
Update on Bungawalbyn (East) Levee Funding Requests

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Recommendation

That the Council:

1. Receive and note the report providing an update on the work completed and actions taken to obtain funding for the resilience improvements to the Bungawalbyn Levee, following the 2022 floods.
2. Receive an update on the status of funding for the resilience improvements to the Bungawalbyn Levee in July 2024.

Background

The Bungawalbyn (East) Levee is an earth levee that is approximately 8km long and runs along the eastern side of Bungawalbyn Creek. The levee starts downstream of the intersection of Moonem-New Italy Road and Bungawalbyn-Whiporie Road and runs downstream to opposite the entrance of Bora Creek (refer Attachment 1). Its construction date is unknown, but based on the available information, it is likely to have been built in the 1920s and further improved in the 1940-1950s. The levee was constructed to prevent minor and moderate floods from naturally spilling out across the floodplain and keep them within the creek banks. The levee protects properties along the eastern side of Bungawalbyn Creek, and in some instances around to Swan Bay and towards Rocky Mouth Creek. The section around Boggy Creek Road is historically known as a natural break-out point for floodwaters.

The Bungawalbyn Levee has been overtopped by four floods since 2017, two of which resulted in the levee breaching (ie. failed - part of the levee has given way, creating an opening through which floodwater may pass), in the same location, once in 2017 and again in 2021 (refer Attachment 2). In the period since March 2017 and until the end of the 2022/23 FY, Rous County Council (Rous) has spent more than half a million dollars of Disaster Recovery Funding Arrangements (DRFA) on reinstating the levee to its pre-flood condition each time.

During March 2017, the levee breached for the first time since it was constructed during an overtopping flood. The breach occurred upstream of Boggy Creek Road, adjacent to Bungawalbyn-Whiporie Rd. During the March 2021 flood, the levee was overtopped, and a larger breach occurred in the same location. Rous repaired the breach and at our costs, placed rock armouring either side of the failure point for further protection. At the time Rous acknowledged that in the long-term, further investigations and possible new work on the levee would be required. During the February and March 2022 floods, the levee was overtopped in both floods. While the top of the levee eroded, it did not breach or fail like it did during the 2021 and 2017 floods. The erosion mostly occurred in the same location as the previous breaches, over a 1.5km stretch of the levee.

Under the DRFA between the Commonwealth and State, assets damaged by natural disasters cannot be improved as part of the re-build, limiting the work to what is required to its pre-disaster condition.

Bungawalbyn Creek runs close to the levee where the breaches occurred. In this area, erosion and slumping of the creek bank (and the rock armouring) is putting the levee at risk of breaching again. The creek bank erosion, undercutting of the bank and slumping in this area have not been resolved and is beyond Council's current resources. Significant investment is required to address creek bank erosion and slumping in this area and increase the levee's long-term resilience. Rous's attempts to secure funding to improve the levee's resilience and address longer-term work have been unsuccessful.

Current situation

At this time, the levee is still present and is intact, and in its current condition, the levee will continue to provide protection against minor and moderate floods. Rous staff will continue with regular inspections of the entire levee and routine maintenance such as clearing access and addressing erosion of the levee.

The outstanding element of work from the 2022 floods is the reinstatement of the slumped rock armouring, which is under investigation and planned for completion by the end of May 2024. The grant of \$237,000 is being funded under the DRFA Natural Disaster Essential Public Asset Restoration (EPAR).

There remain some community concerns around the condition of the levee and its long-term reliability. Although the levee is in place, it is unknown what damage could occur if the levee were overtopped. The creek bank slumping and erosion puts the levee at risk, making it more vulnerable to further breaches. Levees reduce flood risk, but they do not eliminate it. It is always possible that the levee can overtop or breach. Rous has encouraged residents and landowners to determine their own risk and have a flood evacuation plan developed for all sized events and possibilities. Landowners are encouraged to follow advice provided locally by the NSW State Emergency Service (SES). If the levee is breached again, landowners can expect deeper and prolonged inundation. There is also the risk if the levee is breached, it will not provide protection against future smaller floods until it is repaired. If a smaller flood occurs soon after a breach, the levee may not be fixed in time.

