



Government of **Western Australia**  
Department of **Transport**

# Safe Active Streets Program: **BASSENDEAN**

Interim Evaluation Report – 2023



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# WHAT IS THE SAFE ACTIVE STREETS PILOT PROGRAM?

**The Department of Transport's (DoT) Safe Active Streets Pilot Program commenced in 2015, and since that time has seen the construction of 12 safe active streets across Perth and regional WA, with eight completed within the program period that will form part of the evaluation of the pilot program.**

Developed in partnership with local government, safe active streets are active travel routes on quiet local streets, where speeds have been reduced to 30 km/hr to allow for a safer shared street space.

Other treatments such as narrowing road widths, slow points and intersection changes on the streets can help to create low speed residential precincts. With lower vehicle speeds, the streets aim to improve amenity for the community and are much safer for all users, such as people walking, bike riders of all ages and abilities and people driving.

Safe active street routes are also chosen as they form part of wider bicycle networks, connecting to off-road shared paths and linking community amenities such as schools, railway stations or shops.



# WHY WE COLLECT DATA

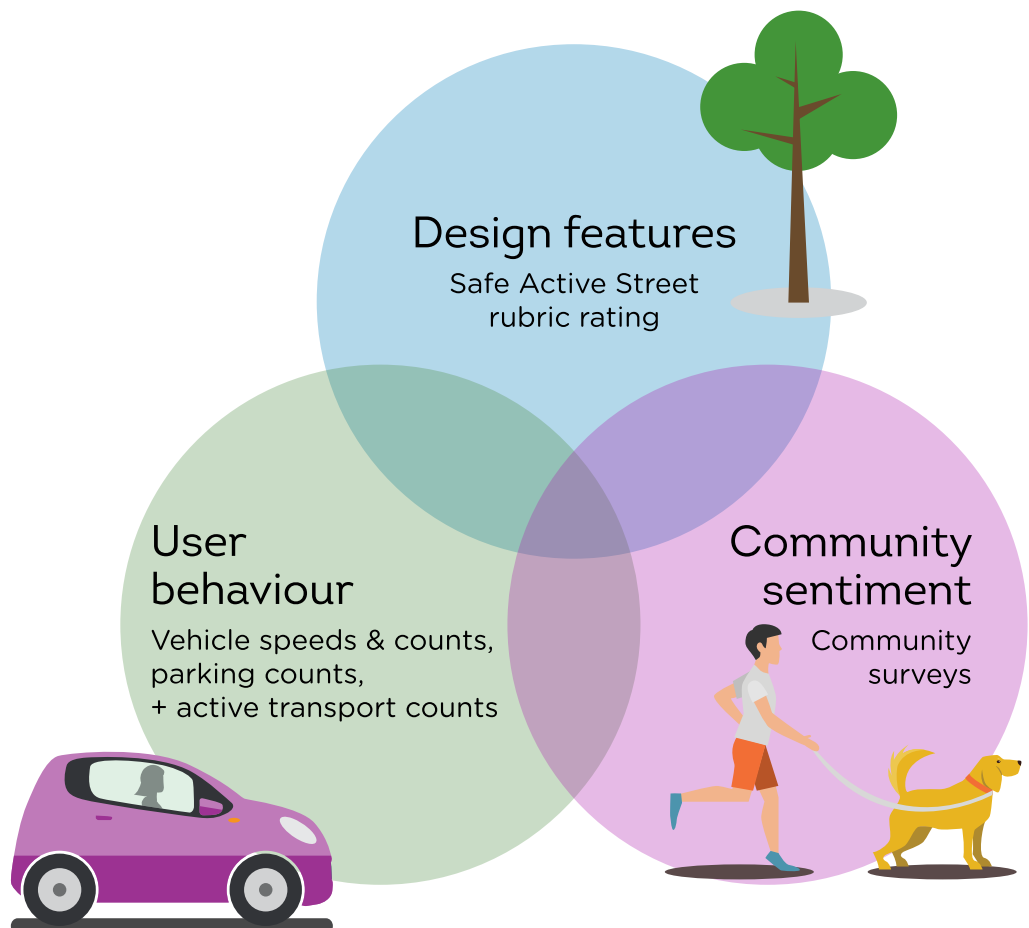
Collecting transport data helps us to better understand transport choices and behaviours. This insight assists us to guide infrastructure investment in local communities to support the growth of active transport.

