



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

# 2023-24 **Making tracks**

## Monitoring WA's bicycle network





Acknowledgement 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.

© Department of Transport 2025

Alternative formats

This publication is available in alternative formats upon request. Contact us to request a copy or submit an enquiry.

Contact

Department of Transport  
140 William Street  
Perth WA 6000  
Telephone: (08) 6551 6000  
Website: [transport.wa.gov.au](https://transport.wa.gov.au)  
Email: [activetransport@transport.wa.gov.au](mailto:activetransport@transport.wa.gov.au)

Contents

Introducing the Bike Counter Network 3

Why we collect data .....4

What we are working towards .....4

Key insights: Bike riding count data .. 5

More people riding .....5

Individual sites .....6

Weekday and weekend trips. ....7

Network sub-groups .....8

Notes on terminology and methodology .. 10

Study limitation .....10

Further information .....10

Appendix. ....11

# 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 77 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 collected via general population surveys, which provide data on participation rates, demographic profiles and trip purposes.

DoT has regularly reported on findings from bike counters in corridors within the CBD, which were 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 broader locations and usage profiles and is interpreting this data to inform decision making. These groups of sites are summarised as:

## Site Groupings



Corridors within the CBD



Picturesque  
(near the river,  
ocean or parkland)



Suburban Perth



Regional WA - North



Regional WA - South



Perth's five main  
PSP corridors

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



Total number of counters

77

Perth metropolitan

68

Regional counters

9



## Why we collect data

Collecting transport data 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 relativity 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.

This report draws upon the bike riding count data collected for the 2023-24 Financial Year.



# Key insights: Bike riding count data

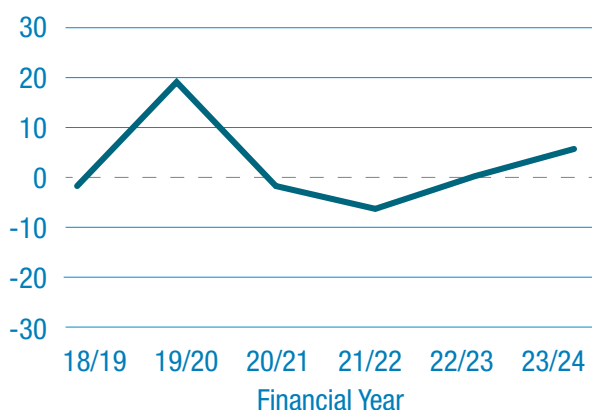
Insights from the 2023-24 Financial Year

## More people riding

Overall, bike riding activity across the network is rising, after no significant change between 2021-22, and 2022-23.

2022-23 analysis showed activity was beginning to return to 2018-19 levels. The latest data from 2023-24 presents a positive increase.

**Six-year Financial Year comparison across entire WA bike network:**  
year on year change percentage



*The data is based on consistent sites operational between the reflected financial years.*

**Bike counters continue to reflect a growth in the number of bike riding trips.**

Bike counts, comparing consistent sites between 2021-22 and 2023-24, reflect a 5.4 per cent growth in bike riding, with daily average bike counts increasing from 16,128 to 16,997 bike rides per day.

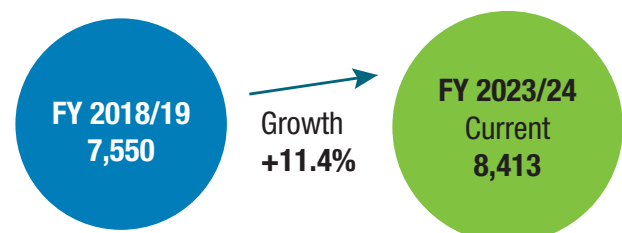
**Network average daily counts over three years**



*The data presented is based on consistent sites operational over three financial years (between 2021-22 to 2023-24) allowing for direct comparison.*

Comparison between consistent operational sites for all six years between 2018-19 and 2023-24, show an 11.4 per cent growth, up from 7,550 to 8,413 bike rides per day.

