

Resident No.	Key Issues Raised	Rhelm Responses - 23 March 2023
1	<ul style="list-style-type: none"> - Sea level rise projections used as a base for this FRMS and FRMP are outdated and need to be adjusted to align with the latest IPCC scientific report. Gosford Council committed in March 2015 to review the Sea Level Rise Planning every five years with a planned review in the financial year 2020/2021 or within one year of a new IPCC report. Similarly, the Flood Planning Level to be adopted should be adjusted accordingly. - Local rainfall figures collected since 2005 should also be incorporated into the FRMS. - The Flood Planning Area (FPA) should include the industrial area at the bottom of Woy Woy Rd. it is one of the three critical road access /escape routes - The potential pollution from this site during a flood into the wider water way is also of concern which should be addressed in the FRMP - The FRMS and FRMP should both have a much greater focus on the protection of essential infrastructure and transport routes. the two hospitals mentioned in the report have no emergency departments and access to Gosford Hospital will be critical, and yet blocked by projected road flooding in the PMF 	<ul style="list-style-type: none"> - Sea level rise projections utilise the predictions from Council's sea level rise policy. While changes to this policy is outside of the scope of this FRMS and FRMP, future feasibility studies and design of floodplain works resulting from the FRMP (e.g. Landform Adaptation) can take into account any changes to Council's sea level rise policy or newly published IPCC reports. - The FRMS modelling utilises the latest rainfall updates from ARR2019 which takes into account rainfall data form 2005. - Woy Woy road at this location is out of the study area of this FRMS and FRMP, although it would be covered as part of the Brisbane Water FRMSP. Water quality considerations in Woy Woy Creek are out of the scope of this FRMS and FRMP (which has a focus on flooding). - In extreme events it is unlikely that the route to Gosford Hospital will be accessible. This has been discussed in the updated FRMS. Text has been added to Section 9.1.3 and 9.1.2 regarding the service capabilities of Woy Woy Public Hospital and Gosford Private Hospital. Text added to Section 9.1.2 regarding access and evacuation during extreme flood events.
2	<ul style="list-style-type: none"> - Please take care of the creek banks. They are overgrown with blackberry and lantana and other invasive weeds. Hard driveways from boundary to kerb? 	<ul style="list-style-type: none"> - no recommendations are made regarding changes to the current creek maintenance plans. Maintenance of these would fall under Council's current maintenance plan.
3	<ul style="list-style-type: none"> - This "study" would see minimum floor level in new structures raised by importing fill almost 1.3 meters above the 1 in 100 year flood level predicted by previous studies. - If adopted, this primitive solution will see a gradual worsening of flooding across the sandplain as existing homes adjacent to new developments are flooded by runoff water into their lower lying homes. It needs to be remembered that the developer on the sandplain always brings hard fill on site to raise their floor level and this practice is recommended by this flood risk study. This policy needs redress. In older settlements the new constructions where raised on piers allowing freeboard beneath houses to act as flood storage - Central Coast Council must rethink this awful pro development proposal and move immediately to stop any and all filling of properties on the floodplain. - Council must require developers and builders to raise all buildings on piers of which there are many styles to chose from. Importing of fill to raise floor levels should cease. - Removal of these two species in particular must cease in all cases. Big and small trees can be pruned by qualified arborists to make them safe and functioning - Asphalt and bitumen intrusion on Nature strips like granny flats in back yards are becoming the new norms. Driveways crossing council land must be kept to a minimum and owners that asphalt entire nature strips must be forced to remove their encroachments 	<ul style="list-style-type: none"> - under the landform adaptation plan, if adopted, this is correct; floor levels would be raised, in park through filling. Raising the landform is seen as one of the most feasible ways to maintain liveability of the low-lying areas that are predicted to be impacted by regular tidal inundation. The landform adaptation plan recommends that imported fill be of suitable quality to maintain current infiltration rates of the underlying soil. - raising floor levels for houses in the low-lying areas with piers only does not address the liveability of these areas and would create ponding in properties when the surrounding roadways are raised. Raising homes on piers in the majority on the peninsula is adequate where they are affected by catchment flooding only, and are not predicted to be impacted by tidal inundation under sea level rise conditions. - Control of native species of trees (or their removal) is not within the scope of this study, and their impact on groundwater has been considered in historic groundwater modelling undertaken in the FRMS. Mass tree planting in the floodplain was not considered to have a significant beneficial impact on flooding from large rainfall events (i.e. the 1% AEP event) and is likely increase flood levels is large events by impeding flood flows. - Control of impervious surfaces in natures strips is controlled by the current council DCP. Enforcement of this is not within the scope of this study. - Planning recommendation 7 (Section 4.2.2 of the FRMP) recommends that as part of any future development, infiltration and open spaces should be increased, and any rezoning consider more flood compatible development types.
