

WCC wastewater network issues, actions and way forward plan

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1. Key Objectives

Long Term Vision/4 th Order Outcome	Objective Area	Objective Targets
Stormwater and wastewater systems support healthy people and ecosystems	How the wastewater network interacts with the stormwater network and the consequent impacts on the city's aquatic receiving environments.	General management processes and design, construction and performance issues those are relevant across all areas of the network over the catchment. Focuses on reducing the incidence and impact of wastewater from overflows within the city's reticulated network.
Coastal water and sediment quality supports healthy people and ecosystems	Water quality and its management	Using the relevant guidelines provides consistency in identification of ecosystems and monitoring regimes appropriate to the receiving environment.
Networks meet current and desired levels of service	Understand catchment wide wastewater network performances - capacity, and constructed overflow performances, contamination locations (hot spot areas, cross-connections/miss-connections etc)	Safe and reliable conveyance of wastewater

2. Wastewater Network Issue Definition

Issue	Causes / Description
Existing networks do not meet current and desired levels of service caused by:	
<i>Aging infrastructure</i>	<ul style="list-style-type: none"> • pipe age, condition and/or capacity • low level of historical investment in asset maintenance and renewal • low historical focus on amenity considerations of networks
<i>Existing stormwater and wastewater networks are not future-proofed</i>	<ul style="list-style-type: none"> • asset management weakly aligned with newly identified values, issues, growth, development, amenity and ecological needs and external risks such as climate change and associated effects
<i>Wastewater Interactions with stormwater systems</i>	<ul style="list-style-type: none"> • exfiltration from wastewater network <ul style="list-style-type: none"> ○ age/state of repair ○ loss of capacity due to growth • design overflows from wastewater network • infiltration and inflow into wastewater network: <ul style="list-style-type: none"> ○ age/state of repair ○ illegal cross-connections and faulty private drains ○ gully traps too low/in secondary flow paths • possible poor construction standards of new wastewater and stormwater reticulation

