

**INQUIRY INTO RESPONSE TO MAJOR FLOODING  
ACROSS NEW SOUTH WALES IN 2022**

**Organisation:** Lismore City Council

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# **LISMORE CITY COUNCIL**

## **SUBMISSION TO NSW INDEPENDENT FLOOD INQUIRY**

### **FLOOD EVENTS**

**FEBRUARY AND MARCH 2022**



# Table of Contents

1.0	Executive Summary.....	3
2.0	Introduction .....	4
3.0	Background .....	5
4.0	Preparation for Floods .....	6
4.1	Local Emergency Management Committee.....	6
4.2	Lismore City Council Preparedness Activities .....	6
4.3	SES Flood Watch and Flood Warning System .....	7
4.4	Emergency Services Premises Location .....	8
4.5	Flood Levee .....	9
4.6	Flood Mitigation Funding.....	10
4.7	Insurance.....	10
4.8	Land Use Planning and Flood Mitigation .....	11
4.9	Preparedness Recommendations .....	11
5.0	Response to Floods .....	13
5.1	Emergency Operations Centre.....	13
5.2	Evacuation and Community Support Centres Recognition .....	14
5.3	Australian Defence Force Role.....	15
5.4	Tasking in the EOC .....	15
5.5	Mental Health .....	16
5.6	Evacuation Orders and Safe to Return.....	16
5.7	Communications .....	17
5.8	Response Recommendations.....	17
6.0	Recovery.....	18
6.1	Waste Collection .....	18
6.2	Multiple Occupancy Community Infrastructure .....	20
6.3	Housing Crisis .....	21
6.4	Disaster Funding Claims Process.....	22
6.5	Recovery Recommendations .....	23
7.0	Summary of Council's Recommendations .....	24
	Appendix 1 – Property Floor Height Diagram.....	27
	Appendix 2 – Lismore City Council Flood Response 2022 .....	28

## **1.0 Executive Summary**

In February and March 2022 the NSW Northern Rivers region experienced a catastrophic flood event. In Lismore, this event consisted of a record flood where the Wilsons River reached a peak of 14.4m on 28 February 2022, some 2.3m (approx.) higher than the previous record of 12.11m and 2.0m higher than the predicted 1 in 100 year flood level of 12.38m. This was followed by a second flood where the river reached 11.4m on 30 March 2022.

Both flood events saw the city's levee, which protects the CBD and South Lismore to river levels of approximately 10.6m, breached, causing widespread flooding and devastation throughout our CBD, to the environment, in rural areas and to Council and private infrastructure.

Five lives were lost in this region across the two events and the mental toll on those that experienced these events cannot be underestimated.

The current estimated cost of damage from the flood for Lismore City Council (LCC) is \$350-400 million. The required repair work will take years to complete, and the human toll may never be fully understood or remedied.

This submission outlines a series of recommendations for improvements based on the experiences of Council staff and our community during the event and are summarised in section 7.0 of this document. LCC urges the Inquiry to consider these recommendations and adopt them in its recommendations to the Premier.

## **2.0 Introduction**

The NSW Government has commissioned an independent inquiry into the catastrophic flood events in the Northern Rivers in February and March 2022. The terms of reference for the inquiry can be found here:

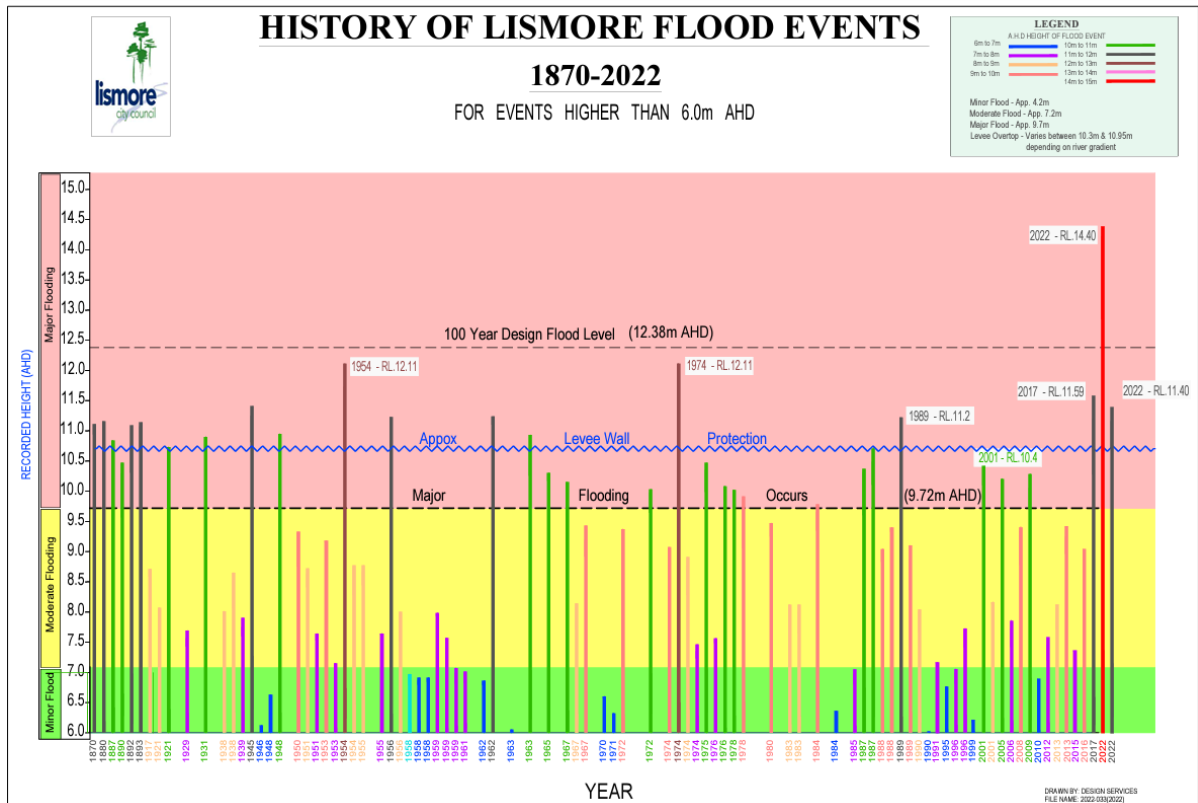
[https://www.nsw.gov.au/sites/default/files/2022-03/CS1111%20Terms%20of%20Reference\\_V4.pdf](https://www.nsw.gov.au/sites/default/files/2022-03/CS1111%20Terms%20of%20Reference_V4.pdf)

The flood event has been widely described as unprecedented and caused widespread and significant disruption to residential, business and recreational communities; damage to public and private infrastructure; social displacement and distress; and has undoubtedly created an ongoing mental health challenge that will take years to overcome.

