



Government of Western Australia
Department of Transport

Making tracks

Monitoring WA's bicycle network



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 69 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 have 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 have 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

69

New counters installed in 2020-21

7

Regional counters

9



Why we collect data

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

It also helps us to:

- guide sustainable 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 are we working towards

DoT have five key performance indicators that are used to monitor and track progress. These include:

1. Increased placement of bike counters at strategic locations across the WA long term cycling network in line with the WA Active Transport Network Monitoring Plan.
2. Increased or sustained network level bike counts compared with the previous 12-month period*.
3. Increased bike counts spread evenly across sub-regional areas of the network.
4. Increased or sustained weekly bike riding participation levels compared with the previous 24-month general population sample and measured in relativity to population growth*.
5. Increased variety of users on the network, particularly women and people under 35 participating in weekly bike riding.

* **Please note:** Where fluctuations occur, these should align with known or suspected influential factors such as: PSP upgrades, closures, or detours; increased working from home or recreational use of the network during the pandemic associated lockdowns, etc.

Key insights: Bike riding count data

INSIGHTS FROM THE 2020-21 FINANCIAL YEAR

Key insights

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

This report draws upon the bike riding count data collected for the 2020-21 Financial Year.

Setting the scene

2019-20 was an important and significant year for cycling growth across Australia. When parts of the country were under direction to stay home and gyms were closed to help contain the spread of COVID-19, many people turned to their bikes for outdoor exercise and recreation. As restrictions have eased so too has the enthusiastic uptake of bike riding, with bike riding counts remaining well above pre-COVID levels.

As the global coronavirus pandemic was ongoing during this period, this should be considered when comparing the bike count data and usage patterns to previous time periods. The data observed during the 2020-21 should be put in context of the surge of cycling count volumes in the 2019-20, likely due to disruptions to travel choices observed across the network.

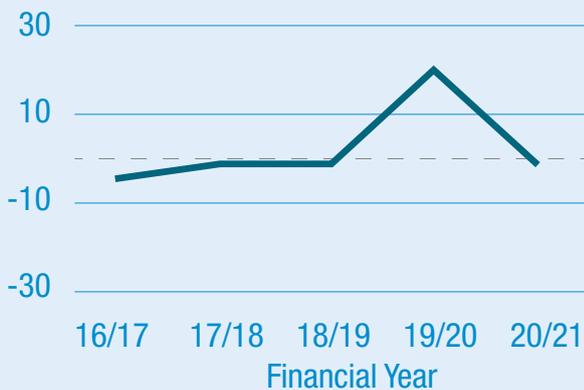
Network Average Daily bike riding counts

2020-21	13,466
2019-20	13,748
2018-19	11,490

This is the total daily count from 30 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.



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



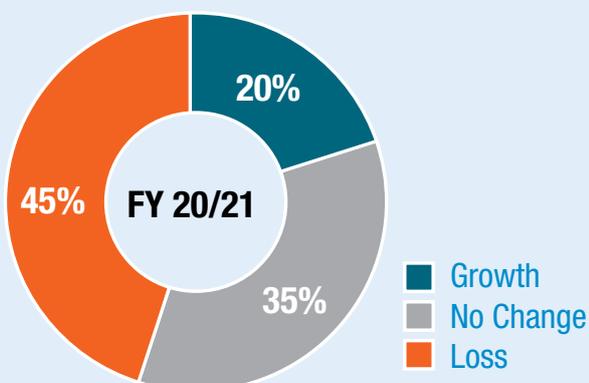
Bike riding remains strong and counts are starting to realign to pre-COVID levels.

2019-20 saw unprecedented growth of 19% in the number of bike trips across the Perth metropolitan counter network. In 2020-21 bike trips declined by 2%, which is not surprising given the high volumes in the preceding period.

There has been a 17% growth, when comparing to the FY 2018-19, indicating continued growth.

It is also indicative some of the growth recorded during the pandemic is being sustained.

Comparison across entire WA Bike Network Percent of growth, loss and neutrality



Over half of all bike counters experienced growth or stable numbers in comparison to 2019-20.

55% of counters across the network experienced some growth or no change over 2020-21, indicating most sites sustained the growth which saturated the previous period.

Please note: The percentage of growth, loss and neutrality has been based on sites which have experienced a change in average daily counts of more than 5% (increase or decrease).



Looking more closely at the 2020-21 change across the networks' sub-groups:



CBD - Cordon



Regional WA - North



Regional WA - South

Bike riding activity was lower around the CBD and Regional WA

It is clear there has been lower bike riding activity around the CBD cordon and in Regional WA (particularly over the weekends). The decline in commuter riding may be an indication of the impact of pandemic hesitancy, disruptions to business and usual activity and work-location flexibility.

