

**From:** [NSW Government](#)  
**To:** [Flood Inquiry](#)  
**Subject:** Floods Inquiry  
**Date:** Friday, 20 May 2022 4:08:26 PM  
**Attachments:** [Northern Beaches Council Submission - NSW Flood Inquiry.pdf](#)

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## Your details

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<b>Title</b>	Mr
<b>First name</b>	Todd
<b>Last name</b>	Dickinson
<b>Email</b>	<input type="text"/>
<b>Postcode</b>	2100

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## Submission details

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<b>I am making this submission as</b>	Other
<b>Submission type</b>	I am submitting on behalf of my organisation
<b>Organisation making the submission (if applicable)</b>	Northern Beaches Council
<b>Your position in the organisation (if applicable)</b>	Director Environment & Sustainability
<b>Consent to make submission public</b>	I give my consent for this submission to be made public

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## Share your experience or tell your story

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**Your story**

Thank you for the opportunity to provide a submission to the Inquiry. A copy of this submission is provided as an attachment.

The Northern Beaches experienced a major flooding event on the 8 March with Manly Lagoon recording its highest water level since records commenced in the 1940s.

In terms of cumulative totals in the lead up to the 8 March event, 336mm fell from 6 – 9 March (4 days) representing over 30% total annual rainfall, 519mm fell between 22 Feb to 7 March representing 47% of annual rainfall, with over 70% of annual rainfall from 1 Jan to 7 March. The 8 March event was the most significant in a number of storm and coastal erosion events throughout February and March with over 170mm falling in a 6hr period which was substantially higher than all available forecasts for the area.

According to the limited Damage Assessment undertaken by the emergency services, over 200 properties sustained damage due to localised flooding/inundation, primarily in the Manly Lagoon catchment area and including a small number in the Narrabeen Lagoon catchment. This is considered an underestimate due to limited resources available to undertake a thorough damage assessment in other impacted areas. Numerous additional properties were also affected by overland flows.

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**Terms of Reference (optional)**

The Inquiry welcomes submissions that address the particular matters identified in its [Terms of Reference](#)

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**1.1 Causes and contributing factors**

Historic strategic planning decisions and the need to provide land to accommodate population increases has resulted in an increased number of people in our community living in areas affected by natural hazards.

Large areas of flood prone land were historically used for low intensity land uses such as agriculture, nurseries, holiday homes and the like, however during the early to mid-1900's these areas commenced their transition to the current urban form as a result of the increased demand for housing.

Over the decades, development creep combined with increased property values and the desire to live near the water has increased exposure. The cost and/or rejection of insurance cover for land affected by natural hazards such as flooding has increased the risk to our community of significant (if not devastating) financial losses. We've heard from our community that annual flood cover premiums can exceed \$18,000 making it cost prohibitive for a large portion of the community. Population growth and housing demand, increasing property prices and climate change will continue to be key drivers of increased risk exposure. All levels of government will need to work together to employ a suite of adaptive and mitigative actions to limit the exposure of our community.

This includes a more focussed approach within the strategic planning phase to afford better consideration of hazard management at the highest level of the land use planning framework. It is often the case Councils are left to the deal with these matters from a mitigation perspective at the development application stage rather than the preferred approach of risk avoidance, which is often too late in the process. This needs to be driven by the NSW Government to ensure there is a consistent approach in managing natural hazards across the state.

In terms of the causes of the event itself, the BoM rainfall forecast for the area for 8 March was for falls of between 50 to 80mm (the bulk of which were expected before 9am). Because forecasts in surrounding areas were so high (e.g.

Wollongong) staff had been monitoring the rainfall overnight and continued through the morning in case further action was required. Actual rainfall totals were significantly higher than forecast and occurred later than forecast. Critical rainfall periods include:

- 110mm between 8am – 11am (3hrs)
- 174mm between 6am – 2pm (9hrs)

The intensity of this rainfall approached and/or exceeded a 1%AEP event in a number of catchments including the Manly Lagoon catchment. While it led to significant flooding around the Manly Lagoon area, it also overwhelmed stormwater networks and overland flowpaths leading to significant inundation across a broader area. The rapid escalation of the event is typical of flash floods and highlights the need for reliable real-time forecasts and efficient issuing of warning and/or orders by relevant agencies.

Manly Dam plays an important role in reducing the inflows to Manly Lagoon from Curl Curl Creek which is one of the 3 main tributaries for the lagoon. While Council had its release valves open at the Dam to reduce water levels non-stop for weeks before the event, the persistent storms and inflows meant the water levels would rise faster than the time it took to drop the levels. Council worked with other stakeholders who also have valves to increase the amount of water being released, however the continuing rainfall on a saturated catchment meant that inflows continued to exceed the outflows, and the Dam wall overtopped (noting the Dam is only 1 of 3 tributaries to Manly Lagoon).

The extreme forecasts for adjoining forecast areas (e.g. Wollongong) were more like what was experienced on the Northern Beaches (rather than what was actually forecast locally). Given this, it may be appropriate to change processes so that combat agencies are on a

dual footing. For example, if the local forecast is benign, resources are not put on the ground, however if in addition to a benign local forecast, the forecast for an adjoining area is extreme, resources are called together at a forward location for rapid deployment. This is important in a flash flood environment.

