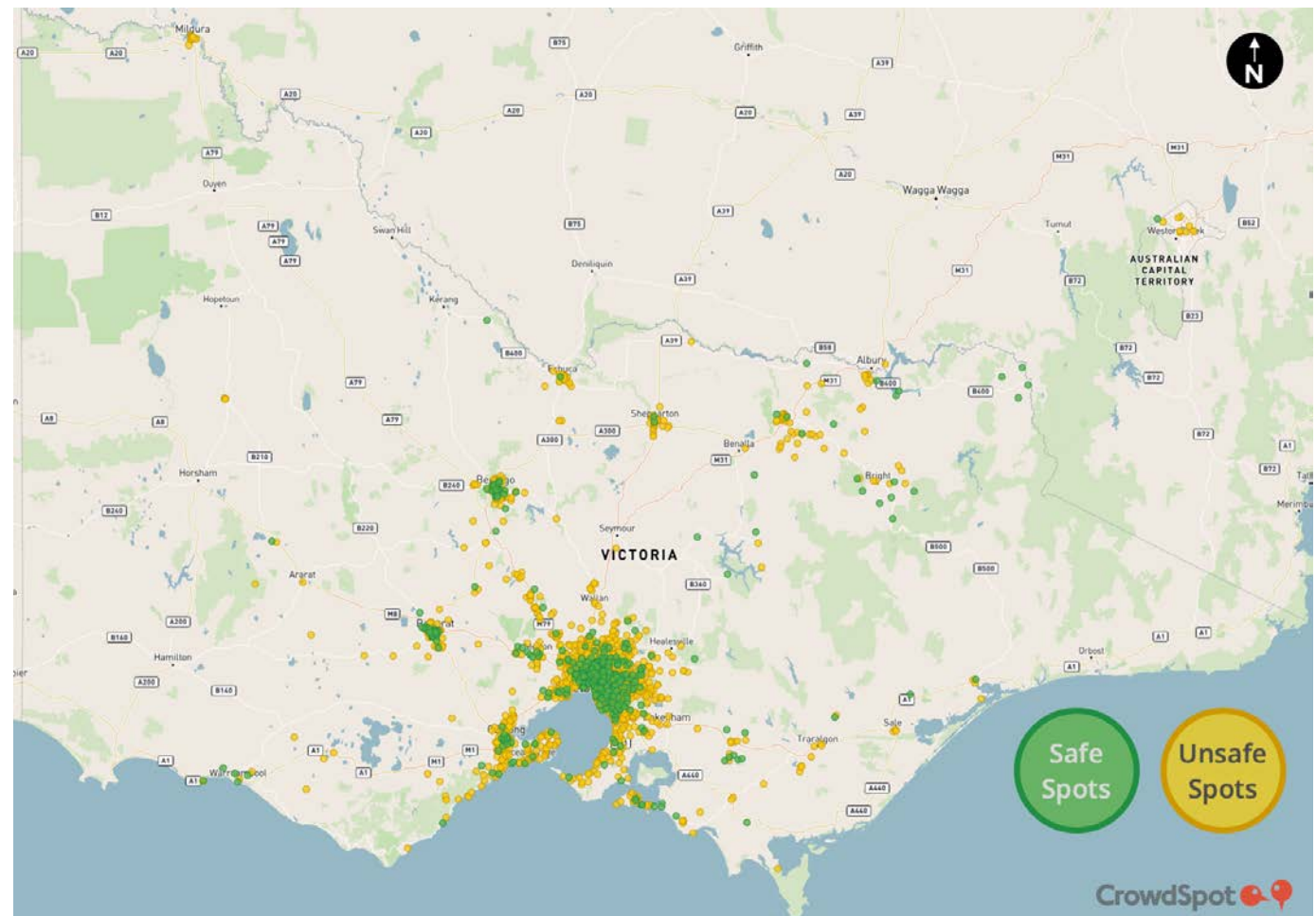
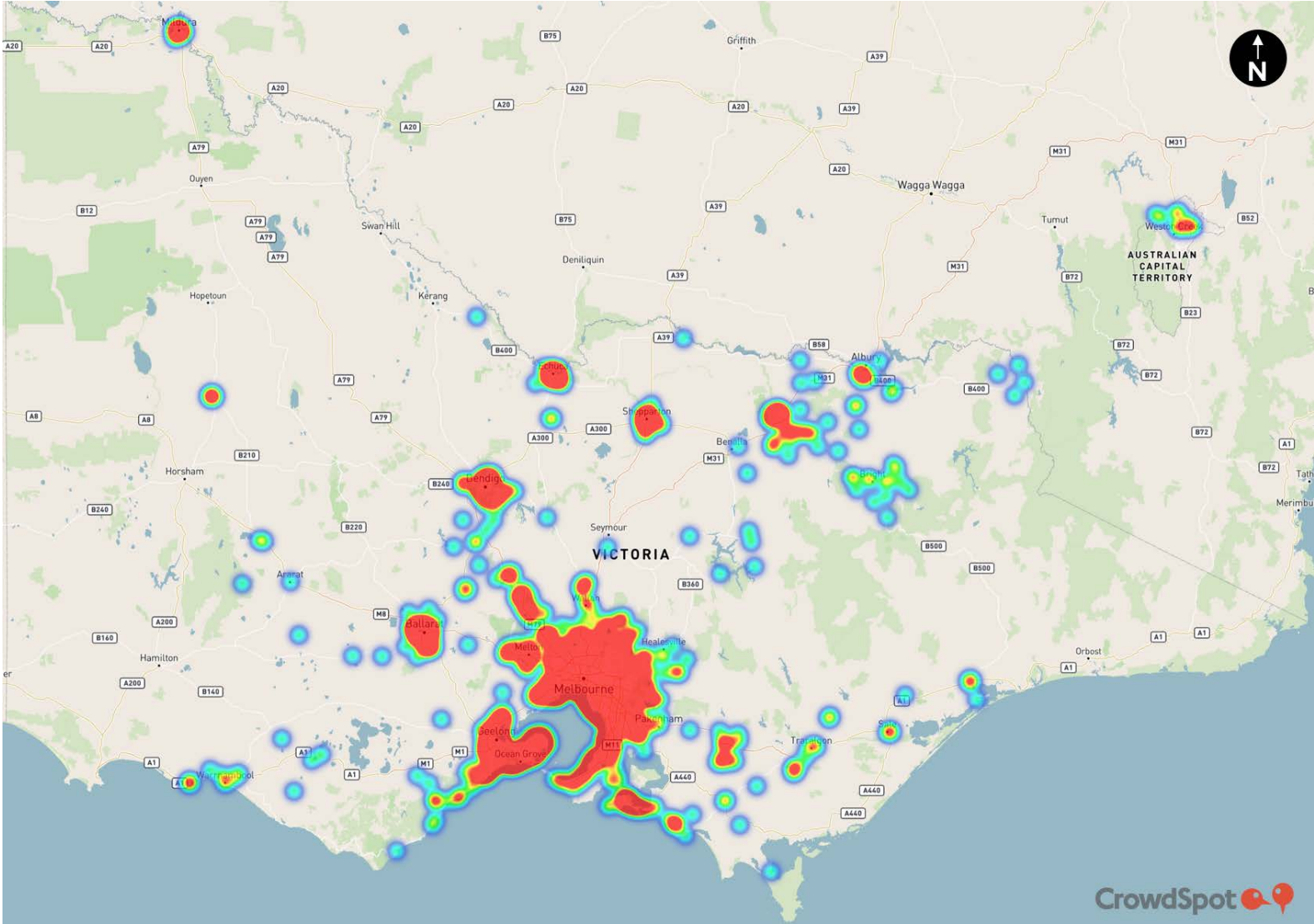


Figure 14 - Spatial distribution of spots (heatmap)



In central Melbourne, there are clear concentrations of spots in the Melbourne CBD and the corridors of St Kilda Rd, Chapel St, Sydney Rd and the Capital City Trail. Figure 16 on the following page presents Safe Spot in inner-city Melbourne. These spots tend to be situated at locations with cycling infrastructure. Unsafe Spots, whilst much more plentiful are also more scattered across the network. It is clear there are many unsafe spots at locations with cycling infrastructure. Presumably as these are locations where people gravitate towards riding and therefore being in a position to identify issues and improvements.

Figure 15 – Spatial distribution of spots in Melbourne (heatmap)

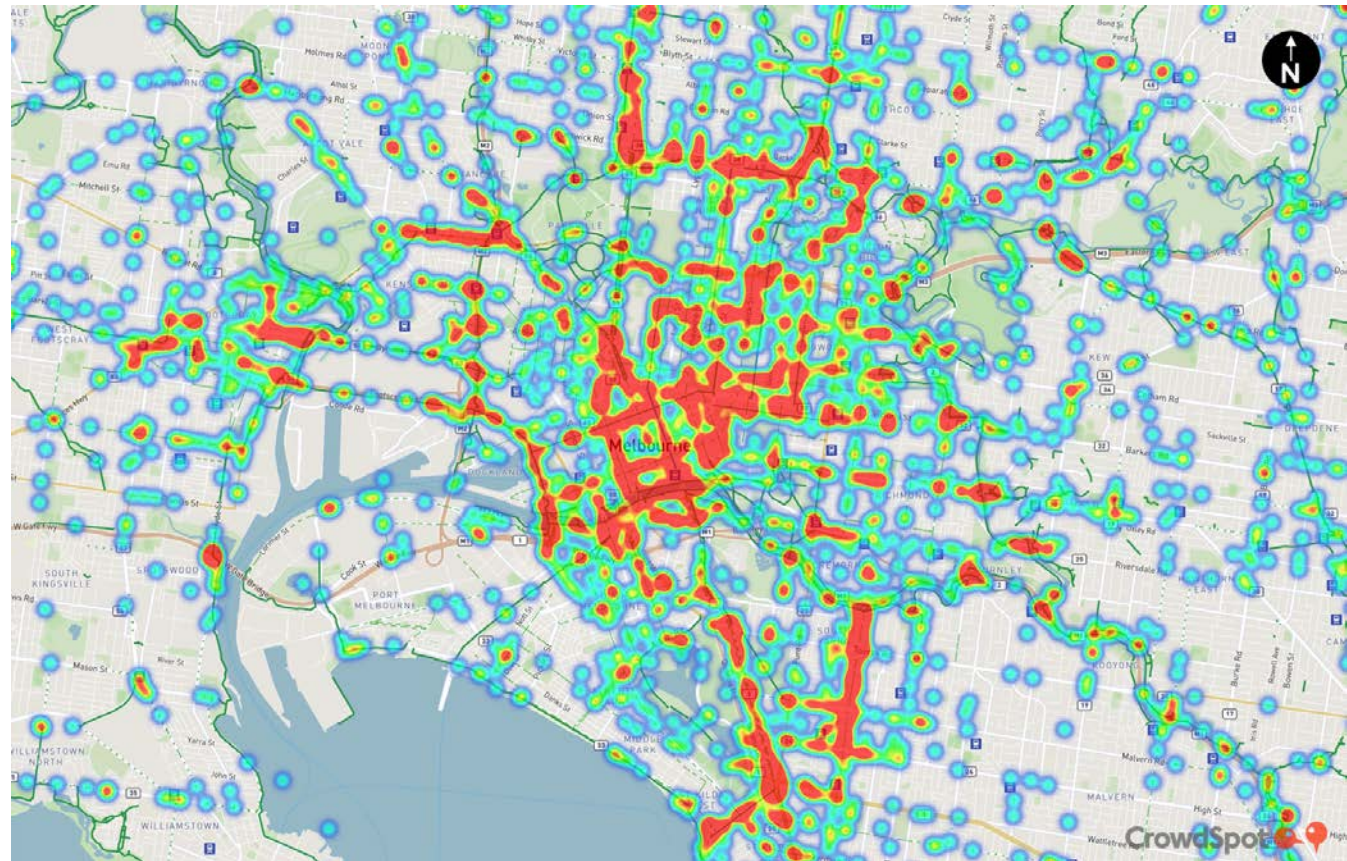


Figure 16 – Spatial distribution of 'Safe Spots' in Melbourne

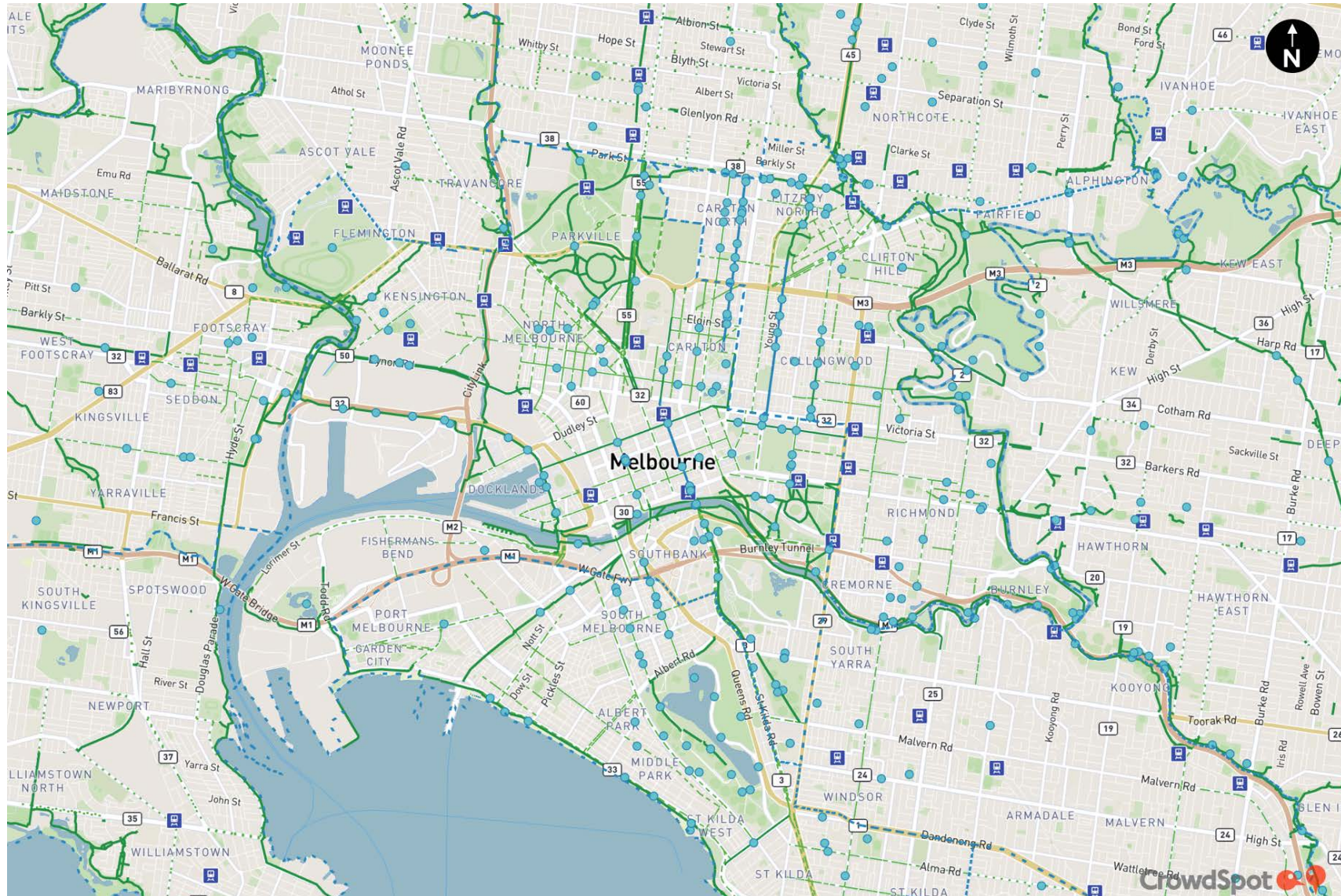
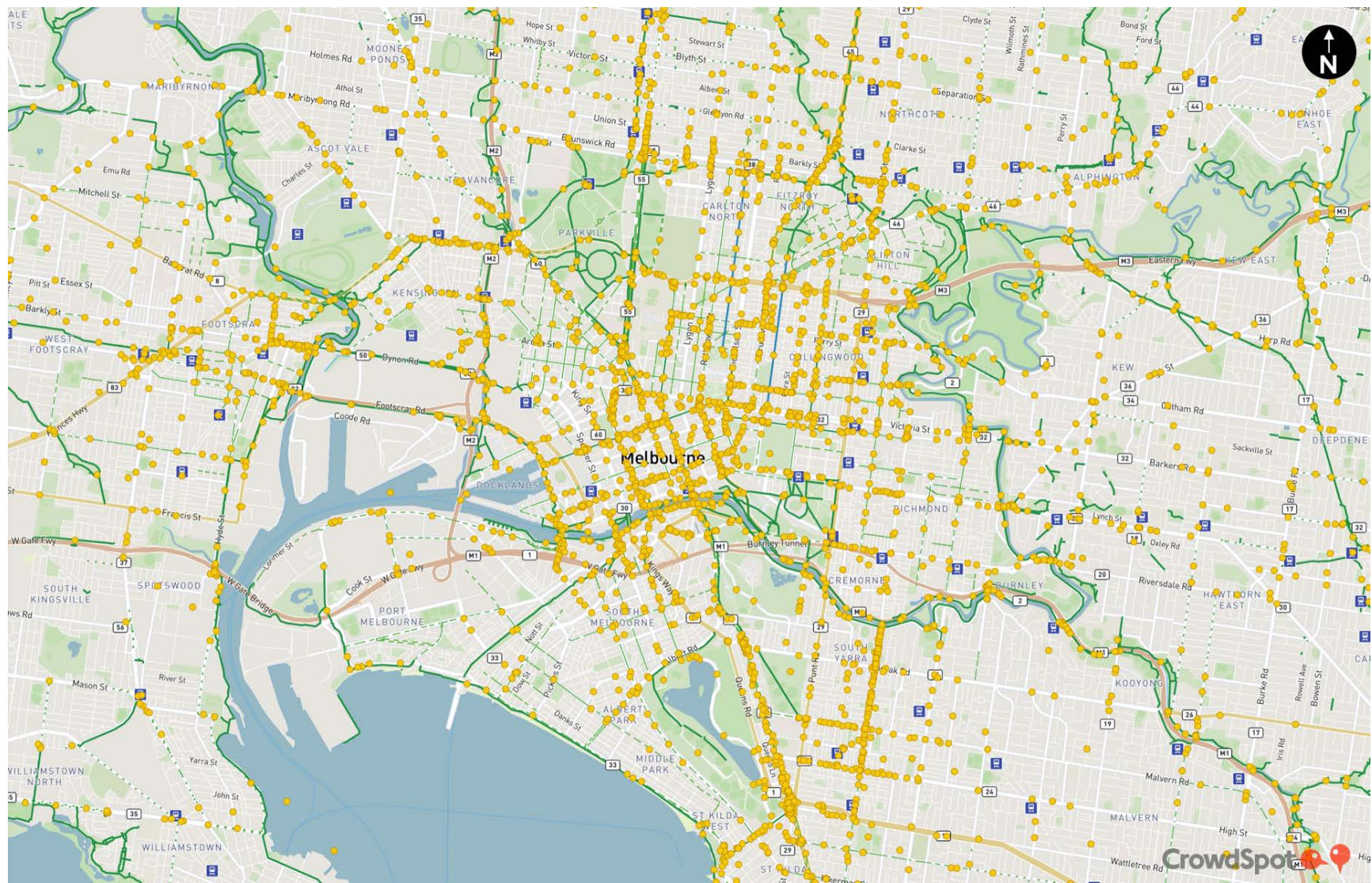


