

Agenda Extraordinary Meeting

Thursday, 19 May 2022



BYRON
SHIRE
COUNCIL

Agenda Extraordinary Meeting

held at Conference Room, Station Street, Mullumbimby
commencing at 2.30pm

Public access relating to items on this agenda can be made between 9:00 and 10:30 am on the day of the meeting. Requests for public access should be made to the General Manager or Mayor no later than 12:00 midday on the day prior to the meeting.

A handwritten signature in black ink, appearing to read 'Mark Arnold'.

Mark Arnold
General Manager

CONFLICT OF INTERESTS

What is a “Conflict of Interests” - A conflict of interests can be of two types:

Pecuniary - an interest that a person has in a matter because of a reasonable likelihood or expectation of appreciable financial gain or loss to the person or another person with whom the person is associated.

Non-pecuniary – a private or personal interest that a Council official has that does not amount to a pecuniary interest as defined in the Code of Conduct for Councillors (eg. A friendship, membership of an association, society or trade union or involvement or interest in an activity and may include an interest of a financial nature).

Remoteness – a person does not have a pecuniary interest in a matter if the interest is so remote or insignificant that it could not reasonably be regarded as likely to influence any decision the person might make in relation to a matter or if the interest is of a kind specified in the Code of Conduct for Councillors.

Who has a Pecuniary Interest? - a person has a pecuniary interest in a matter if the pecuniary interest is the interest of the person, or another person with whom the person is associated (see below).

Relatives, Partners - a person is taken to have a pecuniary interest in a matter if:

- The person's spouse or de facto partner or a relative of the person has a pecuniary interest in the matter, or
- The person, or a nominee, partners or employer of the person, is a member of a company or other body that has a pecuniary interest in the matter.

N.B. “Relative”, in relation to a person means any of the following:

- (a) the parent, grandparent, brother, sister, uncle, aunt, nephew, niece, lineal descends or adopted child of the person or of the person's spouse;
- (b) the spouse or de facto partners of the person or of a person referred to in paragraph (a)

No Interest in the Matter - however, a person is not taken to have a pecuniary interest in a matter:

- If the person is unaware of the relevant pecuniary interest of the spouse, de facto partner, relative or company or other body, or
- Just because the person is a member of, or is employed by, the Council.
- Just because the person is a member of, or a delegate of the Council to, a company or other body that has a pecuniary interest in the matter provided that the person has no beneficial interest in any shares of the company or body.

Disclosure and participation in meetings

- A Councillor or a member of a Council Committee who has a pecuniary interest in any matter with which the Council is concerned and who is present at a meeting of the Council or Committee at which the matter is being considered must disclose the nature of the interest to the meeting as soon as practicable.
- The Councillor or member must not be present at, or in sight of, the meeting of the Council or Committee:
 - (a) at any time during which the matter is being considered or discussed by the Council or Committee, or

- (b) at any time during which the Council or Committee is voting on any question in relation to the matter.

No Knowledge - a person does not breach this Clause if the person did not know and could not reasonably be expected to have known that the matter under consideration at the meeting was a matter in which he or she had a pecuniary interest.

Non-pecuniary Interests - Must be disclosed in meetings.

There are a broad range of options available for managing conflicts & the option chosen will depend on an assessment of the circumstances of the matter, the nature of the interest and the significance of the issue being dealt with. Non-pecuniary conflicts of interests must be dealt with in at least one of the following ways:

- It may be appropriate that no action be taken where the potential for conflict is minimal. However, Councillors should consider providing an explanation of why they consider a conflict does not exist.
- Limit involvement if practical (eg. Participate in discussion but not in decision making or vice-versa). Care needs to be taken when exercising this option.
- Remove the source of the conflict (eg. Relinquishing or divesting the personal interest that creates the conflict)
- Have no involvement by absenting yourself from and not taking part in any debate or voting on the issue as of the provisions in the Code of Conduct (particularly if you have a significant non-pecuniary interest)

RECORDING OF VOTING ON PLANNING MATTERS

Clause 375A of the Local Government Act 1993 – Recording of voting on planning matters

- (1) In this section, **planning decision** means a decision made in the exercise of a function of a council under the Environmental Planning and Assessment Act 1979:
- (a) including a decision relating to a development application, an environmental planning instrument, a development control plan or a development contribution plan under that Act, but
- (b) not including the making of an order under that Act.
- (2) The general manager is required to keep a register containing, for each planning decision made at a meeting of the council or a council committee, the names of the councillors who supported the decision and the names of any councillors who opposed (or are taken to have opposed) the decision.
- (3) For the purpose of maintaining the register, a division is required to be called whenever a motion for a planning decision is put at a meeting of the council or a council committee.
- (4) Each decision recorded in the register is to be described in the register or identified in a manner that enables the description to be obtained from another publicly available document, and is to include the information required by the regulations.
- (5) This section extends to a meeting that is closed to the public.

BYRON SHIRE COUNCIL
BUSINESS OF EXTRAORDINARY MEETING

- 1. PUBLIC ACCESS**
- 2. APOLOGIES**
- 3. DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY**
- 4. STAFF REPORTS**

Sustainable Environment and Economy

- 4.1 NSW Flood Inquiry Submission 6

Councillors are encouraged to ask questions regarding any item on the business paper to the appropriate Executive Manager prior to the meeting. Any suggested amendments to the recommendations should be provided to the Administration section prior to the meeting to allow the changes to be typed and presented on the overhead projector at the meeting.

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

Report No. 4.1 NSW Flood Inquiry Submission

Directorate: Sustainable Environment and Economy

5 **Report Author:** Sharyn French, Manager Environmental and Economic Planning

File No: I2022/483

Summary:

10 In March 2022, the NSW Government commissioned an independent expert inquiry into the preparation for, causes of, response to and recovery from the 2022 catastrophic flood event across the state of NSW.

An independent flood inquiry has been established to examine and report on the causes of, preparedness for, response to and recovery from the 2022 catastrophic flood event.

15 Professor Mary O'Kane AC and Michael Fuller APM have been engaged to lead the Inquiry.

Submissions to the inquiry are open to 20 May 2022 with late submissions being accepted from impacted Local Government areas.

Council resolved (**Res. 22-156**) to prepare a submission and hold a Community Roundtable Meeting (held 10 May 2022) amongst other matters.

20 Staff have prepared a draft response to the NSW Flood Inquiries Terms of Reference (Attachment 1), for Councils' consideration. It is proposed that this be submitted as part of a package of information to the NSW Flood Inquiry.

25

RECOMMENDATION:






30 That Council endorses the draft response to the NSW Flood Inquiries Terms of Reference (Attachment 1, E2022/37795), supporting information (Attachment 2, E2022/43685; Attachment 3, E2022/ 43662; Attachment 4, E2022/43660 and Attachment 5, E2022/43657) and results received to date from 3 Council surveys: 'Share your Flood Story', 'Flood Height Survey' and 'Business Survey' as Council's submission to the NSW Flood Inquiry for lodgement online.

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1

Attachments:

- 1 Submission response to NSW Flood Inquiry Terms of Reference, 2022, E2022/37795 , page 12 [↓](#) 
- 5 2 February 2022 Flood Event – photographic story of the flood impact for submission to NSW Flood Inquiry, E2022/43685 , page 28 [↓](#) 
- 3 3 Community Roundtable Meeting 10 May - NSW Flood Inquiry - Meeting Notes, E2022/43662 , page 40 [↓](#) 
- 10 4 Community Roundtable Meeting 10 May - NSW Flood Inquiry - Brunswick Heads Foreshore Protection Society Submission, E2022/43660 , page 43 [↓](#) 
- 5 5 Community Roundtable Meeting 10 May 2022 - NSW Flood Inquiry - Main Arm Rural Residents Association (MARRA) submission, E2022/43657 , page 49 [↓](#) 

Report

Inquiry commissioned

- 5 In March 2022, the NSW Government commissioned an independent expert inquiry into the preparation for, causes of, response to and recovery from the 2022 catastrophic flood event across the state of NSW.

An independent flood inquiry was established to examine and report on the causes of, preparedness for, response to and recovery from the 2022 catastrophic flood event.

- 10 Professor Mary O’Kane AC and Michael Fuller APM have been engaged to lead the Inquiry.

The Inquiry will report on:

- the causes of and factors contributing to the frequency, intensity, timing and location of floods;
 - preparation and planning by agencies and the community for floods in NSW;
 - 15 • responses to floods, particularly measures to protect life, property and the environment;
 - the transition from incident response to recovery;
 - recovery, including housing, clean-up, financial support, community engagement and longer-term community rebuilding.
- 20 The Inquiry will consider and, if thought fit, make recommendations on a range of matters, including:
- the safety of emergency services and community first responders;
 - current and future land use planning and management and building standards in flood prone locations across NSW;
 - 25 • appropriate action to adapt to future flood risks to communities and ecosystems;
 - coordination and collaboration between all levels of government.

