

# **Roads and Footpaths**

## **Activity Management Plan**

**Long Term Plan 2015 – 2025**

***As amended through the Annual Plan 2016/17***

**1 July 2016**

## Quality Assurance Statement

Christchurch City Council Civic Offices 53 Hereford Street PO Box 73015 Christchurch 8154 Tel: 03 941 8999	<b>Version</b>	V0.5 3 December 2014
	<b>Status</b>	Draft <i>Final</i> <i>not</i>
	<b>Activity Manager: Richard Topham</b>	<i>R. Topham</i>
	<b>Chief / Director: Jane Parfitt</b>	<i>Jane R. Parfitt</i>
	<b>Asset Manager: Michael Jacobson</b>	
	<b>Finance Manager: Michael Day</b>	<i>M. Day</i>

## Table of Contents

Table of Contents.....	i
<b>1 Key Issues for the Roads and Footpaths Activity .....</b>	<b>2</b>
1.1 Community Outcomes.....	2
1.2 Effects of growth, demand and sustainability .....	2
1.2.1 Population Growth and Demand.....	2
1.2.2 Sustainability .....	3
1.3 Key Challenges and Opportunities for Roads and Footpaths .....	4
<b>2 Proposed changes to activity .....</b>	<b>6</b>
<b>3 Activity description .....</b>	<b>7</b>
3.1 Focusing on what we want to achieve.....	7
3.2 How we will know we are achieving the outcomes .....	7
3.3 What services we provide.....	7
3.4 Our Key Customers.....	8
3.5 Key legislation and Council strategies.....	8
<b>4 Levels of service and performance measures .....</b>	<b>9</b>
<b>5 Review of cost effectiveness - regulatory functions and service delivery (OPEX).....</b>	<b>14</b>
<b>6 Long Term Infrastructure Strategy .....</b>	<b>15</b>
6.1 Significant projects .....	15
6.2 Assumptions .....	15
<b>7 Review of cost-effectiveness - infrastructure delivery (CAPEX).....</b>	<b>16</b>
<b>8 Significant Effects .....</b>	<b>17</b>
8.1 Assumptions .....	17
<b>9 Risk Management.....</b>	<b>18</b>
<b>10 Improvement Plan .....</b>	<b>19</b>
<b>11 Operations, Maintenance and Renewals Strategy .....</b>	<b>20</b>
11.1 Operations and Maintenance.....	20
11.2 Renewals .....	20
<b>12 Key Projects .....</b>	<b>20</b>
<b>13 Summary of Cost for Activity .....</b>	<b>21</b>

# 1 Key Issues for the Roads and Footpaths Activity

This activity Management Plan replaces the existing Activity 10.0 Road Network and includes:

- Road Infrastructure (including roadways, footpaths, kerbs and channels)
- Bridges, Retaining Walls and Culverts
- Road marking and Signage
- Existing cycleways (excludes the Major Cycleway Routes)
- Street Lighting
- Street landscaping and Street Trees
- Street Sweeping and Litter
- Graffiti Removal
- Overhead Tram Line Maintenance

## 1.1 Community Outcomes

The effective management of Roads and Footpaths for Christchurch supports achieving community outcomes including:

- There is a range of travel options that meet the needs of the community
- The transport system provides people with access to economic, social and cultural activities.
- An increased proportion of journeys is made by active travel and public transport
- Streetscapes, public open spaces and public buildings enhance the look and function of the city
- Transport safety is improved
- Christchurch's infrastructure supports sustainable economic growth
- City assets, financial resources and infrastructure are well-managed, now and in the future

## 1.2 Effects of growth, demand and sustainability

### 1.2.1 Population Growth and Demand

The Christchurch City population is expected to grow by around 23,000 between 2015 and 2025, and by 60,000 people between 2015 and 2056<sup>1</sup> (Approx 45 years).

The Land Use Recovery Plan (LURP) has set out a pattern of future land use to the north and southwest including intensification in the central city and existing urban areas, and has actions to ensure a multi model transport network is maintained to support growth.

The Canterbury earthquakes have caused significant population movement, particularly away from the eastern suburbs and the city centre towards the north and southwest neighbouring districts. Much of this movement of business and residential is temporary and changing. The transport system needs to be flexible enough to deal with the constantly changing travel patterns and volumes in the short to medium term without committing Council to significant expenditure on assets that will only have a short term of value, or risk oversupply.