There was however a growth in bike riding activity observed across



Picturesque
(near the river,
ocean or parkland)

Picturesque sites in Perth

Growth in bike riding counts across picturesque sites could be linked in some part to the lockdown restrictions in place during parts of this period, where people may have been riding their bikes within their community or near the river, ocean or parklands, for outdoor exercise and recreation.

The busiest site was the Canning Highway Path (near the Canning Bridge) reporting a growth of 8% with an average daily count of 1488. This was closely followed by the South Perth Esplanade Path (near Sir James Mitchell Park) with a growth of 6% and 1453 average daily counts.



Perth's five
main
PSP
corridors

Mitchell Freeway Principal Shared Path

Counters on the Mitchell Freeway PSP experienced significant growth which is likely related to the extension of the PSP from Glendalough Station to Hutton Street which opened in July 2020, providing greater connections and convenience for people riding and walking.

The site north of Oxford Street had the largest growth with an increase of 46% and an average daily count of 1087.

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, 59 were operational for at least eleven complete months during 2021. Of these 41 piezoelectric counters were comparable across 2019-20 and 2020-21, and 30 were comparable across 2018-19 to 2020-21.
- The percentage of growth, loss and neutrality has been based on sites which have experienced a change in average daily counts of more than 5% i.e. a decrease of more than 5%, stable volumes between -5% and 5% and those which have experienced growth greater than 5%.
- 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 the DoT website.

www.transport.wa.gov.au



Appendix

Five-year Calendar Year comparisons

Chart 1:

Comparison across the WA Bike Network

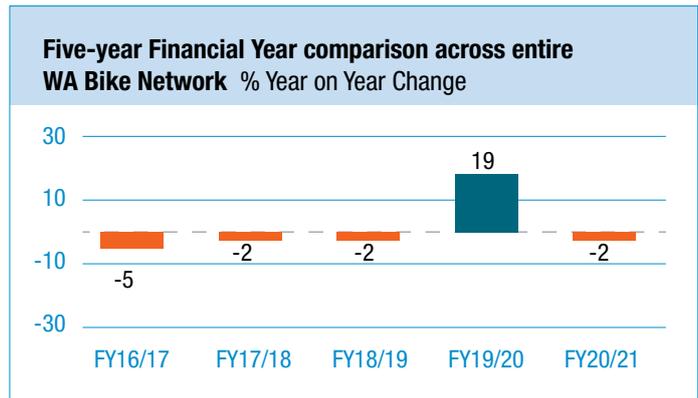
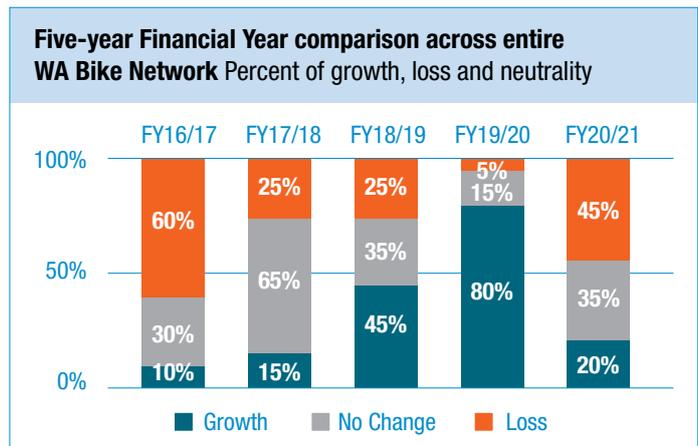


Chart 2:

Percent growth, loss and neutrality



Last 12-month bike counts

Chart 3:

Comparison across Sub-locations

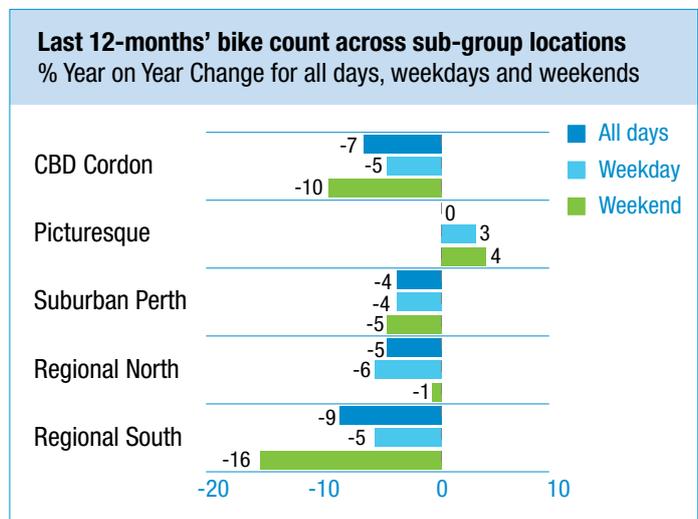


Chart 4:

Comparison across PSP corridors

