



# Cost-effective mitigation strategy development for flood prone buildings

Extreme weather research advisory forum / **July 2019**

**Ken Dale**/ Geoscience Australia



**Business**  
Cooperative Research  
Centres Programme



# Project Outputs

Classification of Australian Buildings (Completed)

Literature Survey of Flood Mitigation Options for Buildings (Completed)

Costing of All Appropriate Mitigation Strategies (Completed)

Experimental Testing of Building Materials/Components (Completed)

Vulnerability Assessment for Current and Retrofitted Building Types (Completed)

Benefit vs Cost Analysis for Key Mitigation Options (In Progress)



# Utilisation

## Launceston Study (Completed 2017)

- End-users included:
  - City of Launceston
  - Launceston Flood Authority
  - Tasmanian Dept of Premier and Cabinet
  - Northern Midlands Council
  - Tasmanian SES
- Outcomes quoted/referenced in the Independent Review into the Tasmanian Floods of June and July 2016 (Blake, 2017)
- Newstead component of this work was the first time the project team incorporated intangible losses (through collaboration with BNHCRC project Economics of Natural Hazards)
- Opportunity to extend this work



# Utilisation

## NFRAG Flood Damage Models (in progress)

- End-users include:
  - National Flood Risk Advisory Group
  - Floodplain Management Australia
  - Australian Institute for Disaster Resilience (AIDR)
  - Local Government
  - Insurance Industry (IAG & ICA)
  - Consulting Industry
- Outputs include generalised flood vulnerability curves for use by those without access to detailed exposure information
- Curves will allow consistent comparisons to be made across jurisdictions benefitting decision makers in comparing flood impact and risk
- Broad stakeholder group suggests impact should be widespread, particularly with dissemination through AIDR

[bnhcrc.com.au](http://bnhcrc.com.au)

## FLOOD DAMAGE MODELS FOR FLOODPLAIN MANAGEMENT

Reporting on Steering Committee Meeting  
9 April 2019, RMIT University, Melbourne

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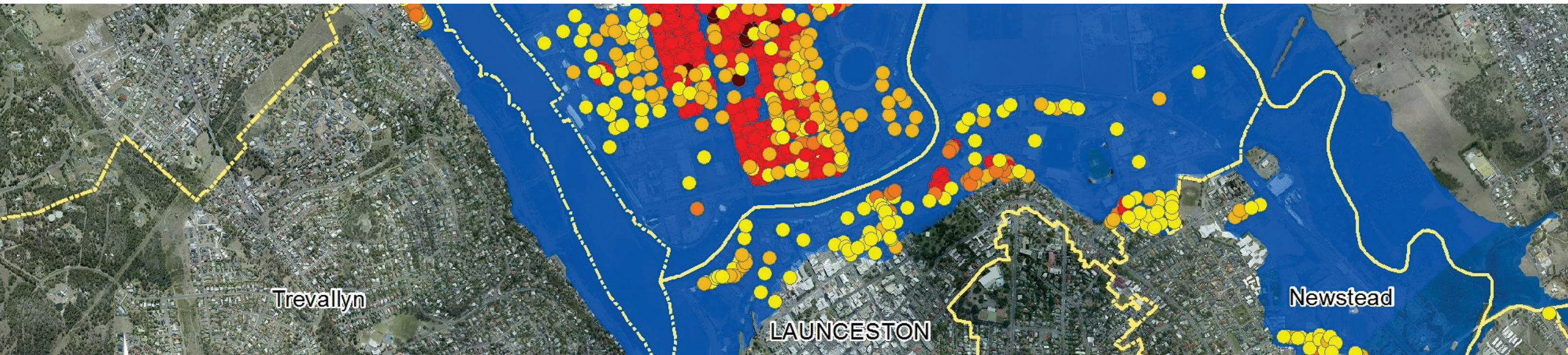
<sup>3</sup>National Location Information Branch, Geoscience Australia, ACT