#### Recommended Review Areas

1. NSW Government support Councils across NSW to establish clear consistent planning controls that assist in reducing the physical and financial exposure to natural hazards in a changing climate including limiting the intensification of development, inappropriate development and incompatible land uses in areas affected by natural hazards such as flooding.
2. The NSW Government review the findings and recommendations of the Natural Disaster Insurance Review 2011 and implement where appropriate.
3. Expand the Australian Government's Reinsurance scheme to provide insurance cover for existing properties within flood prone land (and other natural disasters) that are uninsurable or where insurance is cost-prohibitive.
4. NSW Government develop a flood adaption/mitigation grant program that the community can access to increase the resilience of private property.
5. NSW Government agencies reconsider the way resources are deployed in areas known to be affected by flash flooding to cater for situations when if forecasts are exceeded, resources are available for rapid deployment from a forward operating site.

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## **1.2 Preparation and planning**

### NSW SES Resources

The Northern Beaches has dedicated and committed emergency service volunteers across all of the relevant combat agencies, including the NSW SES. Council has an excellent relationship with its local NSW SES generally and in the LEMC and EOC settings. Volunteers do an



excellent job especially given the limited local specialist resources available to them. Without their commitment and dedication, the impact on the community would be significantly higher.

However, the NSW SES as an agency relies heavily on these volunteers to fill critical positions that arguably should be professional salaried roles that address key skill needs. Without this, volunteers are placed in a difficult position trying to find balance between the substantial demands of their volunteer role (and the increasing expectation for specialist skills) and the competing interests of their civilian lives. This can affect not only the completion of strategic work, but may also affect the timing of advice and deployments.

This type of arrangement can limit the capacity and in turn the capability of volunteer agencies to adequately focus on local strategic emergency planning through all stages of the prevention, planning, response and recovery spectrum. Consequently, much of this strategic emergency planning, such as the preparation of Flood Plans etc, ends up being centralised and coordinated through the Metro Zone region. As this region covers much of the Sydney Metropolitan area, there are significant competing demands for resources which makes it difficult to commit to, deliver and implement strategic disaster initiatives at a local level.

Increased resources in the form of paid personnel at local levels would be expected to improve flood prevention, planning, response and recovery outcomes and reduce overload at the regional level. By doing this at a local level (in a similar way to the NSW RFS) a local specialist group can be created with intricate knowledge of their respective local areas and who can build local knowledge and understanding at that level.

NSW Floodplain Management Grants

Many NSW Councils rely heavily on the NSW Floodplain Management Grant Program to deliver flood mitigation programs to reduce risks to their communities. However, delays of between 6 – 12 months before being informed of the outcome of grant applications make it difficult to plan and deliver flood mitigation strategies within an appropriate timeframe.

Like many coastal Councils, dredging of waterways and the entrances to coastal lagoons forms a significant yet cost prohibitive mitigation action within a flood mitigation program. Under the current guidelines funding for dredging activities is often not supported on the basis that this is an asset maintenance activity, despite in many cases being the most cost-effective option to manage significant flood risk (and having been used for many years as a proven strategy).

During the 8 March event, flood risk was substantially reduced at Narrabeen Lagoon as a result of Council deciding to unilaterally fund and implement lagoon entrance dredging in the months before the event. This dredging program has been two-thirds funded by the NSW Government for decades, before being recently ruled ineligible by NSW grant staff on the basis that it was maintenance work (apparently made by the NSW grant staff rather than NSW technical flood staff). Had Council not taken the unilateral decision to fund and implement the works itself, substantially worse flooding may have resulted.

#### Recommended Review Areas

6. Increase the capacity of the local NSW SES through the appointment of paid personnel in critical roles with appropriate training in any additional skills required to manage hazards relevant to the local area.
7. Improve NSW SES flood intelligence capability through intensive flood management training relevant to their area of operation, and

access to real-time predictive data/tools.

8. NSW Government to reduce the assessment time and approval regime for applications under the NSW Floodplain Management Grant Program.

9. Include dredging as an eligible flood mitigation activity within the NSW Floodplain Management Grant Program.

10. Increase the weight of NSW Government subject matter/technical flood experts in decision making on hazard mitigation grant programs.

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### **1.3 Response to floods**

#### Evacuation Management

A number of potential issues were identified in relation to the evacuation management processes (warnings through to orders) during this event. On the morning of 8 March, recommendations were made to the NSW SES to forward deploy resources and/or commence an evacuation process due to the potential for flooding in Manly Lagoon. It does not appear that any official evacuation warning or order was issued regarding the flooding of Manly Lagoon, notwithstanding some social media updates from local units (which obviously have limited reach).

The issuing of emergency warnings is considered an important mechanism for the community to manage some of the risks to themselves and their properties. Delays in commencing this process, can make it harder to evacuate and/or reduce property damage. This is particularly relevant in areas identified as low flood islands where all access roads are inundated leaving the only evacuation option via flood rescue craft and the like. Council understands the process and delegation for issuing warnings/orders appears to be a reflection of NSW SES head office arrangements rather than a reflection of the efforts of our hard-working local NSW SES units.

As a further example of the need for timely warnings and the importance of local NSW SES knowledge/delegations, water levels in Manly



Dam exceeded the “Amber Alert” and approached the “Red Alert” thresholds under the Manly Dam Safety Plan which requires the NSW SES to issue an Evacuation Warning to all downstream properties. Council understands that this is also controlled by higher levels of the NSW SES rather than local units. An Evacuation Warning was issued for downstream areas approx. 2.5hrs after dam levels peaked (and after lagoon levels had already peaked leading to significant flooding of downstream homes) by which time dam level commenced receding. It is recommended that the dam alert process be reviewed to ensure that this essential process is delegated as close to the local level as possible to allow for rapid decision making and action.

