



Government of **Western Australia**
Department of **Transport**
and **Major Infrastructure**

Empowering a
thriving *community*



MELVILLE SAFE ACTIVE STREET

Final Route-Level Evaluation Report



Acknowledgement of Country

The Department of Transport and Major Infrastructure acknowledges the Traditional Custodians of the land throughout Western Australia and pay 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.

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SAFE ACTIVE STREETS PILOT PROGRAM

The Department of Transport and Major Infrastructure (DTMI) worked with local governments between 2015 and 2023 to develop, trial and evaluate safe active streets (SASs).

SASs use local area traffic management treatments to reduce car speeds to 30 km/h and create environments that encourage more people to walk, wheel and ride in their communities.

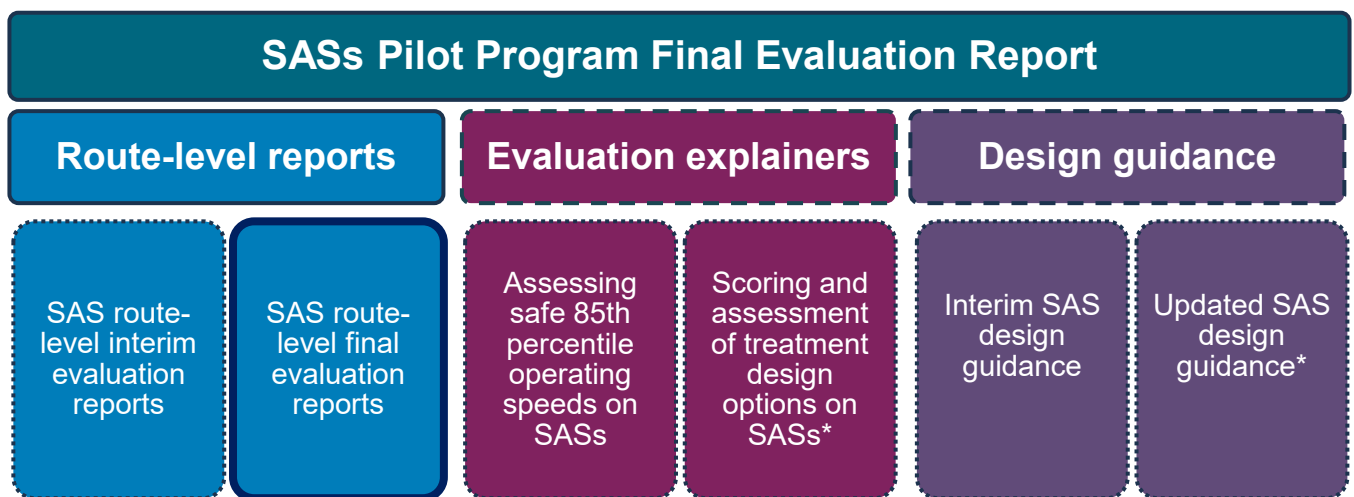
The SASs Pilot Program in Western Australia (WA) was motivated by research which showed that a fear of sharing the road with motor vehicles was a key barrier to many people riding bikes more often. Local research, including a large community-wide cycling survey undertaken in 2015 by the Royal Automobile Club of WA¹ and the 2015 Auditor General’s Report into Safe and Viable Cycling,² highlighted the need for quieter and more comfortable local bicycle routes to remove barriers to active transport and the perceived lack of safety on local roads.

An evaluation plan and framework were established to test whether redesigning a street using traffic management treatments could reduce vehicle volumes and speeds, leading to increased active travel, and positive community sentiment towards the SAS.

Evaluation document suite

This document forms part of the [SASs Pilot Program Evaluation](#). It provides a summary of results across three key change indicators for one of the nine evaluated projects, and a discussion of how the route performed overall.

The results outlined in this final route-level report should be read in conjunction with the SASs Pilot Program Final Evaluation Report,³ and other supporting material including methodology explainers and SASs design guidelines.



Suite of interrelated documents to be read in conjunction with the Melville SAS final route-level report

¹ RAC – WA, 2015. [RAC Cycling Survey: 2015](#). Royal Automobile Club of WA, Perth, WA.

² OAG – WA, 2015. [Western Australian Auditor General’s Report: Safe and Viable Cycling in the Perth Metropolitan Area](#). Office of the Auditor General, Perth, WA.

³ DTMI, 2026. [Safe Active Streets Pilot Program – Final Evaluation Report](#). Prepared by the Department of Transport and Major Infrastructure. Perth, WA.

* Document to come.

CITY OF MELVILLE SAFE ACTIVE STREET

Executive summary

The 1.16 km Links Road SAS route provides a connection between the Riseley Street Shopping Precinct to Westfield Booragoon and Melville Civic Centre. Consultation, design and delivery spanned four years between 2018 and 2021.

This SAS route generated broadly positive outcomes.

Design treatment changes that influenced speed and vehicle volume reductions on the Melville SAS contributed to positive road safety outcomes across the route. This saw large increases in rates of active travel along the SAS and largely positive sentiment from the community.



Key project insights

Overall, the design treatments and measures applied on the Melville SAS led to positive results for user behaviour and community sentiment. These changes contributed to a positive road safety experience across the entire SAS route.

Bike riding and walking increased on all segments of the SAS after construction, with increases also observed on control streets.

Vehicle numbers and 85th percentile speeds decreased on the SAS and on an intersecting lightly treated local distributor road. However, 85th percentile speeds on part of the SAS adjacent to two schools were within an upper bound of the preferred operating range, and some additional treatments could be considered.

Given the increases in walking and bike riding occurring on this segment of the route, and the potential for peaks in vehicle traffic during school pick up and drop off periods, further reducing fastest speeds would be beneficial to ongoing safety of vulnerable road users and the maintenance or continued increase of walking and riding.

Crash patterns enroute and off route showed strong overall SAS performance in supporting the safety of vulnerable road users.

The SAS received a very positive response from the community with the overall design and slower traffic speeds appearing to have contributed to feelings of comfort and safety. Activation activities and involvement of the community, including schools enroute, contributed to community awareness and overall positive sentiment.

Project recommendations

Recommendations to improve outcomes on this SAS project, informed by insights summarised in the SASs Pilot Program Final Evaluation Report, include:

- Lowering 85th percentile speeds consistently across all segments of the route to within the preferred operating range, by considering additional road treatments as required.
- Applying vertical or horizontal deflection treatments 80-100 m apart for maximum benefit realisation and consistent reduction of unsafe speeds.

Program insights

The SASs Pilot Program was successful in trialling a new approach to road safety and active transport on suburban streets. The program has attracted national and international interest, and the SAS concept is being taken up by local authorities in WA and across Australia.

The [SASs Pilot Program Final Evaluation Report](#) detailed the rich array of insights generated through the pilot program, which provide context and relevance to the following individual project key insights and recommendations.

Theory of change supported

- Combining comprehensive physical interventions with a posted speed limit of 30 km/h: increases active travel (walking and bike riding).
- Reduces vehicle volumes and speeds, making streets safer for all users.

Effective design features identified

- Road width narrowing and traffic calming treatments spaced every 80–100 m: these measures physically slow vehicles and change vehicle direction, leading to:
 - lower traffic volumes and speeds
 - increased bike riding and walking.

