GUIDE TO VALUATION AND DEPRECIATION

FOR PUBLIC AND NOT-FOR-PROFIT SECTORS UNDER AASB ACCOUNTING STANDARDS

DAVID EDGERTON FCPA

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- Peter Batten FCPA

PROJECT TEAM

- David Edgerton FCPA, Author
- Ram Subramanian CPA, Policy Adviser – Reporting & Auditing, CPA Australia
- Kerry Mayne, GM Public Sector Engagement, CPA Australia

The Guide has been prepared with input from CPA Australia's External Reporting Centre of Excellence.

Feedback on this publication is invited. Please email publicsector@cpaaustralia.com.au

ABOUT THE AUTHOR

This guide was authored by David Edgerton FCPA. David is well known for his work with the valuation and depreciation of infrastructure assets. He has an extensive history in relation to public sector and not-for-profit assets including more than 25 years experience with the valuation, accounting, auditing and strategic asset management of roads, water, buildings, land and residential properties.

Much of this experience was accumulated during his 22 years with the Queensland Audit Office, when he had responsibility for the audit of all of Queensland's 125 local governments and water sector, and the quality control of the contract auditors used by the Queensland Audit Office to complete their annual audit portfolio.

In recognition of his achievements he was named the 2001 Australian National Public Sector CPA of the Year.

After leaving the Audit Office in 2006 he moved to the private sector but has continued to provide guidance and assistance to the public sector through his consulting, valuation and software companies. He is currently a Director of APV Valuers and Asset Management and Fair Value Pro which specialises in the financial reporting valuations of public and not-for-profit sector assets. Both companies specialise in the valuation of public sector assets in accordance with the accounting standards.

He also:

- represents CPA Australia on the Public Sector Assets Collaborative Group which is a special interest group of the Asset Institute and comprises the peak bodies involved in asset management. Their goal is to facilitate collaboration between interested organisations to promote and enhance asset management for Australia;
- has contributed extensively to CPA Australia through participation on numerous committees and projects, and provided key training programs such as the National Asset Accounting and Asset Management in the Public Sector; and
- was recognised as a Contribution Author of the 2009 Australian Infrastructure Financial Management Guidelines issued by the Institute of Public Works Engineering Association (IPWEA).

Contact details: Email: david@apv.net

CONTENTS

ACKNOWLEDGMENTS	III
Project team	iii
ABOUT THE AUTHOR	IV
CONTENTS	V
INTRODUCTION	1
1. Introduction	1
OVERARCHING FRAMEWORK AND CONSIDERATIONS	4
2. The financial reporting framework	4
3. Things to be aware of	8
4. Why valuation and depreciation are important	12
ACCOUNTING STANDARDS AND CONCEPTS	17
5. Overview	17
6. High Level Accounting Concepts	21
OVERARCHING FAIR VALUE MEASUREMENT CONCEPTS (AASB13)	28
7. Impairment Considerations (AASB136)	56
8. AASB116 Property Plant and Equipment	58
9. Other AASB standards	122
10. AASB13 Disclosures	125
PREPARING FOR VALUATION	130
11. Preliminary planning and timeframes	130
12. Establish appropriate accounting policies	133
13. Data hierarchy / asset registers	133
14. Ensuring Asset Register is complete pre-valuation	134
15. Setting, validation and reassessment of assumptions and methodology	136
16. Insurance valuations	137
17. Choosing the best strategy	138
18. Qualifications, expertise and experience of the valuation team	140
19. Issuing Instructions	151
POST-VALUATION CONSIDERATIONS	152
20. Post delivery evaluation	152
21. Uploading valuation data	153

AUDIT CONSIDERATIONS 154

22. Role of audit 154

23. Assessing managements understanding 155

24. Preparing for audit 157

GUIDANCE FOR SPECIFIC ASSET TYPES 162

25. Introduction 162

26. Land 163

27. Buildings 165

28. Infrastructure Assets 173

29. Networked Assets 178

30. Grouped Assets 179

31. Plant and Equipment 180

32. Aged Care / Retirement Villages 181

33. Art, Museum and Library Collections 183

34. Heritage and Cultural Assets 183

35. Water Licences 184

36. Service Concession Arrangements: Grantor 185

LINKAGE TO ASSET MANAGEMENT 189

APPENDICES AND ATTACHMENTS 210

Appendix 1: Acronyms 210

Appendix 2: Glossary 211

Attachment A: Relevant AASB Standards and Interpretations 219

Attachment B: Interrelationship of the accounting standards 220

Attachment C: Overview of specific accounting standards 221

Attachment D: Quality review checklists 232

Attachment E: Pro forma tender specification and instructions to valuers 248

Attachment F: NZTA price quality model 265

Attachment G: Year-end checklist 272

Attachment H: Example guidance on collections—libraries and museums 291

INTRODUCTION

1. INTRODUCTION

This guide has been specifically developed to provide guidance with respect to the valuation and depreciation of public sector and not-for-profit (NFP) assets in accordance with the requirements of the Australian Accounting Standards (AASB). The focus is directed towards asset intensive entities (such as those that provide public or community infrastructure) rather than commercialised business units that are operated as for- profit entities.

Throughout the guide some reference is made to the approach to value these types of commercialised business units or cash generating units. However, these references are only provided to enable the user to have a greater understanding of how different approaches are required given different contexts.

The concepts and guidance provided by this guide are applicable to both public sector and not-for-profit private sector organisations that adopt accrual accounting and regularly revalue their assets to 'Fair Value'.

Both the public sector and some NFP sector entities are responsible for a very large range and volume of assets representing a highly significant investment of public or partly public funded resources. Over the past three decades there has also been recognition of the need to improve asset management practices across both sectors. This recognition has come about as a result of the combination of increased pressures to provide broader and improved services to the community, focus on sustainability of services, ageing infrastructure and restrictions on the availability of funds at the disposal of the entities.

In many respects the adoption of accrual accounting and the subsequent need to value the assets has proven to be a key catalyst in the drive for enhanced asset management practices. In its basic form the financial reporting valuation process has provided the mechanism to identify and validate the location and condition of assets, resulting in key data to be used with the asset management framework and providing a quick understanding (by the community) of the assets controlled by the public and NFP sectors.

Over the past few decades the processes, systems and concepts relating to the valuation and depreciation of public and NFP sector assets have evolved, and this has been accompanied by enhancements to the various accounting standards. More recently this has included the standardisation of the fair value concept through AASB 13 Fair Value Measurement. However, given the relative complexity of some of these concepts, the changes in standards have also resulted in a wide range of views and practices regarding the valuation and depreciation of assets. As with all change, some users have embraced them while others are a little slower in adapting to new or changed requirements.

The change in the technical accounting requirements along with a myriad of approaches adopted by practitioners and valuers has in turn also created challenges for auditors. The valuation of specialised public and NFP sector assets is a highly specialised field often requiring detailed accounting, engineering and valuation knowledge. Some auditors may feel they do not possess the technical knowledge and skills to challenge the views of those who have undertaken the valuation. As a result they often engage

specialists to assist. Some common challenges facing auditors are:

- gaining assurance that the asset register is complete and accurate;
- understanding significant movements in the valuations and depreciation from year to year;
- difficulty in obtaining sufficient and appropriate evidence over critical assumptions, judgements or estimates;
- lack of understanding by management of the processes and methodology used to determine the valuation;
- complexity and differences of valuation methodologies of different valuers; and
- the associated difficulty in assessing general compliance of the methodologies against the changing accounting standards.

This guide recognises that across jurisdictions and over time a range of practices and different views on specific concepts has evolved. With the issuance of AASB 13 Fair Value Measurement and resulting standardisation of the definition of fair value, this guide has been developed to provide a central point of guidance on the accounting standards requirements and underlying concepts. While it represents guidance at a particular point in time, it is expected that with further evolution of the requirements and concepts this guide will need to be updated on a regular basis to retain its relevance and accuracy.

The guide has been written for three distinct types of readers:

- non-technical people who only require a high-level understanding;
- those involved in the non-technical aspects of the valuation process, such as procurement; and;
- technical people from different disciplines who will be involved in the valuation process and may include:
  - accountants;
  - valuers; and,
  - engineers.

The process of developing the guide has included both formal and informal discussion and feedback from a wide range of sources. The guide has been based on the CPA Australia guide previously published in August 2013 which focused on the valuation and depreciation of public and NFP sector assets under the international accrual based accounting standards. In order to develop this guide it involved a five-month consultation period during which feedback was sought widely from the public and targeted groups. This has included groups and individuals from a range of jurisdictions, including:

- professional accounting bodies;
- professional valuation bodies and agencies;
- professional engineering and asset management bodies;
- audit organisations;
- treasuries;
- experts from within CPA Australia and the Australian Asset Management Collaborative Group (AAMCoG); and
- other interested individuals.

On receiving their feedback, the various responses were discussed through a reference group that comprised a range of experts including auditors, financial reporting experts, valuers and standard setters. This resulted in further enhancements and edits.

It should be noted that the guide attempts to provide high-level and detailed guidance on a subject that many find quite complex. Because of this complexity, it is expected that different jurisdictions may have different interpretations or may prescribe practices that vary in some respects from the accounting standards. Therefore, when considering the guidance provided by this publication, care needs to be taken to ensure the guidance is consistent with the particular jurisdiction's guidance on the same issue.

The guide references a large range of material, some of which has been sourced from public sector agencies and some from professional bodies. Where there was a lack of sufficient guidance provided from the public sector or professional bodies, the guide uses and acknowledges (with their permission) copyright material provided by private sector organisations.

Some materials and examples are provided by firms associated with the author (APV Valuers and Asset Management and Fair Value Pro). The inclusion of this material is for illustrative purposes only and the guide does not endorse or promote these organisations. The guide is an attempt to supply practical solutions and is largely based on the author's considerable industry experience. It should be noted that other solutions may be equally valid and that entity's need to form their own judgment when determining appropriate approaches.

It should also be noted that, in order to demonstrate alternative approaches, the guide provides advice on and examples of a range of processes and methodologies. The guide neither endorses nor rejects any particular approach or methodology.

While care has been taken to present the guide using language that can be understood by those with limited knowledge of the accounting standards or the valuation process, there are sections that deal with complex technical requirements. Accordingly, some sections may be quite technical or complex, requiring a high level of understanding of some concepts. This approach has been adopted when to do otherwise might have resulted in misinformation.

The guide is structured into the following sections:

- Overarching framework and considerations;
- Accounting Standards and Concepts;
- Preparing for valuation;
- Post-valuation considerations;
- Audit considerations;
- Guidance for specific asset types;
- Linkage to asset management; and
- Appendices and attachments.

Finally, it should also be acknowledged that the costs and effort involved in a valuation need to be considered in relation to the assets and benefits involved. However when undertaking this analysis it should also be acknowledged that good information on the physical assets held and their condition and costs may have more benefit to the entity than just the entries in the financial statements.

OVERARCHING FRAMEWORK AND CONSIDERATIONS

2. THE FINANCIAL REPORTING FRAMEWORK

Overview

The fundamentals of modern governance, whether for public or not-for-profit (NFP) sector agencies, include the need to be transparent and accountable to the community at large. The community provides the funds (tax, rates, fees and charges, donations) to enable public and NFP sector entities to provide services to the community.

To provide a level of transparency and accountability regarding how these funds have been used by the entity they are required to (or may voluntarily) produce annually a set of financial statements based on prescribed requirements (including specified accounting standards) and for these financial statements to be independently audited by an external auditor.

> *The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions.*
>
> *Financial statements prepared for this purpose meet the common needs of most users. However, financial statements do not provide all the information that users may need to make economic decisions since they largely portray the financial effects of past events and do not necessarily provide non-financial information.*
>
> *Financial statements also show the results of the stewardship of management, or the accountability of management for the resources entrusted to it. Those users who wish to assess the stewardship or accountability of management do so in order that they may make economic decisions; these decisions may include, for example, whether to hold or sell their investment in the entity or whether to reappoint or replace the management.*[1]

The audit provides assurance to the community with regard to the information contained within the financial report. In some jurisdictions the auditor may also provide an opinion as to whether those who have been entrusted with the funds of the community have exercised their responsibilities diligently and in full accordance with the relevant legislation.

Other prescribed requirements

In the case of public sector entities each jurisdiction's specific requirements make reference to the Australian Accounting Standards. However there may also be other additional requirements. Typically, these may be specific legislation or guidelines issued by Treasury or a government body given responsibility to develop and issue accounting policy directions. This may include the development of model financial statements. Any jurisdictional requirements are often consistent with accounting standards but may provide for some specific treatments or additional disclosures.

1 Framework of the Preparation and Presentation of Financial Statements (paragraph 12-14)

As the entities will prepare their financial statements in accordance with the jurisdictional requirements, the auditors will audit against the appropriate jurisdictional requirements. However, any departure from the accounting standards should occur only where there is such a variation and it should be clearly disclosed in the notes.

