Submission to the

Australian Accounting Standards Board

Tentative Agenda Decision February 2015
on
Recognition of Residual Value for Infrastructure Assets

Local Government Association of Queensland

April 2015

Contents

Local Government Association of Queensland (LGAQ)

The LGAQ is the peak body for local government in Queensland. It is a not-for-profit association setup solely to serve councils and their individual needs.

LGAQ has been advising, supporting and representing local councils since 1896, allowing them to improve their operations and strengthen relationships with their communities. LGAQ does this by connecting councils to people and places that count; supporting their drive to innovate and improve service delivery through smart services and sustainable solutions; and delivering them the means to achieve community, professional and political excellence.

Executive Summary

The AASB has issued a tentative agenda decision on the recognition of residual values for infrastructure assets. The tentative decision suggests that residual value would only be recognised (in accordance with AASB116) when an agency expects to receive consideration for an asset at the end of its useful life.

Based on this tentative decision, the use of residual values for infrastructure valuation becomes problematic. A suggested alternative approach is to adopt additional componentisation and to value these sub-components as modern equivalent assets with distinct, longer useful lives.

LGAQ submits that the restriction on the recognition of residual value from recycled materials have a number of implications for Queensland local governments' current approach to road asset valuation, including:

1. Increased complexity and variability in application of the infrastructure valuation process.
2. Increased asset management and valuation costs associated with the increased number of components that need to be maintained and managed.
3. Potential divergence between financial and operational asset management practice. The additional componentisation required in the financial asset registers may not be reflected in the operational asset registers because of limited value for operational asset management practice. Divergence between these registers is considered to be an undesirable outcome.
4. Uncertain impact on depreciation expense which will vary between local governments depending on the extent that they have utilised residual values. It is anticipated that it may increase annual depreciation costs of seal and pavement assets in the short term.
5. Significant transitional issues associated with implementing an alternative approach, including the establishment of the additional components in infrastructure asset registers. For councils with large networks, this is a major task. Queensland local governments manage 150,000 kilometres of local roads and if councils are no longer permitted to assign residual value to road assets they would need time and support to implement the necessary changes.

LGAQ submits that the current widely adopted practice of using residual values for infrastructure valuation is a valid and practical approach. These valuation processes have been developed and refined over the last ten years. LGAQ is supporting Queensland local governments through the Road Asset Valuation Project (RAVP) to improve the consistency of the valuation of infrastructure assets.

The refined residual value approach developed by the Roads and Transport Alliance Valuation project aligns financial asset management processes with local government operational asset management processes. Any residual values used are reflective of how the infrastructure networks are currently being managed.

To mandate the use of a more complex valuation model using additional componentisation beyond what is required to manage the assets, in LGAQ's view, provides no overall benefit in informing decision makers and only increases the cost and complexity of the valuation process.

Importance of Infrastructure Valuation for Queensland Local Governments

LGAQ has taken a strong interest in the valuation of infrastructure assets as:

- Preparing valuations to meet statutory requirements is a regulatory requirement for Queensland local governments.
- It can be a costly and time consuming process, especially where system changes need to implemented, for local governments who manage 150,000 kilometres of local roads.
- Previous research by the Queensland Audit Office (QAO) identified wide variations in critical assumptions used by local governments in road valuation processes. The Queensland Audit Office Report to Parliament 10-2012-13:- Results of Audits: Local Government Entities 2011-12 stated:

  "The valuation of infrastructure assets also remains the most significant financial reporting issue for the sector with high levels of volatility in valuations experienced across councils from one year to the next".

- Valuation outputs are widely utilised as part of local government reporting requirements so it is important that they be based on reliable and consistently applied data. Specifically, valuations are used in Financial Sustainability Measures required by the *Local Government Regulation 2012* (Qld) and audited by QAO.

  "Inconsistent valuation outputs can distort local government performance measures which can lead to incorrect conclusions on a local government's sustainability."

Issues and Challenges of Infrastructure Valuation for Queensland Local Government

In 2012, LGAQ undertook a survey of its members to determine the specific issues and challenges associated with infrastructure valuation.

