



Ordinary Council

LATE REPORTS

Business Paper

date of meeting: Wednesday 20 May 2020

location: Via Skype

time: 5.30pm

Community Vision

A sustainable high quality of life for all

Community Mission

Building the future together
People Place Health Education Technology

Council's Corporate Values

- ★ Sustainability
- ★ Excellence in Service Delivery
- ★ Consultation and Communication
- ★ Openness and Accountability
- ★ Community Advocacy

Community Themes

- ★ Leadership and Governance
- ★ Your Community Life
- ★ Your Business and Industry
- ★ Your Natural and Built Environment

Ordinary Council Meeting

Wednesday, 20 May 2020

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Items of Business

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4 Your Natural and Built Environment

What we are trying to achieve

A connected, sustainable, accessible community and environment that is protected now and into the future.

What the result will be

We will have:

- Effective management and maintenance of essential water, waste and sewer infrastructure
- A community that is prepared for natural events and climate change
- Sustainable and environmentally sensitive development outcomes that consider the impact on the natural environment
- Accessible transport network for our communities
- Infrastructure provision and maintenance that meets community expectations and needs
- Well planned communities that are linked to encourage and manage growth
- Accessible and protected waterways, foreshores, beaches and bushlands
- An environment that is protected and conserved for future generations
- Renewable energy options that are understood and accessible by the community

How we will get there

- 4.1 Provide (appropriate) infrastructure and services including water cycle management, waste management, and sewer management
- 4.2 Aim to minimise the impact of natural events and climate change, for example, floods, bushfires and coastal erosion
- 4.3 Facilitate development that is compatible with the natural and built environment
- 4.4 Plan for integrated transport systems that help people get around and link our communities
- 4.5 Plan for integrated and connected communities across the Port Macquarie-Hastings area
- 4.6 Restore and protect natural areas
- 4.7 Provide leadership in the development of renewable energy opportunities
- 4.8 Increase awareness of issues affecting our environment, including the preservation of flora and fauna



Item: 13.09

Subject: LAKE CATHIE EMERGENCY OPENING - FLOOD MITIGATION

Presented by: Development and Environment, Melissa Watkins

Alignment with Delivery Program

4.2.1 Develop and implement coastal, estuary, floodplain, and bushfire management plans.

RECOMMENDATION

That Council:

1. Determine which option to pursue for an emergency lake opening between Options 1, 2 and 3 as detailed in this report.
2. Request the General Manager to proceed to take the action as determined in Recommendation No. 1 above.
3. Request the General Manager prepare appropriate community information explaining the action to be taken and the likely impacts of the action.
4. Request the General Manager to write to the Minister for Water, Property and Housing confirming that Council's ongoing responsibilities for management of the Crown owned Lake Cathie waterbody will be strictly limited to the responsibilities of flood mitigation, stormwater drainage and community protection only and any actions outside of this scope will be directed to the NSW Department of Planning, Industry and Environment - Crown Lands as the owner of the waterbody.

Executive Summary

Following a Council resolution from 6 May 2020, Council applied for and received a short term licence from NSW Department of Planning, Industry and Environment - Crown Lands to undertake emergency flood mitigation works to alleviate the risk of flood inundation of critical infrastructure at Lake Cathie. The licence was received by Council on 8 May 2020. This licence was conditional upon receiving further input from both the Department of Primary Industries Fisheries (Fisheries) and National Parks and Wildlife Service (NPWS), now part of the Biodiversity and Conservation Division (BCD) within the NSW Department of Planning, Industry and Environment. These comments and recommendations were received from Fisheries on 11 May 2020 and from the BCD on 14 May 2020.

Copies of the advice received are provided attached here as **Attachment 1 and 2**. In short, the recommendations are based on the following constraint outlined most succinctly by the BCD as follows:

"The key issue raised by the BCD is the proposed activity has the potential to cause unintended negative indirect impacts to upstream environments. For this reason, the Port Macquarie Hastings Council could adopt a more precautionary approach and

amend the activity so that it only involves the alternative option of scraping the beach berm to install a 'dry notch' at a level of 1.6m AHD instead of excavating a channel to 0.8m AHD."