The non-issue or delay in the issuing of evacuation advice is likely due to a combination; the need for improved NSW SES head office understanding of local flood conditions and processes (essential in a flash flood setting), and/or the centralised approvals process through the chain of command at region level. Other combat agencies appear to have considerably more flexibility and responsibility at a local level in relation to issuing relevant advice/warnings, which allows for rapid and well-informed local decision making. The delegation could be made a joint decision between say the local SES controller and the LEOCON to provide head office with more assurance of any evacuation recommendation.

In summary, in situations where regional/head office resources are stretched, centralisation of approvals risks delays to the timely commencement of evacuation processes. For the avoidance of doubt, this is not a reflection of the hardworking volunteers in our local NSW SES units, rather an issue for NSW SES management to resolve. Council would be happy to assist in any review of these processes if it were helpful.

### School Closures

A number of schools throughout the LGA closed of their own accord due during the severe weather conditions. This resulted in a significant increase of traffic in dangerous conditions during the height of the storm event, with some residents driving through flood waters to reach the school students following reports of schools contacting parents to pick up children as buses were being cancelled.

It is recommended that the NSW Department of Education engages with schools (public and private) to further develop their emergency management plans to ensure students, staff and carers are not placed in at risk situations for Department of Education assets that experience natural hazards such as floods. Further, it would be appropriate for regular drills/training so that there is a common understanding among staff, students and parents about the protocols for such events (however rare they may be).

The NSW SES Policy of mandatory evacuation is understandable for flooding events in regional areas where flood levels persist for days and weeks on end. However, the nature of flooding on the Northern Beaches is characterised as predominately flash flooding whereby flooding conditions can occur in less than 2 hours with a duration of between 6 – 24 hours.

Whilst evacuation should always remain the primary strategy when community members are afforded time to undertake this, in a flash flooding environment evacuation may not be possible. There is a need for other fallback strategies such as shelter in place, to be implemented particularly where evacuation places people in higher risk situations.

In previous events, school students have been evacuated from a property around Narrabeen Lagoon, despite being in a safe location. With no

risk of flood waters entering they were evacuated from the site, taken by flood rescue craft to an assembly point to be collected by their carers. These types of decisions can inadvertently place vulnerable persons into more risky situations where shelter in place was a safer option.

#### Flood Monitoring Program

The Manly Hydraulics Laboratory's (MHL) Northern Beaches Flood Monitoring Program is funded by Council with over \$80,000 per annum for the maintenance of this system. This system is critical as it provides data and modelling capability to inform operational decision-making during a flooding event. Council's Incident Management Team and Emergency Management personnel rely heavily on this data to monitor and respond to events as they unfold.

During the 8 March event, parts of the Northern Beaches flood monitoring system were not operational during a critical period of the emergency. Council and emergency services had to revert to sending staff into the field to obtain physical flood intelligence during the middle of the event. The MHL system is critical to prediction and response in a flash flood environment and outages of this system during flooding events seem to recur which suggests that there is a lack of in-built redundancy.

In addition, the systems appear to be designed to provide water level and rainfall updates on a 15-minute cycle. During a flash flood, these timeframes can make a significant difference to the timeliness of warnings to potentially affected properties (particularly given the issues experienced in NSW SES warnings being given as described above). Real time data provision with multiple redundancies is a reasonable expectation in flash flood settings and it is recommended the NSW Government give consideration to increased investment in systems and tools to support its own combat

agencies, local Councils and the surrounding community.

Further it is recommended that the NSW Government review the operation and deployment of these systems across the state to improve frequency, consistency, reliability, and redundancy to create a “best of breed” flood intelligence system regardless of the level of investment that can be provided by an individual Council. As with the above comments on the NSW SES, Council’s local relationship with MHL is excellent and MHL staff provide support at all hours where Council requires it. However, there are systemic issues that the NSW Government needs to understand and appropriately manage.

#### Landslides

The Northern Beaches LGA experienced over 200 landslides/landslips as a result of the intense rainfall in late February and through March. Unfortunately, there is ambiguity regarding the responsible agency for managing responses to landslides. Whilst Council took carriage for the response to these incidents under the LEOCON, the NSW EMPLAN is unclear on who the combat agency is depending on the circumstances. The plan states that the LEOCON is responsible for “Other emergencies not designated to a combat agency”, however as landslides were a consequence of a storm it may be argued that the NSW SES is the combat agency.

Given the significance of landslides across the state, the risks to life and property in addition to the ambiguity of the nominated combat agency, this hazard warrants the development of a Sub Plan to clearly articulate roles and responsibilities.

#### Recommended Review Areas

11. NSW SES to review evacuation processes including appropriate delegations to the Local NSW SES Commander to issue evacuation



advice.

12. NSW Government to invest in and manage a more comprehensive real-time flood monitoring network across the State.

13. Review the adequacy of landslide/rockfall roles and responsibilities within the NSW Emergency Management framework and consider the creation of a Sub Plan to clearly articulate roles and responsibilities.

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**1.4 Transition from incident response to recovery**

**Welfare Services**

Our past and most recent experiences have shown that despite multiple agencies (WELFAC, DCJ, Resilience NSW) claiming to have responsibility for welfare arrangements in NSW, there remains significant inconsistencies, confusion and gaps in relation to the actual roles and responsibilities between these agencies when responding to and recovering from an event.

Whilst WELFAC were excellent in providing assistance to evacuees at the Evacuation Centres (noting that an evacuation order was not issued and that only limited numbers seek refuge as they primarily seek support from friends and family), further assistance was requested to support a number of individuals. This was denied on the basis that WELFAC do not provide assistance for “individual local matters”. It appears that there are inconsistencies in the support provided to those who attended evacuation centres, compared to those who did not, yet were still displaced requiring assistance. As such, Council and our local community services partners were required to fill this gap without any prior knowledge, expectation or training to step into this role in the middle of the emergency.

