TCDC Workshop Stormwater Group

This is an open working paper on how best we, the stakeholders, would like to progress the 'engagement' process with council and other working groups to develop the stormwater improvements for the AMP.

I include this as a strategy and stage and gate process.

1. Engagement Process

This comes from our 2015 Stormwater Asset Management Plan.

Strategic and Corporate Goals

The stormwater activity contributes to Council's Outcomes as shown in Table 3.

Table 3 - Strategic and Corporate Outcome Goals

Council Outcome	The Stormwater Activity...
A Prosperous District	• Effective management of stormwater to prevent excessive surface water creating access difficulties. This helps to ensure uninterrupted operation of businesses and prevent damage to property. By providing a stormwater service, this activity supports growth of the local economy.
A Liveable District	• Provides infrastructure to help build safe and healthy communities by minimising risks because of the stormwater activity and retaining a safe living environment.
A Clean and Green District	• Stormwater management is critical in playing our part in keeping our environment safe and clean

Its relevance is more important than ever. The recent WRA survey picked stormwater as the leading concern by a country mile. It is time we acted together, as a team, to achieve and re-write the Stormwater AMP.

We have the opportunity right now. If we squander this the outcomes will never be achieved – or delayed to such an extent we would have lost the opportunity.

How this is achieved is through engagement. That is council engagement with the wishes and needs and desires of community. This is how I see engagement could be achieved with the TCDC Stormwater Stakeholders Group. This document is provided in word form so changes can be made.

	Item in engagement agenda	Achieved as at 12 February 2024	Required so we can move on with group
1	Who is invited into group	Yes	NA
2	Determine Objectives of group	Not yet. For example we need to comply with the 2015 Stormwater AMP – not yet discussed and it	Needs to be worked out. 10 year AMP needs to be upgraded.

		needs review this year anyway.	
3	Agree on roles of each person in group	Not done Unknown why so many council staff are involved. Engineers involved too soon – they should only be engaged when we have worked out schedules of hot spots and what is required engineering wise.	To be discussed.
4	List of projects to be scoped – these are the 'hot spots' of flooding	Opus listed around 26 These need checking – some may have been completed, others not. Any new hotspots since then?	To be collated
5	What information is already in our possession for each project	RFS – withheld Expert reports – withheld Fire Service call outs – withheld Previous work scopes for each project (to date) – withheld	To be analysed – even if done by staff in confidence but as a group this is essential information.
6	What information is lacking for each project	Unknown as information withheld even under LGOIMA	Council MUST volunteer this information or we send in the Ombudsman complaint.
7	On the ground inspection	Not done as a group Ian and Rob have done one	Urgent
8	Define each hot spot.	See if these are or can be grouped projects – these to be called 'neighbourly groups' to get cooperation later. Singular projects Business and Industry projects Sports and community group projects	
9	What is in the toolbox of solutions that could be applied to each hotspot?	More than one - options Does the toolbox need expanding.	After inspection can collate
10	What is required to be done to undertake the toolbox solution	Information deficiency – seek from public Engineering deficiency scope engagement for engineer.	After toolbox decisions. Building department changes to policies and decisions. Resource consent changes.

		Impact on other infrastructure Requires new infrastructure outside scope of this project. Requires other sections of council to do something out of this groups control	Council policy changes required.
11	What are the costings for each option	What share does council pay – not discussed. What share will the owner(s) contribute? Is this a rate add on like Energy loans? – not discussed	What are the costs? Appoint costing person or delegate staff to do this role as not really important dollar wise until overall options and priorities are set. PC okay at this stage.
12	What are the priority settings for each project	How many kpi does this satisfy? – unknown What safety/security issues - unknown Wellbeing issues Repetitive issues Legal consequence priority	Needs some agreed scales, kpi and priority settings
13	Test solutions with identified special groups – neighbourly	Prepare preliminary options and costs and distribute as a pre-advice notification. Maybe even have summary notes on progress of the group for public consumption.	Have email addresses. Webpage update maybe through community board meetings so minutes carry the record.
14	Master Plan outputs of the workshops:	Schedule of options and PC for community board, Copy for governance and staff.	Council will have proformas for this to be loaded.
15	Creation of planning and timing for annual plan release to public s83	Workshop hands over to governance and council End of group.	Consultation s83 starts.
16	Submissions that warrant further feedback	Members of the group may be asked to comment	Release response.

