



Streets and transport



It's definitely getting busier on the streets, especially in the mornings and late afternoons, and the city's only going to get bigger. I reckon we need to look at other options, like trains.

I've just converted to a bike for commuting and it's a bit scary at times. I was driving for a few years and in a car you never really notice until you get on a bike how much drivers don't look out for you. It would definitely be better if we could get more people onto bikes; better for the environment and safer for riders too because drivers would be more aware of them.

Tahu Brown

Retail assistant
Linwood

Streets and transport



Why does the Council provide streets and transport?

The Council provides streets and transport so that people can have safe, easy and comfortable access to homes, shops, businesses and many recreational and leisure destinations. Street corridors also provide access for power, telecommunications, water supply and waste disposal activities.

What activities are included in streets and transport?

Streets - road corridors

The Council provides carriageways, road drainage facilities (for example, kerbs and channels), footpaths, on-street marked cycleways, street lighting, landscaping and traffic management.

Cycle and pedestrian linkages

The Council provides off-street linkages throughout the city for cyclists and pedestrians.

Public pedestrian malls

The Council provides attractive outdoor spaces for pedestrians, particularly in the central city.

Off-street parking

The Council provides parking buildings at strategic locations in and near the central city, and other off-street parking at some suburban commercial locations.

Public transport

The Council supports the bus system by providing bus stops, the bus exchange and bus shelters, and it provides the inner-city shuttle service.

How does the Council's work contribute towards our Community Outcomes?

<i>Community Outcome</i>	<i>How the Council contributes</i>	<i>How much?</i>
 Safety	By providing a safe transport system.	✓✓✓
 Community	By providing easy access to facilities.	✓✓
 Environment	By helping to reduce energy consumption in our community.	✓✓
 Governance	By providing the opportunity for the community to participate in decision-making through consultation on plans and projects.	✓✓
 Prosperity	By providing everyone with access to an efficient and affordable transport system.	✓✓
 Health	By contributing to improved air quality, through the promotion of alternative transport modes, the provision of assets for these modes, and the consequent reduction in vehicle numbers.	✓✓
 Recreation	By providing access to recreational facilities throughout the city.	✓✓✓
 Knowledge	By providing education programmes, for example cycle safety.	✓
 City Development	By providing a well-designed, efficient transport system and attractive street landscapes.	✓✓✓



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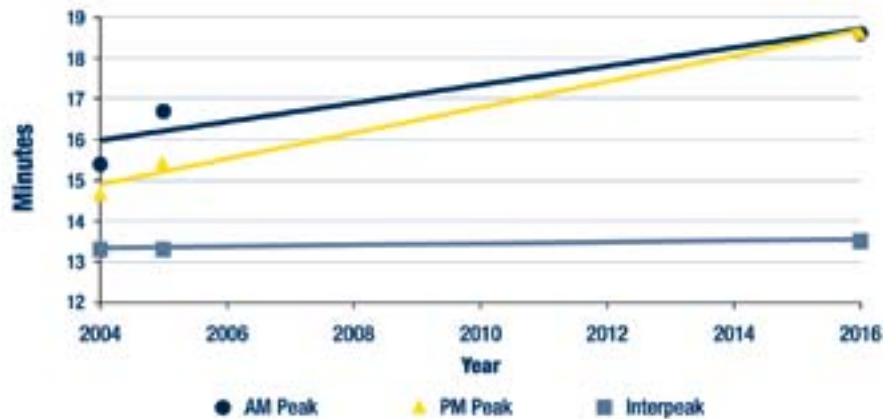
What does the Council plan to do in the future?