Evaluation of the Safe Active Streets Pilot Program is being undertaken, including each of the eight projects involved.

Due to the complexity and differing treatments applied to each of the projects, the evaluation has been designed to collect and analyse data on three key components:

1. Design features
2. User behaviour
3. Community sentiment

The data presented in this interim evaluation report for the Bassendean Safe Active Street discusses initial insights of the available data on design features and user behaviour. Community surveys are being undertaken which will provide additional insights on community perceptions about the safe active street. Further analyses of all data will also be undertaken and incorporated into the final evaluation report due in 2024.





# TOWN OF BASSENDEAN, SAFE ACTIVE STREET

Whitfield Street Bassendean Safe Active Street is a 2.3 km route which links people from Guildford Road to the Sandy Beach Reserve via the Bassendean Town Centre, Palmerston Square and Bassendean Primary School.

The route starts at the Guildford Road intersection of West Road as a shared path along the northern side of Bassendean Shopping Centre. The route transitions on Whitfield Street and travels in a southerly direction towards the cul-de-sac at Watson Street. It continues along Whitfield Street to a cul-de-sac at Sandy Beach Reserve. There is a section of shared path on Villiers Street which allows people to connect into West Road and to the shared path travelling south, to connect directly into the path at the Pilgrim Trail.

The street forms important connections to local shared paths, the train stations at both Bassendean and Success Hill (on the Midland Rail Line) and green spaces at Ashfield Flats, Sandy Beach Reserve and the Swan River Foreshore.



**Construction on the Bassendean Safe Active Street was undertaken in 2020 and the route was opened in January 2021.**



## SAFE ACTIVE STREET MAP

### Unique design features

- Red asphaltting
- Route priority
- Raised plateaus (intersection and road hump)
- On street parking
- Slow points
- Tree plantings
- Kerb reconstruction
- Amenities, including bike repair stations, water fountains, shaded rest areas and wayfinding signs
- New and updated shared path joins the Sandy Beach Reserve and the Nature Play space

### Key route destinations

- Bassendean Shopping Centre
- Bassendean Oval
- Bassendean Skate Park
- Palmerston Square
- Bassendean Primary School
- Ashfield Flats
- Sandy Beach Reserve (Swan River)





## EVALUATION PROCESS

Video surveys and pneumatic tube counters were used to collect pre and post construction measures of:

- Bike rider movements
- Vehicle traffic counts
- Vehicle traffic speeds
- Vehicle parking counts

Data collection on the Bassendean Safe Active Street was undertaken in:

- May 2018 (pre-construction)
- May 2022 (post-construction)

Data was also collected in May 2021, however, this report has shown the data for May 2022 in order to observe usage and uptake 18-months post-completion.

## VIDEO SURVEYS

Video surveys were conducted on the Bassendean Safe Active Street, over different three-day periods between 6.00 am and 6.00 pm.

Video surveys involve placing video cameras at strategic locations to detect the movements of bike riders and pedestrians. Survey footage is then analysed to extract pedestrian and bike rider activity.

These surveys were conducted on the safe active street route and on adjacent intersections off-route to detect area wide trends. There are four comparable pre and post construction sites along the route shown in this report.



# PNEUMATIC TUBE COUNTS

Pneumatic tube counters were placed at specific mid-block sections of road and at adjacent locations off-route to detect area wide trends.