Critical drivers of benefit realisation determined

- Route selection: must form a direct or indirect connection to key attractors (activity centres, shops, schools, stations, recreation areas) and form part of the long-term cycle network (LTCN).
- Design features: narrowed road widths and treatments 80–100 m apart.
- Cost efficiency: projects costing \$600,000 – \$1.2 million per km likely achieve a benefit cost ratio (BCR) >1, if the above conditions are met.

Application of activation, consultation and evaluation (ACE) principles⁴ is essential

- Activation: built infrastructure reflects social needs and the desires of people who will use it.
- Consultation: engagement integrated throughout the project lifecycle is a form of activation and enables community consultation.
- Evaluation: impact measured against anticipated outcomes.

Application of results into future program delivery

The SAS Design Guidance⁵ summarises the range of measures that can be applied and the key factors that have been found through this pilot program to influence user behaviour positively. These principles and guidelines will help local governments and practitioners plan and activate routes, consult with impacted communities and evaluate outcomes, whilst considering the application of design treatments and measures appropriate to their local context.

⁴ DTMI, 2023. [WA Bicycle Network Grants Program: WABN Grants Program Resources - Activation, Consultation and Evaluation \(ACE\) Guidance](#). Department of Transport and Major Infrastructure. Perth, WA.

⁵ DTMI, 2025. [Planning and Designing for Active Transport: Safe active street design guidance](#). Prepared by the Department of Transport and Major Infrastructure. Perth, WA.

PROJECT OVERVIEW

The 1.16 km Links Road SAS route provides a connection between the Riseley Street Shopping Precinct to Westfield Booragoon and Melville Civic Centre.

The route runs along Links Road, Collier Street, Millington Street and Hope Road, onto Willcock Street, and offers connectivity through existing low-traffic, low-speed streets to activity centres, schools, shops and parks.

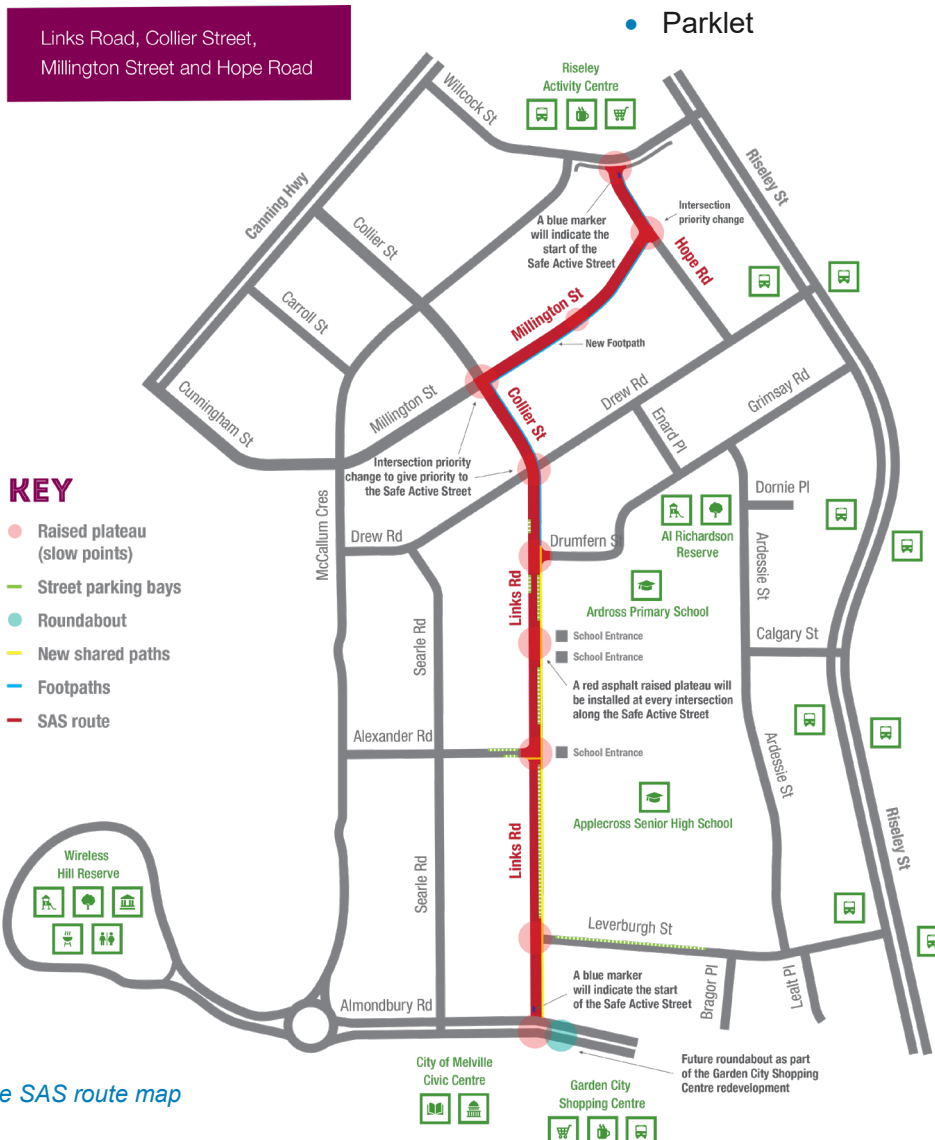
City of Melville SAS project map

Key route destinations

- City of Melville Civic Centre
- Applecross Senior High School
- Ardross Primary School
- Riseley Street Shopping Precinct
- Westfield Booragoon Shopping Centre

Unique design features

- Red asphaltting
- Raised plateaus
- Formalised parking
- New shared path and footpath
- Re-kerbing and drainage works
- Tree plantings
- SAS line marking
- Parklet



Timelines

Delivery

- Community consultation: 2018
- Construction: July 2020-October 2021
- Lines and signs completion: December 2021
- Official opening: October 2021

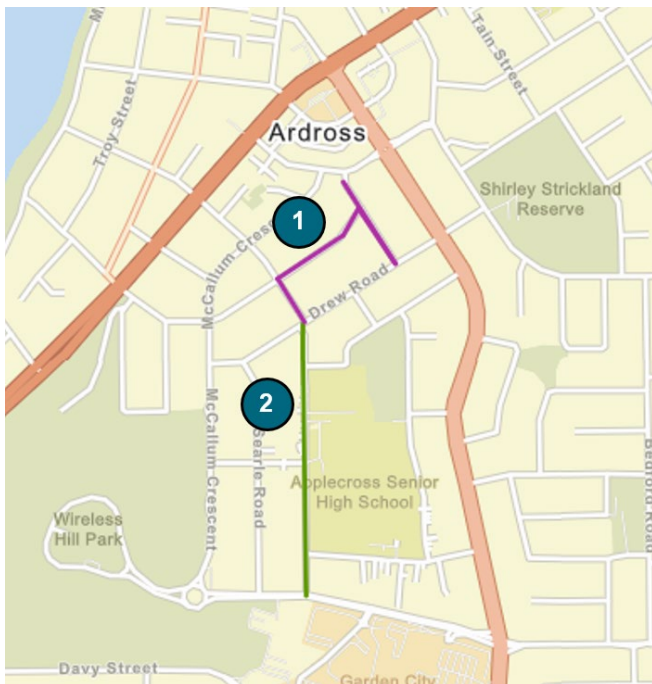
Evaluation:⁶

- Pre-construction data collection (user behaviour): May 2018
- Post-construction data collection (user behaviour): May 2022
- Post-construction data collection (community sentiment): October-November 2022
- Interim evaluation report: 2023
- Final evaluation report: 2026

Segments

For monitoring and analysis, the SAS was split into 'segments' based on differences in form of the existing route and treatments applied during delivery of the SAS. This route was separated into segments as follows:

1. Hope Road, Millington Street and Collier Street (Willcock Street to Drew Road)
2. Links Road (Drew Road to Almondbury Road)



Map of the Melville SAS route showing 'segments' used for data analysis

⁶ Note: Between data collection periods, city-wide travel patterns were disrupted by COVID-19 lockdowns. The post-construction SAS data collection periods, however, were chosen because [DTMI's network monitoring](#) indicated they were much less affected by these disruptions. Any remaining impacts are expected to have influenced both the treatment (SAS) and control streets equally.

