

CAPTURING THE IMPACT OF THE FAILURE OF CRITICAL ROAD STRUCTURES ON THE COMMUNITY



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HOW DOES THE PERFORMANCE OF CRITICAL ROAD STRUCTURES SUCH AS BRIDGES, CULVERTS AND FLOODWAYS AFFECT THE COMMUNITY THAT THEY SERVE; BEFORE, DURING AND AFTER THE OCCURRENCE OF A NATURAL DISASTER?

A SUMMARY OF FINDINGS (TO DATE)

- ▶ The Lockyer Valley community members interviewed considered themselves fairly resilient to flood events, reflecting a risk tolerant attitude and a stoicism that is typical of many Australian regional communities.
- ▶ Social networks were considered an important strength in the area. Local initiative and leadership amongst the community is high.
- ▶ The dominant impact of the floods was felt to be the disruption caused to the road network; particularly the floodways.
- ▶ Overall, a functioning road network was considered the most important influence on community resilience - "access is our livelihood".
- ▶ The impacts of the floods on the community were intensified by the 14 year drought that preceded them
- ▶ As the floods occurred over a four year period 2010-2013; the community's and the council's responses improved through experiential learning.
- ▶ Many community members perceived a disconnect between differing levels of government in responding to the floods and a misfit between legislated rules and local 'fit-for-purpose' solutions - "[the council] will try to address [your concerns] within the rigid criteria that they have".

METHOD

Lockyer Valley Regional Council nominated the case study community - defined spatially as the people who live and work along a number of single-access roads at the upper end of the Lockyer Valley.

Engagement involved semi-structured interviews with relevant experts and affected members of the local community.

DISCUSSION

This case study raises questions about how to design road infrastructure and manage its maintenance so that it supports community resilience. This is particularly important given that under a changing climate, existing codes and designs may be inadequate for the future.

The project also highlights the complex interaction that occurs between communities and various levels of government over road infrastructure design and management - especially in relation to the impact from natural disasters - and queries whether the existing communication methods and channels are adequate to the present and future task.

Questions raised are:

- ▶ How to encourage better interaction between levels of government to provide the best possible response to rebuilding road infrastructure damaged by natural disasters?

- ▶ How to support local and regional councils in the strategic building and repair of minor road infrastructure that are at risk from natural disasters?
- ▶ How to foster strategic 'build back better' thinking and action under the uncertainties of climate change?
- ▶ How to best build a conversation between an affected community and authorities that creates mutual understanding and shared solutions?

END USER STATEMENT

Community resilience with respect to road infrastructure is a challenging and important topic being addressed by this project. Translating the valuable information gathered and making the linkage between community resilience and transport infrastructure will be a key element in understanding how to improve community resilience.

The case study in the Lockyer Valley provides insight into one community's experience and resilience during floods. The disruption of the road network impacts on livelihood, but more importantly on their social networks. How does a community maintain the valuable experience and knowledge gained as the years pass by and the memory of the floods fade?

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Photo: T. & D. Shaw



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