

State guideline: Flood evacuation route improvements

Factsheet: Applying the assessment process with limited resources

About the guideline

The *State guideline: Flood evacuation route improvements* (the Guideline) and supporting materials provide guidance on a process to support the identification of 'fair and reasonable' flood evacuation route improvements in Queensland.

The Guideline outlines an options assessment process that supports decision making in relation to flood evacuation route improvements.

The Guideline can be used to inform flood risk management activities, and has been designed to be used by local governments, state agencies and Queensland's disaster management groups, supported as needed by suitably qualified or experienced persons.

The Guideline is published at: www.qra.qld.gov.au/resilience/flood-resilience/flood-evacuation-route-improvements-state-guideline.



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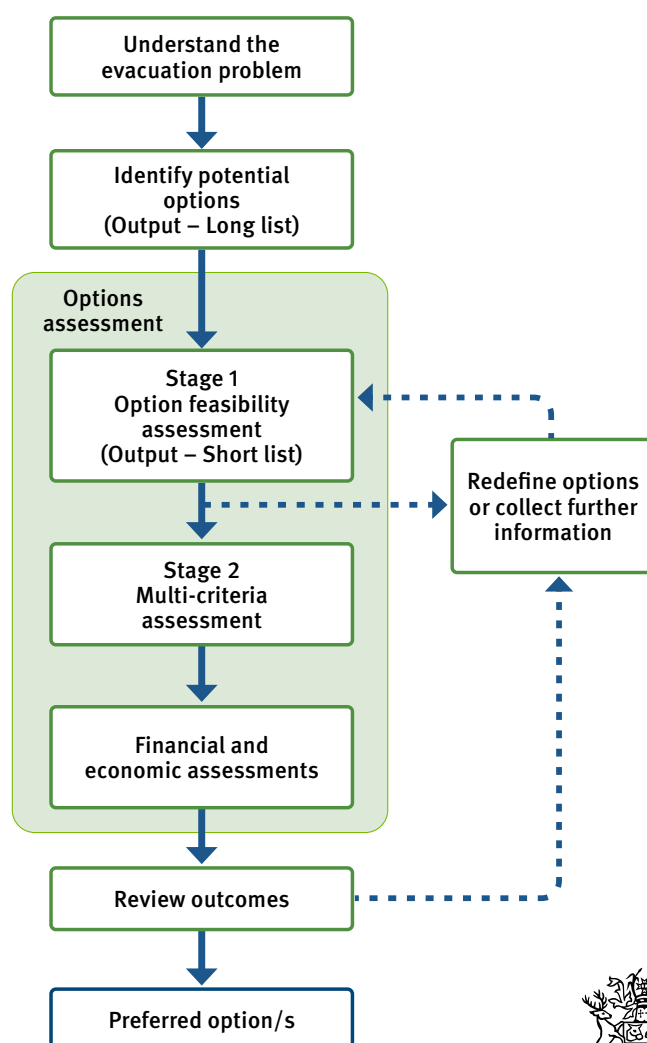
The assessment process

Figure 1 shows the Guideline process for identifying and assessing flood evacuation route improvement options. Stages of the process are:

- **Understand the evacuation problem** – Users investigate evacuation issues before defining the evacuation problem, service need and desired outcomes (Guideline section B1).
- **Identify potential options** – Users identify a long list of options which may resolve the defined evacuation problem and achieve the service need and desired outcome (Guideline section B2).
- **Options assessment** – Users initially undertake a feasibility assessment (Stage 1) to eliminate options that are not practical or feasible to generate a short list of options (Guideline section B4). The short-listed options are then assessed in more detail through a multi-criteria assessment (Stage 2 – Guideline section B5) and financial and economic assessments (Guideline section B6).
- **Review outcomes** – Users review the outcomes of the assessment process to identify a preferred option or combination of options (Guideline section B7).

If a preferred option(s) cannot be identified, options can be redefined or further information collated before repeating the assessment process.

Figure 1 - Options assessment process



Applying the assessment process with limited resources

Depending on local circumstances and the evacuation problem, it may be appropriate to include low cost options for assessment. Additionally, investment in highly detailed technical studies may not always be required as the level of detail required for assessment should be fit for purpose to the evacuation problem, scale and type of options being assessed. These approaches are discussed further below.

Flood evacuation route improvement options

The Guideline undertakes a broad approach to evacuation route improvements by considering a range of options beyond improvements to the immunity of evacuation routes. This ensures that cost-effective options, which improve evacuation capability, are considered in the assessment process.

Where suitable and fit for purpose to the evacuation problem, low-cost options may be included in the assessment process. Low-cost options are often non-infrastructure options as they generally do not require construction or highly detailed studies to justify their investment. Examples of potentially low-cost, non-infrastructure options include:

- community awareness, preparedness and resilience
- disaster management planning
- implementing new, or improving existing flood warning systems.

Other options may also be low cost depending on their scale and design. For further information on options, refer to Table 5 in the Guideline.

The assessment process also considers the financial resources of users in the feasibility assessment and the financial and economic assessment stages of the process. In both of these stages the cost of a potential option is considered against budgets and potential funding.

Level of detail required for assessment

Prior to undertaking the assessment process, users collate data to inform the assessment process (refer to Guideline section A3). Data can be collated from a number of resources including flood studies, flood risk assessments, evacuation capability assessments, records of historic floods and stakeholder and community engagement.

The availability and quality of data to inform the assessment process may vary between users. Reduced quality or availability of data may affect confidence in the assessment results. If sufficient confidence in the assessment process cannot be achieved with available data, it may be necessary to collect additional data (refer to Guideline section A3.6).

At the different stages of the assessment process users will also need to determine if further studies are required to inform the process.

The level (availability and quality) of data to inform the assessment process at each stage should be fit for purpose to the evacuation problem, scale and type of options being assessed. Under certain circumstances highly detailed technical studies may not be required for the assessment. For example, options which require significant investment and construction to deliver may require supporting detailed technical studies in order to justify their high costs, assess their impacts and address technical issues. Where only non-infrastructure options are being assessed, investment in these studies may not be required when considering their potential impacts, cost and design.



Understanding the evacuation problem

A comprehensive understanding of the evacuation problem is critical to identify potential options that are fit for purpose and respond to local circumstances. To understand the evacuation problem users may need to understand:

- the flood risk including the areas and number of people at risk, vulnerability of different parts of the community and inundation / isolation risks
- the source of flooding
- the warning signs and how much warning time is available
- the timing and relative sequencing of inundation
- community acceptance and tolerability to flood risks
- evacuation constraints.

Further information to consider in understanding the evacuation problem is provided in the Guideline (section A3 and B1).

More information

The information in this fact sheet is not intended to be exhaustive. Please refer to the *State guideline: Flood evacuation route improvements* for more information at: www.qra.qld.gov.au/resilience/flood-resilience/flood-evacuation-route-improvements-state-guideline