


# **Long Term Plan 2018-28**

## **Service Plan for Stormwater Drainage**

Adopted by Council with the final Long Term Plan 2018-28 on 26 June 2018

Approvals		
Role	Name	Signature and date of sign-off
Finance Manager	Peter Langbein	Approved February 2018
Activity Manager	John Mackie	Approved 2 March 2018
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## What does the overall Group of Activities do and why do we do it?

Christchurch City Council builds, owns, operates and maintains water supply, wastewater, stormwater and solid waste networks to provide to support healthy communities and a prosperous economy.

These services are core business for the Council, required by the Local Government Act 2002, and governed by a number of other acts and legislation.

Council implements these services for the community through planning, day to day operations, planned and reactive maintenance, repair and renewal of damaged infrastructure, building new infrastructure and implementing improvements to the system and measures its performance in terms of safety, quality and reliability.

### 1. What does this activity deliver?

The stormwater network collects and conveys stormwater whilst protecting the community from surface flooding during storm events. The first two years (or three years with rates constrained option) of the Long Term Plan includes both flood protection (delivered by the Land Drainage Recovery Programme) and renewals, but after this approximately 80% of the activity's capital budget is to renew an ageing pipe and waterway network to ensure that Council is able to continue to provide this core service.

The key physical assets used to deliver this activity are:

- The underground conveyance networks (including pipes, manholes, sumps, inlets, outlets etc)
- Open channels and overland flow path (including natural waterways such as rivers, streams and creeks, constructed drainage channels, in-channel structures, lining and retaining walls etc)
- Treatment devices that are not within the Flood Protection and Control Works Activity (ie where there is no flood protection component such as silt traps, gross debris traps or proprietary treatments devices such as the cartridge filters proposed at the new Bells Creek Pump Station site).

Council uses a multi-value approach to stormwater, where the drainage value of the network is considered alongside other values such as ecology, culture, recreation, heritage and landscape. Together these are known as the 'six values' that Council utilises in stormwater drainage and waterway management.

In delivering this service the Council provides a balanced mix of maintenance and renewals to preserve the levels of service as well as capital investment to respond to increasing demands for growth (both greenfield and infill) and improved stormwater discharge quality to address waterway degradation.

This activity is linked to the Flood Protection and Control Works activity.

## 2. Why do we deliver this activity?

Providing stormwater drainage is core business for the Council, required by the Local Government Act 2002. Effective management of stormwater runoff reduces the risk of flooding, and reduces the impact of stormwater on the receiving environment. A well performing stormwater drainage network contributes to multiple values such as ecology, recreation, culture, heritage, and landscape. It also an important part of developing resilience to hazards and climate change stresses.

The activity must be undertaken in accordance with:

- Local Government Act 2002
- Resource Management Act 1991
- National Policy Statement on Urban Development Capacity 2016
- Health and Safety at Work Act 2015
- Building Act 2004
- Christchurch District Drainage Act 1951
- Christchurch District Plan
- Water Supply, Wastewater and Stormwater Bylaw 2014
- Soil conservation & Rivers Control Act 1941

The stormwater drainage service is critical for achieving and supporting Council's Strategic Priorities, including:

- Safe and sustainable supply water supply and improved waterways including:
  - Water quality and ecological health in our waterways continues to improve over time toward agreed environmental target levels
  - The proportion of our waterways that are safe for contact recreation and that can support mahinga kai is increasing

- Informed and proactive approaches to natural hazard risks:
  - The primary drainage network reduces the risk of habitable floor flooding
  - Christchurch is well prepared for the impacts and consequences of natural hazards and can respond and recover quickly
  - Council infrastructure is able to function following expected natural hazard events
- Maximising opportunities to develop a vibrant, prosperous and sustainable 21<sup>st</sup> Century city
  - Stormwater drainage is core infrastructure to ensure the city functions well and supports prosperity

The Community Outcomes that relate most directly to the Stormwater Drainage activity are:

- Strong Communities - Safe & Healthy Communities
- Healthy Environment - Healthy waterways
- Healthy Environment - Sustainable use of resources
- Healthy Environment - Unique landscapes and indigenous biodiversity are valued
- Prosperous Economy - Modern and robust city infrastructure and facilities network
- Prosperous Economy - Great place for people, business and investment

### 3. Specify Levels of Service

The Levels of Service, Performance Measures and Performance Targets for the Stormwater activity are provided below. 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.

