



Government of Western Australia
Department of Transport

2022-23 **Making tracks**

Monitoring WA's bicycle network



Acknowledgment of Country

The Department of Transport acknowledges the Traditional Custodians of the land throughout Western Australia and pays our respects to Elders past and present.

We acknowledge the members of all Aboriginal communities, their cultures and continuing connection to Country throughout the State.

About this report

The information contained in this publication is provided in good faith and believed to be accurate at time of publication.

The State shall in no way be liable for any loss sustained or incurred by anyone relying on the information.

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Introducing the Bike Counter Network

The Department of Transport (DoT) regularly monitors activity on Western Australia's bicycle network using quantitative and qualitative data sources that provide valuable insights into bike riding activity across the State.

WA's bicycle network is quantitatively monitored using permanent bicycle counters with piezoelectric strip technology. A total of 76 permanent bicycle counters are located primarily on off-road shared paths in the Perth metropolitan area. Of these, nine counters are installed in strategic regional locations including sites in Bunbury, Busselton, Geraldton and Karratha. Additional qualitative data is also collected via general population surveys, which provide data on participation rates, demographic profiles and trip purposes.

DoT produces annual reports of the bike counter network, including survey insights where available. Throughout the year, DoT regularly monitors network insights to inform decision making.

DoT has regularly reported on the CBD cordon of bike counters, which was set up to detect changes in bike riding in and out of the CBD. More recently, DoT has adopted additional bike counter groupings based on locations and usage profiles and is interpreting this data to inform decision making. These groups of sites are summarised as:

Site Groupings



CBD - Cordon



Regional WA - North



Picturesque
(near the river, ocean
or parkland)



Regional WA - South



Suburban Perth

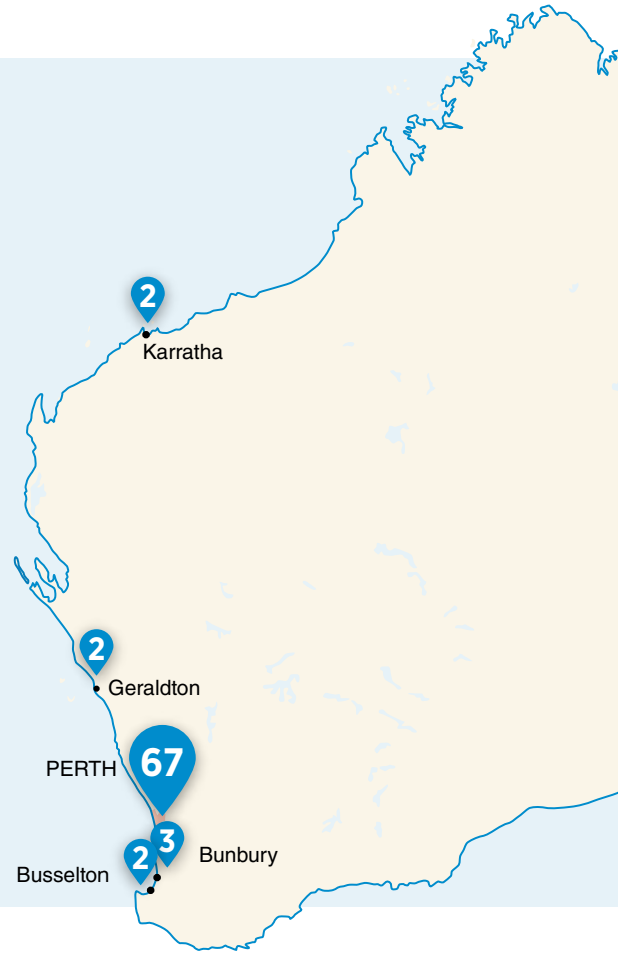


Perth's five main
PSP corridors

The bike counters provide an accurate picture of bike riding volumes at the counter sites; there are however riding routes which are not captured. The analysis within this report is based on current counter sites and does not reflect all riding movements across WA.