4	<ul style="list-style-type: none"> - In view of this information appreciate if Council could advise what are the PMF and Flood Planning Levels applicable to the subject land and existing dwelling. Did the model rely upon LIDA or accurate levels from survey and how do these levels relate to the actual levels as identified in the survey. <p>PS: He sent CC Plans and Survey Plan</p>	<ul style="list-style-type: none"> Council can consider providing the levels requested once data handover has been completed and the study and plan adopted.

5	<p>- The No1 Recommendation would raise the FPL / Floor levels of newly constructed residential buildings an additional 54cm.</p> <p>- The Woy Woy Plan recommends a sea level rise component for FPL of 74CM, this contradicts the FPL adopted in other parts of the estuary only 6 months ago and will increase the floor levels I the adopted area by 54CM.</p> <p>- The states that FPL should be adopted as "1% AEP + 50cm freeboard + 74cm sea level rise allowance" The current allowance for SLR is 20cm.</p> <p>- Again, this sets aside the adopted planning period of 35 years, instead assuming a planning period of 78 years? Does Council want Woy Woy's elderly accessing their homes via extension ladder? Council have already created an utter mess with different seal level rise and FPL methodologies at different ends of the coast, are you now proposing each suburb have a different sea level rise projection despite being on the same body of water?</p>	<p>Section 10.2.3 of the FRMS has been updated as follows:</p> <p>The mapping shown in Figure 10.8 and Figure 10.11 show areas affected by sea level rise in the Brisbane Water downstream boundary conditions during modelled catchment flooding for three scenarios: 2050 (0.20m rise), 2070 (0.39m rise) and 2100 (0.79m rise). These extents represent areas where a flood planning level of the 1% AEP plus 500mm freeboard would not adequately consider sea level rise and would be inconsistent with the flood panning levels from the Brisbane Water Foreshore FRMSP (Cardno, 2015).</p> <p>The Brisbane Water Foreshore FRMSP (Cardno, 2015) defines flood planning levels as:</p> <ul style="list-style-type: none"> •The flood planning levels within the floodplain are recommended to be set at the 100 year ARI flood level + projection of sea level rise + 0.5m freeboard. •Sea level rise should be incorporated into the planning levels in accordance with Council's Resolution (March 2015 or any subsequent amendment). Sea level rise should be commensurate to the asset life and planning horizons of the development proposed. A minimum planning horizon of 35 years should apply to all developments. <p>Based on assessment of flood risk from both catchment flooding and Brisbane Water flooding, the most appropriate definition for flood planning levels within the Woy Woy FRMSP study area is as follows:</p> <ul style="list-style-type: none"> •The 1% AEP flood level plus 0.5m freeboard. •In the low-lying areas along the foreshore of the peninsula (within the Brisbane Water Foreshore Flood Planning Area), the adopted flood planning levels provided by the Brisbane Water Foreshore Floodplain Risk Management Plan (2015) will continue to apply. <p>However, it is important to note that Brisbane Water Foreshore FRMP (Cardno, 2015) flood planning area does not extend to where Kahibah Creek discharges into Brisbane Water, and the above definition of flood planning levels do not account for sea level rise in the Kahibah Creek area. An additional definition for flood planning levels in the Woy Woy FRMS should be considered:</p> <ul style="list-style-type: none"> •In the Kahibah Creek catchment, flood planning levels are recommended to be defined by the 1% AEP flood levels, utilising the appropriate sea level rise downstream boundary condition scenario, 0.5m freeboard. •Sea level rise downstream boundary condition scenario (2050, 2070, or 2100) is to be selected based on the planning horizon for the design life of the proposed development.
