



SUPPLEMENTARY AGENDA

**Council Workshop
Thursday, 26 February 2026**

Date: Thursday, 26 February 2026

Time: 9:00 am

**Location: TCC Council Chamber
Level 1, 90 Devonport Road
Tauranga**

Please note that this meeting will be livestreamed and the recording will be publicly available on Tauranga City Council's website: www.tauranga.govt.nz.

**Marty Grenfell
Chief Executive**

Order of Business

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1 BUSINESS

1.1 Annual Plan Workshop Transport Bulk Programmes

File Number: A19828109

Author: Mike Seabourne, Head of Transport

Authoriser: Reneke van Soest, General Manager: Operations & Infrastructure

Presenter(s): Reneke van Soest, Mike Seabourne

External presenter(s):

Workshop information

Purpose of workshop

1. Annual Plan Workshop;

This item is to cover Transport Bulk Programmes as per request on agenda

Attachments

1. **Minor Safety and Accessibility Pipeline for 26.02 Workshop - A19828008** [↓](#) 
2. **Minor Safety and Accessibility Programme_ (002) - A19828078** [↓](#) 

Attachment 1 – Minor Safety and Accessibility Pipeline

Project/Charter name	Project description	Total Cost	Cumulative Total	Rank
62 Welcome Bay Rd - signalised crossing	Upgrade refuge island to signalised crossing - high crossing demand to support access to bus stops and local area	\$ 580,000	\$ 580,000	1
Pyes Pa Rd Signalised crossing (in vicinity of 78 Pyes Pa Rd)	Support retirement village and access to shops with lack of crossings and high traffic flow	\$ 625,000	\$ 1,205,000	2
Bethlehem Road near Westmoreland Rise - Zebra crossing	New zebra crossing to support access to the shopping centre and school in vicinity of 36 Bethlehem Road	\$ 162,500	\$ 1,367,500	3
Oceanbeach Road Zebra crossing (in vicinity of 269 Oceanbeach Road)	New Zebra crossing, bus stop and footpath upgrades to access beach and passenger transport Not required if Concord Oceanbeach Intersection progresses and approved for implementation	\$ 180,000	\$ 1,547,500	3
Papamoa Beach Rd / Parton Rd crossing - convert refuge to zebra	Convert pedestrian refuge island to dual zebra crossing to access shops and the beach. Supports visits for students from local school	\$ 173,000	\$ 1,720,500	5
Welcome Bay Road Improvement – Temporary Delineation Measures between Kaitemako Road & Waikite Road	Install and upgrade intersection markings to highlight presence of cycle use at five intersection, delineation at some bends	\$ 70,000	\$ 1,790,500	5
Waihi Road Bayview Retirement Village Signalised Crossing in vicinity of 171 Waihi Road	New Signalised crossing to access bus stops and support retirement village	\$ 525,000	\$ 2,315,500	5
Te Ranga Memorial Drive - Pedestrian refuge	Provision of a pedestrian refuge to support access for students to bus stops and local area	\$ 68,000	\$ 2,383,500	9
Tahatai Coast School - zebra crossing (Evans Road near Thoroughbred Place)	Convert Kea Crossing to zebra crossing to support access to school.	\$ 162,500	\$ 2,546,000	11
Tweed Street zebra crossing (between Orkney and Campbell)	New Zebra crossing to support access to buses and schools	\$ 145,000	\$ 2,691,000	15
Otumoetai Primary school pedestrian crossing (in vicinity of 215 Otumoetai Road)	Current zebra crossing upgraded to a signalised crossing to improve access and safety for students accessing the primary school.	\$ 625,000	\$ 3,316,000	15
Tweed Street zebra crossing (between Orkney and Campbell)	New Zebra crossing to support access to buses and schools	\$ 145,000	\$ 3,461,000	15
Vale Street shared path between Landscape Rd and Bureta Rd	Tactical urbanism - installation of delineators on existing road to provide 2.3 shared path on the golf course side. With isolated areas of off-road concrete shared path facilities. A pedestrian refuge island to support access to the path	\$ 497,000	\$ 3,958,000	18
Montiicola Drive (near Te Okuroa Dr.) pram crossings and pedestrian refuge	Installation of pram crossing and provision of a pedestrian refuge island with potential to ammend the existing splitter island	\$ 68,000	\$ 4,026,000	19
Marine Parade zebra crossing in the vicinity of 162 Marine Parade	Install zebra crossing on Marine Parade in vicinity of walkway on Lee Street	\$ 170,000	\$ 4,196,000	19
Papamoa College Safety Improvement (Doncaster Drive)	2 shared crossing facilities, in vicinity of Tara Road and on Doncaster Road north of the college.	\$ 300,000	\$ 4,496,000	20

Project/Charter name	Project description	Total Cost	Cumulative Total	Rank
Seaspray Drive at Grenada Street - improve crossing	Upgrade existing pedestrian refuge island to a zebra crossing	\$ 170,000	\$ 4,666,000	21
Tahatai Coast School zebra crossing at the Gravatt / Gloucester / Evans Road Roundabout	Existing zebra crossing to be raised on a speed platform - not progressing	\$ 142,000	\$ 4,808,000	22
Sandhurst Drive/Grenada Street roundabout - zebra crossings	Install zebras on western and northern legs of roundabout, lack of deflection and high speed. High cycle demand	\$ 680,000	\$ 5,488,000	23
Gravatt Road/ Beachwater Dr zebra crossing	Provision of a zebra crossing to connect the Wairakei shared paths and improve access to shopping centre	\$ 145,000	\$ 5,633,000	24
129 Lakes Boulevard - new pedestrian refuge	New pedestrian refuge to support access to bus stops and reserve	\$ 68,000	\$ 5,701,000	25
Bethlehem Road zebra crossing in vicinity of Sandalwood Way	Upgrade existing pedestrian refuge island to a zebra crossing	\$ 145,000	\$ 5,846,000	26
Waihi Road and Birch Avenue intersection provision of a cross walk at the signalised intersection	Provision of a staggered pedestrian and cycling crosswalk at the signalised intersection to access K Valley, the City Centre and the path along Takitimu Drive. Upgrade 80m of footpath to shared path	\$ 450,000	\$ 6,296,000	27
Devonport Rd footpath (16th to 18th)	Install 18.m footpath on south side of Devonport Rd, between 16th and 18th Ave (total 410m)	\$ 607,200	\$ 6,903,200	28
Pillans Point School zebra crossing (vicinity of number 108 Pillans Road)	Upgrade existing speed table to a zebra crossing to support access to the school	\$ 162,000	\$ 7,065,200	29
Waikari Marae to the Kura footpath along Hungahungatoroa Road	Provision of a 150m of footpath connecting Marae to the School along	\$ 64,800	\$ 7,130,000	29
Welcome Bay Road zebra crossing in vicinity of 166 Welcome Bay Road	Conversion of existing non-raised pedestrian refuge to a zebra crossing that meets intervention standards of increased pedestrian and traffic volumes to support access to the shops and kindergarten	\$ 162,500	\$ 7,292,500	31
Fairway Avenue on the corner of Golf Road	New pedestrian refuge, kerb let downs and footpath improvements. Minor widening required to accommodate delivery vehicles to Golf Course	\$ 83,000	\$ 7,375,500	33