This submission outlines LCC's views on how the event unfolded, how it was managed both in the response phase and moving into recovery and provides recommendations on lessons learned to be considered for inclusion in recommendations to the Premier as a result of the Inquiry.

### 3.0 Background

Lismore and more broadly the Northern Rivers experience regular flooding - it is a part of living in the region. As such communities in the region are in general very aware of the risks associated with riverine and flash flooding and are reasonably well prepared for such events. The image below shows the history of recorded floods in Lismore above a river level of approx. 6m.



However, the scale and severity of the event of 28 February 2022 was well beyond anything previously experienced in Lismore. To have a second major flood that also overtopped the levee less than a month later delivered a second blow to our community when it was only just coming to terms with the first event.

Appendix 2 contains a separate document that outlines the response that Council provided to these events and the impacts to the Lismore and surrounding communities. It also contains some reflections on the event and suggestions for consideration as to how our community can be supported to get back on its feet.

## **4.0 Preparation for Floods**

As a community that regularly experiences floods, there are a number of measures and processes in place to prepare our communities for floods.

### **4.1 Local Emergency Management Committee**

LCC is a member of the Northern Rivers Local Emergency Management Committee (LEMC). The Committee consists of the Kyogle, Lismore and Richmond Valley Councils. The three councils agreed to merge their previously separate committees in 2016/17 to provide greater coordination of resources, reduce triplication for local and state agency representatives on the separate committees and because any disaster in this region generally always effects all three council areas, albeit to varying extents and duration.

Richmond Valley Council provides administrative support to the combined committee for a modest fee to the other member Councils.

The LEMC has prepared an Emergency Management Plan (EMPLAN) and associated sub-plans and documents. The latest revision of the EMPLAN was adopted by the LEMC on 12 February 2021 and endorsed by the Regional Emergency Management Committee on 17 May 2021. A copy of the EMPLAN has been provided to staff assisting the Inquiry.

### **4.2 Lismore City Council Preparedness Activities**

LCC has a number of processes that assist with community preparedness as follows:

- Council publishes via its website a diagram of every property within the Lismore urban area that is affected by flood showing:
  - Floor level of the property,
  - Road level at centre of the road,
  - Level at the front boundary of the property,
  - Predicted level of a 1 in 100 year flood.

An example of this is included as Appendix 1.

- Council operates an SMS service that provides information/warnings etc. in the lead up to expected flood events and during flood events. The service is generally used to repeat warnings and other information published by the SES, or to advise of relevant operations of the Council levee system eg. levee gates being closed and will prevent access to riverside carparks – please move your vehicle. Anyone can subscribe to this service.
- Council was the architect of the MYROADINFO website where road closures are recorded and available for public access. This solution has since been adopted throughout NSW and in other states as a key for public facing information on road closures. It has also been linked to the Transport for NSW Live Traffic website.
- Council operates a disaster dashboard on its website whereby relevant information for various sources is collated in one place eg. SES websites and Facebook pages where warnings are issued, Bureau of Meteorology (BOM) websites, road closures information.

- Council is an active participant in the various community forums and information sessions run by the SES. Council's Local Emergency Management Officer (LEMO) attends these events when requested/required to participate, explains how the levee system works and generally provides information and answer questions.
- A separate section is provided on the Lismore Flood Levee system – see below.
- LCC owns and maintains a series of flood gauges and rain gauges throughout the catchment. The data generated by these devices is used by the BOM and SES in flood analysis and predictions. It is suggested these devices should be owned and maintained by the relevant state or federal agency.
- Council actively pursues funding to improve the network of stream and rain gauges within the catchment and provide other warning systems to the public. Ironically, Council made application in late 2021 for a series of additional warning measures through the 2021-22 Floodplain Management Program, only to be advised by letter dated 25 February 2022 that the application was unsuccessful and that:

*“The State Flood Mitigation Assessment Panel were of the view that this work is premature as Council need to complete the revision of the floodplain risk management study and plan.”*

- Whilst perhaps understandable, this response demonstrates a lack of flexibility in the system and lack of recognition of the importance of warning systems in the catchment. Regardless of whether and when a new floodplain management plan (FMP) is prepared, adequate and functioning flood warning measures will always be part of the approach taken by response agencies. Receiving funds from programs designed to improve flood preparedness should not be contingent on having a review of your FMP. Indeed the FMP is primarily focussed on solutions that mitigate and/or manage floodwater, not warning systems or processes used by response agencies.

There is always more that can be done and the biggest challenge is getting the general community to focus on what might happen and to be ready for it rather than what has previously happened in floods. The reference point for most people is the last flood they experienced or the worst flood they have experienced. People tend to plan around this scenario. We need to change that thought process and have people more focussed on what is coming or might be coming and being ready for any possibility.

#### **4.3 SES Flood Watch and Flood Warning System**

The SES messaging around floods is based on a system of first issuing Flood Watch messages when there is a risk of flooding occurring and then Flood Warnings once rivers start to rise.

There have been significant changes and improvements to this system since the 2017 floods and the SES are to be commended for the changes made as a result of the review from that event. However, there are considered to be further improvements that can be made as a result of lessons learnt in these latest events. Weather is unpredictable and messaging needs to be more focussed on what could happen looking forward and how people need to prepare for that.

The current messaging system contains detailed information based on predictions from the BOM and includes how much rain has fallen, how high the river is because of that, but then only limited general information about what might happen looking forward. There seems to be



a reluctance from the SES and BOM to move into this space because it is understandably highly variable and could be very wrong.

However, the lack of specific information about what might be possibly coming contributes to the general approach of many that their reference point is the last flood or the biggest flood they have experienced.

Further, the speed of the escalation of this event was such that by the time messaging and warnings came out at the nominated times, the situation had changed and that information was already redundant.

It is a fact of life that weather is unpredictable and this needs to be acknowledged and better planning be put in place on this basis. Messaging that is built around a range of possible scenarios would provide the community with enough information to assist them make informed and logical decisions to protect their own lives, possessions and property. It would also perhaps relieve the BOM and SES of the angst that goes with providing a single prediction that could well prove wrong.

Changes to messaging around bushfires in the last five years have been very successful in changing the way people think about their bushfire survival plan. Bushfires are similarly unpredictable and it seems the general community has been able to recognise the importance of planning to not get caught in a fire. We need a similar approach to floods.