Freight volumes through Christchurch are expected to at least double by 2041. This will result in a corresponding growth in heavy goods vehicles travelling on the network. This freight growth will be largely positive for the Christchurch economy but will also have a higher impact on the road network. This includes an expected increase in the number of High Productivity Motor Vehicles (overweight vehicles) using the network, which will result in increased wear and tear on the network and a corresponding strain on maintenance and renewal budgets to keep the network fit for purpose.

---

<sup>1</sup> Market Economics Christchurch Household Growth Model March 2014, extended beyond 2041 using the Medium Projection produced by Statistics New Zealand according to assumptions agreed to by Christchurch City Council based SNZ subnational population projections 2006 base, released October 2012.

### **1.2.2 Sustainability**

The Roads and Footpaths activity contributes to sustainability by supporting access to economic, cultural and social opportunities and maintaining and enhancing the quality of the environment. The Christchurch Transport Strategic Plan highlights the importance of maintenance and renewal of road and footpath assets to support this access. The maintenance and renewal of existing assets is fundamentally important to meet current and future demand. Failure to do so would eventuate in significant costs to the economy and prevent the sustainable growth of the city.

This takes the form of effective asset management of the transport assets, planned and reactive maintenance strategies, asset renewals and cyclic maintenance work. This is also combined with the protection of assets from damage by contractors. Inadequate maintenance of roads and footpaths would lead to asset failure. This would become unsustainable as the financial cost, and the physical resource required for renewing failed assets (or building new ones), is generally much higher, and has a greater impact on the wellbeing of the community, economy and environment, than effectively maintaining existing assets.

The maintenance and renewal of roads and footpaths can also provide an opportunity to review the allocation of road space (e.g. lane configurations and kerb locations) and may in some instances enable reallocation of space to support sustainable modes, such as public transport, walking and cycling, in line with the CTSP's modal networks. This will enable the transport network to become more sustainable and meet future needs.

### 1.3 Key Challenges and Opportunities for Roads and Footpaths

In working towards the community outcomes and influenced by population growth and demand, Council faces the challenge of making decisions that prioritise resources to deliver the best mix of services in a sustainable manner. The key challenges and opportunities that have been priorities by Council are below in Table 1-1.

**Table 1-1**

Key Issue	Discussion
Earthquake legacy	<p>The earthquakes caused significant damage and disruption to the transport system. Delays to the movement of people and freight reduce productivity and increase costs. Further, the condition of the network and corresponding levels of service has been severely impacted.</p> <p>Much of the damage will be repaired under the Crown-Council Cost Share Agreement. However, a recent review has identified a major funding shortfall, meaning many damaged assets will be handed back to Council, including roads, kerb and channels, footpaths, bridges and retaining walls. Condition modelling indicates that even with increased levels of OPEX and Renewals funding, it will take approximately 30 years to return the assets to their pre-quake condition. This will mean a serviceable network but with much lower levels of service (particularly smooth travel exposure) within the timeframe of the Long Term Plan. A further funding review will occur in November 2014 which will have an impact on the level of service targets identified in this plan.</p> <p>To minimise this issue, the plan accounts for the development of smarter asset management systems, continuous process improvements and maximising value opportunities through our service providers. However, even with these mitigating factors, increased funding will be needed in the medium - long term to meet customer expectations. Prioritisation of available funds to protect key lifeline routes and key infrastructure to support community and commercial hubs will be necessary. Prioritisation based on road criticality will ensure value for money by providing higher levels of service on key routes and lower levels of service on low volume roads.</p> <p>Central City recovery is also a major priority to support the wider recovery. The An Accessible City (AAC) plan outlines the proposals which will be delivered under the rebuild programme.</p>
Aging assets and a reduced asset life	<p>Council has an aging network which has been severely affected by a reduction in remaining life due to the direct damage and indirect issues from the earthquakes. Changes to traffic volumes due to population/commercial movement, diversion routes and increased heavy vehicles due to the rebuild programme have accelerated deterioration in many areas. This combined with a reduced renewals programme due to the need for the SCIRT programme to be delivered (particularly those roads affected by the 3 waters renewals) has compounded the issue. In addition, trenching of roads increases roughness and reduces pavement life further reducing levels of service provided. This combination of issues has left the key infrastructure network in a very vulnerable position.</p>
Increased need for coordinated programming	<p>There are many work programmes to be delivered by other organisations which will affect road and footpath assets. These include private developments, streetscape improvements, anchor projects, subdivisions, the SCIRT programme, Enable UFB roll out and the Accessible City programme. This combined with the Council Capital programme for Cycleways, Bus routes, Sumner Road Corridor, Port Hills work and other projects means that programme coordination will be critical for maintenance and renewal works and to minimise the reopening of newly surfaced/repared roads and footpaths.</p>
Reductions to maintenance and renewal budgets	<p>Due to earthquake legacy some current levels of service (such as smooth travel exposure) cannot be met with existing budgets. The Council's financial position demands that operational expenditure is reduced, which will widen the gap between what should be delivered and what can be delivered. At the same time, the capital budget for renewals is being significantly reduced, which will lead to increased maintenance costs. However there will be insufficient operational budget to meet these increased costs, resulting in further deterioration of the network, causing the level of service provision to drop further and require a much greater level of investment in future years to rectify network problems.</p>