Project/Charter name	Project description	Total Cost	Cumulative Total	Rank
22nd Ave zebra crossing (near Courtney Rd)	Install zebra crossing on 22nd Ave, near Courtney Rd	\$ 170,000	\$ 7,545,500	34
Monowai St zebra crossing - at Grenada St	Upgrade of existing pedestrian refuge to a zebra crossing to support access to schools and Arataki Park	\$ 170,000	\$ 7,715,500	34
Alice Lane Footpath	Provision of a missing footpath connection between Parton Road and Gordon Spratt Reserve	\$ 122,040	\$ 7,837,540	35
17th Avenue (between Devonport Road and Fraser Street)	Install new 280m footpath (1.8m wide) on 17th Ave	\$ 496,320	\$ 8,333,860	36
Tauranga Waldorf School and Rose Ring Kindergartens Speed Platform	Provision of a speed table at existing pedestrian refuge	\$ 20,000	\$ 8,353,860	37
Joyce Road footpath between Hanlow Place and St Thomas Ave	152m of missing footpath on Joyce Road to connect Hanlow Place and St Thomas Avenue. No alternative available.	\$ 97,080	\$ 8,450,940	38
Monmouth Street / The Strand footpath improvements to city centre	Shared path is below min footpath standards, provides a key connection to the city centre. Off road path requires widening to improve accessibility and safety improvements	\$ 160,000	\$ 8,610,940	39
Marine Parade zebra crossing (in vicinity of 116 Marine Parade)	New zebra crossing that meets intervention standards of increased pedestrian and traffic volumes to support access to the beach and shared path .	\$ 151,000	\$ 8,761,940	40
Marine Parade zebra crossing in vicinity of 180 Marine Parade	New zebra crossing that meets intervention standards of increased pedestrian and traffic volumes to support access to the beach and shared path .	\$ 151,000	\$ 8,912,940	40
Grenada Street zebra crossing - near Lotus Ave	Upgrade of existing pedestrian refuge to a zebra crossing to support access to Reilly Ave Reserve	\$ 170,000	\$ 9,082,940	42
17th Ave footpath, shared path and crossing	Installation of footpath (1.8m wide) on south side of 17th Ave from Clarke St to skate park (280m) to Historic Village western entrance, installation of 2.5m shared path from Cameron Rd to Historic Villane eastern entrance (140m) and	\$ 1,359,600	\$ 10,442,540	43
Argyll Rd crossing (at Carlisle St)	Pedestrian refuge island on Argyll Rd, near Carlisle St	\$ 70,000	\$ 10,512,540	44
Waikite Road Pedestrian zebra crossing in the vicinity of Welcome Bay Road intersection	New Zebra Crossing across Waikite Road, intersection geometric radii adjustments and footpath improvements in close proximity of the intersection.	\$ 250,000	\$ 10,762,540	45
Yatton St zebra crossing, at Roys Rd	Install zebra crossing on Yatton St, west of Roys Rd	\$ 170,000	\$ 10,932,540	46
20th Ave footpath (Cameron Rd to Clarke St)	Install 1.8m footpath on north side of 20th Ave, between Cameron Rd and Clarke St (distance 200m)	\$ 435,600	\$ 11,368,140	46
Alverstokey Rd zebra crossing	Install zebra crossing on Alverstokey Rd at Fraser St	\$ 170,000	\$ 11,538,140	48
Edgecumbe Rd footpath (11th to 13th Ave)	Install new 320m footpath (1.8m wide) on west side of Edgecumbe Rd, between 11th and 13th Ave. Install a courtesy crossing at 12th Ave and a zebra crossing at 13th Ave.	\$ 778,800	\$ 12,316,940	48
16th Ave footpath (Cameron Rd to Fraser St)	Install 1.8m footpath on north side of 16th Ave, between Cameron Rd and Fraser St	\$ 913,440	\$ 13,230,380	48

Project/Charter name	Project description	Total Cost	Cumulative Total	Rank
Mansells Rd footpath (Chadwick Rd to Yatton St) and zebra crossing (near Chadwick Rd)	New 1.8m footpath on east side of Mansells Rd (380m length), and zebra crossing at Chadwick Rd	\$ 884,400	\$ 14,114,780	51
Grace Rd footpath (16th Ave to 18th Ave) and 16th Ave footpath (Grace Rd to end of cul-de-sac)	Install 1.8m footpath on Grace Rd (18th to 16th Ave), and along cul-de-sac to end of 16th Ave (total 500m), and a pedestrian refuge on Kaka St	\$ 1,127,280	\$ 15,242,060	51
Watling St zebra crossing	Install zebra crossing on Watling St, 30m north of Pohutukawa Way	\$ 170,000	\$ 15,412,060	53
Anzac Rd/21st Ave zebra crossing	Install zebra crossing on Anzac Rd at 21st Ave	\$ 170,000	\$ 15,582,060	53
13th Ave shared path (Edgecumbe Rd to Cameron Rd)	4m shared path (220m length) on north side of 13th Ave, two zebra crossings at Edgecumbe Rd, and two zebra crossings at Christopher St	\$ 1,531,200	\$ 17,113,260	55
20th Ave footpath (Cameron Rd to end of cul-de-sac)	Install 1.8m footpath on south side of 20th Ave, between Cameron Rd and end of cul-de-sac (distance 130m)	\$ 356,400	\$ 17,469,660	55
Large Standalone projects for consideration through the annual plan process				
Harbour Drive shared path and amenity improvements between Bureta Road and Maxwells Road	Provision of a shared path, chicanes, picnic tables and seating to support access and high use of the shared path	\$ 2,306,609	\$ 19,776,269	
Concord Ave and Oceanbeach Road Intersection (zebra crossing)	Install a mini roundabout and zebra crossing facilities on Concord Ave and one on Oceanbeach Road to address a high risk intersection	\$ 1,850,000	\$ 21,626,269	