The Inquiry is required to report to the Premier on causation, land use planning and management and related matters by 30 June 2022, and on all other matters by 30 September 2022.

- 30 Submissions to the inquiry close 20 May 2022 with late submissions accepted.

Council resolved to prepare submission

Council at the 28 April 2022 meeting resolved (**Res 22-156**):

- 5 1. *Notes the NSW Flood Inquiry is required to report to the Premier on causation, land use planning and management, and related matters (see paragraphs 1(a), 2(e) and 2(f)) of the Terms of Reference by 30 June 2022, and on all other matters by 30 September 2022.*
2. *Notes that Council will be able to submit at least 2 submissions to the NSW Flood Inquiry.*
- 10 3. *Receives a draft of Council's first submission to the NSW Flood Inquiry at an Extraordinary Meeting to be held on 19 May.*
4. *Encourages Councillors to submit concepts and materials towards Council's submission to staff by 10 May.*
- 15 5. *In light of point 2, considers for the relevant submission, commentary on issues pertinent to Byron Shire the result of the recent flood events including but not limited to: flooding of buildings, landslip affecting buildings, cutting of access by water and by landslip, adequacy of evacuation centres and post-flood recovery centres, loss of telecommunications and of power supplies, impacts on tenants and landlords and the pre-existing housing emergency;*
- 20 6. *Acknowledges the work of our local community and businesses in response to the local flood event and recovery activities thereafter.*
7. *Invites a representative from each local community organisation and business chamber to a 'Round Table' meeting to share submission concepts and materials;*
8. *Coordinates and shares submission concepts and materials with other flood-affected local government areas in our region;*
- 25 9. *Encourages and supports organisations engaged during and after the 2022 flood events to make their own submissions;*
10. *Encourages individuals, businesses and communities affected by the 2022 flood events to make their own submissions;*
- 30 11. *Requests the co-chairs of the NSW Flood Inquiry Professor Mary O'Kane AC and Michael Fuller APM to hold a community meeting for the Tweed / Byron area, to be hosted by Byron Shire Council in May 2022.*
12. *Encourages individuals, businesses and communities affected by the 2022 flood events to make their own submissions.*

Draft Submission

Council staff have prepared a submission (Attachment 1) that responds to the NSW Flood Inquiries Terms of Reference and accords with Council resolution.

The following additional information is also proposed to form part of our submission:

- 5
 - February 2022 Flood Event – photographic story of the flood impact (Attachment 2)
 - Community Roundtable Meeting Notes and submissions from various community groups (Attachments 3 to 5). Note, if further community submissions are received from this meeting prior to uploading our submission these will also be included in Council’s submission package.
- 10 Additionally, responses from 3 Council surveys: ‘Share your flood story’ (15 responses received to date), ‘Flood Height Survey’ (183 responses received to date) and ‘Business Survey’ will be deidentified before including in Council’s flood submission package.

- 15 Council’s resolution notes that we’ll be able to submit at least 2 submissions to the NSW Flood Inquiry. If further data/ information comes to hand, then this can be considered as part of a future submission.

Next steps

- 20 That Council endorse the draft response to the NSW Flood Inquiries Terms of Reference (Attachment 1), supporting information (Attachments 2 to 5) and results received to date from 3 Council surveys: ‘Share your flood story’, ‘Flood Height Survey’ and ‘Business Survey’ as Councils submission to the NSW Flood Inquiry for lodgement online.

Strategic Considerations

Community Strategic Plan and Operational Plan

CSP Objective	CSP Strategy	DP Action	Code	OP Activity
Community Objective 5: We have community led decision making which is open and inclusive	5.3: Deliver a high level of customer service	5.3.1: Enhance external and internal customer service effectiveness	5.3.1.4	Prepare submission/s on draft changes to State government planning policy or legislative reforms

Recent Resolutions

- Resolution **22-156**

Legal/Statutory/Policy Considerations

Not applicable

5 Financial Considerations

Not applicable

Consultation and Engagement

Community Roundtable Meeting held on Tuesday 10 May 2022.

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STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 1

E2022/37795

Submission to NSW Independent Flood Inquiry Byron Shire Council, May 2022

Terms of Reference	Issues	Recommendations
The Inquiry is to consider and report to the Premier on the following matters:		
Causes and contributing factors 1 a. the causes of, and factors contributing to, the frequency, intensity, timing and location of floods in NSW in the 2022 catastrophic flood event, including consideration of any role of weather, climate change, and human activity	Climate Change contribution to changing weather systems Aging infrastructure and superseded standards	Investigation required Revise standards and strategic planning instruments Increase Betterment Funding for future proofing
Preparation and Planning 1 b. the preparation and planning by agencies, government, other entities and the community for floods in NSW, including the accuracy and timing of weather forecasts, current laws, emergency management plans, practices and mitigation strategies, their application and effect	Recent and 2017 flooding has suggested that weather systems are acting in new ways that existing weather models do not understand and struggle to predict.	Discuss with BOM and provide guidance. Consider the need for BOM to provide different forecast products when or if there are unknowns in severe weather predictions to ensure agencies stay on high alert.
	Currently works under Part 5 (REF) processes now need to be referred to emergency agencies, but part 4 applications do not.	Consider if this requirement should be expanded to part 4 applications.
	Local flooding in last 10 years questions validity of the sizing of Annual Recurrence Intervals for rainfall volumes and intensity.	Investigate and provide advice. The 100 year flood event could be larger than we are currently predicting in Australian Rainfall and Runoff.
	A State Government Post Flood Analysis of Bruns, Tallow and Belongil catchments is currently	

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4.1 - ATTACHMENT 1

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Terms of Reference	Issues	Recommendations
	underway. A copy of this will be submitted to the Inquiry once finalised.	
Response to floods 1 c. responses to floods, particularly measures to protect life, property and the environment, including: <ul style="list-style-type: none"> i. immediate management, including the issuing and response to public warnings; ii. resourcing, coordination and deployment, including with respect to the Australian Defence Force; and iii. equipment and communication systems 	Public evacuation warnings were issued too late and multiple warnings were issued during non-waking hours – many residents were asleep and could not evacuate as the town had already been cut off and homes impacted.	Evacuation warnings need to be issued earlier and during waking hours.
	Public evacuation warnings issued by SES directed residents to an evacuation centre that was not operational. This resulted in extreme confusion and distress for residents as well as the informal, ad-hoc operation of the site.	SES needs to confirm that evacuation centre is operational, prior to issuing evacuation directives to residents.
	Evacuation centre was not operational because DCJ staff failed to arrive on site before the town was cut off and did not seek alternative access (e.g. police escort by boat). The site's Manager and 1 staff member catered to the needs of 300+ residents who had been forced to evacuate locally, with issues including: <ul style="list-style-type: none"> - No registration process, therefore no subsequent support available - No covid safety processes, therefore significant covid risk - No supply of bedding/blankets/dry clothes etc. - Limited supply of food/water 	DCJ staff take precautionary approach to schedule arrival on site prior to flood impact/isolation of community. Alternatively, DCJ staff receive priority marine escort to evacuation centre in situations where site has been cut off.

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E2022/37795

Terms of Reference	Issues	Recommendations
	<ul style="list-style-type: none"> No support for people with significant support needs, e.g. disability, covid-positive, significant distress, etc. 	
	<p>Extensive advocacy and escalation was needed before DCJ staff arrived 48 hours into the flood impact. However, the vast majority of centre attendees had already left due to the poor conditions and lack of resourcing and support.</p> <p>Anecdotal information indicates that many of these residents returned home to flood impacted properties (without an SES confirmation it was safe to return), despite the risks and discomfort, as it was preferable to their experience at the informal evacuation centre.</p> <p>DCJ staff then sought to close the site as soon as possible rather than establish effective communications regarding its operational status.</p>	Increased DCJ evacuation centre staffing surge capacity and meaningful collaboration with local communities to ensure safety of residents at operational evacuation centres.
	<p>During emergency events a number of agencies are acting in separation and only combined via the Local Emergency Management Committee (LEMC). This then relies on one person to disseminate information to each agency staff. In large events it is not possible for agency staff to stay up to date with warning, evacuations and more. Further lead agencies were not always in attendance at LEMC / EOC.</p>	Investigate the appropriateness of an agency wide solution such as the EMCOP used in Victoria or other solutions that allow improved and timely information sharing.
	<p>The deployment of ADF teams was slow, cumbersome and committed later than desired.</p>	Early commitment of ADF teams to support responsible agencies should be investigated and pre agreed methods (including templates) developed to

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Terms of Reference	Issues	Recommendations
		ensure methods of obtaining teams is known pre-event.
	Coordination of ADF operations in local communities was deeply problematic. The volume of needs on the ground made escalation through the LEMC prohibitively unwieldy. An online form was trialled (where members of the public could log support requests), however acceptance of the work, indicative timeframes and work completion was not reported back to residents or local organisations. This led to confusion, duplication and inefficiencies. To mitigate coordination inefficiencies, ADF personnel commenced working directly with local organisations, outside formal processes. This was effective in part, however it was challenging for ADF personnel to have a clear source of truth, critically assess or prioritise requests in the chaotic post-impact context.	Clear task coordination processes, supporting documentation and training developed and implemented in local communities.
	Council staffing for emergency event preparedness is currently at the choice of Councils and dependent on capacity and funding.	State or Federal funding should be provided, along with a level of direction to ensure Council have staff dedicated to ensuring systems and processes are maintained and available at all times ready for events. This includes staff training in the use of the systems.
	Despite Council being proactive in this space community still have limited awareness around agency roles and how to access information.	Wider state level education and the EMCOP noted above could help improve this scenario.

