

City of Marion Innovation Review



Project: Playground Data Collection

Date: December 2019

Project Description

In the delivery of the playground works program Elected Members asked for data in relation to playground usage. A report was endorsed by council to enable the collection of data in playgrounds to inform future development and upgrades of playgrounds.

Objectives

- To collect data that will inform playground and open space works into the future
- To collect data to inform usage of other open space in the City of Marion (CoM)

Playground Data Collection Trial Locations

Biba playgrounds

- Appleby Road Reserve
- Roy Lander Reserve
- Barton Terrace Reserve

Connected Parks

- Oakvale Way Reserve
- Cowra Crescent Reserve
- Hendrie Street Reserve

SAGE Automation (SAGE)

- Jervois Street Reserve

Timeframe

The trial will be undertaken for twelve months commencing the 1st January and concluding on the 1st of February 2020. The length of trial will enable a long term view of data collection that allows for data sets across a range of seasons and holidays to capture comprehensive data collection on playground usage.

Cost

A budget of \$48 000 was allocated to collect data across a range of playgrounds. After reviewing a number of data collection devices and companies, it was decided to trial a range of products and devices to identify which data collection best suits CoM needs into the future.

The following companies and devices have been selected

- SAGE – battery sensors to monitor Jervois Street Reserve
- Connected Parks
 - Oakvale Way Reserve – Wi-Fi sensors to monitor use of open space and play equipment
 - Cowra Crescent Reserve – gate counters
 - Hendrie Street Reserve – gate counters
- Biba – Augmented reality markers fitted to playgrounds to enable games to be played on devices with and around play equipment.

All three technologies are costing a total of \$45 781 to trial. The technology will belong to the CoM after the trial ends, ongoing costs will be for data collection and analysis.

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Assessment

Biba

Biba games have been installed at three playgrounds since February 2019. Reports are received quarterly as per September reports (Attachment 2). Data insights are assessed against similar playgrounds within the CoM and worldwide.

Data to note includes:

Appleby:

- The most popular equipment is the tube slide
- Sunday is the most visited day, in the morning
- Average session length is greater than 30 minutes
- July had the most sessions

Roy Lander

- The most popular equipment is the tube slide
- Saturday was the most visited day, lunchtime
- March had the most sessions

Barton Street Reserve

- The swing and slide were equally popular
- Sunday is the most visited day, lunchtime
- April had the most sessions
- Average session length was less than 10 minutes

Connected Parks

Connected Parks have installed and tested equipment sensors at Oakvale Way Reserve and data collection was started April 2019. Gate sensors were also installed at Cowra Crescent Reserve and Hendrie Street Reserve. The data is collected to a dashboard housed by Connected Parks.

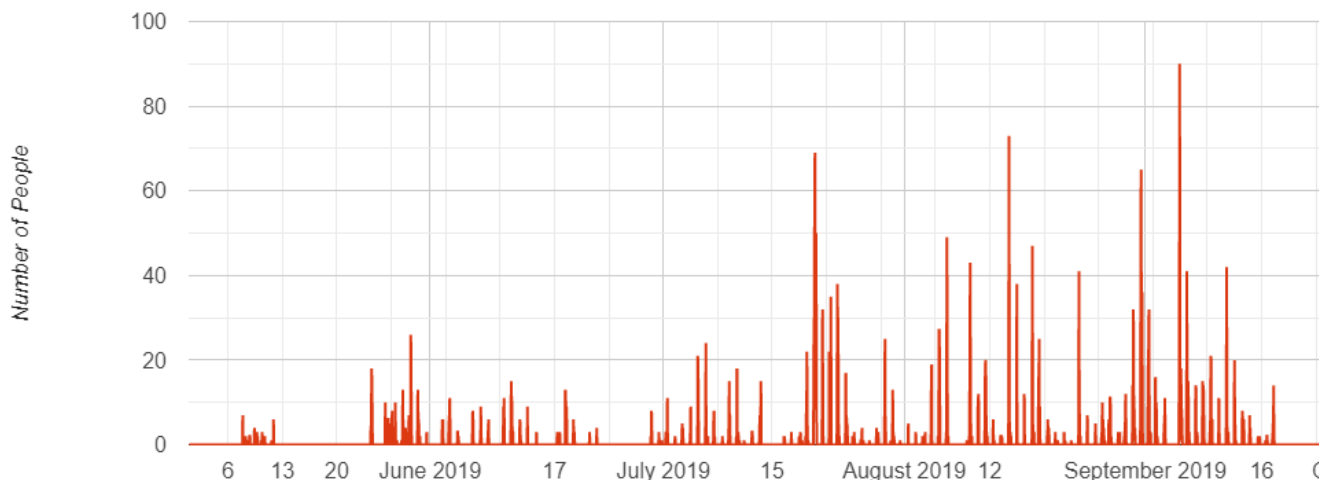
There have been inconsistencies with this data collection and graphs reflect periods of time where no data was collected either from vandalism or poor battery life of sensors.