Minor safety and accessibility pipeline



Agenda

- Purpose
- Community demand
- Risk assessment
- Prioritisation
- Current programme state

Transport Minor Safety & Accessibility Programme (Minor Safety Programme)

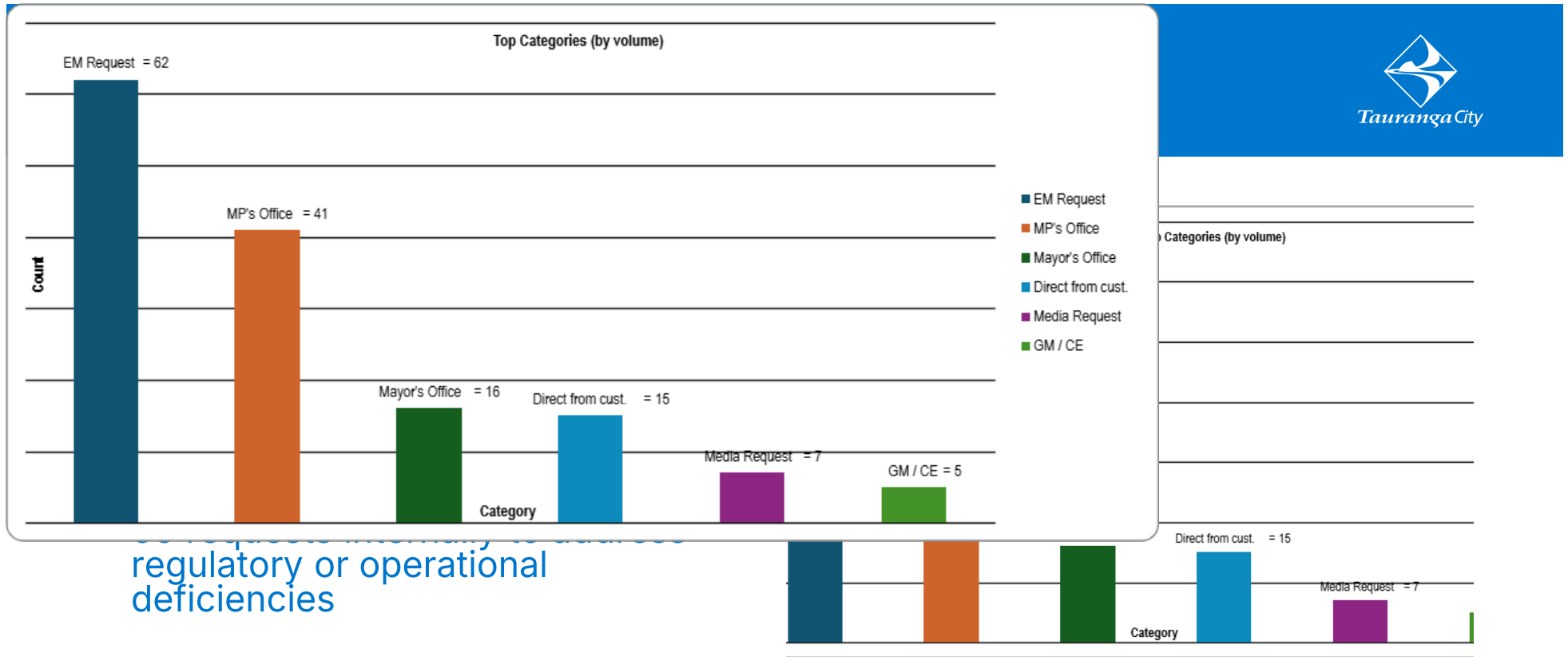
Purpose

To respond to community and safety risks on the transport network

Scope

- Delivers small, high-impact safety and accessibility improvements across the transport network
- Focuses on minor projects, typically under \$2M (most under \$1M)
- Targets specific, localised safety issues identified through data and community demand
- Includes crossings, refuge islands, footpaths, traffic calming, school safety measures, and signage, marking and minor parking changes





We consider

Community demand and risk

- Provide an evidenced and equitable approach to ensure fairness and consistency, transparency

Demand and accessibility issues

- The network changes as growth/intensification occurs with new challenges presented for how people move around
- The higher the demand the higher the score

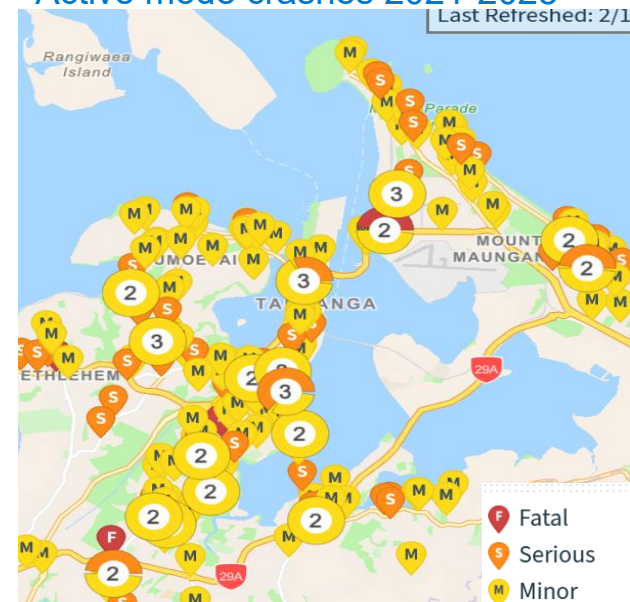
Micro Road Safety Network performance

- Utilise crash data to identify emerging trends and localised issues

Macro Road Safety network performance

- Collective Risk – the number of fatal and serious injury crashes per kilometre along a road segment.
- Personal Risk – the level of danger faced by each individual using a part of the network, measured by exposure.

Active mode crashes 2021-2025



Crash severity	Number	%	Social cost (\$m)
Fatal	5	1.84%	91.56
Serious	66	24.26%	105.20
Minor-injury	201	73.90%	50.35
Non-injury	0	0.00%	0.00
TOTAL	272	100.00%	247.12

Prioritisation

- Bulk funds are allocated through annual plan prioritisation processes
- Project prioritised annually using the matrices and associated weightings
- Annual review ensures responsiveness to emerging risks and community needs

Criteria	Weight	Description
Safety exposure	45%	Assessed using a risk-based approach that draws on historic crash data, near-miss reports, and an understanding of traffic volumes, speed against user demand.
Active Road User Demand	35%	Looks at how many people would benefit from the proposed changes, with a particular focus on those most at risk—such as students, older adults, and people who walk, cycle, or use mobility devices.
Community risk	10%	The likelihood that there will be high or significant community pushback based on delivery of projects of a similar nature. An example is loss of parking.
Ease of delivery	10%	How practical the proposed changes are to implement. This includes construction risks, timeframes, complexity, and the value the changes offer.