2. Toolbox of Solutions

NB: Governance must be the party to decide who should pay.

This is a first list of what could become standard solutions/improvements to assist meeting the vission statement in 2015 Stormwater AMP.

The following is the current vision for the direction of the Council.
"The Coromandel will be the most desirable area of New Zealand in which to live, work and visit"

What is key is as the climate change occurs, whether that be with more frequent and greater intensity storm events, we must take action to keep ahead of the situation. All coastal settlements will suffer to varying degrees. Whangamata is more fortunate than say Whitianga, Tairua and Waihi. These are in a sense our 'competitors' of the vision statement. Our early decisions and actions will determine how well we keep our community alive and vibrant.

	Solution type:	Benefit	Obstacles/challenges	Who should pay
1	Filling depressions and low-lying land	Raises ground above surface ponding	Neighbourly challenge as often diverts water (but does not necessarily increase ponding depth as overland flow path removes it anyway	Owner Could finance it with rate levy paying it back and lump payout if sell or develop. Reason is it removes the natural hazard so increases property value.
2	Lift dwelling floors below 150mm of road crown NB: overland flow paths is not an alternative option for Whangamata as infill houses block it off after CCC issues.	Raises dwelling floor above flood level (say 1:200 year) so prevents damage to buildings and possessions	Cost and height to boundary if double story.	Owner Could finance it with rate levy paying it back and lump payout if sell or develop. Reason is it removes the insurable risk so reduces premiums and increases property value.
3	Reform Street verges into containment flow paths. NB: over the years owners have made changes to verges (for driveways and fences) and councils have developed footpaths and roads without full consideration for verge management of water up to the road crowns	Manages council trespass water at the verge so removes potential claims.	Neighbourly as its often groups of homes where roads were cut and filled not lowered to lowest depression. Owners will want compensation on the basis of it was there when they purchased.	Council Improvements like to concrete owner can pay contribution.

	OR installed an overland flow path.		Verges may not always work in long lengths.	
4	Form overland flow path	Ability to find the space due to infill development. Cost of buying some properties. NB: can purchase, develop, then resell to recoup often at a profit because land will have tag (s73) removed. Where will they outfall. NB modelling should assist but generally a walkover will determine with greater certainty.	Owners – the Dinosaur issue. Works Act may not be available.	Council
5	Aquifer management	Drain off water table when it exceeds a certain height. Originally brought to workshop as pumping but could be done with gravity and forming depressions to capture water to pipe away. Could benefit community by protecting Reserves eg Golf Course and influencing surrounding properties	Needs discharge point. Limited soakage ability. Untested – DrainMOD does have statistical evidence in reverse.	Council
6	Further soakage devices along roads where significant surface water currently ponds because verges have become impervious. These are often long term ponding events.	Could be seen as an interim measure until the piping away principles are agreed to. Most of central Whangamata is so flat neither roads or pipes will work anyway. When the water table is full won't be of assistance. However between the major storms would be of significant value to owners and traffic and in the end tourism as Streets won't be flooded repeatedly – even in events less than 10%AEP. Eg last weeks 40mm of rain caused all the usual Street verge flooding – some went away quickly but other areas was still flooded 4 days after.	Cost	Council
7	Curb and channel with pipes.	Immediate removal of rain water to AEP design. NB: discussion not yet complete where pipe system has holes to recharge aquifer during normal seasonal rain events so rainwater is not being removed from the environment. When water table level is abnormally high the holes will drain the aquifer down as this is surplus water and will mean sand can absorb next normal rainfall.	Limited benefit unless pipes can drain to waterway without encumbrance (eg Williamson Pond level) Rising sea level with inundation. No pipe diameter will ever meet significant rain	Council