A significant challenge faced by affected residents, Council staff and local service providers when providing support to residents was navigating the Service NSW process for accessing accommodation support and



achieving a desirable outcome. A review of the effectiveness of this process is required.

Once flood levels receded, there was an immediate need for waste to be removed from inside affected properties before it became hazardous (i.e. the simple act of removing spoiled assets from the house to the kerb – the collection of this was is covered later in this submission). Whilst this would typically be an activity undertaken by the insurance companies, they were unable to mobilise within this timeframe given they were constrained due to concurrent events. Requests were made to emergency services however they advised that resources were at capacity given the deployment of resources to other affected areas. Therefore, there remains this gap in what is a critical immediate recovery activity.

The Welfare Services Functional Area Supporting Plan was last updated in 2018, does not refer to the role or responsibility of Resilience NSW, and only considers Local Government as “Other Stakeholders”. Our latest experience does not align with the Supporting Plan where Council was expected to be the primary welfare provider. Local community service providers are not subject to the Plan and in many cases do not have the experience, resources or surge capacity to deal with natural disaster events as they are in many cases struggling to meet the demands of their existing client base under current funding.

It is necessary for the Welfare Services Functional Area Supporting Plan to be subject to a complete review and to clearly articulate the roles and responsibilities of all parties subject to the plan. Should Local Government’s role change within the plan (subject to engagement), this must be accompanied with training, resources and funding to ensure that we are able to effectively respond to needs of the community

following events. This also needs to be extended to our local community service partners to ensure they are adequately equipped to deal with crisis events.

#### Recommended Review Areas

14. Review and update the Welfare Services Functional Area Supporting Plan in order to clearly define the roles/responsibilities between the various NSW Government departments.
15. Review available assistance to displaced flood affected persons irrespective if they present at evacuation centres, seek refuge at other locations or remain in-situ.
16. Should further responsibility be given to the local government for welfare assistance, the NSW Government must provide funding and training to assist Council to develop the capacity of local service providers to provide assistance during a natural disaster.
17. Review the Service NSW disaster assistance process to ensure it is fit for purpose, easy to navigate and is customer centric.

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### **1.5 Recovery from floods**

#### Grant Management

The Northern Beaches was not included in the Back Home grant despite sustaining comparative damage, and in many cases worse than other included areas. Requests to Resilience NSW to include the Northern Beaches in this grant program were denied on the basis that additional LGAs included were adjacent to, or related to areas of significant flooding, such as Lismore/Hawkesbury etc.

It is considered that any flood-affected community, regardless of location should have equal access to grant programs of this nature.

#### Disaster Funding Arrangements

One of the principal challenges facing Councils during the recovery phase, is the disaster funding process referred to as the NSW Natural Disaster Relief Arrangement (NDRA) which is supported by the National Natural Disaster Relief

and Recovery Arrangements (NDRRA). The level of detail required to accompany a submission particularly for emergency clean-up activities is extremely onerous and in no way aids the recovery process.

The practicalities of the current funding arrangements make the emergency response and recovery process far more complicated particularly given councils rely heavily on contractors to undertake clean-up activities. There is genuine concern that any attempt to require councils to provide additional evidence during adverse working conditions, is likely to significantly increase response and clean up time and add substantial cost for their services due to the data management requirements.

To further complicate matters, there are many different government agencies involved in the administration of disaster funding. This adds significant administrative burden, confusion and inconsistency in the process.

It is strongly recommended that the current disaster funding process be reviewed in its entirety and amendments made that streamline, not complicate the recovery process. It is recommended that a new process be designed in consultation with local government as the key drivers of recovery.

The NSW Government should also consider providing upfront payments to disaster affected councils to assist manage immediate cashflow constraints.

#### Flood waste management

As with many Local Government areas affected by flooding, one of the biggest challenges during the recovery phase was the management of flood waste. Council managed the flood waste recovery unaided as Requests to NSW Public Works Advisory to assist with flood waste

management were denied as they were at capacity due to concurrent flooding emergencies in NSW.

Council removed over 430 tonnes of flood damaged waste from approximately 1,430 private properties placing significant pressure on internal and contractor resources, in combination with trying to maintain the demands of business-as-usual waste services. There were additional impacts associated with access to local landfill sites at Terrey Hills due to the impact of the intense weather and flooding, significantly delaying disposal of waste with flow through impacts on supply chain, affecting program efficiency and speed.

Of particular note is the reliance on transport of waste out of the Sydney basin (i.e., rail from Clyde to Woodlawn) which impacts the whole network including other landfill operators. While this did not directly affect Council's operations, it affected the resources of our waste contractors and processors which had the potential to significantly impact a core civic service.

#### Recommended Review Areas

18. NSW Government to review the disaster grants process to ensure disaster affected communities have equitable access to disaster assistance.
19. NSW Government to review the NSW Natural Disaster Relief Arrangement with consideration for upfront payments to disaster affected councils and streamlining of the suite of assistance packages.
20. NSW Government to investigate surge capacity to ensure local governments are afforded assistance to manage flood waste recovery and provide clear guidance on the circumstances in which it will assist.
21. NSW Government to assist local government prepare emergency waste management plans to provide a better understanding of roles and



responsibilities in the event of major emergencies.

22. NSW Government establish a 'single point of contact' for coordination of state government advice and assistance for Local Government to access potential funding/grants or other assistance with dealing with emergencies in a timely manner.