Preparation of financial statements

The financial statements are prepared in accordance with a financial reporting framework including a range of accounting policies that are formed by accounting standards together with any specific prescribed requirements. The role of standards and jurisdictional prescribed requirements is to set the rules over the form and content of the financial statements and in particular to set rules regarding the accounting treatment and disclosure for particular types of transactions.

From time to time the accounting standards are reviewed and enhanced to reflect treatments for emerging issues. This may include the development of new standards, changes to existing standards or the issue of guidance.

These requirements, together with opinion of the external auditor provide a mechanism to ensure compatibility and consistency across the financial statements of different periods and entities.

Valuation and depreciation requirements

Under the accounting standards the valuation of assets can be provided by either of two methods: Cost (Historical Cost) or Revaluation (Fair Value). This guide covers valuation (including impairment) and depreciation under the Australian Accounting Standards (AASB).

Under a historical cost model the financial statements record movements in the assets value as a consequence of:

- initial and subsequent costs;
- interest on borrowings used to acquire the asset (where this is a policy/requirement);
- depreciation expense; and
- impairment.

Under the revaluation model the asset is initially recorded at historical cost and after allowing for depreciation expense the asset's value is later reassessed to the fair value. Any adjustment to the carrying amount is then adjusted to the new fair value. Increments in value are typically recorded as adjustments to equity (asset revaluation reserve) in the balance sheet and reductions are posted as an expense in the profit and loss (except to the extent that they reverse a prior period increment).

In the public sector most jurisdictions mandate the use of the revaluation model for material assets (land, buildings, roads, water, sewerage, community and miscellaneous infrastructure) however some entities and jurisdictions continue to use historical cost. In the Not-For-Profit sector (NFP) the use of the appropriate method is usually prescribed by the entity's own accounting policy. However, even if the accounting policy only requires the use of the Historical Cost method many still undertake an assessment of the Fair Value of their assets to assist with internal decisions.

The guidance provided in this publication assumes that the assets are to be valued using the Revaluation model (Fair Value). Under AASB there are a range of different accounting standards and guidance issued by the Australian Accounting Standards Board. **Attachment A: Relevant AASB standards and interpretations** provides a quick reference guide to the various accounting standards and associated guidance.

Attachment B: Interrelationship of the accounting standards provides an overview of the key asset valuation-related accounting standards and their inter-relationship.

To assist users of this guide a number of decision trees have been developed to provide a quick overview of key aspects of the valuation and depreciation of physical assets. They are included as **Attachment C: Overview of specific accounting standards**.

Materiality

When applying accounting standards due consideration also needs to be provided to the concept of materiality. While a standard may require a specific approach or disclosure, the standards provide that such does not need to be followed if the impact of not doing so would not result in a materially different outcome. This concept is discussed in greater detail in the general concepts area of the Technical section.

Common aspects of valuation related standards

The key common aspects flowing through the various standards are as follows.

- **Assets valued on a fair value basis**. There are three distinct valuation methods. Depending on the circumstances the valuer will need to select the appropriate approach or potentially use a combination of approaches. These include:
  - For specialised assets that are not commonly traded in the open market (such as public sector infrastructure, hospitals, schools and associated specialised buildings) this is typically done using the cost approach. (In the past this approach was often referred to as the replacement or cost basis as well as depreciated replacement cost. However the AASB has recently settled on using the term Current Replacement Cost.)
  - If there is an active and liquid market for the asset concerned, the valuation basis would be the market approach.
  - The income approach is usually used only for specific income generating assets such as commercialised business units and commercial assets;

- **Componentisation.** Assets that are made of significant parts that in turn have different lifecycles should be depreciated separately. This is referred to as componentisation of the asset. This is also critical for asset management planning;
- **Annual assessment for revaluation and/or depreciation changes**. At the end of each year the entity needs to assess whether the carrying amount differs significantly from the fair value. This is done by consideration of changes to aspects such as functionality, capacity, utilisation, obsolescence and the assessment of unit rates, pattern of consumption of future economic benefit, residual value, useful life, condition and as a result remaining useful life. Based on this assessment, the assets may need to be revalued, impaired and/or depreciation rates changed prospectively;
- **Revaluation of entire class**. If an asset is revalued, all assets within the class must also be revalued. However, there are some exceptions allowed in practice when applying materiality considerations. Further guidance on this is provided in the section on Annual review of assumptions and value. It should also be noted that under the Australian accounting standards (for public sector and NFP entities) the revaluation increments and decrements may be offset within an asset class whereas other entities must account for the adjustment at the asset level; and
- **Depreciation requirements**. The method used to determine the amount of depreciation expense, having regard to materiality, must:
  - **match the expected pattern of consumption** of the future economic benefit. While many adopt methods such as straight-line as a default the standards require that the method used matches the pattern of consumption of future economic benefit. AASB 116, paragraph 62 states that "The entity selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. That method is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits."
  - **be based on the relevant factors** that provide sufficient and appropriate evidence for determining the level of remaining service potential and how it is consumed. This needs to take into account utilisation, wear and tear, obsolescence, legal and other limits.
  - **depreciate only the depreciable amount**. This requires determination of the non-depreciable component or residual value. For financial statement purposes the depreciation expense calculations will typically be based on the value reported at the beginning of the financial year, which may differ from the assumptions used to determine the fair value at the end of the financial year. However, the assumptions used to determine the closing fair value will then be used in the subsequent financial year to determine depreciation expense.

- **depreciate the depreciable amount in a systematic way** over the asset's useful life.
- **commence when the asset is ready for use**.

Auditing

Some NFP entities may only require a review rather than an audit. However, it is more likely that NFP entities with significant asset portfolios would, as is required for public sector entities, be subject to an annual audit process. In an audit, the auditor obtains reasonable assurance as to whether the financial statements are free from material misstatement and expresses an opinion thereon. The actual opinion provided may vary depending upon the nature of the entity and any associated legislation or other requirements. However, typically the auditor is required to issue an opinion that the statements materially comply with the accounting standards and present fairly the financial performance and position of the entity. In some jurisdictions the auditor may also be required to express an opinion regarding whether the entity has materially complied with other prescribed requirements.

This in turn requires the auditor to conduct tests and gather sufficient evidence to confirm that fair value, depreciation expense and disclosures have been prepared in accordance with the relevant requirement so that the results are based on a sound approach, can be supported by appropriate evidence and are materially correct.

An inability to provide sufficient and appropriate audit evidence to support the valuation would normally result in the auditor issuing a modified opinion.

3. THINGS TO BE AWARE OF

Key Performance Indicators

In recent years there has been an increase in concern regarding the sustainability of both public and NFP sector entities. This in turn has led to an increase in interest in the production and interpretation of a range of Key Performance Indicators (KPIs) including KPI's relating to asset management performance and sustainability.

In some jurisdictions the various Auditors-General have published reports to Parliament summarising a range of KPIs for each local government.

There is however risk in the interpretation of such KPIs. Firstly, it should be recognised that for entities that deliver essential services using non-current physical assets (such as government and NFP entities) the materiality of both the asset valuations and associated depreciated expense are high. Furthermore they are typically based on an extensive range of assumptions and as such can be highly subjective and variable. Finally, no single KPI should be read in isolation.

It should also be noted that some entities may adopt the revaluation model whereas others use historical cost. Hence the ability to make valid comparisons can be impaired. However, this is less of an issue in the public sector as most entities adopt fair value.

There is also a fundament risk in that the financial statements report the position as at the end of the financial period and the performance over that period. Whereas the analysis of whether or not an entity is sustainable is based on future projections. To base future predictions on past performance is risky given the expectation that the asset management strategies are being constantly revised to meet the challenges of an ever-evolving environment. The asset renewal funding ratio, as a contrast, is a forward looking ratio that sources its raw data from the asset management plan and long term financial plan.

To complicate matters there is an underlying assumption with the analysis of KPIs that the underlying data driving the KPIs is correct and calculated on the same basis. As noted above – not all entities within the same sector or service area apply the same accounting policies and as such making valid comparisons is fraught with risk. Likewise even within a single entity there can be significant variation derived from different perspectives, differing professional judgements and differing levels of sophistication with the respective approaches.

Despite this there is obvious benefit in monitoring the KPIs of individual entities over an extended period of time as well as comparing the results of individual entities to others within the same sector.

In 2012 the Australian Centre of Excellence in Local Government (ACELG) in collaboration with the Institute of Public Works Engineering Australia (IPWEA) issued a Practice Note on Long Term Financial Planning. It stated:

> *Good use of accrual accounting can tell an accurate picture about infrastructure condition and performance. Soundly based assumptions regarding an asset's useful life and rate of depreciation, and regularly reviewing asset service performance and written-down recorded value, will mean that financial statements reliably reflect asset values and rates of consumption. This is essential in order to determine affordability of current and proposed service levels and to equitably generate revenue from service recipients over time.*[2]

The practice note also states that "in preparing and adopting long term financial plans, organisations need to specify the financial measures that are to be used to monitor and assess financial performance over the planning period". It recommends the following measures, amongst others, be used as KPIs. These indicators are sourced from the Australian Infrastructure Financial Management Guidelines but can also be used globally.

Asset sustainability ratio

The ratio of asset replacement expenditure on existing assets relative to depreciation for a period. It measures whether existing assets are being replaced at the rate they are wearing out.

2 IPWEA/ACELG Long Term Financial Planning Practice Note 6 (www.ipwea.org.au/practicenotes)

Asset consumption ratio

The average proportion of as new condition left in assets. This is only useful for asset classes where the fair value is calculated using the cost approach and applying the gross disclosure method. It provides, at an asset level, the average level of service potential remaining in the portfolio. While individual assets will be at different levels within the asset lifecycle this calculation provides a high level understanding of the general level of remaining service potential, and movements in the ratio may indicate long-term issues that will need to be addressed.

Asset renewal funding ratio

The ratio of the net present value (NPV) of asset replacement funding accommodated over a 10-year period in a long-term financial plan relative to the net present value of projected capital renewal expenditures identified in an asset management plan for the same period. It assesses the entity's financial capacity to fund asset renewal.

The above are calculated at a whole-of-entity level. However, some practitioners also attempt to assess performance by analysing the results at the asset class level. These indicators usually have greater value when the ratios are calculated over an extended period (five years or more).

Another commonly used ratio (calculated at the asset class level) is the:

- Average Rate of Depreciation. This ratio simply compares the total amount of depreciation for each asset class as a percentage of the total value of the asset class. If this rate increases over time it may indicate underlying issues with the effectiveness of the asset management framework. It may also be useful for benchmarking against similar entities;

As with all ratios extreme care needs to be taken when drawing conclusions from analysing the results. This includes gaining an understanding of the major transactions and movements in the asset classes.

Inconsistency with International Valuation Standards (IVSC)

It should be noted that the valuations undertaken for financial reporting purposes are to be developed in accordance with the Australian Accounting Standards. Valuations undertaken for purposes other than under the accounting standards for financial reporting (such as market valuations) are often performed by Registered Valuers in accordance with the International Valuation Standards (IVS). *The International Valuation Standards (IVS) and Guidance Notes of the IVSC are adopted in their entirety in the Australia and NZ Valuation and Property Standards Manual, issued by the Australian Property Institute and the Property Institute of New Zealand.* [3]

3 NSW Treasury TTP14-01 Accounting Policy: Valuation of Physical Non-Current Assets at Fair Value

It should however be noted that despite the IVS approach (in the main) appearing to be consistent with Fair Value the IVS uses a different definition of Fair Value and there are a number of critical aspects of the IVS which are not consistent with the concept of Fair Value as defined by the Australian Accounting Standards. The IVS approach to Fair Value is consistent with the some of the approaches under AASB13 but is not consistent with other AASB13 approaches. These inconsistencies have previously been noted by a number of the major global accounting firms.

> *Entities that use external valuation specialists to assist in estimating fair values will need to ensure that the bases and methods used comply with IFRS 13.*
>
> *To put this into context, the term 'fair value' is used in professional valuation standards but its definition may differ to IFRS 13's. For example, International Valuation Standards (IVS) define fair value as an amount that is fair in the circumstances, which may take into account factors such as synergistic value. IFRS 13's definition is generally more consistent with the IVS concept of 'market value'. Despite differences in terminology, applying a market participant perspective is very familiar to professional valuers, as are many of the other concepts and techniques in IFRS 13 (such as the 'highest and best use' concept).*
>
> *That said, IFRS 13 does include some principles and requirements that may be less familiar, or not intuitive, to a professional valuer. These include requirements that are primarily accounting concepts rather than valuation matters. Management therefore needs to ensure that the valuation expert is instructed in sufficient detail to ensure clarity and a common understanding of what is required for financial reporting purposes.*[4]

Driven by these inconsistencies the IFRS foundation is currently working with the International Valuation Standards Council (IVSC) to resolve these differences.

