SH1 One-Way System Operational Review

Frequently Asked Questions

Updated March 2023

What lead to the review?

In late 2021, Waka Kotahi NZ Transport Agency endorsed the Shaping Future Dunedin Transport Programme Business Case jointly developed with the Dunedin City Council (DCC) and Otago Regional Council (ORC). It included an enhanced one-way system as part of wider transport improvements driven by the new Dunedin Hospital build. Dunedin City Councillors voted for continuing discussions with Waka Kotahi on the future form of the SH1 one-way system, with the two-way option as a starting point.

What was being reviewed?

The 2021 Shaping Future Dunedin Transport Programme Business Case was reviewed using updated transport modelling to confirm the functionality and performance of both the one-way and the two-way options on SH1. This was to see which of these two options would deliver the safest and most accessible connections to the new Dunedin Hospital and surrounding areas, and attractive landscaping to create people friendly spaces. The review also covered the functionality and performance of SH88 St Andrew Street between the two new Dunedin Hospital blocks.

Were health and well-being outcomes covered?

A Health Impact Assessment was commissioned by the Local Advisory Group to the new Dunedin Hospital project on the transport programme options. This identified the main health and well-being outcomes and provided suggestions on how these might be achieved to improve the design of what ends up being delivered. The review concluded both one and two-way options for SH1 could improve health and well-being outcomes.

What were some of the suggestions for achieving these?

- Lower speed limits
- Better highway crossing facilities including everyone crosses at once Barnes Dance signals
- Greater pedestrian focus on St Andrew Street and linkages to the Central City Bus Hub
- Traffic reductions, including heavy vehicles, in the vicinity of the new hospital
- Greater safety for cyclists at intersections and better integration of cycle connections north of the CBD
- No e-scooters usage on footpaths around the new Dunedin Hospital
- Development of Park and Ride facilities
- Better parking management and availability of mobility parks in the CBD
- Seating and landscaping to create more people friendly surroundings on the highway links to the new Dunedin Hospital and nearby areas

Were urban design considerations part of the Shaping Future Dunedin Business Case review?

Yes, mainly around the urban design potential of the one-way and two-way options by reallocating road space and amenity improvements at key mid-block locations. It's important that all the urban design elements of highway connections to the new Dunedin Hospital are functional and enhance the look and feel of this area.

What did the review of traffic modelling show?

The one-way option sees a small reduction in operational performance of SH1 compared to what currently exists, with less traffic due to the lower speed environment and greater use of the Harbour Arterial. The two-way option has less overall network capacity than the one-way. However, the complexity of this configuration for many drivers, would see more traffic switching to the Harbour Arterial and other central city roads. This is expected to increase central city travel times and cause longer delays at some key intersections.

The review looked at possible options for SH88 St Andrew Street - what were some of the suggestions?

- Reduce road width and traffic lanes
  - Two traffic lanes (banned right turns from internal link)
  - Three traffic lanes (ban single right turn)
  - Three traffic lanes (retain back-to-back right turn lane)

Fewer traffic lanes on SH88 St Andrew Street would:

- Allow wider footpaths and/or space for kerbside activity such as landscaping and seating
- Less traffic on St Andrew Street and at adjacent intersections
- Enable easier installation of extra pedestrian facilities such as Barnes Dance and mid-block crossings.

Modelling shows fewer traffic lanes and banning turns has little impact on the performance of the wider road network in the area. Removing turning movements would free up more space for people friendly spaces and pedestrian crossings.

What were some of the key findings of the review?

- Both one-way and two-way options offer more people friendly spaces that are landscaped and have seating
- Improvements under either option would change how the highway currently operates
- The one-way option offers a marginal reduction in operational performance compared to the existing highway configuration and shifts traffic to the Harbour Arterial By-Pass that's widely used by trucks.
- Both highway options could deliver appealing people friendly surroundings on highway links to the new Dunedin Hospital. Reallocation of space, particularly some on-street parking would be needed to improve the pedestrian environment in this constrained highway corridor.
- The one-way option provides the best overall balance of amenity and pedestrian access improvements across the length of both the north and southbound SH1 corridors.
- The two-way option would see more traffic using the Harbour Arterial and other central city roads due to increased movement complexity for drivers at SH1 intersections.
- A two-way option would increase central city travel times and see poorer levels of service at some key intersections.
- Both St Andrew Street (SH88) options provide opportunities to increase pedestrian, amenity, and safety, through reducing traffic volumes on this road between the two new Dunedin Hospital blocks.