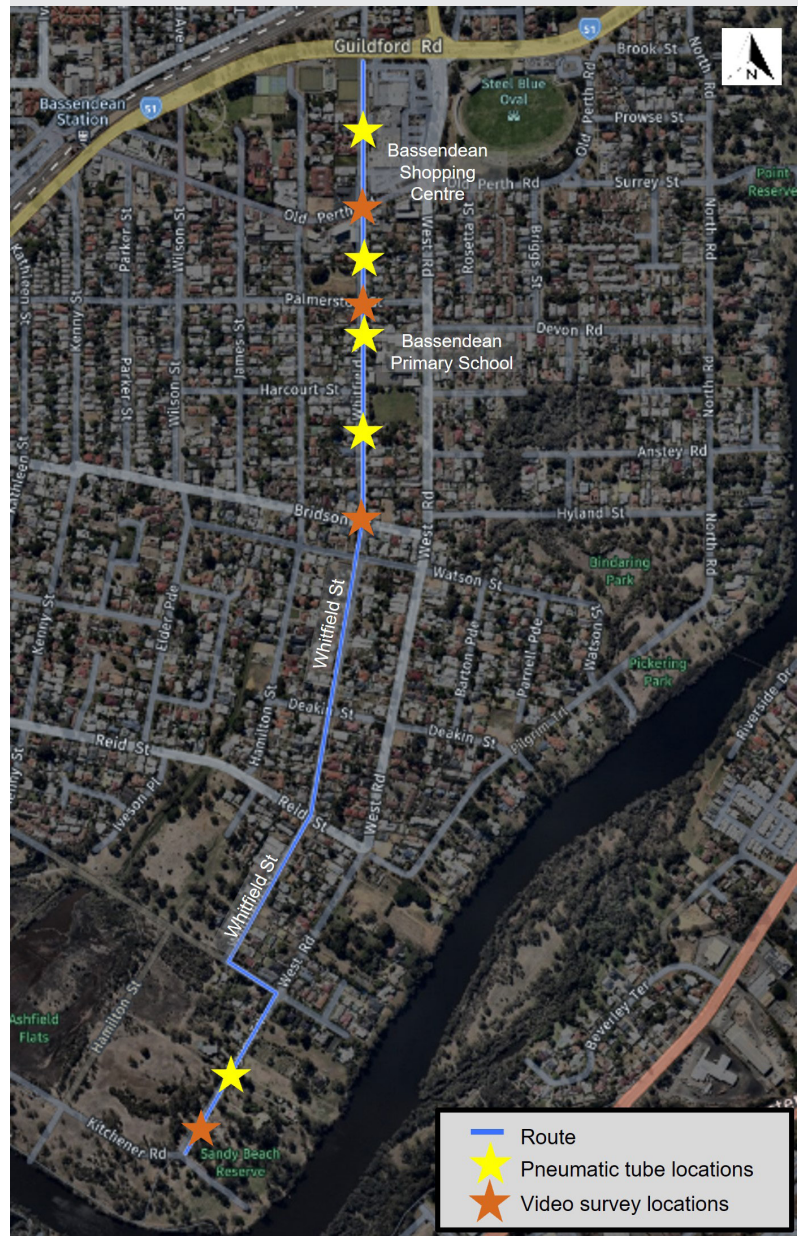
Pneumatic tube counters involve rubber hoses being stretched across the road and connecting at one end to a data logger. Tube counters were used to detect vehicle traffic volumes and speeds. Vehicle volumes reflect the 85th percentile speed which is the speed at or below which 85 per cent of vehicles are travelling.

Tube counters were in place over a specified period in May 2018 and again in May 2022 to capture the pre and post construction counts. There are five comparable pre and post construction sites along the route shown in this report and include the vehicle volumes and speeds as an average across both weekdays and weekends.



**Both data collection methods enable DoT to observe changes in activity pre and post construction.**

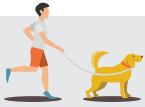
**Route map with pneumatic tube counter and video survey locations**





# KEY INSIGHTS

## Walking and bike riding activity



**The number of people walking increased at all four sites on the weekend and at two (out of four) sites during the week.**

- Increases were seen across all sites along the route on the weekend, with the largest increases observed around Bassendean Shopping Centre (at Old Perth Road).
- During the week, increases in the number of people walking were observed along Whitfield Street and Palmerston Street, likely due to traffic around Bassendean Primary School and at the site on West Road which may be attributed to people visiting Sandy Beach Reserve.
- A decrease in the number of people walking during the week was observed on Whitfield Street and Old Perth Road and at Whitfield Street and Bridson Street.