WHY WE COLLECT DATA

Evaluating a project by collecting data on people's behaviour and sentiment helps us to determine:

- whether the aims of a project have been achieved
- what combinations of interventions were most effective
- whether further improvements could still be made to improve outcomes.

These insights help to guide infrastructure investment in local communities that support the growth of active transport.

SASs Pilot Program

The SASs Pilot Program trialled unique combinations of design features that reflected local community needs and contexts, while also complementing each local government's approach to building an integrated active transport network.

Nine SAS projects, including this one, were included in the evaluation study. For more information on the evaluation methodology, theory of change, and overall program insights see the [SASs Pilot Program Final Evaluation Report](#).

Project aims

The following aims were investigated for each project included in the evaluation study, and results were compared across projects to derive program level insights that could lead to improvements in design guidelines and future SAS delivery.

1. Reduce motor vehicle numbers
2. Reduce 85th percentile speeds to within acceptable operating thresholds⁷
3. Increase the number of riding and walking trips made throughout the week
4. Increase the number of people of all ages and abilities making local trips by riding and walking
5. Influence user, resident and wider community perceptions of SAS routes as safe and comfortable places to walk, wheel and ride.

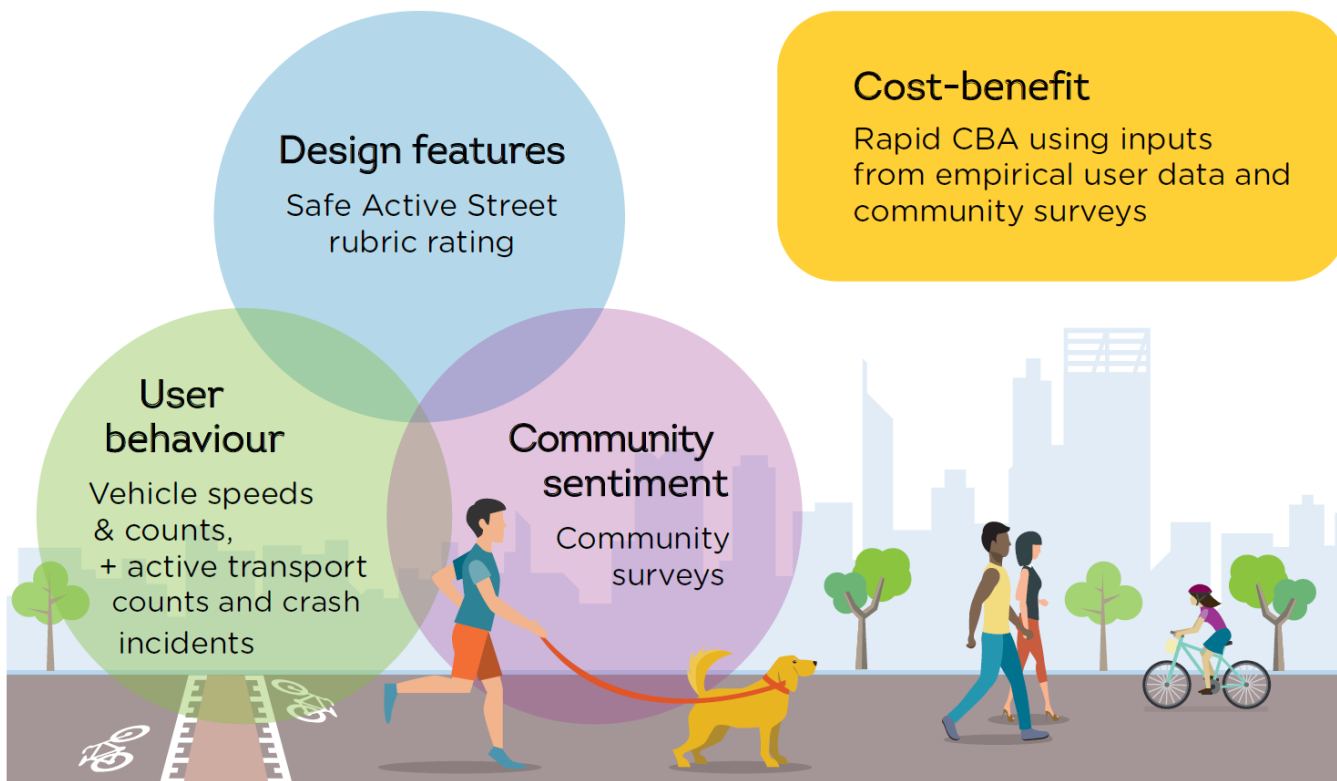
Evaluation framework

A comparative impact evaluation methodology was developed to collect and analyse data on three key change indicators for each SAS:

- **Design features** – scores to quantitatively differentiate between the types and scale of features, treatments and supporting measures applied to the route.
- **User behaviour** – vehicle counts and speeds (using pneumatic tube surveys), and active travel counts (using video surveys), collected pre- and post-construction. Small samples of available crash data were reviewed and discussed at the project level only, to aid interpretations of other data.
- **Community sentiment** – qualitative data on sentiment and perceptions, collected via community, resident and user surveys post-construction.

⁷ DTMI, 2026. [Planning and Designing for Active Transport: Explainers - Assessing 85th percentile speeds on safe active streets](#). Prepared by the Department of Transport and Major Infrastructure. Perth, WA.

At the program level, the evaluation framework included a fourth key indicator: cost benefit. The [SASs Pilot Program Final Evaluation Report](#) includes discussion of outputs from a cost benefit analysis conducted on data from each of the nine evaluated projects and provides a summary of the factors that influenced whether a project received a BCR >1, indicating a positive return on investment.



Data sources for each safe active street key indicator, illustrated to show theoretical interactions

OUTCOMES

Design features

Evaluation of the design features applied on each SAS route was a complex task due to the wide range of measures and treatments available, which could be chosen to influence different unique, yet complementary effects on user behaviour and community sentiment.

Assessment rubric

To assess the types and scale of treatments and supporting measures applied in each pilot project, a consistent scoring rubric and guidelines were developed for the SASs Pilot Program, which required a group of invited transport engineers and planners to agree on scores during focus group sessions.

Twenty-one criteria were identified across five design categories:

1. Active transport infrastructure
2. Connectivity
3. Traffic calming
4. Parking bay infrastructure
5. Placemaking and legibility.