Figure 17 – Spatial distribution of 'Unsafe Spots' in Melbourne

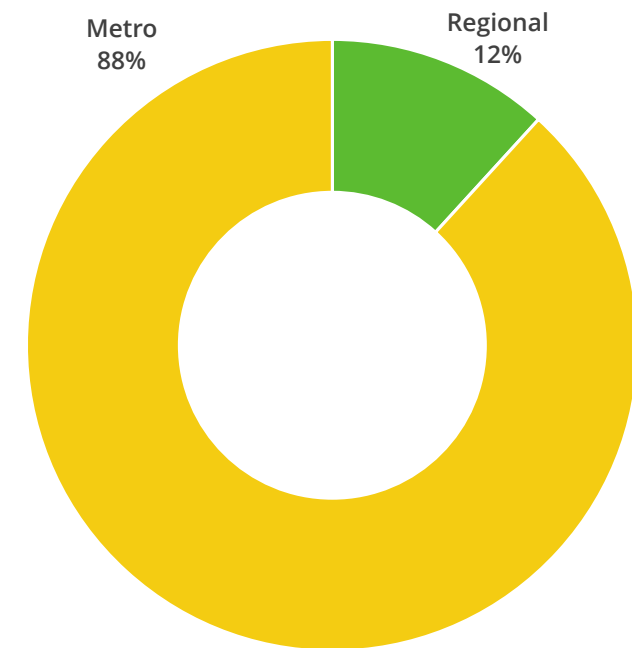


6. Unsafe Spots

Unsafe spot categories

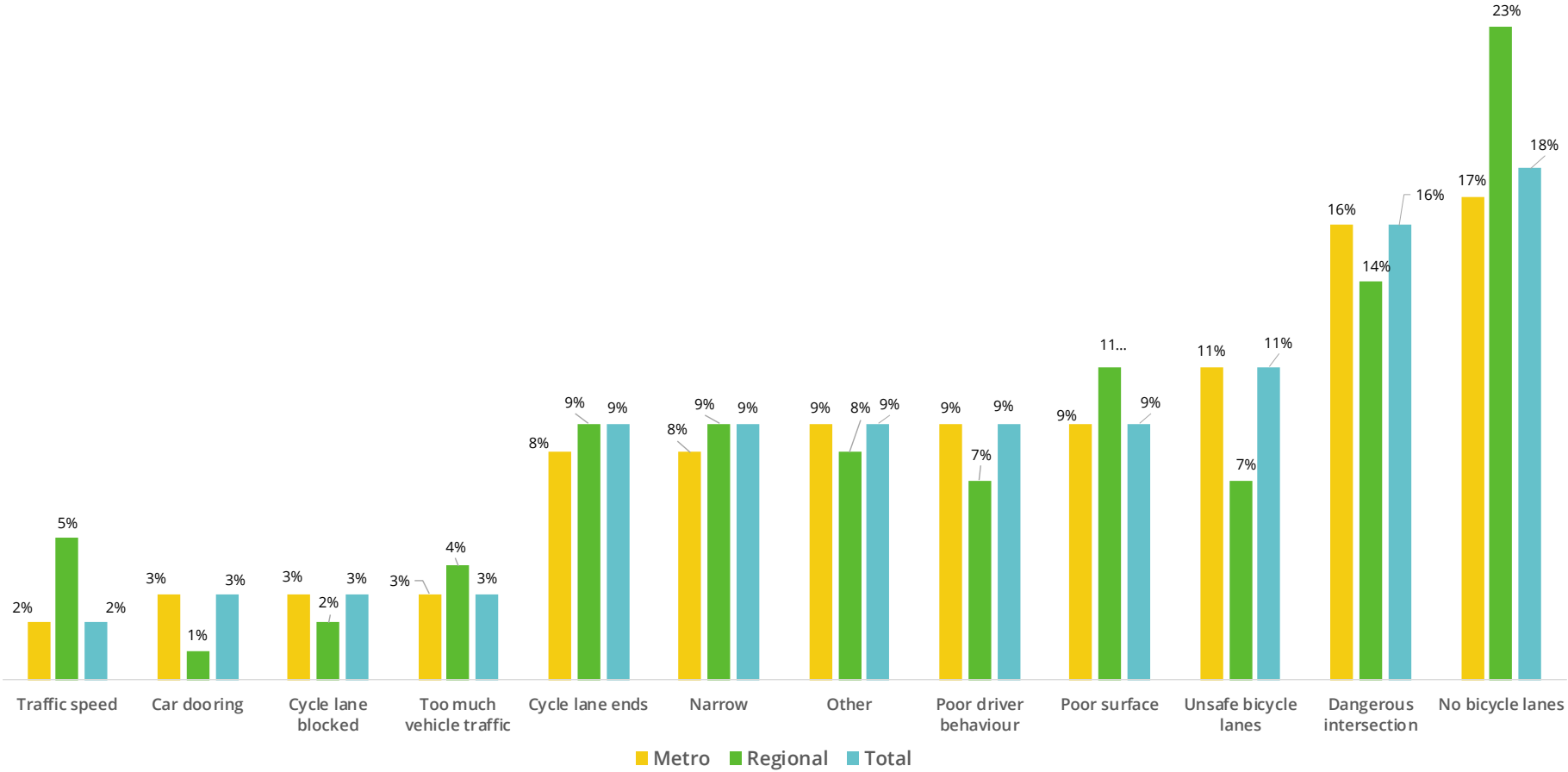
In the process of adding an 'Unsafe Spot', users were asked to identify their **main concern** at their chosen location. There were 6,376 users that completed this process. 88% were added in the Melbourne Metropolitan area and 12% in regional areas (Figure 18). 'No bicycle lanes' (18%), 'Dangerous intersection' (16%) and 'Unsafe bicycle lanes' (11%) were the top three categories for cyclists overall (Figure 19). Comparing metro and regional areas, 'No bicycle lanes' was relatively more significant in the regional areas (23%) than in metro areas (17%). 'Poor surface' and 'Traffic speed' were also relatively bigger issues in regional areas compared to Metropolitan Melbourne. 'Dangerous intersection', 'Unsafe bicycle lanes' and 'Car-dooring' were the issues more commonly experienced in Metropolitan Melbourne compared with the regional areas.

Figure 18 – Metro Vs Regional (unsafe spots)



N = 6,376 (Metro = 5604, Regional = 772)

Figure 19 – Unsafe Spot categories by cyclists

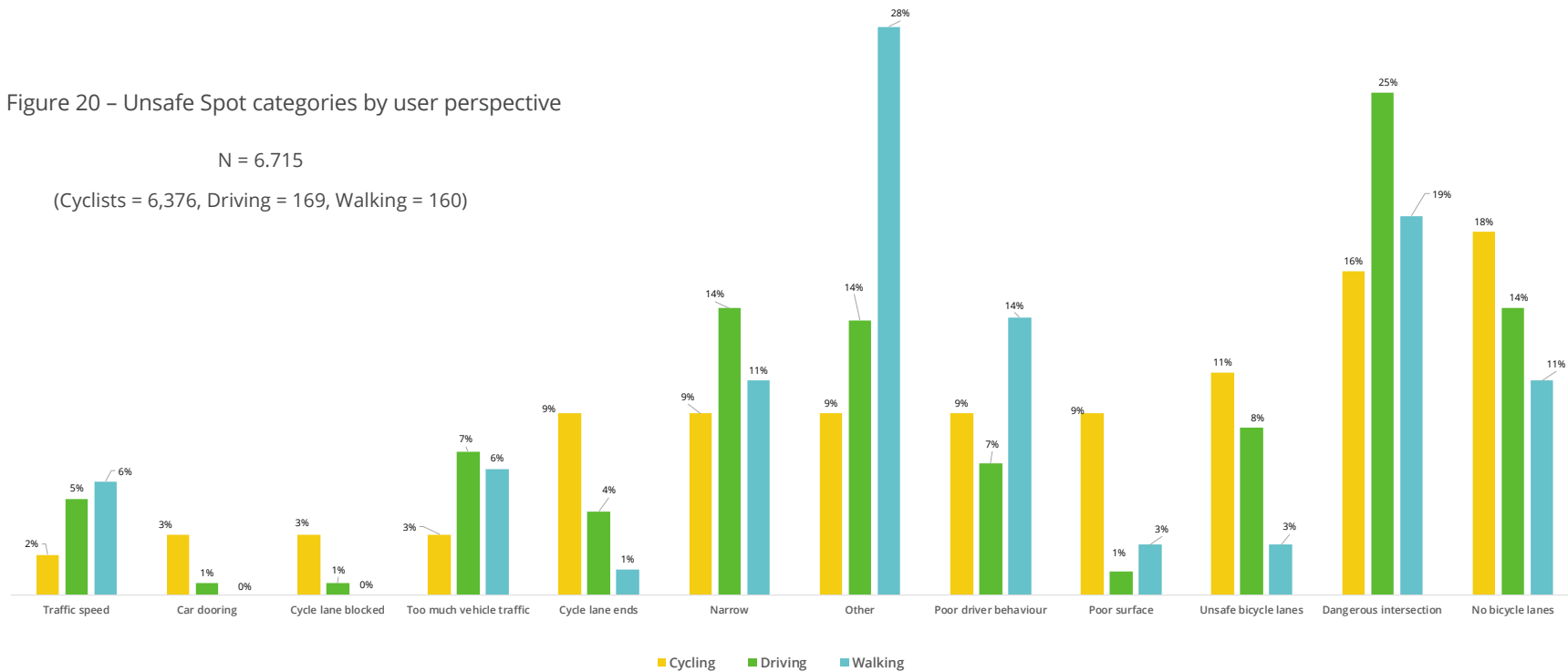


Collectively for cyclists, 75% of unsafe spots relate to insufficient or unsafe cycling infrastructure¹. Similarly, for 'Drivers', 65% of Unsafe Spots relate to insufficient or unsafe cycling (Figure 20) with 'Dangerous intersection' (25%) as the most common category. From a 'Walking' perspective, 'Other' (28%) and 'Dangerous intersection' (19%) were most significant.

Figure 20 – Unsafe Spot categories by user perspective

N = 6,715

(Cyclists = 6,376, Driving = 169, Walking = 160)



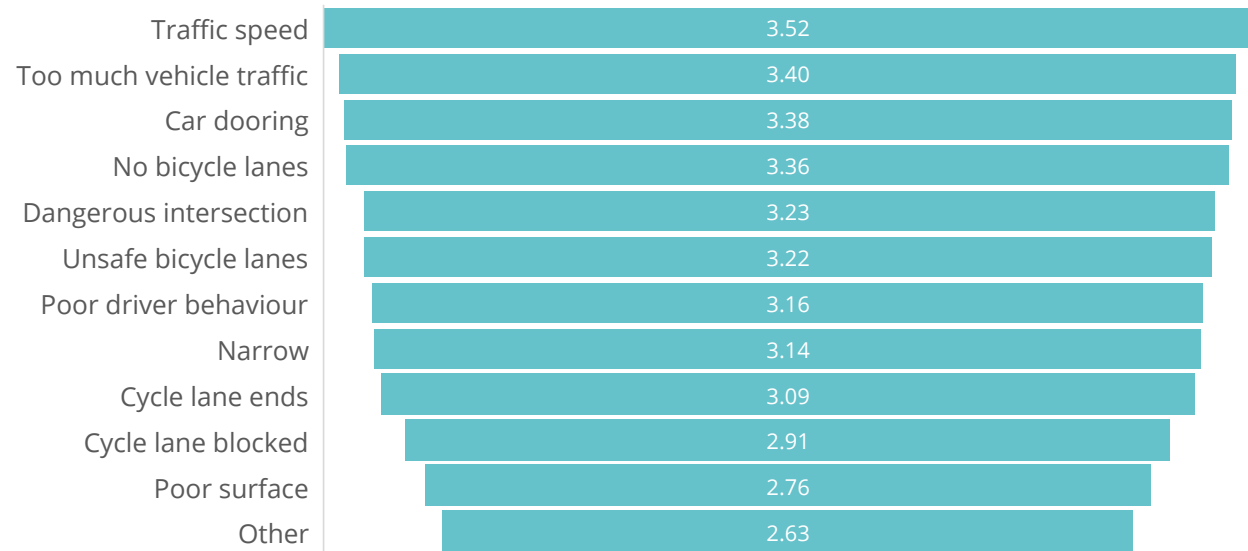
¹ Combining 'No bicycle lanes', 'Dangerous intersection', 'Unsafe bicycle lanes', 'Poor surface', 'Narrow', 'Cycle lane ends' and 'Cycle lane blocked'

Cycling stress by unsafe spot category

Participants adding an 'Unsafe Spot' were asked to rate their level of cycling stress on scale of 1 – 4 in relation to the experience they were submitting. 'Traffic speed' (3.52), 'Too much vehicle traffic' (3.40) and 'Car dooring' (3.38) were on average the top 3 most stressful categories. Interestingly, these three categories relate motor vehicle behavior rather than cycling infrastructure. Perhaps they are the most stressful experiences due to being relatively sudden and unpredictable (eg. Car-dooring, traffic passing from behind, etc.).

Whilst 'Traffic speed' is the highest stress category amongst all 'Unsafe Spots' it was the least submitted 'main concern' category (Figure 19). Understandably, seeking to avoid high stress situations cyclists may gravitate to safer cycling areas where there are lower speed limits and greater space from other vehicles.