An example of the structure of such messaging could include:

- What has happened?
  - how much rain has already fallen?
  - what is the current river height?
  - what is the predicted river height?
- What could happen into the immediate future?
  - is more rain predicted?
  - provide 2 – 3 scenarios over the next 6 – 12 hours based on predicted rainfall,
  - If we get (scenario 1) rainfall, a river height of (scenario 1) is predicted which means .....,
  - If we get (scenario 2) rainfall, a river height of (scenario 2) is predicted which means..... etc.
  - Scenarios are based on BOM advice of likely/predicted rainfall plus possibly a “worst case” scenario.

In order to provide messaging of this nature, further development of existing flood/catchment models would be required.

#### **4.4 Emergency Services Premises Location**

Emergency response agencies in Lismore all have premises located in the flood zone – Fire & Rescue NSW (FRNSW), Police, Ambulance and SES. All of these agencies were forced to evacuate their premises as a result of these events and in the case of FRNSW, Ambulance and Police will be operating from temporary premises for a long time until repairs are undertaken.

FRNSW and Ambulance premises were also flooded in the 2017 flood in Lismore and those agencies were unable to use their premises for a long time after that event.

These services need to be relocated out of the flood zone. Having to manage an evacuation from their own premises and coordinate the arrangements associated with securing and establishing temporary premises takes frontline workers away from response. Having premises located out of the flood zone will ensure they can serve their communities in the best possible way during disaster events.

#### **4.5 Flood Levee**

Parts of South Lismore and the CBD are protected by a levee system that includes earth levees, concrete levees, flood flaps, flood gates and flood pumps.

The levee system is owned by Rous County Council as the flood mitigation authority for this area and operated by LCC under a Memorandum of Understanding (MOU) and Service Level Agreement (SLA). LCC pays the costs of operation and maintenance of the levee system but is not responsible for the renewal (including funding) of the levee system when it requires replacement. This responsibility lies with Rous County Council as outlined in the MOU and SLA.

The levee system is designed to overtop in a controlled manner when river heights exceed the levee height. There are also protective measures installed in parts of the CBD to protect buildings where floodwater impacts those buildings in the designated floodways once overtopping occurs.

The levee system is operated in accordance with an Operations Manual. The manual was first developed when the levee was constructed in 2005 and is reviewed as required. The last review of the levee operations manual was completed in June 2015. A further review of the manual is currently in progress and being undertaken by NSW Public Works Advisory (PWA). The review commenced in late 2021 and is due for completion in the second half of 2022.

Council staff consult and coordinate with the SES on the operation of the levee system.

Regular audits of the levee system are undertaken every 3 months and/or after any flood event where the levee was required to be operational.

The levee system was fully functional and operational at the time of the first flood on 28 February 2022. It was operated in accordance with the Operations Manual before, during and after that event and functioned as expected.

The levee system sustained an amount of damage in the event of 28 February 2022, most notably the four pump stations associated with the levee system were all completely submerged including electric motors and switchboards. All four of those pump stations were non-operational after the first event as a result of the damage. There was also some superficial damage to sections of the concrete levee wall that protects the CBD.

Following the audit of the levee system after the event of 28 February 2022, flood gates etc. were cleared of debris and a workaround temporary repair was undertaken to the Browns Creek Pump Station. As such this pump station was operational for the second event on 30 March. The other three pump stations were not. All other aspects of the levee system were operational for the second event on 30 March 2022.

Further information regarding the levee system in Lismore is included in the flood response document in Appendix 2.

## **4.6 Flood Mitigation Funding**

The Productivity Commission has established that the Australian Government spends 3% on disaster mitigation projects compared with 97% on disaster recovery. Clearly this needs to change and targeted spending on appropriate mitigation projects can and will reduce future liabilities from disaster events.

As outlined earlier in section 4.2 of this submission, processes to consider and approve flood mitigation funding applications are unnecessarily tied to progress of a floodplain risk management plan. This causes delays in rolling out beneficial projects and reduces the capability of councils, response agencies the BOM and SES to be better placed in their preparedness and response activities.

Projects that have a clear benefit to flood preparedness and mitigation and are consistent with the principles of a floodplain risk management plan should be considered on merit regardless of the progress of the plan itself or other associated documents.

The severity and scale of the recent events will also place increased focus on existing voluntary house acquisition and house raising programs. More funding is needed for these programs, especially acquisitions.

The current funding model whereby councils have to provide one third of the funding for an acquisition also needs to be reviewed. Councils do not have the funds to commit to a large-scale house acquisition program. The benefits derived from acquiring a property subject to significant flood risk do not accrue to councils – they accrue to state and federal governments. Whilst councils may end up owning the land, it cannot be used for building or community assets as the land is flood prone. In effect it becomes a liability as the land must be maintained without any meaningful opportunity to generate income. The state and federal governments accrue all of the financial benefit in that a property that would otherwise be inundated in flood events, and therefore qualify for financial assistance from state and/or federal governments through the various support programs they operate is removed. The state and federal governments should therefore meet the entire cost of these acquisitions.

## **4.7 Insurance**

It is virtually impossible for business owners or residents in flood prone areas to obtain flood insurance. Where it can be obtained it is cost prohibitive. Council has anecdotal evidence from local small businesses and residents that live or operate in these areas of quoted premiums in the order of \$30,000 - \$120,000 per annum being the norm. It is simply unaffordable.

This issue not only affects residents and business owners, but Council itself. LCC, through its membership of Statewide Mutual, had flood insurance coverage to the value of \$5,000,000 for the 2017 flood event. As a result of that event, this coverage was reduced to \$2,000,000 for the same premium. It is unclear whether Council will be able to secure flood insurance at all after these latest events.

As a result of these circumstances, the NSW and Australian Governments are effectively insuring the nation against natural disasters through the various financial support programs made available once a disaster occurs. It would therefore seem that an opportunity exists for the NSW and Australian Governments to explore alternative sources of insurance for those living in flood affected areas. This could include establishing a national insurance scheme underwritten by the government. Such insurance would not necessarily have to cover all and every loss associated with a flood event.

#### **4.8 Land Use Planning and Flood Mitigation**

Rous County Council (RCC) is the Flood Mitigation Authority for the Lismore LGA, and through the Lismore Floodplain Management Committee, LCC and RCC have historically coordinated flood mitigation activities. The Lismore Floodplain Risk Management Plan 2014 has guided Council's recent land use planning and flood mitigation activities. The plan is supported by the Lismore Local Environmental Plan 2012, and a supporting Development Control Plan.

Land use planning decisions and regulatory compliance activities under this statutory planning framework have been undertaken by Council consistent with the terms of these planning documents. Upon request, Council is willing to respond to the Inquiry regarding specific flood planning considerations on specific land zonings, development applications and compliance activities to demonstrate Council's ongoing commitment to managing development on the floodplain.