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Terms of Reference	Issues	Recommendations
	Flood sirens were investigated as part of a recent Floodplain Management Plan, but were not supported.	Consider the support of sirens as a future response mechanism to support current messaging systems.
	Internal communications in hinterland areas or when mobile networks fail.	Could Council's access the emergency services radio communications network rather than needing to develop its own radio network.
	Wide-scale communications failure exponentially compounds the challenges of responding to flood impacts. For example, Mullumbimby township had no phone communication, no internet (and therefore no EFTPOS available for people to purchase food/water during temporary period of water insecurity) for approximately 1 week following the flood impact.	Identification of local or broader approach to back up communications infrastructure.
	Immediately after the flood Council were struggling to obtain specialist geotechnical advice to open roads impacted by landslips. Most consultant engineers were isolated from Council due to highways being flooded. A number of government organisations had geotechnical engineers driving around or flying in helicopters looking at landslips on private land. Despite requests via LEMC none would help Council and this prevented roads being opened to community but also emergency services.	Various opportunities to investigate: <ul style="list-style-type: none"> • Flood proof highway access • Require government organisations to support Council for urgent inspections and create a process to request the support via LEMC. • Provide Council with access to helicopters to fly our own specialists to the shire.
Transition from incident response to recovery 1 d. the transition from incident response to recovery, including	Transition from response to recovery was unclear and not communicated well between/within agencies e.g. SES. This led to ineffective communication with	Clearer communication processes within and between agencies, with implications of transition to recovery stage well understood by each agency.

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Terms of Reference	Issues	Recommendations
the roles, structure and procedures of agencies, government, other entities and the community	communities about how to progress requests for support.	Agencies are represented at EOC until officially closed and officially Recovery stage reached. Improved training to EOC representatives for role clarity during declared events or activation.
	Agencies were in different modes at the same time. Tweed/Byron EOC remained active for a period of time after Lismore EOC had already moved to Recovery. SES moved to Recovery for both EOC s causing confusion.	
	Some communities were still in incident response phase, yet formal recovery stage commenced (e.g. isolated hinterland communities).	Establish state-wide pool of upskilled staff from areas of state government operations that do not experience frontline impacts, and can be deployed, during large scale disaster events.
	Inadequate human resourcing surge capacity in agencies responsible for recovery phase, e.g. Resilience NSW, local councils, particularly in a wide-scale, catastrophic event.	
	Local councils have a significant role in recovery and additional human resourcing is needed instantly. However, in order to claim expenses under the DRFA, councils need to either recruit external people or redeploy and backfill staff – this doesn't align with operational time demands.	
	Mobile phone and internet service outages were widespread and over an extended period. Emergency messaging with impacted residents was very limited.	Request telecommunication carriers build more resilient networks. The major NBN outage for the region could have been avoided if multiple network paths were available for internet access rather than a single connection point at Woodburn.

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Terms of Reference	Issues	Recommendations
		Consider funding to have portable satellite-based communications services on standby. These could be used for immediate support in the operations of emergency response centres or other emergency work hubs. Equipment examples include satellite phones and satellite internet services such as Starlink.
Recovery from floods 1 e. recovery from floods, including: i. immediate housing, clean-up, financial support and community engagement measures; and ii. longer-term community rebuilding support	Immediate housing options completely inadequate	Scenario planning for surge housing capacity utilising diverse sites and good practice processes.
	Housing options lacking for community members experiencing homelessness prior to the flood, despite their dwellings being impacted.	Increased Temporary Accommodation surge capacity through DCJ processes. Inclusion of people experiencing prior homelessness in all housing responses.
	Clean up of residents' homes led by community members/spontaneous volunteers, therefore wide-spread risk issues, including health and safety, asbestos management, insurance/legal requirements and trauma awareness.	Resourced coordination of spontaneous volunteers.
	Applications for financial support slow to receive approval – many still waiting on outcome of applications.	Process improvement.
	Financial support packages – level of support inadequate to meet needs of families in locations that were already experiencing housing shortages and inflated rental costs. E.g. Rental Support Payment of \$7200 for 2 people to assist with short term accommodation provides about 5 weeks of fully funded accommodation at	Review support packages available, consider tailored packages that acknowledge the extent of flood damage and rental costs in particular areas.

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Terms of Reference	Issues	Recommendations
	\$200/night. At a rate of 50% subsidy, this would be 10 weeks. Many homes will require significantly longer before they can be inhabitable, depending on the extent of the damage.	
	Not enough rated flood gauges. Byron has two flood rated gauges and this is not enough.	SES need to partner with Council to rate all flood gauges to ensure community can understand what water levels mean at each gauge. Funding will be needed to support this action to happen.
	Timeliness of repairs to essential communications network – delays due to access issues, some parts of the community still without reliable phone or internet service several weeks post flood.	Improve resilience of existing networks or consider alternative options (such as satellite)
	Staff education on disaster funding sources, systems, methods and what is fundable, etc. (Additionally for businesses) Funding support information and dissemination delayed due to internet and phone issues. Too much documentation required for some business grant applications and requirement for businesses to pay for certain goods and services then request reimbursement via business grant once over certain amount of grant request not feasible for many businesses- lack of cashflow and difficulty accessing documentation for various reasons; phone and internet connectivity, lack of ID, overwhelm etc	Council's should receive a level of education annually to refresh current staff and educate new staff. Reduce red tape and proof of upfront documentation, improve phone and internet connectivity.

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Terms of Reference	Issues	Recommendations
	Lack of financial support options for workplace visa holders	Consider financial support options for workplace visa holders
	Flood waste collection:	
	Lack of timely direction from EPA on management of hazardous waste such as asbestos amongst other flood debris	Planning for emergency management of asbestos at EPA level with clear guidance and assistance for local Councils on how to handle this amongst large volumes of flood waste on the kerb
	Lack of landfill sites within the region capable of accepting volumes of asbestos	Future sites and landfill cells approved for this purpose
	Local waste transfer station overwhelmed with the volume of waste in the initial week, and forced to close to the general public	Temporary waste transfer sites identified and pre-approved for the purpose of quick and efficient waste removal from flood affected properties
	Disposal of recoverable materials as waste resulting in much more waste going to landfill than is necessary	Communications and education to be developed on the type of material that can be salvaged, keeping whitegoods, hazardous materials and salvageable materials separate. Funding and focus for resource recovery programs at the kerbside
	Community led groups wanting to help with no real mechanism for this to occur	Community groups empowered to salvage and repair goods and materials for return to owner or those in need with financial support to do so and / or to assist

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Terms of Reference	Issues	Recommendations
	<p>Timely advice as to whether “building waste” would be covered under Natural disaster funding arrangements</p> <p>Clarity and clear communication between ADF and Council during clean up phase – multiple points of contact and no follow up</p> <p>Service NSW portal – residents advised to apply for assistance for ADF and other support in cleaning up their properties and businesses and no follow up / closure. After several weeks request referred to Council after which Contractors had finished clean up efforts.</p> <p>Clean up of creek systems and private properties whereby landslips have occurred, or debris washed from other areas onto private land</p> <p>ADF offering support in the form of people power only, in situations where plant and equipment was far more efficient</p>	<p>Clarity at State level on definition and funding for building and demolition from properties affected by natural disaster</p> <p>Scope of what ADF can assist with and how including available resources with direct communication to the manager of the clean up team to avoid multi agency cross over and a more coordinated approach</p> <p>Better management of the portal if this is the mechanism to be used</p> <p>Program developed and replicated to deal with this type of waste and situation. Recognition that creek and other waterways will be affected as well as navigable rivers</p> <p>Greater understanding and appropriate resourcing to assist in the clean up.</p>