Black text indicates an unchanged performance measure. **Red** current performance text indicates a performance target that has not been met. **Green** text indicates a new performance measure. **Purple** text indicates a performance measure proposed for modification.

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks				Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
Provide and maintain the stormwater drainage system (surface water management systems, such as streams, rivers, utility waterways, basins, structures, pipes)									
14.0.1	Council responds to flood events, faults and blockages promptly and effectively	Community Outcome: Safe & Healthy Communities	Reported in monthly contract reports from the Contractor.	14.0.1.1		14.0.1.1	14.0.1.1	14.0.1.1	14.0.1.1
14.0.1				Target 1		Target 1	Target 1	Target 1	
14.0.				Percentage of emergency calls responded to within 2 hours (urban) or 6 hours (rural): ≥95%		Percentage of emergency calls responded to within 2 hours (urban) or 6 hours (rural): ≥95%	Percentage of emergency calls responded to within 2 hours (urban) or 6 hours (rural): ≥95%	Percentage of emergency calls responded to within 2 hours (urban) or 6 hours (rural): ≥95%	
				14.0.1.4		14.0.1.4	14.0.1.4	14.0.1.4	14.0.1.4
				2016/17: 100%		Target 2	Target 2	Target 2	Target 2
						Percentage of urgent calls responded to within 24 hours: ≥95%	Percentage of urgent calls responded to within 24 hours: ≥95%	Percentage of urgent calls responded to within 24 hours: ≥95%	Percentage of urgent calls responded to within 24 hours: ≥95%

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks				Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
				<b>14.0.1.2</b> 2016/17: 99%		<b>14.0.1.2</b> Target 3 Percentage of priority calls responded to within 3 working days (urban) or 5 working days (rural): ≥85%	<b>14.0.1.2</b> Target 3 Percentage of priority calls responded to within 3 working days (urban) or 5 working days (rural): ≥85%	<b>14.0.1.2</b> Target 3 Percentage of priority calls responded to within 3 working days (urban) or 5 working days (rural): ≥85%	<b>14.0.1.2</b> Target 3 Percentage of priority calls responded to within 3 working days (urban) or 5 working days (rural): ≥85%
				<b>14.0.1.3</b> 2016/17: 99%		<b>14.0.1.3</b> Target 4 Percentage of routine calls responded to within 5 working days (urban) or 10 working days (rural): ≥85%	<b>14.0.1.3</b> Target 4 Percentage of routine calls responded to within 5 working days (urban) or 10 working days (rural): ≥85%	<b>14.0.1.3</b> Target 4 Percentage of routine calls responded to within 5 working days (urban) or 10 working days (rural): ≥85%	<b>14.0.1.3</b> Target 4 Percentage of routine calls responded to within 5 working days (urban) or 10 working days (rural): ≥85%
		<b>14.0.1.10</b> Community Outcome: Safe & Healthy Communities Department of Internal Affairs, Stormwater non-financial performance measure number 3		<b>14.0.1.10</b> 2016/17 <30mins		<b>14.0.1.10</b> Target 5 The median response time to attend a flooding event*, measured from the time that the territorial authority receives notification to the time that service personnel reach the site: ≤60 mins urban ≤120 mins rural	<b>14.0.1.10</b> Target 5 The median response time to attend a flooding event*, measured from the time that the territorial authority receives notification to the time that service personnel reach the site: ≤60 mins urban ≤120 mins rural	<b>14.0.1.10</b> Target 5 The median response time to attend a flooding event*, measured from the time that the territorial authority receives notification to the time that service personnel reach the site: ≤60 mins urban ≤120 mins rural	<b>14.0.1.10</b> Target 5 The median response time to attend a flooding event*, measured from the time that the territorial authority receives notification to the time that service personnel reach the site: ≤60 mins urban ≤120 mins rural



Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks				Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
<b>14.0.3</b>	Council manages the stormwater network in a responsible and sustainable manner	Community Outcome: Sustainable use of resources	<b>14.0.3</b> Resident satisfaction surveys	New level of service – no current performance		<b>14.0.3</b> Target 1 Resident satisfaction with Council's management of the stormwater network ≥37%	<b>14.0.3</b> Target 1 Resident satisfaction with Council's management of the stormwater network ≥38%	<b>14.0.3</b> Target 1 Resident satisfaction with Council's management of the stormwater network ≥40%	<b>14.0.3</b> Target 1 Resident satisfaction with Council's management of the stormwater network ≥50%
<b>14.0.2</b>		<b>14.0.2.1</b>	<b>14.0.2</b>	<b>14.0.2.1</b>		<b>14.0.2.1</b>	<b>14.0.2.1</b>	<b>14.0.2.1</b>	<b>14.0.2.1</b>
14.0.2		Community Outcome: Sustainable use of resources Department of Internal Affairs, Stormwater non-financial performance measure number 2a	Reported in resource consent compliance reports to ECan.	2016/17: 0		Target 2 Number of abatement notices regarding Council resource consents related to discharges from the stormwater networks per year: 0	Target 2 Number of abatement notices regarding Council resource consents related to discharges from the stormwater networks per year: 0	Target 2 Number of abatement notices regarding Council resource consents related to discharges from the stormwater networks per year: 0	Target 2 Number of abatement notices regarding Council resource consents related to discharges from the stormwater networks per year: 0
		<b>14.0.2.4</b> Community Outcome: Sustainable use of resources Department of Internal Affairs, Stormwater non-financial		<b>14.0.2.4</b> 2016/17: 0		<b>14.0.2.4</b> Target 3 Number of infringement notices regarding Council resource consents related to discharges from the stormwater	<b>14.0.2.4</b> Target 3 Number of infringement notices regarding Council resource consents related to discharges from the stormwater	<b>14.0.2.4</b> Target 3 Number of infringement notices regarding Council resource consents related to discharges from the stormwater	<b>14.0.2.4</b> Target 3 Number of infringement notices regarding Council resource consents related to discharges from the stormwater

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks				Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
		performance measure number 2b				networks per year: 0	networks per year: 0	networks per year: 0	networks per year: 0
		<b>14.0.2.3</b>  Community Outcome: Sustainable use of resources  Department of Internal Affairs, Stormwater non-financial performance measure number 2c		<b>14.0.2.3</b>  2016/17: 0		<b>14.0.2.3</b>  Target 4  Number of enforcement orders regarding Council resource consents related to discharges from the stormwater networks per year: 0	<b>14.0.2.3</b>  Target 4  Number of enforcement orders regarding Council resource consents related to discharges from the stormwater networks per year: 0	<b>14.0.2.3</b>  Target 4  Number of enforcement orders regarding Council resource consents related to discharges from the stormwater networks per year: 0	<b>14.0.2.3</b>  Target 4  Number of enforcement orders regarding Council resource consents related to discharges from the stormwater networks per year: 0
		<b>14.0.2</b>  Community Outcome: Sustainable use of resources  <i>Department of Internal Affairs, Stormwater non-financial performance measure number 2d</i>		<b>14.0.2</b>  2016/17: 0		<b>14.0.2.2</b>  Target 5  Number of successful prosecutions regarding Council resource consents related to discharges from the stormwater networks per year: 0	<b>14.0.2.2</b>  Target 5  Number of successful prosecutions regarding Council resource consents related to discharges from the stormwater networks per year: 0	<b>14.0.2.2</b>  Target 5  Number of successful prosecutions regarding Council resource consents related to discharges from the stormwater networks per year: 0	<b>14.0.2.2</b>  Target 5  Number of successful prosecutions regarding Council resource consents related to discharges from the stormwater networks per year: 0
		<b>14.0.6</b>  Community Outcome: Sustainable use of resources	<b>14.0.6</b>  Reported in monthly contract reports from the Contractor.	<b>14.0.6</b>  2016/17: 100%		<b>14.0.6</b>  Target 6  Percentage of all aquatic weed diverted from	<b>14.0.6</b>  Target 6  Percentage of all aquatic weed diverted from	<b>14.0.6</b>  Target 6  Percentage of all aquatic weed diverted from	<b>14.0.6</b>  Target 6  Percentage of all aquatic weed diverted from