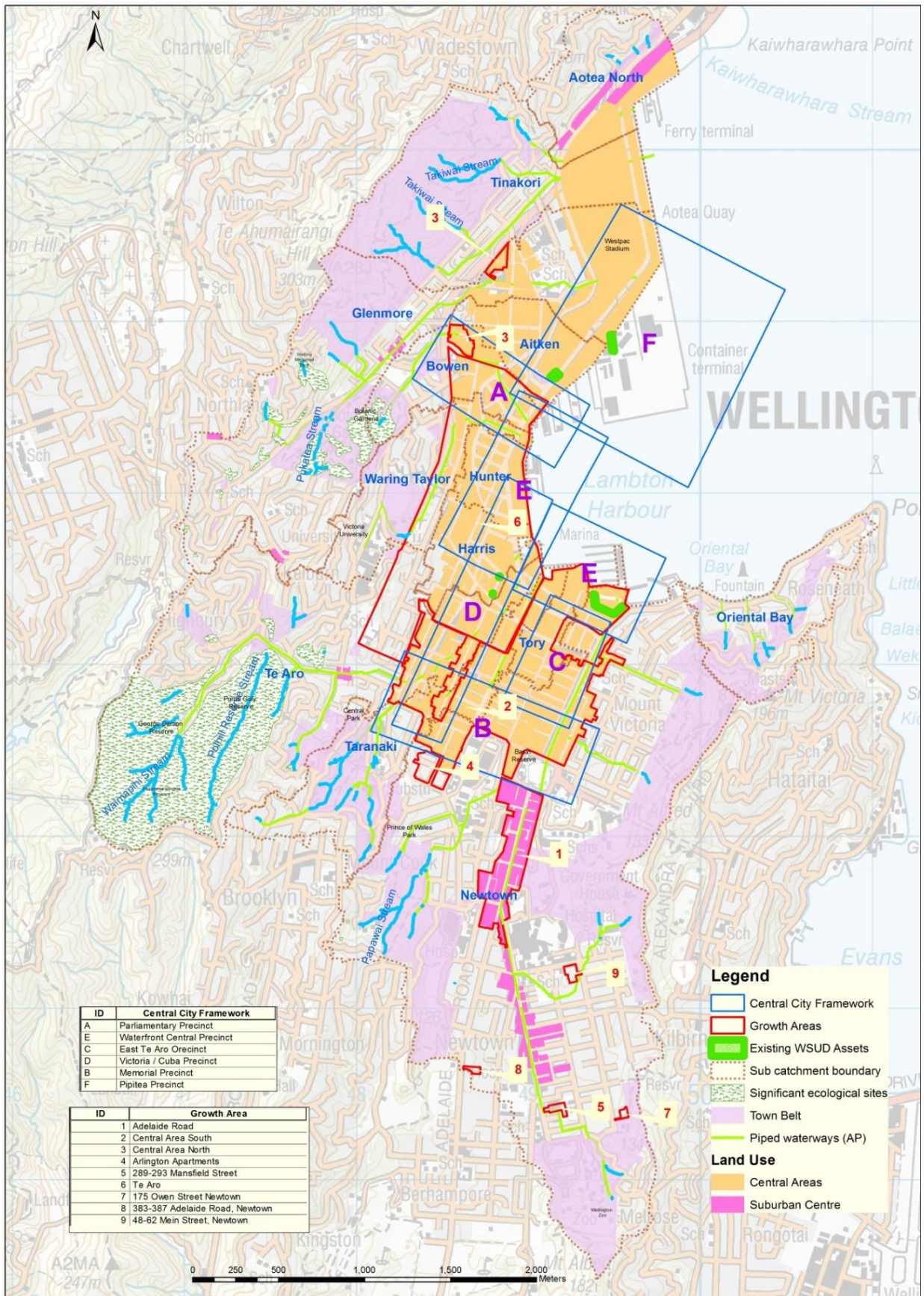


Figure 1: Growth areas for Lambton Harbour catchment
 NOTE: Similar map available for Moa Point wastewater catchment