**Bicycle riding observed increases along the safe active street on the weekend and at three (out of four) sites during the week.**

- The largest increases in bike riding activity were observed at the Sandy Beach Reserve end of the route, with a high number of bike riders using this section during the week and over weekends.
- Increases were also seen along Whitfield Street and Bridson Street and at Whitfield Street and Palmerston Street during the week and on the weekend.
- Bike riding activity decreased during the week at the northern end of the route, around Bassendean Shopping Centre (at Old Perth Road) and remained largely consistent on the weekend.



The tables indicate the additional number of people walking and bike riding post construction. This data compares changes in activity from May 2018 to May 2022.

### Average weekday user behaviour

Increase in usage (additional numbers post construction)

Comparable sites	Additional people walking	Additional bike riders
Whitfield Street and Old Perth Road	-108	-13
Whitfield Street and Palmerston Street	80	15
Whitfield Street and Bridson Street	-20	7
Sandy Beach Reserve Path and West Road	59	17

### Average weekend user behaviour

Increase in usage (additional numbers post construction)

Comparable sites	Additional people walking	Additional bike riders
Whitfield Street and Old Perth Road	103	1
Whitfield Street and Palmerston Street	53	44
Whitfield Street and Bridson Street	72	37
Sandy Beach Reserve Path and West Road	74	56



## Vehicle volumes and speeds



### Vehicle volumes declined at four (out of five) sites along the safe active street.

- Vehicle volumes are higher on Whitfield Street around Bassendean Shopping Centre (at Old Perth Road), however have observed a decrease in volumes post-construction.
- A large decrease in vehicle volumes were observed at the sites along Whitfield Street around Bassendean Primary School at the entry on Palmerston Street and significant decreases were seen at the entry on Harcourt Street.
- An increase in vehicle volumes was observed on West Road at Villiers Street East and Sandy Beach Reserve. This may be due to increased visitation to Sandy Beach Reserve and the new Nature Play space.



### A reduction in (85th percentile) vehicle speeds was observed at three (out of five) sites with 85th percentile speeds below 37 km/hr.

- The 85th percentile vehicle speeds around Bassendean Shopping Centre (at Old Perth Road) have seen a reduction to 33 km/hr post-construction, down from 45 km/hr before construction. A reduction is also observed at the Old Perth Road and Palmerston Street site.
- Vehicle speeds along Whitfield Road at the entry to Bassendean Primary School near Palmerston Street have seen a reduction, however vehicle speeds at the Harcourt Street entry will need to be reduced an 85th percentile speed of 37 km/hr or below.
- Vehicle speeds on West Road at Villiers Street East and Sandy Beach Reserve have remained largely unchanged.



## Daily average vehicle volumes (number of vehicles)

Comparable sites	Pre-construction	Post-construction
Whitfield Street: Old Perth Road and Extension Road	859	<b>753</b>
Whitfield Street: Old Perth Road and Palmerston Street	652	<b>457</b>
Whitfield Street: Bassendean Primary School entry - Palmerston Street	384	<b>323</b>
Whitfield Street: Bassendean Primary School entry - Harcourt Street	735	<b>288</b>
West Road: Villiers Street East and Sandy Beach Reserve	423	543

## Daily average (85th percentile) vehicle speeds

Comparable sites	Pre-construction	Post-construction
Whitfield Street: Old Perth Road and Extension Road	45 km/hr	<b>33 km/hr</b>
Whitfield Street: Old Perth Road and Palmerston Street	40 km/hr	<b>36 km/hr</b>
Whitfield Street: Bassendean Primary School entry - Palmerston Street	43 km/hr	<b>35 km/hr</b>
Whitfield Street: Bassendean Primary School entry - Harcourt Street	33 km/hr	38 km/hr
West Road: Villiers Street East and Sandy Beach Reserve	48 km/hr	49 km/hr

