



Submission to Independent Flood Review

North West Sydney Flood Event

Submission date June 2022

Acknowledgement of Country

Redbank Communities acknowledges the Traditional Custodians of the land on which we live and work, and pay respect to their Elders past, present and emerging.

Redbank Communities is the Developer of Redbank at North Richmond (“**Redbank**”), a master planned estate on flood free land west of the Hawkesbury River at North Richmond. The estate on completion incorporates

- 1399 homes
- An 80 bed high needs nursing home
- 192 independent seniors living houses
- An 88-placement childcare
- a village shopping centre
- numerous parks and walking tracks connecting NSW Heritage listed farm dams and residential homes.

Redbank at North Richmond is currently approximately 50% complete across all construction components.

This submission relates to flood evacuation orders, flood resilience opportunities and future housing development to be on flood free land based on both flood scenarios the 1:100 level and Possible Maximum Flood (PMF).

Flood Evacuation Orders

The land at Redbank has a Heritage Order on the development due to the 1940s farming technique engineered by PA Yeomans known as the Keyline Dam system which was designed to protect soil and maximise the natural topography.

As Redbank has developed, these dams have been reengineered to ensure safety to the public downstream and to meet stringent public liability requirements. One of the dams known as Dam 13 was also identified during the flood event earlier this year as Redbank Dam is a “prescribed Dam” and comes under the required monitoring of Dam Safety NSW.

(See attachment 1 Dam 13 performing as per design during 2022 flood event)



During the recent flood event, dam levels were monitored in real time using a colour-coded risk management model. This meant when it reached the defined red zone, an order was issued from a remote location to Local SES to evacuate downstream of the Dam 13 without seeking local knowledge and visual observation.

Unfortunately, the 'red zone' risk categorization was incorrectly defined as at capacity *and* at risk of failure. This meant that the local SES resources were deployed to evacuate residences unnecessarily as the dam's engineered overflow system was operating as designed, with no risk of failure. This incorrect evacuation order also meant the local flood evacuation centre at North Richmond was included in the map used to evacuate meaning emergency service personnel and community members at the centre were displaced unnecessarily and a new evacuation centre had to be identified.

Recommendation:

- 1) A clearer water level and spill reporting table be developed so that monitoring during floods at a remote location is clearer and more precise.
- 2) Prior to any evacuation order being triggered, local SES make final decision based on their own local knowledge of the dam and geographical area as well as a visual inspection by an authorised person familiar with the dam's engineered operating system.

Flood Resilience Opportunities

Redbank Communities is required to build a new connecting road and a new bridge over the Grose River. Whilst this infrastructure project was originally intended to reduce traffic congestion on the existing Bells Line of Road at North Richmond, Hawkesbury City Council resolved for it to be relocated to a new planned route so it could be built at the 1:100-year flood level.

This project is currently being assessed as a Part 5 development application and the construction is being funded by Redbank Communities while Transport for NSW is responsible for completing the compulsory acquisition process of the 3 properties required to facilitate the construction of this new flood free road and bridge.

During times of flood when the current North Richmond bridge is closed people living west of the river who need to get to the east side need to travel west on Bells Line of Road to Bell then use the Darling Causeway to Blackheath and then down the Great Western Highway. Once the new Grose River Bridge and connecting roads are complete under the same flooding scenario commuters will be able to use this road and travel up Springwood Road to Springwood and then down the Great Western Highway cutting the journey in more than half.

(See attachment 2 artist impression of Grose River Road extension and bridge)