Figure 21 – Avg. cycling stress by unsafe spot category

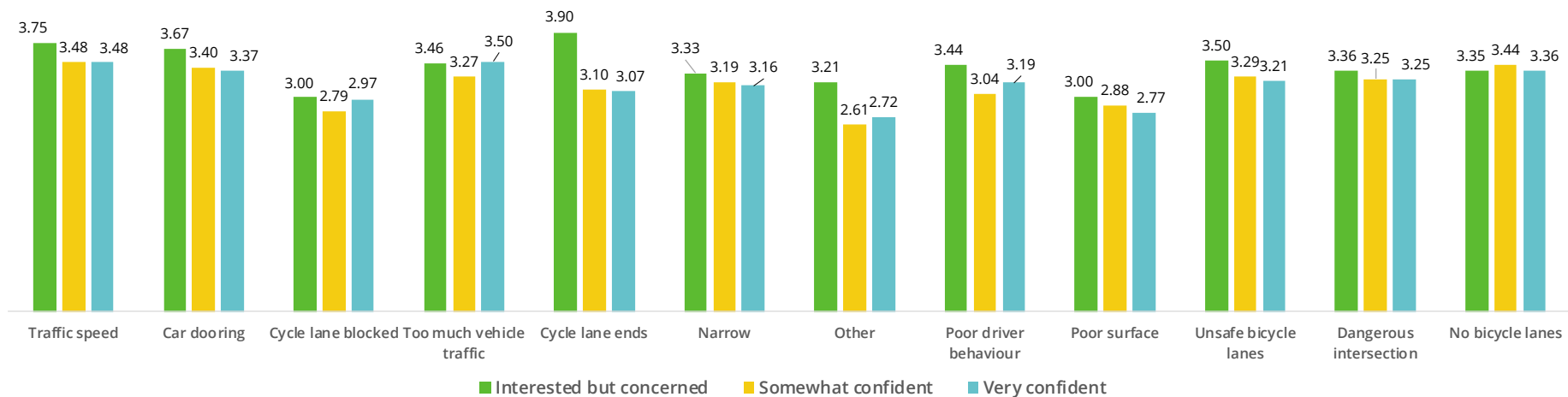


N = 6,376

Cycling stress by rider confidence

As the level of cycling stress for an individual is likely to influence their willingness to cycle it is important to assess the differences in relative cycle stress for individual with different levels of riding confidence. Understandably it is the 'Interested but concerned' cohort that experience the most cycling stress across 10 out of the 12 categories below (Figure 20). On average, this group experience 'cycle lane ends' as the most stressful (3.90) category, followed by 'Traffic speed' (3.75) and 'Car dooring' (3.67). This reiterated the importance of building a connected network of cycling infrastructure in order for less confident riders (eg. New riders) to ride more often. For the 'Somewhat confident' cyclists, 'Traffic speed' (3.48), 'No bicycle lanes' (3.44) and 'Car dooring' (3.4) were the categories with the highest average stress rating. Lastly, the 'Very confident' cohort on average experienced the most stress from 'Too much traffic' (3.5), 'Traffic speed' (3.48) and 'Car dooring' (3.37).

Figure 22 – Cycling stress by rider confidence

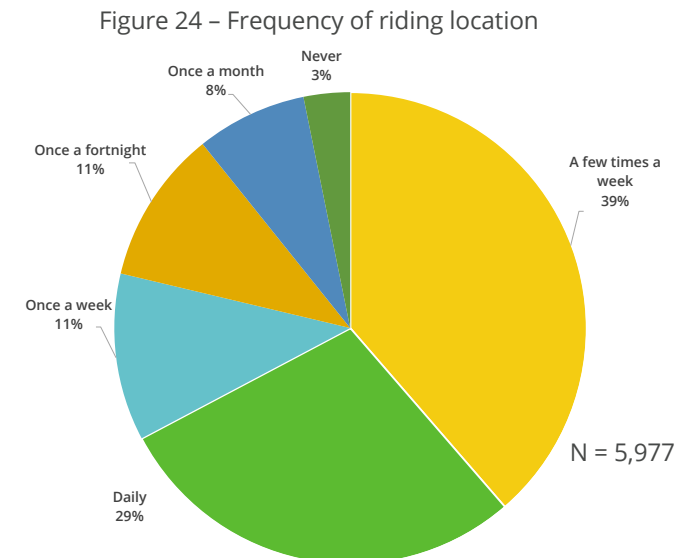
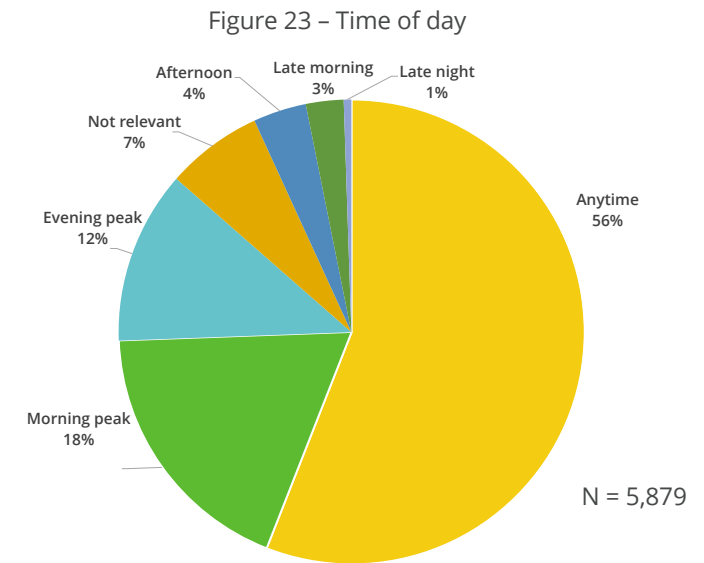


Time of day

Participants were asked what time of day they typically have the unsafe experience. 'Anytime' (55.94%) was the most common response followed by the morning (18%) and evening (12%) peak times. This suggests that 30% of 'Unsafe Spots' have a relationship with traffic volume during peak times and over 50% of unsafe spots experience occur irrespective of the level of traffic activity.

Frequency

Despite experiencing stressful cycling experiences participants appear to persist in riding in locations they deem to be unsafe or stressful. 'A few times a week' (39%) and 'Daily' (29%) were the two most common responses when participants were asked how often they rode at their selected unsafe locations. As the majority of participants are 'Very confident' (Figure 8), it would presume that they have a greater risk tolerance or are willing to accept some level of risk in order to maintain the benefits they receive in continuing to ride.

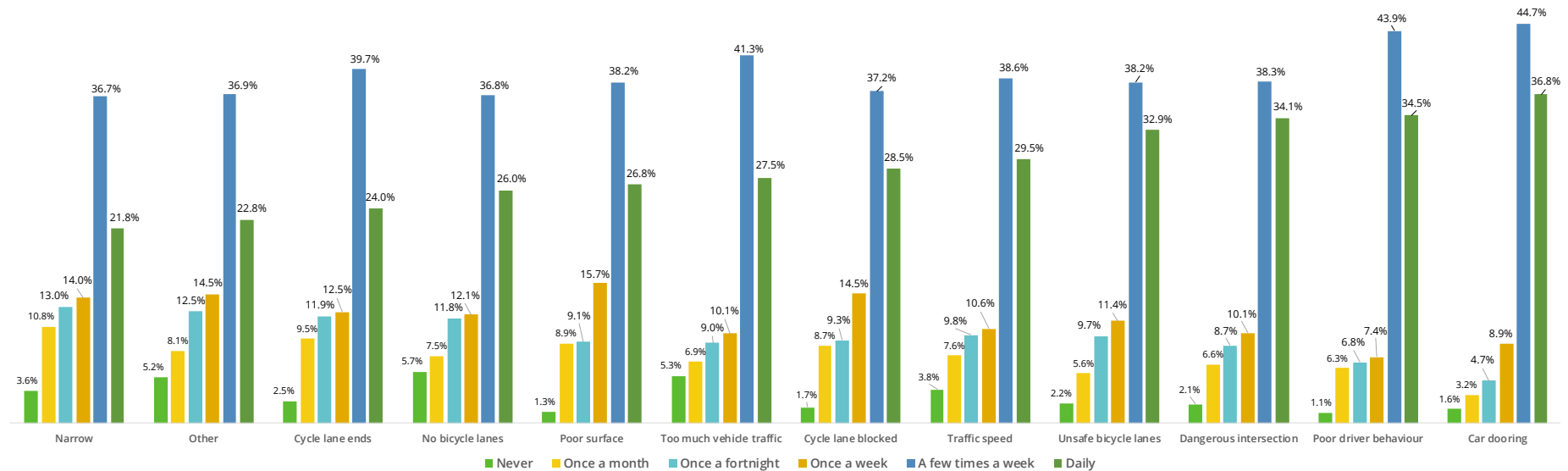


In addition, if confident cyclists are frequently having stressful experiences it would present the difficulty in encouraging more people to start riding.

Figure 24 below presents the frequency of riding locations by unsafe spot category. 'Car dooring' is the most experienced unsafe issue, with 81.5% of riders experiencing their car dooring spot multiple times during the week. 'Poor driving' was the next most common experience with 78.4%.

Figure 25 – Frequency by unsafe spot category

N = 5,977



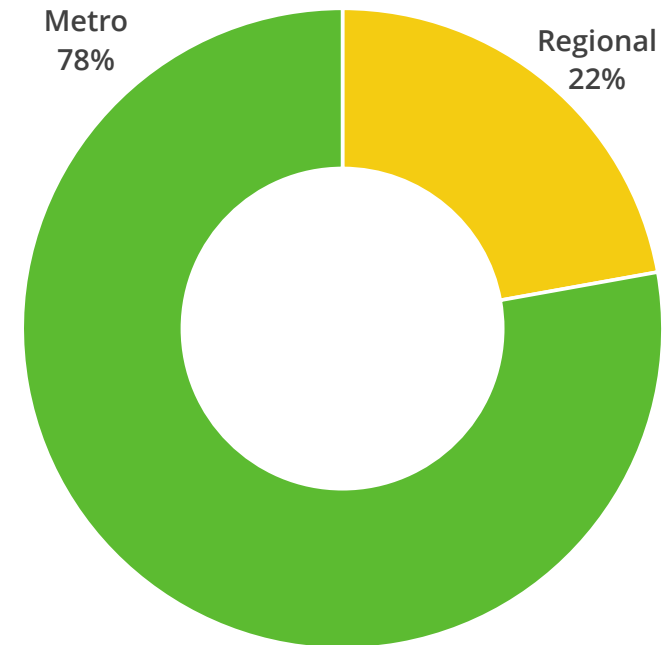
7. Safe Spots

Safe spot categories

When adding 'Safe Spot', users were asked to identify the **main reason** they feel safe at their chosen location. There were 699 'Safe Spots' added to the map, of which 78% were added in the Melbourne Metropolitan area and 22% in regional areas (Figure 25). 'Off-road path' (28%), 'Separated bicycle lane' (18%) and 'Not much vehicle traffic' (17%) were the top three most common categories (Figure 26).

A combined 76% of submissions relate to establishing greater distance from motor vehicles when cycling². Separated bicycle lanes were much more common in the metro spots compared to the regional areas whereas off-road paths and low vehicle traffic were more significant safe reasons in regional areas compared to metro areas.

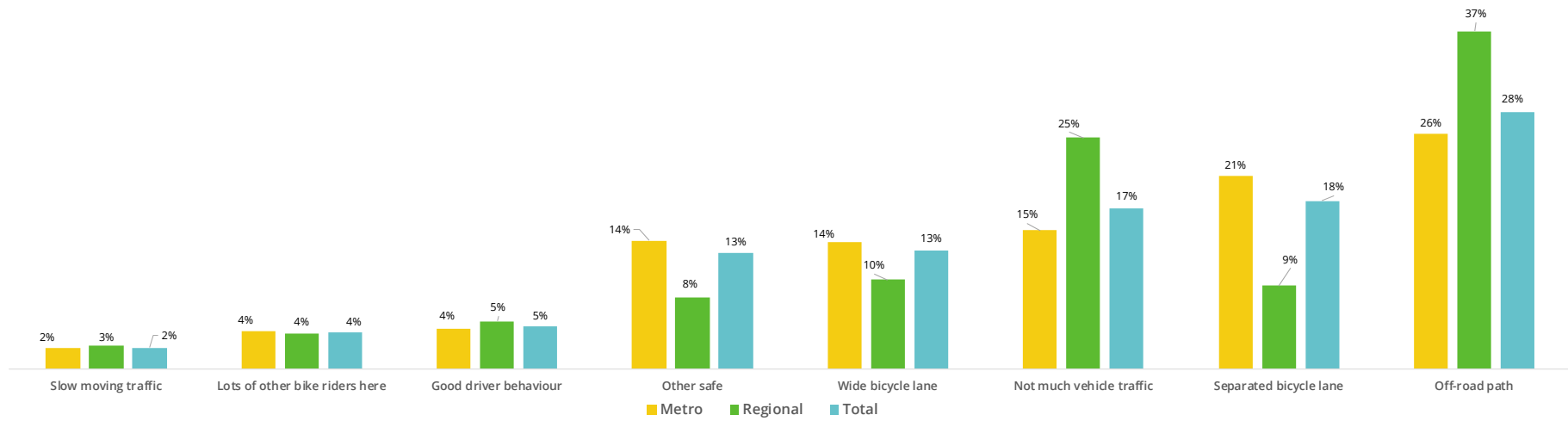
Figure 26 – Metro Vs Regional (safe spots)



N = 699 (Metro = 544, Regional = 155)

² Combining 'Off-road path', 'Separated bicycle lane', 'Not much vehicle traffic' and 'Wide bicycle lane'

Figure 27 – Safe spot categories



Frequency

Overall, 60% of participants regularly ride at their 'Safe Spot' at least a few times a week (Figure 27). 'Separated bicycle lanes' (24%) was the most cited category for daily use whilst 'Off-road path' submissions are largely being experienced (37%) once a month. This may be due to many off-road paths being used for infrequent recreational purposes.

Figure 28 – Safe Spot riding frequency

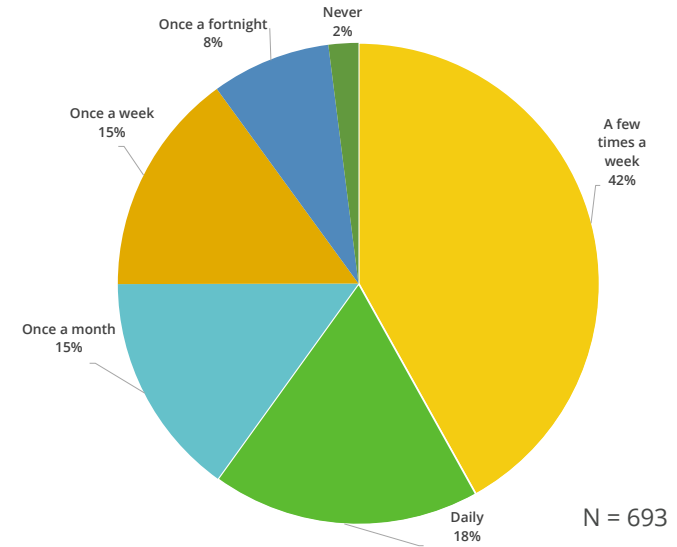
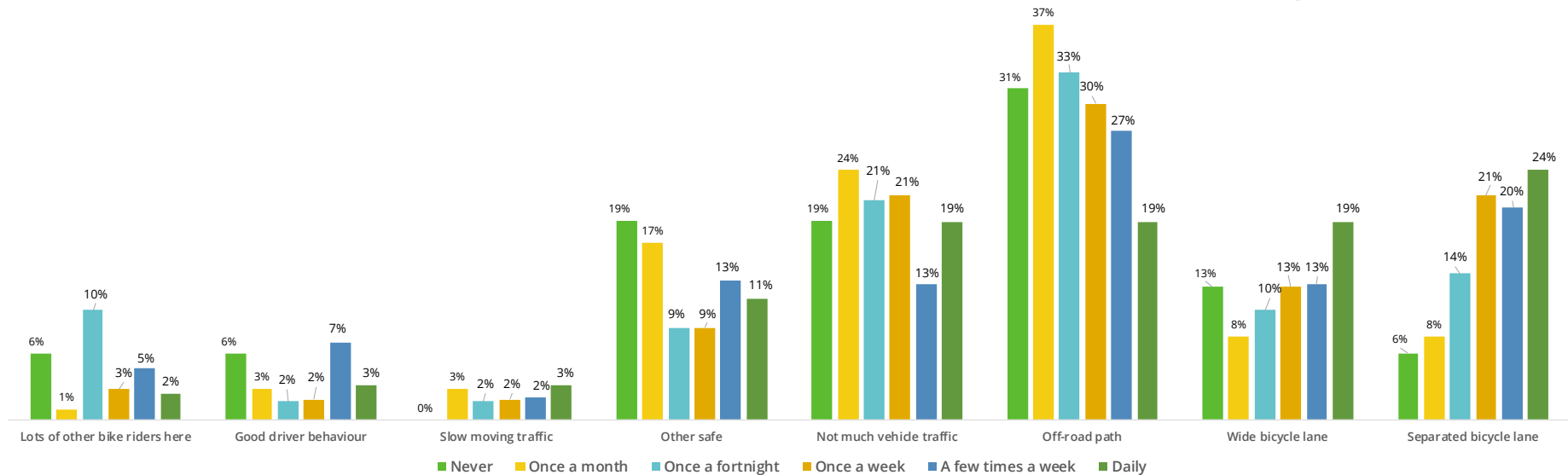