Total number of counters	76
New counters installed in 2021-22	5
New counters installed in 2022-23	3
Regional counters	9



Why we collect data

Collecting transport data helps us to better understand transport choices and behaviours, as well as guide infrastructure investment in local communities to support the growth of active transport.

It also helps us to:

- guide sustainable active transport infrastructure investments in local communities across the State;
- undertake evidence based active transport planning;
- establish baseline data before infrastructure interventions; and
- monitor and evaluate transport projects.

What we are working towards

DoT has four key performance indicators that are used to monitor and track progress of the WA bike network.

1. Increased or sustained network level bike counts compared with the previous 12-month period.
2. Increased or sustained bike counts spread evenly across sub-regional areas of the network.
3. Increased or sustained weekly bike riding participation levels compared with the previous general population survey sample and measured in relative to population growth.
4. Increased variety of users on the network, particularly women and people under 35 years of age participating in weekly bike riding.

Both quantitative data, such as bike counts and video survey data, and qualitative data, such as community survey outputs, are collected and analysed to appraise bike riding trends and issues and monitor against key performance indicators.

Key insights: Bike riding count data

Insights from the 2022-23 financial year

Key insights

This report provides valuable insight into bike riding activity in WA. DoT regularly monitors activity on WA's bicycle network using permanent bicycle counters. The data is reviewed and reported annually.

This report draws upon the bike riding count data collected for the 2022-23 Financial Year.

Setting the scene

Bike riding activity across WA's bicycle network has stabilised in 2022-23, for the first time since the global coronavirus pandemic.

In 2019-20, counter data showed significant growth in bike riding activity in WA, reflecting similar surges elsewhere in Australia.

Between 2020-21 and 2021-22, bike riding activity moderated back towards pre-pandemic levels, and the most recent data in 2022-23 reflects a stabilised trend of bike riding movement across the network.

Network Average Daily bike riding counts	
2022-23	15,729
2021-22	15,761
2020-21	16,786

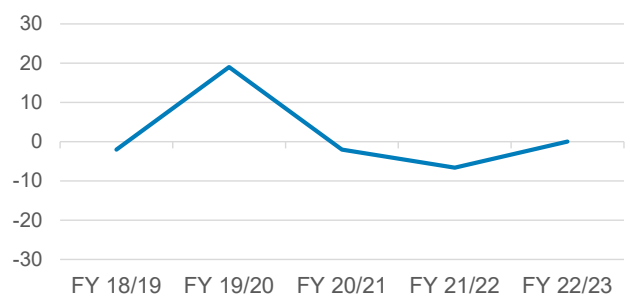
This is the total daily count from 42 consistent sites across the network. It is derived by summing together the average daily count for each site included. This allows for direct comparisons between years and helps us to measure relative change.

Overall, bike riding activity across the network between FY 2021-22 and FY 2022-23 is steady, after a six per cent decrease was observed in FY 2020-21.

The data in 2021-22 indicated activity was starting to return to typical levels, compared to the high volumes experienced in the preceding periods.

The most recent 2022-23 data shows bike movements across the network are steady, with a change of zero per cent between reporting periods.

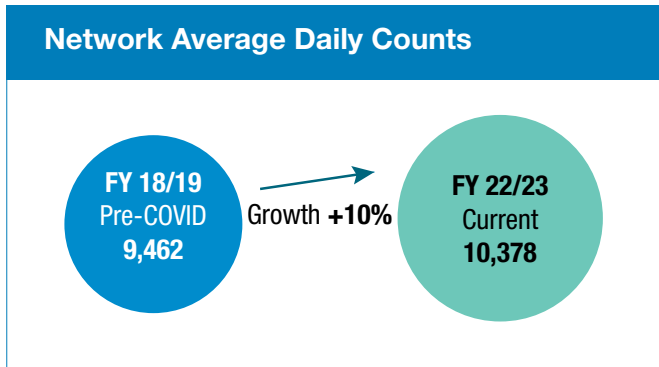
Five-year Financial Year comparison across entire WA Bike Network % Year on Year Change



The data presented is based on consistent sites operational between the reflected Financial Year and the previous Financial Year (e.g. 2022-23 compared to 2021-22; 2021-22 compared to 2020-21).

