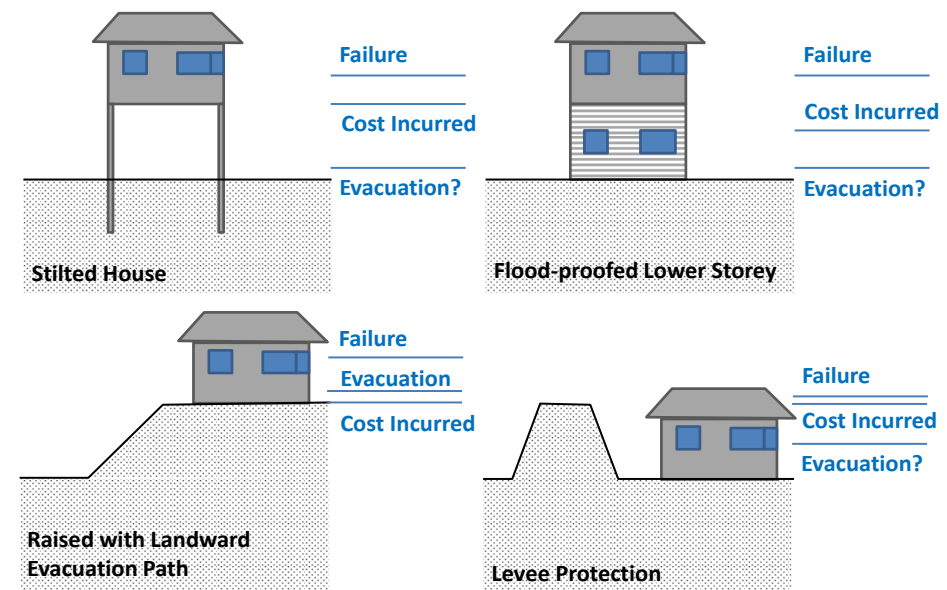


Coastal Flooding Mitigation

Management of coastal flooding in Western Australia is faced by a paradigm shift from avoidance of risk to hazard mitigation through intervention. The combined pressures of increased development and sea level rise challenge existing policies and practices, which have previously relied upon avoiding flood risk. Tolerance of increased recurrence, plus greater use of coastal hazard mitigation techniques is anticipated. A framework to identify scale-appropriate and locally-relevant hazard management is yet to be established.

Regulatory frameworks typically use the wetting or damage thresholds. This has resulted in focus on strategic interventions, such as fill levels or defences, leading to regulatory neglect of property-level or non-structural hazard mitigation. Further, in some cases, strategic intervention to address one criteria does not necessarily result in proportional change to the others.

Strategic interventions typically have practical limits, such as links to drainage pathways. In contrast, property-level protection such as flood proofing is often controlled by socio-economic factors, requiring compliance assessment.



Evaluation of mitigation options requires holistic assessment of change to safety and costs over the full range of possible events, with due recognition of uncertainties associated with flood estimation and sea level rise.

Risk-management based tools (AEMI 2013; Sayers *et al.* 2013) may provide an initial choice of primary mitigation options. However, it is expected that effective flood risk mitigation in a changing climate requires integrated flood risk management over a wide range of events, using a mix of structural and non-structural interventions, including policy refinement and application.