			events we are getting and will get more. Cost	
8	Pumps.	Forcibly removes water. May eventually be required if sea walls are erected to remove inundation behind sea walls and as water levels increase above ground levels	Pumps must be regularly run otherwise they don't work. Pumped water must drain away otherwise it floods at discharge points. Cost.	Council
10	Bylaw to prevent removal of sand and fill from Whangamata area.	The principle if possible would be to fill the ground as sea level rises. That would allow status quo – with infrastructure eventually getting buried. All building excavations to be 'on top' not cut out. All fill to go to marked areas within Whangamata eg Golf Course, Beach Road, Heatherington to Chartwell, Island View etc. Will reduce future costs of bringing fill in.	Organising land for dump and level sites. May need to purchase properties, fill and resell. Could almost be self funding.	Council Partnerships.
11	Create basins ie low lying depressions.	A network of lower lying basins can be the infiltration areas to drain off the water table. These can then be piped away, or pumped away.	Land availability – although Whangamata has lots of Reserves close to waterways.	Council

3 Stormwater kpi settings

We must have some formal way to bring forward what must be discussed and planned. If we do this we will have a way to measure the success of the actions we end up choosing. These are some of the kpi settings – more will be identified if we keep an open dialogue and mind.

	Likely source of information	What does this mean to stormwater AMP and CSDC?	Action required
1	2003 stormwater submissions entered onto property files s71	Becomes the hotspots that the AMP must resolve to appropriate level in Stormwater AMP objectives and mission statement.	AMP written in 2015 after 2003 Opus report so needs amending to take into account councils current knowledge.

2	RFS flooding since 2003 -	Means existing (at that time) AMP is defective/misses as defined under CSDC. Are properties regularly showing up under RFS and other advices	Grade significance. Ensure these have been dealt with in CSDC reviews – not just tucked away.
3	Fire Service Callouts	These are serious misses as Fire Brigade are volunteers and they are being called upon to potentially risk lives to save lives. Means AMP not sufficient.	Urgency to upgrade AMP and with it stormwater solutions.
4	Evidence of pipes protruding from properties	Means surface ponding is occurring (and possibly dwelling floors flooding or near flooding) and owner has decided to do something about it. Means council has failed the owner.	Become priority and it is foreseeable that during storms electricity will be out and petrol must be being stored on properties for petrol generators. This is a public safety issue
5	Photographs	Flood photos. Note council sends staff around to photograph rubbish bin content, Freedom campers, dogs and other things so could easily photograph heavy rainfall events. Residents will be sending photos with RFS.	Council receive our photos as we have been doing this since Hale. Review RFS photos These can provide evidence of significance of flooding ie strength of kpi setting
6	Water Table monitoring	Provides LVL to water table levels – assists plot of surface ponding so will work into LIDAR for areas and flow paths	Adds into strength of kpi and priority
7	Council must have a list of s73 BC properties – natural hazards	Where does this fit into social settings for AMP?	Governance decisions – is it the responsibility of council to provide solutions to s73.

4. Required format for engineers to comply

I have included this as a specific title because we must stop the knee jerk reaction of heading off to get more stormwater reports after every storm. The Auditor General raised a number of key elements in his overview of 3 councils (TCDC was one of the councils) in 2018. It is a fair comment that the formation of the working group could be seen as the first positive step since 2018. Let's work on this thoroughly.

Auditor-General's overview

Managing stormwater systems to reduce the risk of flooding

E ngā mana, e ngā reo, e ngā karangarangatanga maha o te motu, tēnā koutou.

Flooding is New Zealand's most frequent natural hazard. It can have significant social, environmental, and economic implications when it is not managed well.