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**1.6 Any other matters**

Impact Assessments typically only include data derived from a Damage Assessment completed by the relevant combat agency. It is often the case impact assessments only provide a high level of detail due to the unavailability of data in addition to resources available to complete the assessment. Economic impacts usually only involve evaluating costs associated with emergency work or remediation of critical public assets as part of the disaster funding arrangements. The broader financial impacts associated with damage to private assets or economic loss are often difficult to evaluate due to limited data available.

The role of local government in all areas of emergency management is not well described and generally does not align with the realities of its responsibilities. Councils invest significant resources in the mitigation of, response to and recovery from emergencies, however these responsibilities are not adequately reflected in the State Emergency & Rescue Management Act, 1989 (SERM Act) and supporting plans.

For example, whilst the State Emergency Management Plan (2018) formally recognises the position of the Local Emergency Management Officer (LEMO), this is however not reflected in the SERM Act leading to misinterpretation as to the expectations of the role. It is recommended that the position of LEMO be formally included in the SERM Act to address this issue.

The Personal Liability provisions as prescribed



under s62 of the SERM Act do not apply to local government agencies despite the LEMO and other staff providing significant support to emergency services during an event, potentially leaving them unprotected from personal liability, particularly in an environment where there appears to be an increasing reliance on the LEMO to support the governance and administration of emergency management in their local area. Whilst personal liability provisions exist under the Local Government Act, 1993 it is important to ensure there is consistency with these provisions and those under the SERM Act in order to remove any potential exposure of council staff operating under the SERM Act. It is therefore recommended that the SERM Act be amended to include local government employees, and specifically the LEMO under the provisions of s62 of the Act.

#### Recommended Review Areas

23. Mandatory reporting requirements for insurance companies to provide post-event insurance claim information to the LEMC to understand the type, extent and value of damage caused by a natural hazard. This needs to be provided on a Local Government Area basis to assist with reporting requirements.

24. The SERM Act be amended to include local government employees, and in particular the LEMO under the provisions of s62 of the Act.

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### Supporting documents or images

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#### Attach files

- [Northern Beaches Council Submission - NSW Flood Inquiry.pdf](#)
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## NSW Flood Inquiry – Northern Beaches Council Submission

### Background

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### Causes and contributing factors

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## **Preparation and planning**

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However, the NSW SES as an agency relies heavily on these volunteers to fill critical positions that arguably should be professional salaried roles that address key skill needs. Without this, volunteers are placed in a difficult position trying to find balance between the substantial demands of their volunteer role (and the increasing expectation for specialist skills) and the competing interests of their civilian lives. This can affect not only the completion of strategic work, but may also affect the timing of advice and deployments.

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## NSW Floodplain Management Grants

Many NSW Councils rely heavily on the NSW Floodplain Management Grant Program to deliver flood mitigation programs to reduce risks to their communities. However, delays of between 6 – 12 months before being informed of the outcome of grant applications make it difficult to plan and deliver flood mitigation strategies within an appropriate timeframe.

Like many coastal Councils, dredging of waterways and the entrances to coastal lagoons forms a significant yet cost prohibitive mitigation action within a flood mitigation program. Under the current guidelines funding for dredging activities is often not supported on the basis that this is an asset maintenance activity, despite in many cases being the most cost-effective option to manage significant flood risk (and having been used for many years as a proven strategy).

During the 8 March event, flood risk was substantially reduced at Narrabeen Lagoon as a result of Council deciding to unilaterally fund and implement lagoon entrance dredging in the months before the event. This dredging program has been two-thirds funded by the NSW Government for decades, before being recently ruled ineligible by NSW grant staff on the basis that it was maintenance work (apparently made by the NSW grant staff rather than NSW technical flood staff). Had Council not taken the unilateral decision to fund and implement the works itself, substantially worse flooding may have resulted.

### Recommended Review Areas

6. Increase the capacity of the local NSW SES through the appointment of paid personnel in critical roles with appropriate training in any additional skills required to manage hazards relevant to the local area.
7. Improve NSW SES flood intelligence capability through intensive flood management training relevant to their area of operation, and access to real-time predictive data/tools.
8. NSW Government to reduce the assessment time and approval regime for applications under the NSW Floodplain Management Grant Program.
9. Include dredging as an eligible flood mitigation activity within the NSW Floodplain Management Grant Program.
10. Increase the weight of NSW Government subject matter/technical flood experts in decision making on hazard mitigation grant programs.

## Response to floods

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### Evacuation Management

A number of potential issues were identified in relation to the evacuation management processes (warnings through to orders) during this event. On the morning of 8 March, recommendations were made to the NSW SES to forward deploy resources and/or commence an evacuation process due to the potential for flooding in Manly Lagoon. It does not appear that any official evacuation warning or order was issued regarding the flooding of Manly Lagoon, notwithstanding some social media updates from local units (which obviously have limited reach).

The issuing of emergency warnings is considered an important mechanism for the community to manage some of the risks to themselves and their properties. Delays in commencing this process, can make it harder to evacuate and/or reduce property damage. This is particularly relevant in areas identified as low flood islands where all access roads are inundated leaving the only evacuation option via flood rescue craft and the like. Council understands the process and delegation for issuing warnings/orders appears to be a reflection of NSW SES head office arrangements rather than a reflection of the efforts of our hard-working local NSW SES units.

As a further example of the need for timely warnings and the importance of local NSW SES knowledge/delegations, water levels in Manly Dam exceeded the “Amber Alert” and approached the “Red Alert” thresholds under the Manly Dam Safety Plan which requires the NSW SES to issue an Evacuation Warning to all downstream properties. Council understands that this is also controlled by higher levels of the NSW SES rather than local units. An Evacuation Warning was issued for downstream areas approx. 2.5hrs after dam levels peaked (and after lagoon levels had already peaked leading to significant flooding of downstream homes) by which time dam level commenced receding. It is recommended that the dam alert process be reviewed to ensure that this essential process is delegated as close to the local level as possible to allow for rapid decision making and action.