Bike riding counts continue to reflect a growth in bike riding activity when compared to counts in 2018-19.

Bike counts, comparing consistent sites between 2018-19 and 2022-23, reflect a 10 per cent aggregate growth in bike riding activity. This indicates some of the growth recorded during the pandemic has been sustained.

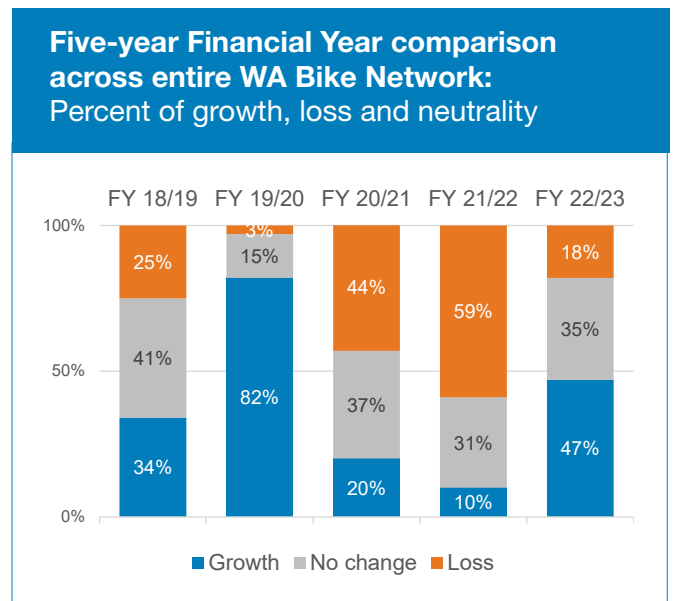


The data presented is based on 25 consistent sites operational across the five years (between FY 2018-19 to FY 2022-23) allowing for direct comparison between years, and for direct comparison with FY 2018/19, which constitutes a pre-COVID baseline.

In 2022-23, there were more individual sites experiencing growth than a decline.

Just under half (47 per cent) of sites across the network observed an increase, up from 10 per cent in 2021-22.

This has changed significantly to what was observed in 2021-22, and is the first time since 2019-20 to reflect a larger number of sites experiencing a growth.



The data presented is based on the change between adjacent years.