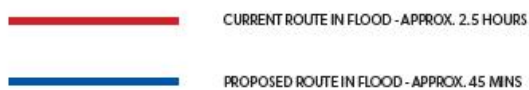
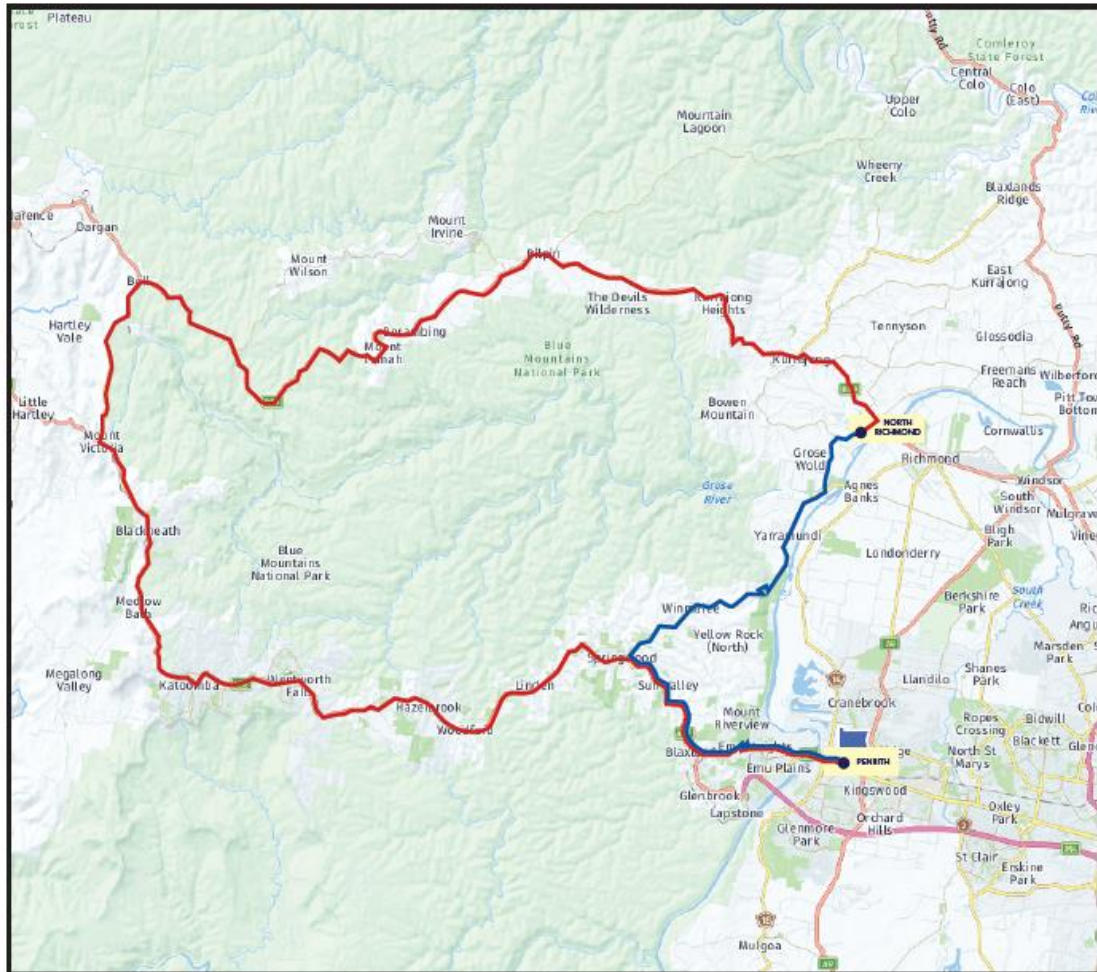


To make this a full flood access route in all flooding scenarios Transport for NSW could increase the height of 2 existing bridges on Springwood Road. In the last flood these bridges were only closed for a matter of hours while the North Richmond Bridge was closed for many days.

In addition, the continuation of upgrades to Bells Line of Rd to Bell including land slip barricades on steep areas which are vulnerable to land slip could again be achieved at a much more affordable budget and in a quicker timeframe than providing a multi lane road and bridge between Richmond and North Richmond at a 1:100-year flood level. This would provide additional options in times of bridge outages due to flooding for trucks to access west of the river to keep supply lines open for the delivery of goods.