The non-issue or delay in the issuing of evacuation advice is likely due to a combination; the need for improved NSW SES head office understanding of local flood conditions and processes (essential in a flash flood setting), and/or the centralised approvals process through the chain of command at region level. Other combat agencies appear to have considerably more flexibility and responsibility at a local level in relation to issuing relevant advice/warnings, which allows for rapid and well-informed local decision making. The delegation could be made a joint decision between say the local SES controller and the LEOCON to provide head office with more assurance of any evacuation recommendation.

In summary, in situations where regional/head office resources are stretched, centralisation of approvals risks delays to the timely commencement of evacuation processes. For the avoidance of doubt, this is not a reflection of the hardworking volunteers in our local NSW SES units, rather an issue for NSW SES management to resolve. Council would be happy to assist in any review of these processes if it were helpful.

### **School Closures**

A number of schools throughout the LGA closed of their own accord due during the severe weather conditions. This resulted in a significant increase of traffic in dangerous conditions during the height of the storm event, with some residents driving through flood waters to reach the school students following reports of schools contacting parents to pick up children as buses were being cancelled.

It is recommended that the NSW Department of Education engages with schools (public and private) to further develop their emergency management plans to ensure students, staff and carers are not placed in at risk situations for Department of Education assets that experience natural hazards such as floods. Further, it would be appropriate for regular drills/training so that there is a common understanding among staff, students and parents about the protocols for such events (however rare they may be).

The NSW SES Policy of mandatory evacuation is understandable for flooding events in regional areas where flood levels persist for days and weeks on end. However, the nature of flooding on the Northern Beaches is characterised as predominately flash flooding whereby flooding conditions can occur in less than 2 hours with a duration of between 6 – 24 hours.

Whilst evacuation should always remain the primary strategy when community members are afforded time to undertake this, in a flash flooding environment evacuation may not be possible. There is a need for other fallback strategies such as shelter in place, to be implemented particularly where evacuation places people in higher risk situations.

In previous events, school students have been evacuated from a property around Narrabeen Lagoon, despite being in a safe location. With no risk of flood waters entering they were evacuated from the site, taken by flood rescue craft to an assembly point to be collected by their carers. These types of decisions can inadvertently place vulnerable persons into more risky situations where shelter in place was a safer option.

### **Flood Monitoring Program**

The Manly Hydraulics Laboratory's (MHL) Northern Beaches Flood Monitoring Program is funded by Council with over \$80,000 per annum for the maintenance of this system. This system is critical as it provides data and modelling capability to inform operational decision-making during a flooding event. Council's Incident Management Team and Emergency Management personnel rely heavily on this data to monitor and respond to events as they unfold.

During the 8 March event, parts of the Northern Beaches flood monitoring system were not operational during a critical period of the emergency. Council and emergency services had to revert to sending staff into the field to obtain physical flood intelligence during the middle of the event. The MHL system is critical to prediction and response in a flash flood environment and outages of this system during flooding events seem to recur which suggests that there is a lack of in-built redundancy.

In addition, the systems appear to be designed to provide water level and rainfall updates on a 15-minute cycle. During a flash flood, these timeframes can make a significant difference to the timeliness of warnings to potentially affected properties (particularly given the issues experienced in NSW SES warnings being given as described above). Real time data provision with multiple redundancies is a reasonable expectation in flash flood settings and it is recommended the NSW Government give consideration to increased investment in systems and tools to supports its own combat agencies, local Councils and the surrounding community.

Further it is recommended that the NSW Government review the operation and deployment of these systems across the state to improve frequency, consistency, reliability, and redundancy to create a "best of breed" flood intelligence system regardless of the level of investment that can be provided by an individual Council. As with the above comments on the NSW SES, Council's local relationship with MHL is excellent



and MHL staff provide support at all hours where Council requires it. However, there are systemic issues that the NSW Government needs to understand and appropriately manage.

## **Landslides**

The Northern Beaches LGA experienced over 200 landslides/landslips as a result of the intense rainfall in late February and through March. Unfortunately, there is ambiguity regarding the responsible agency for managing responses to landslides. Whilst Council took carriage for the response to these incidents under the LEOCON, the NSW EMPLAN is unclear on who the combat agency is depending on the circumstances. The plan states that the LEOCON is responsible for "Other emergencies not designated to a combat agency", however as landslides were a consequence of a storm it may be argued that the NSW SES is the combat agency.

Given the significance of landslides across the state, the risks to life and property in addition to the ambiguity of the nominated combat agency, this hazard warrants the development of a Sub Plan to clearly articulate roles and responsibilities.

## **Recommended Review Areas**

11. NSW SES to review evacuation processes including appropriate delegations to the Local NSW SES Commander to issue evacuation advice.
12. NSW Government to invest in and manage a more comprehensive real-time flood monitoring network across the State.
13. Review the adequacy of landslide/rockfall roles and responsibilities within the NSW Emergency Management framework and consider the creation of a Sub Plan to clearly articulate roles and responsibilities.

## **Transition from incident response to recovery**

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### **Welfare Services**

Our past and most recent experiences have shown that despite multiple agencies (WELFAC, DCJ, Resilience NSW) claiming to have responsibility for welfare arrangements in NSW, there remains significant inconsistencies, confusion and gaps in relation to the actual roles and responsibilities between these agencies when responding to and recovering from an event.