**Network average daily counts change over six years**

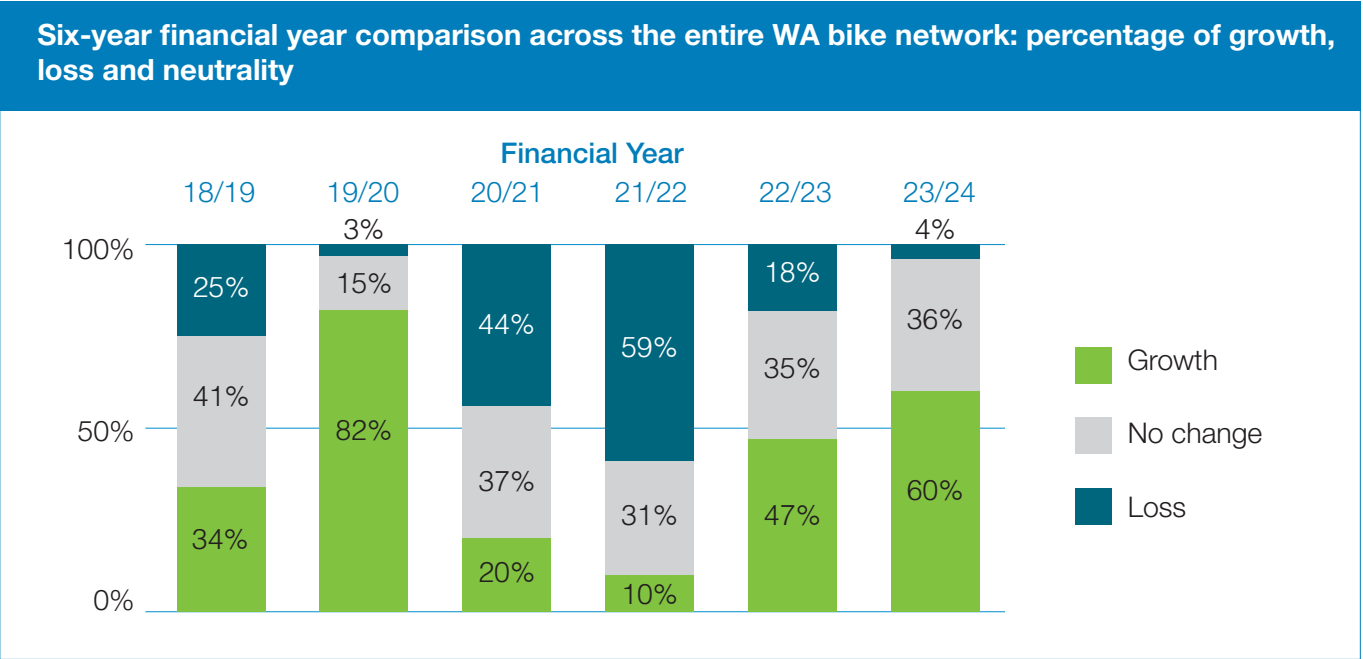


*The data presented is based on consistent sites operational over six financial years (between 2018-19 to 2023-24) allowing for direct comparison.*

## Individual sites

Continuing the trend from last year, 60 per cent of sites across the network observed an increase in riding trips, up from 47 per cent in 2022-23.

From 52 operational counters through 2023-24, 36 per cent recorded stable volumes of bike riding trips and only two reported a decrease (four per cent).



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

Growth = more than 5 % change; Decline = less than 5% change

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



## Weekday and weekend trips

**Weekday and weekend bike riding is increasing.**

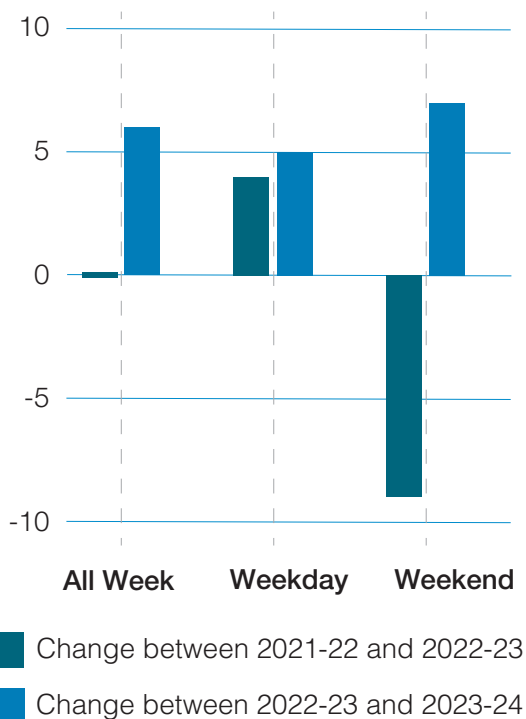
Both weekday and weekend bike riding trips increased in 2023-24. Weekend bike riding rose by seven per cent this year and recovered from the nine per cent decrease in 2022-23. Weekday bike riding activity also experienced a slight increase of one per cent compared to 2022-23.