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Terms of Reference	Issues	Recommendations
	<p>Public Works engaged Contractors failure to deliver on clean up tasks and communicate resulting in distressed residents and increased workload for Council staff</p> <p>Lack of early recovery phase advice at state level in clean up</p> <p>Competition for Contractors and freight both across internal departments and across neighbouring Councils.</p> <p>Highway blockages resulting in inability for any waste to be transported to a licensed landfill</p>	<p>Pre existing contracts for emergency waste management with clear Contract KPIs and expectations to be delivered.</p> <p>Service NSW / Public Works single point of contact as soon as soon as recovery phase commences to provide advice with oversight of plan at regional level</p> <p>Improved regional coordination of resources</p>
<p>Any other matters</p> <p>1 f. any other matters that the inquiry deems appropriate in relation to floods</p>	<p>The recently announced betterment fund is great way of planning to be more sustainable for the next disaster event.</p>	<p>This should not be a one off and ideally form part of the disaster funding processes already in place. This ensures moving forward we can rebuild with suitable assets rather keep rebuilding assets that risk failure in future events.</p>
<p>And to make recommendations arising from the Inquiry as considered appropriate, including on:</p>	<p>Audit of assets that have been repaired numerous times.</p>	<p>Consider the need to complete audits post event to highlight repeat asset repairs and highlight assets that require betterment.</p>
	<p>Community first responders participated in activities with high levels of risk to both physical and psychological safety, including hiking into dynamic,</p>	<p>Funding for training and resourcing community first responders.</p>

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4.1 - ATTACHMENT 1

E2022/37795

Terms of Reference	Issues	Recommendations
2 a. safety of all emergency service personnel and community first responders	<p>isolated disaster-impacted areas, rescuing residents, obtaining/storing/distributing supplies including fuels, etc.</p> <p>In one instance, community first responders located a deceased person during operations to a disaster-impacted area.</p> <p>First responders also took an active role in early stage clean up e.g. demolishing flood-impacted housing elements (walls/flooring/kitchens, etc), which carried significant risk involving health and safety, asbestos management, insurance/legal requirements and trauma awareness.</p>	
	<p>Lack of first responder/spontaneous volunteering coordination and support by a trusted local organisation.</p> <p>Local organisations that previously oversaw spontaneous volunteering were defunded (cessation of community hub funding) in June 2021 and this systemic gap significantly increases risk associated with spontaneous volunteering during an event.</p>	<p>Reinstatement of community hub funding, or similar, to local organisations for the purposes of spontaneous volunteer coordination.</p> <p>Reestablishment of spontaneous volunteering processes in community.</p>
2 b. preparation and planning for future flood threats and risks	Funding for infrastructure, community resilience and planning	Resilience not only reduces long term costs and damage in future events it also reduces the impacts to community during future events. Recommend increased dedicated funding for the upgrade of infrastructure to more resilient infrastructure at any time. It should not only happen post disaster, if

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 1

E2022/37795

Terms of Reference	Issues	Recommendations
		<p>justified. Funding should be 100% to ensure it is not reliant upon Council funding ability.</p> <p>Support establishment of community lead resilience networks</p> <p>Resilience of essential communication services (internet and mobile phone networks)</p>
	Insurance costs/insurability of properties – impact on property owners unable to secure flood insurance	<p>Review Insurance Industry practices and support to property owners.</p> <p>Expansion of government reinsurance pool scheme into Northern Rivers NSW (similar to what is proposed by Morrison Government for Northern Australia, from 1 July).</p>
2 c. use of flood gauges and other warning structures and/or strategies for improved flood prediction	Funding for the maintenance and upgrade of flood warning systems built, maintained and funded by Council continues to be difficult against all of Councils funding needs and desires.	Appropriate and dedicated annual state funding in two streams; maintenance and upgrade for warning systems is desired. Upgrade would also allow for improving accuracy of warning models and the installation of cameras which the community could view at road crossings etc. As requested in inquiry public meetings.
2 d. impact on essential services, including electricity supply, water supply and telecommunications	Council funds and provides a permanent team of labour and associated plant to maintain the drainage and related flood and storm water shire-wide infrastructure and provide ongoing monthly performance reports	Support from state government

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 1

E2022/37795

Terms of Reference	Issues	Recommendations
<p>2 e. land use planning and management and building standards, including:</p> <ul style="list-style-type: none"> i. the instruments, policies and programs applying to existing development in flood prone locations across NSW; and ii. the instruments, policies and programs applying to proposed future developments in flood prone locations across NSW 	<p>The Standard Instrument—Principal Local Environmental Plan (SI LEP) governs land use zoning for all councils in NSW. Currently the SI LEP does not contain a single hazard zone. This year's catastrophic flooding in the Northern Rivers region created significant land slips across the Byron Shire rural hinterland, with certain areas still inaccessible (by road) and potentially uninhabitable in the future. It is important that the inquiry TORs include a review of the need to introduce one or more appropriate hazard zones in the SI LEP, so that such areas are clearly off-limits to incompatible land uses in the future.</p> <p>The new mandatory 'flood planning' clause inserted into all council LEPs (in July 2021) applies to land within the "flood planning area", which in Byron Shire captures land affected by the 1:100yr ARI event with allowance for projected climate change to the year 2100. In light of this year's catastrophic flooding in the Northern Rivers region, it is important that the inquiry TORs include a review of minimum flood planning standards for those areas most severely impacted (e.g. Lismore, Mullumbimby, Ballina). This should form part of a broader review of the NSW Government's Flood Prone Land Policy, as set out in the NSW Floodplain Development Manual.</p>	<p>That the TORs include a review of the need to introduce one or more appropriate hazard zones in the SI LEP, so that such areas potentially/physically affected by landslip are clearly off-limits to incompatible land uses in the future.</p> <p>State to coordinate and undertake necessary risk assessments of land affected by landslip and prepare hazard overlay mapping (e.g. Coded red - acquisition, amber, green)</p> <p>Building height limits may need to be reviewed to allow flood proofing of existing properties</p> <p>State driven building standards required for flood compatibility and servicing</p> <p>That the TORs include a review of minimum flood planning standards for areas most severely impacted by catastrophic flooding in Northern Rivers Region; AND that this form part of a broader review of the NSW Government's Flood Prone Land Policy, as set out in the NSW Floodplain Development Manual Investigate more proactive awareness or declaration of natural hazard constraints on property during purchase/change of land owner Flood Planning Levels based on risk assessment of catchments</p>

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 1

E2022/37795

Terms of Reference	Issues	Recommendations
2 f. appropriate action to adapt to future flood risks to communities and ecosystems	<p>Community-centred adaptation and resilience requires a collaborative, ongoing community development approach, yet this is not well-resourced.</p> <p>The cost burden of establishing ongoing Disaster Resilience Officers falls to individual councils and can be prohibitive, as post-event recovery roles are funded for 2 years only.</p> <p>Buildings that are not adaptable</p>	<p>Fund Resilience Officers, and associated operational resourcing, for all NSW Councils to ensure a community-centred approach to resilience.</p> <p>Adequate planning and budgeting for adaptation and betterment.</p> <p>Consider a mechanism to not allow concrete slab construction in the floodplain and other design considerations that are not adaptable.</p> <p>Improved active management of waterways required to minimise blockages and maintain healthy banks</p>
2 g. coordination and collaboration between the NSW Government and the Australian Government	Lack of clarity about state/federal agency roles (e.g. Resilience NSW as compared to the NRRRA) and duplication of local presence.	Clarification and communication to local councils about scope of work, alignment and differentiation between ResNSW and NRRRA.
	<p>Federal outreach service delivery (Services Australia mobile bus) was too rigid to integrate with other outreach support or respond to community need.</p> <p>The Services Australia bus had mandated locations and times that were issued by federal staff under Ministerial direction, who were unwilling to coordinate or align with state-based services or locally planned outreach. This created confusion and inefficiency for local communities, disrupted attempts</p>	Collaboration between Federal and State services in response to local community need.