Data to note includes:

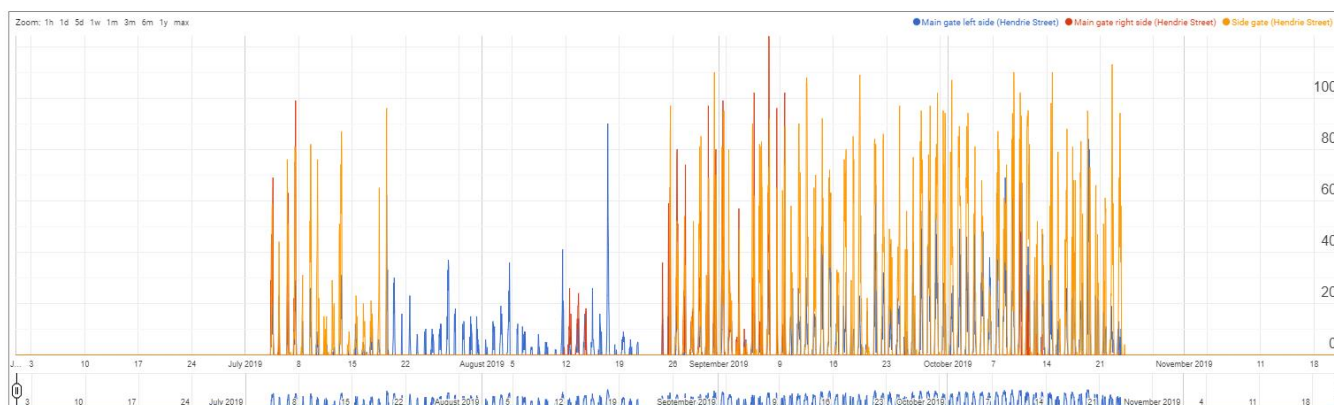
- The swing is the most popular piece of equipment at Oakvale Way Reserve
- The side gate at Hendrie Street Reserve is open the most
- Use of equipment at Oakvale way reserve is poor – it will be interesting to see if this use increases once a new playground is constructed.
- Gate openings at Cowra Crescent reserve are low, suggesting that use is minimal.

The following graphs summarize a sample of data usage over the last year at Cowra Crescent Reserve. There are a number of high use days, but these may be due to the gate being left open.

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The side gate at Hendrie Street Reserve receives the most use.



Sage

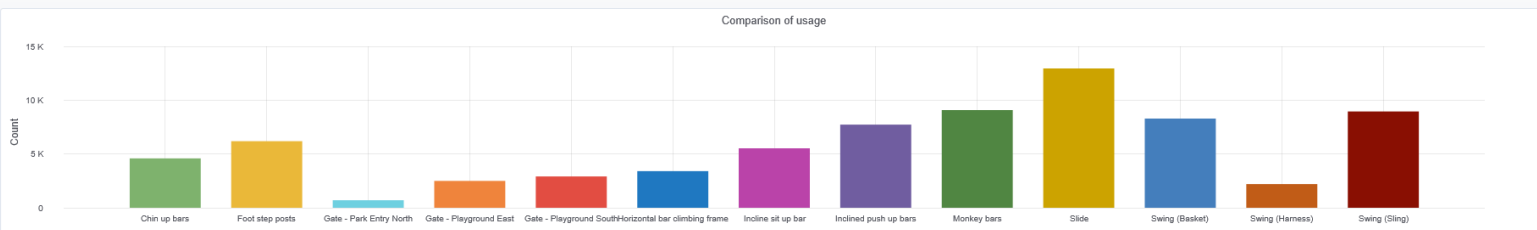
Sensors at Jervois Street Reserve have been in place since March 2019 and data is collected and analyzed in a dashboard housed by SAGE, which can be visualised in a variety of ways.