Although the average weekday activity is higher than weekend (17,063 weekday compared with 16,862 weekend), the gap is becoming smaller.

Weekday riding trips are higher during AM and PM peak hours, with more people riding during the morning peak than the afternoon. More weekend riding trips are happening in AM peak too. This pattern is consistent with 2022-23 and 2023-24.

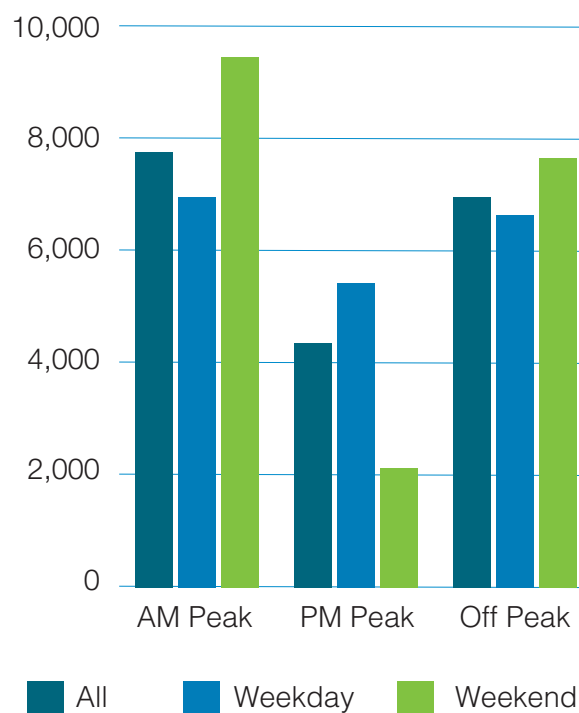


**Year on year comparison across the entire WA bike network:** percentage change for all days, weekdays and weekends



*The data is based on consistent sites operational between the reflected financial years.*

**Network average daily counts**  
FY 2023-24, AM peak, PM peak, off-peak





## Network sub-groups

Looking closely at the change across the networks' sub-groups, all three Perth metropolitan sub-groups (corridors within the CBD, suburban Perth, picturesque sites) maintained stable activity between 2022-23 and 2023-24.

To keep the analysis consistent, changes less than five per cent were considered stable. Any increase more than five per cent is considered growth and decrease under five per cent is categorised as a decline.



**Corridors within the CBD**  
Average daily count 4,656

Bike riding trips across the corridors within Perth CBD stayed stable again this year. The number of weekday trips along this sub-group was 30 per cent higher than weekend activity, which could indicate more commuting trips.



**Picturesque**  
(near the river, ocean or parkland)  
Average daily count 4,273

Picturesque sites activity was stable during 2023-24. Unlike CBD sub-groups, average daily counts for picturesque sites are higher on weekends than on weekdays, reflecting more recreational trips.



**Suburban Perth**  
Average daily count 1,912

Suburban sites had no significant change in bike riding activity. Like picturesque sites, these sites were used more during the weekend than weekdays.