The specific issues highlighted include:

1. Accounting for flood damage.
2. Access to reliable unit rates.
3. Ensuring that each new valuation accurately reflects all new capital work undertaken.
4. Cost of valuation.
5. Inconsistency in methodology and unit rates between valuations and valuers.
6. Inconsistency between condition surveys.
7. Data completeness and quality.
8. Residual value and useful lives.
9. Size of network, condition assessment.
10. Council resourcing.
11. Remote location.
12. Unit rate verification by auditors.
13. Variation of unit rates across large LG areas.
14. Lack of historical construction dates and estimating remaining useful life.

The survey found significant variations in the key assumptions being used and supported the concerns raised by QAO. The variations found are highlighted in Table 1, Table 2, and Table 3.

Table 1: Variation in Unit Rates used for Asset Valuation

		LG Min	LG Max
Rural	Seal	$ 5.86	$ 10.00
	Pavement	$ 8.50	$ 29.10
	Earthworks	$ 3.41	$ 31.82
Urban	Seal	$ 7.00	$ 18.10
	Pavement	$ 8.50	$ 29.60
	Earthworks	$ 4.00	$ 56.47

Table 2: Variation in Road Component Residual Values

		LG Min	LG Max
Rural	Seal	0%	50%
	Pavement	15%	50%
	Earthworks	0%	100%
Urban	Seal	0%	63%
	Pavement	15%	50%
	Earthworks	0%	100%

Table 3: Variation in Road Component Useful Lives

		LG Min	LG Max
Rural	Seal	10	15
	Pavement	20	65
	Unsealed Pavement	12	50
	Earthworks	50	200
Urban	Seal	10	20
	Pavement	30	80
	Earthworks	80	200

In summary, large variations were found in the key assumptions used in the valuation process which in turn leads to significant variations in the valuations of similar assets and between valuations of the same assets.

LGAQ Response to Improve Valuation Consistency

The LGAQ response through the Road Asset Valuation Project (RAVP) has been to promote a standardised approach across Queensland local governments based on a stereotypical model approach for unit rates developed by the Queensland Department of Transport and Main Roads.

- Transport and Main Roads have since 2008-09 developed a very robust road valuation approach which accommodates varying climatic, terrain and soil type and is applied consistently across Queensland.
- The process is updated annually.
- The Road Asset Valuation Project extends the TMR methodology to the local government road network with the addition of additional stereotypes for local government type roads.
- The TMR methodology incorporates the use of residual value based on the concept of savings arising by renewing rather than replacing asset components.

'The Aim of the Road Asset Valuation Project is to provide inputs to the valuation of road assets which are consistent with the Australian Accounting Standards requirements, promote consistency (between local governments and between successive valuations) and transparency (key assumptions, inputs and methodologies).'

To promote consistency across local government and valuations, the RAVP also provides guidance on the selection of component useful lives and the determination of residual values. For further information and background documentation follow the attached link:

http://lgaq.asn.au/road-asset-valuation-toolbox

Road Asset Valuation Project approach to calculating Residual Value

The current recommended RAVP approach for the calculation of residual value aligns the road valuation methodology with the current adopted road asset management rehabilitation practices of the road organisation. Councils would reasonably **expect to receive consideration for the sale** of the recycled material or in terms of savings on the purchase of replacement materials, therefore recognising residual value on these road assets is a reasonable and consistent approach.

Residual value is currently calculated as the cost saving in renewing an asset (eg. rehabilitating a pavement, resurfacing a road, etc.) with the remnants of the old asset in place compared with constructing the asset (eg. new pavement on completed formation, or new seal on completed pavement from scratch).

To estimate residual values, each local government (based on its current rehabilitation practices) determines for each Road Stereotype the percentage of each rehabilitation treatment being utilised. The weighted average rehabilitation rate is calculated for each road stereotype based on the current rehabilitation practices used. This is a dynamic process and effectively links the estimation of residual value to current rehabilitation practice.

An example of how the residual value is calculated is provided in ***Attachment A***.

As rehabilitation practices change on a road network over time, this is reflected in the residual value. A range of rehabilitation treatments are used in road management ranging from treatments which utilise a large percentage of existing materials (such as in-situ stabilisation) to treatments which totally replace the original materials and therefore no residual value is recognised. As a section of road is managed over time, a range of treatment types will be used.