Through facilitated consultation, design scores (0-4) were determined, where scores reflected the degree of improvement applied for each criterion per route segment assessed. Total average scores per route segment and category (grouping of criterion) could then be interpreted as:

<1 = minimal improvements	1-2 = moderate improvements	2-3 = major improvements	>3 = substantial improvements
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Results

Table 1 provides a breakdown of scores per route segment and design category.

Overall, the route averaged a design score of 2.38, indicating major improvement was achieved across the whole route.

- The route score was brought up by substantial improvements to 'active transport infrastructure', with new shared paths and footpaths built as part of the upgrade.
- Scores for 'placemaking and legibility' were major, with red asphalt, parklets and landscaping among the physical measures implemented, in addition to the running of activation activities to promote the SAS post construction.
- Scores for 'connectivity' were major which is an indication of suitable route selection.
 - The route linked directly to key local destinations including Westfield Booragoon Shopping Centre, two local schools and Riseley Street Shopping Precinct.
 - The SASs Pilot Program Final Evaluation Report determined that route selection is a critical driver of benefit realisation, with direct influences on current and latent demand.
- Scores for 'traffic calming' were moderate as no narrowed slow points were installed along the route, however, the carriageway narrowing created by provision of formalised parking on segment 2 would have contributed to reduced vehicle speeds and volumes.

- Scores for 'parking bay infrastructure' were moderate, brought down by the lack of formalised parking bays provided in segment 1, whereas segment 2 achieved substantial improvements to 'parking bay infrastructure' where these were used extensively near the two schools.
 - Use of formalised 'parking bay infrastructure' had a traffic calming effect by narrowing the road carriageway and should be considered as a supportive design feature for the goal of reducing traffic volumes and speeds.

Table 1: Design scores* per category, segment and overall for the Melville SAS route

Segment	Active transport infrastructure	Connectivity	Traffic calming	Parking bay infrastructure	Place-making and legibility	Total*
Segment 1: Hope Rd, Millington St and Collier St (Willcock St to Drew Rd)	3.5	1.33	1.71	0	2.4	2
Segment 2: Links Rd (Drew Rd to Almondbury Rd)	3.5	3	2	2.5	3.2	2.76
Overall average route score	3.5	2.17	1.86	1.25	2.8	2.38

*Total average scores per segment and category can be interpreted as: <1 = minimal improvements, 1-2 = moderate improvements, 2-3 = major improvements, >3 = substantial improvements.

Examples of applied design treatments



Entry and exit treatment



Intersection priority changed



Formalised parking – carriageway narrowing



Parklet at raised intersection enroute



Raised intersection with all legs



Entry and exit treatment

User behaviour

Evaluation of user behaviour followed a comparative impact approach, with before-after, control-intervention (BACI) data collection design.

Data collection design

A BACI data collection design was applied to differentiate between the effects of interventions applied on the treatment route and changes that may have occurred 'naturally' in the surrounding area.

Data was collected before construction at carefully selected sites on the SAS (treatment) and at comparative sites on similar nearby streets (control) and repeated at the same sites after construction at consistent times of the year to minimise influence of seasonal variation.

With a BACI design, traffic and movement flow on control streets did not need to match with treatment streets, and an appropriate analysis of change (odds ratio) was determined.

Odds ratio analysis

To assess changes in counts of vehicles, walkers and bike riders on the treatment compared to control routes, a statistical measure of probability was applied known as an 'odds ratio', which compares the odds of an outcome occurring in one group to the odds of it occurring in another group (regardless of differences in raw counts across groups).

Odds ratios were used to estimate whether the outcomes observed on the SAS route were likely attributable to the SAS, unlikely attributable, or consistent with trends observed on the control streets.

Scores range from 0-2 and sometimes higher, with scores >1 indicating higher odds of the treatment influencing the outcome and scores <1 indicating decreased odds. It is common, however, that during interpretation of results, a middle range is determined that indicates a neutral or indeterminate result. During analysis of the SAS user behaviour data, a middle range of 0.93 and 1.08 was determined as neutral change or change on the SAS that was consistent with trends observed on the control routes.

Assessing 85th percentile speeds

It was not suitable to apply odds ratios for 85th percentile speeds because the posted speeds were intentionally reduced on the SAS route. Instead, a method was developed specifically to assess the effectiveness of the lowered speed limits and changed street conditions of SAS routes on driving behaviour, through which DTMI identified an acceptable operating range and upper bound for 85th percentile speeds. For more information, see the supporting document:

[Assessing Safe Operating Speeds on 30 km/h Streets](#).

Calculating average daily results

Vehicle counts and speeds were detected across 14 consecutive days, including weekdays and weekends, at consistent seasonal and temporal periods before and after SAS construction. Active transport counts were detected across three weekdays and one weekend day, at consistent seasonal and temporal periods before and after SAS construction.

Data collection periods were carefully selected to avoid local area events, public holidays and school holiday periods. If collection technology failed, samples were repeated immediately.

Calculations of average daily results were undertaken by:

- i. averaging the available weekday and weekend data per collection period
- ii. applying weightings for the number of weekday and weekend days per week
- iii. adding the result to determine average weekly activity
- iv. dividing by seven to achieve an average daily estimate.

This method was applied to achieve consistency across the available dataset, and smooth out any day-of-the-week fluctuations that may have occurred. In this way, data between control and treatment sites, and across SAS locations could be compared consistently.

Vehicles

Method

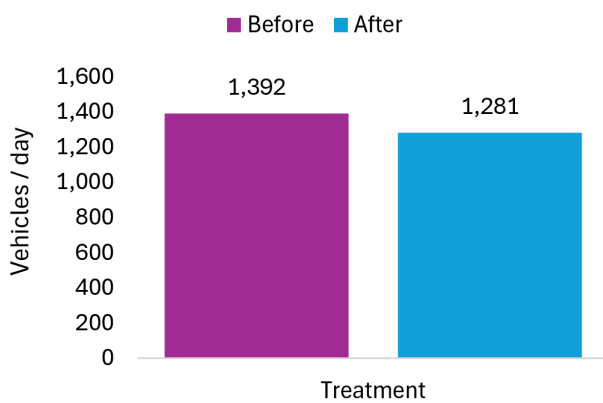
Pneumatic tube counters were used to detect vehicle traffic volumes and speeds. They were placed at strategically selected midblock locations on the SAS route (treatment) and comparable locations on adjacent streets (control). Depending on segment length, between 1 - 4 counters were placed on each.

