

Victorian Disaster Recovery Funding Arrangements

Fact Sheet 3: Cost estimation for essential public assets

1. Introduction

Victoria's Natural Disaster Financial Assistance (NDFA) scheme is available to local councils, Catchment Management Authorities (CMAs) and state agencies (Delivery Agencies), to relieve some of the financial burden that may be experienced following a natural disaster, in accordance with the Australian Government's Disaster Recovery Funding Arrangements (DRFA).

Under the DRFA, the Australian Government will reimburse the states under an estimates-based model for Reconstruction of Essential Public Assets (REPA) following an eligible disaster. The DRFA specifies that:

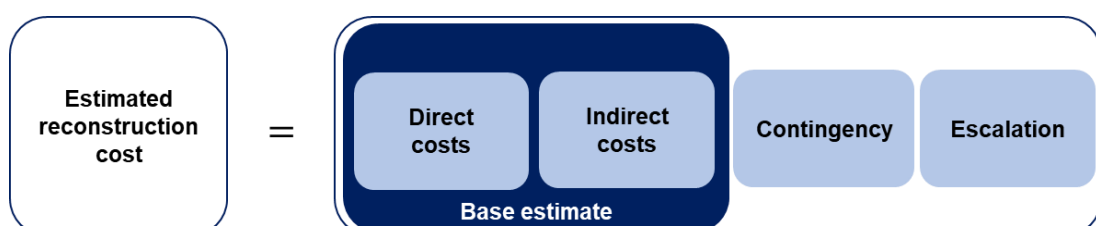
'A critical step in this process is the estimate of the reconstruction cost of the essential public asset and identification of a total project cost. States must develop the estimated reconstruction cost for the reconstruction of an essential public asset comprising eligible state expenditure for construction, design and project management, contingency and cost escalation.' (DRFA 2018, Section 6.4.3)

This guideline documents the process adopted by the State of Victoria for developing an estimated reconstruction cost following an eligible disaster and is consistent with the requirements of the DRFA published by the Australian Government.

2. Cost elements

The following diagram provides a summary of the components of the estimated reconstruction cost. Consistency in the application of overhead and indirect allowances is crucial across the program of works from both a controls perspective and to ensure auditability.

Figure 1: Breakdown of estimated reconstruction cost



2.1 Direct costs

Direct costs may be established through one of the following approaches:

- **Market response** – defined scope of works priced by the market for delivery by contractors. The applicable procurement processes must be followed when requesting pricing from the market. The scope of work should be sufficiently developed and designed to minimise increases in cost after the contract is awarded.
- **Cost estimation** – undertaken using the first principles estimation method. This mechanism requires applicants to customise a first principles build-up of standardised treatments. Where non-standard treatments are required, a first principles or itemised cost estimate can also be estimated using the ‘other’ category of treatments.

2.2 Indirect costs

Indirect costs of design and project management must be included in the estimated reconstruction cost. These indirect costs are explained in more detail below:

- **Design** – costs will vary widely depending on the complexity of works. Works may vary from simple maintenance style interventions through to complex geotechnical projects. Accordingly, design costs may vary from 0.5 to 15 per cent.
- **Project management** – costs can vary subject to the ease of procurement, delivery method and complexity of works. For example, works delivered by a contractor, adopting a standing offer arrangement, using principle supplied materials will have different project management costs to a custom build with pre-fabrication of time crucial elements of a structure. Accordingly, project management costs may vary from 3 to 15 per cent.

2.3 Contingency

Recognising the uncertainties in disaster recovery works, including pressures on the workforce, short supplies of materials and difficulty of access, allowance has been made within the DRFA for the inclusion of reasonable contingency.

‘In estimating reconstruction costs, the states will be required to account for residual risks through the inclusion of a contingency allowance.’ (DRFA 2018, Section 6.5.1)

A streamlined approach for the application of a contingency allowance has been developed through treatment categories and should be varied by region.

Risks vary by treatment type and include:

- availability of plant, labour or materials;
- variable costs of mobilisation and haulage;
- variable productivities because of a range of lot sizes;
- variable costs of traffic control; and
- environmental risks.

In considering the regionally specific risks, the deterministic approach to calculating contingencies can be applied by treatment category as is detailed in the standard deterministic matrix developed for common risk factors, included in *Appendix 2* of the *Cost Estimation Guideline*. Typical contingency ranges, correlating to a first principles estimate stage for each treatment category have been provided in the table below.

Table 1: Typical contingency ranges by treatment categories

Treatment category	Typical contingency ranges
Unsealed pavements	24-30%
Sealed pavement repairs	24-30%
Clearing and earthworks	28-34%
Road furniture and delineation	24-34%
Concrete	30-40%
Drainage structures	30-40%
Other	40%
Total	24-40%

Should a market response be used to price the works, a lower contingency in the order of 12 to 20 per cent may be more suitable.

2.4 Escalation

Escalation should be allowed for in accordance with the DRFA, which refers to the rates published in the Road Construction Cost Escalation Forecasts (RCCEF) prepared annually by the Australian Government Department of Infrastructure and Regional Development. The DRFA provides for up to three years of escalation to be applied to estimates.

3. Timeframes for lodgement

Estimates must be submitted to the assessing agency no later than 31 March in the financial year after the eligible disaster occurred, and prior to undertaking the reconstruction works.

4. Further information

For further information, refer to the document *Victorian DRFA Guideline 3: Cost estimation* for essential public assets.

4.1 Document details

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V1.0	12.10.18	Issued for IDC review	
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V2.1	30.10.18	Working Document	
V2.2	13.01.2019	Updates to Standard forms and templates	

4.3 Standard forms and templates

Item	Description	Form/Doc ID
1	Victorian DRFA Guideline 3: Cost estimation for essential public assets	GL-3
2	Victorian DRFA Fact Sheet 3: Cost estimation for essential public assets	FS-3
3	Standard treatment guidelines for cost estimation	GL-3 App B
4	Standard Deterministic Risk Matrix – Victoria	GL-3 App C
5	Guidance Note 3A	GL-3 App D
4	Victorian DRFA Cost estimation tool	VT-CE