(See attachment 3 travel distance map)

COMPARISON OF TRAVEL TIME BETWEEN NORTH RICHMOND & PENRITH DURING FLOOD



Recommendations:

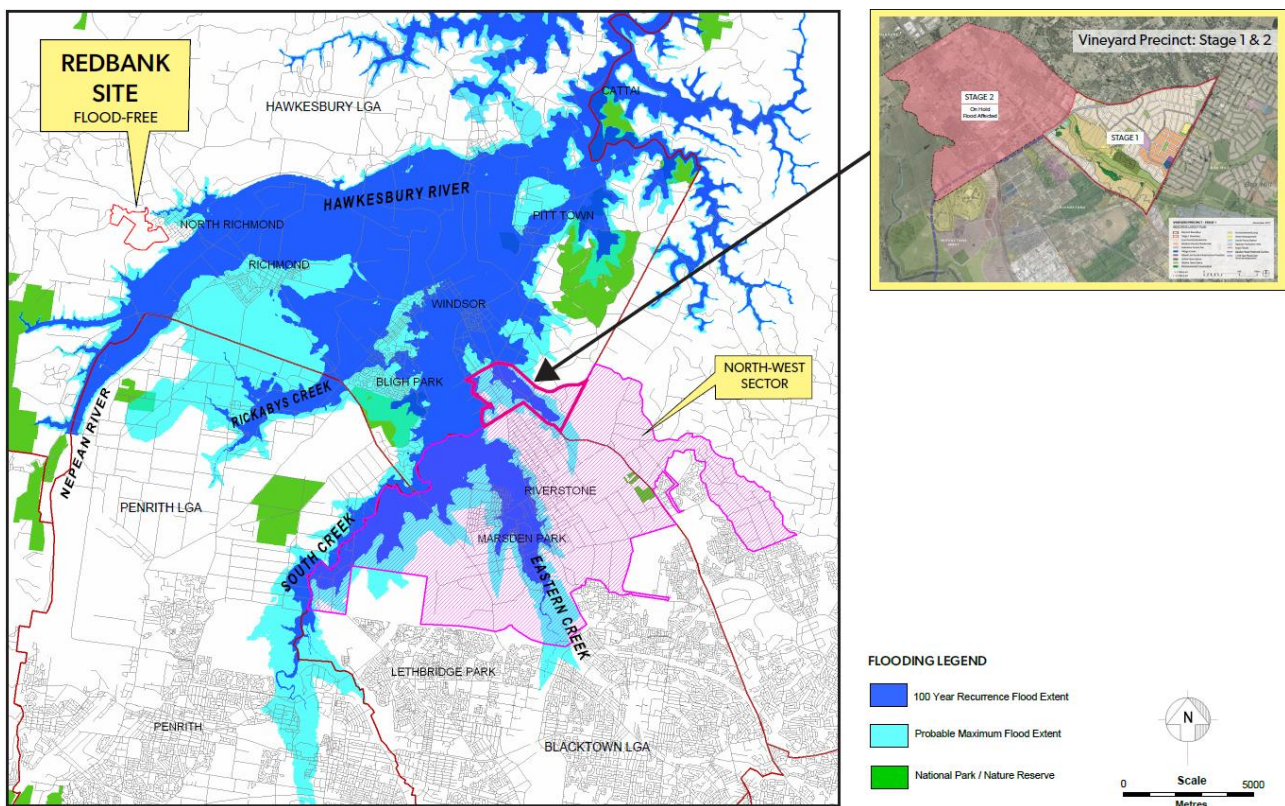
- 1) The Grose River Bridge and connecting roads construction be supported by all Government Departments and construction completed as quickly as possible. (See graphic of Road and Bridge)
- 2) Transport for NSW commence planning to lift the height of the two existing bridges of Springwood Road, so they are always flood free and set a timeframe for the completion of those works.
- 3) Bells Line of Road upgrade to continue including engineering works in areas vulnerable to land slip.

Future Housing Requirements

Each Local Government Area in metropolitan Sydney is responsible to fulfil their share of new housing requirements. Until recently Hawkesbury Local Government Area was focused on Vineyard Stage 1 and 2 to provide the short-term local housing needs. Following the recent floods, the Vineyard Release Area 2 has been put on hold including other areas in the North West which are vulnerable to flooding.

Local flood mapping should dictate where future housing development can go and where flood mapping shows significant flooding during major flooding events, below 1 in 100 years and worse still at PMF (Possible Maximum Flood), new housing development should not be permitted.

