



# Flood Protection and Land Drainage

## Purpose

We protect people and property from flooding caused by severe weather events. For land drainage this protection can include the provision of stopbanks and floodgates to prevent the backflow of water from rivers and harbours where the high tide level can be higher than the land behind. For flood protection the focus is on keeping flood flows and tidal flows moving along rivers, and from overflowing onto the land. Both these activities may utilise the same infrastructure.

Responsibilities overlap between Kaipara District Council (KDC) and Northland Regional Council (NRC). Generally, though not in all cases, NRC is responsible for river management while KDC maintains and operates the drainage districts.

## Legislation associated with this service

- Climate Change Response Act 2002
- Land Drainage Act 1908
- Local Government Act 1974
- Local Government Act 2002
- Local Government (Rating) Act 2002
- Resource Management Act 1991
- River Boards Act 1908
- Soil Conservation and Rivers Control Act 1941

## Risks and issues

- Sea level rise, river and coastal flooding may overload the capacity of the drainage systems impacting future level of service (LOS)
- The threat of productive land being lost could impact the economic well-being of the district
- Objections from targeted ratepayers who feel they do not benefit from the targeted rate, e.g. infrastructure investment decisions
- Dissatisfaction amongst ratepayers paying the targeted rate, as not all landowners contribute
- Landowners hampering access to public drains situated on private land
- Some overlap and confusion on the respective roles of KDC and NRC for flood protection
- A financial risk exists in that the small size of some drainage districts means there may not be enough rates collected to cover costs, and
- Information gaps around each drainage districts capacity due to lack of drainage specific flood modelling.

## What we do

The increasing frequency and intensity of severe weather events puts people, property, infrastructure, and roads at heightened risk, making resilience a key focus in all activities.

Flood protection and land drainage covers flood control schemes, river alignment control and land drainage. We coordinate land drainage work in 30 drainage districts of various sizes.

These include Kaihu Valley and Mangatara Drainage Districts, both discharge into the Kaihu River which is administered by NRC. The largest district is the Raupō Drainage District, where we provide administrative and technical support.

The current capacity of the land drainage network is maintained with:

- weed spraying
- drain clearance
- floodgate and outlet maintenance in all districts
- floodgate and stopbank maintenance in Raupō
- discretionary stopbank maintenance for the remaining districts.

We also provide flood protection through various drainage system stopbanks and floodgates, monitor rivers for tidal and stormwater levels during weather events and warn of potential flooding.

The Raupō Drainage Committee, a formal committee of this Council, is in place to perform delegated functions. All land drainage activities outside Raupō are administered by informal community committees and supported, where practicable, by the infrastructure team.

While landowners are responsible for maintaining privately owned stopbanks and NRC is responsible for catchment management, there is often confusion around the responsibilities for ownership, management and control. As per the Infrastructure Strategy, we will use the first three years of this LTP to:

- a. Consider if the existing drainage district boundaries are still fit-for-purpose or if consolidation would provide benefits beyond those currently available
- b. Establish a multi-agency approach for river and harbour management to harness broader funding options; determine responsibilities for ownership, management and control
- c. Assess asset condition for both private and public assets
- d. Formalise action plans for improvements and maintenance for future investment.

## Contribution to community outcomes



	Affordable Living	Dependable Roadways	Healthy Environment	Prosperous Economy	Vibrant Communities
Flood protection of road and property access		Dark Blue	Light Blue	Blue	Dark Blue
Manage inundation of drainage schemes, particularly salt water		Light Blue	Green	Blue	Light Blue
Minimising/eliminating unwanted water containment		Light Blue	Green	Blue	Light Blue
Draining and protecting productive land for all forms of agriculture and horticulture activities		Light Blue	Green	Blue	Dark Blue
Stopbanks made available for recreational activities where safe to do so		Light Blue	Light Blue	Light Blue	Dark Blue

### How is climate resilience being considered?

There is a need to keep climate resilience front of mind where sea level rise, increasing coastal hazards and increasing intensity of rainfall events and flooding could impact council flood protection and land drainage activities.

Increased understanding of asset condition, both public and private, will contribute to the plan for required maintenance and future improvements.

The assets are designed for the very long-term, and the resilience requirement will need to be balanced with the available investment funds. The May 2024 central government budget included funds to be allocated to a group of 42 projects known as stage 1 of *Before the Deluge*. Council benefits from this with funding confirmed for the continuation of the Dargaville to Te Kōpuru stopbank.