Results

Vehicle volumes - overall

- Vehicle counts reduced on the treatment route (-8 per cent), indicating the SAS treatments had a positive impact in discouraging vehicles from the route.⁸

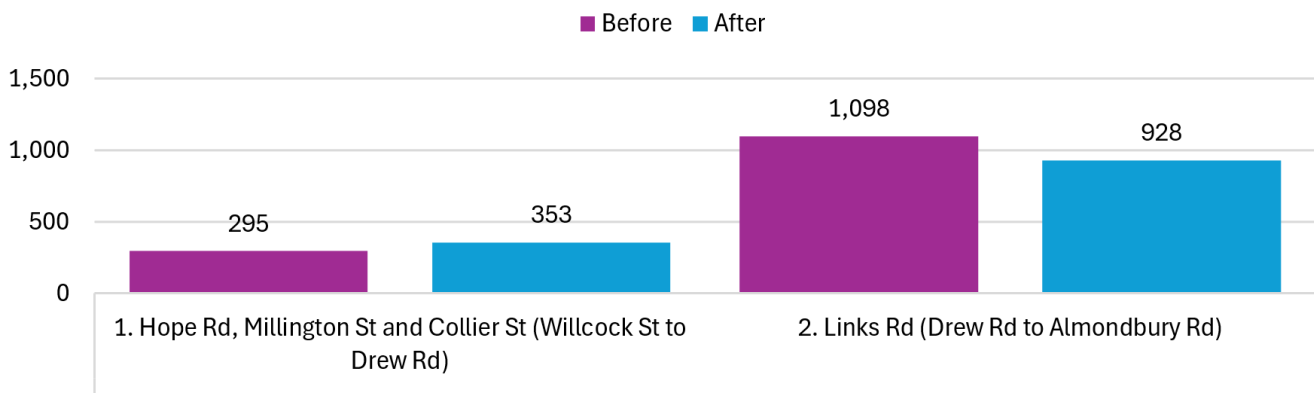
Figure 1: Melville – average daily vehicles



Vehicle volumes – segment comparison

- A modest increase in vehicle volumes was recorded on segment 1 (+16 per cent), from a low baseline amount.
- For segment 2, which includes a large, high-demand high school (Applecross Senior High School) and a primary school (Ardross Primary School), there was a reduction in vehicle volumes (-15 per cent) from a high baseline.

Figure 2: Melville – average daily vehicles on SAS segments

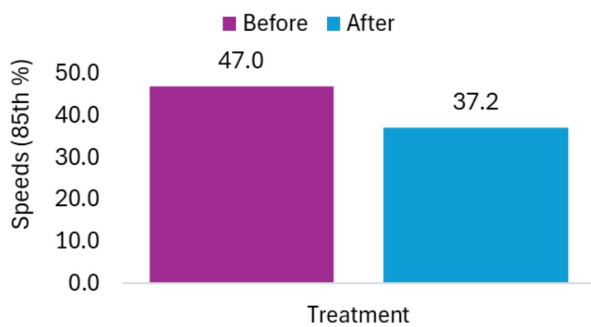


⁸ Note: Pneumatic tube data from control streets could not be analysed for the Melville SAS route due to problems with data formatting and file corruption, consequently, odds ratios could not be calculated for vehicle volumes enroute compared with the surrounding area.

Vehicle speeds - overall

- A large reduction in 85th percentile vehicle speeds (~10 km/h) was observed on the treatment route, with the resultant speeds meeting the preferred operating range for an SAS route: 32.1 km/h to 38.1 km/h.
- This was achieved through features such as formalised parking bays to narrow the carriageway, narrowed slow points and some raised intersection plateaus. No speed humps were installed on the route, however, some were installed on cross-streets.

Figure 3: Melville – 85th percentile speeds

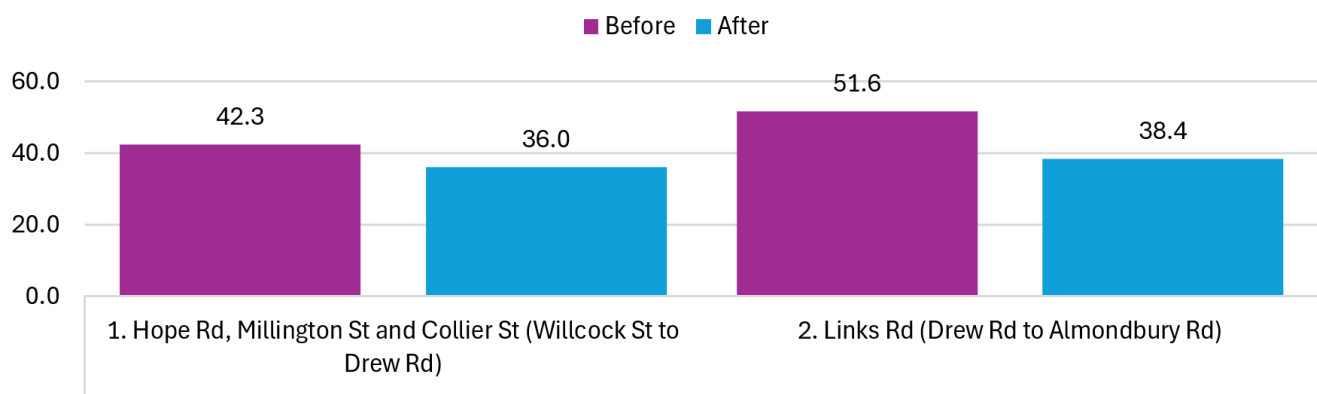


This result indicates good overall SAS performance in supporting the safety of vulnerable road users by sufficiently lowering the fastest vehicle speeds, with some variability across the route.

Vehicle speeds – segment comparison

- 85th percentile vehicle speeds recorded decreases on both segments, though the change was more substantial on segment 2 (-25 per cent) than segment 1 (-15 per cent).
- Segment 2 scored higher than segment 1 for all design features, including ‘traffic calming’ and ‘parking bay infrastructure’ which together appear to have impacted the over 12 km/h reduction in fastest speeds on this section of the SAS, contributing to improved amenity and safety for vulnerable road users.
 - With the large volumes of students moving through this location, these outcomes are positive for encouraging active travel movements among people of all ages and abilities.
- Nevertheless, 85th percentile speeds on segment 2 were within an upper bound of the preferred operating range, and some additional treatments could be considered.
 - Given the increases in walking and bike riding occurring on this segment of the route, and the potential for peaks in vehicle traffic during school pick up and drop off periods, further reducing fastest speeds would be beneficial to ongoing safety of vulnerable road users and the maintenance or continued increase of walking and riding.

Figure 4: Melville – 85th percentile (fastest) speeds on SAS segments



Additional insights - vehicle volumes and speeds on mid-route intersecting road

- Drew Road is a local access road that intersects mid-way with the Melville SAS. Less than 400 m east of the SAS intersection, Drew Road intersects with the district distributor road, Riseley Street, and provides one of the only multi-directional vehicle entry points into that suburban area. The Drew Road link to Riseley Street is one of the shortest vehicle access connections to both the primary and high school, which have a combined student number of 2,400 (K-12).
- Three road hump treatments were applied to Drew Road between Riseley Street and Links Road, to aid reduction of vehicle traffic moving through and onto the SAS route.
- Data was collected on this street for vehicle volumes and speeds, to determine whether these additional treatments combined with those on the SAS route impacted driver behaviour. Data showed:
 - daily volumes decreased substantially on this lightly treated local access road and likely contributed to reduced vehicle movement onto the SAS.
 - 85th percentile speeds were greatly reduced (-15.3 km/h), even though posted speeds on Drew Road remained at 50 km/hr.
- These changes show that applying treatments on the SAS route and a high-use intersecting local access road have a combined overall impact on:
 - re-routing local vehicle traffic to avoid use of the SAS
 - reducing fastest vehicle speeds in line with the intention of the SAS to provide a safe connection for people walking and riding.
- Furthermore, with high-frequency bus routes along Riseley Street, reduced speeds and traffic volumes on Drew Road may have improved road safety experiences for people commuting to and from school or home.