## 2 Proposed changes to activity

Table 2-1 summarises the proposed changes for the management of the Roads and Footpaths Activity since the Three Year Plan 2013-16 Activity Management Plan.

**Table 2-1 Proposed changes to activity**

Key Change	Reason	Level of significance? What investigations are needed?	Options for consultation and engagement
Several Performance Measure targets need to be lowered in regard to setting appropriate Levels of Services. These include <b>resident satisfaction with roadway quality</b> (to be dropped to >25% from 35%) and <b>roadway condition</b> (to be dropped from 85% to 70%).	Historic targets are not achievable within the current environment. Public expectation needs to be appropriately set to a more realistic level.	This is a significant issue as public expectation is high. However it is important for Council that a long term strategy is developed that sets out a longer term plan.	LTP consultation document.
The name of this Activity has been changed from Road Network to Roads and Footpaths.	Better alignment with LGA.	Minor.	Not required.
A number of assets and services have been shifted to other activities, including Transport Operations and Traffic systems.	Better alignment of activities with Units and Teams.	Minor.	Not required.
Footpaths have been moved from the Active Travel Activity into this Activity.	Better alignment of activities with Units and Teams.	Minor.	Not required.
Due to the 2013 amendments to the Local Government Act, a number of non-financial performance measures are mandatory for Local Authorities. Roadways condition, sealed road renewals, footpath condition, and response times are included in this activity.	Legal requirement	Minor, as it overlaps with previous work.	Not required.
Several New performance targets have been added	To allow a better understanding of performance target achievement on the transport network across a broader range of functional delivery areas. Long term benefit for procurement of services to meet customer needs	Minor	Not required



## 3 Activity description

### 3.1 Focusing on what we want to achieve

Within the current environment of recovery, our achievements must be in-line with both future strategic requirements whilst working towards a long term sustainable road and footpath network meeting customer expectations. We would therefore like to achieve:

- A serviceable and sustainable network
- Support the wider economic and social recovery of the city
- Provide a base for the long term recovery of the transport assets to pre earthquake levels
- Support the implementation of long term strategies
- Transfer of knowledge from the rebuild into Council and build a positive legacy
- Develop industry leading asset management systems
- Provide maximum value with the limited funds available by prioritising investment in strategic routes
- Improve the aesthetic value of the road and footpath corridor
- Provide safety improvements
- Build strong community relationships and help to set expectations/build knowledge of the long term recovery strategy

### 3.2 How we will know we are achieving the outcomes

We will know we are achieving the above outcomes when we see the following results:

- Levels of service will be held or improved on the network
- Safety statistics improve
- Less Customer Service Requests
- A higher proportion of work is planned rather than reactive.
- Value opportunities achieved in doing things 'smarter' reducing cost without affecting levels of service
- Improvements in customer satisfaction surveys
- Positive feedback from Community Boards and User Groups
- Positive feedback from partner organisations

### 3.3 What services we provide

This Activity includes for the maintenance and renewal of road and footpath infrastructure including:

- Maintain Road Infrastructure - Carriageway, kerb and channels, structures (bridges, retaining walls and culverts), street lighting, signs, road marking, on street cycle lanes and tram infrastructure.
- Maintain Walking Network - Footpaths (walking network).
- Maintain Street landscaping and trees.
- Maintain Response - General maintenance activities such as street sweeping and graffiti removal.
- Support the wider city recovery and implementation of Strategic Plans

This activity is primarily delivered through the management of maintenance contracts.

## Benefits and Funding Sources

### 3.4.1 Who Benefits?

Who benefits?	
Individual	
Identifiable part of the community	
Whole community	Full

Key:
Full
Majority
Some

#### Explanatory Comments:

All members of the Community use the Transport Network and gain benefit from it.