**Bold** indicates a decrease in either volumes or speeds



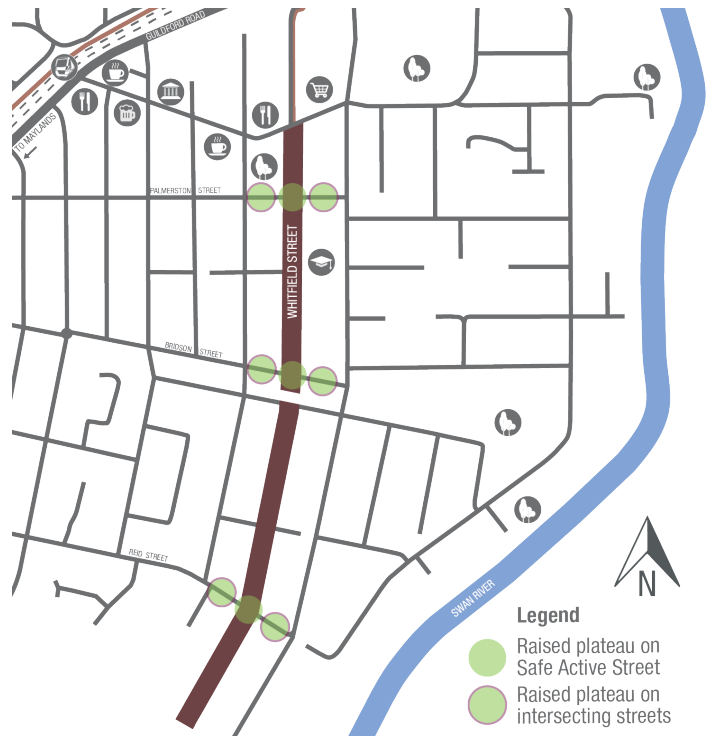


## Traffic calming treatments

Traffic calming was implemented at several intersecting streets to remind traffic entering the safe active street route of the change in priority (to cycling and walking) and reduced speed.

Raised intersection plateaus, with additional raised road hump plateaus on both sides of the approach, were installed on the feeder streets and intersections of:

- Reid Street
- Bridson Street
- Palmerston Street



## Daily average (85th percentile) vehicle speeds

Traffic calming on intersecting streets

Comparable sites	Pre-construction (2018)	Post-construction (2022)
Palmerston: Between Whitfield Street and Hamilton Street	53 km/hr	43 km/hr
Reid Street: Whitfield Street and Hamilton Street	56 km/hr	42 km/hr

**The positive impact of adding additional raised road hump plateaus for traffic calming is evident in the speed data**



Reduced speeds were observed at two adjoining streets where raised intersection plateaus, and additional raised road hump plateaus on both sides of their approach to the intersection, were introduced:

- On Palmerston Street, between Whitfield Street and Hamilton Street, there was a reduction in the 85th percentile speeds from 53 km/h to 43 km/h.
- This is also evident on Reid Street, between Whitfield Street and Hamilton Street, with a large reduction in the 85th percentile speeds from 56 km/h to 42 km/h.

## SUMMARY

- Overall, the Bassendean Safe Active Street has seen some positive shifts since construction of the route in 2018. The positive impact of the current treatments is evident in the speed data at the northern end of the route, with large reductions in the 85th percentile vehicle speeds and in the increase in the number of active transport users along the route.
- It is positive to see an increase in the number of people walking and bike riding around key destinations, such as Bassendean Primary School and Sandy Beach Reserve.
- Bassendean Primary School is a participating school in the [Your Move Schools Program](#) (since 2019). Since participating in the Program, the school has organised events and activities such as Ride2School days, 'Fume Free Fridays' and Bike Education sessions to encourage children and families to ride, scoot or walk to school. Encouraging use of the route and leveraging off the walking and riding activity generated through the School's Behaviour Change Program could help to encourage further use.
- Vehicle speeds have reduced at the northern end of the route, however the southern end could benefit from the installation of 30 km/hr regulatory signs to complement the existing blue patch at the Reid Street intersection to reduce 85th percentile speeds.
- Community perception data will help to ascertain the breadth and depth of positive or negative community sentiment for the Bassendean Safe Active Street.
- The Safe Active Streets Pilot Program Evaluation Report will include statistical analyses of the full dataset and will be available in 2024.