Figure 5: Drew Road – average daily vehicles

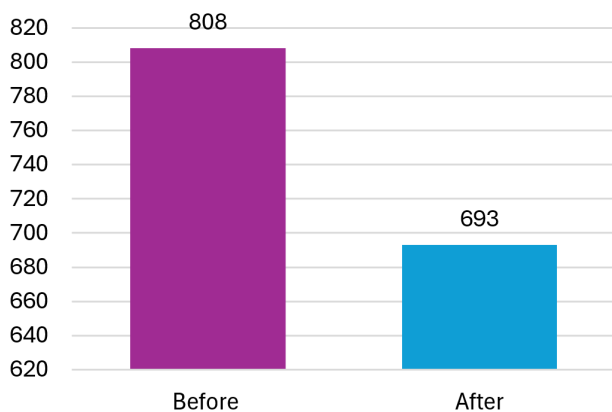
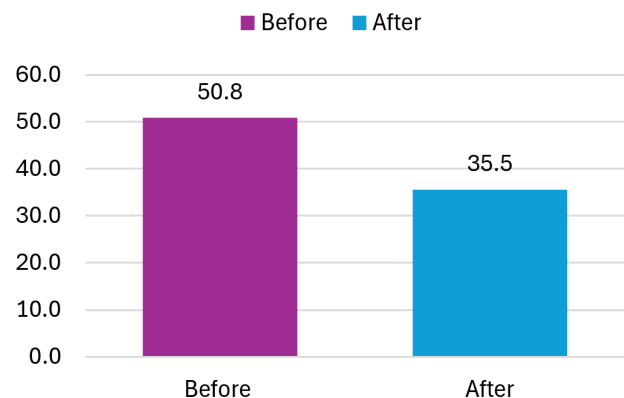


Figure 6: Drew Road – 85th percentile vehicle speeds



Active transport

Method

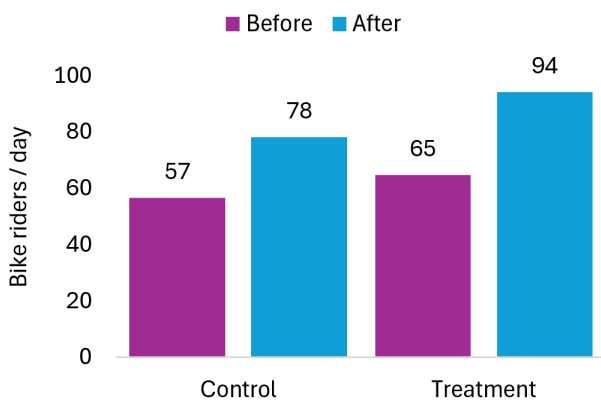
Video surveys were used to detect rates of active transport. Video cameras were placed at strategically selected intersections on the SAS route (treatment) and comparable locations on adjacent streets (control). Depending on segment length, between 1 - 4 counters were placed on each.

Results

Bike riding - overall

- Riding activity increased on both the treatment route (+45 per cent) and control streets (+38 per cent), with a slightly larger proportional increase on the treatment route, suggesting a preference for riders to use the route.
- Increases in the surrounding area indicate that bike riding became more popular overall, likely due to the improved road safety provided by the SAS route and light treatments on Drew Road.
- Comparing changes on the treatment and control routes, the odds ratio generated high score of 1.13, **indicating the SAS was likely responsible for the increases observed enroute.**

Figure 7: Melville – average daily bike riders



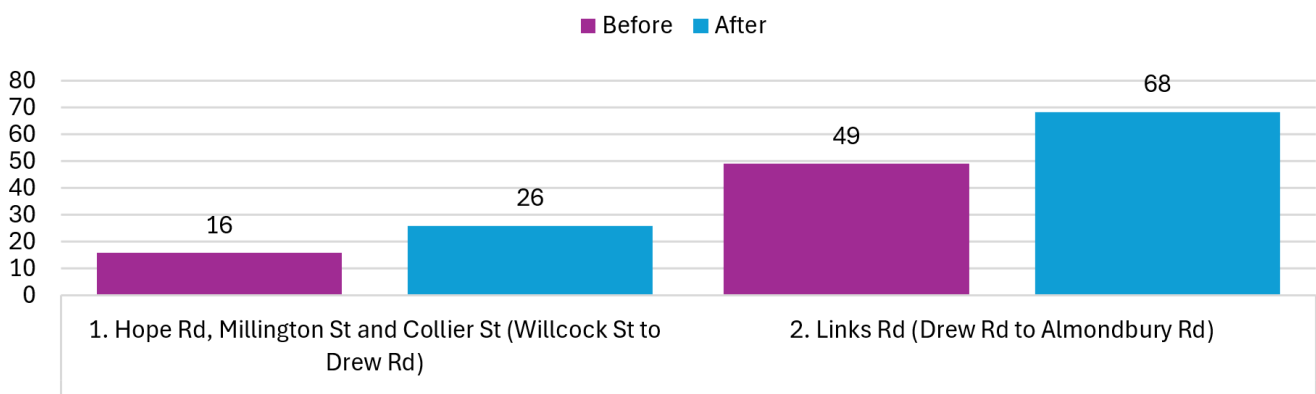
Bike riding activity increased on the SAS to a much higher proportion than control streets, indicating it was a more attractive route for bike riders.

The odds ratio indicated the increase in bike riding on the SAS route after construction was likely attributable to the SAS when compared with trends observed on nearby control streets.

Bike riding – segment comparison

- Daily bike riding increased significantly on both segments of the SAS, with segment 2 seeing nearly 20 more riders per day on average, likely due to increased student active travel.

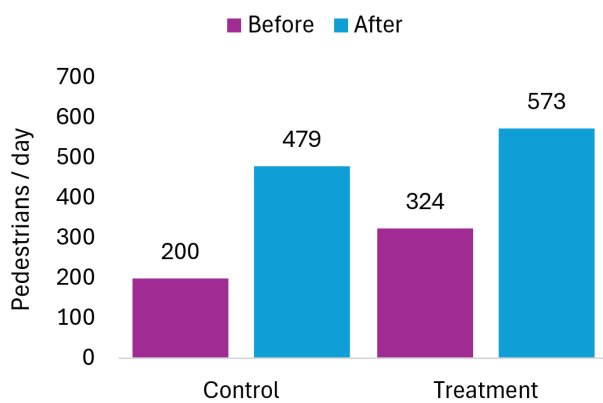
Figure 8: Melville – average daily bike riders on SAS segments



Walking – overall

- Walking activity also increased on the treatment route (+77 per cent). The increase was proportionally lower compared to control streets (+140 per cent), however, and the odds ratio found that walking activity increases on the SAS were consistent with area-wide trends.
- Comparing changes on the treatment and control routes, the odds ratio generated a low score of 0.81, **indicating the SAS was likely not responsible for the increases observed enroute.**
 - Control streets around the SAS included locations that were along transport desire lines to and from Riseley Street and the high-frequency bus services that operate along that distributor road.
 - These results could indicate that active travel movement to and from school and home increased on the SAS and in the surrounding area due to improved road safety and driver awareness overall.