### 3.4.2 Who pays?

Funding - Fees / User Charges	Other revenue Grants & Subsidies	General rate	Targeted rate
2%	10%	88%	0%
	Some	Majority	

Note: Funding Split % is derived from the 'Summary of Cost for Activity' (section 13).

Key:		Typically
Full	All or almost all the cost is funded from that source. If the comment is made in the general or targeted rate columns it does not preclude making minor charges for the service but indicates that the charges are a negligible part of the fund.	95%+
Majority	The majority of the activity is funded from this source.	50%+
Some	Some revenue is derived from this source.	<50%

Does this Activity generate surplus funds that can be applied to other areas? **No**

#### Explanatory Comments:

Funding is generated via the Asset Protection area; however this is used to fund the Activity.

## 3.4 Our Key Customers

Our customers include residents, commercial users, visitors to the city, public transport operators, utility operators, and emergency services for all transport modes.

We work with our strategic partners, the New Zealand Transport Agency, Environment Canterbury and the New Zealand Police Force to provide a road network that meets the requirements of all users.

## 3.5 Key legislation and Council strategies

Local Government Act, Resource Management Act, Land Transport Management Act 2003, Land Transport Amendment Act 2013, Regional Land and Public Transport Plans, Safer Journeys Strategy, the Land Use Recovery Plan (LURP), Greater Christchurch Transport Statement, Christchurch Transport Strategic Plan.

## 4 Levels of service and performance measures

Table 4-1 summarises the levels of service and performance measures for the Roads and Footpaths Activity. Shaded rows are the levels of service and performance measures to be included in the Long Term Plan. Non-shaded rows are non-LTP management level measures, agreed with and reported to Council but not included as part of the community consulted document.

**Table 4-1**

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2024/25
						Year 1	Year 2	Year 3	
						2015/16	2016/17	2017/18	
Maintain road infrastructure									
16.0.3	Maintain resident satisfaction with roadway condition	Customer satisfaction	Annual Resident satisfaction survey	09/10 63% 11/12 40% 12/13 35% 13/14 27%	-	≥25%	≥26%	≥27%	≥40%
16.0.2	Maintain roadway condition (Department of Internal Affairs mandatory non-financial performance measure number 2)	Cost effective	The average quality of the sealed local road network, measured by smooth travel exposure (STE)	09/10 85% 10/11 84% 11/12 71% 12/13 69% 13/14 71%	National average 86.3% Hamilton City 91%	≥70%	≥71%	≥72%	≥80%
16.0.1	Deliver an appropriate level of sealed local road network renewals (Department of Internal Affairs mandatory non-financial performance measure number 3)	Cost effective	The percentage of the sealed local road network that is resurfaced per year	09/10 4% 10/11 3% 11/12 1% 12/13 2%	Hamilton City 2-4% per year	≥2%	≥2%	≥2%	≥4%

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10
						Year 1	Year 2	Year 3	
						2015/16	2016/17	2017/18	2024/25
16.0.4	Bridges are fit for purpose for public and commercial use	<i>Cost effective</i>	Number of bridges with weight or speed restrictions by road hierarchy	3 2 3 25	<i>Major arterial</i> <i>Minor arterial</i> <i>Collector</i> <i>Local</i>	≤3 ≤2 ≤3 ≤25	≤3 ≤2 ≤3 ≤24	≤3 ≤2 ≤3 ≤23	0 ≤1 ≤2 ≤20
16.0.5	Street lights to be operational at night	<i>Safety</i>	Proportion of street lights operating at night	99%	-	≥99%	≥99%	≥99%	≥99%
16.0.6	Maintain road marking to required standards	<i>Safety</i>	Percentage of remarking completed each quarter	<i>Establish Baseline</i>	-	<i>Establish baseline</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>
16.0.7	Undertake channel sweeping, rubbish & litter collection to agreed standards	<i>Safety</i>	Reduction in number of Customer Service Requests received	<i>Establish Baseline</i>	-	≥5% reduction per annum (from baseline)	≥5% reduction per annum	≥5% reduction per annum	≥5% reduction per annum
16.0.19	Maintain road infrastructure					The average roughness of the sealed local road network measured along the longitudinal profile of the road (NAASRA roughness counts): ≤127 for 2015/16	The average roughness of the sealed local road network measured along the longitudinal profile of the road (NAASRA roughness counts): ≤126 for 2016/17	The average roughness of the sealed local road network measured along the longitudinal profile of the road (NAASRA roughness counts): ≤125 for 2017/18	The average roughness of the sealed local road network measured along the longitudinal profile of the road (NAASRA roughness counts): ≤120 by 2024/25

