



Legislative Council Environment and Planning Committee

Inquiry: Inquiry into Climate Resilience

Hearing Date: 6 November 2024

Question[s] taken on notice

Directed to: Aurecon

Received Date: 11 December 2024

1. **Gaelle BROAD, page 27-28**

Question Asked:

I am just interested in levees, because we have so many regional towns that are built near rivers and there are a number of places that have identified the need for levees. I am just interested in your thoughts on that, because we know that there is not a maintenance program and there are lots of breaches that occur with significant damage. If you could perhaps give your insights into that, that would be great.

Michael NOLAN: Levees –

The CHAIR: Maybe any thoughts you want to collect you can give to us.

Michael NOLAN: Sorry. I will collect it later.

Gaelle BROAD: That is fine. Just send it through

Response:

Levees are a protection asset to prevent flooding usually of urban areas. The governance and maintenance of levees is key to their success. Levees that are built as an emergency response to reduce flood damage to property is usually considered to be temporary as the asset is not usually planned and designed to last beyond the threat of the immediate flood.

There is potential to increase flooding risk to other properties and assets that are not protected by the levee. This needs to be assessed and considered in planning and design.

Levees that are not maintained pose a significant risk as urban and commercial development over time in the protected areas will make design decisions that do not factor in flood risk so if the levee breaks they are worse off and likely unprepared. This has potential for greater damage impact and loss of life.

If levees are developed with a clear long term governance arrangement that ensures funding and management of levee maintenance and enhancement over time then they can be effective protection from flooding for some properties. Creating a governance structure to enhance or maintain such an

asset could have a financial mechanism to gain contribution from protected property owners including government entities.

Levees can be built to allow additional height to be added later when larger floods are predicted or as the climate change increases expected flood levels. The development of levees should consider inclusion of future urban growth areas to avoid new developments being higher flood risk than the protected areas.

Where possible it is beneficial to design levees as multi-use areas such as bike and pedestrian paths or incorporate commercial, recreational and entertainment development on or adjoining the levee. This may contribute to its funding and amenity.

Another alternative to government building a levee, is to plan and design a levee that could be built with a combination of community, private and government support. As we have seen in recent years community and businesses will contribute to build a levee themselves when a major flood is expected. This contribution may be facilitated for multiple benefits and utilise local inputs, capabilities and assets.