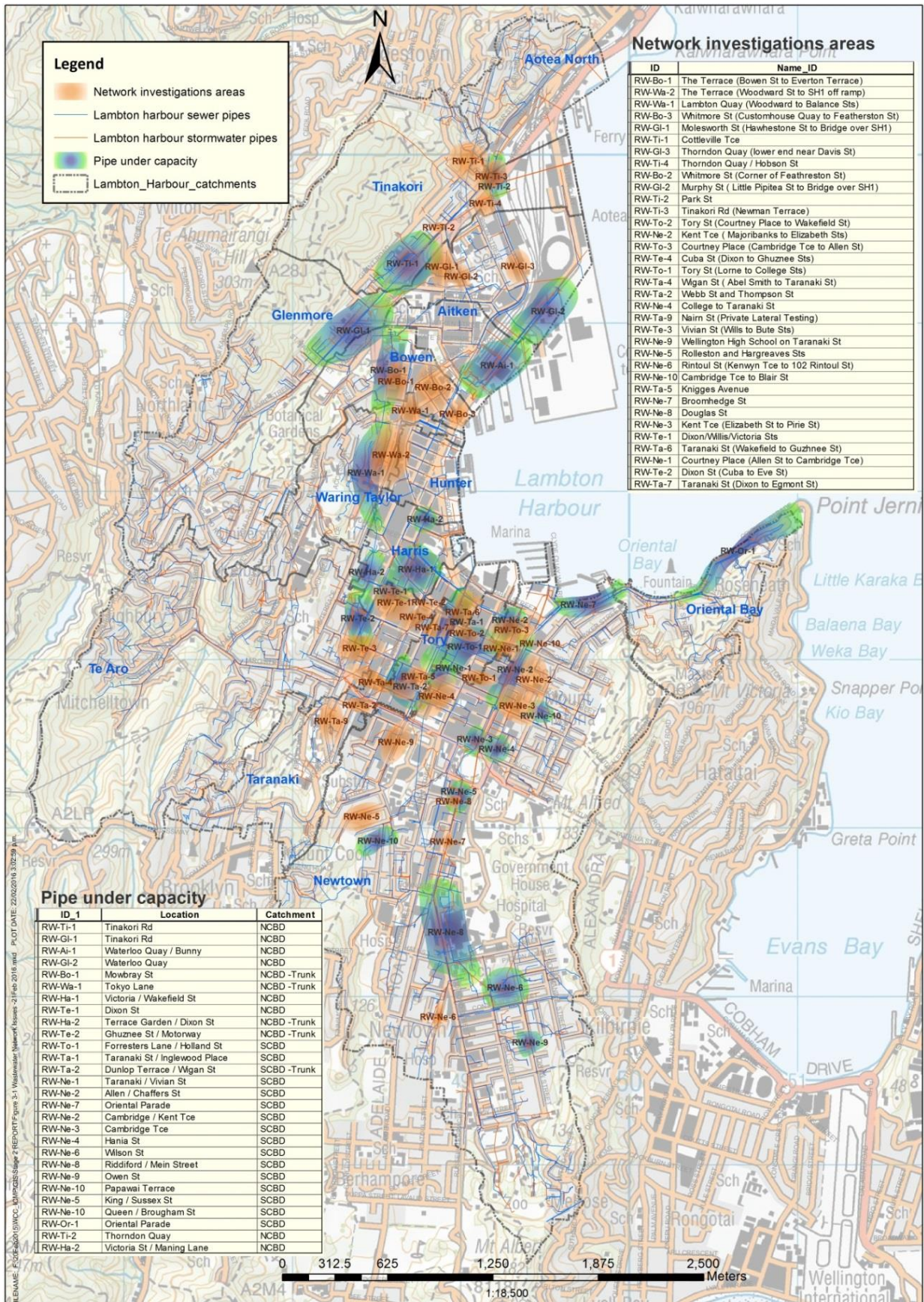


Figure 2 a: Wastewater network issues Lambton Harbour catchment
 NOTE: Maps to be prepared for Moa Point wastewater catchment

