

June 2016 Floods

Submission to:
Government Flood Review Team



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Introduction

June 2016 will be remembered as a time of severe weather events which caused serious disruption to the Central Coast community's way of life but also as a time when its resilience was quietly demonstrated in its actions.

The month started with severe winds hitting the area, resulting in major vegetation damage and very lengthy power outages for many residents. By the fourth day of the month this had changed to heavy rainfall resulting in major flooding in both the Forth and Leven Rivers causing extensive property and unimaginable environmental damage. The highest ever flood levels were recorded in the Forth River and on the eastern side of the Central Coast municipal area.

Damage to Council/community owned infrastructure totalled more than \$5.7 million. Even now many unknowns exist with at least one large landslip covering between 2-3kms² remaining unstable, and extensive environmental damage to water courses and beaches threatening the environmental values of the Central Coast. Private property damage in the order of \$10 million has caused considerable concern with several major agricultural businesses still reeling from the major damage to their holdings and worried about the environmental damage that has seen stream regimes change.

The period was a time of concern for communities with many offering a helping hand and many instances of people who were unknown to affected residents pitching in and helping those who were less fortunate than themselves. It has also been a time of personal growth in at least one community within the Central Coast with everyone now connected by a shared purpose to ensure that their community is safe and that communications remain possible even in times of emergency.

The evidence of the fury of the floods remain and only now are we beginning to understand the full effects of the environmental damage that occurred.

The June 2016 Flood Experience in Central Coast

The preparations

History

The Central Coast municipal area lies between the Forth and Blythe Rivers and covers much of their catchments as well as almost all the Leven River catchment located between the other two rivers. Numerous smaller rivers and creeks create a network of waterways between the ranges that criss-cross the Central Coast area and these three rivers. Riverine flooding has been recorded since the creation of the original Ulverstone and Penguin municipalities who merged to form the Central Coast Council in 1993.

As the Central Coast communities are quite resilient they have their own ways of dealing with flooding and various mitigation systems are in place both on a small property-based scale and up to a large scale, i.e. the Forth levee system was constructed to protect the Harvest Moon installations and properties after flooding in January 2011 in the Forth River. Consequently, when flooding is predicated in the area the Council and residents prepare to deal with the expected levels, e.g. prepare for sandbagging properties and installations, move equipment and product etc.

As a result of previous flooding in the Forth River the Council has a Lower Forth Flood Response and Recovery Plan incorporating a Flood Evacuation Plan which has been updated after each major flood in the Forth River to ensure that the plan is relevant and accurate. Data used in modelling of the river and its floods is obtained by Council staff as well as using the information of Hydro Tasmania who have extensive dam and hydro power station assets on the Forth/Wilmot River system.

The Forth flood levees commence in the township and follow the river northwards towards the Bass Highway and Bass Strait. As part of the levee system a flood stop is erected, when necessary, across Leith Road within the township of Forth to maintain protection for what was thought to be a 1:100yr flood. This device is installed and maintained by the Council and can be erected within 15 minutes of becoming aware of flooding developing on the Forth River.

June 2016

Weather forecasts during the last days of May and the first days of June suggested that severe weather would be experienced in early June. Consequently, staff commenced normal preparations ensuring all emergency systems, including sandbagging equipment and the Forth flood stop, were in place and able to be accessed in the minimum times determined.

Initially strong winds and rain across the Central Coast region caused very severe damage to vegetation and considerable power outages which kept emergency response staff busy dealing with the many issues and reports/requests for assistance received.

Weather warnings on third June were heeded with all staff on standby for the weekend and the warnings being communicated to all. Advice of possible increases in rainfalls were received on fourth June and sandbagging preparations made with sand accessed and made available to the two main sandbagging sites at Turners Beach and Forth.

June 2016 Flood

Staff were in contact with, and working with, the SES, Police and other emergency services in preparation for the predicted flooding. Contact with TasNetworks had been made on behalf of residents over Friday and Saturday on road closures and downed powerlines but little response was forthcoming on actions being taken to restore power to residents in the southern half of the municipal area.

