

GAWLER RIVER FLOODPLAIN MANAGEMENT AUTHORITY

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P O L I C Y D O C U M E N T

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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.

In November 2023 North Projects (NP) was engaged by the Gawler River Flood Management Authority (GRFMA) to conduct a revaluation of the Bruce Eastick North Para Flood Mitigation Dam structure to determine the replacement cost of the dam at 2023/24 prices.

The revaluation was conducted based on a review of The Dam Valuation Policy and Worksheet (2011) provided by the GRFMA.

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?

The 2023/2024 revaluation process involved estimating the value of the existing dam based on 2023/2024 market conditions to determine the Current Valuation and estimating the value of the depreciation since construction to determine to its Written Down Value.

In summary, the Current Valuation for the Bruce Eastick North Para Flood Mitigation Dam is \$54,036,053 based on 2023/2024 market conditions and the Written Down Value is \$43,313,042.

These figures are based on the most recent construction rate information and adhere to the relevant accounting standards. Incorporated within these amounts is a Total Depreciation value of \$10,723,011 (formulated utilising the straight-line depreciation method).

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

The construction costs are at cost for the year ended 30th June 2024

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

Step 4 - What method or revaluation will be applied?

NP has based the revaluation on the schedule of rates prepared by Entura in 2007/2008, and independently assessed the total asset values of the asset.

As specified within the 'Dam Revaluation Specs' (provided by GFRMA), NP has used ABS Producer Price Index, specifically Index Number; 3101 Road and bridge construction South Australia (part of the 6427.0 catalogue, series ID A2333748X) to extrapolate 2008 rates to 2024 rates.

Note that NP has forecasted June 2024 index based on previous years from June 2019 to September 2023. In addition, market rates have been applied to specific line items where the rates vary from this benchmark.

June 2008 Index 84.20

September 2014 Index 109.80

June 2019 Index 122.10

Expected June 2024 Index 159.04

Projected increase for 2008-2024 (%) 88.89%

Using the above index NP has analysed the cost of the project to be \$22.6 M however a closer inspection of the individual rates of the line items revealed that the rates updated using the index does not represent the current market condition (2023/2024).

A schedule of rates has been prepared to mirror the construction costs incurred in 2007 and 2008, adjusting for asset value of the dam at 2023/2024 price.

The schedule of rates is split under the two contracts: \$4 million for the Earthwork Contract and \$34 million for the Dam Contract. Consequently, the total construction cost in 2024 is projected to be \$54 million.

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.