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 1

E2022/37795

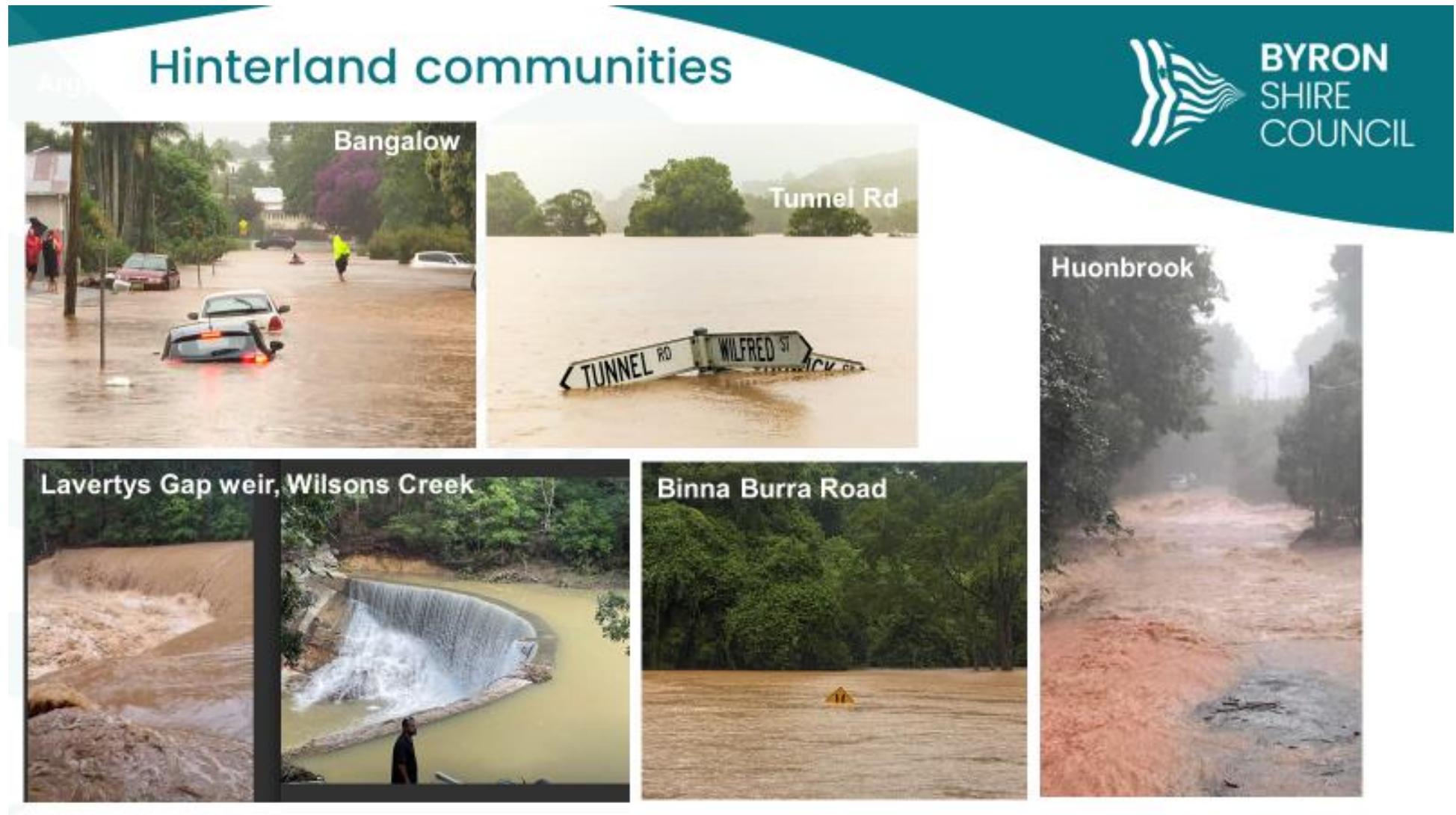
Terms of Reference	Issues	Recommendations
	to enable a 'one-stop shop' and was not person-centred.	
2 h. coordination and collaboration by the NSW Government with other state and territory governments and local governments	Lack of consistency and clear communication from Res NSW regarding planning and implementation of Recovery Centre and outreach planning.	Increased Res NSW surge capacity to enable consistency of personnel deployment to impacted areas.
	Voluntary House Raising and Purchase scheme are very hard for Council to fund and make happen. The expenditure also doesn't save Council money in the future, it saves government and insurers money and protects communities' wellbeing and houses.	A new funding model is urgently needed to 100% fund Voluntary House Purchase schemes and provide 50% of funds to land owners towards the costs of Voluntary House Raising.
2 i. public communication and advice systems and strategies	Refer to comments on this in responses above	

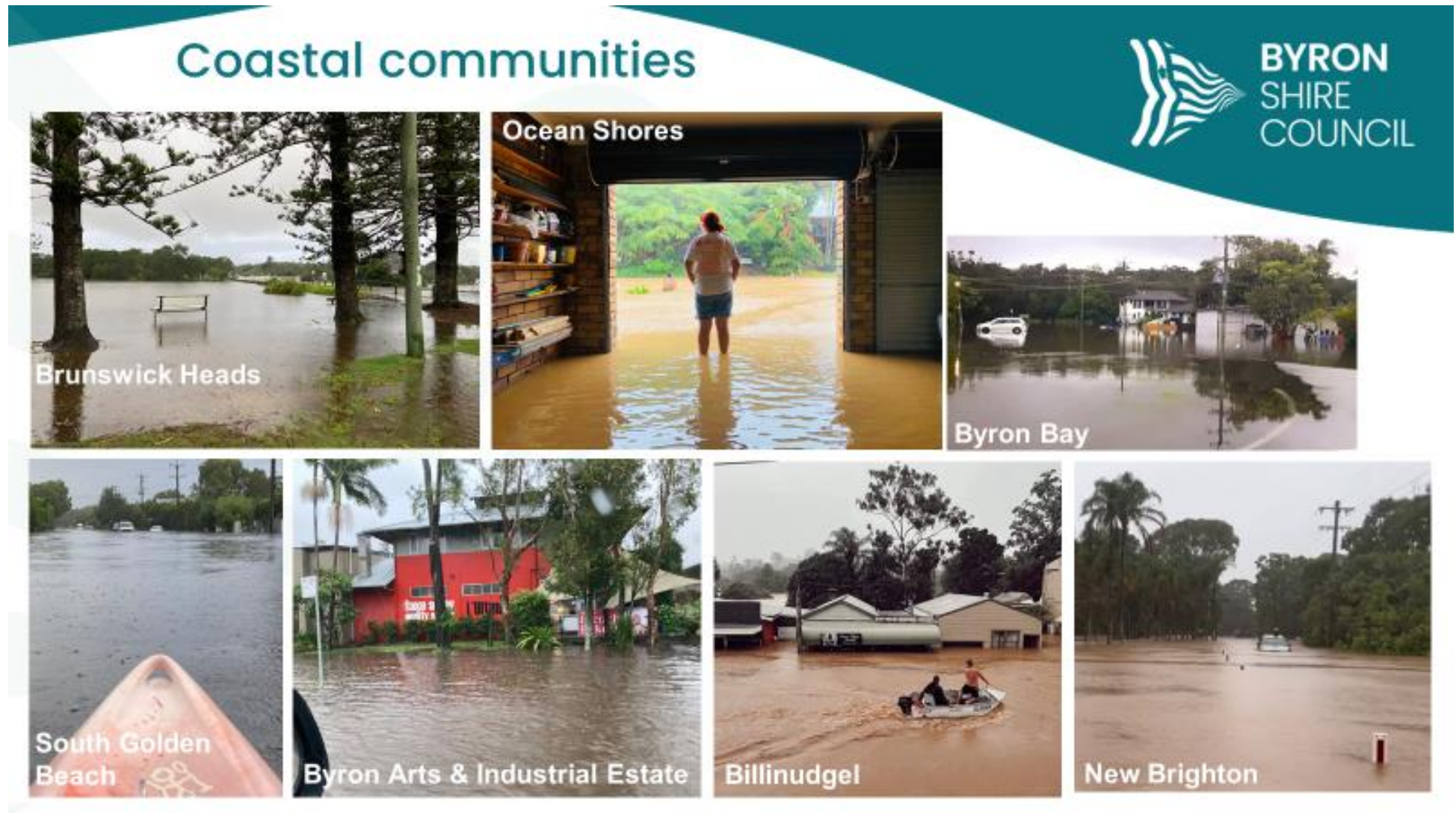
February 2022 Flood Event



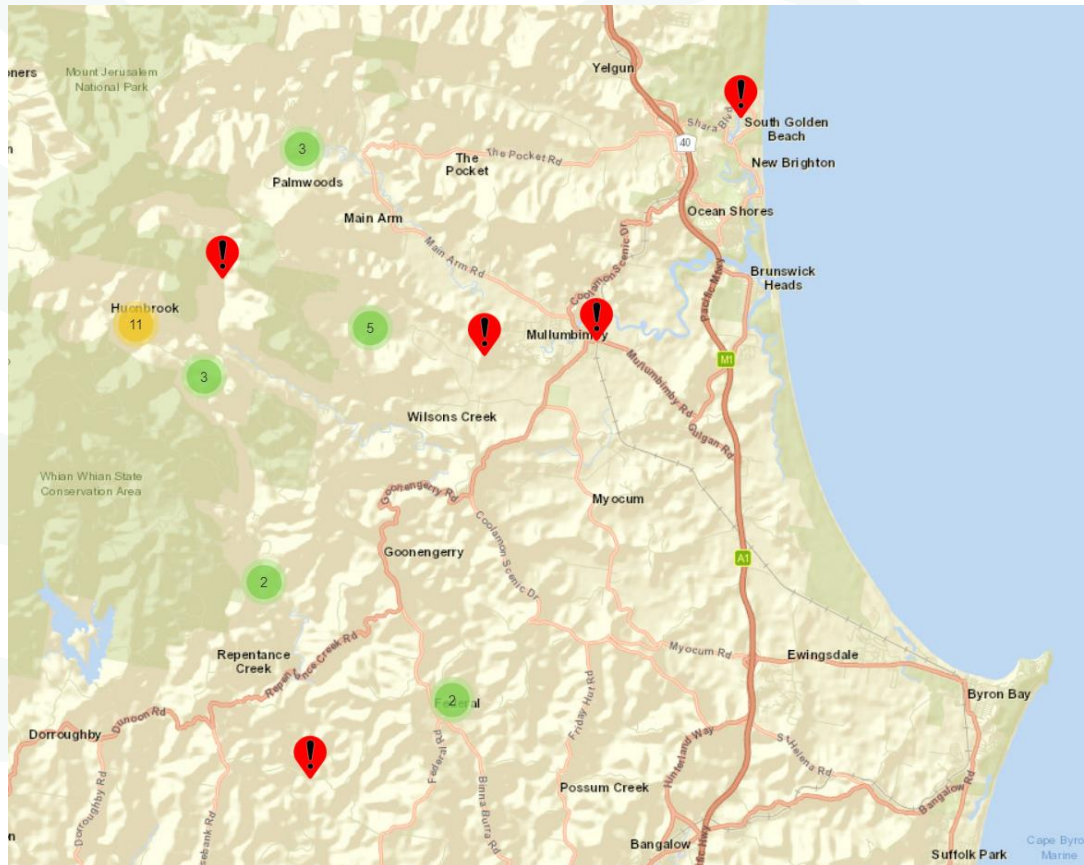
Mullumbimby







Damage Map



Huonbrook / Wanganui



Main Arm / Upper Main Arm



Palmwoods



Wilsons Creek / Upper Wilsons Creek



Upper Coopers Creek



Mullumbimby & surrounds



BYRON
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long-term options for flood impacted communities being considered