The response

Rainfalls on Saturday were higher than predicted resulting in major flooding on the Leven and Forth Rivers during Sunday and Monday. Manual checking of river heights in Forth commenced during Sunday as the flood levels being reported in warnings appeared to be less than what was being experienced. Sandbagging of properties commenced on Sunday in Forth and at the same time staff were also in Gunns Plains dealing with major flooding of the Leven River.

All Works Group team members were on duty and dealing with the numerous issues being experienced, e.g. closing roads, sandbagging at Turner Beach and Forth, removing vegetation from roads, cleaning out drains and undertaking any other works necessary to ensure the Central Coast community was safe and prepared for any eventuality. The Municipal Operations Centre at the Council Depot was operational and staff were also operating from the Council offices in Ulverstone.

Regular contact was maintained with the Regional Manager (NW) SES prior to and throughout the weather events with bulletins and SITREPS being issued on a regular basis as expected.

The Council's Community Services Department staff were dealing with communications between the Council and community, ensuring health and building damage issues were being addressed and the Council's Social Recovery Coordinator was on the ground ensuring that the Evacuation Centre at the Ulverstone Sports and Recreation Centre was ready should it be needed. The flood recovery phase worked in parallel with the emergency response phase with some crossover of staff due to the Council's limited staff resources.

Staff monitoring the Forth River indicated that the flood levels would be higher than was being predicted by Bureau of Meteorology (BOM) warnings and the flood stop was installed on Saturday earlier than originally planned. Sandbagging had been undertaken on Saturday but levels rose above sandbags more quickly than expected and entered homes and business on the western side of the town. The decision was made to notify all residents in the flood zone of the expected flood levels on Saturday and all but one family could be evacuated away from the flood waters.

The ferocity and quantity of flood waters were greater than previously experienced and have been estimated to have been equivalent to a 1:200yr flood but this is still to be confirmed as modelling of the flood is undertaken.

State Emergency Services volunteers and Council staff worked exceptionally well together on many actions, and exercises between the two organisations will continue. Communications between the two organisations were appropriate and this contrasts with TasNetworks where issues occurred with unanswered calls and unhelpful comments being received by Council staff when attempting to assist TasNetworks. At the date of writing this submission calls to

the TasNetworks call centre remain unanswered despite attempts to remedy this. Dates, times and call content can be provided if requested.

Tasmania Police and the Council maintained constant contact and assisted each other in providing services and responses to communities across the Central Coast area. This has continued beyond the flooding with monitoring of affected residents' situations.

Major flooding in the Leven River was experienced hours earlier than Forth township with little warning available but every effort made to ensure the safety of residents. Staff were chased from the Gunns Plains area by the flood waters and the upper reaches of the river were not able to be reached on Saturday and Sunday due to the flood levels and ferocity of flow. However, road closures were established before the peak flood levels were reached and no staff were isolated in their duties. Advice was received during the day of the loss of one bridge in the Gunns Plains area, major landslips blocking roads and roads being severely damaged by the river. Although the circumstances were dangerous, application of risk management principals by all staff ensured no issues with safety arose.

The Recovery

The Central Coast Council does not have a large number of staff to resource its response and recovery teams as individual teams, i.e. these teams include all three departments of the Council with staff being part of the emergency response as well as the recovery phase. Good coordination existed during the flooding with communication between the various teams ensuring that everyone was aware of when evacuations were taking place and contact was maintained and assistance provided to community members in high risk areas.

As previously indicated, the recovery and emergency response phases commenced simultaneously with recording of damage to infrastructure and private property occurring throughout the event and planning taking place on how to return the community to some form of normalcy as soon as the flood levels receded.

As the flood waters receded, the task of identifying what was needed by the various communities commenced and the key issues of access and communications were quickly addressed with temporary measures.

Regular contact was maintained with all affected communities of the Central Coast either by community wide meetings or individual contacts to ensure that the Council was fully aware of any issues that could or were arising. From these meetings and contacts, information was filtered up to the Regional Flood Recovery Committee to assist with the planning for the States recovery as well as being used in our recovery planning.

Road and bridge damage repairs were underway immediately and roads opened to isolated communities as soon as possible and damage estimates and preparations for returning the Central Coast to its pre-flood infrastructure condition commenced. The restoration works continue with the first of two bridges under construction, road repairs being undertaken by Council staff and road repair contracts soon to be finalised.