Data to note includes:

- The most popular day to play is Monday, lunchtime
- The most popular piece of equipment is the slide
- The sling swing is more popular than the basket swing
- The southern gate is the most popular entry to the children play area

The following graphs summarize a sample of usage data from Jervois Street Reserve over the last year.

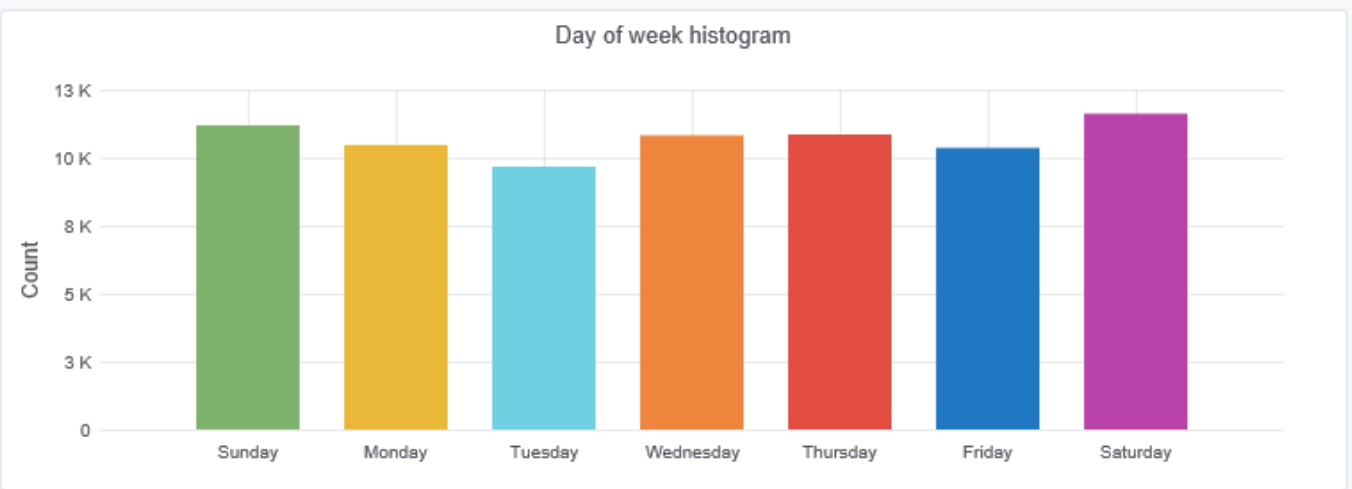
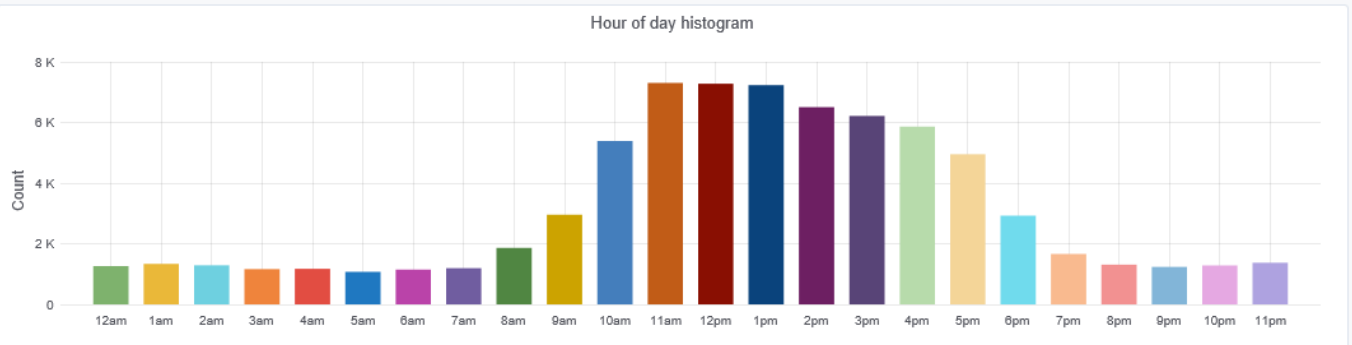
What is the most popular equipment?



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What are the most popular times?



Data use

The data collected will help inform:

- Popular equipment that should be used in new constructions
- Times of day to activate open spaces and playgrounds
- Historical use when a decision is made to remove a playground
- Determination if a new build increases use of the playground
- Provision of data for reports, awards and grant applications