WRA initial list of issues and possible solutions

This is a working document arising from the WRA working group report into flooding.

WRA has committed to its members to lobby for solutions to the recent flooding. It is accepted that existing infrastructure was unable to cope with the rain intensities recently experienced. Members advise this is not the first time their properties have been flooded. It is therefore of interest to WRA that any proposed solutions need better resilience modelling. Changes are needed to the storm water assets.

WRA would like to be able to take back to its members progress towards resolutions on the following projects relating to storm water improvements. NB: WRA is still working through emails from members and has yet to visit all the affected properties or examine the various past projects that are the storm water assets. Ie WRA will provide more complete lists as we go.

	Project	WRA says	TCDC response
1	Drain Williamson pond	Part of the solution to lower water table. We are of the firm belief the water table will not naturally drop whilst the pond is full. NB: This will assist but is not the sole driver of elevated water tables.	
2	Lower water table	Objective: Requires several incremental steps including: a. Remove weir obstruction b. Drain the pond c. Pump the golf course d. Further pipes to remove surface water from getting to water table	
3	Regulatory matters with storm water 105667 certificate	2011 certificate is in question. First step is to demonstrate the 2011 certificate is above board. WRA require documentation to support its validity.	
4	Compliance matters in relation to FFL of new builds.	Can be implemented immediately without cost and could save major claims which would affect future CAPEX and maintenance funding. Insist compliance team comply with E1.	
5	Compliance matters for soak pits of new builds.	Soak pits can only be functional if water table is permanently lowered. In the meantime, policy change can be implemented immediately without cost and could save major claims which would affect future CAPEX and maintenance funding. Insist compliance team comply with E1.	
6	Compliance matters to s71 of the Building Act	Can be implemented immediately without cost and could save major claims which would affect future CAPEX and maintenance funding. Insist	

		compliance team comply with s71 BA2004.	
7	Monitor water tables and integrate response	WRA believe it is TCDC responsibility to monitor water table levels. This must be the essential kpi as to the effectiveness of the storm water management assets. When the water table rises soak pits fail.	
8	Create solutions into policy to deal with each level of adverse effect from storm water misfunction	WRA believe solutions are possible for each of the levels of adverse effect (TCDC existing policy) owners are currently being subject to. This should be titled 'flood solutions'. Minor issues like 'fill with sand' must be approved under schedule 1. Other more significant work needing building consents must be provided with clear unobstructed policy.	
9	No tags after CCC have issued. No tags to existing buildings prior to 1991BA	WRA claim 1991BA s36(1) and 2004BA s71 is the legislative intended time to issue tags. If tags are to be issued TCDC must assist with a solution and be prepared to provide monetary assistance. This policy is important as it is a conciliatory response.	
10	Flooding solutions Nil to minor adverse effects (see TCDC policy adverse effects)	WRA believe each street and each house may need a different solution. The important requirement is the nil to minor adverse affect, being the simplest, require immediate solutions. No delays. Owners could be able to these on their own initiative. These need to be adopted into the annual plan and completed in urgency.	
11	Development of old camping ground	WRA advance the position that the reserve contributions and levy for development be applied to Whangamata storm water assets in priority to other spending. This was mostly grassed areas and now likely to become 33 odd homes with upwards of 80% impermeable surfaces. The run off in high intensity rainfall of 137mm/hour would be catastrophic for existing storm water assets. These won't cope so neighbouring low property will become flooded. This is foreseeable.	
12	New development	WRA advance the same argument as for the camp ground. The more natural area that is converted to impervious surfaces means more surface water	

		must be dealt with. It means less absorption and delays to become soaked into water tables. This is foreseeable so needs storm water infrastructure before approvals are approved. This means the LTP needs adjusting to allow for increasing capacity and delays as costs escalate. These developers need policy clarity otherwise their projects may be stalled, or proceed without factoring in adverse effects.	
13	Project numbers for storm water projects	WRA cannot reconcile the fact the $6.36Million in the Whangamata storm water LTP has no project number. Does this mean there is no actual project. Is the figure merely a pro-rata calculation between all wards? Need to see how this figure was created?	
14	Removal and deconstruction of the Williamson pond system.	WRA's position is for reasons yet to be determined, residents of Whangamata have lost the use of the Moana anu anu estuary due to decisions approving the causeway bridge and the Marina. Whether this is an unforeseen unintended consequence or a risk that went unmanaged we don't intend allowing the pond to continue polluting our greatest asset the surf beach. In our preliminary view, the pond is not directly cited in RC 105667. We doubt it is legal or been correctly constructed. It is inappropriate and a breach to position a polluted sediment retention pond being a hazard cited in RMA adjacent to children and pests in close proximity to a playground. We do not see any valid reason the requirement to 'maintain' means raw polluted water is required to be pumped out onto the surf beach to be maintained. This pollutes the beach and ocean. There are no management systems in place to temporarily restrain polluted water overflowing into the Ocean when it rains.	
15	Removal and deconstruction of the Island View pond system.	WRA's position is that this asset must also be decommissioned. We see this as too co-incidental that the retreat of the sand dunes along this coast only occurs adjacent from this discharge location.	