Figure 29 – Frequency by safe spot category



8. Top 10 Unsafe Spots

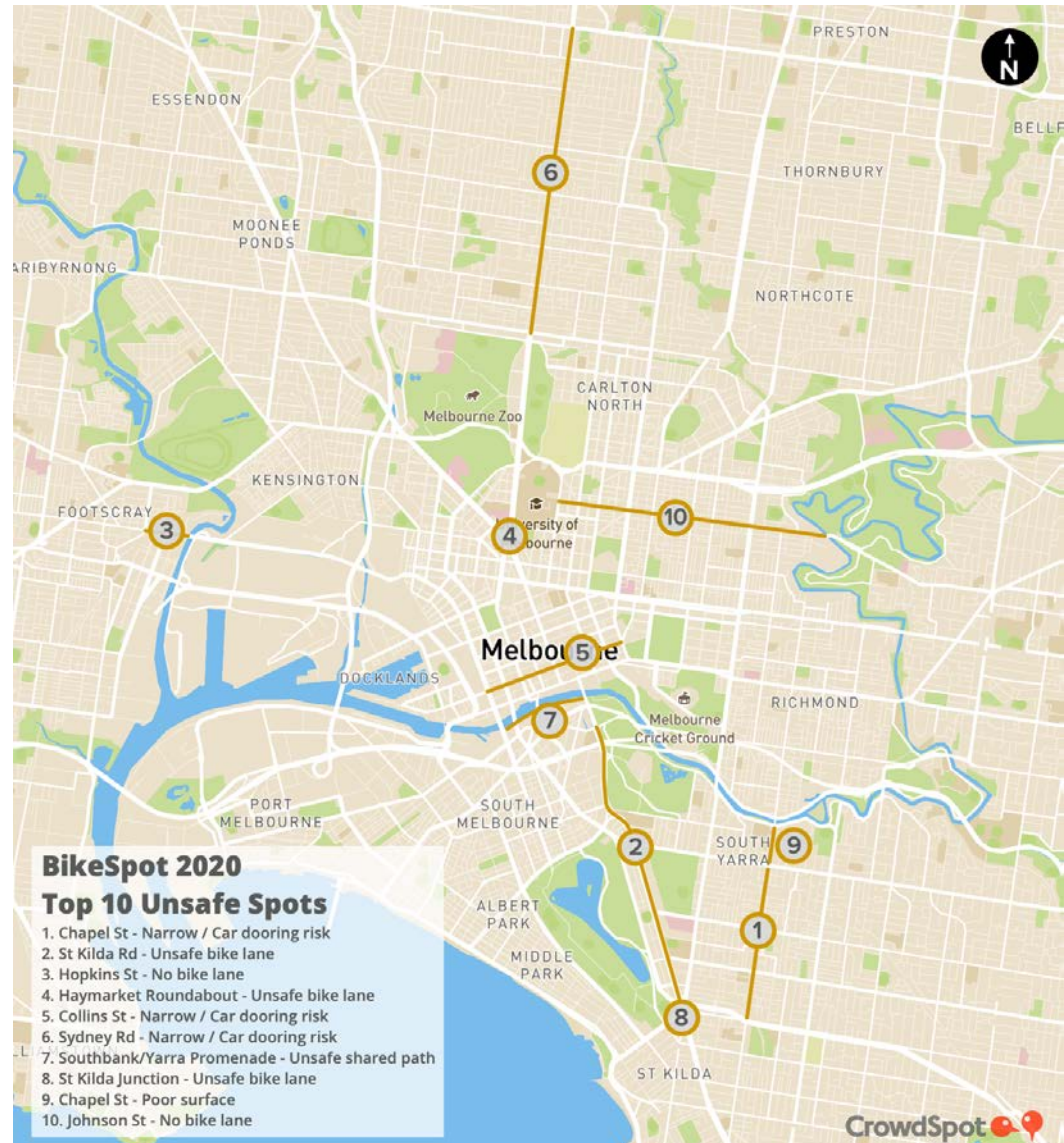
The top spots are determined by the level of 'activity' (no. of comments' + no. of 'likes) a spot receives. Spots in close proximity that share the same category/sentiment are also combined.

Figure 29 visualises the top 10 spot 'Unsafe Spots'. These locations are also the top overall spots and all located in Metropolitan Melbourne.

1. Chapel St - Narrow / Car dooring risk

'Chapel Street has so much going on: bidirectional vehicle traffic, tram lines, bike lanes and on-street parking. The situation isn't great for anyone. For cyclists, the current situation means an overwhelming amount of traffic, the constant fear of being doored from parked cars, a car pulling out from a parking bay, or being killed by a car ramming you into a parked vehicle.' – Dean

Figure 30 – Top 10 Spots



2. St Kilda Rd - Unsafe bike lane

'Bike lane is in between car lanes and car drivers are changing/joining lanes without consideration for cyclist. Bike lane should be off the road here.' - Anonymous

3. Hopkins St - No bike lane

'Multiple dangerous hazards for cyclists. No safe connection from barkly to Hopkins to the new separated bike lane on the bridge. Narrow congested road shared with heavy large vehicles.' - Jade

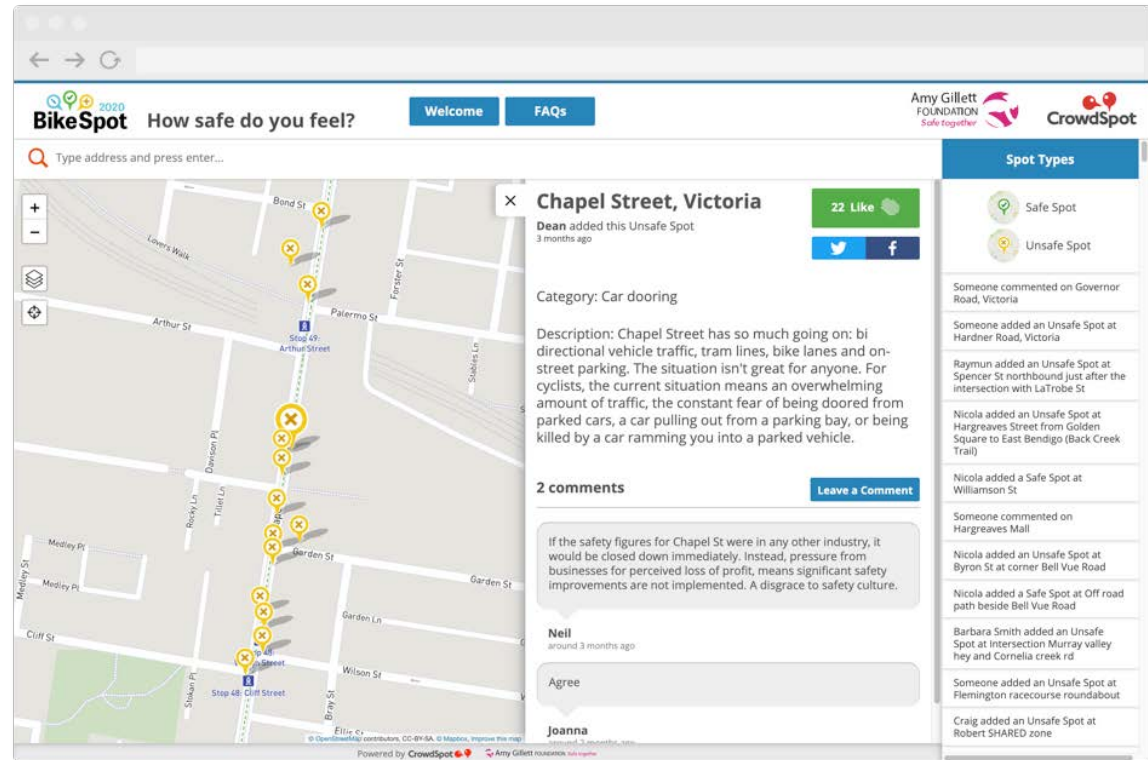
4. Haymarket Roundabout - Unsafe bike lane

'This roundabout is confusing for all users including cyclists and cars. Its so dangerous as cyclists need to merge into the middle lanes to travel north to Royal Parade when coming from the city, often requiring them to position themselves by less than a metre between two cars.' - Anonymous

5. Collins St - Narrow / Car dooring risk

'Narrow bike lane, risk of door, poor driver behaviour, pedestrians walking out between parked vehicles and stationary traffic, taxi ranks - the lot.' - Arthur

Figure 31 – Chapel St



6. Sydney Rd - Narrow / Car dooring risk

'Sydney Rd is notorious. There is so much traffic plus the car parking means cycling along here is like running the gauntlet.'

- Nathan

7. Southbank & Yarra Promenade - Unsafe shared path

'Everyone is oblivious of everyone else on Southbank - Pedestrians walk 5 abreast and leave no space for zigzagging cyclists to pass. It's stressful for everyone.' - Heather

8. St Kilda Junction - Unsafe bike lane

'So many categories for why this is unsafe! Narrow path between multi lane traffic travelling at speed and crossing over the "bike lane". Very dangerous.' - Hayley

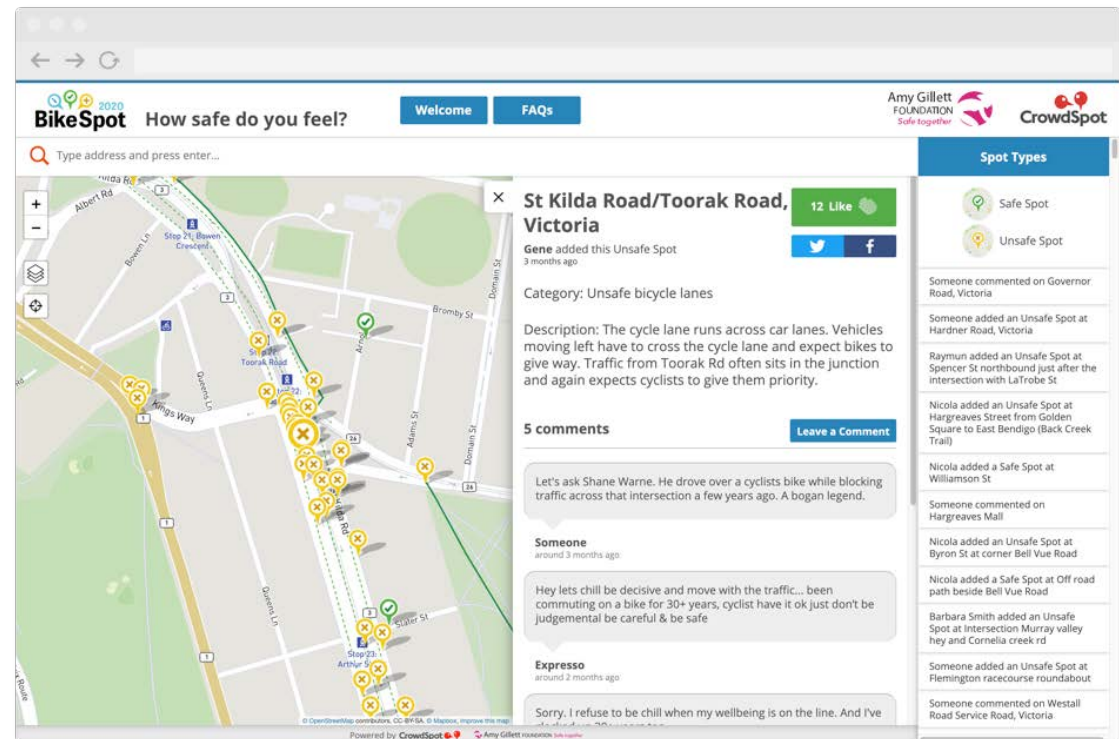
9. Chapel St - Poor surface

'The entire stretch from Toorak Rd to the river is potholed, bumpy or gravelly from all the construction and patching. This applies in both directions.' - Ash

10. Johnson St - No bike lane

'No bike lanes. An Upgrade of Johnston Street is needed. Safe separated bike lanes to provide a safe and needed East West link! With priorities given to both bikes and buses at intersections.' - Craig

Figure 32 – St Kilda Rd



Top Unsafe Spots - 2016 Vs 2020

Comparing the top unsafe spots from 2016 with BikeSpot 2020 results we can see from Figure 32 that the four locations of Chapel St (no. 5 to no.1), Haymarket Roundabout (no. 2 to no. 4), Sydney Rd (no. 6) and Southbank/Yarra Promenade (no.1 to no. 7) that remain in the top 10. Harbour Esplanade (no.15) and the two St Kilda Rd intersections from 2016 remain within the top 30. The remaining top two locations from 2016 (Swanston St / Flinders St and Elizabeth St) recording significant less submissions.

Figure 33 – 2016 Vs 2020 Top Unsafe Spots

| No. | Location | Unsafe category | Change | |
|-----|---|---------------------------|--------|---|
| 1 | Southbank/Yarra Promenade | Unsafe shared path | - 6 | ↓ |
| 2 | Haymarket Roundabout | Unsafe bike lane | - 4 | ↓ |
| 3 | Swanton St / Flinders St | Unsafe bike lane | - 200 | ↓ |
| 4 | St Kilda Rd / Southbank Blvd | Dangerous Intersection | - 97 | ↓ |
| 5 | Chapel St | Narrow / Car dooring risk | + 4 | ↑ |
| 6 | Sydney Rd | Narrow / Car dooring risk | - | - |
| 7 | Swanston St | Mixed use zone | - 20 | ↓ |
| 8 | Elizabeth St (Queensberry St / Victoria St) | Unsafe bike lane | N/A* | |
| 9 | St Kilda Rd / Commercial Rd | Dangerous Intersection | - 19 | ↓ |
| 10 | Harbour Esplanade | Dangerous speed bumps | - 5 | ↓ |

- No change

*N/A – No submission records

Regional Victoria

The top spots in regional Victoria (all unsafe) are located in the Echuca and the Geelong / Bellarine Peninsula. The focus in Echuca appears to be as a result of a committed and active user group. Please note that due to the limited number of Safe Spots submitted in Regional Victoria we are unable to identify a clear set of top Safe Spots.