Whilst WELFAC were excellent in providing assistance to evacuees at the Evacuation Centres (noting that an evacuation order was not issued and that only limited numbers seek refuge as they primarily seek support from friends and family), further assistance was requested to support a number of individuals. This was denied on the basis that WELFAC do not provide assistance for "individual local matters". It appears that there are inconsistencies in the support provided to those who attended evacuation centres, compared to those who did not, yet were still displaced requiring assistance. As such, Council and our local community services partners were required to fill this gap without any prior knowledge, expectation or training to step into this role in the middle of the emergency.

A significant challenge faced by affected residents, Council staff and local service providers when providing support to residents was navigating the Service NSW process for accessing accommodation support and achieving a desirable outcome. A review of the effectiveness of this process is required.

Once flood levels receded, there was an immediate need for waste to be removed from inside affected properties before it became hazardous (i.e. the simple act of removing spoiled assets from the house to the kerb – the collection of this was covered later in this submission). Whilst this would typically be an activity undertaken by the insurance companies, they were unable to mobilise within this timeframe given they were constrained due to concurrent events. Requests were made to emergency services however they advised that resources were at capacity given the deployment of resources to other affected areas. Therefore, there remains this gap in what is a critical immediate recovery activity.

The Welfare Services Functional Area Supporting Plan was last updated in 2018, does not refer to the role or responsibility of Resilience NSW, and only considers Local Government as "Other Stakeholders". Our latest experience does not align with the Supporting Plan where Council was expected to be the primary welfare provider. Local community service providers are not subject to the Plan and in many cases do not have the experience, resources or surge capacity to deal with natural disaster events as they are in many cases struggling to meet the demands of their existing client base under current funding.

It is necessary for the Welfare Services Functional Area Supporting Plan to be subject to a complete review and to clearly articulate the roles and responsibilities of all parties subject to the plan. Should Local Government's role change within the plan (subject to engagement), this must be accompanied with training, resources and funding to ensure that we are able to effectively respond to needs of the community following events. This also needs to be extended to our local community service partners to ensure they are adequately equipped to deal with crisis events.

### **Recommended Review Areas**

14. Review and update the Welfare Services Functional Area Supporting Plan in order to clearly define the roles/responsibilities between the various NSW Government departments.
15. Review available assistance to displaced flood affected persons irrespective if they present at evacuation centres, seek refuge at other locations or remain in-situ.
16. Should further responsibility be given to the local government for welfare assistance, the NSW Government must provide funding and training to assist Council to develop the capacity of local service providers to provide assistance during a natural disaster.
17. Review the Service NSW disaster assistance process to ensure it is fit for purpose, easy to navigate and is customer centric.

## **Recovery from floods**

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### **Grant Management**

The Northern Beaches was not included in the Back Home grant despite sustaining comparative damage, and in many cases worse than other included areas. Requests to Resilience NSW to include the Northern Beaches in this grant program were denied on the basis that additional LGAs included were adjacent to, or related to areas of significant flooding, such as Lismore/Hawkesbury etc.

It is considered that any flood-affected community, regardless of location should have equal access to grant programs of this nature.

### **Disaster Funding Arrangements**

One of the principal challenges facing Councils during the recovery phase, is the disaster funding process referred to as the NSW Natural Disaster Relief Arrangement (NDRA) which is supported by the National Natural Disaster Relief and Recovery Arrangements (NDRRA). The level of detail required to accompany a submission particularly for emergency clean-up activities is extremely onerous and in no way aids the recovery process.

The practicalities of the current funding arrangements make the emergency response and recovery process far more complicated particularly given councils rely heavily on contractors to undertake clean-up activities. There is genuine concern that any attempt to require councils to provide additional evidence during adverse working conditions, is likely to significantly increase response and clean up time and add substantial cost for their services due to the data management requirements.

To further complicate matters, there are many different government agencies involved in the administration of disaster funding. This adds significant administrative burden, confusion and inconsistency in the process.

It is strongly recommended that the current disaster funding process be reviewed in its entirety and amendments made that streamline, not complicate the recovery process. It is recommended that a new process be designed in consultation with local government as the key drivers of recovery.

The NSW Government should also consider providing upfront payments to disaster affected councils to assist manage immediate cashflow constraints.

### **Flood waste management**

As with many Local Government areas affected by flooding, one of the biggest challenges during the recovery phase was the management of flood waste. Council managed the flood waste recovery unaided as Requests to NSW Public Works Advisory to assist with flood waste management were denied as they were at capacity due to concurrent flooding emergencies in NSW.

Council removed over 430 tonnes of flood damaged waste from approximately 1,430 private properties placing significant pressure on internal and contractor resources, in combination with trying to maintain the

demands of business-as-usual waste services. There were additional impacts associated with access to local landfill sites at Terrey Hills due to the impact of the intense weather and flooding, significantly delaying disposal of waste with flow through impacts on supply chain, affecting program efficiency and speed.

Of particular note is the reliance on transport of waste out of the Sydney basin (i.e., rail from Clyde to Woodlawn) which impacts the whole network including other landfill operators. While this did not directly affect Council's operations, it affected the resources of our waste contractors and processors which had the potential to significantly impact a core civic service.

### **Recommended Review Areas**

18. NSW Government to review the disaster grants process to ensure disaster affected communities have equitable access to disaster assistance.
19. NSW Government to review the NSW Natural Disaster Relief Arrangement with consideration for upfront payments to disaster affected councils and streamlining of the suite of assistance packages.
20. NSW Government to investigate surge capacity to ensure local governments are afforded assistance to manage flood waste recovery and provide clear guidance on the circumstances in which it will assist.
21. NSW Government to assist local government prepare emergency waste management plans to provide a better understanding of roles and responsibilities in the event of major emergencies.
22. NSW Government establish a 'single point of contact' for coordination of state government advice and assistance for Local Government to access potential funding/grants or other assistance with dealing with emergencies in a timely manner.