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## FURTHER INFORMATION

More information on the Safe Active Streets Program can be found on the DoT website: [www.transport.wa.gov.au](http://www.transport.wa.gov.au)



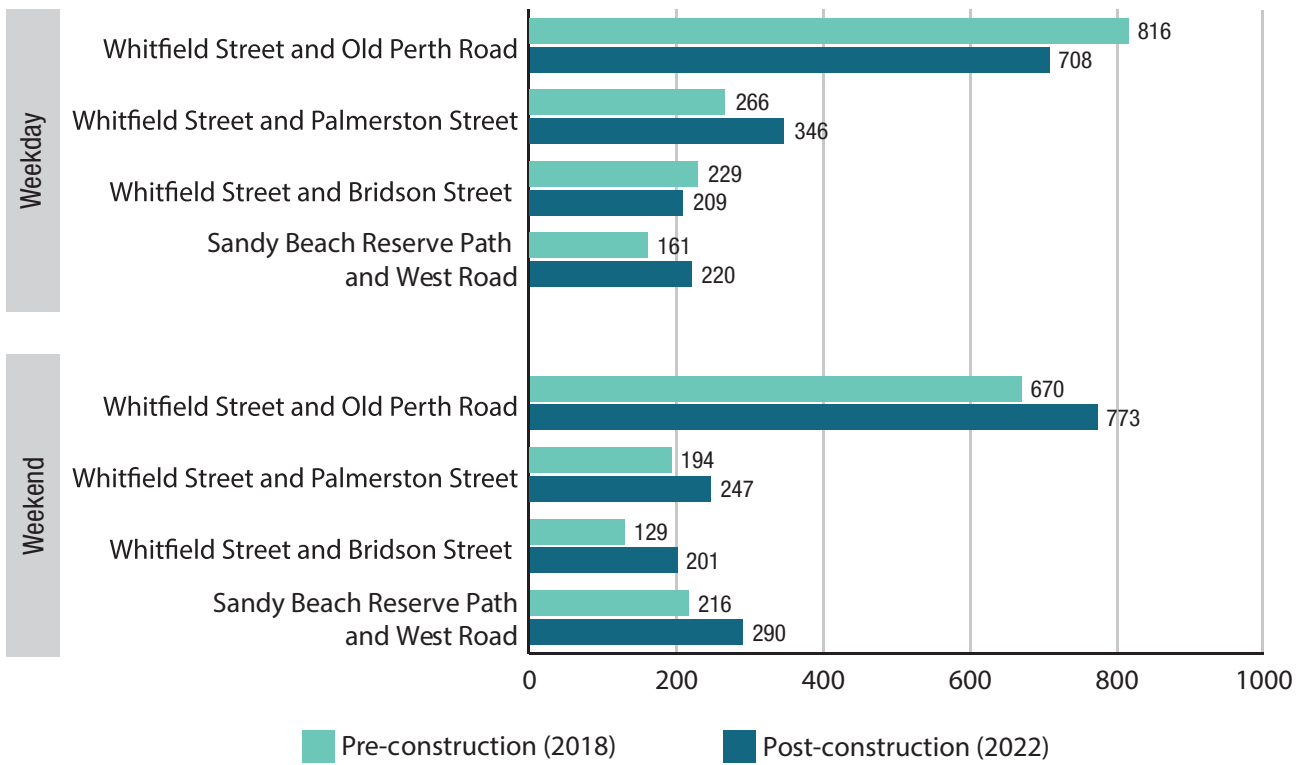
# APPENDIX

## Chart 1

### Average weekday and weekend walking