1. Bowen St, Echuca - No footpath or bike lane

My three-year old loves going for bike rides and there is no footpath heading towards Goulburn road past Food MAC. Bowen street is a popular area for kids to get to school and people front lawns are full of bindis, forcing us to walk/ride on the road. - Anonymous

2. Murray V. Hwy, Echuca - No bike lane/traffic speed

Not safe riding amongst 100km/hr traffic, especially with kids, shared paths needed. - Chelsea

Figure 34 – Top Regional Spots



3. 13th Beach Rd, Barwon Heads - Poor driver behaviour and surface

This road is a very popular cycling route and also with car drivers to view the ocean and check out the surf. With an 80 kmh speed limit I feel unsafe as a cyclist on this narrow poorly surfaced road. – Trevor

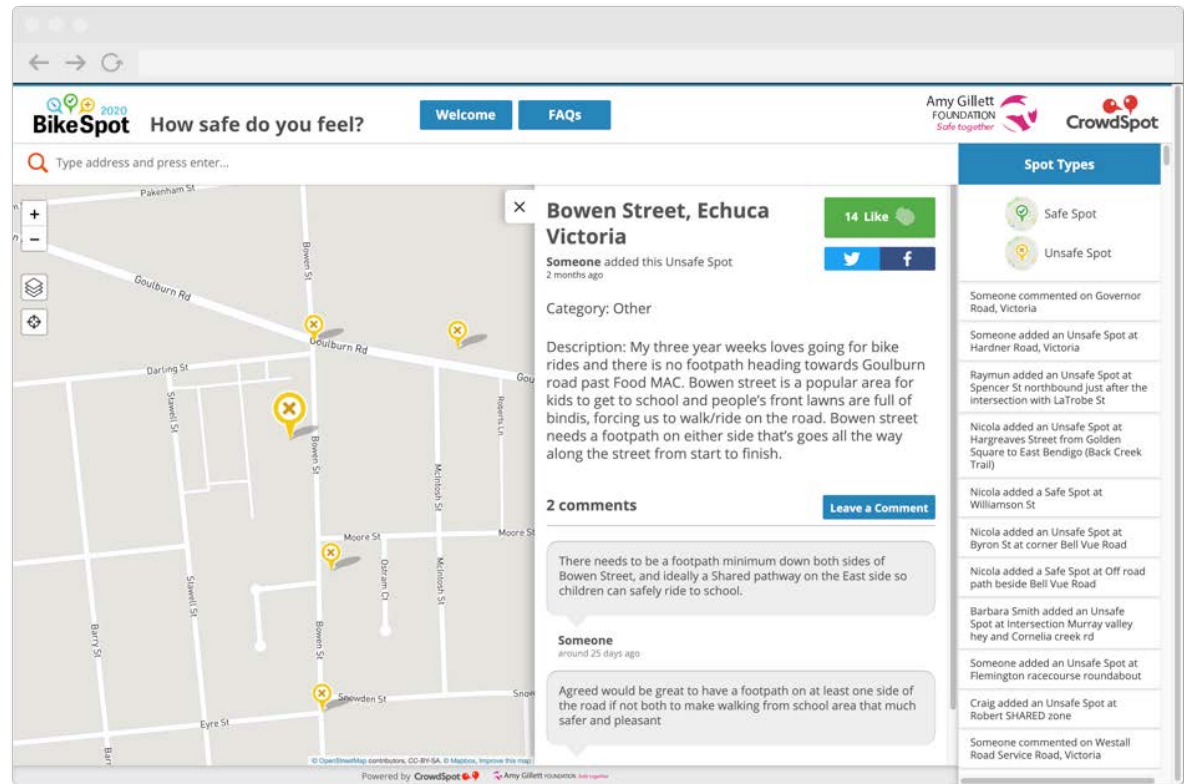
4. Queenscliff Rd, Swan Bay - No bike lane

This section of road is a key bike link on the Bellarine , With high car & bike traffic however the road shoulder varies from sufficient to nothing and places Bike riders at risk. - PeterR

5. Pakenham St, Echuca - Dangerous intersection

No safe crossing points, missing footpath connections, unsafe for many children to ride to local primary and high schools. You have to cross this intersection to connect to the Levee Track, a safe off-road walking and cycling option. - Anonymous

Figure 35 – Bowen St, Echuca



6. Hovell Street, Echuca - No bike lane

Travelling in an westerly direction from Anstruther st by bike to enter the bike path taking you under the bridge you must avoid all traffic coming at you in all directions to gain entry to the cycle path. We need a better entry from Anstruther St. – Bob Craig

7. Barwon Heads Rd - Dangerous intersection

Dangerous crossing, cars travel well above speed limit, don't allow cyclists or pedestrians to cross. This is a major cycling route. - Matt

8. Denmark Road, Echuca - No bike lane

Many residents (adults and children) live in the South East Rural Living precinct and want to safely cycle into Echuca for work, school or leisure, however, cannot safely do so due to the lack of a safe cycle lanes and pathways. There is a new industrial estate under development, however, no pathways have been created to walk or cycle safely. - Anonymous

9. Forest Rd South - No bike lane

This road is 70 km/h with a high number of truck, and cyclists have to use the traffic lanes. If a cyclists is on this road, and a truck makes a late move to pass, you have no time to react to a cyclist in front to you. Seal the shoulders (and fix the road). - Mark

10. McKenzie Rd, Echuca - No bike lanes

This is a dangerous intersection for all modes of transport. There are no cycling lanes, footpaths and it is a busy intersection. This is a major intersection linking many workplaces and residential homes with downtown Echuca. - Anonymous

9. Top 10 Safe Spots

1. Footscray Rd Trail

'Thumbs up for this 'temporary' cycle lane while West Gate Tunnel is under construction. It is highly appreciated that this cycle lane is treated with as much importance as normal roads for cars. That's how it should always be. Thank you.' -

Edouard

2. Wellington St – Separated bike lane

'Wide separated bike lane, amazing biking experience.' -

Brooke

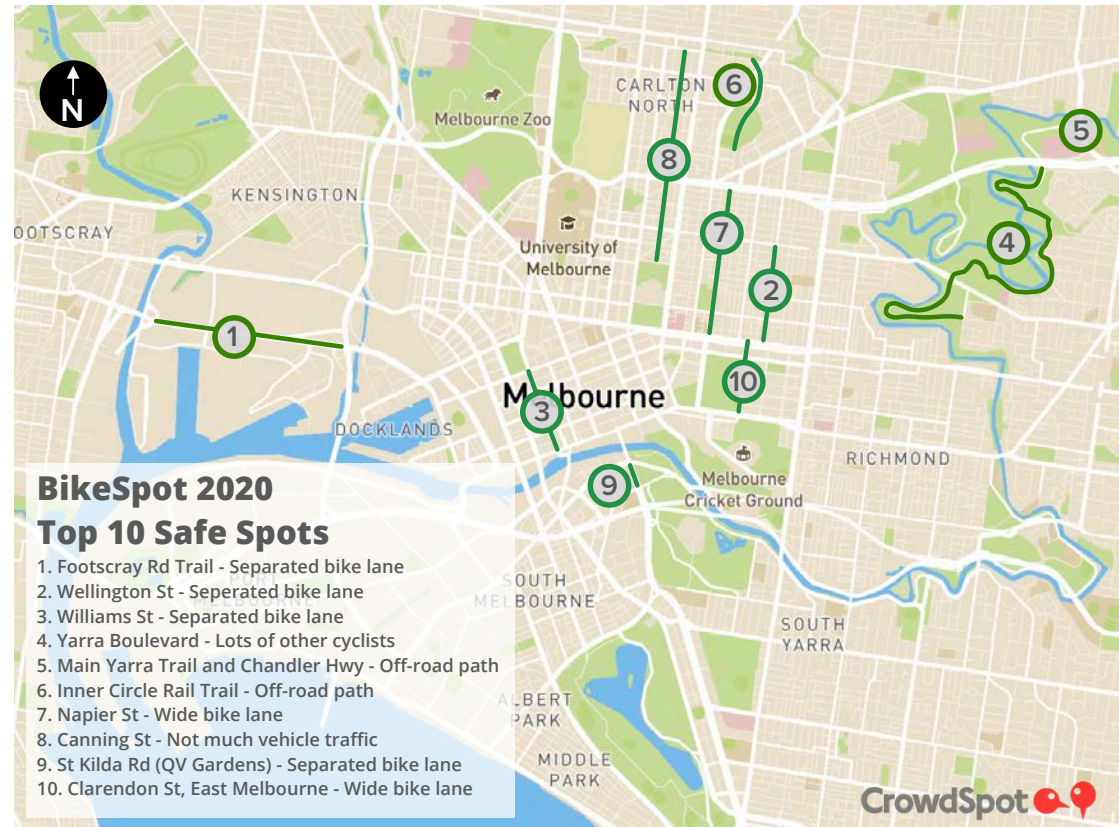
3. William St – Separated bike lane

'New separated bike lane is brilliant. It's also a passive visual reminder for drivers to keep their speed in check, which seems to work well (not much speeding).' - Cory

4. Yarra Boulevard – Lots of other cyclists

'Vehicles passing safely, many riders' – Justin W

Figure 36 – Top 10 Safe Spots



5. Main Yarra Trail / Chandler Hwy - Off-road path

'This new on road cycle lane and crossing over the Yarra is a vast improvement on the narrow bridge we used to have to use.' - Melissa

6. Inner Circle Rail Trail - Off-road path

'Well-used off-road bike path.' - Anonymous

7. Napier St - Wide bike lane

'Like this new bike boulevard layout for Napier Street. Rest of the street needs the same treatment.' - Anonymous

8. Canning St – Not much vehicle traffic

'Well designed to limit traffic using as a thoroughfare, priority bike traffic lights subtly changed driver behaviour at Elgin st, many bike users of all types. Excellent example of bicycle corridor.' - Fi

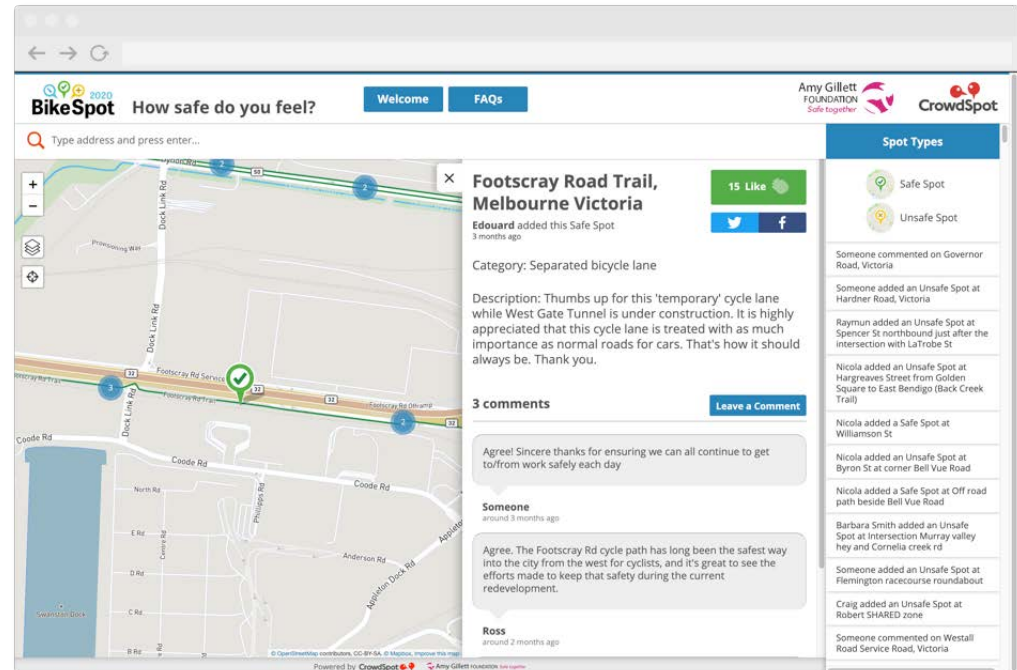
9. St Kilda Rd (alongside QV Gardens) - Separated bike lane

'Good to see separation goes right to intersection and does not disappear' - Morton

10. Clarendon St, East Melbourne - Wide bike lane

'The wide and separated bike lane gives plenty of space to avoid car doors and cars on the other side.' – Brooke

Figure 37 – Wellington St



Top Safe Spots - 2016 Vs 2020

There are 4 Safe Spots from the 2016 top 10 list that feature in the 2020 top Safe Spot list. These include Footscray Rd (no. 2 to no. 1), Wellington St (no. 3 to no. 2), Canning St (no. 1 to no. 8) and St Kilda Rd (alongside QV Gardens - no. 6 to no. 9). Interestingly, it was only the separated bike lane of Footscray Rd and Wellington St that moved up in order. Both corridors were the beneficiaries of improvements since 2016. Other additions to the 2020 top 10 (Williams St, Main Yarra Trail / Chandler Hwy and Clarendon St) also received relatively new cycling upgrades. Conversely, people may have simply become accustomed to the 2016 top 10 locations and therefore felt no need to shine a light on relatively older cycling infrastructure features.

Figure 38 – 2016 Vs 2020 Top Safe Spots

| No. | Location | Safe category | Change | |
|-----|--|------------------------|--------|---|
| 1 | Canning St | Wide bike lane | - 7 | ↓ |
| 2 | Footscray Rd - Separated bike lane | Separated bike lane | + 1 | ↑ |
| 3 | Wellington St - Separated bike lane | Separated bike lane | + 1 | ↑ |
| 4 | Rathdowne St (hook turn into Queensberry St) | Priority crossing | - 100 | ↓ |
| 5 | Yarra River to Docklands (Nth Bank) | Separated bike lane | N/A* | |
| 6 | St Kilda Rd (alongside QV Gardens) | Separated bike lane | - 3 | ↓ |
| 7 | Moonee Ponds Creek Trail | Separated bike lane | N/A* | |
| 8 | Swanston Street | Closing street to cars | - 100 | ↓ |
| 9 | Napier st & Johnston st | Priority intersection | - 100 | ↓ |
| 10 | Main Yarra Trail pontoons | Off-road path | - 100 | ↓ |

*N/A – No submission

10. Top 10 Unsafe Spots Vs CrashStats

The 2016 BikeSpot project contained a focus to explore differences between perceived risk and historical crash locations. As Government organisations use crash data for safety insights and to inform planning decisions it is important to validate and understand differences between crash data and perceptions of safety.

Results from 2016 indicated that there was strong variation between the two data sources.

To compare these locations of high-perceived risk with crash history, we will cross reference the BikeSpot data with official VicRoads bicycle crash locations from the past 3 years of available data (Jan 2016 - Mar 2019). During this time there were 3,998 bicycle related crashes in Victoria. This does not include non-injury crashes.

It is important to note that VicRoads CrashStats data is generated through police crash reporting. As a result, these tend to involve more serious injuries and therefore minor crashes often go unreported.

Figure 39 – Cycling crashes (Jan 2016 – Mar 2019)

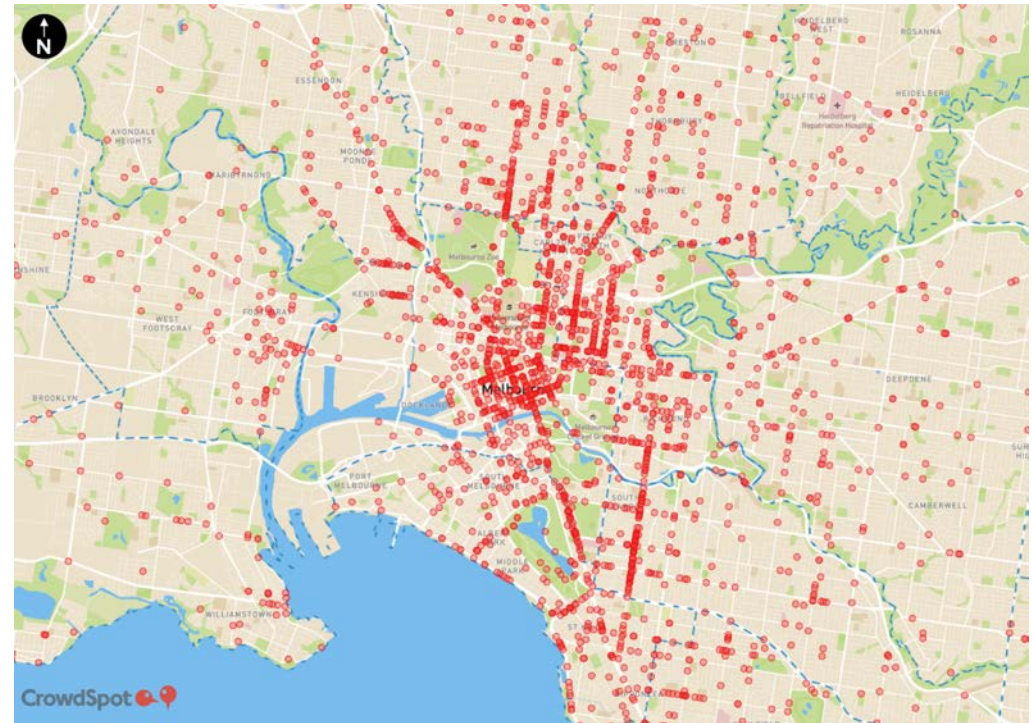


Figure 38 compares the top 10 Unsafe Spots with the number of crashes that involved cyclists and took place in the 3-yr period between 2016 - 19. Key points include:

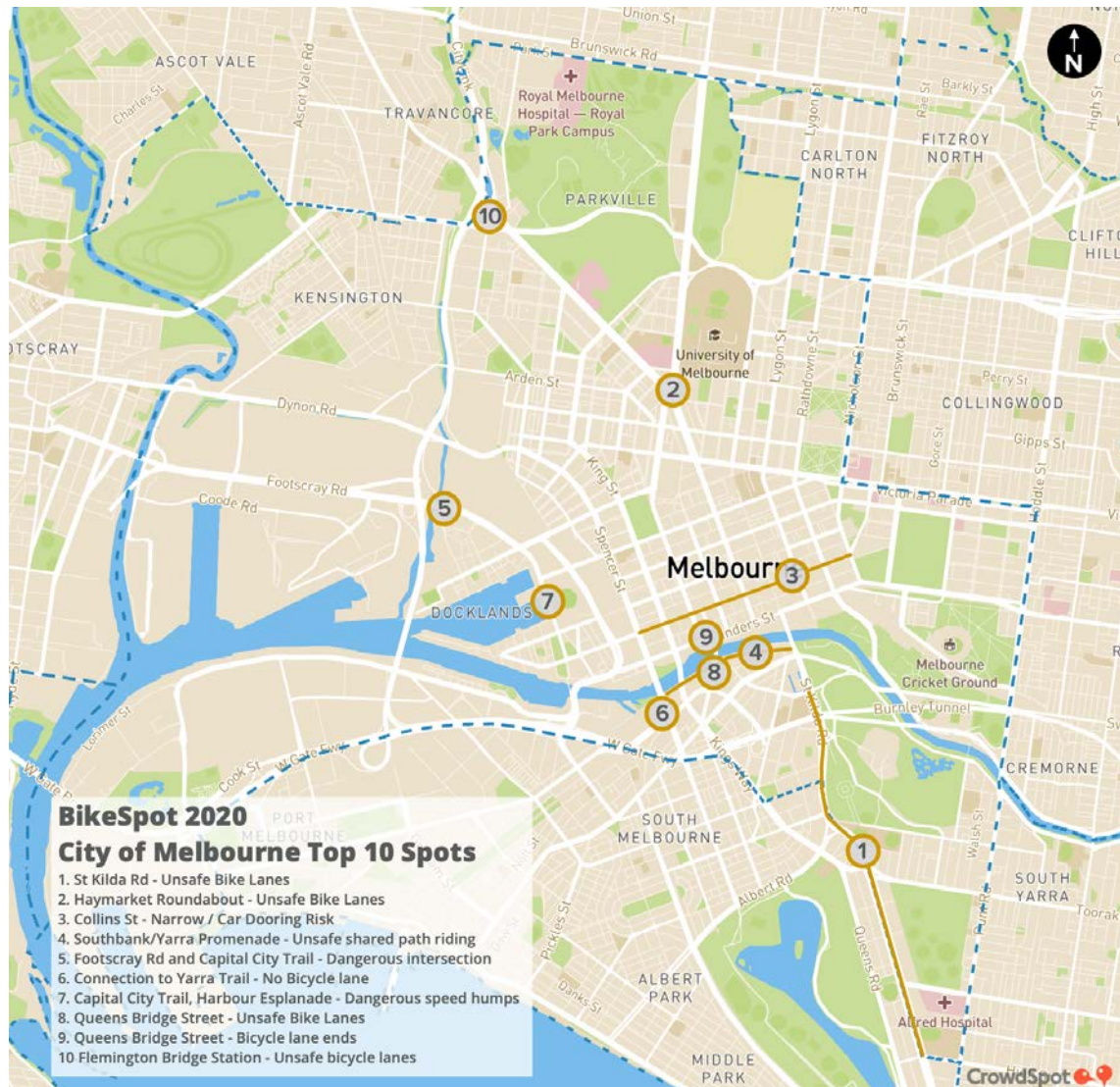
- Four of the top unsafe spot locations recorded less than 3 crashes between 2016-19.
- Six unsafe spot locations recorded double digit crashes during the 3-year period. These locations experience relative high volumes of cycling corridor movement.

Figure 40 – Cycling crashes at Top 15 Unsafe Spots

| Location | Crashes |
|---|---------|
| 1. Chapel St - Narrow / Car dooring risk | 55 |
| 2. St Kilda Rd - Unsafe bike lane | 55 |
| 3. Hopkins St - No bike lane | 0 |
| 4. Haymarket Roundabout - Unsafe bike lane | 1 |
| 5. Collins St - Narrow / Car dooring risk | 36 |
| 6. Sydney Rd - Narrow / Car dooring risk | 40 |
| 7. Southbank/Yarra Promenade - Unsafe shared path | 0 |
| 8. St Kilda Junction - Unsafe bike lane | 2 |
| 9. Chapel St - Poor surface | 13 |
| 10. Johnson St - No bike lane | 30 |

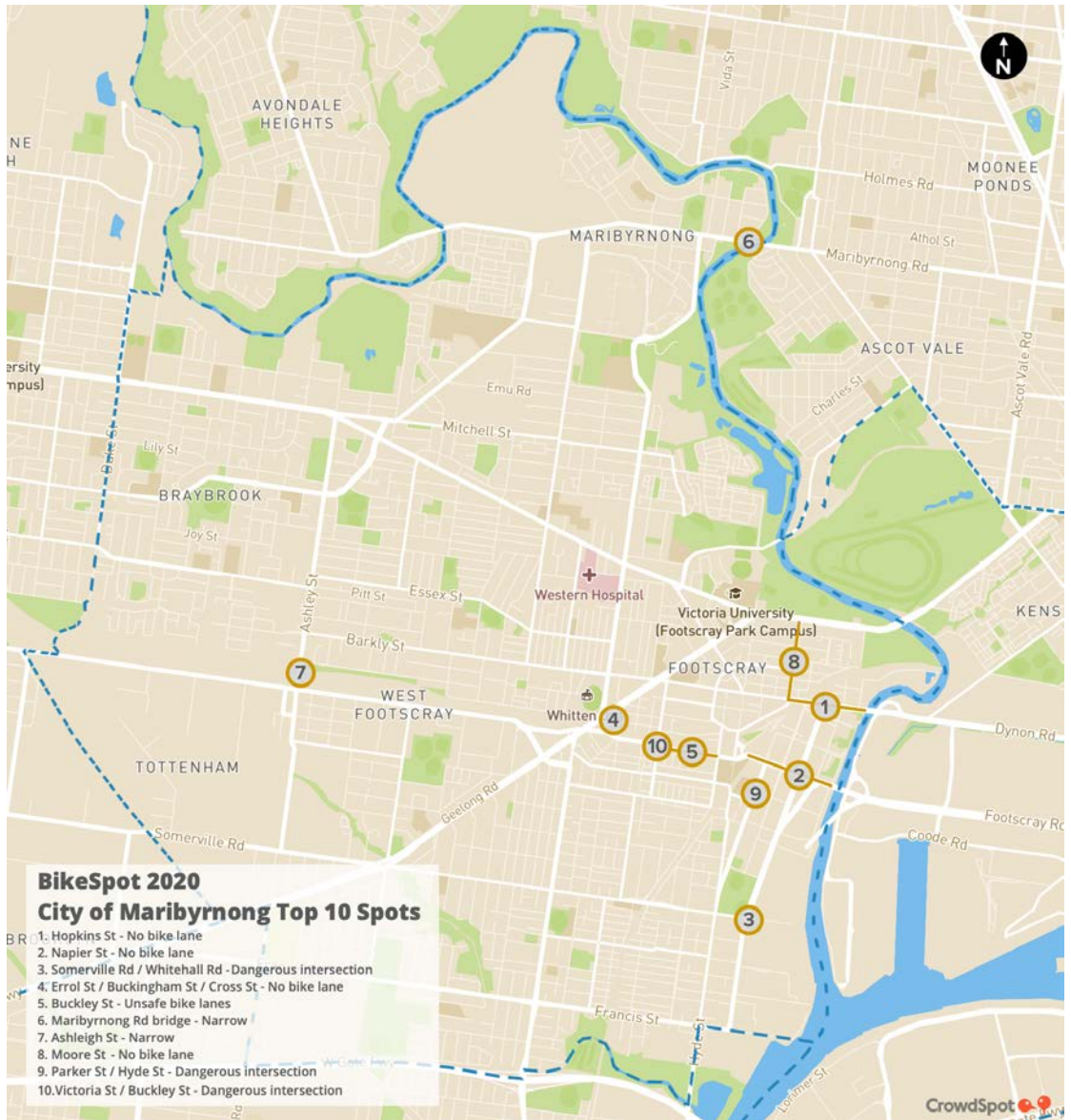
Despite the fact that just under half of these locations do not have a strong historical crash record, does not mean they are safe. It is reasonable to expect that people who perceive risk at certain locations would tend to take more caution when riding at those locations (or even avoid riding at the location altogether). This confirms that people’s perception of safety concerns can vary considerably from official crash data. While these data sources can tell a different story they both can have a considerable impact on people’s willingness to cycle more often.