> *The IFRS Foundation and the International Valuation Standards Council ('IVSC') today announced a joint statement of protocols for co-operation on International Financial Reporting Standards ('IFRS') and International Valuation Standards ('IVS').*
>
> *Both the IVSC and the IFRS Foundation have a shared interest in the consistent measurement of fair value for financial reporting. Certain Standards issued by the IASB use fair value as a measurement basis. The IASB has also published IFRS 13 Fair Value Measurement, which sets out the principles for measuring fair value when it is required to be used in other financial reporting Standards. The IVSC has standards and guidance on fair value and other valuation measurement and facilitates collaboration and co-operation among its member organisations to help ensure consistent application.*

The aim of the agreement is to ensure that both organisations are able to co-operate effectively in this important area with each organisation continuing to assume sole responsibility for their Standards.

The statement of protocols:

- *captures and recognises the nature of the present and continuing co-operation between the IVSC and the IFRS Foundation in developing standards and guidance on fair value measurement that will support financial statements prepared in accordance with IFRS;*
- *identifies areas of mutually supportive work that each institution will use its best endeavours to undertake; and*
- *provides for continued future co-operation between the IVSC, the IASB and the IFRS Foundation.*[5]

One of the fundamental issues is that Fair Value (per the AASB) is based on 'highest and best use that other market participants would pay' and is not an entity specific price. However under IVS it is sometimes based on an entity specific value and it excludes any service potential that the existing owner does not need even though other market participants may value it. Replacement Cost under AASB includes all of the existing service potential whereas under IVS it is an Depreciated Optimised Replacement Cost (DORC).

As a result care needs to be taken to ensure that when the IVS are referenced in relation to any valuation performed for financial reporting purposes that the requirements of the AASB take precedence over IVS requirements.

3. WHY VALUATION AND DEPRECIATION ARE IMPORTANT

Many public sector and NFP entities control vast portfolios of physical and intangible assets, which they use to deliver services to the community. This may include –

- land and buildings,
- miscellaneous plant and equipment,
- infrastructure such as roads, footpaths, drainage, bridges, water infrastructure, sewerage infrastructure, marine assets and airports
- nursing and aged care facilities,
- retirement villages,
- aged care facilities,
- hospitals and health care,
- educational facilities such as schools and universities,
- churches and other religious or heritage assets, and
- software systems.

The fair value method provides significant advantages over historical cost accounting for these types of assets because the information provided in the financial statements affords the users of the financial statements a greater understanding of the value of assets controlled by the entity and performance of the entity.

5 www.ifrs.org website Statement issued 6 March 2014

The use of fair value in the public sector is critical to assessing the real performance of the entity and may assist in providing meaningful key performance indicators (KPIs) about important matters such as sustainability and asset management performance. However, it is critical that such figures reflect the reality of where an asset is within its lifecycles and the rate at which the asset's service potential is being consumed. Otherwise the resulting KPIs will be meaningless and may be misrepresentative of the true position.

The purpose of general purpose financial statements is to provide information that assists users when making and evaluating decisions about the allocation of scarce resources. They focus on providing information to meet the common information needs of users who are unable to command the preparation of reports tailored to their particular information needs. These users rely on the information communicated to them by the reporting entity to assess the performance of the entity.

In relation to physical assets, the financial statements provide the users with specific information about the value of assets held by the entity and the rate at which they are being consumed (depreciation).

Asset management performance and its impact on financial statements

If an entity manages its asset portfolio well with good asset management strategies one of the outcomes of the process should be to achieve greater value out of the portfolio over an extended period at a lower lifecycle cost than would be achieved without such an effective asset management strategy. We would also normally expect the general condition and level of remaining service potential of the asset to also be greater than if the asset is not maintained.

There is a common view expressed within the asset management community that keeping assets maintained in a good or reasonable condition (as opposed to letting them run down to a poor condition) will result in a lower overall lifecycle cost. This obviously depends on the specific scenario. As a result, communities typically associate assets not being maintained in a good condition with poor asset management.

If improving asset management performance had no impact on the value and associated depreciation of assets then there would be no reason to invest such monies in asset management. Clearly this is not the case. An effective asset management strategy should normally result in positive outcomes for both valuation and depreciation expense.

In regards to the entity that keeps its asset well maintained we would expect the Fair Value expressed as a percentage of the Gross Replacement Cost to be higher than the entity that does not maintain its assets. It would also then follow that as less value (remaining service potential) is being lost over the same period of time (accumulated depreciation) that the rate of annual consumption of that service potential (depreciation expense) should also be lower.

Example: Impact of asset management performance on the financial statements

The table below demonstrates the difference in both valuation and depreciation expense driven from different asset management outcomes. To simplify the calculations we have assumed a constant pattern of consumption (straight-line) and a zero Residual Value. It is also assumed the assets were brand new at acquisition (100% remaining service potential) and an assessment of the level of remaining service potential was carried out at the end of year 10.

Impact of Assistant Management System	Assets well maintained	Assets not well maintained
Replacement Cost	10,000,000	10,000,000
Fair Value	8,000,000	6,000,000
Accumulated Depreciation	**2,000,000**	**4,000,000**
Years	10	10
Average Annual Depreciation	200,000	400,000
Depreciation rate (assuming zero Residual Value)	2.0%	4.0%

The above example highlights some of the problems of adopting approaches that oversimplify or ignore key aspects of the accounting standards. For example, it is not uncommon for entities to adopt policies that assume the pattern of consumption of future economic benefit is constant (a straight line) despite an analysis of real asset management performance indicating that the real pattern of consumption of future economic benefit being other than a straight line. Some entities do this for the sake of simplicity and reduced costs, and to limit the variability in results from year to year.

Another example is the assumption that all assets (such as buildings) have the same defined and consistent useful life, resulting in a constant rate of depreciation expense. In reality, each asset is affected by several consumption drivers, and each consists of a range of different components that in turn create varied consumption patterns and residual values and, ultimately, different valuations and depreciation calculations.

Simplified approaches have the benefit of clarity, but over time they risk producing materially incorrect results. They tend to produce consistent results from year to year rather than measuring the actual performance of the organisation.

Typically entities try to maintain their assets to provide a level of service that is considered acceptable to the community. Assets in a poor physical condition would typically raise concerns from the community regarding the level of service received from those assets, as well as concerns about how well the organisation is managing the community's funds.

However, there will always be specific scenarios in which, for good asset management reasons, the assets are allowed to deteriorate to a poor condition. In reality the portfolio of an entity will include assets in varying stages of the asset lifecycle and levels of remaining service potential. The financial statements do not provide the detail for specific assets but instead provide high-level summary data at the asset class level.

If we assume maintaining assets at a level that retains a significant level of remaining service potential equates to good asset management, then compared with an entity that is not managing its assets well, an entity should be disclosing a higher relative value and lower rate of depreciation. In simple terms this would reflect that a longer useful life should be achieved through better asset management. This information enables the readers of the entity's financial statements to make informed decisions about the performance and sustainability of the entity.

Implications for non-compliance with the accounting standards

While considering what Fair Value and Depreciation Expense represent and how they can be used as part of the suite of measures used to assess the performance of entities, it would be remiss not to also consider the implications of non-compliance with the accounting standards.

The application of processes and methodologies that do not satisfy the requirements of the accounting standards runs the risk of producing materially incorrect results.

For asset-intensive entities (such as local governments, hospitals, schools, nursing homes and religious bodies) the fair value of non-current physical assets is typically greater than 95 per cent of the balance sheet and depreciation expense is often reported in the range of 15 per cent to 40 per cent of total expenses. As these types of entities generally aim to produce a small operating surplus, the impact of misstated depreciation expense on the bottom line is highly material, and given the subjective nature of the calculations it poses an extreme audit risk.

The accounting standards promote consistency and aid comparisons between financial years and organisations. Provided the requirements of the standards are satisfied, as demonstrated by an unmodified audit opinion, users are able to make valid comparisons between different organisations and periods. For organisations such as local governments, this provides the ability to undertake and report benchmarking exercises.

Consistency and comparability is provided by compliance with the standards rather than by everyone following the same process or using the same assumptions or methodology. Underlying errors or non-compliance aspects in a process used commonly across all agencies results in misstatement of the entire sector.

Calculations of fair value or depreciation expense that result in greater differences between asset accounting and the asset management reality, in turn, significantly compromise the ability of external users to assess the performance of the entity. This then impairs the ability of users to make informed decisions and results in material misstatement. Care therefore needs to be taken to ensure full compliance with the requirements of the accounting standards, thus ensuring the results reflect the asset management reality.

It is acknowledged that while this guide provides practical guidance on how to apply the concepts, in practice it is based on an understanding of the concepts as they currently apply. Furthermore as the concepts and asset management evolve along with enhancements in the accounting standards, this guide will also need to be updated and enhanced. Consequently this guide promotes a continued call for the integration of asset accounting and asset management.

ACCOUNTING STANDARDS AND CONCEPTS

4. OVERVIEW

Types of assets

The public and NFP sectors control a diversity of asset types, ranging from land and specialised buildings through to infrastructure and community assets. Owing to the nature of the assets and restrictions placed over them, these assets' fair value is more often than not determined using the 'cost approach'. (Current Replacement Cost).

There are of course some assets valued at fair value using the market approach (such as residential and commercial properties), and some assets relate to their income-generating capability and fair value is valued using the income approach. However, typically, owing to their specialised nature, the bulk of assets are constructed by the entity to meet its specific needs and generally are either not sold at all, or are not sold in an open and liquid market.

This guide focuses on the valuation of assets at fair value. While it does not cover in detail the valuation of assets at historical cost, the concepts and requirements of depreciation and impairment are relevant to assets recorded either at historical cost or fair value.

Relationship between fair value and depreciation expense

In the financial statements the fair value figure provides information about the current value of the level of remaining service potential, while depreciation expense provides an estimate of the amount of future economic benefit consumed during the year.

Typically (unless there is a part-year revaluation) the depreciation figures are based on the values (and their corresponding assumptions) reported at the beginning of the financial year. If the assets are revalued at the end of the financial year there may not be an obvious link between the depreciation expense and the fair value reported in the financial statements at year end.

For example, we will assume there is one asset valued at $10 million as at the beginning of the financial year with a zero residual value, remaining useful life of 10 years and assuming a straight-line pattern of consumption of future economic benefit. The depreciation expense will be calculated (and recorded in the statement of financial performance) at $1 million per annum.

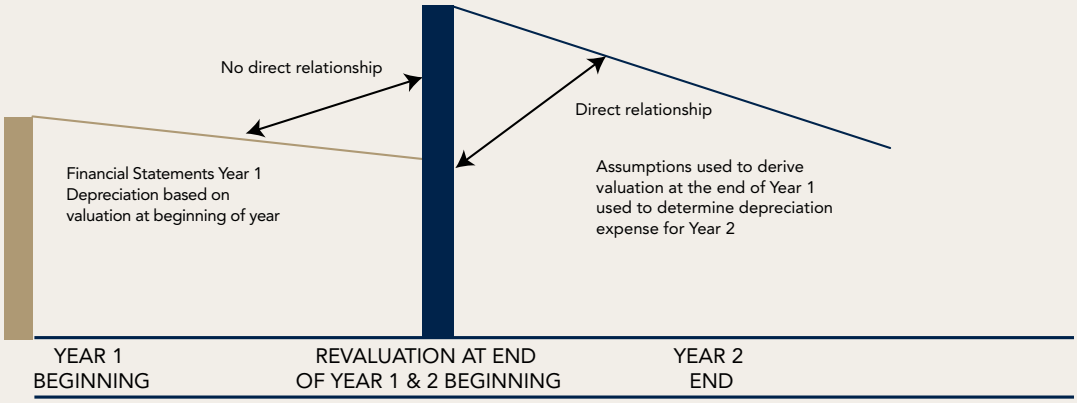
However, at the end of the financial year a revaluation is performed and the asset is revalued to $20 million with the remaining useful life reassessed to 12 years. The resulting estimate of depreciation expense (for the next financial year) will now be $20 million/12 = $1.67 million per annum.

In this situation there is no obvious link (in the financial statements just issued) between fair value and depreciation. The fair value is based on assumptions as at the end of the year whereas the depreciation calculations are based on assumptions existing at the beginning of the financial year.

However, from a valuation perspective, some practitioners argue there is a direct link between the revaluation and subsequent calculations of depreciation expense. This is because the calculations for depreciation expense should be based on the same assumptions as used in the valuation. It should however be noted that some practitioners argue that there is no direct relationship and that depreciation is nothing more than a cost allocation exercise aimed at apportioning the cost of the asset over its useful life. Irrespective of the approach adopted it is likely that auditors will expect a high level of consistency between assumptions used for valuation (using the cost approach) and depreciation expense.