**Regional WA - North**  
Average daily count 267



**Regional WA - South**  
Average daily count 297

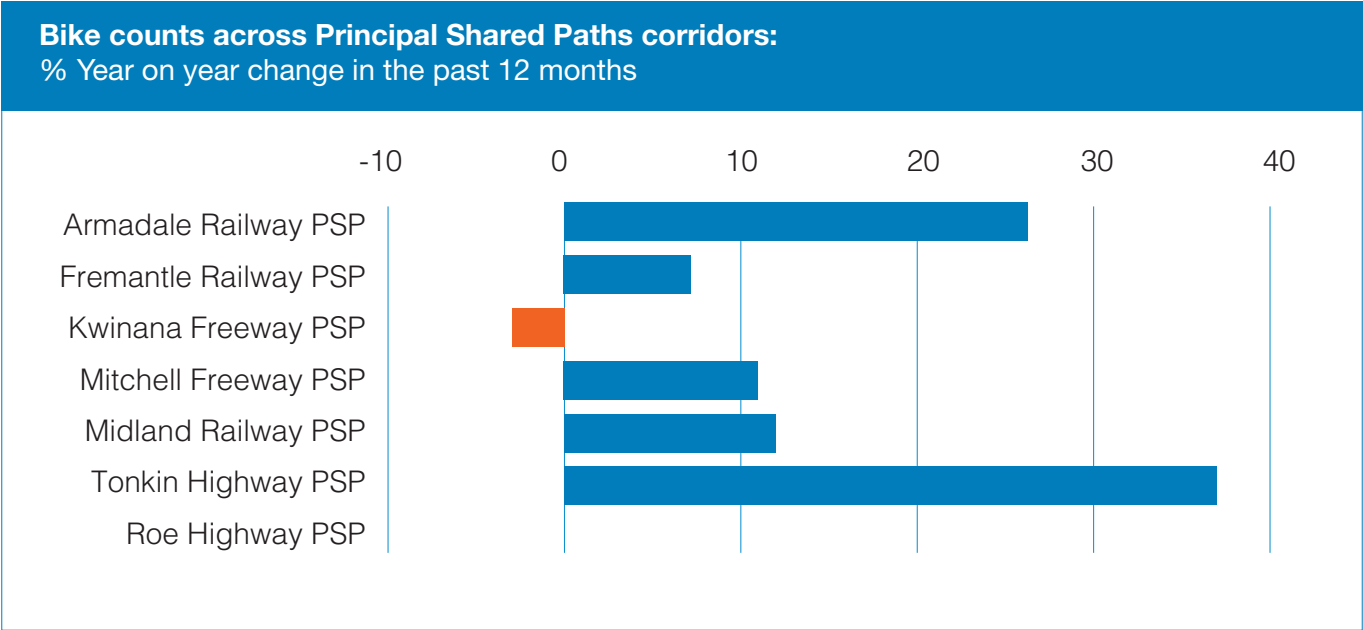
Regional North sub-groups experienced a growth of 31 per cent, and an eight per cent increase was seen for Regional South sites. The highest increase was recorded in Geraldton which could be related to completion of the Chapman Road Shared Path in 2023, offering a 3.5km connection between Corallina Quays and Glenfield Beach Drive. The trends in both regions have been consistently on the rise since 2021.





Five out of seven Principal Shared Path corridors observed growth in 2023-24.

Bike trips along five Principal Shared Paths increased this year, though Kwinana Freeway had a stable period (less than five per cent change). From four operational counter sites on Kwinana corridor, only one experienced a decrease that could be attributed to upgrade works, including the South Street underpass, and the six-month detour that was in place during the construction. There was not enough validated data to perform analysis for Roe Highway during 2023-24.



Principal Shared Paths are high quality paths for walking and riding. They are typically wider than 4m and have adequate lighting and grade separation at intersections. They form the backbone of the WA bike network, and often follow freeway and rail corridors.

The data presented is based on consistent sites operational between FY 2022-23 and 2023-24.

There was not enough validated data to perform analysis for Roe Highway during 2023-24.

Growth = more than 5% change; Decline = less than 5% change

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



The Tonkin Highway Principal Shared Path corridor observed the highest growth overall in 2023-24, of 37 per cent. This could be the result of the newly built Principal Shared Path on the western side of Tonkin Highway in July 2023.



Armadale Railway Principal Shared Path recorded the second largest increase (27 per cent) during 2023-24. The increase in activity started before the official Armadale line shutdown, trending up through November and December and sustained through April. Commuter behaviour was disrupted with the train line closed and replacement bus services adding more time to people’s journeys. This potentially made bike riding more desirable.

## Notes on terminology and methodology

To keep the analysis consistent, changes are categorised as:

- Growth = more than 5% change
- Decline = less than 5% change.