APPENDIX A – Top Spots in each partnering LGA

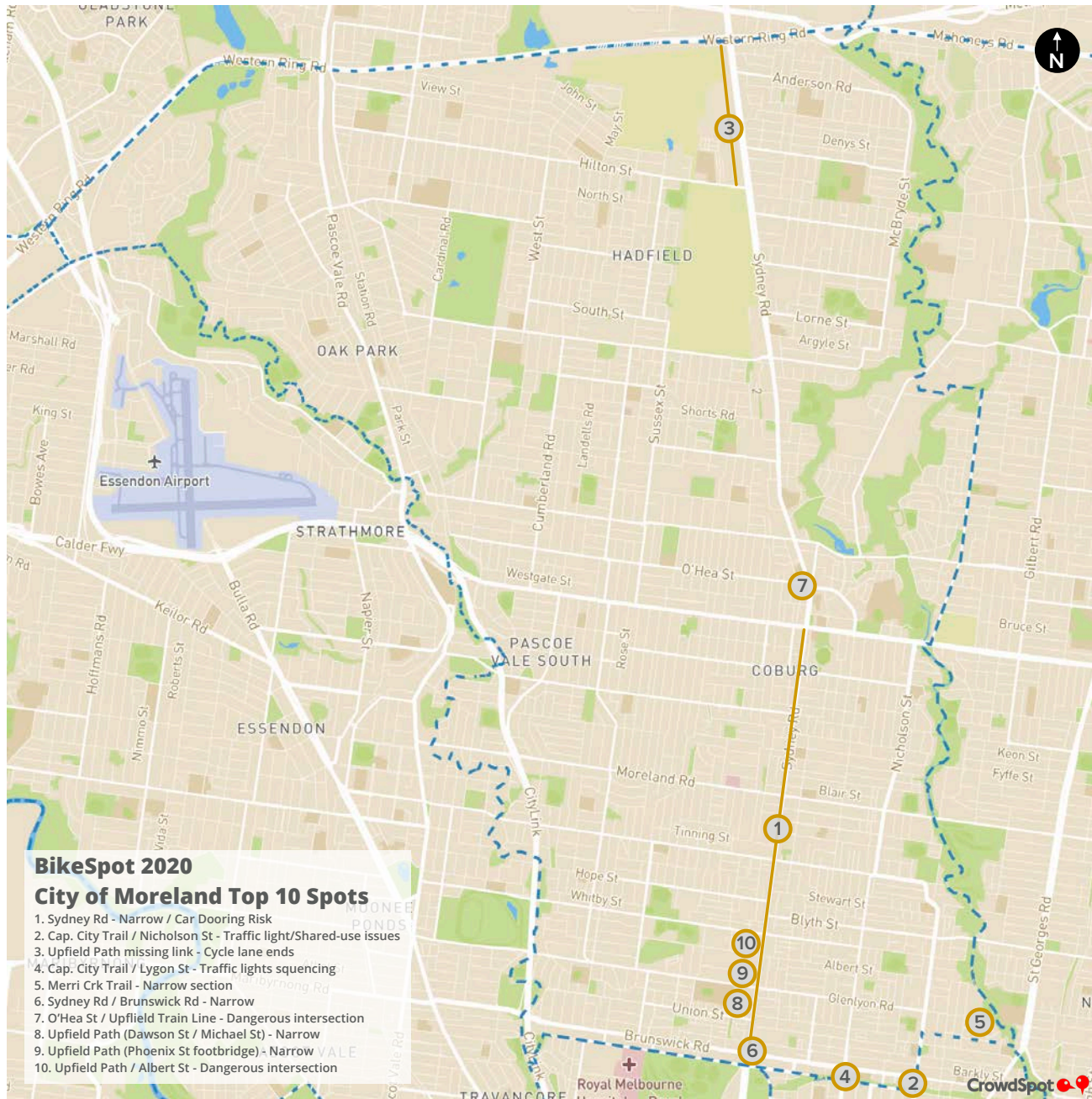


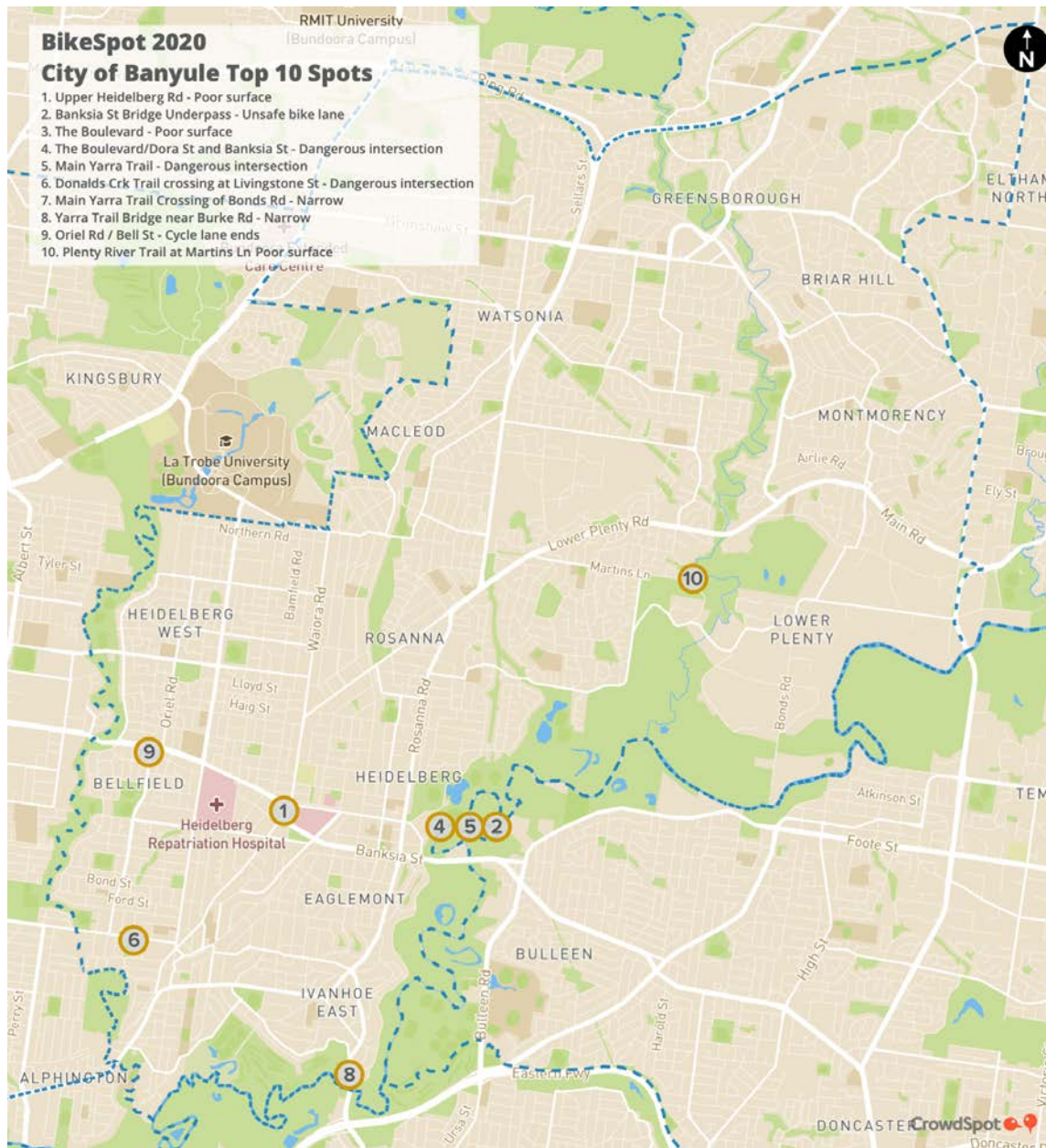


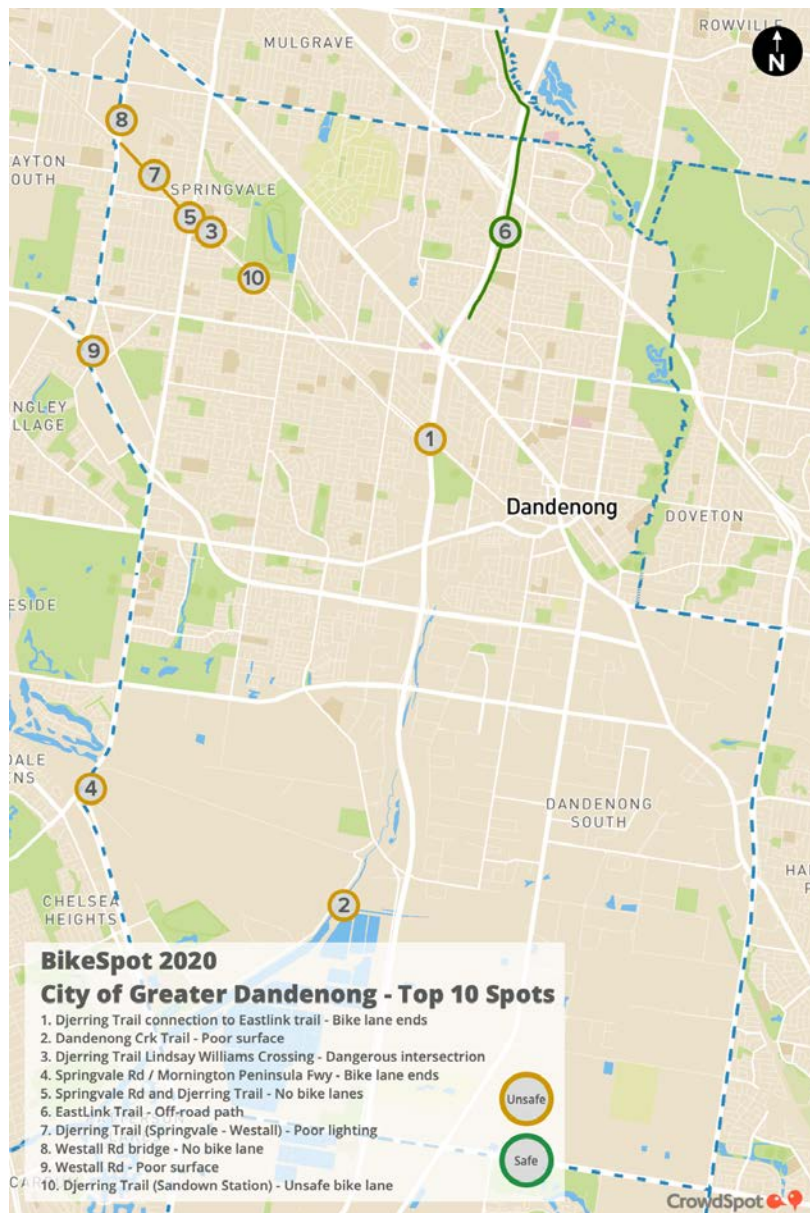


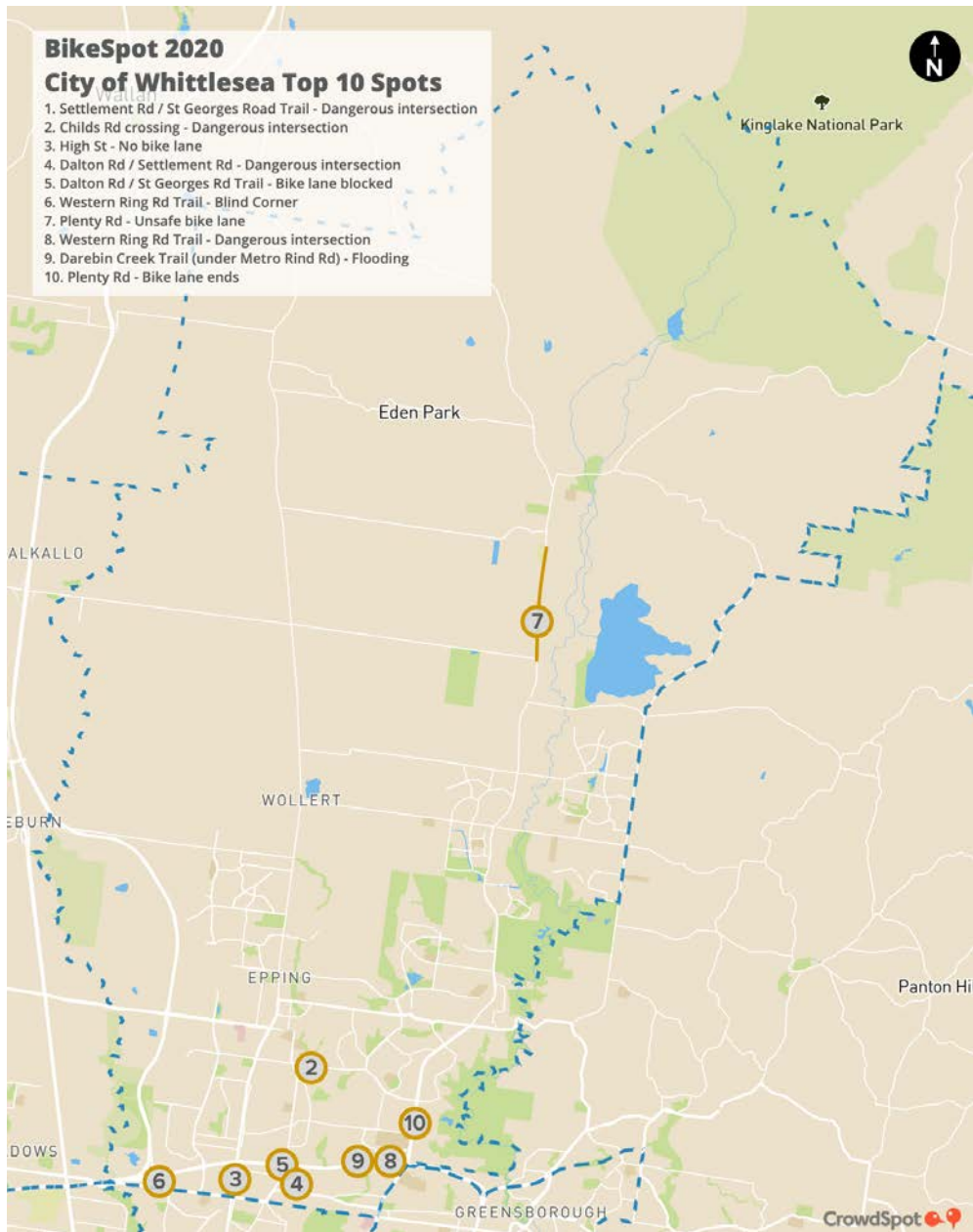


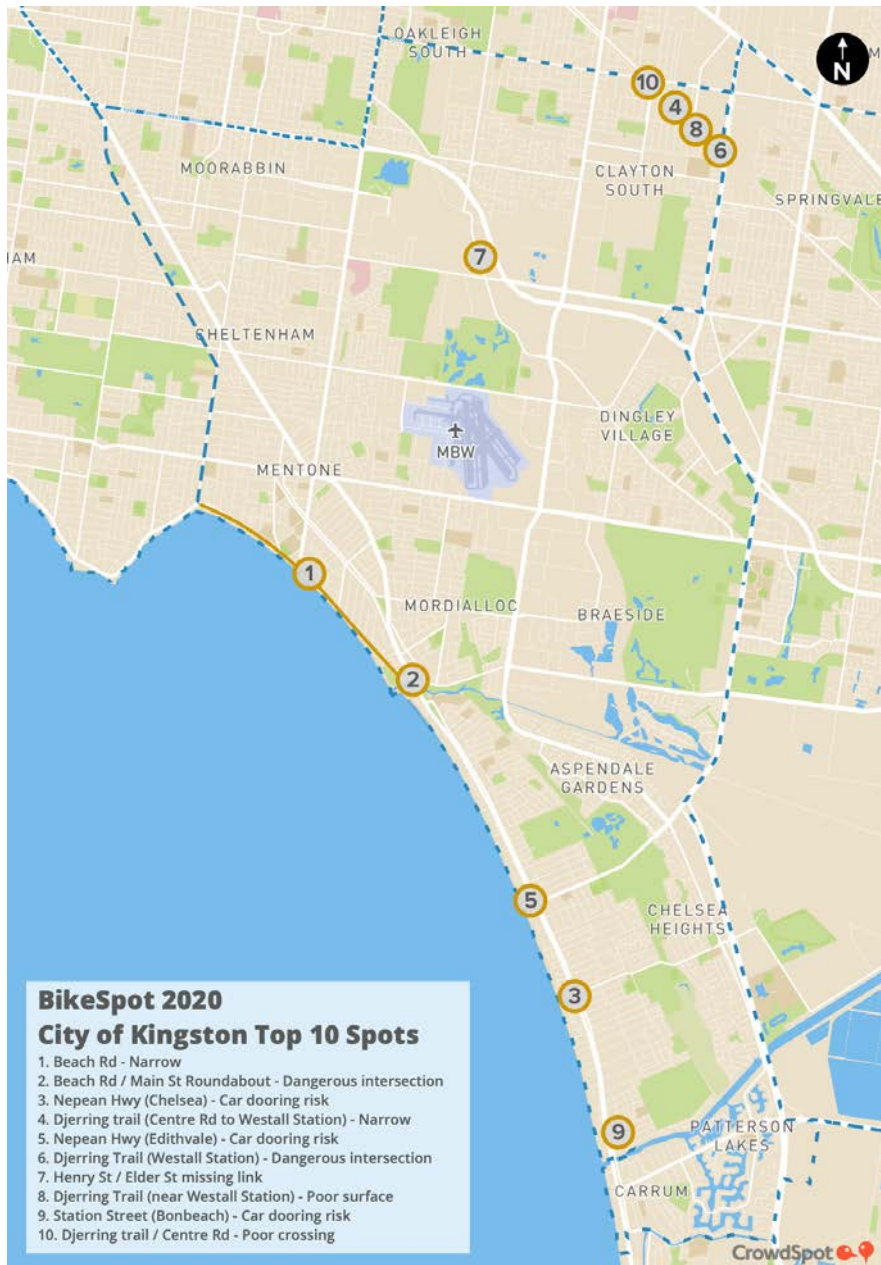


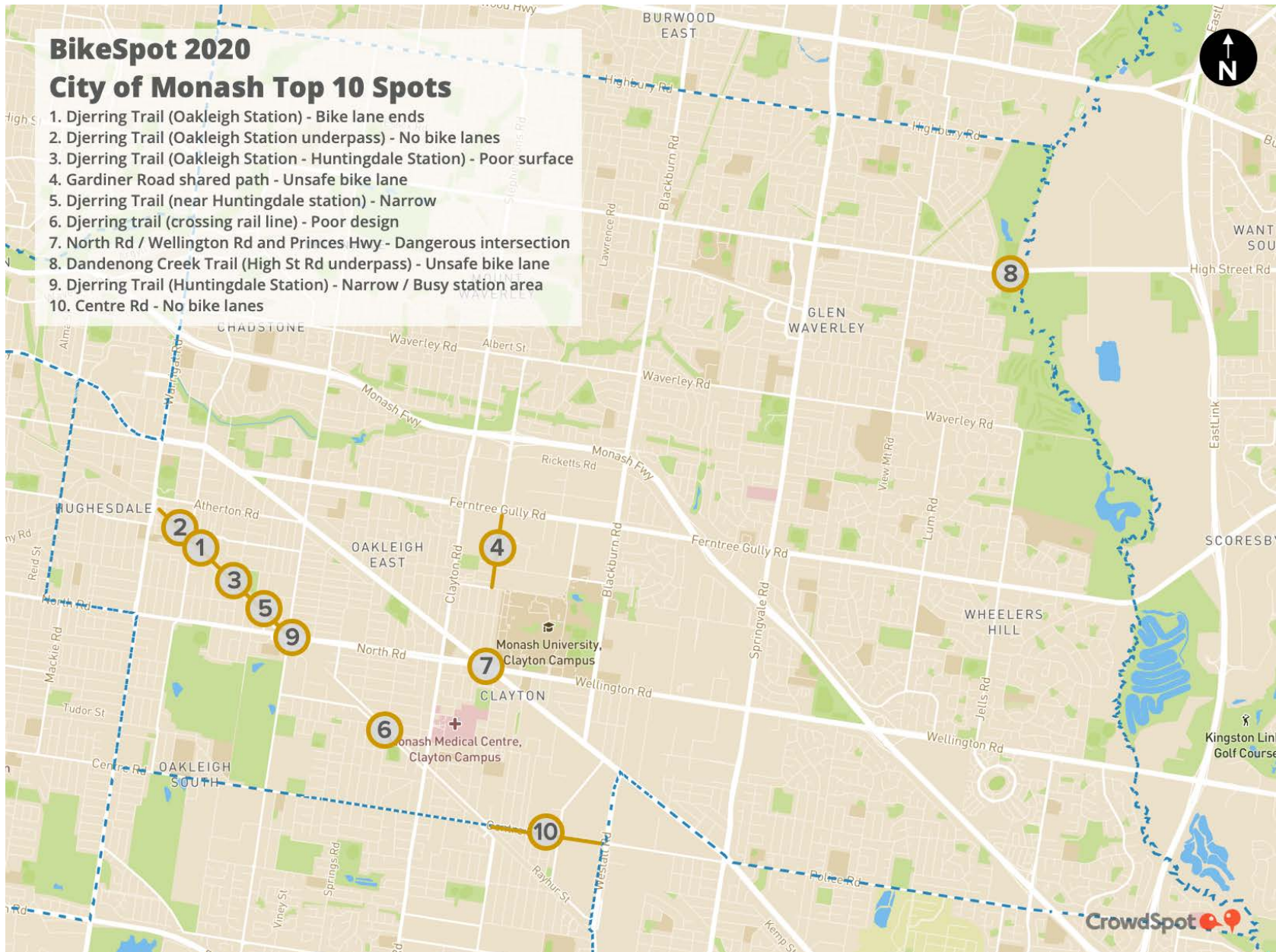












APPENDIX B – Media

Broadsheet - 17 May 2020

<https://www.broadsheet.com.au/melbourne/city-file/article/bikespot-mapping-places-victoria-where-cyclists-feel-unsafe-heres-how-you-can-help>

The Age – 14 May 2020

<https://www.theage.com.au/national/victoria/melbourne-cyclists-single-out-scariest-suburbs-for-riding-20200514-p54t11.html>

The screenshot shows the Broadsheet website interface. At the top, there is a navigation menu with categories like 'ART & DESIGN', 'ENTERTAINMENT', 'FASHION & STYLE', 'FOOD & DRINK', 'THINGS TO DO', 'TRAVEL', and 'THE SHOP'. The main headline reads 'Bikespot Is Mapping the Places in Victoria Where Cyclists Feel Unsafe - Here's How You Can Help'. Below the headline is a sub-headline: 'Noticed a pothole, dangerous intersection, narrow bike path or no bike path at all? Add it to this interactive map to give your fellow cyclists (and maybe the local council) a heads up.' A large photograph shows a cyclist riding on a city street with a dedicated green bike lane. To the right of the main image is a 'YOU MAY ALSO LIKE' section with three article thumbnails: 'Victorians Will Soon Need Pre-Approval to Enter South Australia', 'Dan Andrews Tightens Victoria's Coronavirus Restrictions Again After Outbreaks', and 'Fitzroy's Historic Spanish Club'.

The screenshot shows the The Age website interface. The main headline is 'I went straight into the back of it': Cyclists single out Melbourne's scariest suburbs'. The author is 'Chloe Booker' and the date is 'May 14, 2020 - 11.45pm'. The article text states: 'Melbourne's CBD, St Kilda and Footscray are among the scariest suburbs to ride in, according to cyclists. Bike riders have been pinpointing Victoria's most dangerous and safest spots for cycling using an online interactive survey that will inform local and state government road infrastructure policy.' Below the text is a photograph of two men, Anthony Aisenberg and Michael Barrett, with a bicycle. A caption below the photo reads: 'CrowdSpot director Anthony Aisenberg with Michael Barrett, who says he started taking different routes after colliding with a car on St Kilda Road last year. SIMON SCHULTER'.