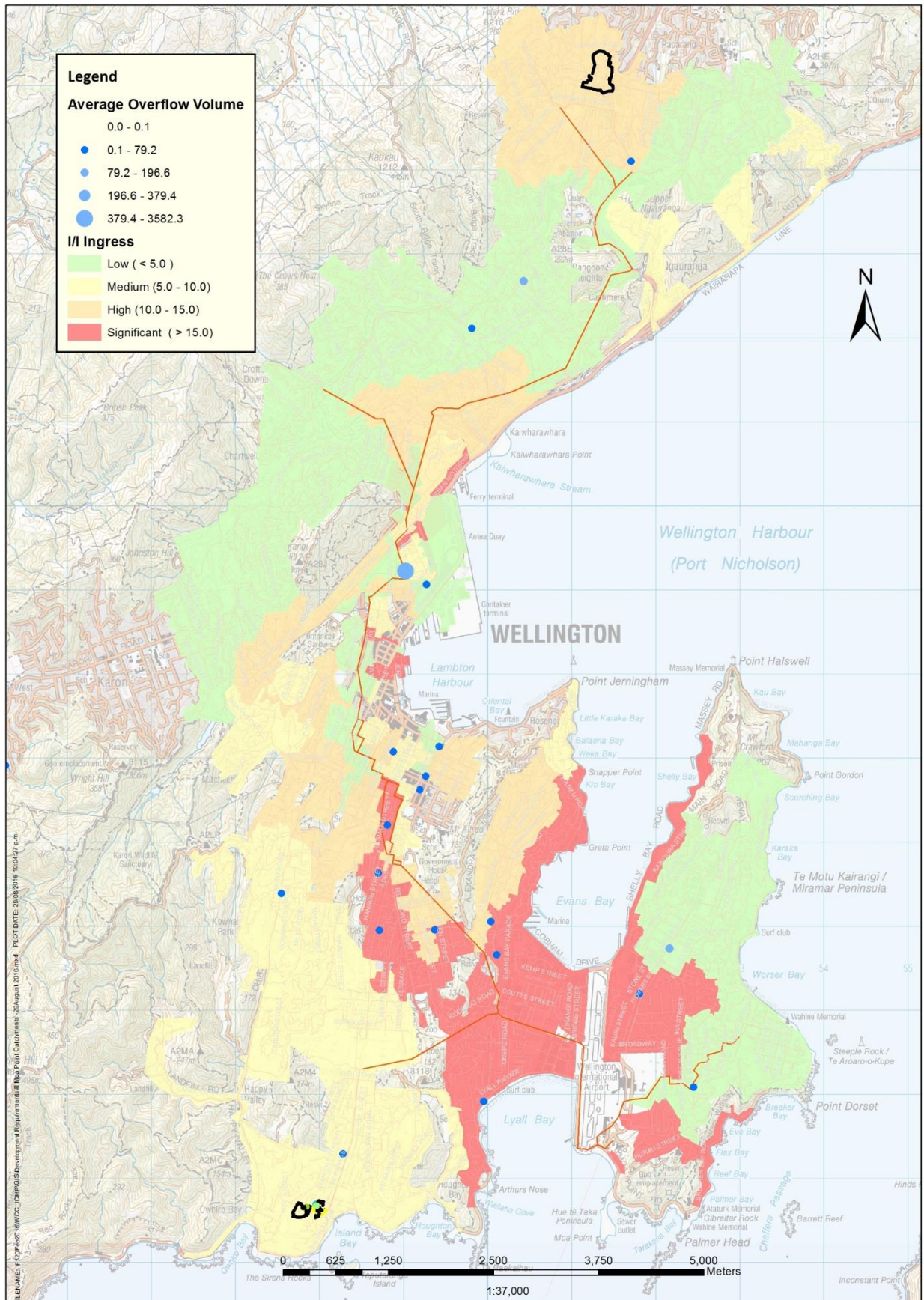


Figure 2 b: Inflow and infiltration status for Moa Point wastewater catchment

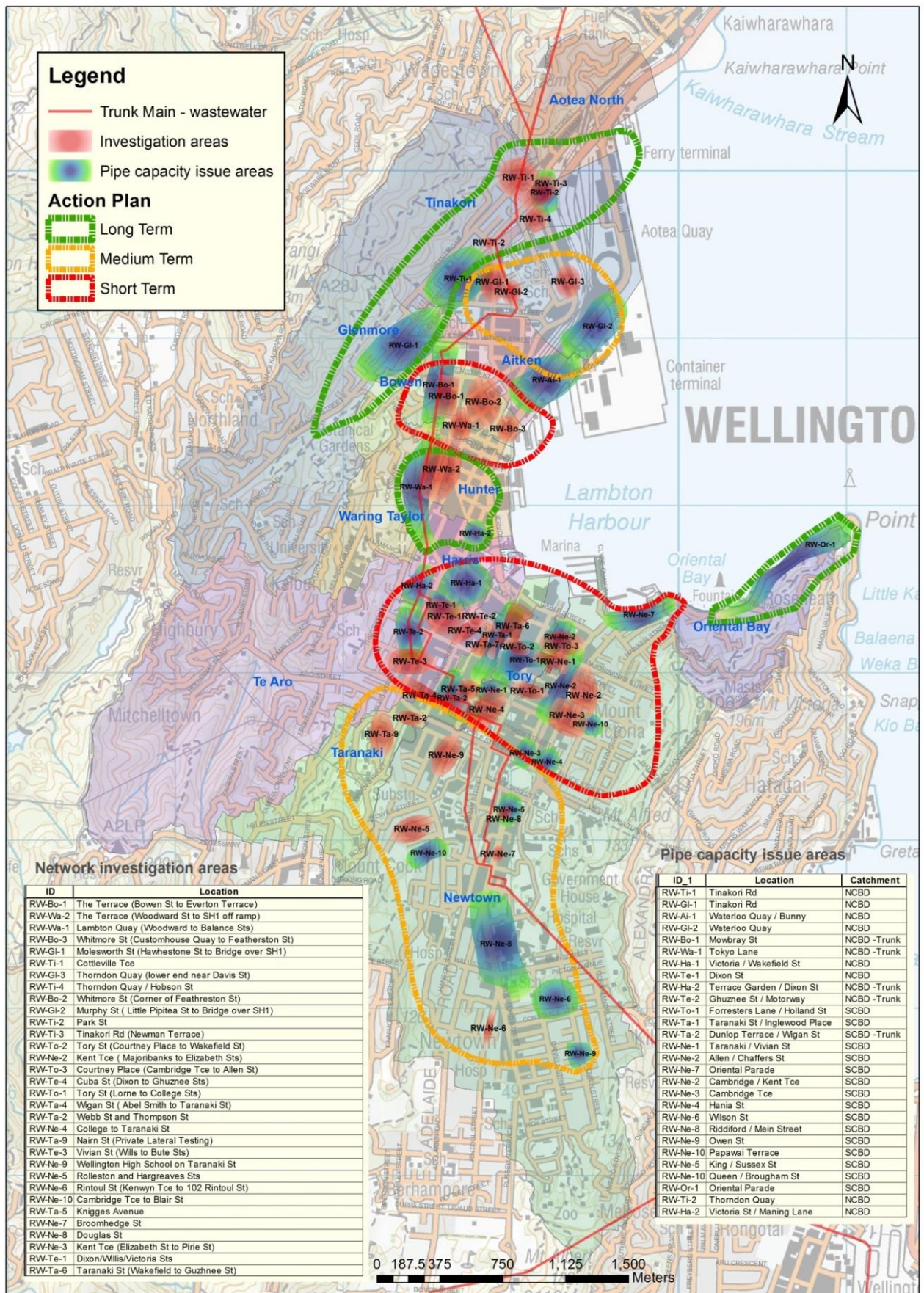


Figure 3: Localised issues priorities – wastewater impacts Lambton Harbour catchment

NOTE: Maps will be prepared for Moa Point wastewater catchment by March 2018

3. Actions and Timing – wastewater network

Table 1: Overview of catchment-wide actions identified in Lambton Harbour Catchment ICMP (NOTE: Detail actions are identified for each issue marked in the maps, refer to the draft Lambton Harbor ICMP)

	ID Number and Name		Description	Timeframe		
				Short term (2018)	Medium term (2018-2021)	Long term (2021 – 2038)
General Actions	C-1	Investigation and Analysis	Pipe capacity (performance) analysis and condition assessment for wastewater and stormwater network in order to set a target (detail actions are listed for each issue areas)	✓		
	C-2	Hydraulic network modelling	Completion of model calibration/verification	✓		
	C-3	Performance analysis	Detail network performance analysis and refining issues (preliminary capacity issues are identified based on other analysis)	✓		
	C-4	Preliminary option assessment	Solution identification – (previously identified actions are implemented and progressing)	✓		
	C-5	Solution workshops	Refining solutions / costing – MCA analysis	✓		
	C-6	Inspect gully traps	Investigate whether stormwater discharges into gully traps in high priority areas	✓		
	C-7	Illegal cross connection data	Investigate illegal connections and faulty private drains in high priority areas	✓		