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2024/25
						Year 1	Year 2	Year 3	
						2015/16	2016/17	2017/18	
Maintain walking network									
16.0.8 (ex 10.1.7)	Maintain the condition of footpaths <i>(Department of Internal Affairs mandatory non-financial performance measure number 4)</i>	<i>Safety</i>	Condition rate the footpaths within the city on a 1 to 5 (excellent to very poor) scale and confirm what percentage are rated as 1 or 2 (good or better)	10/11 76% 11/12 57%	-	≥57%	≥58%	≥59%	≥65%
16.0.9 (ex 10.1.9)	Maintain resident satisfaction with footpath condition	<i>Customer satisfaction</i>	Annual Resident satisfaction survey	09/10 67% 11/12 46% 12/13 45% 13/14 43%	-	≥45%	≥46%	≥47%	≥65%
16.0.10 (ex 10.1.5)	Maintain the perception that Christchurch is a walking friendly city	<i>Customer satisfaction</i>	Annual Resident satisfaction survey	09/10 88% 11/12 81% 12/13 75% 13/14 77%	-	≥78%	≥79%	≥80%	≥85%
Maintain street landscaping and trees									
16.0.12	Maintain street landscapes	<i>Safety and amenity</i>	Number of customer service requests received	<i>Establish Baseline</i>	-	<i>Establish baseline</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10
						Year 1	Year 2	Year 3	
						2015/16	2016/17	2017/18	2024/25
16.0.11	Maintain Street Trees	<i>Safety</i>	Number of trees maintained annually	10/11 – 7,365 11/12 – 8,125 12/13 – 9,381 13/14 – 11,156	-	16.0.11.1 ≥9,500	16.0.11.1 ≥9,500	16.0.11.1 ≥9,500	16.0.11.1 ≥9,500
16.0.11	Maintain Street Trees	<i>Safety</i>	Percentage of trees compliant with Electricity Regulations	10/11 97.6% 11/12 96.4% 12/13 98.4% 13/14 97.4%	100% require compliance	16.0.11.2 ≥98%	16.0.11.2 ≥99%	16.0.11.2 ≥100%	16.0.11.2 ≥100%
<b>Maintenance response</b>									
16.0.13	Respond within appropriate timeframes <i>(Department of Internal Affairs mandatory non-financial performance measure number 5)</i>	<i>Safety</i>	The percentage of customer service requests relating to roads and footpaths that are responded to within contractually agreed timeframes	13/14 96.1%	-	≥95%	≥96%	≥97%	≥99%
16.0.14	Maintain overhead Tram Lines	<i>Customer</i>	Number of interruptions in Tram Operators service	<i>Establish baseline</i>	-	<i>Establish baseline</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>
16.0.15	Graffiti removal	<i>Amenity</i>	Percentage of reported graffiti vandalism removed within 48 hours	>95%	-	≥95%	≥95%	≥95%	≥95%
16.0.16	Response times for damaged regulatory signs	<i>Safety</i>	Percentage of signs responded to within 48hrs	<i>Establish baseline</i>	-	<i>Establish baseline</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2024/25
						Year 1	Year 2	Year 3	
						2015/16	2016/17	2017/18	
16.0.17	Sumps inspected	<i>Safety</i>	Percentage of sumps inspected every 6 months.	<i>Establish baseline</i>	-	<i>Establish baseline</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>
<b>Support the wider city recovery and implementation of Strategic Plans</b>									
16.0.18	Work Programming coordinated with other organisations	<i>Cost Effective</i>	Percentage length of new surfaces (less than 24 months old) affected by external programmes of work	<i>Establish baseline</i>	-	<i>Establish baseline</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>	<i>TBA once baseline established</i>

## 5 Review of cost effectiveness - regulatory functions and service delivery (OPEX)

The majority of service delivery for the Roads and Footpaths Activity is carried out through maintenance contracts. Council maintains a wide range of assets within the legal road and has several maintenance contracts in place to ensure these assets are maintained to the appropriate level.

The maintenance contracts are awarded through a competitive tendering process following NZTA procurement standards to ensure cost effective delivery of the service by appropriate suppliers.

The following table shows the types of contracts that the Council is currently engaged in for roads and footpaths, the assets maintained through those contracts and the approximate annual operational expenditure associated with the contracts.