# Utilisation Opportunities

## Revisit Launceston Study

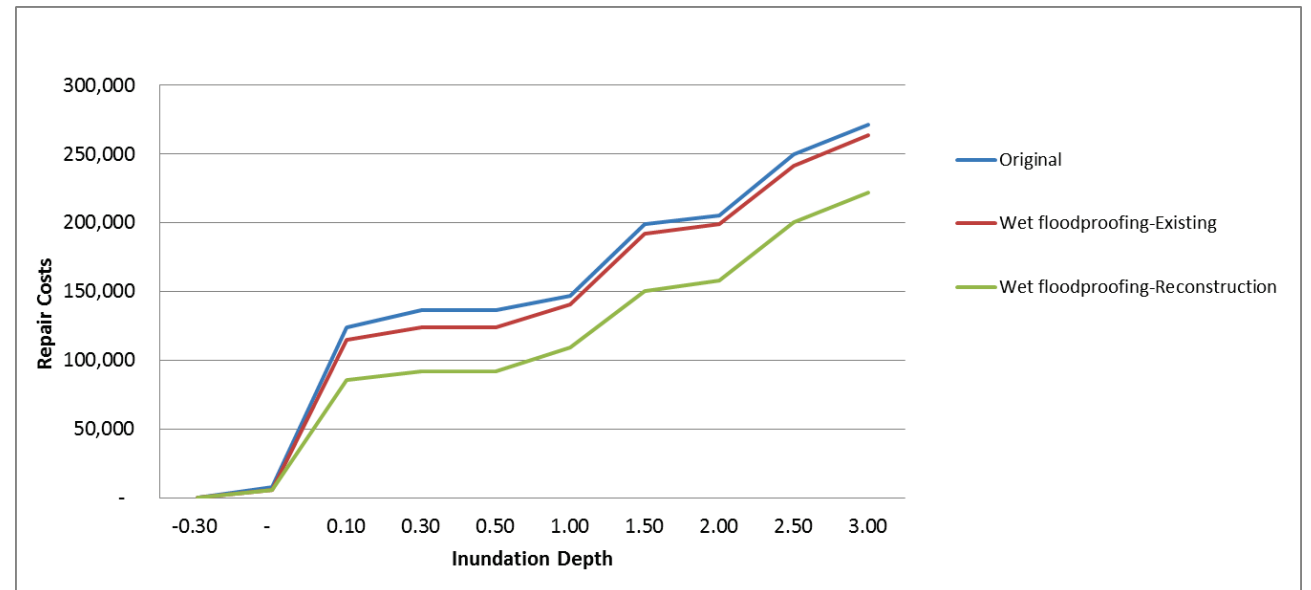
- Flood hazard has been reassessed following 2016 floods
- Hazard has reportedly increased
- Reassessment of cost benefit analysis of flood mitigation works is a logical extension to the original work
- Preliminary discussions have commenced



# Utilisation Opportunities

## Core Project Outputs

- Information on flood retrofit options suitable for Australian building types
- Associated cost-benefit analysis on retrofit options for a range of catchment characteristics
- The above will provide an evidence-base to inform decision-making on the mitigation of community risk posed by Australian residential buildings located in flood plain environments



# Utilisation Opportunities

## Core Project Outputs – Dissemination Mechanisms

- Stakeholder Workshops
- Reports through BNHCRC
- Conference Publications
  - BNHCRC/AFAC
  - Floodplain Management Australia Annual Conferences
  - Insurance/Reinsurance Industry Conferences
- Journal Articles

# Utilisation Opportunities

## Core Project Outputs – Potential End Users

- Local Government
- State Government
  - Emergency Services, Floodplain managers, Planners
- Federal Government
  - EMA, AIDR
- National Flood Risk Advisory Group
- Floodplain Management Australia
- Insurance/reinsurance industries
- Consultants
- Risk/Loss/Impact Modellers
- Academics and other researchers



**| Questions?**