The relationship between the fair value and depreciation expense is demonstrated in the following diagram.

Figure 2: Relationship between fair value and depreciation expense



For the purpose of this document any reference to depreciation being linked to fair value relates to the calculation of depreciation expense for the following 12 months based on the same assumptions used to determine the fair value.

Valuation and depreciation accounting standards

A range of accounting standards need to be considered when valuing and depreciating assets in the public and NFP sector. Depending on jurisdiction and overriding prescribed requirements, these may include:

- The Australian Accounting Standards (AASB) including the conceptual framework and associated interpretations.
- a jurisdiction-specific requirements (such as instructions issued by the Department of Treasury or a legislated 'accounting code')

Attachment A: Relevant AASB Standards and Interpretations provide a quick reference guide to the various accounting standards and associated guidance.

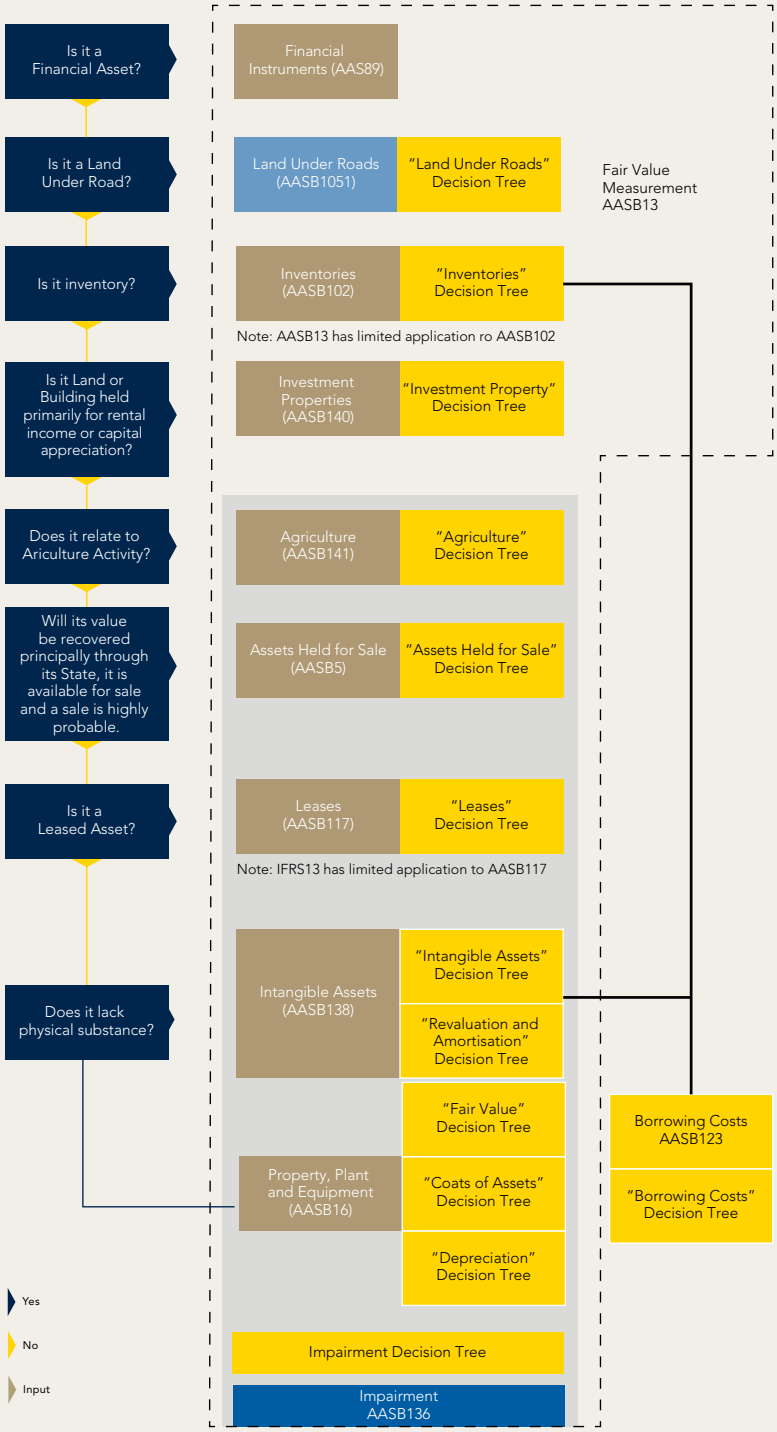
This guide does not cover financial instruments, nor does it cover in detail the use of the income approach.

The following Decision Trees provides an overview of the key standards which are commonly used to value public and NFP sector assets. This Decision Tree also provides information about the relationship between the various standards.

Depending on the nature of the asset it may be valued under a range of different specific standards. In some cases (such as when an asset is now held for sale) it may be valued under a different standard than valued previously.

In reality (apart from investment properties and assets held for sale) the bulk of public and NFP sector assets are valued in accordance with AASB116 Property Plant and Equipment. As such this guide focuses on AASB13 (as the overarching requirement) and AASB116.

Valuation of assets decision tree



5. HIGH LEVEL ACCOUNTING CONCEPTS

In order to undertake the valuations there are a number of concepts that need to be taken into account. These include a number of common concepts that apply broadly across the entire body of accounting standards as well as concepts that apply specifically to those standards that relate to valuation.

The common concepts include:

- control;
- future economic benefit;
- materiality and thresholds;
- recognition criteria.

5.1 Control

The *AASB Framework* defines an asset as follows:

> *An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.*[6]

As result, an asset must:

- be controlled by the entity;
- be a result of past events; and
- produce future economic benefits.

There are a number of GAAP (General Accepted Accounting Practice) guidelines that provide some comment on the concept of control. The common view is that to have control the entity must be able to receive the benefit and restrict other entities' access to that benefit.

The Wiley IFRS 2007 guide states that:

> *The following three characteristics must be present for an item to qualify as an asset:*
>
> - *The asset must provide probable future economic benefit that enables it to provide future net cash inflows.*
> - *The entity is able to receive the benefit and restrict other entities' access to that benefit.*
> - *The event that provides the entity with the right to the benefit has occurred.*[7]

To have control the entity does not necessarily have to hold legal title. Similarly, because an entity uses an asset for its own purposes and even maintains them, it does not necessarily mean that it has control from an accounting perspective. Often the determining factor is whether the entity has the ability to restrict access to that benefit. For example, councils often benefit from and maintain roads or land on behalf of higher levels of government. While they benefit from their use and expend money maintaining them, ultimately they may not necessarily control them if only the higher level of government is able to:

- close them;
- sell them and receive proceeds from their sale;
- restrict access to them and;
- even allow another user also to use the same land for other purposes.

Before assuming a physical asset is an asset of the entity, consideration may need to be given to determining whether the asset is controlled by the entity. Often this is a complex issue to resolve.

6 AASB Framework (Paragraph 49)

7 Wiley IFRS 2007: Interpretation and Application of International Financial Reporting Standards

This approach is also consistent with recent guidance provided by a number of Australian Interpretations. The most useful is that relating to **Service Concession Arrangements (Interpretation 12)** which relates to circumstances where services normally delivered by the public sector via infrastructure assets that are operated (and possibly constructed) by private sector organisations (operators) on behalf of the government (grantors). The interpretation states –

5 This Interpretation applies to public-to-private service concession arrangements if:

(a) the grantor controls or regulates what services the operator must provide with the infrastructure, to whom it must provide them, and at what price; and

(b) the grantor controls – through ownership, beneficial entitlement or otherwise – any significant residual interest in the infrastructure at the end of the term of the arrangement.[8]

It should also be noted that in some jurisdictions there may be over-riding prescribed requirements that 'deem' the asset to be controlled even though from a pure technical perspective the issue of control may be debatable.

5.2 Future economic benefit

The AASB Framework defines an asset as follows:

the future economic benefit embodied in an asset is the potential to contribute, directly or indirectly, to the flow of cash and cash equivalents to the entity[9]

The framework or accounting standards do not provide a specific definition of future economic benefit. However, the framework does provide some comment:

The future economic benefit embodied in an asset is the potential to contribute, directly or indirectly, to the flow of cash and cash equivalents to the entity.

The potential may be a productive one that is part of the operating activities of the entity. It may also take the form of convertibility into cash or cash equivalents or a capability to reduce cash outflows, such as when an alternative manufacturing process lowers the costs of production.[10]

The Accountants' Handbook also provides comment regarding future economic benefit:

Assets commonly are items that also can be characterised as economic resources—the scarce means through which people and other economic units carry out economic activities such as consumption, production, and exchange. All economic resources or assets have service potential or future economic benefit, the scarce capacity to provide services or benefits to the people or other entities that use or hold them.[11]

8 Australian Interpretation 12 Service Concession Arrangements

9 Conceptual Framework (paragraph 53)

10 Conceptual Framework (paragraph 53)

11 Accountants' Handbook (Carmichael, Whittington & Graham)

For the purpose of this guide the terms future economic benefit and service potential are used interchangeably. Neither is defined by the accounting literature but both are often used as interchangeable terms by a range of accounting and engineering guides and technical papers. For example, the IPWEA Australian Infrastructure Financial Management Guidelines state:

> *"future economic benefits" is synonymous with "service potential".*[12]

Future economic benefit (with respect to public and NFP sector entities) can be defined as the potential to contribute, directly or indirectly, to:

- the delivery of relevant goods or services;
- in accordance with the entity's objectives; and
- of a particular volume, quantity and quality to its beneficiaries.

With regard to public sector entities such as local governments, the overriding objective of the entity is to provide services to and for the benefit of the community at a level of service that is acceptable to the community or beneficiaries.

In essence, the local government exists to provide a range of services to the community to enable the community to function efficiently and effectively, ensuring satisfaction of essential needs. These typically include safety, health, social, environmental and economic trade.

In general terms the concept of future economic benefit or service potential can be seen as the potential to contribute, directly or indirectly, to the delivery of services that meet the needs of the community and at a level of service that is deemed to be acceptable to the community.

It therefore revolves around not only the direct impact on the asset owner but also the impact on the community or beneficiaries of the services delivered by the assets.

Care needs to be taken not to confuse the Level of Remaining Future Economic Benefit (or Level of Remaining Service Potential) with the asset management concept of the Level of Service. The fair value of an asset measures the current value of the level of remaining future economic benefit, and depreciation measures the rate of consumption of that remaining level of future economic benefit.

Level of service, on the other hand, is an asset management term and provides a measurement of the quality, timeliness, responsiveness, quantum or otherwise, of the service to be delivered.

Just because the actual service delivered or even the level of service remains relatively constant does not necessarily mean that the rate of consumption should also be constant. Consideration needs to be given to changes in utilisation and the impact of factors such as changes in functionality, capacity and obsolescence.

12 IPWEA NAMS AIFMG (page 12.6)

For example roads are normally constructed to handle a certain level of vehicular traffic and load. This is often described as Equivalent Standard Axles (ESA). Given the normal expected utilisation the road may be expected to last 60 years before requiring major renewal. However if the number of ESA increases (such as through population and traffic increases or the opening of a mine or major commercial enterprises that then result in increased truck usage) then the expected time frame to when the next major renewal is required might reduce to 40 years.

This demonstrates that the rate of consumption (depreciation) has increased as evidenced by the useful life reducing from 60 years to 40 years despite the actual service provided by the asset remaining the same.

5.3 Materiality and thresholds

As with all accounting standards, due consideration needs to be given to the costs and benefits of compliance with specific requirements. This includes both the financial cost of the compliance and the additional cost incurred to provide a slightly higher level of disclosure.

The Conceptual Framework provides some guidance on materiality:

> *Information is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements. Materiality depends on the size of the item or error judged in the particular circumstances of its omission or misstatement.*[13]

It further states:

> *To be reliable, the information in financial statements must be complete within the bounds of materiality and cost. An omission can cause information to be false or misleading and thus unreliable and deficient in terms of its relevance.*[14]

AASB 101Presentation of Financial Statements mandates that consideration be given to materiality, which it defines as follows:

> *Materiality: The inaccuracies or omissions of material items are (or have relative importance) if they can, individually or as a whole, influence the economic decisions taken by users based on the financial statements. Materiality depends on the extent and nature of the omission or inaccuracy, prosecuted depending on the particular circumstances in which they were produced. The extent or nature of the item or a combination of both could be the determining factor.*[15]

Considerations of materiality affect the application of accounting standards to all transactions and in relation to non-current assets typically affect two key thresholds that are often included in an entity's asset accounting policy. Both thresholds should of course be regularly reviewed to ensure they remain relevant and appropriate.