(See attachment 4 flood mapping of Hawkesbury Local Government Area)



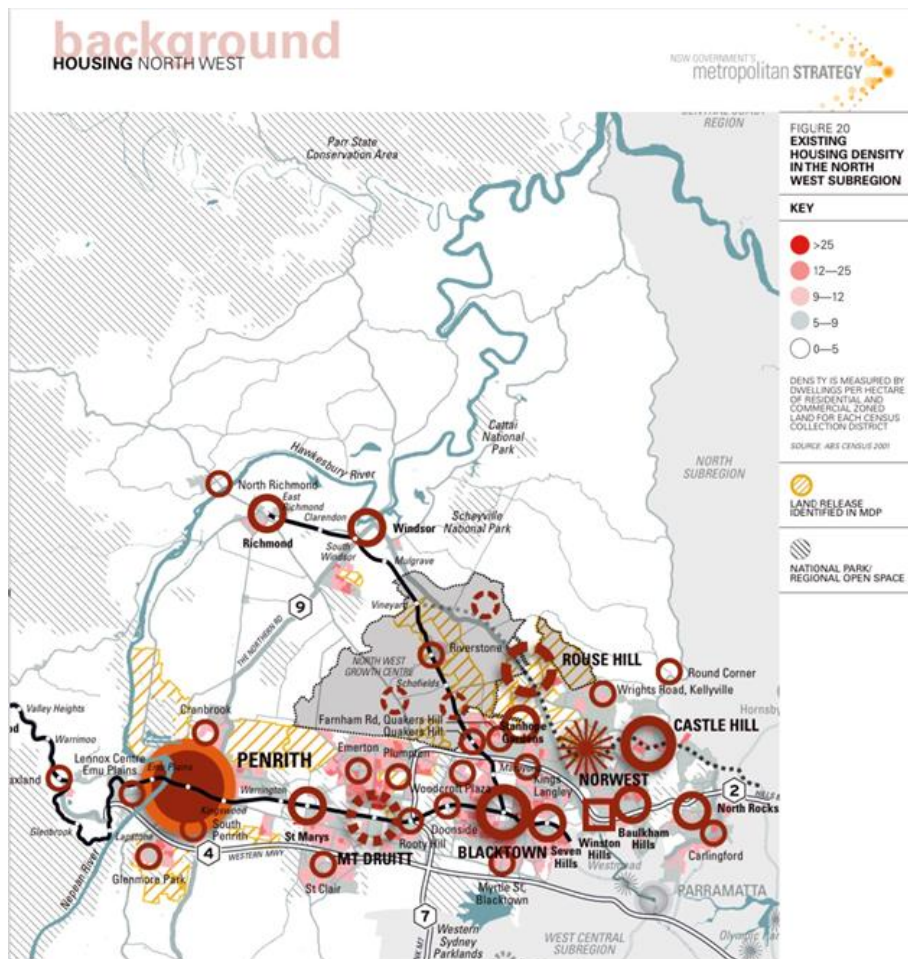
NSW Planning should use previous North West Subregional Strategy from 2007 for short to medium housing in Hawkesbury LGA to fill the housing supply gap created by stopping new housing at Vineyard and elsewhere where it is flood affected. Previous plans stipulated growth west of river out of floodplain. Infill west of river where existing infrastructure exists to support it should be prioritized.

Also, the position put forward by some people that you need a flood evacuation route from west of the river to the east is unnecessary and impractical. In times of flood with roads and bridges flooded it would be impracticable to add to traffic congestion issues on the east side of the river when people are not in a flood liable area west of the river. As outlined in the previous section of this submission people can still access Bells Line of Road and head west if they need to travel and more importantly once the Grose River Road extension is complete people will have access to the east via Springwood Rd and the Great Western Highway.

Recommendations:

- 1) Cease any new planned housing development located within the 1:100 and PMF flood zones.
- 2) Prioritise new housing west of the river as stated in the North West Subregional Strategy 2007 which has established infrastructure to support the short-term housing goal at no cost to Government.
- 3) Great Cities Commission review the Metropolitan Rural Lands definition to include savings provisions so housing can be accommodated as infill using existing infrastructure with excess capacity around existing housing out of the floodplain which can be delivered at no cost to Government.

(See attachment 5 North West Subregional Strategy 2007 showing North Richmond for housing outside of floodplain)



Redbank Communities

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