Monitoring of communities affected by the floods continues today with all assessments advised to relevant authorities and addressed as required.

Response to Terms of Reference

The effectiveness of the strategies, preparedness and plans related to managing flood risk in Tasmania that were in place prior to the June 2016 floods occurring; including existing and potential levee systems

Many reference documents and plans have over time been prepared to cover emergencies within the Central Coast municipal area in accordance with the *Emergency Management Act 2006* and the Tasmanian Emergency Management Plan.

The Central Coast, Devonport, Kentish and Latrobe Councils are recognised under the Act as a combined municipal area for emergency management purposes and have established the Mersey–Leven Combined Municipal Committee. The Mersey–Leven Municipal Emergency Management Plan (MLMEMP) was last reviewed in 2014 and is likely to be reviewed considering the learnings from the June 2016 Floods.

Each of the four Councils has a Municipal Coordinator, Deputy Municipal Coordinator and a Municipal Social Recovery Coordinator who each work with their counterparts in the other three Councils as well as with other Councils in the North–West Region. It was found during the floods that there is a need for additional resources in the social recovery area and certainly a Deputy Social Recovery Coordinator would assist greatly in future Council social recovery activities.

It is suggested that this flood event showed some areas within the MLMEMP need to be reviewed and this will no doubt be actioned by the Committee in the near future. That said, all four Councils cooperated well during the event and assisted with staffing of the Evacuation Centre that was set up in East Devonport for residents from Latrobe, Kentish, Devonport and Central Coast.

Although the Plan mentions the responsibilities of the various State Government authorities and departments and the four Councils during and after the severe weather events, it became obvious during and after the flood events that greater definition of roles is required and resourcing of particular State Government departments is needed to ensure that they provide an appropriate response during and after emergencies.

During the weather events of May/June, numerous contacts were made with the TasNetworks Emergency Centre (Call Centre) providing information on damaged powerlines and offering assistance from time to time. Some calls were on behalf of residents who were not able to contact the call centre, i.e. calls weren't answered or unsatisfactory responses appeared to have been given. Offers of assistance were made by senior Council staff and these were never taken up or responded to. In one particular instance in Ironcliffe Road, Penguin, a person with a medical condition was not able to access their medical supplies. A request for information on when the road might be opened was not responded to. Contact with the call centre by the Councils Municipal Coordinator did not result in any advice being received and no call back by the person in charge of the centre. The Council acknowledges that TasNetworks was dealing with many issues across the State at the time, however, it is suggested that the Corporation needs to review its emergency response capability including the call centre and what advice is provided to the general public.

June 2016 Flood

The Central Coast Council's Emergency Management Plans include the Lower Forth Flood Response and Recovery Plan and the Central Coast Municipal Operations Centre Plan/Manual. The latter document is regularly reviewed and/or updated to account for staff changes and changes of contacts. As a result of each review new operational matters and procedures are being added to ensure all possibilities are addressed including climate change effects as these become known.

Municipal Social Recovery documentation and processes which were produced by the North West Regional Social Recovery Group were of great assistance during the flood event. The North West Regional Flood Recovery Committee was also helpful in the later stages of the emergency and the Tasmanian Health North West Social Recovery Coordinator who is also a member of the North West Regional Flood Recovery Committee assisted during the event and kept Council staff well informed.

The June 2016 flood emergency highlighted the need for upgrading of the flood modelling of the Forth River and a revision of the Lower Forth Flood Response and Recovery Plan will result in due course. The Plan currently provides flood levels on properties along the Forth River within the Central Coast municipality for floods up to and including a 1:200 Annual Exceedance Probability. The accuracy of the 1:100 and 1:200 AEP flood modelling has been called into question by the actual flooding and Engineering Consultant, Entura, has been engaged to revise the modelling to take account of now known flood levels and the obvious stream flow characteristics. This will also result in new evacuation plans for residents along the Forth River in the vicinity of Forth and Turners Beach. This review of the modelling will also consider the existing levee system within and downstream of Forth and is likely to model any effects that additional levees downstream of Forth might have on the township.

Suggestions have been made that maybe an additional levee system is needed on the western side of the river in the Forth township to prevent the flooding that occurred through the centre of the town. At this time the Council has no capacity whatsoever to fund such a study but it would be prepared to work with Government Departments and corporations if this were to be considered.