The large increase in the regional sub-groups could be due to the lowest level of daily trips. This means the smallest change in daily numbers could present itself as a large percentage change. However, the trend in both regions has been consistently on the rise since 2021.

Only corridors which met the minimum threshold of three valid counter sites in 2022-23 and 2023-24 have been included in year-on-year analysis. Roe Highway did not meet the defined criteria for this report period.



## Study limitation

The bike counter network has been installed progressively. Also, occasional periods of counter downtime are experienced due to technical faults or path construction works. Counters with less than 11 months of valid data are excluded for the related year and only corridors which met the minimum threshold of three valid counter sites each year have been included in year-on-year analysis. Thus, the average network riding trips cannot be compared with each other every year.

Of all the installed counters currently in use, 52 were operational for at least 11 months during FY 2023-24. Of these, 47 piezoelectric counters were comparable across the three financial years 2021-22 through to 2023-24, and 23 were comparable across 2018-19 to 2022-23.

Double counting is unavoidable for the Principal Shared Path corridor groups. It is likely that at least some riders will travel across multiple counter sites in a group. The data analysis method is adapted as follows to limit the possibility of double counting:

- Only a single counter from within a mutual sphere of influence is chosen.
- Counter sites have been grouped to reduce double counting effects, and a representable sample of counters from a group were selected to limit potentially counting same trip several times.

Please also note the bike counters provide an accurate picture of bike riding volumes at the counter sites, there are other riding routes not captured. Analysis within this report is based on current counter sites and does not reflect all riding movements across WA.

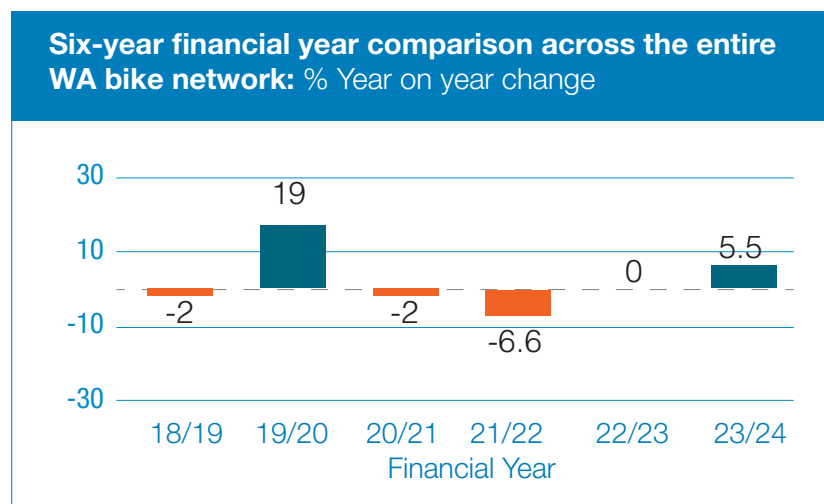
## Further information

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



# Appendix

**Chart 1: Six-year financial year comparisons**



The data presented is based on consistent sites operational between the reflected financial year.

**Chart 2: Year on year bike counts, comparison across sub-groups**

Sub-location	Number of operational counters 2021-22 to 2023-24	Average Daily Count 2021-22	Average Daily Count 2022-23	Average Daily Count 2023-24	Growth between 2022-23 and 2023-24
All Sites	47	16,128	16,109	16,997	<a href="#">5.5%</a>
Corridors within Perth CBD	7	4,550	4,467	4,656	<a href="#">4.2%</a>
Regional WA – North	4	161	203	267	<a href="#">31.2%</a>
Regional WA – South	4	253	275	297	<a href="#">7.8%</a>
Suburban Perth	9	1,746	1,865	1,912	<a href="#">2.5%</a>
Picturesque sites	6	4,455	4,143	4,273	<a href="#">3.1%</a>

The data is based on the consistent sites operational over three financial years and shows the change between adjacent years (e.g. 2022-23 compared to 2023-24). Please note, there are 17 counters that do not belong to any subgroups.

## Contact

Department of Transport

140 William Street

Perth WA 6000

Telephone: (08) 6551 6000

Website: [transport.wa.gov.au](http://transport.wa.gov.au)