The NSW Department of Planning, Industry and Environment (DPIE) provides funding under the NSW Government's Floodplain Management Program for the Voluntary House Raising Scheme on a 2:1 basis (landowner contributes 1/3), with the scheme managed by RCC on Lismore's behalf.

The Lismore Floodplain Risk Management Plan 2014 identified flood modification measures in section 5 detailing projects that have since been implemented as per the plan. The completed projects are:

- Airport Floodway Bypass
- Wilson River Channel Improvement

RCC is one of the last stand-alone flood mitigation authorities in NSW. Flood mitigation in NSW is typically managed by one entity, being the local council or a Water Corporation. When the former Richmond River County Council was amalgamated into RCC by proclamation in July 2016 the former roles, asset ownership and ongoing arrangements were not reviewed or updated as part of the amalgamation process.

The circumstance where RCC is the asset owner of flood mitigation assets in the Lismore LGA, and LCC operates and maintains these assets under an MoU is an outdated arrangement that blurs roles and responsibilities for flood mitigation activities and should be reviewed to a more contemporary model that clarifies the asset ownership and roles for flood mitigation across the catchment.

#### **4.9 Preparedness Recommendations**

1. The SES to conduct a concerted public information campaign to raise community awareness of the need for residents and business owners to have a flood plan ready to implement when there is a risk of flooding.
2. The campaign draw heavily from the approach taken to improve community preparedness for bushfires and some of the messaging used in that program eg.
  - a. There isn't a fire truck (or flood boat) to come to every house,
  - b. It may not be safe or possible for emergency services to come and rescue you,
  - c. Fires (or floods) may cut off road access long before your home is threatened directly – leave early.

3. Review messaging and information provided by the SES in the lead up to and during flood events to provide greater focus on what could occur if rainfall continues or escalates rather than what has already happened. This messaging to be based around a number of scenarios of what could happen, including a worst case scenario.
4. To assist with item 3, further develop the existing flood models that councils in the region hold to be a predictive tool that can be used to model scenarios during weather events. Use these scenarios as community facing information to raise awareness of the risks associated with a given event and ensure residents and businesses can make early decisions to ensure people's safety and move possessions, equipment, stock etc. to higher ground.
5. Consider using the model as an interactive tool available online where residents could provide their own inputs and generate relevant information to assist in their decision making.
6. To assist with item 3 and 4, install additional rain and river height gauges throughout the catchment to improve data collection and information as input to modelling.
7. The NSW and Australian Governments review the current ownership of stream and rain gauges whereby local councils own and maintain many of these and consider transferring ownership and maintenance/operational responsibility to the BOM or SES as the agencies most reliant on the data generated by these instruments.
8. The NSW Government commit to relocating its emergency services out of the flood zone in Lismore.
9. The NSW and Australian Governments increase spending on disaster mitigation activities and projects to improve resilience to future disasters.
10. The NSW and Australian Governments review the funding model for voluntary house acquisition programs to equally share the cost of these acquisitions and remove the current requirement for local councils to fund one third of any acquisition.
11. The NSW Government review its processes for considering applications for funding under the Floodplain Management Program ensure that applications for improved flood warning systems are not unnecessarily tied to the progress or adoption of FMP and remove any requirement for review of floodplain risk managements studies and plans to be completed and allow nominated projects to be considered on their merits.
12. The NSW and Australian Governments investigate opportunities to establish alternate insurance schemes, including the possibility of a government underwritten scheme, for those living or operating businesses in flood prone areas.
13. The NSW Government undertake a review of RCC's role as Flood Mitigation Authority for constituent councils and how it is meeting statutory obligations – with options and recommendations to address any identified governance risks and outcomes of the review process.

## **5.0 Response to Floods**

### **5.1 Emergency Operations Centre**

As the weather system developed and it became apparent there was going to be flooding across the region, and Emergency Operations Centre (EOC) was established at the request of the Local Emergency Operations Controller (LEOCON), Superintendent Scott Tanner. The EOC was established in the LCC Corporate Centre at Oliver Avenue, Goonellabah.

All response and support agencies were requested to attend the EOC as is normal practice. There were challenges around staff from some agencies being able to physically get to the EOC because of roads being cut by floodwaters. In some instances, relevant staff were flown into Lismore from other places by helicopter when no other option was available.

The response agencies are generally well resourced and where there are resource gaps or a need for surge capacity, are able to call upon additional resources from other parts of the state or interstate, where necessary. There were some challenges with non-local people and/or non-EOC experienced staff at times including:

- Lack of familiarity with EOC processes and available documentation,
- Lack of understanding of the roles of the various agencies represented in the EOC,
- No understanding or knowledge of the status of matters already in progress and within the remit of their own agency – lack of handover from predecessor.

Whilst in general these issues were able to be readily overcome, and the team in the EOC worked very well together throughout the event, it nevertheless was a cause of frustration at times.

The support agencies sometimes struggled to provide the required resources to the EOC or other functions when needed eg. staff for Evacuation Centres, representatives to the EOC when primary contact was required to stand down for fatigue management.

Support agencies were at times overwhelmed as a result of the scale of the event, the level of disruption caused within their own agency by the event and as a result of a lack of suitable back up staff being available to backfill roles. Examples of this include:

- LCC having to provide staff to establish and operate an Evacuation Centre at Goonellabah Sports & Aquatic Centre. Council staff were still required even after Department of Communities and Justice (DCJ) provided a staff member to “manage” the venue,
- Community led evacuation and support centres standing up at Nimbin, The Channon and Dunoon. These centres were required as people from surrounding areas were unable to come to Lismore because roads were cut and staff from DCJ, even if they had any available, were unable to get out to those areas for the same reason.
- No representative for the TELCO Authority being present in the EOC for the entire response phase of the first event. Given the severe and ongoing challenges around communication in this region during the event, it is incomprehensible that no representative was available to the EOC.
- A DCJ staff member who worked considerable hours at the Southern Cross University (SCU) Evacuation Centre from when it was first opened having their own home in Ballina inundated by floodwaters later in the week. When they were stood

down, both because of fatigue management and to allow them to deal with the inundation of their home, a suitable replacement was not provided. The person was then publicly named and shamed on social media for supposedly abandoning their role. This also contributed to a situation where a member of the public took it upon themselves to be the self-appointed Manager of the Evacuation Centre at SCU for a period of time.

- A staff member from NSW Health working a considerable number of consecutive days without a break as the representative to the EOC, but then not being replaced when taking a well-deserved break.