Rous has funded an inspection of the levee by engineers under the NSW Public Works Flood Levee Repair and Maintenance Program, which is being undertaken for urban levees across the State. This work is expected to be finalised by the end of the calendar year.

Rous has also funded an assessment by the NSW Soil Conservation Service of sections of the Bungawalbyn Creek and the erosion occurring along the creek bank, particularly below the levee.

In the 21 months since the flood, in addition to the DRFA grants, Rous has applied for funding through the following State and Federal Government programs, all of which have been unsuccessful or are yet to be determined. These include:

1. NSW Floodplain Management Program 2022 – NSW DPE (May 2022).
2. Northern Rivers Reconstruction Corporation.
3. NSW Flood Levee Repair and Maintenance Program – NSW Public Works.
4. CSIRO \ NEMA – Northern Rivers Resilience Initiative – Tranche 1 and 2.
5. NSW Betterment Program – Infrastructure Betterment Fund (Nov 2022).
6. Disaster Ready Fund – Round 1 (Dec 2022).
7. Disaster Ready Fund – Round 2 (Dec 2023) – awaiting outcome.
8. Flagship Fish Habitat Action Grant – NSW Government Recreational Fishing Trusts (Oct 2023) – awaiting outcome.

It is disappointing for the community that funding for the levee has not become available. The levee requires further investment to increase its resilience. These improvements are needed to increase the long-term viability of the structure and reduce the damage that overtopping events currently cause. Without this work, the levee will remain in a cycle of being damaged during floods, that damage being repaired and then the next flood causing more damage.

Staff have estimated that funding of \$3,000,000 will allow for investigations, design and on-ground works to address some of the major issues that the levee faces as a result of changes occurring in the catchment and the climate, which are affecting its ability to protect the local community.

The levee is a critical asset within the mid-Richmond floodplain. Within the area that it protects, there is farmland, residential and farm buildings, and local roads. There are 15 residential dwellings directly protected by the levee and more than 90 indirectly impacted through closure of evacuation routes.

- **Finance**

Detailed in the body of this report.

Consultation

Throughout 2022 and 2023, Rous has engaged proactively and constructively with a broad range of stakeholders. As described previously, the purpose of this engagement has been to inform, bring attention to and collaborate to bring about a better result for the community benefiting from the Bungawalbyn Levee.

The forms of consultation have included:

- A Landholder Information Sheet (May 2023) to local residents affected by the levee to update them on the levee, work completed since the Feb\Mar 2022 floods and actions taken to obtain more funding.
- NSW SES to advise of the status of the levee and improve future communication during an event.
- Richmond River Cane Growers to update them on the levee, work completed since the Feb\Mar 2022 floods and actions taken to obtain more funding.
- Richmond Valley Council to ensure that the levee is included in their upcoming Flood Risk Management Plan, so that funding can be applied for under the Floodplain Management Program.
- The Hon. Richie Williamson, MP (Member for Clarence) to update him on the levee and actions taken to obtain more funding – September 2023.
- The Hon. Janelle Saffin MP (Member for Lismore and Parliamentary Secretary for Disaster Recovery) - to update her on the levee and actions taken to obtain more funding - letters 9 August and 21 November 2023.
- Letter to Minister for Emergency Management Senator Hon Murray Watt – requesting re-consideration of funding for the levee under the CSIRO \ NEMA funding - August 2023.

Conclusion

The Bungawalbyn (east) levee is a critical flood mitigation asset within the mid-Richmond floodplain. The levee requires further investment to increase its resilience. These improvements are needed to increase the long-term viability of the structure and reduce the damage that overtopping events currently cause. Without this work, the levee will remain in a cycle of being damaged during floods, that damage being repaired and then the next flood causing more damage.

Rous will continue to pursue funding opportunities to improve the levee and the creek bank. Rous has engaged regularly and cooperatively with stakeholders to listen to concerns and raise awareness of the importance of the Bungawalbyn Levee and the need for further investment.

Attachments:

1. Bungawalbyn East Levee – Aerial Photo
2. Bungawalbyn East Levee Photos