13 Conceptual Framework (paragraph 30)

14 Conceptual Framework (paragraph 38)

15 AASB 101 Presentation of Financial Statements (Definitions)

5.3.1 Capitalisation threshold

This threshold determines the cut-off point at which expenditure that provides future economic benefits greater than 12 months (non-current) is capitalised as an asset. Expenditure below this threshold is expensed and is referred to as either operational expenditure or maintenance.

The rules around capitalisation can become quite complex, depending upon the type and nature of the asset and the relative size of the organisation. It may also depend upon whether the asset is part of a network that, in combination, provides the future economic benefit—for example, a reticulated water network.

It is appropriate to establish a capitalisation threshold for each asset class based on an assessment of materiality, cost and benefit. For infrastructure assets the development of the asset management framework would include determination of what intervention activities represent capital treatments, with the lower cost being referred to as maintenance activities.

5.3.2 Revaluation threshold

Entities subject to the fair value regime should also consider establishing a revaluation threshold that provides for only assets of value greater than a certain level to require revaluation. This is done to reduce the cost of revaluation given that the revaluation of relatively small value items, often with fairly short lives, would have no material impact on the total valuation. While only a portion of the total asset class is comprehensively inspected and revalued, the entire asset class is deemed to be valued at fair value because the final result is not materially incorrect.

There are two commonly adopted approaches to dealing with those assets not subject to comprehensive inspection and valuation: either continue to record their value at the existing value (less any depreciation), or index the assets based on an appropriate index (less any depreciation).

In setting this threshold, consideration needs to be given to the number and value of existing assets and their stratification within the total portfolio. The threshold should be set at a level where even if those assets below the threshold were reported with an incorrect balance, the overall impact on the total portfolio would be immaterial.

Typically, portfolios have a very small number of assets that comprise the bulk of the fair value and a large number of assets that make up a relatively small proportion of the total portfolio fair value. The risk associated with the large-value assets is high while the valuation risk associated with the small-value assets is very low, as all of those assets would need to be materially misstated to make even a minor impact on the overall valuation.

For example, imagine that a portfolio was comprised of the following:

Number			Value	
Value less	**Number**	**% NO.**	**CRC**	**%CRC**
$1,000	250	57%	150,000	4%
$5,000	100	23%	350,000	10%
$10,000	50	11%	400,000	12%
$50,000	25	6%	875,000	26%
$100,000	10	2%	760,000	23%
$1,000,000	3	1%	800,000	24%
	438	100%	3,335,000	100%

Based on the following assessment it would be appropriate to set a Revaluation Threshold at $5,000 and possibly even $10,000 depending upon the organisation's risk assessment. This is because with a threshold of $5,000 (even if those assets below that limit were misstated by 40 per cent) the total overall error of the reported fair value would be only 6 per cent, which would likely be considered immaterial.

This approach would result in a considerable reduction in the cost of valuation as 350 (or 80 per cent of the number of assets in the portfolio) would not require inspection and revaluation. However, consideration should be given to testing a small sample to verify existence and condition.

Result if assets below $5,000 undervalued by –				
Value less than	**10%**	**20%**	**30%**	**40%**
$1,000	165,000	180,000	195,000	210,000
$5,000	385,000	420,000	455,000	490,000
$10,000	400,000	400,000	400,000	400,000
$50,000	875,000	875,000	875,000	875,000
$100,000	760,000	760,000	760,000	760,000
$1,000,000	800,000	800,000	800,000	800,000
	3,385,000	3,435,000	3,485,000	3,535,000
Error in value	1.5%	3.0%	4.5%	6.0%

5.4 Recognition criteria

Even if expenditure satisfies the definition of being a cost of the asset, it must also satisfy the recognition criteria. This is possibly the most difficult aspect of the decision process as it involves consideration of subjective criteria and each scenario can be slightly different, possibly leading to a different outcome.

For example, if an entity has committed to a project (such as a new building) and approved the budget, providing the design is undertaken after the approval to proceed is given, these costs can be incorporated as a cost of the asset. However, if the design is completed prior to the approval being given, the design costs cannot be included.

> *The recognition criteria are that the cost of an item of property, plant and equipment shall be recognised as an asset if, and only if:*
>
> *(a) it is probable that future economic benefits associated with the item will flow to the entity, and*
>
> *(b) the cost of the item can be measured reliably.*[16]

If there is any doubt that the asset will produce future economic benefit or will proceed, such costs fail the recognition threshold. Common examples include initial survey and planning costs, community consultation and planning process costs.

Likewise, costs that cannot be measured reliably or identified as being directly attributable to the asset also fail to satisfy the recognition criteria. Common examples include various forms of overhead costs such as rental of main administration buildings, salaries of executives and IT costs.

It is also important to note that the assessment against the recognition criteria must be performed at the time the cost is incurred. It cannot be reassessed at a later date, such as after the project is approved to proceed. The standard states:

> *An entity evaluates under this recognition principle all its Property, Plant and Equipment costs at the time they are incurred. These costs include costs incurred initially to acquire or construct an item of Property, Plant and Equipment and costs incurred subsequently to add to, replace part of, or service it.*[17]

16 AASB 116 Property Plant and Equipment (paragraph 7)

17 AASB 116 Property Plant and Equipment (paragraph 10)

6. OVERARCHING FAIR VALUE MEASUREMENT CONCEPTS (AASB13)

AASB13 is the Australian equivalent of IFRS13. The background to IFRS13 was in many respects a consequence of the Global Financial Crisis and collapse of the US Sub-Prime Mortgage Market. At that time there were many companies who held investments in their Balance Sheets (which had also been audited) and were purportedly valued at market or fair value. With the collapse of the share market and sub-prime mortgage market the value of many of these assets were in retrospect extremely over-valued.

The nuance of AASB13 Fair Value Measurement is that it is not focused on the assets but instead is focused on how those assets are valued. It provides for a process that must be undertaken and sets out a range of explicit disclosures that are to be made about how the valuation was determined.

The accounting standard setters decided that there needed to be a better system to allow readers of the financial statements to be able to make their own assessments about how much reliance they could place on valuations. They recognised that some values were indisputable as they were evidenced by open share market trading. They also recognised that some assets required professional judgment but could be supported by observable evidence. The balance were then essentially based on a range of assumptions and as such constituted increased risk.

To address the range of risk the standard was established to increase the level of disclosure commensurate with the level of associated risk. i.e. The greater the risk (level 3) the greater the level of disclosure required.

The response was to introduce the Fair Value Measurement standard (AASB/IFRS 13) that requires a range of detailed disclosures. These will be discussed in great detail later within this guide. However the key disclosures include:

- identification of 'asset classes' based on highlighting those assets that were valued based on different methodologies, approaches, assumptions, characteristics or risk.
- Each 'asset class' to be classified by the approach used and the level of the 'valuation hierarchy'
- The valuation hierarchy to be based on the associated risk-
  - Level 1 – quoted price (zero risk)
  - Level 2 – Observable evidence (low to moderate risk)
  - Level 3 – Non-observable evidence (high to extreme risk)
- Each 'asset class' to be reconciled back to the Balance Sheet so that the reader could be sure the statements provided sufficient information on all assets subject to valuation
- For level 2 and 3 'asset classes' that:
  - all significant inputs be identified and classified as level 1, 2 or 3
  - details were provided of the valuation techniques and underlying methodology
- For all significant level 3 inputs (assumptions) details are provided about:
  - where it came from (how it was developed?)
  - how it was evaluated for reasonableness
  - quantitative information about the assumptions (e.g. min and max range)

- the level of reliance that could be placed on it (sensitivity)
- the resulting impact on the fair value calculation.

It should be noted that following the approval to vary AASB13 Fair Value Measurement via exposure draft ED 262 by the AASB in June 2015 that there have been some limited relief from these disclosures for public and NFP sector bodies. This limited relief applies only to specialised assets (such as infrastructure) that are valued under AASB116 using the cost approach. For these assets entities are no longer required to provide quantitative information about the level 3 inputs. Nor are they required to provide sensitivity disclosures. These disclosures however remain mandatory for other assets.

This Exposure Draft proposes relieving not-for-profit public sector entities from the following disclosures for assets within the scope of AASB 116 that are held primarily for their current service potential rather than to generate future net cash inflows:

(a) for recurring and non-recurring fair value measurements categorised within Level 3 of the fair value hierarchy, quantitative information about the significant unobservable inputs used in the fair value measurement;

(b) for recurring fair value measurements categorised within Level 3 of the fair value hierarchy, the amount of the total gains and losses for the period included in profit or loss that is attributable to the change in unrealised gains or losses relating to the assets held at the end of the reporting period, and the line item(s) in profit or loss in which those unrealised gains or losses are recognised; and

(c) for recurring fair value measurements categorised within Level 3 of the fair value hierarchy, a narrative description of the sensitivity of the fair value measurement to changes in unobservable inputs if a change in those inputs to a different amount might result in a significantly higher or lower fair value measurement. Where there are interrelationships between those inputs and other unobservable inputs used in the fair value measurement, the disclosure of a description of those interrelationships and of how they might magnify or mitigate the effect of changes in the unobservable inputs on the fair value measurement will also not be required.[18]

The key aspects of AASB13 Fair Value Measurement are discussed below. They include:

- Determining the Asset Class
- Unit of Account
- Exit Price
- Characteristics
- Determining the Market
- Identifying potential market participants
- Establishing the valuation premise
- Selecting the valuation technique
- Inputs
- Hierarchy of inputs
- Adjusting for condition and comparability

The decision tree on the next page provides an overview of the process required to undertake a fair value measurement for the valuation on non-financial assets (per AASB 13 Fair Value Measurement)

6.1 Determining the Asset Class

This aspect of AASB13 Fair Value Measurement is perhaps one of the most subtle and least understood aspects of the standard.

The main objective of AASB13 is to allow the users of the financial statement the opportunity to make their own informed decisions about how much reliance they place on the reported values. Rather than just rely on a statement to the effect that the valuation was provided either by management or by an external expert (because of the short-comings in this approach as evidence by the GFC and other associated events) it was decided that the reader should be provided with an increased amount of information. The aim being so that the reader could ascertain for themselves how much risk is associated with the valuation and, based on the information provided, how much reliance they can place on the valuation.

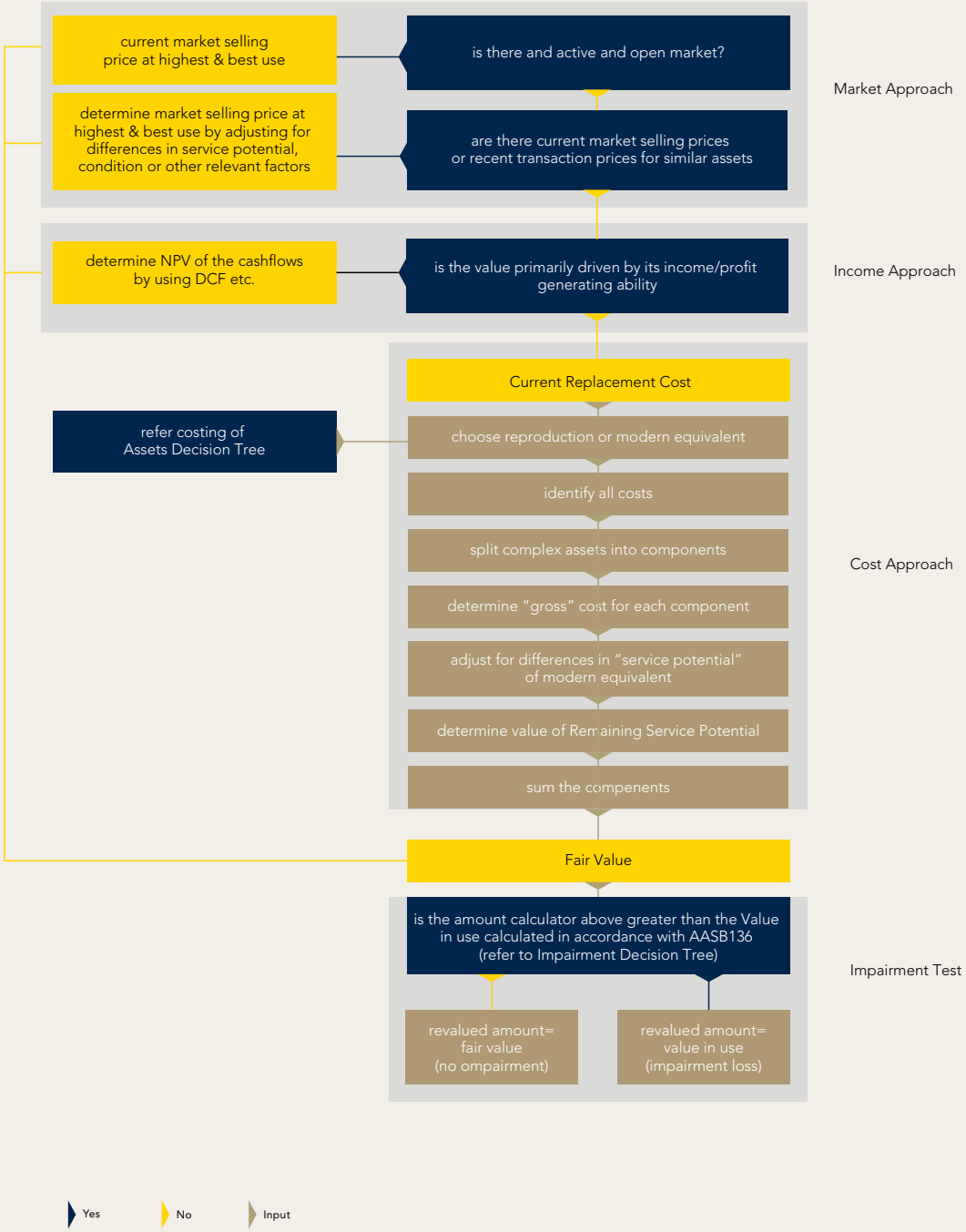
To enable the reader to be confident that the information about all such valuations were provided AASB13 requires that each valuation which is based on a different approach, range of assumptions, level of risk, etc. is highlighted as a different 'asset class' and that each of these 'asset classes' are then reconciled back to the Balance Sheet. Essentially this requires each different 'valuation' to reported as a different 'asset class'. This provides the reader information about the materiality of each different type of valuation and the subsequent disclosures provides detailed information about how each valuation was performed.

