GAWLER RIVER FLOODPLAIN MANAGEMENT AUTHORITY

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POLICY DOCUMENT

Strategic Reference	Policy Documents
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Applicable Legislation	Local Government Act 1999
Related Policies	Procurement and Operations Policy
Related Procedures	

Bruce Eastick North Para Flood Mitigation Dam Valuation Policy

Background

In December 2007, the GRFMA completed the construction of the Bruce Eastick North Para River Flood Mitigation Dam (Dam) which is one of the major items of capital infrastructure to implement the Gawler River Flood Mitigation Scheme. The Dam is located on land owned by the GRFMA which also owns a number of 'Right to Flood' easements over the land upstream of the dam wall which will be inundated by the water held by the dam during a flood event.

Regulations and Standards

The Local Government (Financial Management) Regulations 2011 requires the revaluation of all material non-current assets in accordance with AASB 116 which in effect limits the choice of carrying value otherwise available under the Standard. The effect of this is that these assets must be carried at fair value.

Australian Accounting Standards require that depreciation methods reflect *"the pattern in which the asset's future economic benefits are expected to be consumed"* (see paragraph 60 AASB 116; Property, Plant and Equipment). Depreciation methods are all based either on the asset's expected lifetime or usage during the life of the asset and Councils should choose a method that best practically reflects the way an asset is used up.

Australian Accounting Standard AASB 116 requires assets to be recorded at fair value or historical cost less accumulated depreciation. However the Local Government (Financial Management) Regulations 2011 restrict this to fair value only for infrastructure assets while allowing for historical cost valuation for short-lived assets such as plant, equipment etc. Paragraph 6 of AASB 116 defines fair value as *"the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's length transaction"*. Paragraph 33 advises that in the absence of market based evidence, fair value may be estimated using a depreciated replacement cost basis i.e. the cost of replacing the asset today less the value of the asset that has been 'used up' to date. This is therefore the basis that Councils must use for infrastructure assets.

Paragraph 31 of AASB 116 requires revaluations to be made with sufficient regularity so as to ensure that the carrying amount of assets at the reporting date is not materially different from that which would be determined using the 'fair value' definition. In practice external auditors are usually satisfied if a Council formally reviews all asset values about every 3 to 5 years.

History of Valuation

The original cost of the dam in 2007 included a number of elements comprising, design, relocation of a water main, supervision, construction, land and easements, replacement flow gauge weir, survey monuments and floodplain mapping. In 2009 the capitalised costs were impaired to align with the actual assets owned and controlled by the GRFMA.

The Dam Valuation Policy and Worksheet (2011) prepared by Gawler River Floodplain Management Authority (GRFMA) states that the SA Local Government (Financial Management) Regulations 2011 requires the revaluation of all material noncurrent assets in accordance with AASB 116 at fair value.

The Worksheet (2011) also mentions that the revaluation should be carried out every five years with the commencement date for revaluation being 1 July 2008.

The first asset valuation of Bruce Eastick Flood Mitigation Dam was undertaken by Entura for GRFMA in 2014/15. As the Worksheet (2011) requires the revaluation should be carried out every five years, GRFMA requested Entura to undertake the asset revaluation of Bruce Eastick Flood Mitigation Dam to determine the replacement cost of the dam at 2018/19 prices.

Revaluation Process

Step 1 - Is the Structure Complex?

The first step is to understand the structure which comprises a dam wall and secondary spillway constructed of 44,000 cubic metres of Roller Compacted Concrete (RCC) that has no internal reinforced steel (apart from the primary spillway crest wall, spillway side channel walls and stilling basin walls and baffle blocks). The dam wall has been bedded onto the excavated bedrock of the river valley and the secondary spillway has been bedded on to the deep clay of the high terrace. The bedrock under the dam wall was treated with curtain grouting to seal the footing from the egress of water under pressure to protect the integrity of the dam foundation. There are no moving parts, gates or valves. While the dam wall was constructed in full width layers it is separated into 15 metre wide monoliths separated by 1mm stainless steel inducer plates and neoprene water stops. While these may deteriorate over time the integrity of the dam wall as a flood mitigation structure will not be impaired.

Galvanised steel components include and access ladder, spillway railing, and Low Level Outlet Pipe Trash Rack and High-level Outlet Pipe safety screens. These components will require maintenance and are itemised in the Operations and Maintenance Manual - Maintenance Schedule and will be maintained and replaced as required as part of the operating costs of the dam.

On this basis the dam is deemed to be NOT a complex asset and will be treated as one.

Step 2 - What will be revalued?

Entura has followed the same scope of work as it undertook in 2014. In particular, the scope of work included the following tasks:

- Updated unit rates to 2019 costings, including validation;
- Review of unit rates and amended as required. This will only apply to quantifiable rates.
- Prepared a brief report compiling relevant information, assumptions and methodology including the updated value of the dam.

Step 3 -What is the start date for the revaluation?

The construction costs are at cost for the year ended 30th June 2019.

The commencement date for the revaluation will be 30 June 2008.

Step 4 - What method or revaluation will be applied?

To reflect the increase in construction costs since 2008, it was decided to use the ABS' Producer Price Index (PPI), 6427.0 (domestic). Civil engineering projects, such as dams, are sufficiently different from building projects for a building price index such as Rawlinson's to be misleading, and while the producer price index is not perfectly applicable it was considered to be the best published index to apply here. At a little over 4% per annum average, it increases the estimated cost less than would be the case with a building price index.

The index values published by the ABS for the March 2019 quarter were 121.2. Entura have forecast the June 2019 figure of 121.75

Step 5 - How frequently will the asset be revalued?

The actual construction cost will be revalued every five years.

Step 6 - How will the asset be depreciated?

URS Australia Pty Ltd, Dam Designers, have previously advised that a concrete RCC dam wall can be expected to have a life of 80 years after completion.

On that basis the dam wall should be depreciated at the rate of 1.25% annually.

Step 7 - What will be depreciated?

The actual construction cost, including some 'owner's costs' which would be incurred in the event of a replacement being necessary. For example, some design work and superintendent costs for the construction contracts.

Associated constructed access roads have also been depreciated

Step 8 - What is the commencement date for depreciation?

The commencement date for depreciation will be 1 July 2008.

Step 9 - What about the other dam costs?

Note that other dam costs will remain at cost.