LCC would like to formally recognise the outstanding efforts of Essential Energy staff throughout the response and recovery stages of the event. They were able to work closely with all agencies to find solutions to most problems and went above and beyond what might normally be expected. For example:

- Flying LCC staff in a helicopter out to Nimbin to assess the considerable damage to the water main that supplies water to the Nimbin township. A 4km section of main and the road that it followed was completely destroyed in the event, cutting off water supply to the town.
- Providing generators for multiple locations around town when the mains supply was unavailable.
- Working closely with Council staff between the first and second event to implement a temporary solution for repairs and power supply to the Browns Creek Pump Station (part of the levee system) such that it was available for the second event on 30 March 2022.
- Deploying considerable additional resources to the area to assist with the repairs to their network and assist private property owners with reconnection of power to their premises.

## **5.2 Evacuation and Community Support Centres Recognition**

Community led evacuation and support centres were established in three villages within the Lismore LGA. These were located at Nimbin, The Channon and Dunoon. The centres were established by those local communities as a result of a genuine need given the scale and severity of the event. People from surrounding areas that needed to evacuate their homes could not get to Lismore because the roads were cut and indeed staff from relevant agencies could not get to those locations for the same reason.

LCC also established a second evacuation centre in Lismore at the request of the LEOCON – the primary Evacuation Centre was located at SCU, using its own staff as the DCJ did not have sufficient staff to run it. This was done due to the predicted scale of the event and expected number of displaced people.

All of these centres played a vital role in supporting people from those areas. They were also a source of important intelligence for the LEMO in the EOC regarding damage to local infrastructure, isolated people and local river/stream conditions. The Nimbin Neighbourhood and Information Centre was also a vital link to the large number of multiple occupancy communities located in that part of the LGA.

However, because these centres were not established through the formal process normally used via the EOC and LEOCON, and not staffed by the relevant NSW Government agencies,

they were not formally recognised in the EOC processes. For example, no statistics were taken as to numbers of people located in these places – noting numbers were collected for GSAC once DCJ was able to get a staff member to the site.

Given the important role they played in this event, and that NSW Government agencies had no capacity to provide a similar service, even if they could have physically made it to those places, the NSW Government should harness the goodwill and capability of these centres for future events. A process needs to be developed to support these centres through formally recognising their role and capability, appropriate training, and support once operational whether that be through financial support or designated contact pathways (ie. online or phone) with appropriately scalable resourcing. The absence of this formal recognition means that people operating or supported within these centres are not captured in statistics for reporting purposes and the cost of response activities is subsequently underestimated.

### **5.3 Australian Defence Force Role**

The provision of resources from the Australian Defence Force (ADF) was most welcomed. Having them here meant a great deal to the local community and allowed a lot of work to be done that would not otherwise have been possible in the timeframes achieved.

There were however a couple of lessons to be learnt from their time here.

The ADF were unable to undertake any tasks that may have carried a professional or ongoing liability. For example, they were unable to undertake works on private property to restore a damaged driveway or remove a damaged ceiling. This was despite there being qualified engineering and other staff within their ranks. This led to some inefficiency where the ADF was tasked with certain things, only to decline those tasks such that they had to be reallocated to other agencies. This caused delays in responding to requests for assistance in those circumstances.

When the ADF first arrived, they had personnel and the vehicles that they travelled in. Heavy machinery arrived later but could have been used earlier if it was available. In particular heavy machinery such as excavators and body trucks were required to clear landslips, trees and other debris from roads. High clearance vehicles were also of great use for transporting staff and supplies via flooded roads.

### **5.4 Tasking in the EOC**

Each of the emergency service agencies has their own software and management system for receiving, recording, allocating and monitoring progress of tasks. Support agencies have little or no systems in place like this and rely on the work of staff in the EOC to keep on top of what they have been asked to do.

In a disaster event, the EOC structure means that tasks are generated and allocated in a different way to normal times. In particular, support agencies get a lot of tasks allocated to them and need to keep track, especially when there are staff changes due to shifts, stand downs for fatigue management etc.

There is a need for either a central tasking and tracking system that is used by all response and support agencies, or for a system that sits above the others and distributes tasks through to each agency to manage within the system they already have.

This was recognised early in the event and the NSW Police were able to develop a system known as the “Blue Portal”. Whilst this was a central place to record tasks they were then sent



to each agency and managed by those agencies within their own systems. There was no feedback loop to close tasks out unless agencies reported back on progress or completion.

Whilst it was good that there was a central system to record tasks, it was far from perfect and very reliant on manual processes. It was highly inefficient given the way it operated and that very senior Police Officers with limited keyboard skills were asked to do data entry and management. This was not good use of their time given their considerable skills in other areas.

## **5.5 Mental Health**

A common theme and concern of all agencies throughout the event was the mental health effects on the community, emergency services and support agency staff. It was regularly identified at most briefings by almost every agency involved.

The scale and severity of the event was the obvious cause of the challenges. NSW Health were not resourced to meet the demand for mental health support. Whilst it did the best it could with the resources available, there was clearly a far greater need for mental health support services than could be provided.

Mental health support will be an ongoing need of the community for a considerable time post the event.

A review of the resourcing and surge capacity for mental health services during and post disaster events is required.

## **5.6 Evacuation Orders and Safe to Return**

As part of the response the SES issued evacuation orders for suburbs and localities likely to be affected by floodwaters as the rivers systems rose. Once the peak of the flood has passed and waters start to recede, the SES issues “Safe to Return” orders for those areas once it has been assessed as safe to do so ie power has been switched off, rapid damage assessments complete, hazardous materials dealt with etc.

These “Safe to Return” orders are generally issued for large areas at once, even entire townships or suburbs. The reality is that residents and business owners do not wait for these orders to be issued. They will return to their homes or business premises as soon as water has receded sufficiently for them to gain access. Some simply want to assess damage whereas others will immediately commence the clean-up process.

A Flood Evacuation Warning for Lismore was issued by the SES at 4.20pm on Sunday 27 February 2022 with Evacuation Orders issued at 9.30pm that same night.

The water levels from the first flood took several days to recede from the peak of 14.4m at approx. 3.00pm Monday 28 February to approx. flood levee height of 10.6m in the early hours of Wednesday 2 March. The water took a further 3 days to recede to below minor flood levels on Saturday 5 March 2022 where affected business and residential premises were largely no longer inundated. The “Safe to Return” Order for the Lismore CBD, North and South Lismore was then issued on Sunday 6 March at 5.30pm.

This was effectively a full week where residents and business owners of affected premises were in theory not permitted to be in those areas subject of the evacuation orders. So those people in premises in the highest parts of Lismore affected by floodwaters, and were the first properties to come out of the water as the flood receded, in theory had to wait a full week before returning to assess damage and/or start clean up.

As the waters receded, different areas became accessible and some were “safer” than others to be moving around in. A staged approach to the “Safe to Return” process would provide clearer messages to the community and allow them to be working in areas where it is safe to do so at the earliest possible opportunity. A daily assessment and publication of areas where it is safe for people to return would seem appropriate for these large scale events.