activity Pre and post construction (raw counts)



City of Bassendean Safe Active Street

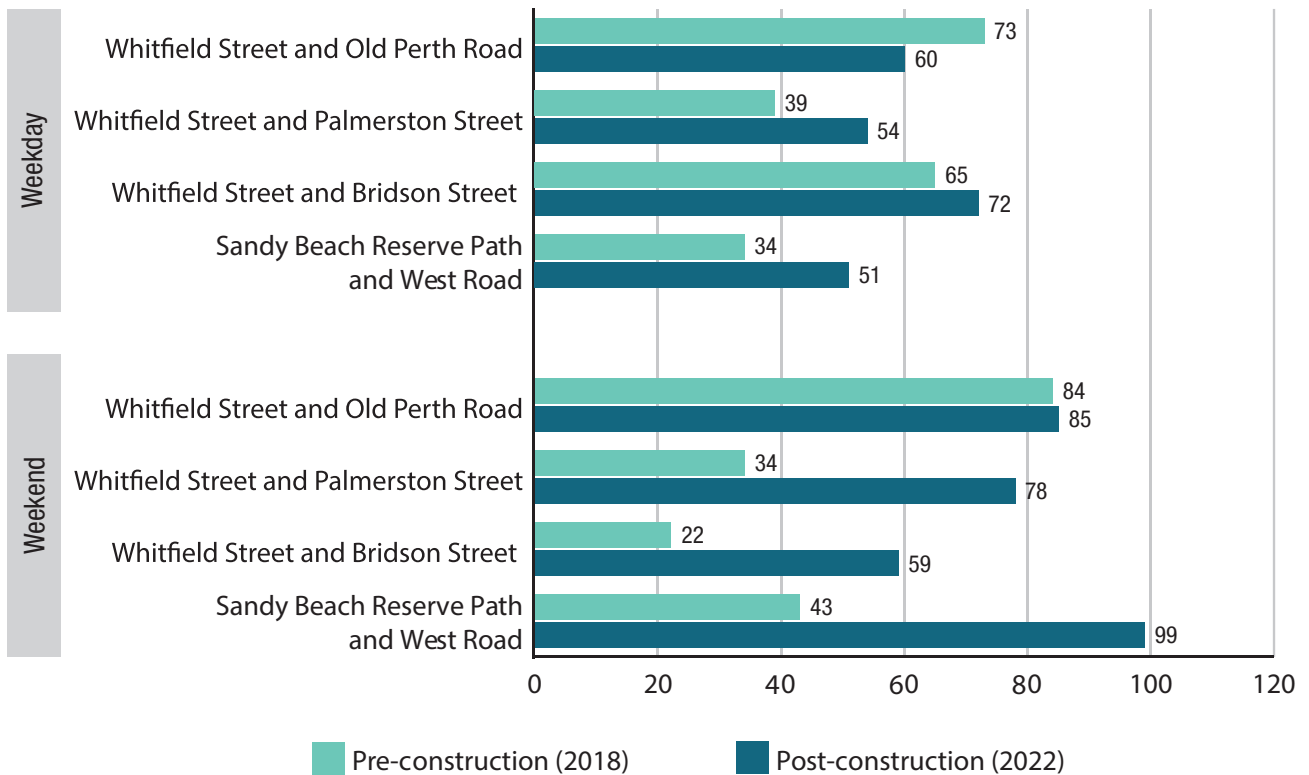


## Chart 2

### Average weekday and weekend bike riding activity Pre and post construction (raw counts)



City of Bassendean Safe Active Street

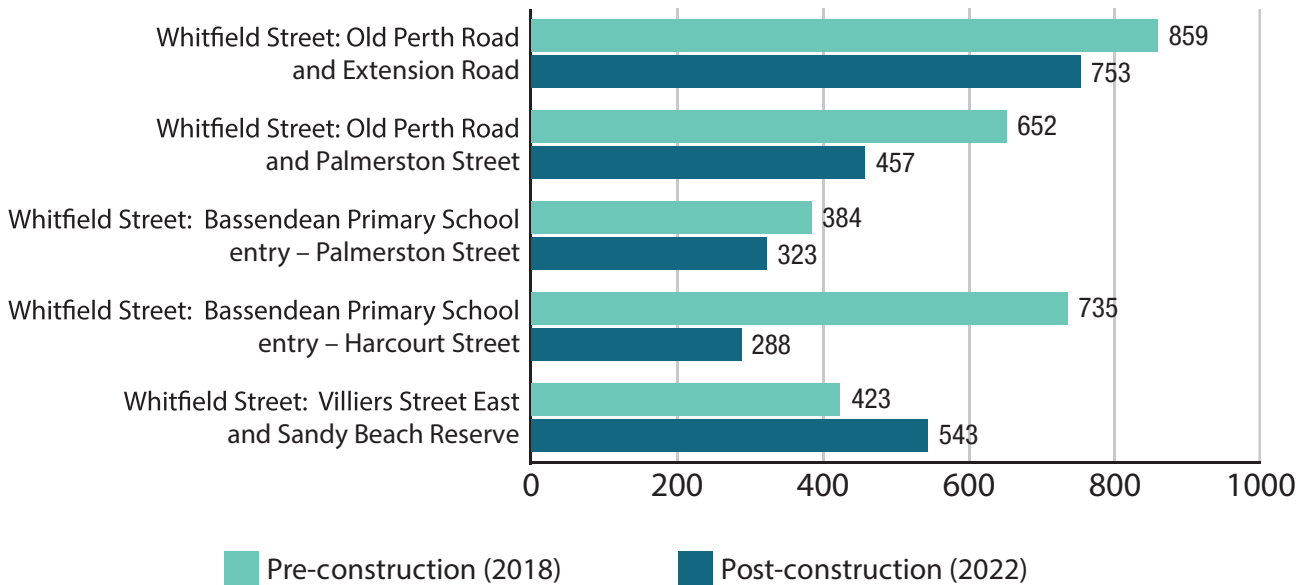