The benefits of the current Road Asset Valuation Project include:

- Alignment of the calculation of residual value to the range of current rehabilitation practices.
- **Uses appropriate components** (seal, pavement, earthworks) which align with asset management.
- Good **alignment between operational asset and financial management and reporting systems**.
- Promoting **consistency between local governments** and between valuations over time.

We submit that the RAVP approach is consistent with the requirements of AAS116.

Impact of the Tentative Agenda Decision on the use of Residual Values for Infrastructure Assets

AASB 116 (Property, Plant and Equipment) defines residual value of an asset as "the estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal".

The tentative view of AASB is that residual value would only be recognised (in accordance with AASB116) when an agency expects to receive consideration for an asset at the end of its useful life.

The tentative decision states that adequate componentisation of parts of an item of property, plant and equipment and appropriate estimation of useful lives of such parts, would result in a similar overall depreciation expense being recognised regardless of whether the costs savings from recycled materials are included. This leads to a suggested alternative approach to comply with AASB 116 which is to adopt additional componentisation of seals and pavements to recognise both short life and long life components and to value these sub components as modern equivalent assets (that is, the lowest cost to replace the service capacity of an asset).

Some proponents suggest that, in the case of roads, there is little evidence of road materials being disposed of and sold. The reason for this is that roads are very rarely totally decommissioned. Roads tend to be reclassified to a lower class and continued to be utilised. Road materials are rarely sold as the road owner would always be prepared to pay the highest price for existing road materials in place (up to the residual value based on current replacement costs) in a hypothetical sale situation.

Road surface and pavement components are maintained in perpetuity by various rehabilitation treatments with different treatment lives. There are examples in Europe of roads built by the Romans still being used 1000 years later. There are also examples of rails and sleepers being sold off on the closure of railways, bridge timbers being sold and old road culverts being sold. With gravel resources becoming increasingly expensive and the potential costs of transporting these over long distances, a market for recycled materials could be readily found if the current road owner does not require them.

The tentative decision states that if significant values attach to in-situ materials, and they are expected to be recycled, the materials have not reached the end of their useful lives (and therefore a residual value exists). While the materials may not have reached the end of their useful life, the current configuration of the road which is comprised of the component materials has reached the end of its useful life (at a given standard).

An example is a road that is in such poor condition that it is no longer trafficable. A stabilisation treatment can be used to restore the service potential of the road using the same materials. There is clearly a residual value, as in the absence of the existing materials then replacement materials would need to be obtained. This approach recognises the complete asset and not only the initial inputs.

Implications of the Tentative Agenda Decision on Valuation Practice for Infrastructure Assets

Moving from recognising residual value to a greater level of components has a number of implications for valuation practice associated with infrastructure assets including:

- **Increased Complexity and Variability**

Introducing additional components increases the complexity and the opportunity for greater variability of the valuation process. For roads, the number of seal and pavement components will potentially double. These additional components will need to be maintained in the financial asset register and the attributes updated when treatments occur. Additional unit replacement costs and useful lives will need to be determined for the long life sub components. The additional components will further exacerbate the variability problem identified in the RAVP survey with the wide variation in assumptions being adopted. It may be possible to reduce some of the need for additional components by combining components with similar useful life. For example, the long life component of bitumen seals could be combined with the road pavement because both components would be replaced at the same time.

- **Increased Cost**

The increased complexity will increase the cost of the valuation because of the large increase in the number of components to be valued. For example, in a 1000km road network with 1km segment lengths, the number of valuation components will increase from 3000 to 5000. These additional components will need to be added to and maintained in the financial asset register to facilitate depreciation calculations.

- **Divergence from Asset Management Practice**

It is suggested that by adding an additional level of componentisation to road seals and pavements, then it will not be necessary to recognise residual values. Specifically, it has been suggested that road seals and pavements can be split into short and long life components. However, the concept of two components (short and long life) for seals and pavements is not embedded in asset management practice.

Seals and pavements are managed in terms of rehabilitation as whole components, not as short life and long life sub components. Although it is theoretically possible in most cases to physically identify the long life residual component, on completion of the treatment, the seal and pavement components will still be managed as a whole and not as two sub components. With current technology, it will be difficult to assess the condition of the short and long term components separately. Condition is widely used and recommended to assess remaining component useful life. Field knowledge will not be available to assist with the estimation of useful lives of components.