The reality is there is no enforcement of the evacuation orders once flood waters recede and people start to return.

## **5.7 Communications**

There were significant challenges with communications during the event. Widespread disruption to the mobile phone network, NBN and fixed line internet caused significant challenges for emergency and support services and the community in general. Rural areas that already experience challenges with communications were the worst affected. There were also issues with the radio network.

The causes of these issues were that:

- physical damage was caused to critical infrastructure and distribution networks, either through water inundation or actual physical destruction,
- equipment at communication towers lost electricity supply,
- backup generators and batteries ran out of fuel and/or power,
- Access was difficult or impossible to undertake repairs or to re-supply.

A review needs to be undertaken and program developed and funded to relocate critical communications infrastructure out of flood prone areas, and improve redundancy.

## **5.8 Response Recommendations**

14. All agencies ensure any staff coming into the EOC are properly trained in emergency management processes and have access, either electronically or in hard copy, to required documentation such as EMPLANS and contact lists.
15. All agencies ensure where there is a changeover of staff in an EOC as a result of rosters, shift changes etc. that a proper handover procedure is in place and implemented.
16. NSW Government support agencies be better prepared to provide staff to the EOC, especially to provide suitable replacement staff once their primary contact is required to stand down for a break.
17. The NSW Government review its approach to the establishment of Evacuation Centres, Support Sites etc. during disaster events to harness resources in community groups and similar organisations that are effectively already providing the same or similar services to local communities.
18. The NSW Government develop a process to formally recognise and support community groups identified in Recommendation 13 through provision of information, training and financial assistance where appropriate.
19. The NSW Government review its arrangements with the Australian Government for deployment of the ADF in disaster response such that tasks/work undertaken by the

ADF is properly insured for any ongoing liability. This will allow the ADF to undertake a broader range of tasks when deployed.

20. The NSW Government develop with the Australian Government a plan that identifies what type of equipment is likely to be required from the ADF in specific disaster events such that it can be deployed at the earliest opportunity when called upon.
21. The NSW Government develop a single task management process and software solution to be utilised in any multi-agency response event such that all agencies can utilise the system to record, allocate and monitor progress of requests for assistance logged through an EOC.
22. The NSW Government review its processes and resourcing, including surge capacity, to provide mental health support to disaster affected communities both during and post event to deliver significantly increased capacity compared to existing.
23. The SES review its "Safe to Return" processes to provide a daily list of suburbs, streets and/or localities where safe to return orders can be issued to facilitate the quick return of residents and business owners as the flood recedes.
24. A review be undertaken to identify and relocate critical communications infrastructure out of flood prone areas.
25. Greater redundancy be provided within communications networks to ensure communication services remain available to the community and emergency and support services during emergency events.

## **6.0 Recovery**

The process of recovery for our community will take a long time and is complex.

In terms of the emergency management arrangements, and the formal transition/handover from response to recovery, this was challenging. The community is not at all aware or interested in the processes of government regarding this transition. They simply want to get on with their lives. Whether an activity that is there to support them falls under a response or recovery structure/funding arrangement is irrelevant to them.

The handover process was challenging because as flood waters are receding in Kyogle, and response activities wind down those communities in the higher parts of the catchment start moving into recovery activities when those in the middle and lower parts of the catchment are still in response, or may not even have had their peak floods in the case of lower river areas such as Broadwater, Woodburn and Ballina.

Different parts of the region were in different modes as the event unfolded. This creates challenges for response and support agencies to manage resources and processes to support the community.

### **6.1 Waste Collection**

The waste collection challenge was enormous in this event. In previous events, Council has had to coordinate this task and it has been problematic in regard to logistical challenges, managing contractors and coordinating the claim for reimbursement of costs incurred.

The model adopted in this event whereby NSW PWA coordinated the waste collection effort was much appreciated by Council. Council would not have been unable to manage the task

in any event as substantial damage was sustained at Council's waste facility as result of the flood. Advantages of this model are:

- Local waste facilities are not geared up for a task of this size and duration – the temporary transfer stations established at Coraki, Alstonville and in the Lismore CBD for smaller trucks were a good solution to managing the task.
- Transporting the waste to large facilities in Queensland makes sense rather than consuming significant volumes of capacity in local tips.
- The considerable workload associated with Council meeting the costs and having to claim through disaster funding arrangements is avoided.
- The cashflow challenge of Council funding this activity is avoided – LCC did not have cash reserves to meet the up-front costs of the clean-up.

Council would also like to recognise and thank TfNSW and PWA for recognising the damage caused to the local road network on the haul route to the Coraki facility, arranging significant repairs and meeting the costs of the work.

There were however some lessons to be learnt and improvements that can be made for next time under this model as follows:

- There was some confusion as to whether contractors engaged by PWA were being supervised by PWA or Council. This potentially has significant ramifications for PCBU under the WHS Act should incidents or accidents occur.
- There was a position taken by some staff within PWA that Council should pay accounts for contractors engaged by PWA.
- After floodwaters subsided, residents immediately began cleaning out flood affected premises and placing flood waste in the kerbside area for collection. The waste was not sorted into different waste streams as a rule. The sorting of waste at the source into categories such as "hazardous" (eg. asbestos), putrescible (eg. food waste) from other waste such as furniture/fittings would significantly improve the efficiency and cost reduction of the collection and disposal processes. Flood planning documents need to have pre-prepared community education information to help flood affected residents sort waste at the source for more efficient flood waste collection from road kerbside areas by public authorities.
- There were some streets where kerbside waste was collected multiple times as residents and business owners progressively cleaned up their premises. This caused frustration for emergency response agencies, contractors and ADF staff and lead to inefficiency in those processes.
- There were issues around the definition of "flood waste" vs "building waste". Many people commenced stripping out buildings very early and deposited the building waste generated on the footpath for collection. This is not what the general kerbside waste collection is for and indeed is a cost factored into the various government financial packages that are available. Anyone with insurance would also have those costs covered. As such the NSW and Australian Governments are potentially paying twice for rubbish removal in many instances – for the free kerbside collection where owners strip their properties early and deposit the waste on the footpath, and in providing financial assistance to those property owners for building repairs.

## **6.2 Multiple Occupancy Community Infrastructure**

Lismore has a significant number of multiple occupancy (MO) communities, especially in the northern parts of our LGA around the villages of Nimbin and The Channon. These communities are generally large, single parcels of land with multiple dwellings. They are generally managed through a body corporate structure and can vary in size from a few acres with a couple of dwellings to hundreds and even thousands of acres with dozens of dwellings.