### Chart 3

## Daily average vehicle volumes

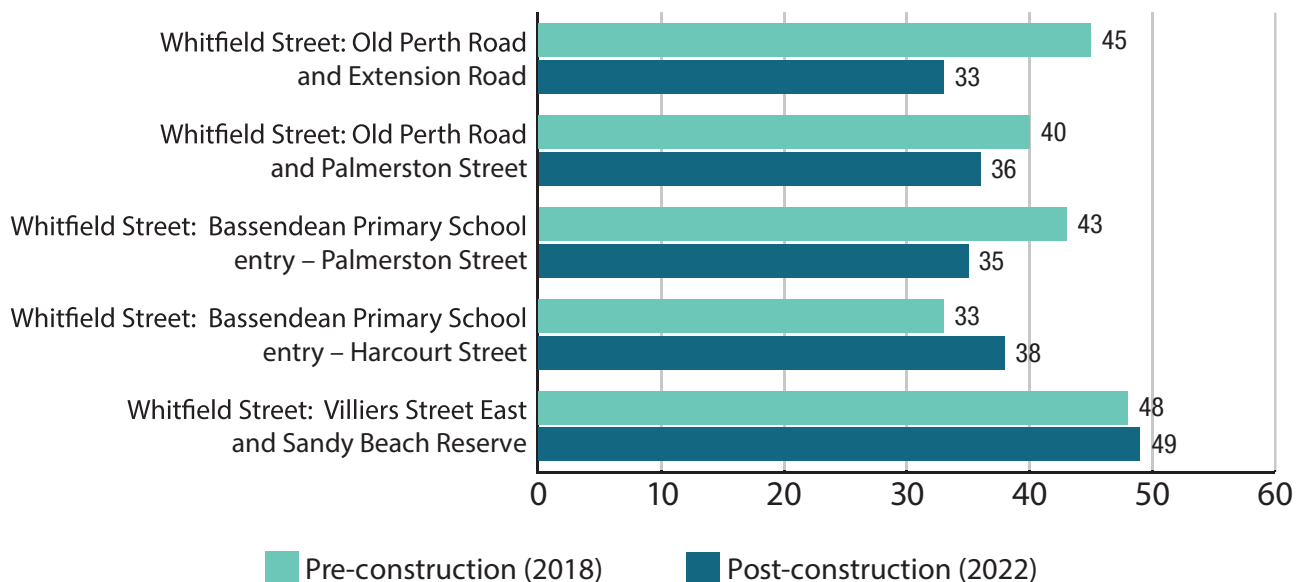
Number of vehicles pre and post construction  
(across both weekends and weekdays)



### Chart 4

## Daily average vehicle speeds

85th percentile speeds pre and post construction



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