- **build back better**
- **build different**
- **build elsewhere**
- **build with infrastructure and services to support the above options – proportionate to community need and available funding**

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 3

Byron Shire Council Flood Inquiry Submission Community Feedback

APOLOGIES

- Magdalena Gustafsson – Suffolk Park Football Club
- Patrician Warren – Foreshore Protection Group

ATTENDING

- Mayor Michael Lyon (Chair)
- Ian Wills – Ocean Shores Country Club / North Byron Chamber of Commerce
- Ron Priestley – MARRA
- Dale Emerson – Mullumbimby Residents Association
- Donald Maughan – Suffolk Park Progress Association
- Michael Sherrington – New Brighton Residents Association
- Asren Pugh – Byron Shire Councillor
- Wendy Chance – Wategos Protection Society
- Patricia Warren – Foreshore Protection Group
- Sharyn French
- Dale Emerson – Mullumbimby Residents Association
- Cr Alan Hunter
- Cr Sama Balson
- Cr Mark Swivel
- Cr Duncan Dey
- Cr Peter Westheimer
- Mark Arnold
- Michael Lyon
- Shannon Burt
- Es Davis
- Annie Lewis

Ian Mills – Ocean Shores Country Club and North Byron Business Chamber

- GM – Country Club integral part of the community.
- Competing interests – need water to maintain the golf course and have several water storage areas (reservoirs) on the course.
- Questions about impact of the water holding areas on local flooding.
- Flood Management study – concluded that lowering of the tide gates would have net impact of around 10mm.
- Don't believe this really contributes to flooding.
- If gates are removed then this would compromise ability of club to store water.
- Would like club's needs to be considered – need water to irrigate the course.
- Prior to rain events in 2020 – drought – exploring avenues to secure bore water – from one extreme to another.
- North Byron Business Chamber – not a lot of consultation.
- Infrastructure has not been maintained.
- Numerous drains all flow into OSCC and only since post flood have we had contact from council re: managing of drains and removing of silt and debris.

Miranda Chance – Wategos Protection Society

- Regarding floods and issues around the Shire – Wategos issues aren't predominantly as bad as the rest of the Shire.
- Just wants to be a part of the conversation and a new member of the roundtable.

- Miranda to send Councillors a list of actions/concerns of the group (generally).

Dale Emerson – Mullumbimby Residents Association

- Karl Allen is the specialist. Dale filling in.
- A document has been prepared and will be sent to the roundtable.
- Residents Assoc has a public meeting on Monday 16 May about the floods...where, causes, factors, responses.
- One thing raised is the railway line and blockage and the drainage works.
- Drainage and flood overflow is a major concern.
- Water is coming in but how does it get out as well?
- Response – in Mullumbimby – the whole effort of the volunteers at Civic Hall, MDNHC and RSL – magnificent...also ongoing work of Recovery Centre.
- Residents Association wants to acknowledge the work of locals and the Council for the clean-up, mud army etc.
- Interested in – causes, factors, but looking for feedback to submit to Council re: voluntary house raising scheme...want to look at how Mullum Residents Assoc can have a dynamic, active house-raising scheme.
- Looking at best practice and less red tape and MARA happy to help council with this.
- Water-proofing of houses that can't be raised.
- Voluntary acquisition of houses that can't be raised/waterproofed etc.
- MARA would like to see a vision of where Mullum is going to be at the next flood.
- Communications in relation to the early warning system, evac routes, where to go and where not to go.
- Second flood – people informed to go to Ocean Shores but people couldn't get there.
- Would like an evac centre that is accessible to Mullum residents and Ocean Shores is not.
- Karl sending in more detailed and scientific submission.

Michael Sherrington – New Brighton Village Association

- Acknowledged the traditional owners.
- Lived in area since 6yrs old. Fair knowledge of area and trained earth scientist.
- We are all different groups – flood drains and flood plains impact all/multiple areas.
- Have compiled historic review of Marshalls Creek – reviewing flood and land form changes from 1947 to recent times which show changes and impacts on drainage systems in area.
- Show changes to drainage patterns that have resulted from development of New Brighton area.
- Allowing excess water from flood inflow to reach the ocean – currently water backfills.
- One member has completed a review of the study and combining the document and happy to share that with Council.
- Group meeting this evening with OS, SGB, NB, Billi – combining to form a single voice for the north of the Shire.
- Location impact of the flood event in relation to NB – has done a prelim model of where the flood heights reached and is getting more information but approx. 60-75cm higher than any previously recorded flood.

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 3

- Came across Gaggin St and was touching back foredune of the beachfront.
- Looking at modelling volume of water
- 50% of houses in New Brighton. Similar in SGB. OS as well but more hilly.
- Responses and recovery – response from Council was fantastic.
- Significant amount of rubbish cleaned up within 2 weeks. Very impressed by community initiative.
- Coastal belt – flood response – SES couldn't get to coastal belt.
- Great to have some local infrastructure that could allow/provide immediate support. E.g. UHF radio networks where everyone has frequencies, establish a small SLS-type response ?? in community centre (boat, emergency kit) so people can get out and about help others quickly.

Action – Michael Sherrington to send through document to Councillors and staff.

Ron Priestley – Main Arm Rural Residents Assoc (as per MARRA submission to Council)

- 7 issues
 1. Near total failure of comms (phones, landline and mobile, couldn't dial 000)
 - Only comms were through local resident with satellite internet via Starlink.
 - ABC radio does not get down local enough; BayFM has reception and should be used for emergencies.
 - Satellite emergency public phones should be available in flood-prone communities.
 2. Kohinur Hall – scoured foundations.
 - Can Council arrange grant for diverting swift water to protect the hall?
 - Can Council inspect all properties and carry out flood mitigation measures.
 3. Upper Main Arm Public School – is closed but locked and going mouldy.
 - Can Council approach Dept of Education to reactivate this vital entity.
 4. Road paving – Council did magnificent and expensive job in immediate repairs.
 - Concrete roads did not fail but bitumen did. All roads below flood level should be concrete so that they will be there post-flood.
 - Council appears to have abandoned concrete for bitumen
 - Council did not allow highly skilled private operators with excellent local knowledge to help/work on reopening houses
 5. Housing – houses lost due to land slips, not directly by flooding. residents need grants, assistance, and temporary accommodation while they rebuild.
 6. Fire APZ clearing rules lead to bare areas that lead to landslips.
 7. Flood mitigation to reduce flood levels are unlikely to succeed.
 8. Landslips leave bare ground. This is an opportunity to replant with natives rather than let the weeds take over.

Donald Maughan – Suffolk Park Progress Association

- Problem with audio. Submission will be sent in.

Patricia Warren – Foreshore Protection Society

- Hope floor-space ratios are looked at, especially in Brunswick Heads.
- Michael Lyon – all the grants are assessable income.

NSW GOVERNMENT FLOOD INQUIRY

LGA: BYRON SHIRE COUNCIL

LOCATION: BRUNSWICK HEADS

WHY NOW AND NOT BEFORE DID THE WATER LEVEL RISE AT NO 3 MONA LANE AND NO 12 RIVERSIDE CRESCENT BRUNSWICK HEADS NSW, FEBRUARY 2022?

SUMMARY: *The low pressure system that had 'stationed' itself off the east coast produced an unprecedented 'rain bomb'. By 28th February 2022 the water table had risen to the surface level following intensive and extensive rains*

Rising water levels at both properties exposed a drainage system that is not fit for purpose and has been in that condition for decades. Whilst it would be impossible to have a drainage system able to cope with the volume and velocity in its catchment in this case, a 'fit for purpose system' would have been able to mitigate storm water damage by allowing it to get away on the outgoing tide before the morning high tide at 7.45hrs.