6	<p>- With consideration of the Floodplain risk in the Peninsula area, why does the DCP allow non permeable surfaces to dominate the building design?</p> <p>- We are seeing an increase in hard surfaces and a decrease in permeable surfaces. These Development Applications are not taking into consideration the need for permeable surfaces to reduce run –off but the DAs are still being approved with no consideration of future flood risk.</p> <p>- Consideration should be given for changes in land use zoning to enable significant increases in pervious surfaces and rainfall infiltration across the peninsula. This should also include revisions to the DCP requirements for development. This means that the flooding in these low-lying blocks nearby is likely to be worse if other blocks of land create increased run off from the increase in impervious surfaces.</p> <p>- Let's not forget the value that trees offer in collecting water in a pervious setting. The planting of trees such as Paperbarks, which have the ability to absorb water in a flood prone area, can be beneficial. We must retain these where they already exist</p>	<p>- Control of native species of trees (or their removal) is not within the scope of this study, and their impact on groundwater has been considered in historic groundwater modelling undertaken in the FRMS. Mass tree planting in the floodplain was not considered to have a significant beneficial impact on flooding from large rainfall events (i.e. the 1% AEP event) and is likely increase flood levels is large events by impeding flood flows.</p> <p>- Planning recommendation 7 (Section 4.2.2 of the FRMP) recommends that as part of any future development, infiltration and open spaces should be increased, and any rezoning consider more flood compatible development types.</p>
7	<p>- Drains are often clogged, I have not personally ever seen them being cleaned and sometimes garden refuge ends up in gutters often by blowers which then go to clog up the drains, so the water has no where to go and flooding is made worse.</p>	<p>- blockage of the stormwater system is assessed in the FRMS with results showing a potential increase in flood depths for some areas of the peninsula. This FRMS and FRMP does not propose to make significant changes to Council's current maintenance regime.</p>
8	<p>- I highly recommend to stop concreting bituminising the area, main reason is that when the concrete or bitumen goes down it stops water soaking into the sand, it has no where to go but all run off lto the lowest areas. This is one of the major reasons on the peninsula that is causing flooding to the area, in saying this the area is all ready over developed, no more high rise no more units should be built</p>	<p>- Planning recommendation 7 (Section 4.2.2 of the FRMP) recommends that as part of any future development, infiltration and open spaces should be increased, and any rezoning consider more flood compatible development types.</p>

9	<p>- In past years I have written to and spoken to Council Officers and Consultants in relation to tidal inundation at high tide in an area in front of several homes at this location I have suggested increasing the Sea Wall height at this location as a relatively simple measure to address this issue.</p> <p>- When this inundation occurs the tidal waters flow across the Pedestrian / Cycleway path, and the Reserve, completely blocking access along the path until the tide recedes. The salt water also kills off the grass on the Reserve that has been replaced by Council on several occasions over the years. This path is used extensively by numerous people on a daily basis. When the path is blocked off, those with prams, disability / mobility scooters, wheelchairs etc cannot pass and pedestrians and cyclists are forced to detour either out onto the road or the grass on the Reserve, when there is space available. For a public facility that is used extensively, this seems far from appropriate</p>	<p>- the landform adaptation plan (PM07) seeks to maintain the liveability in the long term of these low-lying areas of the peninsula taking into consideration sea level rise and allowing for adequate drainage of, or improvements to, catchment flooding.</p>
10	<p>- I would like to comment on the recommendations to alter the dam at Palmtree Grove detention basin to reduce its capacity. I live near the outlet for this dam and know that it works very well. When we have a week of rain the waterfall that falls into it is spectacular, and reducing its capacity would endanger excess of flooding down the road, into peoples houses, endanger traffic and possible undermining of the nature strip as it makes its way to the creek. I have attached a video of the waterfall so that you can see it in action. please open attachment 2.</p>	<p>- Alterations to the Palmtree Grove detention basin (FM08) is not recommended in the FRMP.</p>