<i>What is the Council's objective?</i>	<i>What policies, strategies or drivers support these objectives?</i>	<i>What is the Council already doing?</i>	<i>What will we do in years 1 to 3?</i>	<i>What will we do in years 4 to 10?</i>	<i>How will we know if we achieve our objective?</i>
<p>To provide public street frontages to properties.</p> <p>Residential streets (urban) To provide a sustainable network of streets connecting the main traffic routes with properties, while contributing to the liveable environment.</p> <p>Collector / arterial streets (urban) To provide a sustainable network of streets, which distribute traffic between neighbourhoods, and connect to major localities within and beyond the city.</p> <p>Country streets (rural) To provide a sustainable network of streets which enable higher vehicle speeds.</p> <p>To provide off-street cycle and pedestrian linkages.</p> <p>To provide outdoor pedestrian malls.</p> <p>To provide off-street parking facilities.</p> <p>To provide public transport infrastructure and the Shuttle Bus.</p>	<p>Policies and strategies:</p> <ul style="list-style-type: none"> • NZ Transport Strategy • Regional Land Transport Strategy • Metropolitan Christchurch Transport Statement • Christchurch Road Safety Strategy • Christchurch Public Passenger Transport Strategy • Cycling Strategy • Pedestrian Strategy for Christchurch City • Parking Strategy • Safer Christchurch Strategy <p>Drivers:</p> <ul style="list-style-type: none"> • City Plan • Living Streets charter • Changes in population /urban form /location of businesses • Safety • Access /connectivity • Legislative requirements • Modal change • Environmental and economic sustainability 	<p>Providing street frontages for property/land.</p> <p>Providing and maintaining a street system for land-based transport and services/utilities.</p> <p>Providing and maintaining infrastructure such as roads and bridges, footpaths and shared paths, on and off-street cycleways, on- and off-street parking facilities, outdoor pedestrian malls, and public transport infrastructure such as bus stops and shelters.</p> <p>Providing systems and devices to support user safety, for example traffic signals.</p> <p>Providing drainage facilities to meet site-specific requirements.</p> <p>Providing street landscaping and trees, on-street open spaces.</p> <p>Providing the Shuttle Bus.</p>	<p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p>	<p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p> <p>Continue to do the same.</p>	<p>Congestion, comfort and quality measures.</p> <p>Services/utilities access requirements.</p> <p>Number of crashes per 10,000 people; cyclist and pedestrian casualties.</p> <p>'Journey to work by mode' targets.</p> <p>Residents' satisfaction with congestion levels, ease of navigation, facilities and street appearance.</p> <p>Response rates, cleanliness and renewal target rates.</p> <p>Shuttle bus measures.</p>

Measuring our achievements

Measures and targets	Current performance	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16
% resident satisfaction with the safety of streets.	Not currently measured.	---	---	Results will be reported as they become available, and future targets will be based on these results. Baseline measures will be established 2008/09.							
Accident statistics provided by Land Transport NZ. Aim for ongoing downward trend, within specific targets: Number of vehicle crashes per 10,000 people - 5-year rolling average. Number of cyclist casualties - 5-year rolling average. Number of pedestrian casualties - 5-year rolling average.	22 112 95	<22 <112 <95	<22 <112 <95	<22 <112 <95	Targets to be reassessed from 09/10 onwards.						
Average travel time for a 10 km trip (minutes:seconds), based on average speeds for monitored portion of network. See graph below.	2004 AM Peak 15:20 PM Peak 14:40 Interpeak 13:20 2005 AM Peak 16:40 PM Peak 15:20 Interpeak 13:20			2016 AM Peak 18:30 PM Peak 18:30 Interpeak 13:30							

Average travel time for 10 km





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Measures and targets	Current performance	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16
% resident dissatisfaction with general road congestion.	Not currently measured.	---	---		New measure - Baseline measures will be established in 08/09.						
Land Transport NZ Smooth Travel Exposure measure. % vehicle travel on smooth roads.	87%	>87%	>87%		Initial target is 87%, Target to be reassessed from 09/10 onwards.						
Kerb and channel renewal (remove dished channels by 2023).	Renew 21 km of kerb and channel.	Renew 15 km of kerb and channel.	Renew 17 km of kerb and channel.	Renew 19 km of kerb and channel.	Total 210 km of kerb and channel to be replaced over the 10 years covered by the plan.						
% resident satisfaction with quality of cycleways.	68%	>65%	>65%		Ongoing target >65%						
% resident satisfaction with quality of pedestrian malls.	63%	>65%	>65%		Ongoing target >65%						
% user satisfaction that cars are safer in off-street parking facilities than parked on street.	69%	>66%	>66%		Ongoing target >65%						
% user satisfaction with the Council's off-street parking facilities.	Not currently measured.				New measure - Baseline measures will be established in 08/09.						
Number of shuttle bus passenger trips per year.	857,312	>850,000	Maintain		Maintain						
% resident satisfaction with the quality of bus signs, shelters and seats.	65%	>65%	>65%		Ongoing target >65%						

What negative effects or risks can occur in relation to our streets and transport?

Negative effects	Mitigation options
User safety issues.	<ul style="list-style-type: none"> • Manage/implement safety strategies/standards. • Designs to allow separation between user groups; clarity of user function through the provision of traffic signals, signage, and road markings; skid-resistant surfaces. • Promotion and education programmes.
Implications of land acquisitions (land not available for other uses; affects demand /property market).	<ul style="list-style-type: none"> • Aim for land purchases to complement other land uses; and for management of land use to support and encourage sustainable transport systems.