Annual prioritisation of projects delivered within fiscal envelope



Reactive work programme – delivers projects in response to service requests e.g signs, markings, mobility parking, or minor geometric adjustments. 92 projects delivered in FY25

Minor Safety and Accessibility Programme – community demand and network performance (Safety and Accessibility)

Rapidly Deployable – those projects which can be expedited using savins



Current programme state

- 52 minor safety and accessibility improvements projects in the pipeline ~\$17.5M
- 2 larger projects for consideration in LTP programme ~\$4.1M
 - Harbour Drive
 - Oceanbeach Road and Concorde Avenue intersection
- With current resource and capacity delivery of ~\$6M per year
- The upcoming annual plan and LTP will assume sole funded.
- A bid will however be submitted to NZTA through the NLTF process to determine if partner funding is available between FY28 and FY30.





Thank you

Supplementary slides



1.2 Annual Plan Workshop Stormwater bulk funds agenda item

File Number: A19828197

Author: Wally Potts, Head of City Waters

Authoriser: Reneke van Soest, General Manager: Operations & Infrastructure

Presenter(s): Reneke van Soest, Wally Potts

External presenter(s):

Workshop information

Purpose of workshop

1. What is the purpose of the workshop? Annual Plan Workshop

This information is to cover the Stormwater bulk funds agenda item

Attachments

1. **2026 February Integrated Stormwater Project - DxV LoS and SWRRF Overview Workshop 26.02.26 - A19828027** [↓](#) 
2. **2026 February Integrated Stormwater Project - DxV LoS and SWRRF Overview (002) - A19828161** [↓](#) 

BACKGROUND

Flooding of localised residential, commercial and industrial areas within parts of the City that were first developed more than 20 years ago has been an ongoing issue for many years. In older established areas of the City stormwater infrastructure provision varies and in many cases only a 2 year or 5 year ARI piped network exists. Generally in areas developed prior to the 1990's no overland flowpath, ponding network or piped network (catering to above the 5 year ARI) was provided.

In greenfield areas/urban growth areas (being developments post 1990) a stormwater network catering for a minimum 50 year Annual Return Interval (ARI) through overland flowpaths for larger storm events and a 10 year ARI piped network catering for more frequent events is provided for. This can be defined as the current greenfield level of service and is provided through the structure planning process and delivery of the new greenfield areas as required through the Operative Tauranga City Plan and Infrastructure Development Code.

Prior to 2015, Council had never set a level of service in regard to stormwater network provision in brownfields areas or formally considered the methods on which to provide an agreed LoS to its community within existing developed areas of the City that are subject to flooding resulting in damage as a result of intense rainfall events.

Significant Flooding Events

Tauranga has experienced a range of intense rainfall events, the most notable being in May 2005 and to a lesser extent in 2010, 2011 and April 2013 (assessed as between a 5 year and 20 year ARI event within localised catchments primarily affecting the Matua, Mount Maunganui and Papamoa areas). In June 2014 flooding also occurred in the Waimapu Catchment as a result of the Waimapu River over topping its banks and flooding Roxanne Place and parts of Glen Lyon Avenue.

The 2005 event is considered the most extreme event that Tauranga has experienced in recent memory. This storm event caused significant damage through landslips and flooding to properties across the City.

Over the period 2005 - 2015 approximately \$89M was spent by Council on flood mitigation works across the city in response to these flood events, focussing on those catchments most affected (Matua, Mount Maunganui, Pillans/Bureta and to a lesser extent Papamoa).

A New Flood Risk Approach (2015)

Through the 2014/2015 Annual Plan, Council adopted a strategic approach to addressing stormwater flooding issues across the City. This arose following the 2013 flood event and a desire to adopt a wider approach to how stormwater flooding was to be managed. The context was high stormwater activity debt levels and the need for wider integration to improve the current situation across Council departments (planning/engineering /building/emergency management and civil defence).

The Integrated Stormwater Programme consisted of the following two funds plus the elements in bullet points below:

Through the 2015/25 LTP Council adopted a Depth x Velocity (DxV, Safety to Persons) focussed Level of Service (LoS) as part of its approach to flood risk management. This approach provided for a reduction in risk to persons up to and including the 100-year Average Recurrence Interval (ARI), generally the "bulk fund".

The Reactive Reserve Fund relates to where the property in question has a recorded history of flooding of more than once in the last 10 years.

Other key components of the new approach included the following:

- Reactive response capacity, to aid flood affected landowners following flood events (*subsequently implemented through the Stormwater Reactive Reserve Fund (SWRRF) and associated Policy*);
- Regulation and policy amendment to ensure no increased risk occurs, and over time risk is reduced (*subsequently implemented through Plan Change 27 Flooding from Intense Rainfall Events*);
- Education to enable private individuals to make informed decisions; and,

- Residual risk and emergency management to ensure an appropriate service is provided to flood affected landowners following flood events.

To support Council's approach to flood risk management, funding of \$10.5M / annum for the first 3 years of the 2015-2025 LTP was confirmed. This comprised:

- \$7.1M in Y1, \$8.2M in Y2 and 3 for capital works;
- \$1.4M in Y1 and \$0.3M in Y2 and 3 to implement the programme of 2D-hydraulic modelling; and,
- \$2M for Y1 – 3 to provide for relief support to flood affected landowners following intense rainfall events that result in damage to buildings and property through the SWRRF.

Depth x Velocity (DxV, Safety to Persons) Level of Service

Priority for implementation of the 'safety to persons' focussed LoS was determined by the number of at-risk properties (habitable floors) within a sub-catchment, with sub-catchments having a higher number correspondingly having a higher priority. Properties within residential and rural-residential zoned zones are also afforded a higher priority as compared to those within non-residential / non-rural residential zones.

At-risk properties were those where a DxV threshold of $\geq 0.4\text{m}^2/\text{s}$ was exceeded within 8m of a building with a habitable floor for residential and rural-residential zoned private property, and $\geq 0.6\text{m}^2/\text{s}$ for non-residential and non-rural residential zoned private property.