There are no flood response plans for the Leven River despite considerable flooding being recorded over many years in the upper catchment and to a lesser extent through the administrative centre of the Central Coast Council, Ulverstone. Modelling of the entire river is needed and an early warning system needs to be put in place to warn of impending flood events. The cost of a flood study could be in the order of up to \$0.5million or even higher depending on the stream information required. The Council does not have the capacity to fund the modelling studies and it is respectfully suggested this should be the responsibility of the State Government with this data being used by a number of Government departments as well as the communities along the river.

Major damage occurred at the mouth of the Leven River during the flooding with extensive property damage (Leven Yacht Club launching ramps, lookout and associated retaining walls) and the river continuing to move ever so slightly eastwards and now endangering the Clubhouse building. Some of this community infrastructure is being temporarily repaired but no long-term decisions can be made unless and until a full study of the river and its capacity to relocate at the mouth of the river is undertaken.



Leven Yacht Club Infrastructure damage

As a result of the flooding the Council has revised its contact lists for those along the river and a phone tree has been set up in the Gunns Plains, Lowana and Loongana areas to provide a communications mantle of care for future flood and bushfire emergencies.

Summarising, the Council believes that:

- (a) Better definition of roles and responsibilities of State Government Departments are needed to avoid the current lack of clarity that exists with regards river management, beach management and forestry management;
- (b) The human resources of State Government Departments needs to be reviewed to ensure departments can fulfil their roles and responsibilities;
- (c) Modelling of the Leven River should be undertaken by the relevant Government Department and that the information gained should be used to prepare a Flood Response Plan for the river;
- (d) Assistance should be provided by State Government Departments to the reviewing of the Lower Forth Flood Response and Recovery Plan by way of funding and survey data sufficient to allow a full flood study for a 1:200 AEP flood event to be carried out;
- (e) The emergency response capacity of TasNetworks needs to be reviewed including its Customer Service actions and policies.

Community preparation, resilience and awareness, including awareness of insurance matters, relating to major flood events in Tasmania

The Central Coast community has proven over the last four months that it is resilient in emergency situations. It is suggested that this has resulted because of the tight knit communities across the area and the Council fostering this within communities.

The floods have shown though that there is not an appropriate awareness within the municipal area of Government services available during emergencies and that the Council is not the sole source of funding and advice for any eventuality. Certainly, the Central Coast Council takes a proactive role in this area with its residents and is able to provide considerable advice and assistance but this means that Council resources soon diminish unless support is received from other authorities. One particular feature of the floods was the capacity of the community to “buddy” with neighbours. Gunns Plains is an example where residents and the Council were constantly monitoring each other to ensure that health issues were immediately addressed and support provided for those who needed it. This community has a number of “champions” who assisted ably in keeping the community informed as well as other forms of communication operating.

It is suggested that considerably more resources need to be put into flood awareness education programs with colourful and attention creating documents for Tasmanians similar to those that are provided for bushfire awareness. Most climate change reports suggest that rainfall intensities will increase in Tasmania and this will mean that flooding will occur with increasing regularity and possibly with higher flood levels, this also suggests that more community education is needed within Tasmania on flooding and its effects.

One area in particular that is of major concern to Council was the regular occurrences of motorists driving around road closure barriers and then expecting when they got into trouble in flood waters, that Council staff and SES volunteers would put their own lives at risk to rescue them. Council staff are not trained in swift water rescues and we have no plans to undertake this as our resources are required in responding to the many calls for assistance that we receive during emergencies. It is acknowledged that SES and TFS have this responsibility and it is considered that this is appropriate. However, the question is raised as to the penalties for drivers driving around road closure barriers. It is strongly suggested that the traffic legislation covering this risky action be reviewed and severe penalties introduced for offenders with these penalties being tiered in accordance with the level of risk caused to emergency staff. The legislation should also ensure that the offence is easily dealt with by TasPolice so that there are no delays in taking action due to the amount of paperwork and investigation required.

The Council provides no comments on flood insurance and the difficulties that it heard of from adjoining councils that occurred during the flood emergency.