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Negative effects	Mitigation options
Pollution - motor vehicle emissions, noise, vibration, sediment, light, air, water, chemicals (including trade-waste and wash-down water, and water-borne sediments).	<ul style="list-style-type: none"> • Manage air, water and soil pollutants: <ul style="list-style-type: none"> • Management of congestion which generates air pollutants • Landscaping treatments as pollutant 'sinks' • Manage stormwater run-off quality from street surfaces with on-street stormwater treatment systems • Manage soil quality/disposal • Manage on-street activity and adjacent construction to minimise pollution. • Management of stormwater run-off quality from adjacent properties, trade wastes and public and private off-street pre-treatment systems. Provision and management of on-street management systems. • Limit the use of agrochemicals. Manage hazardous spills.
Effects during construction – energy use, noise, vibration, nuisance, sediments, pollutants, disruptions, the use of non-renewable resources, public and site staff safety issues and production of waste.	<ul style="list-style-type: none"> • Design projects around economies of scale, control of construction site issues, safe traffic management, use of recycled resource materials, and responsible waste disposal.
Impact on adjacent property owners/residents – post-construction.	<ul style="list-style-type: none"> • Consultation/implementation processes to ensure awareness of impacts. • Design and construction solutions that minimise impacts such as severance and loss of amenity.
Consumption of energy by streetlights and traffic signals – increasing use and costs.	<ul style="list-style-type: none"> • Energy use reductions by operational and design management to ensure efficiency and efficacy gains over time.
Use of non-renewable resources.	<ul style="list-style-type: none"> • Minimise congestion and travel times. • Meet standards for upward waste light and light spill for streetlights. • Recycling of road construction materials.
Unclean or unhealthy elements such as litter and stagnant water.	<ul style="list-style-type: none"> • Manage street cleanliness and potential health issues.

The Council's key assets relating to streets and transport

Streets	1,608 km
Footpaths	2,314 km
Cycleways	73 km off-street, 58 km on-street
Kerbs and channels Structures – bridges, culverts and retaining walls	2,725 km 911
Amenity Areas/outdoor pedestrian malls Traffic signals Street lights	57,000m ² 202 sets 31,500
Parking Buildings (9) On-street metered parking spaces Bus Shelters	3299 spaces 2,444 333



Maintaining our assets

Renewal of the roads, footpaths, and other streets assets, is based on a mix of factors including the overall condition and the useful life of the asset. Renewals occur at fairly regular intervals.

Typical renewal/replacement periods (approximate) for key assets include:

- Road surfaces – every 10-20 years
- Concrete kerbs and channels – every 80 years
- Footpath surfaces – every 23 years
- Paint markings – every nine months
- Street light fittings and poles – every 20-40 years (bulbs every three to four years)
- Bridges – approximately 100 years
- Street trees – approximately 100 years

Annual renewals include eight to ten km of carriageway (road), 70 to 90 km of road surfacing, 95 km of footpath surfacing, and an average of 21 km of kerb and channel. One bridge is renewed every four years.

An entire street, including the underlying base materials, is renewed about every 80 years. When this happens, the opportunity is taken to address all aspects from boundary to boundary across the street. This may allow for street landscaping, traffic safety initiatives and addressing cycling and pedestrian needs.

Changes planned for assets

<i>Reason for change</i>	<i>What will be done?</i>	<i>Year 1 cost (\$ 000)</i>	<i>Year 2 cost (\$ 000)</i>	<i>Year 3 cost (\$ 000)</i>	<i>Years 4 to 10 cost (\$ 000)</i>
Renewals and replacements	Assets are maintained in accordance with the Streets and Transport asset management plan including replacement of kerb and channel (total of 210 km over the 10 years covered by the plan), carriageway sealing, footpaths, bridges, parking building equipment, berms, signs and traffic signals, depending on the age and condition of the asset.	40,071	40,034	40,913	325,529
Increased levels of service	Service improvements are planned in the areas of major amenities (including City Mall), traffic signals, signage, street lighting and implementing the Metropolitan Christchurch Transport Strategy initiatives.	11,357	18,910	11,585	117,421
Increased demand	Assets will be added in accordance with the Streets and Transport asset management plan including major road network improvements (including Blenheim Rd deviation and Ferrymead bridge), implementation of the Metropolitan Christchurch Transport Strategy passenger transport initiatives and expansion of the Bus Exchange.	4,098	16,778	25,826	96,552