Level of Service: Draft 'Decision-Making Intervention Framework'

Due to the large number of DxV affected properties and to assist in prioritisation, a 'decision-making intervention framework' was developed by staff (and subsequently endorsed by the then Environment Committee prior to adoption of the 2018/28 LTP in November 2017). The framework, depicted in **Attachment 1**, facilitated transparency in decision-making around the LoS and ultimately ensured consistency in approach across the city. It described the key factors which would be considered when undertaking 'assessments' to determine if physical intervention is warranted (such as the ability or not to egress safely from a dwelling), or alternatively where education or advice regarding the DxV risk may be more appropriate. The framework also depicted a potential linkage between DxV management approach and Civil Defence and Emergency Management (CDEM). **Note:** The advice pathway has not been implemented to date but remains a recommendation for outstanding Tranche 2 sites as set out below.

Level of Service Review

A review of the LoS occurred prior to the adoption of the 2018/28 LTP. Key findings of this review were that:

- The LoS operated well with the exception of the minor issues below for which amendments were recommended (and subsequently endorsed).
- The adoption of the SWRRF and Policy in 2015 is a key factor in the efficient operation of the LoS. The fund is complementary to the LoS, in that it provides a mechanism for Council to intervene in flood mitigation for those areas that are not subject to DxV risk. The policy provides a means for the public to apply for assistance for a wide range of interventions, and delegations within the policy enable staff to act quickly and decisively when applications to the fund are received and assessed as compliant.
- For those areas subject to extensive non-DxV/conventional flooding (i.e. outside the LoS) and which do not qualify for intervention under the SWRRF, staff would continue to seek direction from Council with regard to investigating and or implementing works, such as in the case of Mount North. Implementation of any non-LoS project will be considered against relative LoS project priorities and 'priority catchments'.
- Development and implementation of a regulatory framework would further support all components of the flood risk approach and LoS.

Through the LoS review the following amendments were endorsed by the Environment Committee in November 2017.

- **To allow for Non-Infrastructure Interventions:** The LoS previously referred to only infrastructure improvements for intervention. An amendment allowing non-infrastructure measures e.g. the provision of 'general' or 'site specific advisories' was included as a means to mitigate flood risk.
- **To allow for Non-Infrastructure Interventions Regardless of Flood History:** The LoS applied *'where there has been a recorded history of flooding of more than once in the last 10 years'*. An amendment was made to enable 'general' and 'site specific advisories' to be issued where there has been no recorded flood history but relying instead on modelled DxV flood risk.
- **Recorded History of Flooding:** An amendment to enable consideration of 'staff knowledge' in addition to/or in lieu of 'confirmed reports/documentated evidence' in recognition of gaps in documented/historical Council records. Prioritisation reflects a count of the number of affected buildings. If flooding reports could not be substantiated (and therefore counted) the area may be afforded a lower priority than is actually warranted.
- **Depth x Velocity Intervention Framework (Attachment 1):** The framework as described above was endorsed to guide intervention.

Stormwater Reactive Reserve Fund (SWRRF) and Policy

As part of the new approach to flood risk management Council established a \$2M p.a rates funded reserve which is managed via the [Stormwater Reactive Reserve Fund Policy](#). The policy guides the effective utilisation of the fund and provides guidelines for the Council in its administration and implementation. The policy was adopted following community consultation in early December 2015.

As set out in the Policy, the fund covers emergency response and recovery, clean-up costs, initiatives on private and public land to enable stormwater to be conveyed away from at risk areas, infrastructure delivery and potential property purchase (in certain circumstances).

The SWRRF is complementary to the LoS, in that it provides a mechanism for Council to intervene in flood mitigation for those areas that are not subject to DxV risk. This is the case in areas such as Mount Maunganui and Papamoa, where the topography is much flatter and the DxV thresholds (for LoS intervention) are not met.

In these areas, the policy provides a mechanism for the public to apply for assistance for a wide range of interventions, with the allocation and distribution of funds being prescribed by criteria within the policy. The CE or his/her delegate has responsibility for the implementation of the policy within their delegated financial authority, excluding decisions on property purchase which remain with the CE.

The policy and delegations enable staff to act quickly and decisively when applications to the fund are received and assessed as compliant.

An application and assessment process has been developed and continues to be implemented by staff as and when applications are received from the public (refer to [Stormwater Reactive Reserve Application Form](#)).

Modelling Programme to Inform Flood Risk Approach

Council’s programme of 2D-hydraulic modelling was used to identify which properties across the city were likely to be affected during an extreme (100-year ARI) rainfall, existing development (ED) scenario. These models were used to inform all aspects of the flood risk approach, but specifically the 'safety to persons' focussed LoS by identifying those properties that are subject to DxV risk. By the end of 2017 all areas of the city were modelled, flood hazard mailout to affected property owners completed and information placed on property files and LIMs.

LIM and Property File Disclosures

The following sets out the nature of and timing of flood risk disclosures to property owners.

1% AEP Flood Risk	Mailout to affected properties (citywide) disclosing flood hazard modelling. Placement on property files and inclusion in LIMs. Public availability on Councils map viewer Mapi	2014-2018
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Plan Change 27 – Flooding from Intense Rainfall Events 1% AEP, 2130 flood risk	Adopted for notification: LIM notices added to affected properties include reference to Plan Change 27. A map is included showing the type of flooding (i.e. floodplain, overland flowpath or flood prone area) on the property Public availability on Councils map viewer Mapi	13 October 2020
	Mailout advising affected landowners of Plan Change 27 with a link to the plan change webpage and information open days. The webpage includes a link to a web viewer. https://www.tauranga.govt.nz/council/council-documents/tauranga-city-plan/proposed-plan-changes/plan-change-27-flooding-from-intense-rainfall	9-13 November
	Notification of Plan Change 27	16 November 2020

Simpson Grierson Legal Opinion: Disclosure of DxV Flood Hazard in Property Files and LIMs

In July 2021, as funding for the DxV programme was reduced, legal advice was sought from Simpson Grierson as to whether:

Flood modelling information that the Council holds in relation to “DxV” flood risk should be disclosed on property files and in Land Information Memoranda (LIMs) for affected properties?