11	<p>- Because the storm water on the Woy Woy Peninsula is mostly collected straight into sump type drains, dug in the grounds of the properties there. Plus the fact that council does not have any diagrams as to where storm water pipes are, that run into the storage drain, this terrain needs as much open space to help drain it.</p> <p>- the vacant blocks are flood savers. Does council have any studies as to the amount of storm water they absorb. Building on any open ground that is left is foolhardy, its time council started to really look to the into future and do things that will make places like the low lying peninsular stand a chance to survive</p>	<p>- Planning recommendation 7 (Section 4.2.2 of the FRMP) recommends that as part of any future development, infiltration and open spaces should be increased, and any rezoning consider more flood compatible development types.</p>
12	<p>- A request advising damage to reserve on Veron Road was made 12 months ago and it was only recently partially repaired and mowed as it had become a fire hazard</p> <p>- The drain and creek are now being overtaken by lantana, morning glory and many other weeds and are at risk of becoming blocked, which will cause flooding. Previous to amalgamation reserve was mowed monthly and creek was cleared when reeds or vegetation blocked them. This level of service should be maintained</p> <p>- If Council further reduces its level of drainage services, then this will mean that this creek and many other drains will become blocked and more properties will flood</p> <p>-</p> <p>The recommendations of this study should not create a bigger problem but help residents reduce the risks. As part of this flood study Council should be held responsible for maintaining its own infrastructure.</p>	<p>No recommendation are made in the FRMP which would increase flood risk for residents.</p> <p>Option PM06 has been recommended to allow Council to improve drainage infrastructure within the study area without restrictive costs.</p>

13	<p>- Where in the WWPFRRMS&S is the plan for planting groves of trees in low-lying areas to absorb excess water and push the water table down so it can absorb more moisture?</p> <p>- A case in point is the large stand of mature paperbarks between the Woolworths carpark and the rugby oval at Woy Woy. If threats from a supermarket giant to expand their carpark or they will leave when their lease is up, force Council's hand to give in or do the right thing and retain those trees so they can continue to soak up water and clean the air?</p> <p>- For instance, will DA3931 at 124 Broken Bay Rd, Ettalong Beach, a site of 821sqm, be permitted to build nine (9) units on it? On the published flood plain map, not only is this plan too dense with inadequate set backs, but right on the edge of future inundation?!</p>	<p>Low-lying areas (those near the foreshore) are subject to groundwater affects primarily from Brisbane Water and tree planting will not affect the groundwater levels.</p> <p>Tree planting in areas of significant flood velocities will results in increased flood levels to the surrounding area.</p> <p>Tree planting may be appropriate for some areas of low flood velocities (e.g. previous wetlands), but the impact to the groundwater table cannot be quantified with the current groundwater model.</p> <p>Commentary on existing DAs is not part of the scope of the FRMSP.</p>
14	<p>- The natural ecological and habitat values of our creeks and lagoons should be highlighted and utilised in councils plans for management. I strongly support the continuation of their management using bush regeneration methods. These methods and resources support flood mitigation and wider environmental goals. Resources allocated to these activities should be increased to counter the negative impacts of recent extensive developments both planned and illegal.</p> <p>- The latest IPCC report needs to be referred to , for example for sea level rise projections, by the FRMA and the FRMP in line with Gosford Councils resolution of March 2015. Critical decisions need to be informed by the most recent data. Time frames and cost/benefits of landform adaptation may be significantly different with updated projections.</p> <p>- The Flood Planning area should include the industrial area at the bottom of Woy Woy Road. It is one of the three critical road access/escape routes. This is not currently identified or discussed in the plan.