		The same qualifications as to Williamson apply	
16	Flooding solutions to 'adverse effects – more than minor, and significant (see TCDC policy adverse effects)	WRA believe several streets and some homes are going to be difficult to prevent future flooding. Solutions for these areas may require new or replacement infrastructure. These need project numbers and be included in the LTP with completion dates no more than 3 years.	
17	All storm water projects to include full allowance for the 1.8M sea rise.	WRA understand Government has set a benchmark 1.8m sea level rise. WRA have no opinion this is a certainty, but do support the intended resilience this will incorporate in future planning and asset building – including homes, commercial and infrastructure. This must be the minimum benchmark all storm water assets must meet.	
18	Existing old storm water pipes to be replaced	WRA understand much of the 'older pipes' are in poor condition, have not been maintained, are undersize (if piping is to be the solution) and have no proper seals. The adverse effect of this is TOMO, inadequate immediate drain off and back flooding into the water table. These must have obsolete dates applied.	
19	Maintenance of soak pits on roads	WRA understand the road grates are actually sumps that include a 'sediment trap' and the rain water is then piped out to the side to soak pits installed under the verges. Many of the sumps have sludge and rubbish up to the pipe outlets which means sludge has likely already lined and reduced the efficiency of soaking into the water table. Some of the sumps full and bubbling up through the grass verges and low lying surrounding land. Many are located in verges beside the low lying ground. Many of the reported flood areas have this problem.	
20	Maintenance of discharge pipes and channels through Park Avenue Reserve	The grates on the McKellar/Apperly and Avalon regularly block which prevents discharge flow under these roads which then floods the houses along the flood plains behind the Park Avenue Reserve and opposite McKellar Place. It is likely the current 'driveby' maintenance is missing these as the grates are not	

		located on vehicle carriage ways. These need better grates and regular cleaning.	
21	Project to utilise the Park Avenue Reserve infrastructure to become the sediment, foam and filtering stations	WRA believe it is in the interests of all of Whangamata to chose a suitable site and plan for the long term how storm water is to be managed. This is an option to be considered. This site is large enough for pumping if that is the final decision. It is natural low ground. It already has some infrastructure.	
22	Maintenance of discharge pipes along the Coastline other than Williamson and Island View (Rangi)	WRA want all these decommissioned immediately. Whilst it is all very well to claim the Whangamata shoreline will be resilient in rising sea levels the storm water assets discharging into the Ocean are not. Some are sticking out unsupported into the air. Loose rocks are left stranded. This is unacceptable to have the coastline obliterated like this. These have all been done on a cost cutting, no notification basis without considering what the residents want. These structures are not as resilient as sand dunes. They require re-piling or more rocks after every storm. They are an eyesore. This is the prestige surf beach in NZ. Being obliterated with pipes, rocks and wash outs. Imagine if an owner stuck truck loads of rocks along the beach to protect their homes? TCDC would pounce on them and fine them hundreds of thousands and make them remove anything not natural. Same rules apply to RCDC. Where will these end up?	
23	Flooding includes sea encroachment.	Plans must be clear as to 2004BA s71 so architects do not approach TCDC for consents in areas known to be the first at risk. It is unacceptable purchasers are unaware of the repercussions of s71 when they purchase land with flood risk or future likely flood risk.	
24	Commercial areas of town affected.	The back road behind Super Liquor has had knee deep in water since December. Nothing has been done about this. To all intention purposes it looks like TCDC has already decided ‘retreat’ is the only option. This is unacceptable. TCDC still collects rates form all thee businesses and rate payers	

		who want to use the parking and service lane. It is inconceivable TCDC is not aware of this flooding. Who has the obligation to fix this?	
25	Rates remission for flooded properties	Legislation already exists for hardship remission. Rates are calculated based on property land value. Flooded land has no, or lesser value. None if it can't be built on. Property owners with flooding need rates remission or at the least a recalculation based on land at no value. This is a useful tool as it would empower TCDC to take action like addressing the storm water infrastructure so it could get the rates paid again. Imagine the rate loss if 120 owners got full remission for 10 years. That would be $40M lost opportunities.	
26	Compliance team to expand s71 to include 'blocking of secondary flow paths'	WRA review of many flooded properties demonstrates the importance of keeping secondary flow paths free to shift surface water away to a water way. Where these have been blocked many properties suffer flooding. Building consents (and CCC) must clearly show and disclose the requirement to not ever fill flood paths or if they do all the affected properties must be included in the approval.	
27	Parks and Reserves undertake a stock take of each asset to ensure secondary flow paths remain open.	WRA visit of storm water assets shows in many places' parks have been levelled in the sake of useability but the net effect is blockages of natural flood plains. One example is the golf course. It was developed with a swale almost around the entire perimeter. Its development cut through secondary flow paths without an alternative managed system.	
28	Redevelop the Williamson Golf course into a 'central managed hub' to lower water table and redistribute new piping infrastructure	WRA say whilst the golf club is closed it would be a useful time to design and install a permanent long term solution for the 1.8m plan. WRA consider an option would be to centrally pipe to Park Avenue Reserve and distribute pipes to Tui, Kiwi, the golf course, Achilles, Williamson, Bellona, Sylvia and Mary, then later to Ocean.	
29	Draining the water table at Williamson Golf Course with a	Many golf courses, parks and farmland have come from low value swamp land. WRA is sure research will find ways to	

	underground network of pipes and pumps	install a latticework of drain coils about 1-2m below the surface with a submerged pumping station that would lower the water table prior to winter rains. The pumps could also pump out the water table as cyclones dumped their loads in summer months. The pumps would NOT remove all the water to the 1-2m depth but remove sufficient water so the natural ground could absorb rain water as it rains. The water table is still needed to provide nutrients to trees and vegetation. The benefit of a 'controlled water table' is the water level could be lowered to a level that the soak pits would work again. This means the house and road soak pits could manage medium intensity rain fall without bubble up surface flooding. The pump capacity needs to meet the high intensity rainfall and allow that water entering the water table may take some time to reach a Nova flow pipe to then be pumped out. Ie some surface flooding would occur but it would be able to dissipate into the water table as the water table will be being pumped out.	
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