In this advice, Simpson Grierson noted that:

- *TCC holds flood modelling information in relation to “DxV” flood risk. The information is held by the Council as part of its approach to flood risk management, and may be used by the Council’s building control team (with caution, due to concerns about accuracy).*
- *The information can be applied at a property-specific level by generating visuals which impose a depth x velocity layer on aerial photographs.*
- *The Council uses DxV thresholds to identify buildings with “risk to persons” The Council then prioritises stormwater improvements in sub-catchments with a higher number of at-risk buildings, to increase levels of service in those sub-catchments. A key output of this process is the mapping and identification of a “Level of Service Intervention Area” across the City.*
- *The DxV modelling is distinct from the Council’s “2D” modelling (which models flood depth and extent for a 1% AEP event), and more recent modelling prepared in conjunction with Plan Change 27 (the flood maps prepared through that process sit outside the district plan, but are effectively used by default).*
- *The DxV modelling is derived from, and based upon, the Council’s 2D modelling of flood depth and extent (and the relevant parameters and assumptions).*
- *We consider that there is a good argument that identification of flood risk as mapped in conjunction with proposed Plan Change 27 (or other relevant modelling, for example the modelling for Mount North) is sufficient to satisfy the Council’s mandatory obligation under section 44A(2)(a) of the Local Government Official Information and Meetings Act 1987 (LGOIMA) to identify in LIMs any “special feature or characteristic” of the land concerned, including potential inundation.*
- *However, if no mention is made of the DxV modelling at all in LIMs, an adverse Court finding could not be entirely discounted. We therefore suggest inclusion in the LIM notation for properties identified as being subject to potential inundation, a statement referencing the availability of the DxV modelling, and how that modelling can be obtained (as opposed to including an additional map of DxV for each affected property).*
- *Alternatively, the Council may choose to include further DxV flood modelling information as a “relevant discretionary matter” under section 44A(3).*
- *There is no mandatory legal requirement for DxV modelling information to be placed on property files, although the Council may choose to do so.*

In response Council implemented the DxV LIM notation on affected properties as follows:

*Tauranga City Council model for Depth & Velocity of flood water. This gives us important information about where flood waters flow during a 1 in 100-year rainfall event. "Depth x Velocity 100yr event" * information with respect to this property is viewable on the Council's mapping website, Mapi <https://www.tauranga.govt.nz/exploring/maps/council-map-viewer-mapi>.*

CAPITAL WORKS PROGRAMME

Level of Service DxV: Capital Works Programme – 2015-2021

A range of 'physical intervention' LoS DxV projects or scoping studies were completed over the period 2015-2021 with expenditure around \$26M (Refer to **Attachment 2** for table, schematic and project summaries). Studies initially focussed on the priority catchments of Matua and Waimapu before extending to other DxV areas across the city. Scoping studies were carried out to determine what if any intervention was appropriate and prioritisation was carried out in accordance with the intervention framework discussed earlier. In 2021 the DxV programme budget reduced significantly. At this time, capital projects and scoping studies underway were completed, however some scoping studies (and any decision-making regarding the potential for upgrades) remain outstanding. Those outstanding are noted below and in the Attachment 2 table in red (where the upgrade option is selected) or orange (scoping study completed but no decision-making on upgrade).

Close Out of Depth x Velocity Programme (2021) – Remaining Work

As the DxV programme was drawing to a close in 2021, a 'close out' report <https://objective-prod.tauranga.govt.nz/documents/A12395403/details> was prepared to document the status of the programme and the site(s) still to be scoped or mitigation to be carried out. As noted within the report, sites were categorised as First or Second Tranche depending on how progressed they were at the time.

First Tranche Sites: Remaining first tranche sites, and current progress on these, are:

- Awaiti Place: *Currently, design and consenting for this project is largely completed in readiness for construction (shown as red in Attachment 2 table)*
- Esmeralda Street: *This project is now complete, no further action required*
- Resolution Road / James Cook Drive: *This project remains outstanding with mitigation likely to involve property purchase (red in Attachment 2 table)*

Remaining first tranche sites that have been scoped but no decision-making on upgrade (and are all denoted orange in Attachment 2 table) include:

- 2 locations on Welcome Bay Road
- 2 locations in Gate Pa: Neil Place and Church/Wellesley Street
- 3 locations within Brookfield: Darraghs Road, Heronvale Way and Barossa Way
- 3 locations within CBD: 18th Avenue, Sheath Street and Lower Elizabeth Street

Second Tranche: Second tranche sites are set out in the table below. Those for which scoping studies should commence are in Category A and B: Those in Category C would not be individually investigated further unless part of a cluster or if stormwater works are carried out in that area. For Category E sites, a site specific advisory should be considered.

Table 4: Second tranche clusters

	Catchment	Number of sites per category				
		A	B	C	D	E
Osprey Dr / Bateleur Cl / Hawk Pl / Farrow Way	Welcome Bay	-	8	-	3	8
Cheyne Rd / Fairfax Crs	Waimapu	1	-	19	-	6
Jonathon St / Otumoetai Road	Bethlehem	2	3	-	-	3
Lakes Boulevard	Kopurererua	-	-	11	-	4
Beaumaris Boulevard	Bethlehem	-	-	6	2	2
Glenorchy Pl / Merriman Pl	Waimapu	-	-	7	-	1
Peppertree Way / Jonathon St	Bethlehem	-	2	-	-	-
Maungatapu Rd	Kaitemako	-	2	-	-	-
Condor Dr / Veda Pl	Waimapu	-	-	2	3	1
Roger Guy Pl/ Waitaha Rd / Kaitemako Rd	Welcome Bay	-	1	-	-	3
Rosella Dr	Welcome Bay	-	1	-	-	2
Matapihi Rd	Mt Maunganui South	1	-	-	-	-
Moiri Pl	Kaitemako	-	1	-	-	1
Rovesdale Dr	Kaitemako	-	1	-	-	1
Parmwell Pl	Kaitemako	-	1	-	-	1
Castlewold Drive	Bethlehem	-	1	-	-	1
Caermarvon Rise	Bethlehem	-	1	-	-	-
Autumn Pl	Kaitemako	-	1	-	-	-
Pengary Ln	Kopurererua	-	-	2	-	1
Oropi Rd	Waimapu	-	-	1	-	-
	TOTAL	4	23	48	8	35

Non-Level of Service Projects or Projects Commenced Prior to Level of Service (- to 2021)

Some projects completed were initiated prior to the LoS being implemented in June 2015 or were implemented outside of the LoS in recognition of their significant flood risk history (non-DxV/conventional flood risk). Those projects implemented outside of the LoS were the subject of reports to Council seeking approval for staff to deviate from the LoS (refer to **Attachment 3** for table, schematic and project summaries). Approximately \$25.5M was expended in this category.

Of these projects, the most significant in cost and scale were within the Mount Industrial and latterly in the Mount North area.