</p> <p>- There is need for a policy to extend for the whole of the LGA, not only the Peninsula, to deal with the encroachment of illegal structures, particularly unauthorised bitumen/concrete surfaces on public land so that pervious surfaces are mandated and nature strips as well as driveways allow water and flood waters to permeate the ground surface and disperse as quickly as possible. Compliance resources need to be allocated in a timely manner.</p> <p>- Further planning of emergency management would need to cover access to the railway, Brisbane Water Drive(for actual Hospital Emergency access), and the Rip Bridge.....how does this planning tie in with the Risk Management Plans. given the PMF projections. I consider this to be a matter to be given high priority as part of the FRMP also.</p>	<p>Most comments are repeated from above.</p> <p>Re: emergency management planning. Commentary can be included on access to the railway, although it may be inoperable in an extreme rainfall event. Changes to the hospital locations will be completed in Section 9.1 of the FRMS.</p>
15	<p>- This report was extremely difficult to read and interpret. Generally it seemed very focussed on cutting expenditure associated with maintaining the creek and charging developers a levy to manage flooding. No mention made of stormwater upgrades - odd considering this is a council responsibility and still most of the streets on the peninsula are without stormwater drains, curbs, gutters or footpaths.</p>	<p>Increasing the feasibility and sustainability of stormwater construction is covered in recommended option PM06. Typical stormwater upgrades (i.e. those which need to convey the 1% AEP event are not cost effective and provide relatively little reduction in flood levels.</p>
16	<p>- Concerned about the water coming into her garage. She has records of correspondence with Council and member of the govt.</p>	<p>Not action needed in the FRMSP</p>
17	<p>- The biggest problem I have with flooding is the fact water can't move along the gutters because they are full of leaf litter & soil build up. Once upon a time council regularly cleaned gutters, now they don't. We have always cleaned the gutters out the front of our home, others don't & that stops the water running along & flowing freely& then causes it to flood back along drives etc. I'm too old to keep doing my gutters especially when other don't as it really is of no use the rubbish just washes down and gets caught in grass growing over the gutters etc.</p>	<p>- blockage of the stormwater system is assessed in the FRMS with results showing a potential increase in flood depths for some areas of the peninsula. This FRMS and FRMP does not propose to make significant changes to Council's current maintenance regime.</p>
18	<p>- "Please se attached submission" - there is no attachment</p>	<p>No attachment received.</p>

19	- Concerned that the report used as base for the Study is from March 2015. He considers it misleading and Outdated	- Sea level rise projections utilise the predictions from Council's sea level rise policy. While changes to this policy is outside of the scope of this FRMS and FRMP, future feasibility studies resulting from the FRMP (e.g. Landform Adaptation) can take into account any changes to Council's sea level rise policy or newly published IPCC reports.
20	- Concerned that Drains overflow near his house - The Gosford Council spent a lot of money to replace the pipes that run across James Brown Oval only to neglect the open drain.	Not in the scope of this FRMSP
21	It is essential that flood plain issues are factored into assessment of development applications. Reassurance to the community in this matter should be mandatory.	Current DCP and LEP guidelines consider this. The FRMS undertook a review of Council's flood related development controls and made recommendations for any required updates.
22	- While it is essential that the report contents be considered and ultimately adopted, there appears to be little or no mention of existing or future causeway / creek management. - Some 18 months ago I brought to Councils attention the overgrown, weed infested, partially blocked and waste affected condition of Ettalong Creek in the Cowper Road / Janet Ave area in Umina Beach. NOTHING has been done to clean or upgrade the natural water course so in the event of even a moderate rain event it backs up causing low lying flooding.	- blockage of the stormwater system is assessed in the FRMS with results showing a potential increase in flood depths for some areas of the peninsula. This FRMS and FRMP does not propose to make significant changes to Council's current maintenance regime. Low-lying flooding is acceptable as long as there is no risk to life and property. - Options FM06A and FM06B have also been included in the FRMS to review the existing maintenance program and potential increases in the program.