Natural water storage areas have been infilled for residential development with consequent impacts on the immediate allotments as well as forcing water to find its own level elsewhere either naturally and/or because of inadequate drainage associated with that infill.

Council's LEP has meant that permeable land on residential allotments is being lost to hard surfacing which is exacerbating the drainage issue because the catchment area of the roof tops feeds into the immediate drainage system.

The then Roads and Traffic Authority's engineering in the local area for the M1 dual carriageway has exacerbated the stormwater runoff problem at Riverside Crescent with its 'watershed' configuration at the roundabout and inadequate drainage system from the paper bark swamp on the west to the salty marshes on the eastern side of highway. Water subsequently built up and turned back to find an alternative path to the river.

The collection system to the Brunswick Valley Sewerage Treatment Plant is not fit for purpose in rain events, a condition that has been known for decades. Diluted raw sewage from overflowing gravity mains added contaminants to the rising waters. A properly functioning collection system would have mitigated damage from contaminants, reduced the inflow into the STP and minimized any alleged sewage overflow from manholes.

Siltation of the Brunswick River forces waters from the catchment to find their own level and broke the banks of the river in places on an outgoing tide.

'NORMAL' WET WEATHER CONDITIONS BEFORE FEBRUARY 2022 AT 3 MONA LANE, BRUNSWICK HEADS NSW 2483

1. I have lived at 3 Mona Lane, Brunswick Heads, NSW 2483 for 36 years... It adjoins the Brunswick River to the north and has, until February 2022, been a dry block for that time

2. To the south of the block is Mona Lane. The laneway's gradient is from east to west. The lane's camber is from north to south.

3. There is a large stormwater drain on the western end of Mona Lane with an opening into it on either side of Mona Lane. This drain's purpose is to channel storm water into the Brunswick River.

4. To the east of the laneway is Memorial Park. South and parallel to Mona Lane is Fawcett Street. To the west is Tweed Street

5. Under 'normal wet weather events', storm water pools on the western side of Memorial Park then overflows into the gutters of Mona Lane adding to the stormwater already feeding from the adjoining dwellings into the drainage system. Because of the lane's camber, dwellings no 4 and in particular 2, would get water into their downstairs area. Over the years, No 2 in particular, has used bound rolls of coconut fibre to stop this water. Summed, local knowledge about the drainage system meant that households in the laneway could 'manage' a rainfall event. Being on the higher level of the road camber, Nos 1,3,5 and 7 have never experienced any wet weather problems.

6. A noticeable change in the last couple of years is the impact of a development at No 5. The discharge from this development, in both volume and velocity fills the gutter on the northern side of Mona Lane to within a few millimeters below the storm water outlets from No 3. Previously, there had been a lot of open space on the 1,078sqm block and rain could readily soak through porous soils into the water table. Now, with the extent of hard surfacing rainwater is initially fed into an en-site tank with excess going into the drainage system. Given the high rainfall regime current to the local area, that tank is generally full so storm water continues to feed into the drainage system. Similarly, the renovations/extensions to No 6 Mona Lane have increased the runoff from the now flat roof and ground level hard surfacing. The loss of permeable land under Council's LEP is blatant in terms of its consequences on the infrastructure.

7. The gutters in Mona Lane are not fit for purpose. They are not cleaned and have accumulated silt, sediment and grass so storm water cannot get away efficiently as was intended. This has been the case for decades.

8. The storm water pipes at the end of Mona Lane feeding directly into the river are normally choked with leaf litter which, in part is induced by peoples' behavior.

WHAT HAPPENED IN LATE FEBRUARY 2022

9. By February 28th, there had been extensive rains and the water table at No 1 Mona Lane was at surface level. The extent and intensity of rainfall would be recorded by BOM but those figures are from a rainfall collection point inland from Brunswick Heads at Fairview Farm. However, an indication of the rainfall can be gleaned by looking at the inflow figures on Council's website for the Brunswick Valley Sewerage Treatment Plant (BVSTP) whose collection system includes Brunswick Heads and Mullumbimby.

The design capacity of the BVSTP is 3,800kL/day. Normal Average Dry Weather Flow (ADWF) is 1,300kL/day. The STP has inflow/infiltration problems because the gravity mains are not fit for purpose. Surface water and a rising water table allows water to get into the earthen ware pipes. This means the STP is treating stormwater at inflows above its design capacity. The following daily inflow figures are indicative of the storm water entering the collection system over the relevant period.

DATE	INFLOW kL/day
22.2.22	1,971.09kL
23.2.22	8,438.54kL or 2.22 times design capacity
24.2.22	13,580.20kL or 4.36 "
25.2.22	8,949.11kL or 2.35 "
27.2.22	17,726.86kL or 4.67 "
28.2.22	20,694.40kL or 5.45 "
01.3.22	14,544.50kL or 3.83 "
02.3.22	9,214.47kL or 2.42 "
03.3.22	8,072.30kL or 2.12 "
04.3.22	8,990.85kL or 2.37 "

10. High tide was at 7.45hrs with a height of 1.80m and again at 20.01hrs at a height of 1.25m. However, the water level in the downstairs area of No 3 was rising well before the night time high tide. It didn't pose a problem at the morning's high tide that day.

11. It was obvious earlier in the day that the drainage system could not cope with the volume/velocity of storm water feeding into it. The water level in the gutter at the entry to No 3 Mona Lane was about knee deep but had not entered the dwelling or the undercover garage area.

12. Later, in the day, and adding to the problem of rising water in Mona Lane, was water that had flowed from west to east across Tweed Street from west of Pandanus Court and Byron Street. The area west of Byron Street was originally a swamp. It was filled with material dredged to create the Brunswick Boat Harbour and then developed for residential purposes in Bower and Cudgen and part of Fingal Street.

13. The water coming from the west flowed across into Fawcett Street and added to the volume of water already flowing into the drainage system from the east along Mona Lane. Water also flowed from south to north across and along Tweed Street from approximately the corner of Tweed and Mullumbimbi Street. This water added to the rising waters in Veteran's Lane.

14. Since the drainage system was already unable to cope with the volume and velocity of water flowing into Mona Lane, water flowing south to north down Tweed Street towards Massy Green Holiday Park and Mona Lane acted like a dam. Water backed up. The water level on the western side of the dwelling at No3 was raised and pooled on the lawn to the north. To the south of the block, the garden was virtually covered. Rising water also flowed throughout the downstairs of the dwelling. This was occurring well before the high tide at 20.10hr which meant that rising water levels were occurring on an outgoing tide. There are varying heights between the cement slab and the ceiling under the house. At the highest, the water level was at knee level at the bottom of the stairs on the south of the house to the hob leading into the downstairs area proper.

15. The gravity main was overflowing and diluted raw sewage from the inspection points at No 2 and 3 was also flowing into the water in Mona Lane.

16. No 7 Mona Lane, being slightly more elevated, did not incur any damage. No 6 Mona Lane's downstairs flats only incurred minor damage with water touching the kickboards in each kitchen. No 4 Mona Lane's downstairs garage and flat were damaged. No 2's downstairs garages and bathrooms/laundries were flooded. No 5's basement area filled to waist high. No 3's downstairs area was flooded with water depths of varying levels up to knee level. The two cars, which could not be moved because of the water level in Mona Lane were had water through them. One of the cars was subsequently written off. No 1 Mona Lane's downstairs laundry and garage area was flooded.

17. For the first time in 36 years of living here I witnessed the Brunswick River breaking its banks in front of No 3 only. That break did not extend to any other part of the foreshore. Water pooled in a slight hollow adjoining the foreshore. It caused minor flooding directly from the river with dimensions approx 5m wide x 8m long x 10cm in depth in a convex shape to 1.5m north of the Norfolk Pine.

I am aware that opposite the Brunswick Hotel, the river broke its banks and flowed across part of Banner Park and Mullumbimbi Street to the pub's brick fence. The question is why couldn't the river accommodate the waters from the catchment feeding Simpson's Creek? The siltation of the estuary, together with that elsewhere is known to locals. Over the period of 36 years, the visible evidence of increasing siltation of the Brunswick River has been massive. To give you an example; in 1986 when I first came to Brunswick Heads, I could swim over arm across Simpson's Creek and barely touch bottom at low tide. Now I can walk across that same width at low tide on exposed sand. To the east of No 3, the rock walls, known as the 'dog-leg' have function as a sand catchment area which now extends west to the tip of the eastern rock wall of the caravan park. The one remaining operating trawler in Brunswick Heads oftentimes gets stuck on the extending sand bank.

12 RIVERSIDE CRESCENT, BRUNSWICK HEADS

'NORMAL' WET WEATHER CONDITIONS BEFORE FEBRUARY 2022 –

1. I have owned this dwelling since August 2001. I researched its history before purchasing the dwelling from flood level marks recorded at No 6 Riverside Crescent. No 12 had always been a dry block during all prior flood events. In fact, it was the only dry block within the loop road adjoining the 12 dwellings because the site had been infilled at the time of construction in the early 1970s.
2. The adjoining drainage system is not fit for purpose and no attempt has been made to make it so;
 - (i) There is a deep drain on the eastern side of Ferry Reserve Holiday Park that has been blocked for decades.
 - (ii) There is a shallow drain on the southern side of the holiday park opposite No 12 which similarly has been blocked for decades.
 - (iii) There is a vegetated shallow drain adjoining No 10,11, 12 and 1.