**Table 5-1 Maintenance Contracts OPEX for Service Delivery**

Contract Type	Term of Contract	Assets Maintained	Annual Operational Expenditure	Activity Area managing contract
Road Maintenance – Northern/Central	July 2012 – June 2017	Roadway, Kerb & Channel, Footpaths, Cycleways, Sweeping & Litter, Drainage structures, Road marking, Signs, Culverts	\$7.3m	Road Maintenance
Road Maintenance – Southern/Eastern	July 2012 – June 2017	Roadway, Kerb & Channel, Footpaths, Cycleways, Sweeping & Litter, Drainage structures, Road marking, Signs, Culverts	\$8m	Road Maintenance
Road maintenance – Banks Peninsula	March 2015 – June 2020	Roadway, Kerb & Channel, Footpaths, Cycleways, Sweeping & Litter, Drainage structures, Road marking, Signs, Culverts	\$2m	Road Maintenance
Maintenance of Road Landscapes	July 2012 – June 2016	Gardens and turf within legal road boundary	\$2.4m	Asset & Network Protection
Maintenance of Street Trees	July 2013 – June 2023	Street Trees	\$1.5m	Asset & Network Protection
Maintenance of Street Lights	November 2013 – October 2018	Street lights, poles and associated equipment	\$1.2m	Asset & Network Protection
Graffiti vandalism removal	July 2013 – June 2018	Removal of graffiti vandalism from council assets and some private / commercial assets adjoining the legal road	\$0.8m	Asset & Network Protection
Tramway overhead line maintenance	November 2013 – February 2015	Tram power supply poles & lines	\$0.012m	Asset & Network Protection
		<b>TOTAL P.A.</b>	<b>\$22.4m</b>	



## 6 Long Term Infrastructure Strategy

The priorities for roads and footpaths are:

- Maintenance and renewal of existing assets: Through optimal use of available funds for maintenance activities and asset renewals. Effective asset management and funding of this area is needed to ensure the network does not deteriorate further and affect the levels of service provided and future funding requirements.
- Improving the safety of the network: Safety is enhanced by maintaining the existing asset base, as above, but also includes safety improvements to the road corridor to reduce crashes, with priority focussed on reducing the occurrence of fatal and serious injury crashes on the network.
- Support the redevelopment, recovery and growth of the city: This includes work to resolve current level of service issues as well as supporting central city recovery, population movement, new developments and Roads of National Significance projects. In the first instance this will be through a network management and optimisation approach, and managing congestion and providing travel choices through investment in public transport, walking and cycling. Upgrading roading infrastructure and constructing new infrastructure will only be undertaken as a last resort after the above hierarchy of interventions has been exhausted.

### 6.1 Significant projects

There are several key eternal programmes which affect the network and how it is maintained, these include:

- SCIRT Rebuild Programme (Roading, Structures and 3 Waters)
- Non-SCIRT Rebuild Programme (Accessible City Plan, Sumner Rd Corridor, Central City AC, Second Coat Seals)
- Central City Recovery Plan (Public realm proposals)
- Enable UFB Roll out
- Red Zone land use
- Port Hills Geotechnical Programme

### 6.2 Assumptions

In determining the financial forecast there have been a number of assumptions as follows.

- Inflation has not been included.
- There is a shortfall in funding within the cost share agreement
- The current CAPEX programme is approved
- Maintenance requirements within the central city will increase associated with the new public realm areas
- Maintenance requirements outside the central city will increase due to increase areas with new public realm facilities

## 7 Review of cost-effectiveness - infrastructure delivery (CAPEX)

While the main focus of a maintenance contract is to maintain the asset to a specified condition, each asset has a finite lifespan. Towards the end of that lifespan, the cost of maintaining the asset at the appropriate level increases as the asset approaches the end of its lifespan.

Within the maintenance contracts that the Christchurch City Council manages, there is some allowance for the capital renewal of assets. This allows for the replacement of an asset when it reaches a point where the on-going maintenance costs start to increase due to degradation of condition. The planning process for renewal work is outlined in Chapter 11.

The capital renewal of assets is primarily undertaken through a combination of the competitively tendered maintenance contracts detailed in Section 5 and competitively tendered capex projects, thereby ensuring cost effectiveness of infrastructure delivery.

The following table shows the type of assets renewed through the maintenance contracts that the Council is currently engaged in.