AASB13 Fair Value Measurement states:

> *94 An entity shall determine appropriate classes of assets and liabilities on the basis of the following:*
>
> *(a) the nature, characteristics and risks of the asset or liability; and*
>
> *(b) the level of the fair value hierarchy within which the fair value measurement is categorised.*
>
> *The number of classes may need to be greater for fair value measurements categorised within Level 3 of the fair value hierarchy because those measurements have a greater degree of uncertainty and subjectivity. Determining appropriate classes of assets and liabilities for which disclosures about fair value measurements should be provided requires judgment. A class of assets and liabilities will often require greater disaggregation than the line items presented in the statement of financial position. However, an entity shall provide information sufficient to permit reconciliation to the line items presented in the statement of financial position. If another Standard specifies the class for an asset or a liability, an entity may use that class in providing the disclosures required in this Standard if that class meets the requirements in this paragraph.*[19]

19 AASB13 Fair Value Measurement

AASB13 – FAIR VALUE MEASUREMENT: FAIR VALUE DECISION TREE



In layman's terms this effectively means that:

- If you have used a different valuation process then this would be a different 'asset class'
- Idea is to provide the 'reader' with all the information about each different valuation
- Indicators include different:
  - Techniques
  - Level of Valuation Hierarchy
  - Approach / Algorithms
  - Inputs / Assumptions
  - Level of risk or uncertainty

For example the movement reconciliation (for local governments) prepared in accordance with AASB116 Property Plant and Equipment traditionally breaks assets into:

- Land
- Buildings
- Road Infrastructure
- Water Infrastructure
- Sewerage Infrastructure
- Parks and Gardens
- Plant and Equipment

However these are not 'asset classes' for the purposes of disclosure under AASB13. For example an entity may have a range of buildings valued using different techniques, assumptions or with different levels of the valuation hierarchy. As a result each different approach would represent a different 'asset class'. The approach used to value the entire buildings portfolio may have included:

- Residential type buildings valued using the 'market' approach with reliance placed on level 2 inputs (direct comparison to sales of similar buildings);
- Some residential properties located in a remote location where there is no depth of market and due to changes in the mining sector there is high volatility of prices. As such the valuation may be undertaken using a combination of 'cost' and 'market' approaches assessed at level 3 on the valuation hierarchy;
- Some commercial type buildings valued using direct comparison (market level 2) or some valued using the 'income' approach. Depending on the level of support for the underlying assumptions the valuation hierarchy may be classified as either level 2 or 3;
- Specialised buildings valued using the 'cost' approach. Due to reliance placed on depreciation assumptions they would most likely be classified as level 3. However if the building was highly material and newly constructed (as the depreciation level 3 inputs are insignificant) the building may be classified as level 2 on the valuation hierarchy.

Each of these different scenarios represent a different valuation approach and as such under AASB13 represent a different 'asset class'. The various disclosures required by AASB13 are then required to be made for each different 'asset class'.

Likewise the classification of 'Road Infrastructure' represents a range of different types of asset which exhibit different characteristics, risks, approaches, algorithms and assumptions. As such each different type represents a different 'asset class'. Example include:

- Sealed roads
- Unsealed roads
- Kerb and Channel
- Footpaths
- Bridges
- Stormwater
- Traffic signals
- Traffic Management Devices

The following diagram is an example of the relationship between typical asset classifications per AASB116 and asset classes per AASB13.

This diagram does not suggest that each of these combinations will exist in every set of financial statements. However it does highlight that potentially an asset class used for AASB116 purposes (such as in the movements reconciliation note) may need to be further split into different asset classes for the purposes of AASB13 disclosure. If the valuation technique, approach or valuation hierarchy is different - this would indicate the existence of a separate asset class. As with all requirements due consideration should be given to materiality.

Examples: Relationship of AASB13 and AASB116 Asset Classes

AASB116 ASSET CLASS	LAND	BUILDINGS	ROAD INFRASTRUCTURE	PLANT AND MACHINERY
AASB13 ASSET CLASS Based on assets different by nature, characteristics or risk and level of hierarchy. As a result each valuation is based on different approach, algorithms or assumptions	Residential Market Level 2	Residential Market Level 2	Roads Cost Level 3	Fleet, Trucks and Machinery Market Level 2
	Development Site based on hypothetical development Market Level 3	Residential New and unique. As no market based on Cost Level 2	Footpaths Cost Level 3	Specialised Plant Cost Level 3
	Restricted Cost Level 2	Commercial Direct comparable sales Market Level 2	Kerbing Cost Level 3	
	Restricted (based on significant assumptions) Cost Level 3	Commercial Income Level 3	Bridges Cost Level 3	
		Specialised Cost Level 3	Bridges and New Materials Cost Level 2	
		Specialised Material and New Cost Level 2	Traffic Signals Cost Level 3	

6.2 Unit of Account

AASB13 states:

> *14 Whether the asset or liability is a stand-alone asset or liability, a group of assets, a group of liabilities or a group of assets and liabilities for recognition or disclosure purposes depends on its unit of account. The unit of account for the asset or liability shall be determined in accordance with the Standard that requires or permits the fair value measurement, except as provided in this Standard.*

It is therefore important that when determining the unit of account that appropriate consideration is given to the specific standard under which the asset is being valued. The bulk of assets in the public and NFP sectors however are normally valued under AASB116 Property Plant and Equipment.

In this regard AASB116 provides:

> *9 This Standard does not prescribe the unit of measure for recognition, that is, what constitutes an item of property, plant and equipment. Thus, judgment is required in applying the recognition criteria to an entity's specific circumstances. It may be appropriate to aggregate individually insignificant items, such as moulds, tools and dies, and to apply the criteria to the aggregate value.*
>
> *10 An entity evaluates under this recognition principle all its property, plant and equipment costs at the time they are incurred. These costs include costs incurred initially to acquire or construct an item of property, plant and equipment and costs incurred subsequently to add to, replace part of, or service it.*

This issue is relevant to both the public and NFP sectors. Some specific public sector guidance (than can also be applied to NFP sector) is provided by the NSW Treasury Accounting Policy: Valuation of physical non-current assets at Fair Value tpp 14-01:

> *In exercising professional judgment for an entity's specific circumstances, entities should consider the following issues in determining the unit of account:*
>
> - *How the business is managed. This may be evidenced by:*
> - *How management assesses and monitors performance.*
> - *Whether the business is managed on an individual, functional, geographical or total entity basis. Supporting documents include strategies in respect of service delivery, capital expenditure, asset management and risk management.*
> - *Whether the business is managed on the basis of a cash-generating unit.*
> - *The regulatory approach adopted by national and state jurisdictional regulators in respect of the entity's economic and operational activities.*
> - *What is an operating asset:*
> - *Whether an item has utility by itself or only when operating in conjunction with other items of property, plant and equipment – that is, whether the components work together as an integrated whole to provide a service or bundle of related services to the end customer and deliver future economic benefits.*

- *What items of property, plant and equipment would be aggregated to constitute an asset for the purposes of disposal as evidenced by observable market transactions.*

The unit of account is important when an agency measures the fair value of an asset subsequent to initial recognition because fair value is measured for each particular asset.

Although each particular asset is measured separately, its fair value is determined with reference to assumptions about whether its highest and best use is as a stand-alone asset or as part of a group (refer to section 4.2). Whether an asset is a stand-alone asset or part a group will depend on its unit of account (AASB 13, paras 13-14).

For example, a water corporation's rationale for using a single unit of account for a water delivery network may be based on the integrated functionality of individual components. That is, reservoirs, treatment/filtration plants and pumping stations of a water corporation may contribute towards a complete delivered water service to customers. The case for a single system/infrastructure asset may also be evidenced by an integrated water delivery system where water may be sourced from multiple reservoirs should there be supply or water quality issues in one particular part of the system.

Alternatively, a water corporation may have three separate system/infrastructure assets (units of account) – the above mentioned water delivery asset, as well as sewerage and drainage assets. However, the fair value of these assets may be determined as a group of assets rather than on a stand-alone basis (i.e. valuation premise is that the highest and best use is in combination with the other assets as a group) (refer to section 4.2).

Conversely, an electricity Distribution Network Service Provider may only have a single system/infrastructure asset based on an analysis of the above principles, including that all components within the network must work together in order to reliably supply electricity to the end customer. In this case the unit of account is the entire distribution network and the valuation premise is that the infrastructure asset is used as a stand-alone asset.[20]

6.3 Exit Price

AASB13 Fair Value Measurement changed the definition of fair value to:

The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price).[21]

20 NSW Treasury Accounting Policy: Valuation of Physical Non-Current Assets at Fair Value tpp 14-01

21 AASB13 Fair Value Measurement (definitions)

The logic about the new definition is clarified in the Basis for Conclusions to IFRS 13:

BC30 Like the previous definition of fair value, the revised definition assumes a hypothetical and orderly exchange transaction (i.e. it is not an actual sale or a forced transaction or distress sale). However, the previous definition of fair value:

(a) did not specify whether an entity is buying or selling the asset;

(b) was unclear about what is meant by settling a liability because it did not refer to the creditor, but to knowledgeable, willing parties; and

(c) did not state explicitly whether the exchange or settlement takes place at the measurement date or at some other date.

BC31 The IASB concluded that the revised definition of fair value remedies those deficiencies. It also conveys more clearly that fair value is a market-based measurement, and not an entity-specific measurement, and that fair value reflects current market conditions (which reflect market participants', not the entity's, current expectations about future market conditions).[22]

While on the face of the definition it appears to create some issues for public and NFP sector assets, the reality is that the definition is consistent with the previous definition of fair value. Confusion is really likely to exist in some jurisdictions only where in the past they were guided by approaches that adopted a market value or value to the business approach in situations where the cost approach should have been applied. This has created confusion and significant differences in valuations. These types of approaches are "entity specific" rather than being a "market-based" approach.

The Basis for Conclusions that accompanies IFRS 13 states that the cost approach (often used in the public sector) is an appropriate valuation basis and represents the exit price.

BC141 Respondents generally agreed with the descriptions of the three valuation techniques. Some respondents questioned whether a cost approach is consistent with an exit price definition of fair value because they think that the cost to replace an asset is more consistent with an entry price than an exit price. The IASB noted that an entity's cost to replace an asset would equal the amount that a market participant buyer of that asset (that would use it similarly) would pay to acquire it (i.e. the entry price and the exit price would be equal in the same market). Thus, the IASB concluded that the cost approach is consistent with an exit price definition of fair value.[23]

22 IFRS13 Fair Value Basis for Conclusions

23 IFRS13 Fair Value Basis for Conclusions

The accounting standards are quite explicit in that where neither market nor income approach is appropriate, fair value is to be measured using the cost approach. The cost approach measures the value of the remaining service potential at current cost.

Example: Land used as a cemetery

Note that this example highlights the differences between the AASBs (which uses a Fair Value approach) and the proposed IPSAS & IVSC which use an entity specific value. The difference between both approaches is that under AASB the entire service potential of the asset is valued using an exit price whereas under the IPSAS/IVSC approach only that part of relevance to the entity (using an entity specific value) is valued. This example will also be referenced throughout this guide.

In this example a parcel of land that is acquired by a local authority and then converted to a cemetery with appropriate zonings and restrictions.