### **Any other matters**

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Impact Assessments typically only include data derived from a Damage Assessment completed by the relevant combat agency. It is often the case impact assessments only provide a high level of detail due to the unavailability of data in addition to resources available to complete the assessment. Economic impacts usually only involve evaluating costs associated with emergency work or remediation of critical public assets as part of the disaster funding arrangements. The broader financial impacts associated with damage to private assets or economic loss are often difficult to evaluate due to limited data available.

The role of local government in all areas of emergency management is not well described and generally does not align with the realities of its responsibilities. Councils invest significant resources in the mitigation of, response to and recovery from emergencies, however these responsibilities are not adequately reflected in the *State Emergency & Rescue Management Act, 1989* (SERM Act) and supporting plans.

For example, whilst the State Emergency Management Plan (2018) formally recognises the position of the Local Emergency Management Officer (LEMO), this is however not reflected in the SERM Act leading to misinterpretation as to the expectations of the role. It is recommended that the position of LEMO be formally included in the SERM Act to address this issue.

The Personal Liability provisions as prescribed under s62 of the SERM Act do not apply to local government agencies despite the LEMO and other staff providing significant support to emergency services during an event, potentially leaving them unprotected from personal liability, particularly in an environment where there appears to be an increasing reliance on the LEMO to support the governance and administration of emergency management in their local area. Whilst personal liability provisions exist under the *Local Government Act, 1993* it is important to ensure there is consistency with these provisions and those under the SERM Act in order to remove any potential exposure of council staff operating under the SERM Act. It is therefore recommended that the SERM Act be amended to include local government employees, and specifically the LEMO under the provisions of s62 of the Act.

### **Recommended Review Areas**

23. Mandatory reporting requirements for insurance companies to provide post-event insurance claim information to the LEMC to understand the type, extent and value of damage caused by a natural hazard. This needs to be provided on a Local Government Area basis to assist with reporting requirements.
24. The SERM Act be amended to include local government employees, and in particular the LEMO under the provisions of s62 of the Act.

## Summary of Recommended Review Areas

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1. NSW Government support Councils across NSW to establish clear consistent planning controls that assist in reducing the physical and financial exposure to natural hazards in a changing climate including limiting the intensification of development, inappropriate development and incompatible land uses in areas affected by natural hazards such as flooding.
2. The NSW Government review the findings and recommendations of the [Natural Disaster Insurance Review 2011](#) and implement where appropriate.
3. Expand the Australian Government's Reinsurance scheme to provide insurance cover for existing properties within flood prone land (and other natural disasters) that are uninsurable or where insurance is cost-prohibitive.
4. NSW Government develop a flood adaption/mitigation grant program that the community can access to increase the resilience of private property.
5. NSW Government agencies reconsider the way resources are deployed in areas known to be affected by flash flooding to cater for situations when if forecasts are exceeded, resources are available for rapid deployment from a forward operating site.
6. Increase the capacity of the local NSW SES through the appointment of paid personnel in critical roles with appropriate training in any additional skills required to manage hazards relevant to the local area.
7. Improve NSW SES flood intelligence capability through intensive flood management training relevant to their area of operation, and access to real-time predictive data/tools.
8. NSW Government to reduce the assessment time and approval regime for applications under the NSW Floodplain Management Grant Program.
9. Include dredging as an eligible flood mitigation activity within the NSW Floodplain Management Grant Program.
10. Increase the weight of NSW Government subject matter/technical flood experts in decision making on hazard mitigation grant programs.
11. NSW SES to review evacuation processes including appropriate delegations to the Local NSW SES Commander to issue evacuation advice.
12. NSW Government to invest in and manage a more comprehensive real-time flood monitoring network across the State.
13. Review the adequacy of landslide/rockfall roles and responsibilities within the NSW Emergency Management framework and consider the creation of a Sub Plan to clearly articulate roles and responsibilities.
14. Review and update the Welfare Services Functional Area Supporting Plan in order to clearly define the roles/responsibilities between the various NSW Government departments.
15. Review available assistance to displaced flood affected persons irrespective if they present at evacuation centres, seek refuge at other locations or remain in-situ.
16. Should further responsibility be given to the local government for welfare assistance, the NSW Government must provide funding and training to assist Council develop the capacity of local services providers to provide assistance during a natural disaster.
17. Review the Service NSW disaster assistance process to ensure it is fit for purpose, easy to navigate and is customer centric.
18. NSW Government to review the disaster grants process to ensure disaster affected communities have equitable access to disaster assistance.
19. NSW Government to review the NSW Natural Disaster Relief Arrangement with consideration for upfront payments to disaster affected councils and streamlining of the suite of assistance packages.

20. NSW Government to investigate surge capacity to ensure local governments are afforded assistance to manage flood waste recovery and provide clear guidance on the circumstances in which it will assist.
21. NSW Government to assist local government prepare emergency waste management plans to provide a better understanding of roles and responsibilities in the event of major emergencies.
22. NSW Government establish a 'single point of contact' for coordination of state government advice and assistance for Local Government to access potential funding/grants or other assistance with dealing with emergencies in a timely manner.
23. Mandatory reporting requirements for insurance companies to provide post-event insurance claim information to the LEMC to understand the type, extent and value of damage caused by a natural hazard. This needs to be provided on a Local Government Area basis to assist with reporting requirements.
24. The SERM Act be amended to include local government employees, and in particular the LEMO under the provisions of s62 of the Act.