Further discussion below provides greater context to the issue to allow an informed decision of Council.

This report recommends that Council determine which opening option it would like to proceed with and requests the General Manager to write to the Minister for Water, Property and Housing to confirm that Council's ongoing responsibilities for management of the Crown owned Lake Cathie waterbody will be strictly limited to the responsibilities of flood mitigation, stormwater drainage and community protection only and that any actions outside of this scope will be directed to the NSW Department of Planning, Industry and Environment - Crown Lands as the owner of the waterbody. Council will continue to manage any existing licenced lands in accordance with approved licence(s).

Discussion

At the 6 May 2020 Council meeting, Council resolved the following:

"RESOLVED: Pinson

That Council:

1. *Note the level of Lake Cathie as reported on 6 May 2020 at 1.573m AHD and the impact of this level for a prolonged period, which is resulting in the inundation of public infrastructure such as footpaths and the potential risks to the community that this poses.*
2. *Request the General Manager to proceed to open Lake Cathie upon (whichever comes first):*
 - a) *A rainfall event of 10mm or more in the Lake Cathie catchment;*
 - b) *Receipt of approval from NSW Crown Lands for a Short Term Licence (for a period of up to 12 months);*

to reduce the impacts of flood inundation of public infrastructure.

CARRIED: 7/0

FOR: Alley, Dixon, Hawkins, Intemann, Levido, Pinson and Turner

AGAINST: Nil"

Following this resolution, Council received a short term licence (**Attachment 3**) from the NSW Department of Planning, Industry and Environment - Crown Lands on 8 May 2020, which was conditional on receiving further advice from Fisheries and BCD.

The Review of Environmental Factors (REF) and proposed work plan was provided to NSW Department of Planning, Industry and Environment - Crown Lands as part of the license application for the emergency opening of Lake Cathie. The works proposed were consistent with previous openings undertaken and entails the excavation of a deep channel 135m long x 6m wide x 1.4m deep. This excavation would essentially allow the water in Lake Cathie to empty, including upstream to

Lake Innes and potentially allow tidal water to wash back into the lake if conditions were suitable, noting that the Lake Innes Nature Reserve is National Parks Estate and also not a Council owned or managed asset.

After consideration by BCD and Fisheries, an alternative more environmentally sympathetic approach to opening the lake has been recommended by these two agencies. This recommended program is as follows:

- Undertaking scraping of the beach berm to a toe cut level of 1.6m AHD. The purpose of these works is to reduce water levels within Lake Cathie to below 1.6m AHD which will prevent inundation of private and public infrastructure. This is achieved by allowing the water to flow out of the system once when the water level exceeds 1.6m AHD.

As outlined in the advice received this is a typical lower risk action to address the risk of inundation of infrastructure associated with high water levels within Intermittently Closing and Opening Lakes or Lagoons (ICOLLs) as it allows water to drain without complete draining of the entire ICOLL. In this case the sufficient water level that would prevent inundation of public and private infrastructure within the lake system catchment has been identified as 1.6m AHD.

In essence, this approach facilitates a natural opening by scraping the current sand berm to a level of 1.6m AHD. If the sand berm is reduced to this height, the berm may be breached as soon as there is enough head pressure behind the berm for the water to push through. This alleviates any risk of further flooding and may occur straight after the works, or may require more rain before the water tops the berm.

Once the water starts to leave Lake Cathie the level of the lake will be determined by natural factors such as rain, tides, and wind which will either keep the lake open, or cause it to close again. The resulting level of the lake is likely to be higher than the opening method of channel excavation.