Figure 9: Melville – average daily walkers



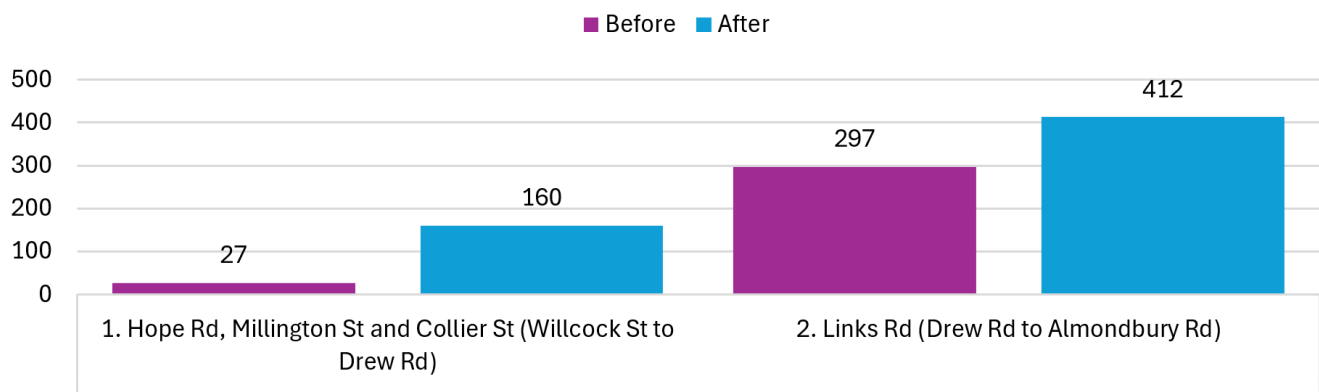
Walking activity increased on the SAS to a lower proportion than control streets.

The odds ratio, however, indicated increases in bike riding on the SAS route after construction were consistent with area-wide trends, showing that overall walking increased in the area, likely due to the SAS and other factors.

Walking – segment comparison

- Walking increased significantly on both segments of the SAS route demonstrating consistency in the attractiveness of the route for walkers.
- Design scores on both segments were high for ‘active transport infrastructure’ and moderate for ‘placemaking and legibility’, which are important factors for the attractiveness of a route and enhancement of user experience. Overall, the Melville SAS was highly successful in attracting increased walking, and supplementing increases in the surrounding area.

Figure 10: Melville – average daily walkers on SAS segments



Crash incidents

Additional to the count data collected to assess user behaviour, a review of available crash data provided an indication of safety performance of the road environment before and after implementation of the SAS.

Objective evidence on the number, type and severity of crashes occurring in the area, in light of the changed user behaviour along the route, helps identify whether the SAS treatments have influenced road safety outcomes.

Method

Crash incidents were downloaded from the Main Roads WA data warehouse via Data WA. Eleven years of reported incidents across the State, from 1 January 2013 to 31 December 2023,⁹ were available which included midblock and intersections.

Data was filtered to anything involving bike or pedestrian, and geospatially mapped to visualise their location, type and injury severity against the SAS routes.

Sample sizes were low, which limited analysis to a simple visual count. Nevertheless, patterns were assessed alongside the design features of the route and user behaviour count results for vehicles, people walking and bike riders.

Sample sizes in active transport related crash data were typically low due to:

- frequency of incidents being generally low in the specific areas of interest

- the incident dataset only containing medical, hospital, fatal or property damage reports.

Results

Table 2 provides a summary of incidents between vehicles and bike riders or people walking, before, during or after SAS route construction, shown for each stage of the SAS route and corresponding control street locations. Notable data patterns:

- The completed Melville SAS route experienced zero incidents enroute, from a base of zero in previous years.
- One incident involving a pedestrian was recorded on control streets before, and one property damage related bike rider incident occurred after SAS construction.

Increases in riding and walking on the SAS and on control streets does not appear to be related with an increase in crash incidents between vehicles and vulnerable road users.

The reduction in vehicle use on the SAS could be related to the maintenance of a zero-crash incident rate enroute. The increase in bike riding activity overall could be related to the one property damage bike/vehicle related incident on a control street after construction.

This pattern indicates positive SAS performance in supporting the safety of vulnerable road users.

Table 2: Incidents between vehicles and bike riders or pedestrians, before, during or after SAS route construction

Years of data reviewed ¹⁰	SAS construction status	Crashes on SAS route – Bike	Crashes on SAS route – Pedestrian	Crashes on control street – Bike	Crashes on control street – Pedestrian
7.5 years	Before	Nil	Nil	Nil	1 hospital
1.5 years	During	Nil	Nil	Nil	Nil
2 years	After	Nil	Nil	1 property damage	Nil

⁹ Note: At the time of analysis (late 2025), data for 2024 and 2025 was not available to download.

¹⁰ Years of data reviewed reflects the combined total of all available incident data analysed relative to the SAS's construction status. Due to the limited sample size and targeted location, averaging incidents per year was not suitable for this analysis.

Community sentiment

Community sentiment was collected to understand how residents and road users perceived the SAS and how they reported using the street before and after implementation. These insights provide valuable context on perceived safety, comfort and self-reported travel behaviours that cannot be captured through traffic counts alone. Incorporating community perspectives enables a more complete assessment of SAS user experience and helps to inform decisions about future refinement or expansion of the program.

Method

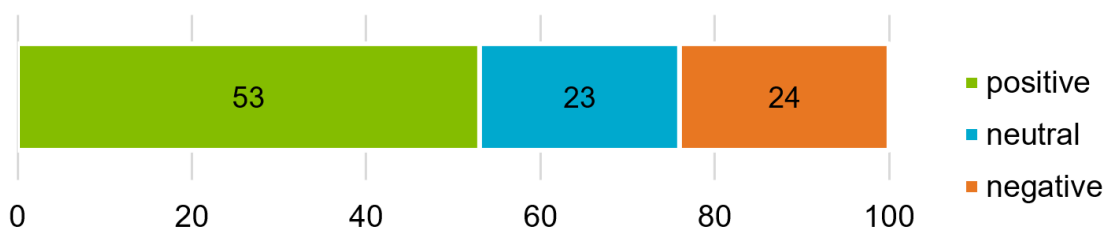
Community surveys were undertaken in 2022, one year following the opening of the SAS.¹¹ Questions focused on the design treatments and effectiveness in delivering the project objectives, self-reported usage of the route (frequency, trip purpose) and demographics.

Results

Community sentiment and perceptions

- Community responses towards the SAS were largely positive overall:
 - **53 per cent** of all respondents reported feeling positive towards the SAS.
 - This is one of the higher positive sentiment values compared with other SAS routes sampled one year or less post-construction and indicates the community were well engaged throughout the development of this route and understood the design intentions.