Growth = >+5 % change; Decline = <-5% change

Stable = less than 5% growth or less than 5% decline

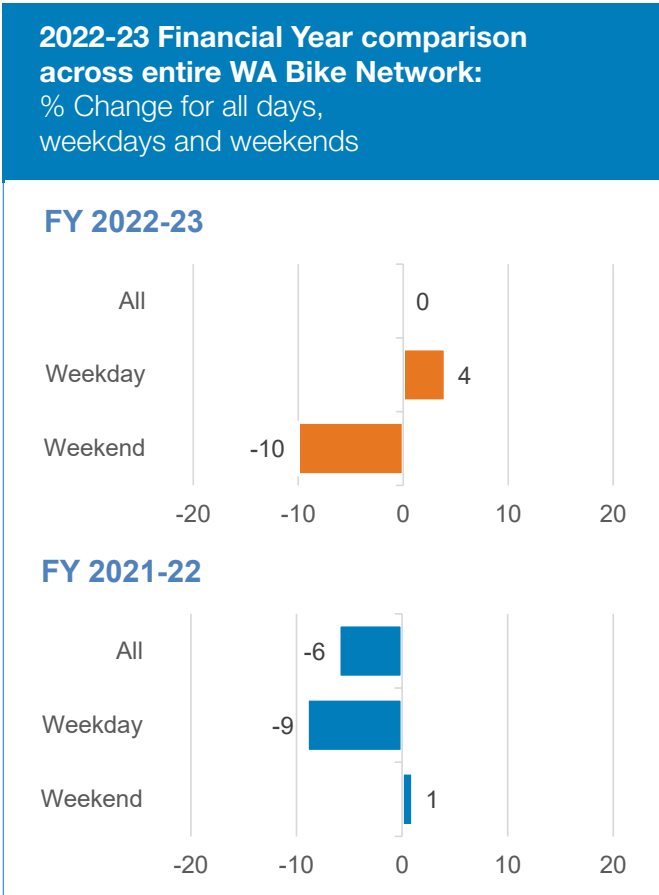


Weekday bike riding activity looks to be returning.

The most recent data indicated weekday bike riding is starting to grow, up four per cent in 2022-23 (from a loss of -9 in 2021-22).

Weekend activity experienced strong growth during COVID-19, reflecting changes in travel patterns, with more people working from home and an increase in local trips.

Growth in weekday bike riding has not been seen over the past two reporting periods.



The data presented is based on the 42 consistent sites operational across the three years between FY 2020-21 to FY 2022-23



Looking more closely at the 2022-23 change across the networks' sub-groups:

Bike riding activity is spread across the network.

All sub-groups (CBD cordon, Suburban Perth, Regional WA North and South) maintained stable activity or observed growth between FY 2021-22 and FY 2022-23, except picturesque sites where there was lower activity compared to the previous year.



CBD - Cordon
Average daily counts 4,554

Bike riding activity across the CBD cordon observed similar levels when compared to activity in 2021-22. An increase in CBD weekday activity was recorded, suggesting a growth in commuter trips.



Picturesque
(near the river, ocean or parkland)
Average daily count 3,956

Picturesque sites recorded a seven per cent decline compared to 2021-22. Lower bike riding activity was observed on weekends (compared to 2021-22), however, average daily counts remain higher overall on weekends than on weekdays for this sub-group.

While overall activity across picturesque sites is lower compared to previous years, the counter located at Canning highway bridge (a picturesque site) continues to report the highest average daily count of 1,279, followed by the counter on the South Perth Esplanade near Sir James Mitchell Park (also a picturesque site) with an average daily count of 1,217.



Suburban Perth
Average daily count 1,620

Suburban sites observed an increase in bike riding activity, with an increase of three per cent compared to 2021-22. Similar to the trends observed at picturesque sites, there was more activity observed on weekends than on weekdays, however this separation is decreasing as weekday activity increases.



Regional WA - North
Average daily count 303



Regional WA - South
Average daily count 275

The counters located in Regional WA North and Regional WA South observed growth in 2022-23.



Growth was observed across several Principal Shared Path (PSP) corridors in 2022-23.

The Armadale Railway, Mitchell Freeway and Midland Railway PSP corridors all observed growth in 2022-23. This growth could reflect recently completed upgrades along sections of these PSPs.



The Armadale Railway PSP corridor observed growth overall in 2022-23, with an increase of 11 per cent, which could reflect recently completed upgrades along the PSP.



The Mitchell Freeway PSP corridor had some of the highest activity across the network, with an average count per day of 580 across sites active in 2022-23, and a maximum count per day of 1,058 at the site located north of Oxford Street. Growth along this PSP corridor may reflect path upgrades along the PSP, from Hutton Street to Glendalough station (opened in July 2020) and from Civic Place to Reid Highway (opened in May 2023).

A shift in demand towards newly constructed PSP routes is observed.

The largest decreases in bike riding activity were observed at two counters located along older sections of the network, parallel to the new PSPs (one on Curtin Avenue south of Leighton Beach, and one near Mitchell Freeway north of Karrinyup Road) showing an observable shift in demand towards the new PSP.