	C-8	Public awareness	Conduct baseline survey to identify the current level of public awareness and set benchmarks and targets (Table B14-Item 1, 2 and 3)		✓	
	C-9	Education and Training	Re-align existing education plan to include Stage 2 ICMP findings (including business premises and other localised sources of contamination)	✓		
	C-10	Intra and Inter agency Co-ordination	Working with other internal and external parties to make sure priorities are aligned with city wide planning concepts. (Table B-10, item 4)	✓		
	C-11	Strategies Co-ordination	Linking in with other strategies such as the Central City Framework, Growth Study, Town Belt and Biodiversity.	✓		
	C-12	Existing work Plan updates	Updating all relevant planning programmes		✓	

4. Tentative Action Schedule: March – November 2016 (Identified in the Lambton Harbour ICMP)

	Item	Responsible*	Comments
1	Completion of hydraulic model	Hywel	90% is completed for Lambton Harbour catchment. Other models are progressing
2	Performance assessment	Hywel / Rajika	To refine the catchment issues identified
3	Preliminary solution assessment	Hywel / Rajika lead - discussions with Steve/Ryan/Iqbal/???	Brain storming of ideas – assessing big picture and aligned with other on-going WW work programmes
4	Option workshops	Hywel / Rajika / Steve/Ryan/Iqbal/???	Initial workshops with the Development, Ops and Delivery teams
5	Cost estimation and MCA analysis	Rajika lead with the help of Delivery team and ND & D staff	Discussions with WCC / WWL
6	Implementation	ND & D	Include to the LTP

NOTE: * identified while developing ICMP actions in May 2016. Subject to change, will discuss with Wastewater Chief Advisor ND & D.