## What we will deliver, when

Description	2024/2025	2025/2026	2026/2027
GIS mapping of drainage districts			
Continue stopbank protection from Dargaville to Te Kōpuru when funds from Regional Infrastructure Fund are confirmed			
Complete design and consenting floodgate for K Canal			
Increase asset management practices including data, condition assessment and modelling			
Establish multi-agency group for river management to determine responsibilities for ownership, management and control			
Consider drainage district boundaries and realign where agreed			
Formalise and implement governance and action plans for maintenance and future improvements			
Continue investigations, modelling and feasibility activities			

Performance measures	LTP Year 1 Target 2024/2025	LTP Year 2 Target 2025/2026	LTP Year 3 Target 2026/2027
The number of flood events not contained by the drainage schemes up to a 1:5 year flood.	0		
Service requests for broken, blocked, or failing floodgates.	< 10 service requests per year	< 7 service requests per year	< 5 service request per year
Service requests for additional cleaning of drains i.e. missed by the monitoring and maintenance programmes.	< 5 service requests per year		
Biannual inspection of our drainage network to ensure it can contain a 1:5 year flood.	2 inspections per year		
Targeted maintenance of the stopbank system in the Raupō Drainage District to prevent tidal flows from inundating private property during high tide and/or when the river is in flood.	Minimum yearly inspections and targeted maintenance completed		

## Changes in levels of service

There will be no changes to the level of service in the first three years. The activities to establish the formal maintenance and future improvements plans may result in future level of service changes.



## Significant negative effects

Identified significant negative effect/issue	Mitigation
<p><b>Drainage capacity</b></p> <p>A lack of drainage networks or maintenance on the existing network could result in increased flooding of farming and cropping communities in low-lying land near rivers, streams and canals.</p>	<p>Inspections and assessment of network capacity and monitoring of service requests relating to capacity issues. Planning continual improvement.</p>
<p><b>Climate resilience</b></p> <p>The frequency and severity of storm events, including rainfall event intensity is projected to increase. Sea level rise will increase severity of coastal inundation and flooding.</p>	<p>Continue assessments, modelling and feasibility activities to establish priority areas of focus.</p>
<p><b>Level of service (LOS) versus feasibility</b></p> <p>The construction and maintenance costs of infrastructure upgrades to meet a set level of service is beyond the means of the community.</p>	<p>The planned engagement with various government and community agencies will set agreed service levels and responsibilities to ensure the most practicable way forward, without negatively impacting on public health and the environment or creating risk to persons or property.</p> <p>The future plans established will consider future growth and/or land use changes so the appropriate funding can be allocated.</p>
<p><b>Infrastructure not maintained to the correct standard</b></p> <p>Base infrastructure maintenance and renewals have been under resourced leaving capacity and resilience issues.</p>	<p>Increased asset management practices with surveys and condition assessment will improve asset data and provide clarity on ownership and responsibilities. A robust maintenance schedule will be an outcome of this work allowing more forward planning and reducing reactive work in future.</p> <p>Any risks to the public are elevated with urgency.</p>

# Prospective Funding Impact Statement

Flood Protection and Land Drainage	Annual Plan	Budget	Budget	Budget
For the year ended: 30 June	2023/2024 \$'000	2024/2025 \$'000	2025/2026 \$'000	2026/2027 \$'000
<b>Sources of operating funding</b>				
General rates, uniform annual general charges, rate penalties	161	194	146	191
Targeted rates	1,081	1,075	1,076	1,076
Subsidies and grants for operating purposes	0	0	0	0
Fees and charges	0	0	0	0
Internal charges and overheads recovered	0	0	0	0
Interest and dividends from investments	0	0	0	0
Local authorities fuel tax, fines, infringement fees and other receipts	0	0	0	0
<b>Total operating funding</b>	<b>1,242</b>	<b>1,269</b>	<b>1,222</b>	<b>1,267</b>
<b>Application of operating funding</b>				
Payments to staff and suppliers	811	937	886	874
Finance costs	18	3	17	39
Internal charges and overheads charged	193	246	218	214
Other operating funding applications	0	0	0	0
<b>Total applications of operating funding</b>	<b>1,021</b>	<b>1,185</b>	<b>1,121</b>	<b>1,127</b>
<b>Surplus (deficit) of operating funding</b>	<b>220</b>	<b>84</b>	<b>101</b>	<b>140</b>
<b>Sources of capital funding</b>				
Subsidies and grants for capital expenditure	0	3,900	3,898	0
Development and financial contributions	0	0	0	0
Increase (decrease) in debt	129	100	497	370
Gross proceeds from sale of assets	0	0	0	0
Lump sum contributions	0	0	0	0
Other dedicated capital funding	0	0	0	0
<b>Total sources of capital funding</b>	<b>129</b>	<b>4,000</b>	<b>4,395</b>	<b>370</b>
<b>Applications of capital funding</b>				
Capital expenditure	0	0	0	0
Capital expenditure - to meet additional demand	0	0	0	0
Capital expenditure - to improve the level of service	0	4,000	4,400	400
Capital expenditure - to replace existing assets	213	175	275	335
Increase (decrease) in reserves	137	-92	-179	-225
Increase (decrease) of investments	0	0	0	0
<b>Total applications of capital funding</b>	<b>350</b>	<b>4,083</b>	<b>4,496</b>	<b>510</b>
<b>Surplus (deficit) of capital funding</b>	<b>-220</b>	<b>-83</b>	<b>-101</b>	<b>-140</b>
<b>Funding Balance</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>