23	- Woy Woy was flooding back in the 40's and always will be. It is no different now as it was way back then. Woy Woy is flat, we are on the water. The money being wasted on this nonsense would be better spent on shoring up the beaches that are damaged by storms, mainly Ettalong, Umina and Wamberal. We will continue having high tides, we will continue having storms. Tides we can't control but the beaches we can. Just get out there and put the money to good use and stop fluffing about.	N/A
24	Detailed Document - saved in the folder	<ol style="list-style-type: none"> 1. Sea level rise projections utilise the predictions from Council's sea level rise policy. While changes to this policy is outside of the scope of this FRMS and FRMP, future feasibility studies resulting from the FRMP (e.g. Landform Adaptation) can take into account any changes to Council's sea level rise policy or newly published IPCC reports. 2. ARR2019 incorporates previous rainfall form 2005 in its IFD data. 3. Planning recommendation 7 (Section 4.2.2 of the FRMP) recommends that as part of any future development, infiltration and open spaces should be increased, and any rezoning consider more flood compatible development types. Further detail to be considered by Council. 4. Enforcement of controls are not part of this FRMSP. 5. Community Education is proposed in recommendation EM05. 6 and 7. This area is not within the scope of this FRSMP. Commentary can be made on evacuation through here. 8. Council currently has a maintenance budget for the creeks. 9. Can add that Council to consider a temporary hold on development in low-lying areas until the climate change adaptation plan is adopted. 10. Additional commentary on evacuation to emergency centre (i.e. Gosford hospital) to be included. Although raising of all transportation routes is likely to be unfeasible. 11. Train line to be considered in emergency management, but may be inoperable during an extreme event. 12. 3 of 4 Emergency Response Modifications are expected to be implemented within 5 years. Can adjust the MCA criteria to increase the priority of this, if Council wishes.

25	<p>- I has have noticed many storm water drains fully blocked. From the roadside, not at the outlet. If these were jetted and cleaned out frequently, this would help a lot with letting the water flow away quicker.</p> <p>Also, sometimes fixing a problem somewhere, creates a problem elsewhere. Please look at all the angles of flood management.</p>	<p>- blockage of the stormwater system is assessed in the FRMS with results showing a potential increase in flood depths for some areas of the peninsula. This FRMS and FRMP does not propose to make significant changes to Council's current maintenance regime. Low-lying flooding is acceptable as long as there is no risk to life and property.</p>
26	<p>- My concern being that the level of the waterway to which a drainage system discharges sets a control level that will reflect up the drainage. If flood assessments are conducted without consideration of high waterway levels coinciding the 1%AEP or MPP or the possibility of reduced capacity of the stormwater system due to siltation or obstruction. Then a significant underestimation of what may be the impact of extreme events may occur. This as of the design hydraulic grade of existing drainage systems being significantly impacted by high discharge levels/reduced capacity. Further past discussion with some practitioners associated with past flood studies seemed to indicate that they considered that "... drainage is not a flooding Issue " .</p> <p>I would be appreciated if you could refer me to the report section and page number that clearly incorporates the dependence of flood levels on waterway level and drainage system capacity /condition. in the assessment.</p> <p>Further if there is no current consideration of the above, I suggest that this be clearly stated in the document. Its omission may mislead readers.</p> <p>Alternatively clearly record in the Executive Summary that the interdependence of the drainage systems capacities, waterway levels and the impact of extreme events have been incorporated into the studies results.</p>	<p>FRMS assessed the impact of Brisbane Water levels (and sea level rise scenarios). Text can be added to the Executive Summary highlighting that BW levels affect the drainage system capacity.</p>