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks				Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
						landfill (mechanical and hand harvested): ≥95%	landfill (mechanical and hand harvested): ≥95%	landfill (mechanical and hand harvested): ≥95%	landfill (mechanical and hand harvested): ≥95%
14.0.4						14.0.4.1	14.0.4.1	14.0.4.1	14.0.4.1
14.0.3	Council maintains waterway channels & margins to a high standard	Community Outcome: Unique landscape and indigenous biodiversity are valued	GIS	New level of service – no current performance		Target 4 Total length of bank naturalised per year: 150m	Target 4 Total length of bank naturalised per year: 150m	Target 4 Total length of bank naturalised per year: 200m	Target 4 Total length of bank naturalised per year: 300m
						14.0.4.2	14.0.4.2	14.0.4.2	14.0.4.2
						Target 5 No net loss of open waterway and riparian habitat (eg piping or encroachment in to setback): Pass	Target 5 No net loss of open waterway and riparian habitat (eg piping or encroachment in to setback): Pass	Target 5 No net loss of open waterway and riparian habitat (eg piping or encroachment in to setback): Pass	Target 5 No net loss of open waterway and riparian habitat (eg piping or encroachment in to setback): Pass
14.0.4	Stormwater network is managed to minimise risk of flooding, damage and disruption	Community Outcome: Modern and robust city infrastructure and facilities network.	Resident satisfaction surveys	2016/17: 53%		Target 1 Proportion of residents satisfied with the management of Council stormwater systems to ensure flood risk is minimised: ≥50%	Target 1 Proportion of residents satisfied with the management of Council stormwater systems to ensure flood risk is minimised: ≥50%	Target 1 Proportion of residents satisfied with the management of Council stormwater systems to ensure flood risk is minimised: ≥75%	Target 1 Proportion of residents satisfied with the management of Council stormwater systems to ensure flood risk is minimised: ≥80%
<div> <p>This level of service target is published in the LTP 2018-28. It will be proposed to the Council for removal from the LTP as it is a duplication of level of service 14.0.3 (page 9).</p> </div>									

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks				Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
14.0.11	Stormwater network is managed to minimise risk of flooding, damage and disruption	14.0.11.2 Community Outcome: Modern and robust city infrastructure and facilities network. DIA stormwater non-financial performance measure number 1a	14.0.11.2 Site inspection reports	14.0.11.2 2016/17: < 2		14.0.11.2 Target 2 The number of flooding events that occur: <2	14.0.11.2 Target 2 The number of flooding events that occur: <2	14.0.11.2 Target 2 The number of flooding events that occur: <2	14.0.11.2 Target 2 The number of flooding events that occur: <3
		14.0.11.1 Community Outcome: Modern and robust city infrastructure and facilities network. Department of Internal Affairs, Stormwater non-financial performance measure number 1b	14.0.11.1 Site inspection reports	14.0.11.1 2016/17: 0.66		14.0.11.1 Target 3 For each flooding event, the number of habitable floors affected. (Expressed per 1000 properties connected to the territorial authority's stormwater system.): <0.1	14.0.11.1 Target 3 For each flooding event, the number of habitable floors affected. (Expressed per 1000 properties connected to the territorial authority's stormwater system.): <0.1	14.0.11.1 Target 3 For each flooding event, the number of habitable floors affected. (Expressed per 1000 properties connected to the territorial authority's stormwater system.): <0.1	14.0.11.1 Target 3 For each flooding event, the number of habitable floors affected. (Expressed per 1000 properties connected to the territorial authority's stormwater system.): <0.1
		14.0.11.3 Community Outcome: Modern and robust city infrastructure and facilities network.	14.0.11.3 Number of complaints received through the call centre	14.0.11.3 2016/17: 8.4		14.0.11.3 Target 4 Number of complaints received by a territorial authority about the	14.0.11.3 Target 4 Number of complaints received by a territorial authority about the	14.0.11.3 Target 4 Number of complaints received by a territorial authority about the	14.0.11.3 Target 4 Number of complaints received by a territorial authority about the

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks				Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
		<i>Department of Internal Affairs, Stormwater non-financial performance measure number 4</i>				performance of its stormwater system, expressed per 1000 properties connected to the territorial authority's stormwater system: < 10	performance of its stormwater system, expressed per 1000 properties connected to the territorial authority's stormwater system: < 10	performance of its stormwater system, expressed per 1000 properties connected to the territorial authority's stormwater system: < 9	performance of its stormwater system, expressed per 1000 properties connected to the territorial authority's stormwater system: < 8
		Community Outcome: Modern and robust city infrastructure and facilities network.	<b>14.0.11.4</b> Infonet	New level of service – no current performance		<b>14.0.11.4</b> Target 5 Percentage of total stormwater gravity network pipework length at condition grade 5. Based on physical inspection or theoretical model: ≤ 7%	<b>14.0.11.4</b> Target 5 Percentage of total stormwater gravity network pipework length at condition grade 5. Based on physical inspection or theoretical model: ≤ 7%	<b>14.0.11.4</b> Target 5 Percentage of total stormwater gravity network pipework length at condition grade 5. Based on physical inspection or theoretical model: ≤ 7%	<b>14.0.11.4</b> Target 5 Percentage of total stormwater gravity network pipework length at condition grade 5. Based on physical inspection or theoretical model: ≤ 7%