While AASB 13 Fair Value Measurement requires some changes to the process to determine fair value, there remain three distinctly different valuation techniques. Where there are observable market inputs, the fair value is determined using the market approach. Where the value is primarily dependent on the ability to generate income/ profits, the fair value is determined using the income approach. Where neither of these approaches is appropriate, the fair value is determined using the cost approach. Both the income and cost approaches may include consideration of observable and unobservable market inputs. Due to the nature of public sector assets, most infrastructure and specialised assets are typically valued using the cost approach. This process is set out in the AASB 116 fair value decision tree included in **Attachment C: Overview of specific accounting standards.**

The income approach would generally be used only where the underlying value of the asset is derived from its income- producing capability. In the public sector these types of assets are often held by commercialised business units as separate cash-generating units (CGU).

Typically, the major assets controlled by public and NFP sector entities are the type that provide a community service (no profit motive) and are not traded on an open and liquid market. Accordingly their valuation basis (exit price) would normally be determined using the cost approach.

When purchasing the land the council would have had to compete with other potential market participants (such as developers) and would have had to pay the market price. At the time of the transaction the Fair Value would be calibrated to the amount paid ($10 million). This value reflects the highest and best use which, based on the reason for purchasing the land, is as a cemetery. The Fair Value at the time of the transaction would be $10 million and would be based on the market approach.

However once the council rezones and places restrictions on the land the market approach is no longer appropriate as there is no open and liquid market for assets which by definition cannot be bought and sold. It should however be noted that the highest and best use remains as a cemetery.

As the value of the assets is not driven by its income generating capability the Fair Value should now be determined using the cost approach. This would be is based on what council would have to pay to acquire such land when competing with other market participants for the same site. AASB 13 states:

> *If the transaction price is fair value at initial recognition and a valuation technique that uses unobservable inputs will be used to measure fair value in subsequent periods, the valuation technique shall be calibrated so that at initial recognition the result of the valuation technique equals the transaction price.*[24]

In future years, while the land remains restricted in use, the valuation of the cemetery land will remain being based on the cost approach. The valuation will continue to take into account how much the council would need to pay to acquire the land assuming it was unrestricted freehold land. If there was no change in the market for such land its Fair Value would remain at $10 million.

The Illustrative Examples that support IFRS 13 Fair Value Measurement also include a specific NFP sector example highlighting that the restrictions need to be inherently embedded in the asset when determining the exit price.

> *IE 29 A donor contributes land in an otherwise developed residential area to a not-for-profit neighbourhood association. The land is currently used as a playground. The donor specifies that the land must continue to be used by the association as a playground in perpetuity. Upon review of relevant documentation (legal and other), the association determines that the fiduciary responsibility to meet the donor's restriction would not be transferred to market participants if the association sold the asset, i.e. the donor restriction on the use of the land is specific to the association. Furthermore, the association is not restricted from selling the land. Without the restriction on the use of the land by the association, the land could be used as a site for residential development. In addition, the land is subject to an easement (i.e. a legal right that enables a utility to run power lines across the land). Following is an analysis of the effect on the fair value measurement of the land arising from the restriction and the easement:*
>
> *(a) Donor restriction on use of land. Because in this situation the donor restriction on the use of the land is specific to the association, the restriction would not be transferred to market participants. Therefore, the fair value of the land would be the higher of its fair value used as a playground (that is, the fair value of the asset would be maximised through its use by market participants in combination with other assets or with other assets and liabilities) and its fair value as a site for residential development (that is, the fair value of the asset would be maximised through its use by market participants on a stand-alone basis), regardless of the restriction on the use of the land by the association.*

24 AASB13 Fair Value Measurement (paragraph 64)

(b) Easement for utility lines. Because the easement for utility lines is specific to (that is, a characteristic of) the land, it would be transferred to market participants with the land. Therefore, the fair value measurement of the land would take into account the effect of the easement, regardless of whether the highest and best use is as a playground or as a site for residential development.[25]

Example: Pipe under a Road

In this example it is assumed that a local government owns a pipe which is under a road controlled by another entity. In this case the exit price would be determined using the cost approach.

The cost to the local government will include the cost to rip up and replace the road which is controlled by the other entity. Despite the other entity recording the price of the road in their financial statements the local government should include in their valuation of the pipe the cost which they would incur. This includes the cost of the pipe plus the cost to rip up and repair the road. However if the local government were to utilise underground technology which would enable them to reline the pipe without disturbing the road above the exit price would exclude the cost to rip up and repair the road.

The inclusion of the cost of the road in the books of both entities does not represent double accounting. The cost in the books of the local government simply represents that would be the cost they would need to incur to replace the asset (exit price).

6.4 Characteristics

AASB13 Fair Value Measurement specifically requires that when valuing an asset that due consideration is given to the underlying characteristics of the asset.

11 A fair value measurement is for a particular asset or liability. Therefore, when measuring fair value an entity shall take into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Such characteristics include, for example, the following:

(a) the condition and location of the asset; and

(b) restrictions, if any, on the sale or use of the asset.

An essential aspect of the Fair Value is that due consideration needs to be given to the highest and best use and what other market participants may be willing to pay. The reality is that different market participants may place different value in the different characteristics of each asset.

For example a developer would be interested in how many blocks he could produce, potential sales value, the cost of construction and the costs and possibility of relevant town planning requirements. Whereas a golf club looking to expand their course might be more interested in the physical attributes of the land and cost to convert into a golf course. Based on their assessments each might be willing to offer a different price in order to compete with a council who also wants to acquire the same land for a future cemetery.

25 IAS 13 Fair Value Illustrative Examples

Some characteristics are essentially embedded within the asset and will pass from one owner to the other. Such characteristics need to be considered in light of how other market participants might value such an asset. Some characteristics however may not be embedded within the asset and may not pass from one owner to the next and therefore should be excluded. Likewise some characteristics may be easily changed subject to legal or other proceedings.

Subsequently determination and consideration of the characteristics requires professional judgment and needs to take into account what is physically possible, legally permissible and financially feasible and any associate costs of undertaking such conversion.

Just because an entity uses an asset in a specific way does not limit how other market participants might also use that same asset. This is especially important when valuing an asset using the 'cost approach'. This is because under this approach the actual owner is placed in a position of valuing it as if they were having to acquire it by competing with other market participants for the same asset.

For example – even though land may be owned and used by a local government as a park does not mean its value is severely diminished compared to a vacant parcel of freehold land. There are many examples of councils who over time have changed the zoning of such land in order to then sell to other market participants in order to generate funds for alternative purposes. The use of the land as a 'park' is an entity specific characteristic, which can be easily changed, and therefore should not be used to discount the value. In order to maximise the profits from such sales, based on sound logic, local governments tend to change the zoning and in some cases provide for very attractive 'material change in use' provisions. The value of such land should be based on the 'cost to replace' which mean competing against other market participants based on typical town planning restrictions for that location. Entity specific restrictions, that can be changed, should be excluded.

Likewise a NFP sector entity may have been bequeathed a building for which they currently have no specific operational use. It may be vacant or perhaps might be used partly or temporarily when desired. While this might indicate the building provides only limited service potential to the NFP entity when valuing the asset due consideration needs to be given to the characteristics and alternative uses that other market participants might consider as a higher and better use. For example the building might be suitable as a commercial warehouse, development as flats or used as office accommodation.

6.5 Determining the Market

AASB13 requires that the valuation is based on either the principal market or, if one does not exist, the most advantageous market.

Where assets are openly traded (such as for motor vehicles, plant and equipment, residential properties) it is easy to identify such a principal market. However, especially for infrastructure assets, the assets are not traded in an open market and tend to be constructed either by the entity themselves or via a contract. For these types of assets the assets are to be valued using the 'most advantageous market'. This would normally based on the assumption of going to the market via a tender or quotation process.

AASB13 specifically states:

16 A fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place either:

(a) in the principal market for the asset or liability; or

(b) in the absence of a principal market, in the most advantageous market for the asset or liability.

17 An entity need not undertake an exhaustive search of all possible markets to identify the principal market or, in the absence of a principal market, the most advantageous market, but it shall take into account all information that is reasonably available. In the absence of evidence to the contrary, the market in which the entity would normally enter into a transaction to sell the asset or to transfer the liability is presumed to be the principal market or, in the absence of a principal market, the most advantageous market.

18 If there is a principal market for the asset or liability, the fair value measurement shall represent the price in that market (whether that price is directly observable or estimated using another valuation technique), even if the price in a different market is potentially more advantageous at the measurement date.

19 The entity must have access to the principal (or most advantageous) market at the measurement date. Because different entities (and businesses within those entities) with different activities may have access to different markets, the principal (or most advantageous) market for the same asset or liability might be different for different entities (and businesses within those entities). Therefore, the principal (or most advantageous) market (and thus, market participants) shall be considered from the perspective of the entity, thereby allowing for differences between and among entities with different activities.

20 Although an entity must be able to access the market, the entity does not need to be able to sell the particular asset or transfer the particular liability on the measurement date to be able to measure fair value on the basis of the price in that market.

21 Even when there is no observable market to provide pricing information about the sale of an asset or the transfer of a liability at the measurement date, a fair value measurement shall assume that a transaction takes place at that date, considered from the perspective of a market participant that holds the asset or owes the liability. That assumed transaction establishes a basis for estimating the price to sell the asset or to transfer the liability. [26]

6.6 Identifying Potential Market Participants

AASB13 requires:

> ***22 An entity shall measure the fair value of an asset or a liability using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.***
>
> *23 In developing those assumptions, an entity need not identify specific market participants. Rather, the entity shall identify characteristics that distinguish market participants generally, considering factors specific to all the following:*
>
> *(a) the asset or liability;*
>
> *(b) the principal (or most advantageous) market for the asset or liability; and*
>
> *(c) market participants with whom the entity would enter into a transaction in that market.* [27]

The identification of other market participants is straight forward in relation to assets that are openly traded in an open and liquid market. However where no such market exists the process to identify potential market participants is a little more difficult and may require the creation of a hypothetical competitor.

For example a local government has sole responsibility for the provision of local roads within their boundaries. Clearly they would be the only market participant for the acquisition of these roads. However as the most appropriate valuation technique is likely to be the 'cost approach' consideration needs to be given to what market participants would be involved. In order to obtain the assets they have a range of options available regarding acquisition. They could construct then using in-house resources or could engage a third party to construct them. Under the second scenario this might be done via a formal tender process or potentially through a preferred supplier process.

When pricing the asset consideration needs to be given to these alternative choices and what is the most advantageous.

6.7 Establishing the Valuation Premise (Highest and Best Use)

The Fair Value is determined by consideration of what is 'highest and best use'. This needs to take into account the use of the asset that is physically possible, legally permissible and financially feasible. It includes analysis of what is physically possible and what is legally permissible (AASB13 paragraph 28).

Importantly, the assessment must be based from the perspective of the potential market participants – rather than from the entity. The standard requires the valuation to be market driven rather than being entity specific.

In the case of public and NFP entities this is normally the purpose for which it is currently being used. However care needs to be taken not to confuse the 'highest and best use' with the approach used and associated assumptions used to determine Fair Value.

For example – We will use the same example as noted previously regarding land acquired by a local government to be used as a cemetery. In this situation we might assume that there were three market participants competing to acquire the same piece of land – council, a developer and the neighbouring golf club. All three would have submitted offers for the property and in order to acquire the land the council would have had to provide the highest offer ($10 million). This then establishes that the 'highest and best use' for that piece of land is to for it to be used as a cemetery. Likewise land held and used as a park or green space (despite having restriction on use or sale placed over it) is its highest and best use. If it wasn't then logically council would make them available for sale in order to generate revenue that could be used for some alternative purpose. AASB13 provides a presumption that an asset's current use is its highest and best use unless circumstances to the contrary exist.

The actual restrictions, which preserve its use for the enjoyment of future generations and for general public benefit, is essential for delivering this 'highest and best use' and therefore deliver part of the asset's overall service potential. However having determined that this is the highest and best use the next step is determine the Fair Value. In this scenario the Fair Value will be determined by the 'cost approach' (what would it cost to replace it) as due to its restrictions there is no open and liquid market for similar assets. Based on the actual transactional price it would be the price paid to acquire the land ($10 million). In future valuations it would be based on the market price of land with similar characteristics (such as location , size, proneness to flooding, etc.).

AASB 13 Fair Value Measurement states:

Valuation premise for non-financial assets

31 The highest and best use of a non-financial asset establishes the valuation premise used to measure the fair value of the asset, as follows:

(a) The highest and best use of a non-financial asset might provide maximum value to market participants through its use in combination with other assets as a group (as installed or otherwise configured for use) or in combination with other assets and liabilities (e.g. a business).