- (iv) There is a vegetation shallow drain adjoining No 6,7,8 and 9
 - (v) There is a deep drain on the southern side of the loop road adjoining dwellings nos 6,7,8,9 and 10. That drain collects water principally from the drainage system on the adjoining agricultural property to the south. It has been blocked/vegetated for decades. During rainfall events it is also influenced by tidal movements.
 - (vi) There is a deep drain across the foreshore on the western side of the loop road opposite No 1 Riverside Crescent. It is vegetated and like all the other drains, not fit for purpose. This drain is on Crown Land.
3. The then RTA constructed a new 'back road' as part of the new M1 to access the 12 dwellings. Prior to that, entry and exit was along the then public road adjoining the foreshore. The gradient of this new 'back road' slopes from east to west promoting surface runoff into a drainage system unfit for purpose. Engineers chose to ignore local knowledge about the drainage system when doing the back road. They also ignored local knowledge about the natural flow of salt water through the paper bark swamp across the area now taken with the M1, to the river.
4. During a rainfall/storm event, No 12 has never flooded be it from stormwater in the drainage system or the Brunswick River breaking its banks along the foreshore. Surveyed height levels for the locale are available in the Plans of Management Ferry Holiday Park December 2013 at Appendix B. Sheet 4 is relevant to the elevation levels. The manhole in front of No 1 is 1.39m. With infill at No 12, this puts the elevation above that and in fact makes it the highest elevated land within the loop road. The allotment has only been recently deemed in a flood study as of 'intermediate' risk.

CONDITONS IN FEBRUARY 2022

5. High tide on 28th February was at 7.45am at a height of 1.80m and 20.01pm at 1.25m
6. Well before the morning's high tide, water was coming from the south-west. Google Earth gives a clear visual of both the natural and man made drainage system in the area. Water used to flow from those drains into the
- (i) natural outlets in the Nature Reserve and enter the river on the eastern side of the highway via the salt marsh flats and paper bark swamp that spanned east and west of the road. The then RTA's poor drainage system for the M1 has been inadequate from the start because it makes it difficult for waters from the west to access the river on the east of the highway. The evidence of how the RTA blocked the natural flow of water through the paper barks and salt marsh swamp is well known to locals because the area was good for mud-crabbing. Once the M1 was constructed the crabs, who are dependent on salt water, no longer inhabit the area.
- On the 28th given poor maintenance of the RTA's drains, plus the inadequacy of them, the water could not get under the M1. Consequently 4hrs before the morning high tide at

7.45am, the waters turned back and onto Riverside Crescent at which time local residents had to open the barricades at Ferry Holiday Park themselves and move vehicles to higher ground. Waters continued to rise well before the high tide.

(ii) the drain on the southern side of the loop road, Riverside Crescent has never been fit for purpose because it is blocked with a mangrove system reclaiming land and trees reclaiming the road reserve. The result was that rising water backed up and sought the lowest pathway to the river. The lowest point in the loop road has to be where water stagnates in front of Nos 11, 8 and 7 Riverside Crescent.

7. A combination of prolonged rainfall, a saturated ground water table at site No 12 meant that stormwater entered the downstairs area of the house.
8. Diluted raw sewage from the gravity main manhole near No 12 would have added to the problem of rising waters given the gradient of Riverside Crescent is from west to east.
9. It is undisputed the river broke its banks at a time after water had already entered the downstairs area of the dwelling.
10. Rising waters was thus a combination of both stormwater runoff and the river breaking its banks during an unprecedented 'rain bomb' event.

Patricia Warren
3 Mona Lane,
Brunswick Heads 2483

04.05.2022

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 5

COUNCIL ZOOM MEETING

MARRA SUBMISSION 10th May 2022

NOTES FOR SUBMISSION

My name is Ron Priestley and I am President of the MAIN ARM Rural Resident's Association MARRÁ. I have been a resident of Upper Main Arm for 50 years and have had extensive experience of floods and recovery

Communications

Problem:- There was a near total failure of communication. Power, landline phones, mobile phone towers, access to Internet via landlines have all failed

As there were no landlines and all mobile phone towers failed it was not possible to dial 000. The 000 network does not seem to have a satellite connection

Solution:-The only communications possible were when a generator was available and the owner had satellite Internet. Residents should be supported in acquiring generators and satellite Internet. Elon Musk's system is available to all whereas the NBN Skymuster system is not

Battery powered radios could receive information from a secure radio station. ABC radio does not cater for small local area problems but Bay FM could be set up with stand-by generators and a flood free site. Bay FM could then act as a clearing house transmitting to the battery powered radios

Also satellite connected emergency public phones could be established in the flood prone communities . These would be similar to the solar powered ones you can find on walking trails in remote National Parks throughout the world.

Kohinur

Problem:- The flood waters raged under the Hall and reached slightly above the lower floor level. The speed of the water was enough to scour the foundations and lead to collapse. The Hall proved its worth during and after the floods as a vital community resource. It is still being used for the emergency

Solution:-As the Owner of the Hall could Council please organize foundation protection for the future. I am a retired Builder and do not expect it would be possible to stop water ingress but a protection design which deflected the fast running water is needed. Still water ingress is far less likely to cause damage

It would be wise if Council were to inspect all its properties and carry out necessary flood mitigation measures

Upper Main Arm School

Problem :-Most of the buildings survived but the old heritage listed original classroom had water run through and there has been minor shifting of foundation piers. No-one has cleaned up the old building and mould is being allowed to grow. The buildings are now fenced off and admittance disallowed There have been previous attempts to close the school but it is a vital resource for the community and closure has been and will be firmly resisted. It is the core of the Main Arm community

Solution:-There was a time when the community would have simply repaired the building already and the school would be up and running again already. But now the "authorities" appear to be doing nothing except encourage deterioration. Please assist in rebuilding and reopening. All the children are now being sent to Durrumbul school whose headmistress is said to be notorious for losing 90% of pupils; reducing enrolments from 40 to 5 due allegedly to mismanagement and poor disciplinary problems.. The Upper Main Arm children should not be subjected to similar treatment

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 5

Concrete road paving

Problem:-The most vital need straight after a flood is to open the roads for vehicle access. Then the community can look after itself without the need for helicopters, food deliveries, medical help and medicines being brought in etc and the community can access all other resources.

Solution:- Council did a magnificent (and expensive) job in emergency repair and filling road wash outs but better prior better construction methods would have avoided much of the necessary work. Council had a programme for gradual replacement of bitumen with concrete pavements in areas where the roads flooded. None of the concrete pavements failed and access was possible to Kohinur as soon as water levels dropped. Numerous bitumen paved roads failed however under the flood waters leading to very serious erosion. The scour outside Kohinur Hall could have held a single decker bus, for example. All floodable roads should be concrete and this I think is the most urgent need of all. Council appear to have abandoned the programme for replacing bitumen with concrete.

There is also a very annoying demand from Council that locals due not use their own equipment for temporary road repairs, tree removal etc but demand we stay without access until Council machinery arrives later. There is a great wealth of good machinery in the valley with operators who have probably had more experience than Council excavator operators in repair of flood damage To demand and even fine local operators who are willing to assist in opening access is downright insulting and regressive.

Dangerous Houses

Problem:- Many houses have failed due to slips and others may be under threat. Authorities are likely to demand demolition, extensive alteration , eviction and bans from re-entering as has happened in Lismore.

Solution:- Residents affected need to be treated properly and fairly with grants, assistance, temporary housing and fair resumption payouts if necessary. Compounding their current misery with draconian edicts such as eviction orders must be avoided

Conflict between fire clearing rules and need to avoid slips

Problem:- There is a Council rule that properties should have no trees for a horizontal distance of 50 metres. These enforced cleared areas have been responsible for exacerbating damaging landslips where the trees have gone.

Solution:-Serious new legislation is required which will preserve and enhance new tree planting. The fire risk in this wet Shire is far less than the danger of slips

Flood mitigation measures unlikely to succeed

Problem: There has been discussion on providing measures to reduce the height of floods by dredging, levees, culverts,ocean outlets etc- As a retired Quantity Surveyor /Builder I know these measures are extremely costly.

Solution:-Many of these measures will only reduce flood levels by a few millimetres and are not worth the cost, and the environmental destruction involved. Therefore they need serious expert input and very careful engineering. It would be a tragedy if all available funds were wasted on such measures. Do not doubt that the recent storm has a massive tsunami like effect which cannot be economically controlled. Measures such as moving and raising houses are far preferable. We cannot hold back these type of flood

Finally

All of the above issue could be further examined and expanded with additional detail