In practice it is not possible to treat the long life seal or pavement component without disturbing the short life component. For example a stabilisation treatment will update the short life pavement component and not affect the long life pavement component. A full “dig out” treatment will affect both components.

If the practice of a higher level of componentisation is adopted to facilitate compliance with AASB116, this will lead to **a divergence between the records required for financial asset management and operational asset management**. For example for roads if short and long life components are mandated for seals in pavements in the financial register, this is unlikely to be replicated in the operational asset register, where single components are normally adopted for seals and pavements.

- ### Impact on Depreciation

It is uncertain, whether the use of additional componentisation will increase the depreciation expense over and above that being currently estimated using residual values. Any differences will dependent on the assumptions used in the two approaches.

The following example (Table4) illustrates the different approaches and the impact on depreciation.

A 1kmX 8m wide road section has a replacement pavement cost $60/m2. A 150mm stabilisation treatment is planned at $25/m2. The short term pavement life is 50 years and the long term pavement component life is estimated as 100 years. The assumption of 100 years for the long term pavement infers that the pavement is to be replaced or the road decommissioned at 100 years.

Table 4: Comparison of Using Residual Value and Residual Component

Method 1: -Conventional Residual Value Approach	**Method 2:-Proposed Residual Component Approach**
Based on expected treatments for specific segment First 50 years Replacement Value = $60/m2 or $480,000 Rehabilitation rate= $25/m2 Residual value = $60-$25=$35 or $280,000 Depreciable Amount = $200,000 Annual Depreciation = $4000 Written Down Value at Year 50 = $280,000 Total depreciation over first 50 years =$200,000 Second 50 years Replacement Value = $60/m2 or $480,000 Rehabilitation rate= $60/m2 (pavement replaced) Residual value = $60-$60=$0 Depreciable Amount = $480,000 Annual Depreciation = $9,600 Written Down Value at Year 100 = $0 Total depreciation over second 50 years =$480,000 Total depreciation over 100 years =$680,000	Based on expected treatments for specific segment First 50 years Short Life Pavement Replacement Value = $25/m2 or $200,000 Residual Value =0 Depreciable amount = $200,000 Annual Depreciation = $4000 Long Life Pavement Replacement Value =$60-$25=$35 or $280,000 Residual Value = 0 Depreciable amount = $280,000 Annual Depreciation = $2800 Total Depreciation = $6,800 Written Down Value at Year 50= $140,000 Total depreciation over first 50 years = $340,000 Second 50 years Short Life Pavement Replacement Value = $25/m2 or $200,000 Residual Value =0 Depreciable amount = $200,000 Annual Depreciation = $4000 Long Life Pavement Replacement Value =$60-$25=$35 or $280,000 Residual Value = 0 Depreciable amount = $280,000 Annual Depreciation = $2800 Total Depreciation = $6,800 Written Down Value at Year100= $0 Total depreciation over second 50 years = $340,000 Total depreciation over 100 years = $680,000

The two methods will tend to converge over time with each revaluation. At each revaluation the key assumptions are revisited based on field performance and predicted pavement performance. The concepts are illustrated in Figure and Figure 4.