These MO communities have significant infrastructure on those properties to support their community. This infrastructure can include roads, bridges, culverts and other stormwater drainage structures, buildings, water tanks/storage and supply systems. The responsibility to maintain this infrastructure rests with the body corporate for that community.

Significant damage was caused to this infrastructure and private dwellings on those properties as a result of this event – it was no different to the damage caused to public infrastructure and dwellings on other single owner private properties. The type of damage caused included land slips – both minor and major, affecting roads, dwellings and land generally, road and culvert washouts, bridge damage and stormwater drainage pipe washouts.

Hundreds of people living in these communities were isolated as a result of the event and there are large numbers that remain isolated at the time of writing this report. The biggest challenge for them is major land slips have blocked internal access roads.

NSW Government agencies have been unable to find a way forward to support these communities. The issue was first raised in week two of the event by Council's LEMO in briefings in the EOC. There were various reconnaissance missions flown by the Rural Fire Service (RFS) and ADF helicopters as well as some on-ground inspections undertaken. Council was also receiving information from the community-based support centres at Nimbin and The Channon with details of affected communities and the damage that had occurred.

A further information gathering exercise was organised by Resilience NSW (RNSW) but took four weeks to plan and execute – happening on Thursday 7 and Friday 8 April 2022. It is acknowledged that the second flood event caused this exercise to be delayed by a week. The purpose of the exercise was to ground truth previously gathered information and try to establish the extent of the problem such that a support package could be developed for these properties. The primary purpose of the support package was to re-establish vehicle access through provision of relevant technical advice such as geotechnical engineering, and financial support to have works undertaken.

As of 20 May 2022, some 6 weeks after the exercise on 7 and 8 April, no program has been developed or approved, no communication with Council or affected communities has occurred, large numbers of residents remain isolated in these communities and there is no sign any support will be forthcoming.

This is an example of a situation whereby the challenge to be met does not sit neatly within any existing government support process or program and the government agency responsible cannot move quickly to address the challenge. This needs to be improved, not just to address this issue, but more generally to allow government agencies to respond more quickly to situations that are new or different to previous events.

### 6.3 Housing Crisis

The housing crisis in this region is well known and documented. These flood events have shone an additional spotlight on the issue and severely exacerbated an already critical housing shortage in this region. Swift and decisive action is needed to address it, particularly for those affected and displaced by the flood events.

Displaced businesses and residents need to make decisions about the future. The slow pace with which government can respond makes that process frustrating and potentially financially detrimental to some because individuals are affected in different ways, want to move at different speeds to that which government is able to respond and might be thinking differently to decision makers in all levels of government.

For example, a resident of South Lismore that has had their home severely damaged by the flood and has had to move out needs to know and decide:

- What is the level of damage to the property and can it be repaired?
- If it can be repaired what is the cost?
- Do they want to stay in their current home, regardless of whether it can be repaired?
- What level of financial support will be provided by government for repairs?
- Will the Council/NSW Government allow the home to be repaired or will it be eligible to be acquired?
- If it is to be acquired, will that be compulsory or will it be voluntary?
- If the home is acquired, what compensation will be paid?
- Will any additional financial support be made available to help with the costs of buying or building a new home on higher ground?

All of this information, and more, is needed to allow residents and business owners to make the best decision for their future and ensure they can move forward from the events of February and March 2022. In particular, there is no point in a person that has decided they want to move elsewhere spending money on fixing a home they do not wish to return to.

A key issue in the decisions for those not wanting to stay in their current homes will be how to bridge the “gap” between what funds they might be able to secure for their current home and what the cost of a similar home will be on higher ground.

Many of the homes and businesses affected by the flood are the cheapest real estate in Lismore. This is because it is well known they are in areas subject to flood and are some of the oldest homes in Lismore. The flood event has made these properties even less attractive to a potential buyer, both in terms of the damage that has been caused and the realisation of how susceptible those areas are to floods. It leaves the current owners in a completely untenable and invidious position and facing financial ruin. They will effectively be unable to sell their properties, or at best achieve a sale price well below what is fair and reasonable, or could have been achieved prior to the flood.

The NSW Government, in consultation with LCC and other stakeholders, needs to develop a plan to financially support people that want, or must, move their business or home to a flood free location as a result of either voluntary or compulsory property acquisition and could consider:

- Provision of low or interest free loans to bridge the cost difference – capped at a reasonable amount,
- Provision of grants to assist with costs of relocation,
- Working with the Australian Government to provide tax and other incentives for businesses that wish to relocate.

#### **6.4 Disaster Funding Claims Process**

A key challenge for councils in managing the works in both response phases and restoration of damaged infrastructure is bank rolling to cost of the works up front.

It is acknowledged this challenge has been somewhat mitigated through upfront payments of funding.

In the past LCC as experienced significant delays in having funding claims processed under the NDRRA arrangements. Key challenges experienced in regard to the claims process include:

- Insistence of funding providers that exhaustive lists of transactions from ledger accounts be provided,
- Interpretation of those managing and/or auditing the claims process being different from agency staff consulted as the event unfolds,
- Apparent different audit/validation processes between the NSW and Australian Governments where joint funding is provided.
- Entire value of a large claim being held up by a request for additional information on relatively small items/amounts included in the claim,
- Levels of documentation required to support claims being unclear in guidelines,
- Additional requirements for documentation imposed by claims assessors than what is necessarily required by funding guidelines.

To streamline these processes it is suggested that the NSW and Australian Governments review the claims process to streamline it and ensure quick turnaround of payments to councils by:

- Involving suitable staff that process claims with councils early in the process ie. when funding is announced and periodically throughout the time that work is being undertaken to progressively check that supporting documentation/records etc. are being kept,
- Changing the claims assessment and audit process to remove the need for large volumes of material to be provided by Council to the funding assessor/auditor,
- Implement a process whereby the claims assessor/auditors, if necessary from both NSW and Australian Governments, to physically visit the council and spend a few days or a week auditing the claim. The process would be similar to council's annual financial audit where auditors visit and go through relevant documentation etc. with staff present. Any additional information required can be asked for and provided during this time and issues identified dealt with expediently.
- Commit to a one month turnaround.