27	<p>3 SEPARATE DOCUMENTS - very detailed</p>	<p>Ettymalong Creek Landcare Submission:</p> <ol style="list-style-type: none"> 1. Sea level rise projections utilise the predictions from Council's sea level rise policy. While changes to this policy is outside of the scope of this FRMS and FRMP, future feasibility studies resulting from the FRMP (e.g. Landform Adaptation) can take into account any changes to Council's sea level rise policy or newly published IPCC reports. 2. ARR2019 takes into account recent rainfall in its IFD data analysis. 3. Planning recommendation 7 (Section 4.2.2 of the FRMP) recommends that as part of any future development, infiltration and open spaces should be increased, and any rezoning consider more flood compatible development types. 4. Enforcement of DCP controls are not within the scope of this FRMSP. 5. Repeat comment. 6. Repeat comment 7. Council already has budget for creek maintenance. 8. repeat comment. 9. Repeat comment. 10. Repeat comment. 11. Repeat comment. <p>Resident 27 submission:</p> <p>Consultation and Exhibition:</p> <ol style="list-style-type: none"> 1. Community drop in sessions and online engagement was undertaken at the outset of the project, plus public exhibition. 2. No change to outcome of the FRMSP here. Council may want to review its engagement policies in the future. 3. No change to outcome of the FRMSP here. Council may want to review its engagement policies in the future. <p>General:</p> <ol style="list-style-type: none"> 1. page errors to be fixed. 2. FRMP will list stakeholders. 3. page 25 of FRMS to be fixed 4. Management plans for creeks to be added. 5. High set houses are by far the majority in the study area. Creating a new flood damages curve for a few hundred houses in the study area will not significantly affect any economic outcomes. 6. FRMS creek naming conventions to be corrected.

27	Contd....' 3 SEPARATE DOCUMENTS - very detailed	<p>SLR predictions:</p> <ol style="list-style-type: none"> 1. Repeat comments. 0.98m SLR is roughly equivalent to SLR in Brisbane Water. Refer the BWFRMSP. For the purposes of this FRMS the SLR rise adopted is appropriate. 2. Sea level rise projections utilise the predictions from Council's sea level rise policy. While changes to this policy is outside of the scope of this FRMS and FRMP, future feasibility studies resulting from the FRMP (e.g. Landform Adaptation) can take into account any changes to Council's sea level rise policy or newly published IPCC reports. 3. Additional commentary can be made on the existing risk in Woy Woy CBD. The landform adaptation addressed this risk. 4. Damage to vehicles is typically not included in flood damages. This is in line with the updated floodplain development manual guidance on damages. 5. Repeat comment. <p>Planning Issues:</p> <ol style="list-style-type: none"> 1. Lismore and Hawksbury flooding are different flood mechanisms (i.e. mainstream riverine flooding) with deep and fast flowing waters. Woy Woy is subject to oceanic flooding in low-lying areas and widespread shallow flooding from catchment rainfall. During a PMF event (rainfall, not ocean storm), evacuation may be difficult with roadways cut off and many needing to shelter in place. However, the cost of raising main evacuation routes is prohibitive and will also result in adjacent properties being negatively affected by changes to flood behaviour. 2. Planning recommendation 7 in the FRMS and FRMP highlights the need for more infiltration. Some of this text can be incorporated into that section. 3. Enforcement of development controls is not in the scope of this FRMSP. 4. Repeat comment. 5. Repeat comment. 6. further discussion on access roads to be included. 7. FRMP to include more discussion on access roads. 8. Cowper Road can be included on the list. 9. Further discussion on flood risks around Blackwall mountain to be included in the FRMS. 10. Repeat comment. 11. Repeat comment. 12. Text to be amended to include any sewer pump stations affected by flooding. 13. Text can be added to the proposed development and planning controls. 14. Further planning controls for vulnerable populations are included in existing LEP clauses.