Notes on terminology and methodology

- The bike counter network has been installed progressively and with occasional periods of counter downtime due to technical faults or path construction works. Of all the installed counters currently in use, 56 were operational for at least 11 months during 2022-23. Of these, 42 piezoelectric counters were comparable across the three financial years 2020-21 through to 2022-23, and 25 were comparable across 2018-19 to 2022-23.
- The data in this report is based on:
 - three-year comparison: 42 consistent sites across the network; and
 - previous FY: 51 common sites from between adjacent years (2022-21 and 2022-23).
- The data reported in the previous 2021-22 report was based on 30 consistent sites across the network when comparing trends over the past three years, and 49 common sites between adjacent years (2020-21 and 2022-21).
- Please note, in some instances rounding has been included in the report.

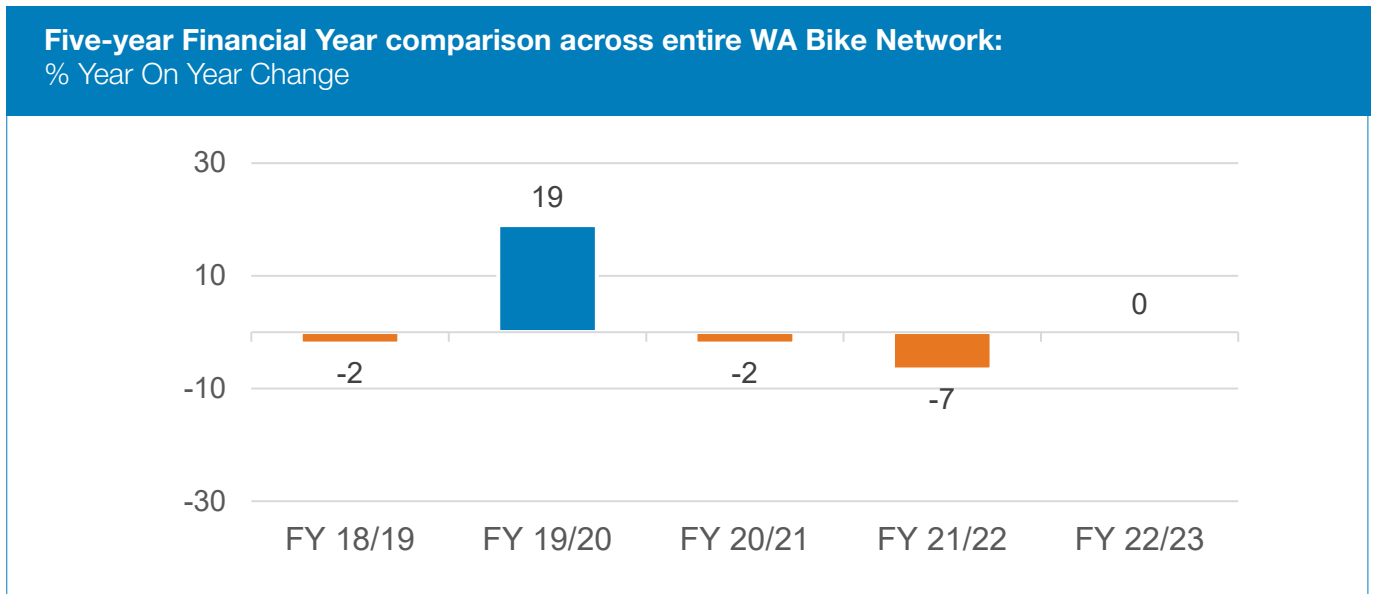
Further information

- Detailed charts of the key measures provided in this report can be found in the appendix.
- More information on can be found on Active Transport's [evaluation, monitoring and reporting webpage](#) on the DoT website, including previous Making Tracks reports.

