

## Traffic Assessment

The Harbour Arterial Route, which runs from Portsmouth Drive to State Highway 88, is one of Dunedin City's major traffic routes. Table 1 below summarises the morning (am) and afternoon (pm) traffic flows on major components of the Arterial network (2006 flows).

Table 1: Traffic Monitoring of Major Parts of the Arterial Network (2006)

<b>Route</b>	<b>From</b>	<b>To</b>	<b>AM Peak</b>	<b>PM Peak</b>
Portsmouth Drive	Orari Street	Strathallan Street	2507	2905
Cumberland Street Overbridge	Jetty Street Ramp		1519	1478
St Andrew Street Extension	Anzac Avenue	Mason Street	1491	1124
Anzac Avenue	St Andrew Street	Hanover Street	1032	1181
Union Street	Butts Road	Logan Park Drive	928	998
Southern Motorway	The Glen	Andersons Bay Road	2336	2554
Andersons Bay Road	Kensington Avenue	The Motorway	1819	2063
Princes Street	Andersons Bay Road	Jervois Street	1392	1664
Stuart Street	Highgate	Queens Drive	1431	1324
Castle Street Central	St Andrew Street	Stuart Street	1237	1427
Cumberland Street Central	Stuart Street	St Andrew Street	1009	1395

The Council's Transportation Strategy (July 2006) (the Strategy) sets out the proposal to extend the Harbour Arterial route to a roundabout at the foot of Frederick Street and then on around the campus to reconnect with State Highway 88 north of Logan Point. The Strategy also includes proposals to alter intersections on Strathallan Street to encourage heavy traffic to travel on to The Harbour Arterial route, thus bypassing the one way system.

Transit New Zealand have recognised the importance of this and their State Highway Strategy signals the potential to shift State Highway 1 onto Strathallan Street and the Harbour Arterial route, then reconnecting to the existing highways via Frederick Street.

Dunedin City operates a transportation model called "TRACKS". This is a gravity land use model and is a recognised tool for predicting traffic flows on the network at future dates. The model is upgraded at census time with population and land use data and traffic counts at different points on the network.

This model has been used to determine the impact of extending the Harbour Arterial route from St Andrew Street through surplus rail land to a roundabout at Frederick Street and then on to reconnect to State Highway 88 near Logan Point.

Table 2 below shows the predicted flows in 2011 with and without the Harbour arterial route extended.

Table 2: Predicted 2011 Traffic Flows (With & Without Arterial Route Extended)

Route	From	To	AM Peak		PM Peak	
			Do Nothing	Arterial Extended	Do Nothing	Arterial Extended
Portsmouth Drive	Orari Street	Strathallan Street	2494	2483	2976	3039
Cumberland Street Overbridge	Jetty Street Ramp		1537	1670*	1560	1786
St Andrew Street Extension	Anzac Avenue	Mason Street	1745	2748	1745	1905
Anzac Avenue	St Andrew Street	Hanover Street	1222	201	1360	274
Union Street	Butts Road	Logan Park Drive	978	629	1050	311
Southern Motorway	The Glen	Andersons Bay Road	2264	2469	2729	2731
Andersons Bay Road	Kensington Avenue	The Motorway	2040	1818	2828	2590
Princes Street	Andersons Bay Road	Jervois Street	1485	1533	1687	1597
Stuart Street	Highgate	Queens Drive	1700	1604	1502	1475
Castle Street Central	St Andrew Street	Stuart Street	1151	1126	1566	1321
Cumberland Street Central	Stuart Street	St Andrew Street	1179	1138	1474	1299
Harbour Arterial	St Andrew Street	Frederick Street		1971		1248

*\*The extension of the Harbour Arterial has reversed the am peak flows on the Jetty Street Ramp with the change being westbound decreasing from 887 vehicles to 634 vehicles and eastbound flows increasing from 647 vehicles to 1036 vehicles.*

TRACKS has also calculated the Benefit Cost ratio (BCR) for the Harbour Arterial Route extension project as 2.1 on network efficiency grounds only.

This project has a wider influence than the immediate area it is in as it changes traffic patterns on the arterial network over the area from Andersons Bay/South Dunedin to the Gardens, and relieves pressure on the inner City network.