In summary, the Council suggests that:

- (a) Flood Awareness and education programmes with accompanying brochures and information should be conducted Statewide similar to the current Fire awareness program;
- (b) Existing traffic management legislation be reviewed to deal appropriately with persons who drive around road closure barriers and to improve the capacity of police to act easily against offenders.

June 2016 Flood

The causes of the floods which were active in Tasmania over the period 4-7 June 2016 including cloud-seeding, Statewide water storage management and debris management

The Council is aware that the weather system that caused the flooding across the State came in from the north east having caused extensive rainfall and flooding in NSW and Victoria before spreading over the State. It is not aware of the State water storage management arrangements and will not comment on same.

During community meetings, both in Gunns Plains and Forth during and after the floods, the issue of cloud seeding having taken place over the northern and central parts of the state on the 5 June was commented on by many present. Most farmers had obtained a copy of the flight track of the aircraft from the Hydro Tasmania website and all were of the opinion that this cloud seeding contributed to the unexpectedly high flood flows and levels. This was based on the fact that the wind patterns were reported as being from the north east and the flight track was assumed to then cause increased rainfall to occur over the Mersey and Cradle Valley's. The Council cannot comment on the validity of this but suggests that many of the affected farmers in this flood had been monitoring all weather sources more intently over the preceding months due to the extreme drought conditions affecting their farming pursuits.

One of the contributing factors to the infrastructure damage experienced during and after the flood was the immense volume of timber debris that was apparent in the high velocity river flows. To this day considerable amounts of timber debris litters the streams and beaches of the Central Coast causing angst for any who use the beaches for recreation and for the Council who is the subject of constant requests for the removal of the debris from both the Leven and Forth Rivers as well as beaches from Ulverstone to the municipal boundary with Devonport City Council.

Logging of many of the forestry coupes in the southern half of the municipal area commenced in 2016. Advice from the forestry companies is that logging of the majority of coupes will be completed within the next two to three years. The process of logging of the coupes results in a considerable amount of waste timber being deposited on the forest floor which is left to degrade over time and to assist flora and fauna in the area. During the flooding, much of the forest floor waste entered the stream and rivers of the area causing major log jams when combined with large trees being ripped from river banks by the ferocity of the stream flow. In some places debris accumulated to form dams in the flow with diversion of the stream caused and massive erosion of stream banks and beds.

One classic timber dam occurred against and around the pylons of the four Bass Highway and TasRail bridges over the Forth River. Many residents both in nearby Turners Beach and Forth believe that the considerable dam that formed exasperated the flood levels in Forth with photos available of the dams showing a difference of water levels between the upstream and downstream faces of the timber dam having a difference in elevation of between 600mm and 1000mm. Coincidentally this was the increase in flood level in Forth from previous floods. It is acknowledged that the Department of State Growth did attempt to remove the timber during the flooding but the Council has also become aware that TasRail did not agree to a joint effort and that this had a major effect on damming of the flood waters.

June 2016 Flood



Bass Highway Bridges - Log Dam

During the floods in the Leven River, two timber bridges suffered severe damage and in one case was totally removed from its location. The bridge at Taylors Flats at Loongana remains in place but has been damaged beyond repair. The timber debris load on the bridge was extreme with the timber measuring over 2m in height.



Timber waste on Taylors Flat bridge after much had been removed as flood waters subsided.

In view of this experience, the Council considers that a more appropriate way of disposal of the timber waste in the coupes needs to be explored and until that is finalised the current practise of leaving waste timber of the forest floor should be modified to at least a major holding area within the coupe where it is prevented from leaving the coupe and entering any nearby streams.

Controversy continues over the lack of approval to remove at least some of the timber debris on the beaches of the Central Coast. The Council acknowledges the environmental values of this debris but respectfully suggests that conditional approvals should have been granted to allow councils and respected community groups to remove substantially more of the debris from selected areas on particularly well used beaches. The Council is aware of serious injuries occurring to residents when they attempted to climb over the timber debris to access the beaches and it is suggested that even though this waste is on dry sand against the grassed dunes, little environmental damage would have resulted if specific removal techniques were to be used. The issue of public safety must from time to time be allowed to override environmental considerations when such major issues form natural disasters.