27	Contd....' 3 SEPARATE DOCUMENTS - very detailed	<p>Flood Modification issues:</p> <ol style="list-style-type: none"> 1. Council's current budget allocation allows for creek maintenance. 2. More info needed here. what is incorrect about it? 3 & 4. MCA and scoring to be rechecked. 5. Already corrected. 6. Can reassess the flood risk awareness ranking. 7. Can reassess the community support ranking. 8. Assessed against the current situation. 9. Can reassess this ranking. 10. Can reassess this ranking. <p>Emergency response:</p> <ol style="list-style-type: none"> 1. repeat comment 2. repeat comment 1. This recommendation is in the Brisbane Water FRMSP 2. Evacuation routes to be further assessed. 3. Cannot break down tasks into a year by year basis. 4. Text on hospital locations and their capabilities is to be amended with respect to emergency management. 5. It is assumed for catchment flooding that there is no significant warning time (as is the case for a night time rainfall event) Text to clarify this. 6. Buried asbestos is not considered a flood risk. 7. Review of evacuation centres is included in recommendation EM01.

28	<p>- Some low lying areas like Booker Bay and Blackwall may need to be sacrificed rather than have ratepayers [who bought more modest and more elevated homes] pay for works to save these relatively few waterfront homes.</p> <p>- Limited funds should be used for the greatest good for the greatest number. The many, less affluent ratepayers should not bail out the few wealthy, noisy, litigious property owners. If remedial or preventative works need to be carried out for the protection of these few properties then it should be funded by those owners, their insurers and/or the State government.</p> <p>- Council may be subject to compensation claims from at-risk property owners because the original owners, builders and developers who also had a hand in the decision to build at risk homes are usually no longer about. I.e. Council is the only target left standing for litigation</p> <p>- Council can mitigate the effects of global warming and resulting sea level rise by making it harder to knock down older existing homes which are perfectly liveable. These are usually replaced with new McMansions. The carbon footprint of this waste is considerable while the motivation to rebuild a perfectly liveable home is fashion or a crass display of wealth. In addition these have high roof to lawn ratios that reduces infiltration while increasing runoff. Of course there should be exceptions where the old house is unliveable/hazardous.</p> <p>- Better transport links are needed as the only two routes {Woy Woy Rd and Brisbane Water Drive} provide access to the area and are subject to flooding themselves.</p>	<p>Managed retreat is not an option the community would agree with.</p> <p>The greatest individual landform adaptation costs are paid for by those redeveloping low lying land.</p>
29	<p>- The area has become a high density residential area by allowing sub divisions, granny flats and once single occupancy land to be rebuilt into multiple dwelling housing - this has led to more water flowing straight into drains, rather than being absorbed into the ground. I have been saying that since I established Woy Woy Flood Action Group, but no one from the Council is mentioning that</p> <p>- The existing drainage system was unable to cope with the increase in water flowing into it during storms. Work has been done to clear out and replace broken drains and upgrade drainage systems, however flooding still does occur at this stage.</p> <p>- To stop the flooding worsening, the council needs to STOP approving granny flats and conversion of single dwelling land to multiple dwelling use, such as townhouses and apartments, as well as to continue to upgrade drainage. Perhaps a 1 way system being installed where drainage goes into the sea allowing water to enter the sea, but preventing sea water returning up the drainage systems during high tides.</p>	<p>- Planning recommendation 7 (Section 4.2.2 of the FRMP) recommends that as part of any future development, infiltration and open spaces should be increased, and any rezoning consider more flood compatible development types.</p>
30	<p>- Disagrees with the works, mentions that there are only a few areas that may need some attention but considers it a waste of money.</p>	<p>The FRMS assesses a range of potential options to manage flood risk. Part of this assessment is looking at the economic viability of the options; i.e. the cost of implementing the option against the flood risk benefits gained. Only those options identified as viable against the range of criteria are recommended in the FRMP for implementation.</p>