Appendix

Five-year calendar year comparisons

Chart 1: Comparison across the Western Australian Bike Network



The data presented is based on consistent sites operational between the reflected Financial Year and the previous Financial Year (e.g. 2022-23 compared to 2021-22; 2021-22 compared to 2020-21).

Past 12-month bike counts

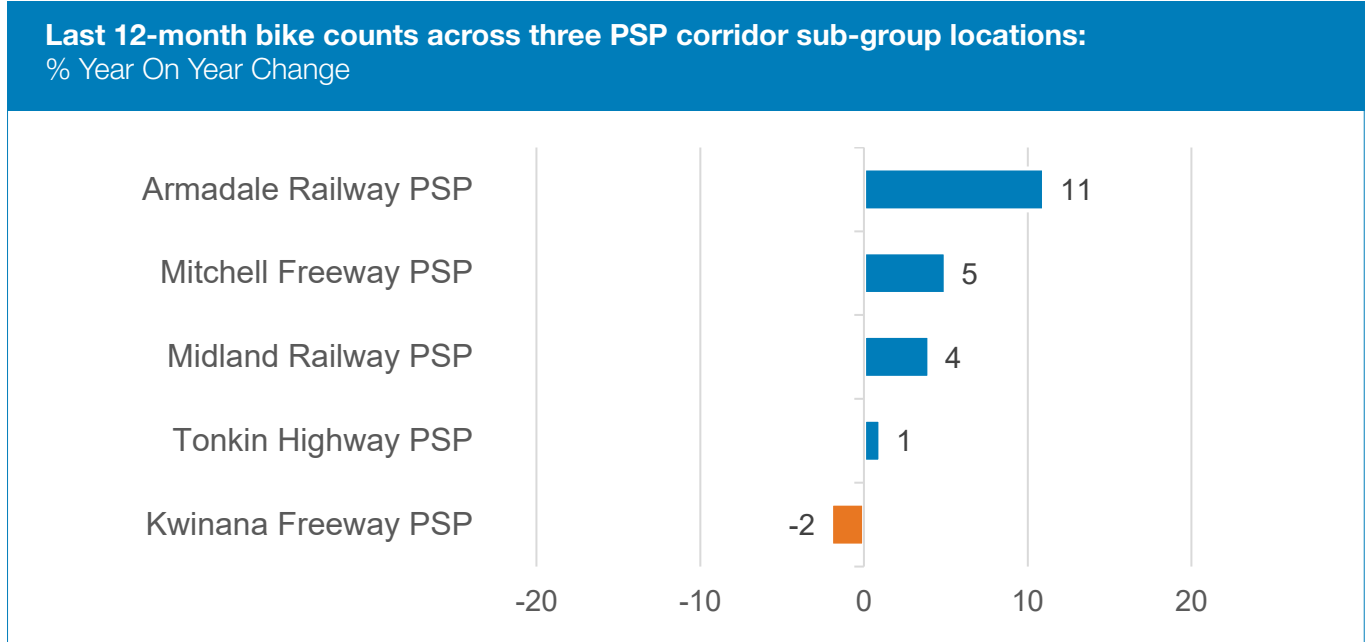
Chart 2: Comparison across sub-locations

Sub-location	Number of operational counters 2021 – 2023	Average Daily Count 2022	Average Daily Count 2023	2022-23 Growth 2023
All Sites	42	15,761	15,729	0%
Perth CBD-Cordon	7	4,441	4,454	0%
Regional WA – North	4	161	203	26%
Regional WA – South	4	253	275	9%
Suburban Perth	8	1,568	1,620	3%
Picturesque Sites	5	4,250	3,956	-7%

The data is based on the 42 consistent sites operational across the three years between FY 2020-21 to FY 2022-23, and shows the change between adjacent years (e.g. 2022-23 compared to 2021-22).

Past 12-month bike counts

Chart 3: Comparison across PSP corridors



The data presented is based on consistent sites operational between Financial Years (e.g. 2022-23 compared to 2021-22).



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