Figure 1: Pattern of Depreciation Method 1

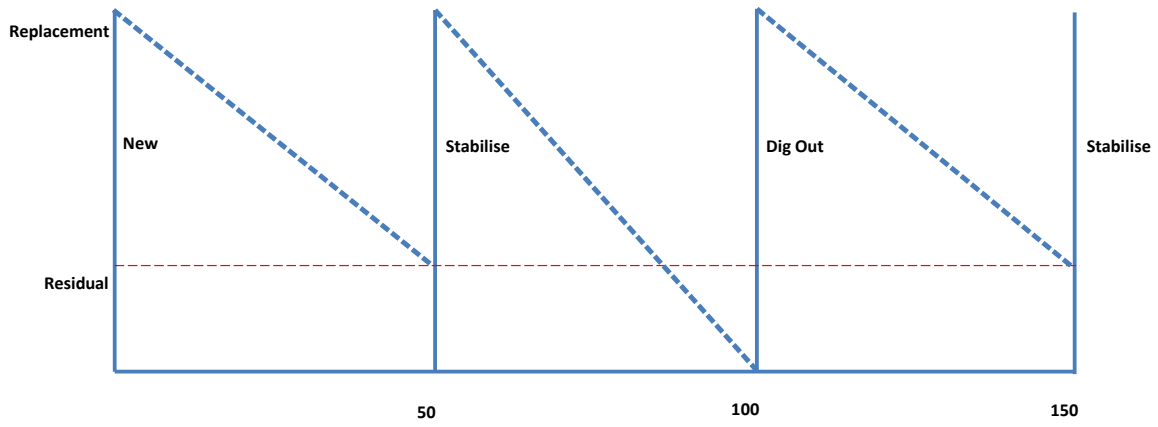
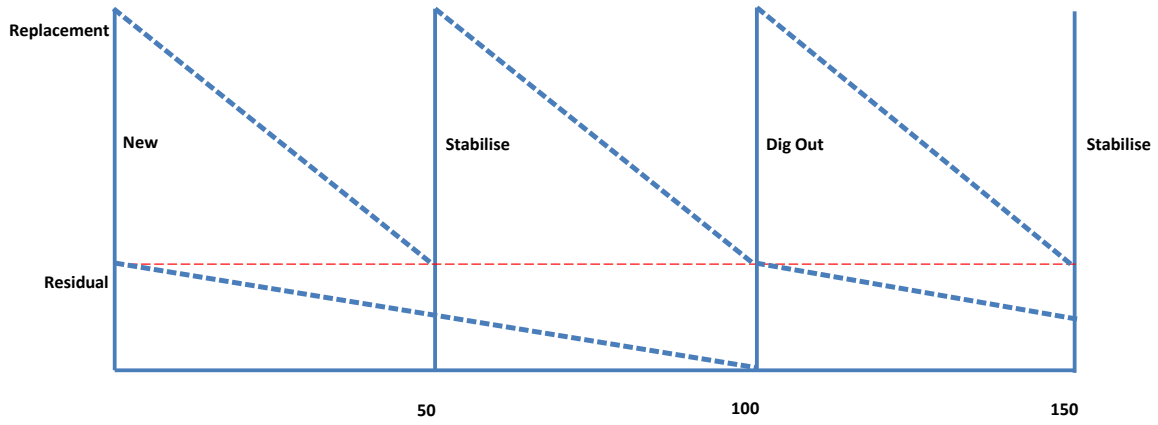


Figure 4: Pattern of Depreciation Method 2



The RAVP uses a version of Method 1. The residual value calculated under the RAVP approach will typically be lower than the conventional residual value approach. The calculation of residual value using the RAVP approach provides a better alignment between the key valuation assumptions (useful lives and residuals) and current field rehabilitation practice. In the RAVP the weighted average of all rehabilitation treatments ranging from low cost treatments such as overlays and stabilisation through to expensive treatments such as “dig outs” is used to calculate residual value rather than a single rehabilitation treatment. The calculation of residual value aligns with the rehabilitation strategies currently being utilised. Different treatments will impact both the component useful life and the effective residual value. By linking to the current rehabilitation program it is in constant alignment with what is actually happening in the field and the outcomes will change if the field practice change over time. Over the full pavement cycle, the full value of the components is depreciated. The pattern of depreciation aligns more closely with field practice.

- **Implementation and Transition**

If a change in valuation practice (such as a greater level of componentisation) is required, Local government will need time to transition to the revised approach. Changes will need to be made to asset registers and to the unit rate valuation models to accommodate the revisions. Training on the implications of the changed approach and how to deal with the changes in the valuation process will also be required.

Conclusion

LGAQ submits that the current widely adopted practice of using residual values for infrastructure valuation is a valid and practical approach. These valuation processes have been developed and refined over the last ten years. LGAQ is supporting Queensland local governments through the Road Asset Valuation Project (RAVP) to improve the consistency of the valuation of infrastructure assets.

The refined residual value approach developed by the Roads and Transport Alliance Valuation project aligns financial asset management processes with local government operational asset management processes. Any residual values used are reflective of how the infrastructure networks are currently being managed.