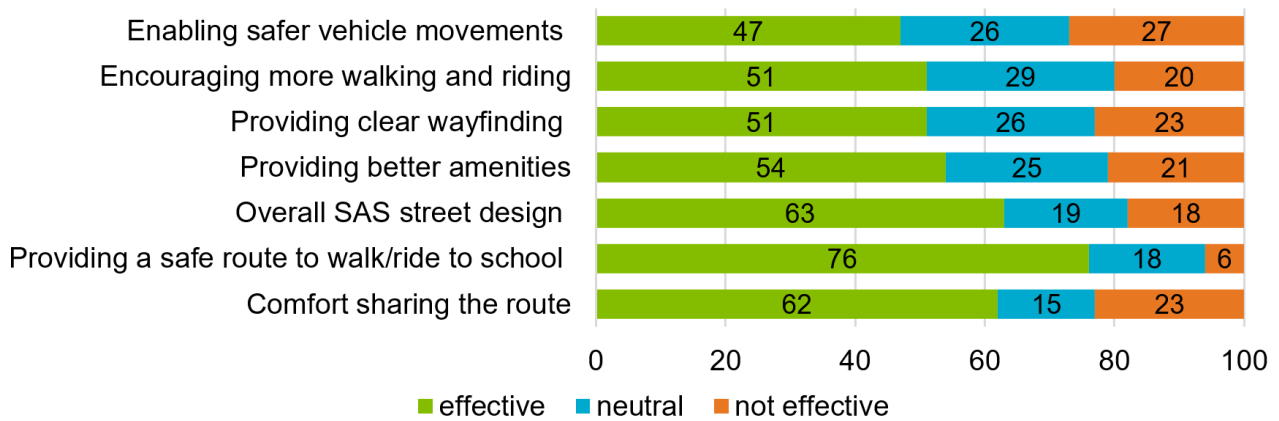
Figure 11: Community sentiment towards the Melville SAS (n=126)



- When asked to rate the SAS on effectiveness across several categories, responses were largely positive.
 - Sentiment was overwhelmingly positive towards the overall street design, comfort sharing the route and the SAS providing a safe route to walk or ride to school.
 - Verbatim responses highlighted that improvements could be made to wayfinding and legibility of the route, particularly for drivers unaware of the changed conditions.

¹¹ Post-construction community surveys would ideally be undertaken one year or longer after construction, to allow time for community and user sentiment to settle.

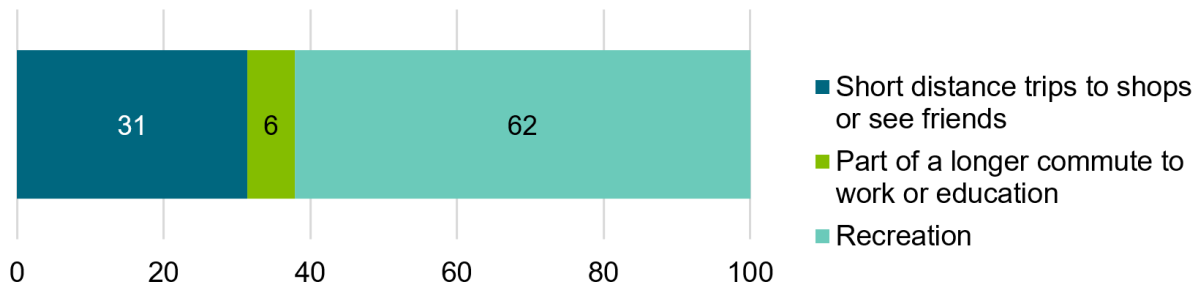
Figure 12: Community perceptions of the SAS (n=126)



Changes in behaviour and trip purpose

- Self-reported changes in behaviour from all respondents were consistent with observations.
 - **24 per cent** = NET increase in active travel
 - **-13 per cent** = NET decrease in vehicle use.
- People who walked or rode a bike along the SAS did so for a mix of reasons, with most doing so for recreation purposes.

Figure 13: Walking, riding – trip purpose (n=117)



Verbatim responses on what people liked or didn't like about the SAS

Positives

"Landscaping. Native plants. Drainage has been improved. Especially at the nature area on corner of Drew and Links. Permeable path has improved run off. Landscaping design with logs and rocks looks fantastic. Interactive for children walking to and from school."

"It is nice visually and wider walking path. The quality of road and speed humps is good. The verge vegetation and parking design is well done. Recently added concrete seats will be practical. Signposting in the street's proximity is adequate."

"It's in good condition, nice wide safe paths. It encourages all the kids to walk to school. If people are educated on how to use it that would make it better."

"Slower vehicle speeds. Improved behaviour of parents dropping off school children. Much improved streetscape nice to use, looks great, high-quality landscaping."

"It's created a safer place for the school kids and slowed traffic. Looks very attractive with the plants."



Negatives

"The street is narrower for cars and during school pick up hours is very busy making it harder to get in and out of the house."

"It is too narrow at the entry to the high school on Links Road. At the junction of Alexander Rd cars continually hit the kerb there. Parents stop in no standing zones there to let their kids out which creates further hazard and kids trying to cross the road have no zebra crossing. The distraction for drivers of the significant narrowing of the road, plus illegal drop off, plus vulnerable children darting across into the school is one that might lead to a major accident with children being the most likely victims."

"It causes people to use other roads unsafely. Grimsay Rd has lots of cars that park illegally on the other side of the footpath and go faster, I don't feel safe letting my kids walk to school by themselves because the built-up traffic around the school gets very unsafe, especially the cars driving over the paths."

"Just that it's a bit narrow, and cars driving as though they are still wide. Maybe encouraging people to park down the end of the road and walk would also help."

SUMMARY OF FINDINGS

Achievements

- Reduction in vehicle volumes along the SAS route and on an intersecting local distributor road.
- Reduction overall of the fastest vehicle speeds (85th percentile) to the preferred operating range.
 - This was achieved without the use of narrowed slow points. Instead features such as speed humps and raised intersection plateaus were used.
 - This was also likely influenced by the major improvements to ‘parking bay infrastructure’ on segment 2, which contributed to narrowing of the carriageway on that part of the SAS.
 - Nevertheless, 85th percentile speeds on segment 2 were within an upper bound of the preferred operating range, and some additional treatments could be considered.
 - Given the increases in walking and bike riding occurring on this segment of the route, and the potential for peaks in vehicle traffic during school pick up and drop off periods, further reducing fastest speeds would be beneficial to ongoing safety of vulnerable road users and the maintenance or continued increase of walking and riding.
- Bike riding and walking activity increased after construction on all segments of the route.
- Crash patterns enroute and off route showed strong overall SAS performance in supporting the safety of vulnerable road users.
- The SAS received a largely positive response from the community with the overall design and slower traffic speeds appearing to have contributed to feelings of comfort and safety.
 - A large contributing factor to this was the ‘placemaking and legibility’ design measures, with major amenity improvements (landscaping and path widening) as well as red asphalt, pavement markings and speed signs ensuring the SAS achieved a high level of legibility.
 - Activation activities and involvement of the community, including schools enroute, contributed to community awareness and overall positive sentiment.

Insights and recommendations

Recommendations to improve outcomes on this SAS project, informed by insights summarised in the SASs Pilot Program Final Evaluation Report:

- Lowering 85th percentile speeds consistently across all segments of the route to within the preferred operating range, by considering additional road treatments as required.
- Applying vertical or horizontal deflection treatments 80-100 m apart for maximum benefit realisation and consistent reduction of unsafe speeds.

Alignment with program insights

By trialling the use of different design features, and collecting data on user behaviour and community sentiment, the nine evaluated projects in the pilot program generated a rich array of insights that will guide future design and development of SASs.

The SAS Design Guidance developed through this trial provides insights for retrofitting brownfield sites but perhaps most importantly, guidance on how to establish an SAS on greenfield sites at inception.

With this guidance and support from DTMI, local governments can design and implement more SASs, creating effective 30 km/h shared street spaces for people to walk, wheel and ride comfortably and safely in their communities.