Major debris issues still exist at Turners Beach and Leith Beach and will not be solved by tidal movement. With the coming summer season, these areas are heavily used and now Fire Safety Officers within the Department of Primary Industries, Parks, Water and Environment have suggested that the area has an extreme fire risk as a result of the huge beach debris load adjoining the natural grassy sand dunes fronting the beach. In hindsight, it would have been better to allow substantial timber removal which would have lowered the fire risk considerably.



Turners Beach debris

In summary, the Council suggests that

- (a) The current practises of leaving logging waste in the logged coups be reviewed and modified; and
- (b) State policies relating to removal of timber from beaches and stream be reviewed such that responsible organisations can remove beach and stream debris in order to maintain a suitable level of public safety.

The use and efficacy of forecasting, community alerts, warnings and public information by authorities in responding to flood events

The Bureau of Meteorology is to be commended for their advances in technology which allows greater forecasting accuracy and the warnings and forecasts that were issued leading up to and Severe weather event commencing at the end of May 2016. The Council relies on such forecasts to be prepared for any weather event and with the Severe Weather Alerts and Flood Warnings that were issued early in the week and particularly on the 3 June, staff were able to fully prepare for the strong winds and flood rains that were experienced.

It was noted during the period that the estimates of rainfalls being provided were slightly lower than what was received and it is accepted that the science of weather forecasting has a level of accuracy which needs to be taken into account when considering these estimations. Discussions with the BOM have assisted this Councils understanding of the level of accuracy provided for in the public weather forecasts and Council is now able to factor this into its planning for all weather events.

At this time the Council has not considered the possible use of community alerts via mobile devices. However, it is known that this contributes to the overall knowledge of the community and so when possible discussions will take place as to how this can be used within the Central Coast.

TasAlerts was used by the Council and the Central Coast community during the floods. This is a valuable resource for the Tasmanian community and when used together with the Council's communications systems, the widest possible coverage of emergency events is achieved.

During the flooding in the Forth River it was noted that the BOM's predicted levels were being exceeded before the warnings were issued. This caused some consternation in planning and meant that a staff member had to be given the task of regularly reporting on flood levels in Forth to allow the Council to plan accurately its responses. After the event, investigations have revealed that the data provided to the BOM by Hydro Tasmania is provided two hourly and thus predicted flood levels could be up to two hours behind the actual levels being experienced. It is acknowledged that the Hydro data is used for a specific purpose by the corporation and the provision of the date to the BOM is a secondary purpose. In a flash flood situation, however, as is the norm throughout Tasmania, flood level recording needs to be in "real time" for the organisations responding to the emergency. Consequently, it is suggested that maybe the data needs to be available to the BOM in "real time" and if upgrading of the systems are needed to allow this then stakeholders such as the BOM and the Council could contribute to this.

A difficulty that is experienced by the Council and possible other councils around the State is that many of the sources of information used in responding to a flood emergency are not in one place or connected such that there is ease of access to the data required. Data for the Forth River, e.g. Time vs Flow rates (hydrographs), river heights etc. is contained on a number of websites including the BOM website, the Hydro Tasmania website and the DPIPWE website and it is not possible to place the data side by side on a computer screen for analysis without having costly specific software and screens which provide this function. During the flooding this caused considerable delays for staff attempting to monitor and assess what was happening. A secure website where all data for a specific stream is available would be ideal

and it is suggested that consideration should be given to one of the State Government Departments providing this for all State Government Departments, Local Government, essential services and Government corporations. This may mean that the Tasmanian Government's Common Operating IT Platform would need to be modified and maybe all stakeholders could contribute to this cost. The custodian could be the SES as it is something that they too would use in times of emergency and its provision is for the purpose of public safety.

As mentioned previously, the Leven River has no warning systems for floods. There is only one river flow gauge in place and this is at Bannons Bridge, Gunns Plains. Its data is provided on the DPIPWE website as a flow rate which is unsuitable to the Council for its planning. For the information to be useful in the Council's situational awareness and emergency planning it needs to provide "real time" river height data. Nearby residents continue to be caught by rapidly rising flood waters and this flood was no different, whereas if the data was provided in river height form the Council could issue flood warnings to nearby residents by way of telephone or by emergency warning on ABC Radio.