## **6.5 Recovery Recommendations**

26. Maintain the model whereby PWA manages the waste collection task for future events with some further refinement of roles and responsibilities to address who is the PCBU under Workplace Health and Safety legislation, who is paying accounts when received and who is generally monitoring and supervising those contractors.
27. The NSW Government ensure suitable arrangements for temporary waste transfer stations are in place on an ongoing basis for future events.
28. A communications strategy for kerbside collection of waste needs to be developed in advance of future events and messaging to the public provided regarding what will and won't be collected, and how waste should be sorted or placed. The issue of "flood waste" vs "building waste" and the cost benefits of sorting waste at the point of collection needs to be resolved and clarified ready for implementation for future events.
29. The NSW Government develop systems and processes that allow support agencies to respond in a timely manner to developing and implementing programs to support all community members, especially in situations that do not fit neatly into existing programs or services already available.
30. The NSW Government expedite its processes and decisions around:
  - a. What level of financial support will be provided to residents by government for property repairs?
  - b. What homes, if any, in those areas of Lismore affected by the floods will be considered for voluntary and/or compulsory acquisition?
  - c. For those residents and businesses that wish to relocate elsewhere and have their properties' acquired, what additional financial support and/or mechanisms would be provided by the NSW and/or Australian Government to facilitate this?
31. The NSW and Australian Governments review the disaster funding claims process to:
  - a. Streamline the process for all parties,
  - b. Reduce or eliminate the need for large volumes of material to be provided between councils and the funding assessors,
  - c. Allow for assessors/auditors to physically visit Councils to assess claims such that any identified issues can be worked through and resolved immediately with relevant staff,
  - d. Commit to assessing and paying claims within one month of the date of lodgement.



## **7.0 Summary of Council's Recommendations**

A full list of recommendations from Lismore City Council is as follows:

### **PREPAREDNESS**

1. The SES to conduct a concerted public information campaign to raise community awareness of the need for residents and business owners to have a flood plan ready to implement when there is a risk of flooding.
2. The campaign draw heavily from the approach taken to improve community preparedness for bushfires and some of the messaging used in that program eg.
  - a. There isn't a fire truck (or flood boat) to come to every house,
  - b. It may not be safe or possible for emergency services to come and rescue you,
  - c. Fires (or floods) may cut off road access long before your home is threatened directly – leave early.
3. Review messaging and information provided by the SES in the lead up to and during flood events to provide greater focus on what could occur if rainfall continues or escalates rather than what has already happened. This messaging to be based around a number of scenarios of what could happen, including a worst case scenario.
4. To assist with item 3, further develop the existing flood models that councils in the region hold to be a predictive tool that can be used to model scenarios during weather events. Use these scenarios as community facing information to raise awareness of the risks associated with a given event and ensure residents and businesses can make early decisions to ensure people's safety and move possessions, equipment, stock etc. to higher ground.
5. Consider using the model as an interactive tool available online where residents could provide their own inputs and generate relevant information to assist in their decision making.
6. To assist with item 3 and 4, install additional rain and river height gauges throughout the catchment to improve data collection and information as input to modelling.
7. The NSW and Australian Governments review the current ownership of stream and rain gauges whereby local councils own and maintain many of these and consider transferring ownership and maintenance/operational responsibility to the BOM or SES as the agencies most reliant on the data generated by these instruments.
8. The NSW Government commit to relocating its emergency services out of the flood zone in Lismore.
9. The NSW and Australian Governments increase spending on disaster mitigation activities and projects to improve resilience to future disasters.
10. The NSW and Australian Governments review the funding model for voluntary house acquisition programs to equally share the cost of these acquisitions and remove the current requirement for local councils to fund one third of any acquisition.
11. The NSW Government review its processes for considering applications for funding under the Floodplain Management Program ensure that applications for improved flood warning systems are not unnecessarily tied to the progress or adoption of FMP and

remove any requirement for review of floodplain risk managements studies and plans to be completed and allow nominated projects to be considered on their merits.

12. The NSW and Australian Governments investigate opportunities to establish alternate insurance schemes, including the possibility of a government underwritten scheme, for those living or operating businesses in flood prone areas.
13. The NSW Government undertake a review of RCC's role as Flood Mitigation Authority for constituent councils and how it is meeting statutory obligations – with options and recommendations to address any identified governance risks and outcomes of the review process.

## **RESPONSE**

14. All agencies ensure any staff coming into the EOC are properly trained in emergency management processes and have access, either electronically or in hard copy, to required documentation such as EMPLANS and contact lists.
15. All agencies ensure where there is a changeover of staff in an EOC as a result of rosters, shift changes etc. that a proper handover procedure is in place and implemented.
16. NSW Government support agencies be better prepared to provide staff to the EOC, especially to provide suitable replacement staff once their primary contact is required to stand down for a break.
17. The NSW Government review its approach to the establishment of Evacuation Centres, Support Sites etc. during disaster events to harness resources in community groups and similar organisations that are effectively already providing the same or similar services to local communities.
18. The NSW Government develop a process to formally recognise and support community groups identified in Recommendation 13 through provision of information, training and financial assistance where appropriate.
19. The NSW Government review its arrangements with the Australian Government for deployment of the ADF in disaster response such that tasks/work undertaken by the ADF is properly insured for any ongoing liability. This will allow the ADF to undertake a broader range of tasks when deployed.
20. The NSW Government develop with the Australian Government a plan that identifies what type of equipment is likely to be required from the ADF in specific disaster events such that it can be deployed at the earliest opportunity when called upon.
21. The NSW Government develop a single task management process and software solution to be utilised in any multi-agency response event such that all agencies can utilise the system to record, allocate and monitor progress of requests for assistance logged through an EOC.
22. The NSW Government review its processes and resourcing, including surge capacity, to provide mental health support to disaster affected communities both during and post event to deliver significantly increased capacity compared to existing.
23. The SES review its "Safe to Return" processes to provide a daily list of suburbs, streets and/or localities where safe to return orders can be issued to facilitate the quick return of residents and business owners as the flood recedes.

24. A review be undertaken to identify and relocate critical communications infrastructure out of flood prone areas.
25. Greater redundancy be provided within communications networks to ensure communication services remain available to the community and emergency and support services during emergency events.

## **RECOVERY**

26. Maintain the model whereby PWA manages the waste collection task for future events with some further refinement of roles and responsibilities to address who is the PCBU under Workplace Health and Safety legislation, who is paying accounts when received and who is generally monitoring and supervising those contractors.
27. The NSW Government ensure suitable arrangements for temporary waste transfer stations are in place on an ongoing basis for future events.
28. A communications strategy for kerbside collection of waste needs to be developed in advance of future events and messaging to the public provided regarding what will and won't be collected, and how waste should be sorted or placed. The issue of "flood waste" vs "building waste" and the cost benefits of sorting waste at the point of collection needs to be resolved and clarified ready for implementation for future events.
29. The NSW Government develop systems and processes that allow support agencies to respond in a timely manner to developing and implementing programs to support all community members, especially in situations that do not fit neatly into existing programs or services already available.
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  - c. Allow for assessors/auditors to physically visit Councils to assess claims such that any identified issues can be worked through and resolved immediately with relevant staff,
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