In the Mount Industrial area, upgrades to address non-DxV flooding included a box culvert, pipeline and new outlet through the Port of Tauranga at Maui Street, and land purchase (landbank for potential new stormwater pump station) totalling \$15.5M. *Complete*

The Mount North area was identified by Elected Members, at the time the LoS was endorsed, as a priority for intervention given its high social, economic and recreational value, its probable future intensification and its vulnerability to the expected consequences of climate change (storm surge, sea level rise and rising groundwater). This priority was afforded in spite of the area not exhibiting DxV flooding. Over this period key interventions in Mount North area total just under \$9M and include:

- Purchase of a residential property to landbank as a potential future site for a large stormwater pumpstation (property is currently tenanted). A pump station is likely to be a part of a future potential flood response for the area (in conjunction with other yet to be identified infrastructure and non-infrastructure mitigation measures) *Landbank complete, no pumpstation construction planned currently;*
- Construction of a stormwater outlet by carrying out construction works on Port of Tauranga land extending to Nikau Crescent and Maunganui Road, sized and constructed to receive a pumped discharge *Complete;* and,
- Development of an adaptable long term strategy to address flooding and climate change effects using Dynamic Adaptive Pathways Planning (part-complete, on-hold due to funding constraints). This would consider the range of potential responses available to Council including both infrastructure (e.g. pumping, piped upgrades etc.) and non-infrastructure (e.g. policy, regulation, retreat etc.). *Project on hold due to operational funding constraints*

A further intervention in this category was the purchase of a severely flood affected property in Pengary Lane (\$1.1M). The dwelling was demolished and the land retained as part of a major overland flow path. *Complete*

Stormwater Reactive Reserve Fund Projects (2015 – Current, Ongoing)

A total of 17 applications have been received and assessed for intervention against the SWRRF Policy to date. Refer to **Attachment 4** for a summary of all, and below for those successful in receiving funding/intervention (totalling *approx \$6M*):

- July 2016: Sylvania Drive 1x in Matua (incl. 4 adjacent properties) - upgrade completed *\$<600K*
- 2017-8: Sherwood Street 1x and Oriana Crescent (x3) in Brookfield – 4x property purchase, minor upgrades then disposal of Oriana properties, demolition of dwelling and readying for disposal of Sherwood property *circa \$3.2M*
- January 2018: Hart Street (1x) in Mount Maunganui – upgrade *complete \$<100K*
- February 2019: Esmeralda Street (1x) in Welcome Bay – upgrade completed *\$<100K*
- September 2020: Ngatai Road (1x) in Pillans Bureta – *property purchase complete \$<900K* with potential for *further expenditure* in FY26/7 (*circa \$1.2M*) if property negotiations favourable and construction of overland flowpath proceeds
- March 2023: Chevron Drive (1x) in Pillans Bureta – property purchase *\$<900K* with *further investigations (and expenditure est. \$50K)* underway to determine ability for disposal
- March/April 2023: Levers Road (x3) and Mahoe Street (x1) in Matua – site specific measures on two *\$<200K currently underway*

ATTACHMENTS:

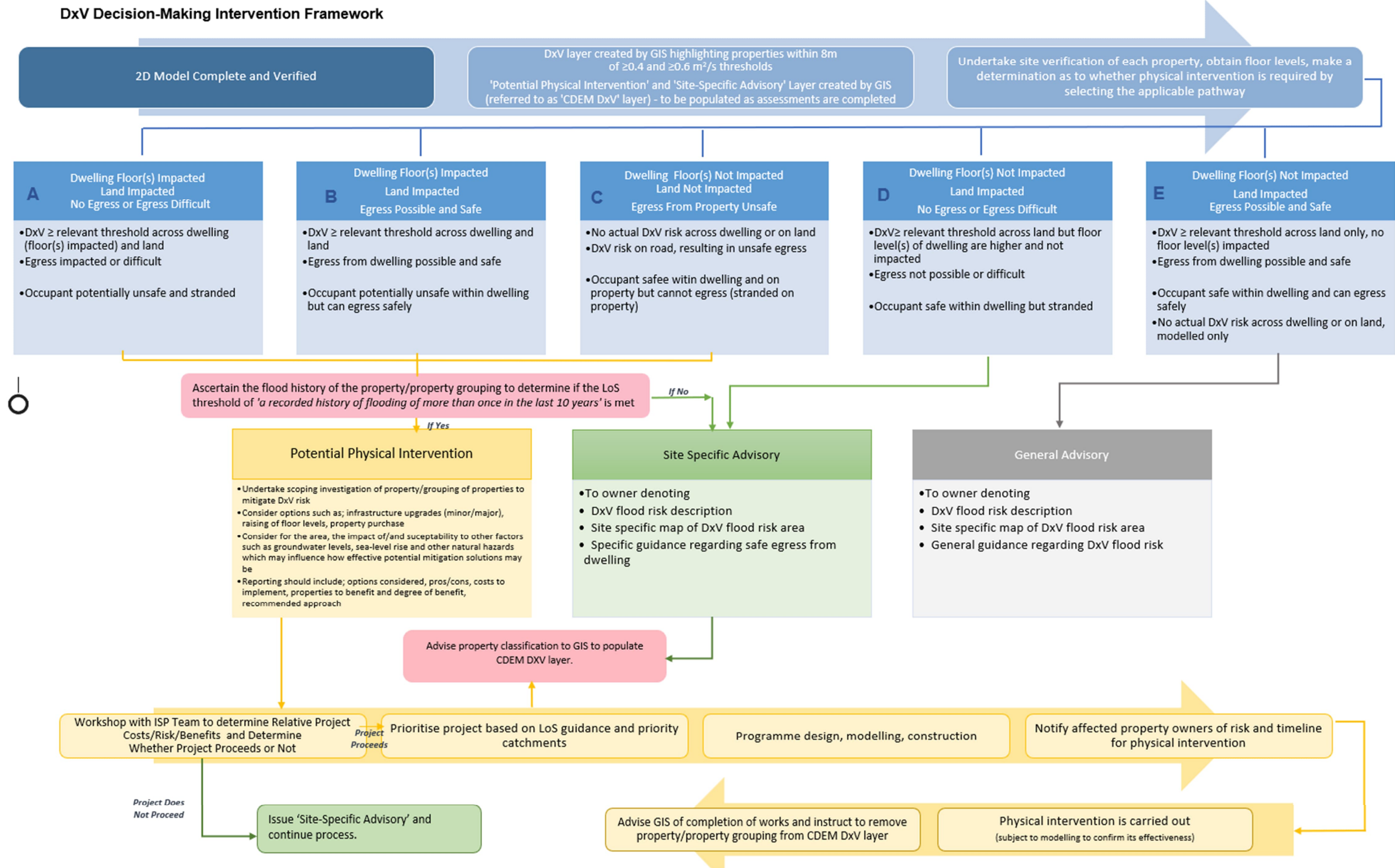
1: DxV Decision Making Framework

2: Level of Service DxV: Capital Works Programme – 2015-2021

3: Non-Level of Service Projects or Projects Commenced Prior to Level of Service (to 2021)