**Table 7-1 Maintenance Contracts CAPEX for Renewals**

Contract Type	Asset Renewals	Activity Area managing contract
Road Maintenance – Northern/Central	Resurfacing work, Kerb & Channel, Footpaths, Drainage structures, Road marking, Signs and street furniture renewal	Road Maintenance
Road Maintenance – Southern/Eastern	Resurfacing work, Kerb & Channel, Footpaths, Drainage structures, Road marking, Signs and street furniture renewal	Road Maintenance
Road maintenance – Banks Peninsula	Resurfacing work, Kerb & Channel, Footpaths, Drainage structures, Road marking, Signs and street furniture renewal	Road Maintenance
Maintenance of Road Landscapes	New Gardens and turf within legal road	Asset & Network Protection
Maintenance of Street Trees	Trees located within legal road	Asset & Network Protection
Maintenance of Street Lights	Street lights, poles and associated equipment	Asset & Network Protection

All other CAPEX projects for road renewals, growth, safety and modal changes identified are delivered through the Capital Programme Group and associated procurement strategies to ensure value is provided.

## 8 Significant Effects

Clause 2(1)(c) of Schedule 10 to the Local Government Act 2002 requires that each Long Term Plan in relation to each group of activities of the local authority must:

*“Outline any significant negative effects that any activity within the group of activities may have on the social, economic, environmental, or cultural well-being of the local community.”*

Therefore through this plan, the Council recognises the following potential negative and positive effects of providing, operating and managing its Transport assets.

**Table 8-1 Significant Negative Effects & Mitigation**

Effect	Council's Mitigation Measure
<b>Rougher Roads</b>	A rougher road network than pre earthquake levels will contribute to increased travel times and vehicle operating costs and has an overall cost to the economy. Environmental issues are also associated with this due to vibration levels for residents and commercial premises. A localised programme of smoothing works to reactive to specific issues will need to be delivered
<b>Capital constrained CAPEX programme affecting network projects</b>	Reduction in funding for Safety, Growth and Modal change projects may not meet all network requirements to support all of the strategic objectives for the city in the short term. Therefore once Council's financial position is known, an agreed strategy is needed with partner organisations to ensure all priorities are met within the constrained environment and to ensure the transport network achieves agreed required standards.

**Table 8-2 Significant Positive Effects**

Effect	Description
<b>Economic development</b>	Prioritised planning for an efficient road network that allows for the movement of freight key hubs and markets, therefore allowing economic growth and prosperity
<b>Effective Programming to support the wider recovery</b>	Prioritised planning to support the implementation of other strategic plans which will benefit to the accelerated recovery of the City
<b>Industry leading Asset Management development</b>	Earthquake legacy will allow Council to improve its understanding of the transport network, the asset needs, community needs, commercial needs and maximise value for available budgets

### 8.1 Assumptions

**Table 8-3 Major Assumptions**

Assumption Type	Assumption	Discussion
<b>Growth forecasts.</b>	That the district will grow as forecast in the LURP and Growth Demand and Supply Model.	If the growth is very different it will have a moderate impact. If higher, Council may need to advance capital projects. If it is lower, Council may have to defer planned works.

## 9 Risk Management

**Table 9-1 Significant Risks and Control Measures**

Risk	Impact	Priority	Risk Strategy	Risk Response / Mitigation
<b>Key Issue: Earthquake Legacy</b>				
Rougher Roads	Increased travel times and cost to the economy. Environmental issues due to vibration levels for residents and commercial premises.	Very High	Minimise	A localised programme of smoothing works to reactive to specific issues will need to be delivered
Lack of reliable information on the post-earthquake performance of pavements leading to inability to plan for pavement renewals.	Desired levels of service are unable to be maintained and/or future budgets become highly variable and may not be able to be funded.	High	Minimise	Develop leading Asset Management Procedures including Asset Inspection Procedures for all assets.
A significant number of retaining walls do not comply with Building Act and will not be fixed through the SCIRT Programme	Risk to life and property	High	Minimise	Set realistic programme to strengthen/replace/repair. Implement Asset Inspection procedures with frequency based on criticality and condition for planned works
<b>Key Issue: Aging Assets and a reduced asset life</b>				
Structural damage including failure due to deterioration over time, overloading, erosion, vehicle damage.	Loss/reduction of asset capacity. Reduction in LOS.	High	Minimise	Set realistic programme to strengthen/replace/repair. Implement Asset Inspection procedures with frequency based on criticality and condition for planned works
Bridge weight restrictions.	Economic cost to business and ratepayers.	Medium	Minimise	Systematic programme of structural inspections. Sound AMP and adequate budget in LTP. Priority given to avoiding weight restrictions on key, high volume, freight routes.
Poor quality restoration of roads and footpaths by Utility Providers and Developers.	Diminished LOS and complaints to Council	Medium	Eliminate	Rigorous enforcement of road opening conditions. Develop new tools and systems for operational management. Proactive training of Developers and Utility Providers
<b>Key Issue: Increased need for coordinated programming</b>				
Work programming not integrated with other organisations during the rebuild process.	Inappropriate maintenance work undertaken, timing of works compounds deterioration, additional cost and rework	Very High	Eliminate	Systems and procedures in place to coordinate with partner organisations and the private development community. Collaborative approach in development of programmes
Timing or cost of capital projects changing to meet the needs of the cities recovery.	Reduction in level of service or increased costs. Transport projects not delivered in programmed year	Medium	Minimise	Undertake consultation, investigation and design phases sufficiently in advance of construction phase. Include standard contingency based on the respective projects lifecycle. Ensure Prioritisation process robust to allow informed decisions
<b>Key Issue: Reductions to maintenance and renewal budgets</b>				
Capital constrained CAPEX programme affecting network projects	May not meet all network requirements to support all of the strategic objectives for the city in the short term.	Very High	Minimise	An agreed strategy is needed with partner organisations to ensure all priorities are met within the constrained environment.
Localised increased construction costs due to the rebuild activities - out of sync with national cost escalation levels	Less work delivered for available funds – leading to asset deterioration	Medium	Minimise	Continuous improvements to systems, processes and maintenance work delivery to provide value and mitigate local increase in construction costs.