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Cost of proposed services

	CCC 2006/07 \$000's	BPDC 2006/07 \$000's	Total Plan 2006/07 \$000's	Plan 2007/08 \$000's	Plan 2008/09 \$000's	Forecast 2009/10 \$000's	Forecast 2010/11 \$000's	Forecast 2011/12 \$000's	Forecast 2012/13 \$000's	Forecast 2013/14 \$000's	Forecast 2014/15 \$000's	Forecast 2015/16 \$000's
Activity operational cost -												
Cycle and pedestrian linkages - off-street	744	-	744	820	885	971	1,073	1,178	1,242	1,312	1,418	1,521
Off-street parking	5,357	-	5,357	5,630	5,939	6,224	6,566	6,808	6,975	7,069	7,214	7,376
Pedestrian malls - off-street	2,647	-	2,647	2,829	3,306	3,828	4,125	4,361	4,613	4,852	5,034	5,289
Public passenger transport	4,216	-	4,216	4,583	4,976	8,505	11,330	11,812	12,673	13,505	14,328	15,075
Streets	55,279	5,131	60,410	63,708	68,563	72,655	76,274	79,463	82,249	85,291	85,972	86,692
Total expenditure	68,243	5,131	73,374	77,570	83,669	92,183	99,368	103,622	107,752	112,029	113,966	115,953
Activity operational revenue -												
Cycle and pedestrian linkages - off-street	75	-	75	80	87	93	99	105	112	119	126	130
Off-street parking	6,377	-	6,377	6,942	7,154	7,351	7,540	7,717	7,881	8,032	8,166	8,303
Pedestrian malls - off-street	12	-	12	12	13	13	13	14	14	14	15	15
Public passenger transport	496	-	496	549	600	715	858	935	1,020	1,116	1,223	1,261
Streets	13,536	1,155	14,691	15,039	15,564	16,073	16,564	17,037	17,483	17,907	18,297	18,673
Capital revenues	8,096	1,316	9,412	18,858	33,465	38,054	26,989	31,745	29,940	28,219	24,096	24,605
Total operational revenue	28,592	2,471	31,063	41,480	56,883	62,299	52,063	57,553	56,450	55,407	51,923	52,987
<i>Fees and charges</i>	<i>14,077</i>	<i>-</i>	<i>14,077</i>	<i>18,092</i>	<i>19,187</i>	<i>20,284</i>	<i>21,382</i>	<i>22,024</i>	<i>22,521</i>	<i>22,983</i>	<i>23,397</i>	<i>23,819</i>
<i>Grants and subsidies</i>	<i>14,515</i>	<i>2,471</i>	<i>16,986</i>	<i>23,388</i>	<i>37,696</i>	<i>42,015</i>	<i>30,681</i>	<i>35,529</i>	<i>33,929</i>	<i>32,424</i>	<i>28,526</i>	<i>29,168</i>
Total operational revenue (by source)	28,592	2,471	31,063	41,480	56,883	62,299	52,063	57,553	56,450	55,407	51,923	52,987
Net operational cost	39,651	2,660	42,311	36,090	26,786	29,884	47,305	46,069	51,302	56,622	62,043	62,966
Vested assets	9,631	-	9,631	9,978	7,092	7,315	7,527	5,585	5,720	5,846	5,960	6,075
Net cost of services	30,020	2,660	32,680	26,112	19,694	22,569	39,778	40,484	45,582	50,776	56,083	56,891
Capital expenditure												
Renewals and replacements	28,538	3,170	31,708	36,262	39,172	41,993	45,204	48,781	48,059	48,805	48,641	51,367
Improved service levels	10,022	712	10,734	17,633	19,371	13,728	16,678	19,583	19,080	17,305	13,754	13,343
Increased demand	3,446	22	3,468	7,729	33,684	36,528	9,996	13,768	11,958	10,550	7,166	7,061
Total capital expenditure	42,006	3,904	45,910	61,624	92,227	92,249	71,878	82,132	79,097	76,660	69,561	71,771

Rationale for activity funding (see also the Revenue and Financing Policy, page 267)

User charges for certain services, such as parking fees, are collected at levels considered reasonable by the Council. Subsidies will be claimed from Land Transport New Zealand for both operational and capital expenditure to the maximum allowed. The level of revenue sought from these activities by the Council for the 10 years covered by the LTCCP is illustrated above. The balance of the net operating cost is funded by General rates, with a loading on the Business sector.

Development contributions are applied towards appropriate capital expenditure. The balance is funded corporately in accordance with the Revenue and Financing Policy.

Refer to page 267 for a summary of the corporate funding approach for capital expenditure.