Environmental and social constraints and benefits

There are possible environmental and social risks and benefits associated with each proposal which have been identified by both Council staff and BCD and Fisheries. These are outlined in more detail in the attached document "Environmental/Social benefits and constraints" (**Attachment 4**).

Further consideration in the decision making process is the evaluation of optimal conditions. These conditions take into account both tides and forecasted rainfall. The current weather forecast shows a medium chance of rain in early June, with higher tides above 1.6m, expected around the 2-8 June. These weather processes may assist the natural opening to take place if it has not already occurred after undertaking the works.

Legislative Requirements

The modified works proposed by Fisheries, being the berm scraping to 1.6m AHD, are considered suitable to continue without revision of the REF due to the reduced environmental impacts that are likely. From a legislative standpoint, *Part 5, Division 5.1, Subdivision 1, Section 5.4* of the *Environmental Planning and Assessment Act (1979)* is considered to apply to the modification, whereby:

Sections 5.5 and 5.7 do not apply to or in respect of the following (despite the terms of those sections)

- (a) *a modification of an activity, whose environmental impact has already been considered, that will reduce its overall environmental impact*

Should the scope of works be further revised, Council would need to further consider and determine the requirement for potential revision to environmental assessment documentation and permit requirements.

Future management of Lake Cathie

Historical management of Lake Cathie, whether real or perceived has placed an onus on Council to manage the expectations of the local community on all things associated with Lake Cathie/Lake Innes estuarine health, despite Council not being the owner or manager of these waterbodies. In order to clarify Council's role in respect of Lake Cathie, it is also recommended that Council write to the Minister for Water, Property and Housing and outline the role of Council in respect of this Crown asset, as being responsible only for flood mitigation, stormwater drainage and community protection, in the management of the Lake Cathie in accordance with an endorsed Coastal Management Program or Coastal Zone Management Plan.

Accordingly, any issues outside of this scope will be directed to the NSW Department of Planning, Industry and Environment - Crown Lands as the owner of the waterbody. Council will continue to manage any existing licenced lands in accordance with approved licence(s). This will make clear to the community that management of the Lake Cathie / Lake Innes estuarine system is a responsibility of the State government as the owner of these waterways and will mean that day to day management of the lake will rest with the State, not Council.

Council will continue to work closely with our partners in DPI and DPIE through the development of the PMHC Coastal Management Program to assist in improving estuarine health by undertaking management actions on land that is owned or managed by Council as well as by providing relevant information and education to ratepayers about what they can do to improve estuarine health.

Options

Council can opt to:

1. Alleviate flooding by the excavation of a deep channel 135m long x 6m wide, to a depth of 0.8m AHD (*'Council's proposal'*); or
2. Alleviate flooding via a 6m wide beach berm scrape to a level of 1.6m AHD (+/- 100mm) (*'Fisheries/BCD recommendation'*); or
3. Continue to monitor conditions and reconsider the issue of opening the Lake once the water level reaches a height of 1.6m AHD (*'Do nothing'*); or
4. Resolve in some other manner.

This report recommends that Council determine one of the above options.

Planning and Policy Implications

There are no long term planning and policy implications in relation to this report.

Financial and Economic Implications

The initial cost of excavating a channel will be more expensive than a berm scrape in the first instance based on the amount of sand that is being excavated out of the channel and therefore the time the contractor will be required on site will be much greater.

Following either opening method, there may be ongoing maintenance/opening requirements if the water level rises again to 1.6m. It is possible that the berm scraping method could result in a higher berm, allowing the water to rise and therefore requiring maintenance more often. This would only occur in the event of ongoing rainfall sufficient to fill the lake to 1.6m.

Attachments

1. Lake Cathie Entrance - DPIE_Biodiversity Conservation Division Comments and recommendations
2. Lake Cathie Entrance -DPI (Fisheries) Advice
3. SIGNED Crown-Land-Licence-618957-Flood-Mitigation-Lake-Cathie.pdf
4. Table 1 - Environmental/Social Benefits and Constraints