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Attachment A

Replacement WBS Code	Seal_Type	LG_Stereotype	Rehabilitation WBS Code	Replacement Rate ($/m2)	Surface Rehabilitation Rates and Current Application								Residual Value
					Reconstructed		Reseal		Ashpalt Overlay		Total %	Weighted	
					Rate ($/m2)	Application	Rate ($/m2)	Application	Rate ($/m2)	Application	Application	Rate ($/m2)	% (of RR)
CLDNR_TN_GS	Spray Seal	C	CLDNR_TN	$10.58	$10.58	40%	$4.46	60%	$0.00	0%	100%	$6.91	35%
CLDR_TN_GS	Spray Seal	C	CLDR_TN	$10.52	$10.58	40%	$4.46	60%	$0.00	0%	100%	$6.91	34%
CLWNR_TN_GS	Spray Seal	C	CLWNR_TN	$12.98	$10.58	40%	$4.45	60%	$0.00	0%	100%	$6.90	47%
CLWR_TN_GS	Spray Seal	C	CLWR_TN	$12.73	$10.58	40%	$4.45	60%	$0.00	0%	100%	$6.90	46%
CRDNR_TN_GS	Spray Seal	C	CRDNR_TN	$10.37	$10.58	40%	$4.45	60%	$0.00	0%	100%	$6.90	33%
CRWNR_TN_GS	Spray Seal	C	CRWNR_TN	$13.06	$10.58	40%	$4.45	60%	$0.00	0%	100%	$6.90	47%
CMWNR_TN_GS	Spray Seal	C	CMWNR_TN	$12.91	$10.58	40%	$4.60	60%	$0.00	0%	100%	$6.99	46%
DLDNR_TN_GS	Spray Seal	D	DLDNR_TN	$10.38	$10.58	40%	$4.43	60%	$0.00	0%	100%	$6.89	34%
DLDNR_TN_GA	Asphalt	D	DLDNR_TN	$20.22	$10.58	40%	$0.00	0%	$26.82	60%	100%	$20.32	0%
DLWNR_TN_GS	Spray Seal	D	DLWNR_TN	$13.04	$10.58	40%	$4.45	60%	$0.00	0%	100%	$6.90	47%
DLDR_TN_GS	Spray Seal	D	DLDR_TN	$10.36	$10.58	40%	$4.45	60%	$0.00	0%	100%	$6.90	33%
DLWR_TN_GS	Spray Seal	D	DLWR_TN	$12.93	$10.58	40%	$4.45	60%	$0.00	0%	100%	$6.90	47%
DRDNR_TN_GS	Spray Seal	D	DRDNR_TN	$10.40	$10.58	40%	$4.43	60%	$0.00	0%	100%	$6.89	34%
DRWNR_TN_GS	Spray Seal	D	DRWNR_TN	$13.05	$10.58	40%	$4.43	60%	$0.00	0%	100%	$6.89	47%
DMWNR_TN_GS	Spray Seal	D	DMWNR_TN	$12.92	$10.58	40%	$4.46	60%	$0.00	0%	100%	$6.91	47%
ELWNR_TN_AS	Spray Seal	E	ELWNR_TN	$15.54	$10.58	40%	$4.41	60%	$0.00	0%	100%	$6.88	56%
ELWNR_TN_GS	Spray Seal	E	ELWNR_TN	$17.00	$10.58	40%	$4.41	60%	$0.00	0%	100%	$6.88	60%
ELWNR_TN_GA	Asphalt	E	ELWNR_TN	$26.79	$10.58	40%	$0.00	0%	$36.53	60%	100%	$26.15	2%
ELWNR_TN_AA	Asphalt	E	ELWNR_TN	$24.64	$10.58	40%	$0.00	0%	$36.53	60%	100%	$26.15	0%
ERWNR_TN_AS	Spray Seal	E	ERWNR_TN	$15.65	$10.58	40%	$4.41	60%	$0.00	0%	100%	$6.88	56%
FLDNR_TN_GA	Asphalt	F	FLDNR_TN	$23.83	$10.58	40%	$0.00	0%	$26.86	60%	100%	$20.35	15%

Application: % of the length or area of a road rehabilitated or resealed or resurfaced

Sealed length		38	km	
Resealed		1.14	km	60%
Reconstructed		0.76	km	
	Stabilised	0.38	km	20%
	Overlay	0.228	km	12%
	Digout	0.152	km	8%
Resealed and reconstruct		1.9	km	