Riverine Herald – 4 May 2020

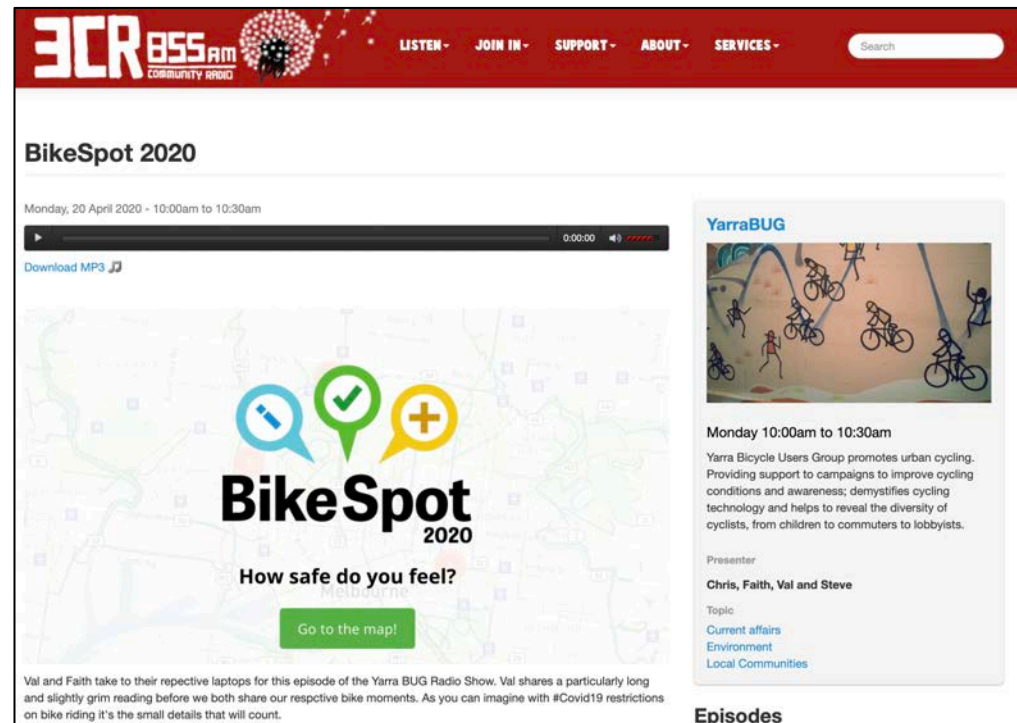
<https://www.riverineherald.com.au/news/2020/05/04/1157310/echuca-bike-riders-urged-to-report-unsafe-cycling-spots>

3CR Yarra BUG Radio Show – 20 April 2020

<https://www.3cr.org.au/yarrabug/episode-202004201000/bikespot-2020>



The screenshot shows the Riverine Herald website. At the top, there are navigation links for 'READ PAPER', 'VIRUS UPDATES', and 'SUBSCRIBE'. Below this is a search bar and a 'LOG IN' button. A banner advertisement for 'MICHAELE'S' is visible. The main article is titled 'Echuca bike riders urged to report unsafe cycling spots' by IVY JENSEN, dated May 04 2020. It features a photo of two cyclists, Piper and Iai Hutson. A sidebar on the right contains a 'Thinking of buying an investment property?' advertisement with interest rates of 2.90% and 4.75%, and a 'Latest articles' section with 'AAP Newswire' links. At the bottom, there is a 'NEWSLETTER' sign-up form.



The screenshot shows the 3CR 'BikeSpot 2020' radio show page. The header includes the 3CR logo and navigation links: 'LISTEN - JOIN IN - SUPPORT - ABOUT - SERVICES'. A search bar is on the right. The main content area features a 'BikeSpot 2020' title, a date and time 'Monday, 20 April 2020 - 10:00am to 10:30am', and a 'Download MP3' button. Below this is a map with three location pins (a blue pin with a pencil, a green pin with a checkmark, and a yellow pin with a plus sign) and the text 'BikeSpot 2020' and 'How safe do you feel?'. A green button says 'Go to the map!'. A text block at the bottom describes the show: 'Val and Faith take to their respective laptops for this episode of the Yarra BUG Radio Show. Val shares a particularly long and slightly grim reading before we both share our respective bike moments. As you can imagine with #Covid19 restrictions on bike riding it's the small details that will count.' On the right, there is a 'YarraBUG' section with a photo of cyclists and a description of the group's mission. Below that, it lists the presenter 'Chris, Faith, Val and Steve' and topics: 'Current affairs', 'Environment', and 'Local Communities'. At the bottom right, there is an 'Episodes' section.

Herald Sun and Ballarat Courier – 31 March 2020

<https://www.heraldsun.com.au/leader/wyndham/new-interactive-map-to-reveal-the-most-dangerous-spots-for-cyclists/news-story/f0dc37f3c1434fd3d9254d5e3dd3a04a>

<https://www.thecourier.com.au/story/6704136/mapping-project-to-find-out-where-people-feel-safe-and-unsafe-on-a-bike/>



WATCH FOR


WHERE ARE VICTORIA'S MOST DANGEROUS CYCLING LOCATIONS?

Cyclists can share their crashes, doorings and close shaves on a new interactive map to reveal Victorian roads bike riders should avoid – and where they feel the safest. And, not to be left out, drivers can also add their cyclist near misses.

The Courier News

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MARCH 31 2020 - 5:00AM

Ballarat part of cycling safety mapping project from Amy Gillett Foundation

Alex Ford Latest News

f t e A A A



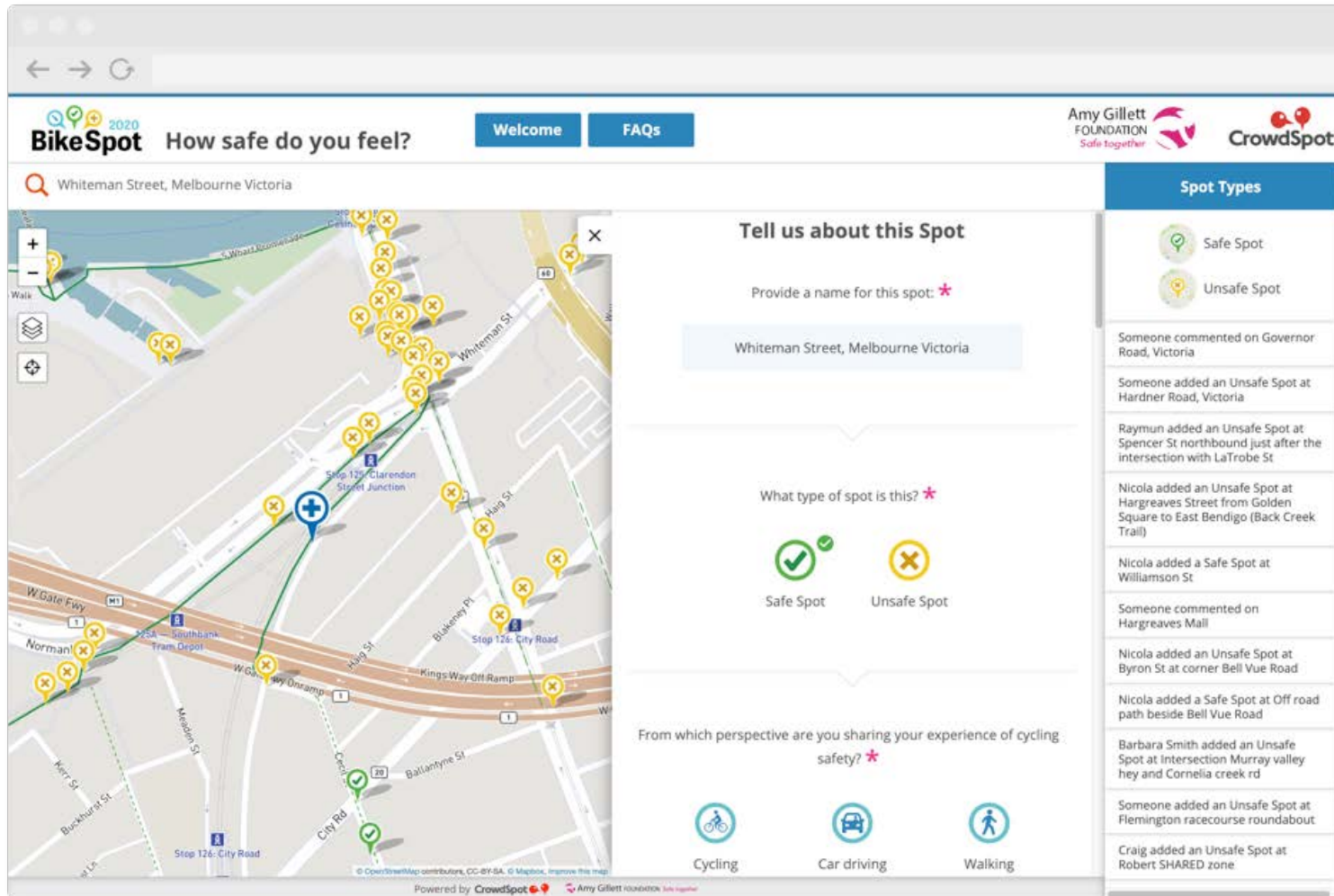
A cyclist on Sturt Street. Picture: Adam Trafford




3AW Breakfast Radio Interview - 31 March 2020

<https://soundcloud.com/user-514403218/anthony-bikespot-3aw-breakfast-interview-310320>

The image shows a screenshot of a CrowdSpot interface. On the left, there is a play button icon and the text "CrowdSpot". Below this is the title "Anthony BikeSpot 3AW Breakfast Interview 310320" and a timestamp "11 seconds ago". A hashtag "# Cycling safety" is visible. Below the title is a waveform visualization of the audio, with a "2:57" marker at the end. On the right, there is a map of Victoria, Australia, with a cluster of yellow and green dots representing data points. A blue location pin is placed on the map, and a text box next to it asks "How safe do you feel when riding your bicycle in Victoria?" and includes a link "Submit your spot."





APPENDIX C - Survey design and structure

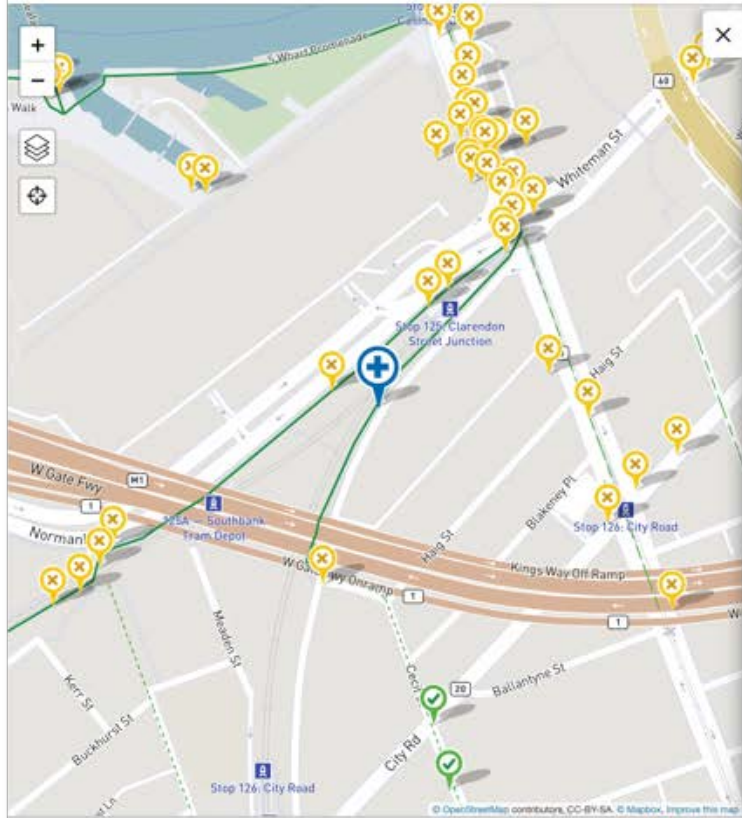


How safe do you feel?


Welcome
FAQs






Whiteman Street, Melbourne Victoria





What is the **main reason** you feel safe at this location?



 Separated bicycle lane



 Slow moving traffic



 Lots of other bike riders here


 Off-road path


 It's a wide bicycle lane


 Good driver behaviour


 Not much vehicle traffic


 Other

Please describe why you feel safe or unsafe here...
(This will be visible to the public) *

Please describe...

400 Characters

Spot Types

- + Safe Spot
- Unsafe Spot

Someone commented on Governor Road, Victoria

Someone added an Unsafe Spot at Hardner Road, Victoria

Raymun added an Unsafe Spot at Spencer St northbound just after the intersection with LaTrobe St

Nicola added an Unsafe Spot at Hargreaves Street from Golden Square to East Bendigo (Back Creek Trail)

Nicola added a Safe Spot at Williamson St

Someone commented on Hargreaves Mall

Nicola added an Unsafe Spot at Byron St at corner Bell Vue Road

Nicola added a Safe Spot at Off road path beside Bell Vue Road

Barbara Smith added an Unsafe Spot at Intersection Murray valley hey and Cornelia creek rd

Someone added an Unsafe Spot at Flemington racecourse roundabout

Craig added an Unsafe Spot at Robert SHARED zone

How safe do you feel?

Welcome
FAQs

🔍 Whiteman Street, Melbourne Victoria

What is your **main concern** of the options below that makes you feel unsafe at this location?

No bicycle lanes

Unsafe bicycle lanes

Cycle lane ends

Dangerous intersection

Cycle lane blocked

Poor surface

Poor driver behaviour

Too narrow

Traffic speed

Car dooring

Too much vehicle traffic

Other

Please describe why you feel safe or unsafe here...
(This will be visible to the public) *

Spot Types

- Safe Spot
- Unsafe Spot

Someone commented on Governor Road, Victoria

Someone added an Unsafe Spot at Hardner Road, Victoria

Raymun added an Unsafe Spot at Spencer St northbound just after the intersection with LaTrobe St

Nicola added an Unsafe Spot at Hargreaves Street from Golden Square to East Bendigo (Back Creek Trail)

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Barbara Smith added an Unsafe Spot at Intersection Murray valley hey and Cornelia creek rd

Someone added an Unsafe Spot at Flemington racecourse roundabout

Craig added an Unsafe Spot at Robert SHARED zone

How safe do you feel?

Welcome
FAQs

🔍 Whiteman Street, Melbourne Victoria

400 Characters

What is the level of cycling stress that you feel at this location?
(1=Low stress and 4=High stress)

1

What time of day do you typically have this experience?

Morning peak

Late morning

Afternoon

Evening peak

Late night

Anytime

Not relevant

Spot Types

- Safe Spot
- Unsafe Spot

- Someone commented on Governor Road, Victoria
- Someone added an Unsafe Spot at Hardner Road, Victoria
- Raymun added an Unsafe Spot at Spencer St northbound just after the intersection with LaTrobe St
- Nicola added an Unsafe Spot at Hargreaves Street from Golden Square to East Bendigo (Back Creek Trail)
- Nicola added a Safe Spot at Williamson St
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- Nicola added a Safe Spot at Off road path beside Bell Vue Road
- Barbara Smith added an Unsafe Spot at Intersection Murray valley hey and Cornelia creek rd
- Someone added an Unsafe Spot at Flemington racecourse roundabout
- Craig added an Unsafe Spot at Robert SHARED zone

← → ↻

BikeSpot 2020 How safe do you feel? Welcome FAQs

Amy Gillett FOUNDATION *Safe together* **CrowdSpot**

Whiteman Street, Melbourne Victoria

How often do you ride here?

Choose One

Image and Video

If you have one, please add an image or video of this spot

Add Image

Insert your Youtube or Vimeo **embed code** below:

400 Characters

Spot Types

- Safe Spot
- Unsafe Spot

Someone commented on Governor Road, Victoria

Someone added an Unsafe Spot at Hardner Road, Victoria

Raymun added an Unsafe Spot at Spencer St northbound just after the intersection with LaTrobe St

Nicola added an Unsafe Spot at Hargreaves Street from Golden Square to East Bendigo (Back Creek Trail)

Nicola added a Safe Spot at Williamson St

Someone commented on Hargreaves Mall

Nicola added an Unsafe Spot at Byron St at corner Bell Vue Road

Nicola added a Safe Spot at Off road path beside Bell Vue Road

Barbara Smith added an Unsafe Spot at Intersection Murray valley hey and Cornelia creek rd

Someone added an Unsafe Spot at Flemington racecourse roundabout

Craig added an Unsafe Spot at Robert SHARED zone

Powered by **CrowdSpot** Amy Gillett roadworks *Safe together*

BikeSpot How safe do you feel?

Welcome
FAQs

🔍 Whiteman Street, Melbourne Victoria

A little bit about you

Please choose the option below that best describes your level of riding confidence?

Very confident

Somewhat confident

Interested but concerned

Does not apply

Your age *

Choose One

Your gender *

Choose One

Spot Types

- Safe Spot
- Unsafe Spot
- Someone commented on Governor Road, Victoria
- Someone added an Unsafe Spot at Hardner Road, Victoria
- Raymun added an Unsafe Spot at Spencer St northbound just after the intersection with LaTrobe St
- Nicola added an Unsafe Spot at Hargreaves Street from Golden Square to East Bendigo (Back Creek Trail)
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