4: Stormwater Reactive Reserve Fund Application

ATTACHMENT 1:



ATTACHMENT 2: Level of Service DxV: Capital Works Programme – 2015-2021

Project	Type	Detail	Cost (as at 2020)	Further Work Required?
MATUA				
Smiths Rd/ Eaton Cres SW Reserve + Overland Flowpath	DxV Upgrade Complete	Acquired 6 properties to create an overland flow path to convey stormwater from Eaton Crescent to Matua Road and reduce flood risk on adjacent and downstream land. Sale and relocation of all dwellings <i>See project summary schematic below</i>	\$15.5M	No
Warrington St/Percival Ave SW Reserve	DxV Upgrade Complete	Acquired 9 properties, sale and relocation of dwellings and construction of a reserve to convey and attenuate stormwater reducing flood risk on adjacent and downstream properties <i>See project summary schematic below</i>		No
Meadowland Street Overland Flowpath	DxV Upgrade Complete	Acquired 5 properties and a portion of a 6th to mitigate DxV on these and adjacent properties. Remove 1 dwelling and relocate others to adjacent land to create a formed overland flow path <i>See project summary schematic below</i>		No
Smiths/Eaton Catchment Outlet (Landbank)	DxV Landbank	For potential future outlet. Landbank, property being tenanted.		Only if higher LoS required
WELCOME BAY				
Esmeralda Street Overland Flowpath	DxV Upgrade Complete	14 residential dwellings impacted by DxV at levels exceeding the intervention threshold for residential zoned land. Project comprised acquisition of 5 DxV affected properties and a small portion of a 6th. 3 dwellings removed, ground lowered to create conveyance/storage, flood retaining fencing constructed to protect remaining houses and excess land and dwellings sold to offset project costs. <i>See project summary schematic below</i>	\$4.71M	No
James Cook Drive/Resolution Road	DxV: Scoping	32 residential dwellings are impacted by DxV exceeding the intervention threshold for residential zoned land. All affected properties were surveyed to determine floor levels and these were then compared against modelled flood levels. This comparison indicates that 23 of the 32 dwellings and 8 attached garages have <u>flood levels exceeding floor levels</u> (to depths of up to 1.6 m). Upgrade likely to include property purchase. <i>See project summary schematic below</i>		Yes – upgrade
Welcome Bay Road Scoping Studies x 2	DxV: Scoping	Scoping study complete, still to confirm preferred option, potential upgrade to come		Potential upgrade
Meander Drive Upgrade	DxV Upgrade Complete	Minor DxV issue adjacent to Johnson Reserve. Shaping of the northern side of the overland flowpath resulted in flow extending into 52C Langstone Street. Works at this location involved minor recontouring to direct overland flow away from the property <i>See project summary schematic below</i>		No
KAITEMAKO				
Awaiti Place Stormwater Upgrade	DxV Scoping	105 properties and Awaiti Place, McFetridge Lane and Poike Road corridors impacted by DxV at levels exceeding the intervention threshold for residential zoned land. Significant flood depths/flows for extended durations (hours) on roads and at road crossings which would render the roads impassable to vehicles even in <10 yr events. Upgrade likely to include dam upgrade and property purchase. <i>See project summary schematic below</i>	\$0.72M	Yes - upgrade
Miriana Street Stormwater Upgrade	DxV Upgrade Complete	DxV in excess of the intervention threshold for residential zoned land is exceeded along the road corridor and affects five properties, predominantly 11, 13A and 13B which are located at the head of the cul-de-sac. <i>See project summary schematic below</i>		No
Mangatapu Road/SH29 and Anchorage Grove Scoping	DxV Scoping	Scoping study complete, still to confirm preferred option, potential upgrade to come		Potential upgrade
WAIMAPU				
Roxanne Place – Poike Road Rasing, bunding, pumpstation	DxV Upgrade Complete	Complete <i>See project summary schematic below</i>	\$1.7M	No
Maleme Street /Glen Lyon Scoping	DxV: Scoping	Scoping study complete – no viable upgrade option identified		No
KOPURERERUA				
Seventh Avenue Bund (Historic Village and Adjacent Land)	DxV Upgrade Complete	Construction of an earth bund to mitigate river influenced (and depth x velocity) flood risk of the Historic Village, a number of commercial properties and the St Johns Ambulance base located on the corner of Clarke Street and Seventeenth Avenue <i>See project summary schematic below</i>	\$1.9M	No
Sherwin Street	DxV Upgrade Complete	Addressed DxV at one property by securing the overland flowpath immediately adjacent. Works also rehabilitated the upstream pipework which was at risk of failure and which received all of catchment stormwater discharges <i>See project summary schematic below</i>		No
Neil Place Scoping	DxV: Scoping	Scoping study complete, still to confirm preferred option, potential upgrade to come		Potential upgrade
Cypress Street Scoping	DxV: Scoping	Scoping study complete – no viable upgrade option identified		No
OTHER CATCHMENTS: DxV SCOPING STUDIES				
Gate Pa: Church St/ Wellesley St Scoping	DxV: Scoping	Scoping study complete, still to confirm preferred option, potential upgrade to come	\$0.07M	Potential upgrade
Brookfield: Darraghs Road, Heronvale Way, Barrosa Way	DxV: Scoping	Scoping studies complete, still to confirm preferred options, potential upgrades to come	\$0.08M	Potential upgrade
Sherwood: Sherwood Street/Mitchell Park	DxV: Scoping	Scoping study complete, no viable option identified. Property purchase at 4 locations and minor site specific measures implemented through SWRRF. Refer Attachment 4.	\$0.05M	Implemented as SWRRF projects
Pillans Bureta: Ngatai Road	DxV: Scoping	1 property is impacted by DxV at levels exceeding the intervention threshold for residential zoned land together with extensive and frequent non-DxV flooding of this and neighbouring properties (estimate current level of protection is 1 in 1 year event). Given DxV risk and frequency and severity of flooding consideration is being given to intervention. Project now being progressed through SWRRF	\$0.11M	Implemented as SWRRF projects
CBD: 18 th Eighth Avenue, Sheath Street and Lower Elizabeth Street optioneering	DxV: Scoping	Scoping studies complete, still to confirm preferred options, potential upgrades to come	\$0.18M	Potential upgrade
Papamoa West: Omanu Drain, TEL Maranui High Flow, Papamoa CSC requirements	DxV: Scoping	Scoping study complete, no further works required	\$1.17M	No
Programme Total (including \$700K allowance for Project/Programme Management) and Property/Staff Time			\$26.3M	