I am interested in stormwater management because of its role in protecting New Zealanders and their homes from flooding. People need to know that their council is managing the risk of flooding appropriately. They should also be involved in decisions about how to reduce the risk of flooding, and by how much.

According to the Insurance Council of New Zealand, severe weather and floods resulted in about $260 million worth of claims in 2017/18. Climate change and urbanisation are expected to increase the risk of flooding.

We looked at how Dunedin City Council, Porirua City Council, and Thames-Coromandel District Council (the three councils) managed their stormwater systems to protect people and their property from the effects of flooding.

Main findings

To date, the three councils have had an incomplete understanding of the flood risk in their districts. Much of their assessment of flood risk has been based on information collected after a flood. This reactive approach risks councils focusing on reducing the effects of the most recent flood, rather than considering all possible flooding events and their effects. It also means that they cannot forecast accurately, and risk being poorly prepared for unanticipated events.

The three councils have gaps in their understanding of the current state of their stormwater systems. These gaps limit their ability to make well-informed and deliberate decisions about how to manage those systems. This means that the councils are unlikely to have had informed conversations with their communities about the potential risk of flooding and the cost of reducing that risk.

Councils are planning to continue spending less than depreciation on renewing stormwater assets, which might indicate that they are under-investing in maintaining those assets. If nothing changes, the under-investment will increase the risk of stormwater systems being unable to cope with rainfall that results in flooding.

The three councils were already aware of some of the issues we identified and are planning improvements. These councils are at varying stages of making improvements. However, all three have more to do.

My view

Councils need thorough and reliable information about their stormwater systems and flood risks so they can make deliberate choices about what level of service they need to provide to their community now and in the future.

Councils need to prioritise gathering the right information to help them understand their flood risk and the performance of their current stormwater system in reducing that risk. This would enable councils to identify the assets most important in protecting homes and property from the effects of flooding, and identify their investment priorities.

In my view, the historical under-investment in stormwater systems that my Office has previously identified creates a level of urgency. People need to be confident that the stormwater system will continue to protect their homes and property from flooding.

I am aware that many councils outsource the maintenance of their stormwater systems. All councils need to ensure that they effectively monitor and manage a contractor's performance so they can assess whether they are receiving what was contracted.

There is also an opportunity for all councils to work together in new ways to address shared challenges in managing their stormwater systems. For example, councils could collaborate to improve their capability in asset management or in responding to climate change.

It is not the job of consultants to satisfy the wishes of communities. Their job is to design and specify the solutions we the community wish. If something we want is unachievable it is there duty to fairly state in an independent way why not. We can ask for suggestions if our ideas are not achievable or could be done better and/or cheaper, but still achieve our goals. Accordingly we need to act like a

business, that must impress its customers (ratepayers) for repeat business. The attitude of ‘take it or leave it’ must remain outside the workshop.

	Title	Terms - The working group must have control and a say
1	Terms of reference for engagement	Each project singular – one off flood solutions Neighbourly common – eg 2 or more properties involved in common flooding of a surface depression/flood Community wide – eg overland flow paths that cross Streets and multiple properties
2	Extent of outputs required (project by project)	Draft drawings – sketch Draft specification – no liability Draft drawings – with dimension Release to community board Preliminary drawings and summary for testing solutions with identified special groups – neighbourly – feedback required Project drawings for release to community s83 Final approved drawings and specification – for quoting and
3	Priority of work	Refer to ‘Stage and Gate’ principles – where projects overlap and rely on scheduling. As directed by working group requirements.
4	Timing	As per working group
5	Costs	This will need consideration as during tendering costs MUST be kept confidential – but the working group is required to set some guidelines.
6	Attending workshops	As directed. NB: it is a conflict of interest for an engineer to be involved in workshop discussions that could lead to ‘more work’ that could be influenced by their suggestion.
7	Reports	Noted report writing is often wasted as the projects change and develop these reports become bogged down and superfluous. Preliminary report as draft with no disclaimer required. No final reports until instructed by Governance after they have elected its options that go into s83.