



Policy Subject/Title: Asset Management Policy – Bridges

Police Number: OP/005

Responsible Officer: Director Operations

Legislative or Regulatory Reference: Local Government Act 2009 and regulations

Related Policies / Procedures: Various

Authorised by: Somerset Regional Council

Authorised on: 8 September 2010

Review / Amendment dates:

- 22 February 2012 [Doc Id 604445]
- 27 June 2012 [Doc Id 625590]
- 8 August 2012 [Doc Id 631976]
- 11 July 2013 [Doc Id 711676 / no amendments]
- 19 December 2014 [Doc Id 794418]
- 28 March 2018 [Doc Id 1024321]
- 12 December 2018 [Doc Id 1084022]
- 14 August 2024 [Doc Id 1653671]

1. OBJECTIVE

To meet Council's legal responsibilities for financially sustainable asset management in respect of bridges and hydraulic structures.

2. BACKGROUND

The *Local Government Act 2009* requires councils to adopt long term asset management plans which provide for strategies to ensure the sustainable management of assets and infrastructure.

It is intended that Council will adopt asset management policies for each of its asset categories as part of its long term asset management plan. This policy deals with Council's asset management strategies for bridges.

3. PURPOSE

This policy deals with Council's asset management strategies for bridges.

4. SCOPE

The policy applies to Somerset Regional Council

5. POLICY

Philosophy

Council's asset management philosophy with bridges is to utilise until end of life and then replace.

Council seeks to replace its timber bridge stocks with longer-lived assets of similar dimensions and at similar heights to current structures over time other than the bridges identified within this policy.

To manage its risks, Council will:

- a) Inspect bridges at least at least every three years to ensure that they are safe for designated traffic.
Inspection activities may include assessing maximum and average girder stress of timber bridges through bore samples.
- b) Maintain all bridges as part of an annual program to ensure that they are safe for designated traffic
- c) Impose mass restrictions on bridges where appropriate
- d) Close bridges where appropriate

All bridge inspections undertaken are to be evidenced and supported by a written document authorised by Director Operations.

Council confirms that it may be willing to use its cash reserves where necessary to replace

bridges with new long-lived concrete or part-concrete structures unless these are low use bridges identified in this policy.

All Council bridge assets are fair valued using written down current replacement cost. This valuation comprises the asset's current replacement cost (CRC) less accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset. Council will determine the gross cost of replacing the full service potential of the asset and then adjusted this amount to take account of the expired service potential of the asset.

CRC is measured by reference to the lowest cost at which the gross future economic benefits of the asset could currently be obtained in the normal course of business. Where existing assets were over designed, have excess capacity or were redundant an adjustment is made so that the resulting valuation reflected the cost of replacing the existing economic benefits based on an efficient set of modern equivalent assets to achieve the required level of service output within the council's planning horizon.

The unit rates (labour and materials) and quantities applied to determine the CRC of an asset or asset component are to be based on a "Greenfield" assumption meaning that the CRC is determined as the full cost of replacement with a new asset including components that may not need to be replaced, such as earthworks.

Council categorises its bridges into concrete, timber and concrete/timber composite hydraulic structures. Council assumes that environmental factors such as soil type, climate and topography are consistent across each bridge. Council also assumes a bridge is designed and constructed to the same standard and uses a consistent amount of labour and materials for its construction type.

CRC is calculated by reference to asset linear and area specifications, estimated labour and material inputs, services costs, and overhead allocations.

Council's bridges and hydraulic structures are to be valued by a suitably qualified engineer at fair value being depreciated replacement cost relying on dimensional, condition, costing and other data collected. Council's bridges primarily consist of either all timber structures, all concrete structures or "Doolan Deck" structures that include both concrete and timber components. Replacement costs for these assets are to be assessed based on unit rates which reflect the council's experiences in constructing bridges. Condition data for bridges are obtained through regular inspection activities including taking core samples of major timber components. Remaining lives of assets were assessed based on both condition and year of construction. No residual value is to be applied in respect of any bridge.

Conditions are assessed using the following table:

Definition	Rating	Reduction in design life
Timber or part-timber bridge with measured girder stress of 60 Mpa or greater	5	90%
Timber or part-timber bridge with measured girder stress of between 40 Mpa and 60 Mpa	4	50%
Timber or part-timber bridge with measured girder stress of between 30 Mpa and 40 Mpa	3	30%
Timber or part-timber bridge with measured girder stress of between 20 Mpa and 30 Mpa	2	15%
Good	1	5%

All-concrete or part-concrete bridge requiring no maintenance	0	0%
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Council's bridge network has been valued using written down current replacement cost. This method utilises a number of inputs that require judgement and are therefore classed as unobservable. While these judgements are made with the greatest care, and based upon years of experience, different judgements could result in a different valuation. The table below summarises the effect that changes in the most significant unobservable inputs would have on the valuation:

Significant unobservable input	Range of inputs	Relationship of unobservable inputs to fair value
Estimated life	30 years to 100 years	The longer the estimated life, the higher the fair value
Estimated remaining life	0 years to 100 years	The longer the estimated remaining life, the higher the fair value
Condition rating	0 to 5 as above	The lower the condition rating, the higher the fair value
Standard construction unit rate per square metre of deck	\$1,950 to \$3,820 as above	The higher the standard construction unit rate, the higher the fair value

6. CONTROLS

This policy is subject to controls as outlined within the policy

7. DATE OF RESOLUTION

This original policy was approved by the Chief Executive Officer and adopted by Somerset Regional Council at the Ordinary Meeting of 8 September 2010. This policy was last reviewed and amended on 14 August 2024.

Signed:

Date: 14 August 2024