#### 4. What levels of service do we propose to change from the current LTP and why?

To review changes to levels of service between those adopted for the Amended Long Term Plan 2016-25 (Annual Plan 2017/18) and the draft Long Term Plan 2018-28, refer to [section 4 of the draft Service Plan](#).

#### 5. How will the assets be managed to deliver the services?

The stormwater drainage service is managed according to best practice which aligns with the International Infrastructure Management Manual (IIMM) and to ensure that Council complies with its statutory requirements and achieves the levels of service as expected by the community. Management processes include:

**Plan:** model current network performance, determine future needs and identify, evaluate and recommend options to achieve an optimal stormwater drainage service

**Regulate:** issue standards, specifications and bylaws to ensure that the service is safe, reliable and resilient and enforce adherence through the Council's consent processes

**Build:** conceptualize, design, specify and procure contractors to build new assets

**Operate:** ensure that stormwater drainage network is operated appropriately, efficiently and effectively

**Maintain:** perform planned and cyclic maintenance for a reliable and compliant service

**Repair and renew:** review asset condition in the context of age, material, maintenance, etc. and establish a prioritized programme for asset repair and renewal to ensure effectiveness and efficiency of supply

**Customer services:** receive, prioritize and respond to customer complaints and requests for services

### ***How are renewal works identified and prioritised?***

For the **core renewals**, detailed methodologies are available in the Draft Lifecycle Management Manual with results in the 2018 Land Drainage Asset Management Plan.

At a high level:

- Long term (years 4-30) budget planning is based on installation year and theoretical useful life where the theoretical useful life takes into account material, manufacturer, manufacturing standard, condition assessment results, criticality and vulnerability assessments and expert judgement from literature.
- Short term (years 1-3) budgets and programs identify and prioritise specific renewals projects based on condition assessment results, performance assessment results, criticality, obsolescence and risk.

### ***How are capital projects for growth, backlog and improvements prioritised?***

**Growth, Backlog and Improved Levels of Service** programmes and projects are established through network planning processes for issue identification and assessment. This includes responding to known stormwater drainage issues and areas of planned growth. The majority of these projects are reported under the Flood Protection and Control Works activity.

## **6. What financial resources are needed?**

Refer to the **Activities and Services** section in the most recently adopted [Long Term Plan / Annual Plan](#).

## **7. How much capital expenditure will be spent, on what category of asset, and what are the key capital projects for this activity?**

Refer to the **Capital Programme** section in the most recently adopted [Long Term Plan / Annual Plan](#).

## 8. Are there any significant negative effects that this activity will create?

Effect	Mitigation
Cost to Council / ratepayers of operating stormwater drainage network	<p>Follow documented procedures and industry best practice for cost minimisation.</p> <p>Follow technological developments and implement cost saving initiatives on a continuous improvement basis.</p> <p>Focus process of defining key performance indicators on cost efficiency.</p> <p>Ensure staff are kept updated with technological and operational best practice through attendance at conferences and participation in specialist industry working groups.</p>
Social, cultural and environmental effects of construction works	<p>Management of construction activities to minimise risk of non-compliance with relevant consent conditions.</p>
Social, cultural and environmental effects of stormwater discharges into waterways	<p>Ongoing education and works programme to reduce contaminant load.</p> <p>Develop and deliver stormwater management plans that consider all six values and set appropriate, measurable performance targets.</p> <p>Monitor stormwater discharges and instigate appropriate remedial actions as may be necessary to address potential non-compliances.</p>

## 9. Does this Service Plan need to change as a result of a service delivery review?

A Service Delivery Review or Exemption report (Section 17A) for this activity has been carried out. Based on the outcome of this report no changes to the service plan or delivery model are required.