The Leven River rises in the Cradle Valley/Blacks Bluff/Mt Catley area and as there are no residents nor rainfall gauges in the area, no warning of impending flooding is available. Assumptions can be made from information provided for the Iris River but these can be quite inaccurate as has been experienced in past events. The Council is of the view that rainfall gauging sites need to be added in this area as well as in the Loongana area to the south of the Leven Canyon in order to provide the BOM, Hydro and the Council with suitable emergency warning data. Initial discussions have been held with the BOM on this matter and the Council has been encouraged to progress the matter with a National Disaster Resilience Program grant application. As this project would have use for at least three departments and organisations it is hoped that maybe all parties could contribute towards the project cost and ongoing operations.

In summary, the Council considers the following to be necessary and of a high priority:

- (a) data available to the BOM from the Lower Forth River depth recording needs to be in real time;
- (b) the Leven River to be provided with a flood warning system with two real time recording rain gauges to be installed in the Blacks Bluff and Loongana area above the Leven Canyon and the data output from the Bannons Bridge river gauge to be in river height rather than river flow rate; and
- (c) a secure and limited access website should be established linking all available data outputs from Government departments and corporations to allow all emergency response organisations to access up to real time data to allow them to plan and instigate response to emergency events.

The effectiveness of transition from response to recovery in the week following the June floods; including capacity and priorities for infrastructure repair, and immediate assistance payments

As indicated previously in this submission, the Response and Recovery phase operated in tandem initially until the flood waters receded. It is understood that the Government and its

departments perceived a quick transition took place but it is respectfully suggested that this is only in the eyes of those who were not on the ground responding to the events and assisting people across their municipality. It is respectfully suggested that the transition by Government Departments was not well managed with staff or consultants not on the ground as quickly as maybe they should have been in some instances.

The issue of stream, i.e. environmental damage, is an example where appropriate staff were needed to meet with and assist residents in their understanding of what they might be able to do with unwanted debris and erosion. Relevant staff were not initially on the ground and it is accepted that the enormity of the flood across the State meant that issues needed to be prioritised before being dealt with. It would have been far better to have an obvious presence on the ground and for experts to be brought in from other States as soon as possible. Many farmers in Gunns Plains needed advice the day after the floods as this was the appropriate time to be moving debris and to be preventing further stream damage by small control measures. Since the floods, there has been at least two further floods in the Gunns Plains area and further stream damage has resulted which should not have been allowed to happen and could have been and in one instance may have caused long-term issues for the farmers' landholding.

One issue that arose during the recovery phase was that of the provision of assistance grants to farmers and associated businesses. It is accepted that the criteria for such grants has been determined under COAG agreements and Commonwealth legislation, but it respectfully suggested that this needs to be reviewed as the assistance is not available soon enough and the approval process appears to be very slow.

Many farmers in the Gunns Plains area did not apply for assistance even though some have now been forced from their agricultural pursuits by the floods. This was because they did not trust the process due to their experiences after the 2011 floods, when many were severely affected and suffered considerable embarrassment with cashflow when funding was not granted, even though the damage was obvious. Monetary assistance is required as soon as the waters recede and not months afterwards. In the 2011 event, the Council is aware of farmers providing accounts for fencing and other materials and payment taking months, whereas the farmers who had a cashflow issue due to the floods, were hoping to have a quick turnaround in funding so that they could purchase further much needed materials for flocks, e.g. hay, feed etc. It is interesting that in most instance in the Gunns Plains, all farm damage, e.g. fencing, debris removal etc., was addressed before Government staff were on the ground in the area. As a result, the Council provided assistance over the first few days after the flooding and is unable to claim NDRRA assistance for this.

Recovery work has commenced across the Central Coast area with over \$1 million spent on urgent repairs and the first of the restoration works. Two NDRRA claims totalling over \$750,000 have been lodged with DPAC and the advice is that processing of these two claims has not been completed as yet. Contracts have been let for some of the restoration works and contract payments are becoming due which means that the Council continues to outlay a considerable sum of money and is covering the holding cost of this, which means the Council's cashflow and cash reserves are being negatively affected. It respectfully suggested that maybe renegotiation of the Commonwealth/State NDRRA funding agreement should be undertaken with a view to either expediting the payments to councils for their outlays or as occurred in the Queensland floods in 2011 and 2013 advance payments be made to councils based on projected cashflows for restoration works so that the covering costs do not affect councils' financial capacity to deliver its normal services.