## 10 Improvement Plan

To date this document has not been reviewed. An external review for compliance with the requirements of relevant legislation, especially the LGA 2002 is proposed as the primary improvement item. The findings and suggestions from this review will be assessed and prioritised by the asset management team and either implemented for the final version of the document or added to the Improvement Plan. It is intended that the Improvement Plan will be continually updated and monitored as a live document.

As this Activity Management Plan is developed further it will be reviewed on a 3 yearly basis as part of the LTP programme. The table below outlines improvements that are to be incorporated over the next 3 years.

**Table 10-1 Improvements to be incorporated into this Activity by 2018**

Item	Description

## 11 Operations, Maintenance and Renewals Strategy

### *11.1 Operations and Maintenance*

Covered under the Transport Asset Management Plan

### *11.2 Renewals*

Covered under the Transport Asset Management Plan

## 12 Key Projects

For details of the capital works relating to this activity refer to the draft Capital Programme, draft Long Term Plan, volume 1.

## 13 Summary of Cost for Activity

Figure 13-1 Funding Caps

ROADS AND FOOTPATHS					Funding splits exclude EQ Costs from all calculations				
Funding Caps in 2015/16 Dollars									
	2014/15 Annual Plan	2015/16	2016/17	2017/18	Funding - User Charges	Other revenue	General rate	Targeted rate	Period of Benefit (years) Comments
	000's								
<b>Operational Budget</b>									
Transport Safety	371	369	355	349					
Road Infrastructure	26,165	27,430	27,768	27,521					
Road Amenity	6,340	6,464	6,426	6,382					
Walking Network	3,135	3,203	3,207	3,310					
<b>Activity Costs before Overheads</b>	<b>36,011</b>	<b>37,465</b>	<b>37,757</b>	<b>37,562</b>					
Earthquake Response Costs	5,830	1,848	1,554	-					
Corporate Overhead	3,733	3,797	3,840	3,684					
Depreciation	34,065	36,415	37,194	38,128					
Interest	6,508	9,334	12,158	14,617					
<b>Total Activity Cost</b>	<b>86,147</b>	<b>88,859</b>	<b>92,502</b>	<b>93,992</b>	2%	10%	88%		
					Some	Some	Majority		
<b>Funded By:</b>									
Fees and Charges	1,281	1,560	1,567	1,388					
Grants and Subsidies	9,383	9,070	9,210	9,164					
Earthquake Recoveries	3,135	880	880	-					
<b>Total Operational Revenue</b>	<b>13,798</b>	<b>11,510</b>	<b>11,656</b>	<b>10,552</b>					
<b>Net Cost of Service</b>	<b>72,349</b>	<b>77,349</b>	<b>80,846</b>	<b>83,440</b>					
<b>Funded by:</b>									
<b>Rates</b>	<b>69,654</b>	<b>76,381</b>	<b>80,171</b>	<b>83,440</b>					
<b>Earthquake Borrowing</b>	<b>2,695</b>	<b>969</b>	<b>674</b>	<b>-</b>					
	<b>72,349</b>	<b>77,349</b>	<b>80,846</b>	<b>83,440</b>					
<b>Capital Expenditure</b>									
Earthquake Rebuild									
Renewals and Replacements									
Improved Levels of Service									
Additional Demand									