In Summary, the Council submits that the State Government should:

- (a) Consider how it can have relevant staff in the field as soon as flood waters recede to assist and manage immediate issues and to offer advice on specific issues such as stream damage etc. It is accepted that this may also result in a review of staff resources to ensure that all situations can be accommodated;
- (b) Review its cash assistance grants system so that it can be accessed immediately after a disaster by legitimately affected farmers and residents;
- (c) Review and renegotiate the NDRRA where necessary, to expedite payment of claims to Councils or if this is not possible, arrange for advance payments to be made to Councils based on projected NDRRA expenditures so as not to further disadvantage Councils with holding costs for the restoration works.

Consideration of the detrimental environmental effects of the flooding upon the landscape, and what effective mitigation measures may be necessary to avoid similar events

Comment has already been made in this submission on the immense amount of timber debris still affecting streams and the beaches of the Central Coast municipal area and how it could be reduced by logging practices in logging coupes across the State. This is reiterated as is the need to appropriately deal with the issue of debris removal from the streams and beaches. As already noted, this flood event was far more severe than any preceding flood, and the event should be seen as such when arrangements for dealing with flood debris are determined. It is suggested that extenuating circumstances require out of the ordinary solutions to be adopted, and foremost should be matters of public safety and environmental damage. Government departments need to consider how special circumstances apply in this situation and not be afraid to adopt innovative solutions that meet both community expectations as well as environmental considerations.

As already outlined elsewhere in this submission, considerable stream bank damage resulted from the flooding with some areas of rivers and creeks being more than twice their normal width. Protection of these fragile stream banks is needed now and out of the ordinary solutions and approvals are required to allow for temporary structures to be placed in streams to protect banks against further damage being caused by the natural flow in the stream. It is respectfully suggested that consideration should be given to allowing temporary training walls in severely damaged areas to stabilise stream banks as well, and farmers should be allowed access to debris mounds in streams to be used for this purpose.

It is strongly suggested in this submission that a complete study of the Leven River is needed and modelling could be included in the study to ascertain where pressure points exist within the river which could be addressed by mitigation works so that future flood does not continue to damage the river and its environs.



Leven River – bank erosion

In summary, it is submitted that:

- (a) a study of the Leven River is needed as soon as possible to limit the continuing stream damage and to be able to pinpoint pressure points in stream banks,
- (b) relevant Government departments should allow innovative solutions to be used in resolving stream damage and debris build-up

Future Plans

This submission outlines many of the plans the Council has in preparing itself and its communities for future flood events. However, there are other matters that the Council will be dealing with over the next year or so.

These include:

- . Implementation of an Emergency Operations Centre IT system that will ensure the operations of the Centre are at maximum efficiency and all documentation is tracked and retained for future reference. It is hoped that this electronic system will also provide situation awareness of the emergency event.
- . A review of the Council's standard operating procedures with the possibility of the addition of other plans and/or the expansion of existing SOPs will be undertaken to ensure that the Council's response to emergencies is timely and effective. In conjunction with this it is hoped that in the future budgets will include an allowance for community education and awareness programs to be undertaken before the next flood/severe weather and fire seasons.
- . Consideration will be given to the Council's Social Recovery capacity and plans which may result in additional SOPs and Plans for other events as well.
- . The issue of timber debris on beaches and in rivers is a continuing concern. The next bushfire season is close and residents have commenced contacting the Council to express their concerns, particularly in the Turners Beach area.
 - The beach debris is also causing concern for Lifesaving Clubs in the Central Coast area who are concerned for beach and swimmer safety. The Ulverstone Surf Lifesaving Club is hosting National Nipper Championships early in 2017 and initial discussions have indicated that it may need to be cancelled unless existing timber debris on the beach in front of the Clubhouse can be removed and the beach made safe for all the events planned. Such a decision will have a major effect on Tasmania's reputation and the tourism potential from these types of events. The Council will continue to work with the Club and Crown Land Services to resolve any issues that could affect the hosting of the Nippers Championships.