(i) If the highest and best use of the asset is to use the asset in combination with other assets or with other assets and liabilities, the fair value of the asset is the price that would be received in a current transaction to sell the asset assuming that the asset would be used with other assets or with other assets and liabilities and that those assets and liabilities (i.e. its complementary assets and the associated liabilities) would be available to market participants.

(iii) Assumptions about the highest and best use of a non-financial asset shall be consistent for all the assets (for which highest and best use is relevant) of the group of assets or the group of assets and liabilities within which the asset

would be used.

(b) The highest and best use of a non-financial asset might provide maximum value to market participants on a stand-alone basis. If the highest and best use of the asset is to use it on a stand-alone basis, the fair value of the asset is the price that would be received in a current transaction to sell the asset to market participants that would use the asset on a stand-alone basis.[28]

AASB 13 Fair Value Measurement also states:

27 A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

28 The highest and best use of a non-financial asset takes into account the use of the asset that is physically possible, legally permissible and financially feasible, as follows:

(a) A use that is physically possible takes into account the physical characteristics of the asset that market participants would take into account when pricing the asset (e.g. the location or size of a property).

(b) A use that is legally permissible takes into account any legal restrictions on the use of the asset that market participants would take into account when pricing the asset (e.g. the zoning regulations applicable to a property).

(c) A use that is financially feasible takes into account whether a use of the asset that is physically possible and legally permissible generates adequate income or cash flows (taking into account the costs of converting the asset to that use) to produce an investment return that market participants would require from an investment in that asset put to that use.

29 Highest and best use is determined from the perspective of market participants, even if the entity intends a different use. However, an entity's current use of a non-financial asset is presumed to be its highest and best use unless market or other factors suggest that a different use by market participants would maximise the value of the asset.

30 To protect its competitive position, or for other reasons, an entity may intend not to use an acquired non-financial asset actively or it may intend not to use the asset according to its highest and best use. For example, that might be the case for an acquired intangible asset that the entity plans to use defensively by preventing others from using it. Nevertheless, the entity shall measure the fair value of a non-financial asset assuming its highest and best use by market participants.[29]

28 AASB13 Fair Value Measurement

29 AASB13 Fair Value Measurement

6.8 Selecting the Valuation Technique

There is a range of accounting standards that deal with the valuation of different types of assets and each standard requires the application of a range of methods.

Some standards (such as inventories and agriculture assets) have a range of different methods that must be applied depending upon the nature of the asset, how it is to be distributed and the stage of production.

The fundamental concept applied to most, however, is the determination of fair value. The various standards, in particular AASB13 Fair Value Measurement and AASB116 Property, Plant and Equipment, highlight that fair value is to be determined, after taking into account the level of observable and unobservable market inputs, as follows:

- where there is an open market with either a quoted price or observable market inputs—the market approach;
- where the value of the asset is primarily dependent on its ability to generate income/profits—the income approach; and
- Otherwise—the cost approach.

However in some circumstances there may be a need to consider two or even all three of the approaches. In this situation the valuer needs to assess the reasonableness of the range of values indicated by the various approaches. Using professional judgment the valuer will then need to adopt an appropriate Fair Value. AASB13 states:

> *63 In some cases a single valuation technique will be appropriate (e.g. when valuing an asset or a liability using quoted prices in an active market for identical assets or liabilities). In other cases, multiple valuation techniques will be appropriate (e.g. that might be the case when valuing a cash-generating unit). If multiple valuation techniques are used to measure fair value, the results (i.e. respective indications of fair value) shall be evaluated considering the reasonableness of the range of values indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances.* [30]

The use of multiple approaches (which include the cost approach) then has consequences for both AASB13 disclosures and general presentation if the 'gross' disclosure method is used for the 'cost' approach. Such an approach is commonly adopted in the public sector. Under this approach the AASB116 movements reconciliation note discloses movements for the gross replacement cost, accumulated depreciation and fair value. Whereas the net disclosure method only requires disclosure of the movements of the fair value.

30 AASB13 Fair Value Measurement

The 'market' and 'income' approaches use the 'net' disclosure approach and therefore any valuation using a combination of either of these approaches as well as the cost approach results in an inability to determine a gross value for the purposes of the gross disclosure method. i.e. There is no logical way to determine a weighted average gross replacement cost. In this scenario it is recommended that under the disclosures relating to techniques that the technique used be disclosed as 'Multiple' and that the 'gross' amount be adjusted to equal the adopted 'Fair Value' as determined by the valuer. Appropriate disclosure should then be made under the AASB13 Techniques and Inputs disclosures.

For example – the valuer uses all three approaches to determine the fair value of a commercial building. Each approach results in a different estimate of value as detailed below. Based on the three differing results the valuer elects to adopt a fair value of $7.9 million. As the adopted value is a combination of all three approaches, and only the cost approach has a gross value, there is in inability to determine a gross and accumulated depreciation for the adopted value. In this scenario the technique should be disclosed as 'multiple' and the net disclosure method used.

Summary of Results by Technique			
Technique	**Gross**	**Accum depr**	**Fair value**
Market approach			7,200,000
Income approach			10,000,000
Cost approach	10,000,000	2,000,000	8,000,000

For disclosure purposes

AASB13 Reconciliation			
Asset class	**Technique**	**Level**	**Fair value**
Building (commercial)	Multiple	3	7,900,000

AASB116 Movements Reconciliation			
Asset class	**Gross**	**Accum depr**	**Fair value**
Buildings	7,900,000	–	7,900,000

6.9 Inputs

In order to undertake a valuation the valuer will need to take into account a range of inputs (or sources of information), Obviously the range of inputs will vary depending upon the valuation technique used, the nature and characteristics of the underlying assets and the availability of evidence.

When selecting inputs it is important to ensure that the input selected is appropriate and provides meaningful information about either the market value or the level of remaining service potential. For example the physical condition of an asset may provide more meaningful information about the level of remaining service potential than the actual age of the asset. In such circumstances it would be more appropriate to use the condition of the asset as an input rather than its age.

Under the market or income approach the range of inputs may include (but not limited to):

- Design, location and specification of the asset
- Condition and associated scoring methodology
- Age / Number of hours used
- Whether there are any indicators of future obsolescence or change in use
- Sales evidence of assets with similar characteristics
- Capitalisation Rates
- Vacancy Rates
- Estimates of future cash inflows and outflows
- Market expectations
- Componentisation / Segmentation

Whereas for assets valued using the cost approach the type of inputs might typically include:

- Design, location and specification of the asset (including whether or not it is has been physically inspected and validated or is based on a range of assumptions)
- Condition and associated scoring methodology
- Age and estimated of Remaining Useful Life
- Componentisation / Segmentation
- Replacement Cost / Unit Rates (including how they were developed or whether based on market evidence – such as recent contracts)
- Whether there are any indicators of future obsolescence or change in use
- Depreciation assumptions
  - Residual Value
  - Pattern of Consumption
  - Useful Life

The Standard outlines a number of general principles regarding valuation inputs, as follows (AASB 13, para 67-69):

- *Valuation techniques must maximise the use of relevant observable inputs and minimise the use of unobservable inputs (AASB 13, para 67).*
- *An entity must select inputs consistent with the characteristics of the asset that market participants would take into account, which may include an adjustment, such as a premium or discount (but only where it is a characteristic of the asset rather than a characteristic of the entity holding the asset) (AASB 13, para 69).*

- *An entity must use the quoted price in an active market without adjustment (if this exists), except as otherwise specified (AASB 13, para 69).*[31]

As such, once identified, each significant input needs to be classified based on the hierarchy of inputs (AASB 13, paragraphs 67-90):

- Level 1 inputs – quoted prices in active markets for identical assets
- Level 2 inputs – inputs other than quoted prices observable for the asset, either directly or indirectly
- Level 3 inputs – unobservable inputs.

In layman's terms where an input is based on some form of assumption this would demonstrate that the input is an unobservable input (level 3). The correct identification and classification of the inputs is important as they then drive the range of sub sequential disclosures required by AASB13.

The following table provides examples of how an entity might classify the same inputs differently based on how they were determined.

Input	Level 2	Level 3
Design, location and specification	Directly observable and supported by engineering drawings. Details could be verified from physical inspection.	Constructed a long time ago and not supported by detailed drawings or the design has never been physically verified. As a result the design is based on a range of assumptions.
Condition	Validated from physical inspection. This might be visual or using a range of technology driven inspection tools.	Reliance placed on data held in the asset register or reliant upon broad assumptions. Due to nature of the asset physical validation of the condition of each asset may not be possible.
Unit Rate	Unit Rate validated by reference to market data of recent sales or construction contracts. Possibly also validated against benchmark data which is derived from actual market evidence.	Developed using a first principles basis where a range of assumptions are made regarding human and material resource requirements, on-costs, etc.
Residual Value	Supported by direct sales evidence (such as trade in values on motor vehicles)	Based on professional estimates sourced from professional experience and the entity's asset management practices.
Pattern of Consumption	Based on actual production/utilisation measures where factors used are the most relevant and are measurable.	Based on professional estimates sourced from professional experience and the entity's asset management practices.
Useful life / RUL	Based on actual production/utilisation measures where factors used are the most relevant and are measurable.	Based on professional estimates sourced from professional experience and the entity's asset management practices.

6.10 Hierarchy of Inputs

Based on the assessment of the individual inputs AASB13 then requires that the asset be classified in terms of the Fair Value Hierarchy. The Fair Value Hierarchy is determined by the lowest level of significant input used to determine the valuation.

In practice it is likely that many assets will use a combination of inputs classified at different levels of the hierarchy. In such cases the Fair Value Hierarchy will be determined by the lowest ranked significant input. AASB13 states:

> *73 In some cases, the inputs used to measure the fair value of an asset or a liability might be categorised within different levels of the fair value hierarchy. In those cases, the fair value measurement is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.* [32]

There may also be instances where a range of observable inputs might require adjustment. For example where there are differences in the location and condition of assets to those supported by observable market evidence. In these cases the valuer needs to assess whether the adjustments made are significant and therefore would warrant classifying the input as level 3. AASB13 states:

82 If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset or liability. Level 2 inputs include the following:

(a) quoted prices for similar assets or liabilities in active markets;

(b) quoted prices for identical or similar assets or liabilities in markets that are not active;

(c) inputs other than quoted prices that are observable for the asset or liability, for example:

- *(i) interest rates and yield curves observable at commonly quoted intervals;*
- *(ii) implied volatilities; and*
- *(iii) credit spreads;*

(d) market-corroborated inputs.

83 Adjustments to Level 2 inputs will vary depending on factors specific to the asset or liability. Those factors include the following:

(a) the condition or location of the asset;

(b) the extent to which inputs relate to items that are comparable to the asset or liability (including those factors described in paragraph 39); and

(c) the volume or level of activity in the markets within which the inputs are observed.[33]

32 AASB13 Fair Value Measurement

33 AASB13 Fair Value Measurement

As a result it is important to note that the technique used does not have any direct impact on the level of the Fair Value Hierarchy. The assessment is driven entirely by the assessed level of each significant input. For example:

- Some assets valued using the market approach might require the need to make a range of significant assumptions due to the lack of directly comparable market evidence. While assets valued using the market approach might normally be expected to be assessed as Level 2 on the Fair Value Hierarchy in cases where such significant assumptions are required this would result in the classification as Level 3.
- Likewise most assets valued using the cost approach depend on a range of level 3 depreciation assumptions (such as Residual Value, Useful Life and Pattern of Consumption) to determine the Fair Value. In such cases it is appropriate to classify the asset as Level 3. However in cases where the asset is newly constructed or has been assessed as being 'as new' the impact of the depreciation assumptions are insignificant and therefore (providing the other inputs were assessed as level 2) should technically be classified as Level 2.

In this regard AASB13 states:

> *74 The availability of relevant inputs and their relative subjectivity might affect the selection of appropriate valuation techniques (see paragraph 61). However, the fair value hierarchy prioritises the inputs to valuation techniques, not the valuation techniques used to measure fair value. For example, a fair value measurement developed using a present value technique might be categorised within Level 2 or Level 3, depending on the inputs that are significant to the entire measurement and the level of the fair value hierarchy within which those inputs are categorised.*[34]

This can create some challenges for entities that have very large portfolios of similar assets and regularly construct or renew their assets. When the 'new assets' are considered to be material in their own right it is recommended that they be separately classified. However where they are not considered material in their own right it may be appropriate to set an accounting policy where all assets of similar nature are classified under the same level of the Fair Value Hierarchy. An appropriate disclosure should be provided in the financial statements under valuation techniques and inputs.

The following table provides examples of the types of typical valuation processes for different types of assets and their associated classification level of valuation input. It is considered that buildings or constructed infrastructure are not identical, if nothing else by the nature of their location, so no Level 1 inputs will exist.

Table 1: Typical valuation approaches by asset class

Asset type	Approach to Valuation	Level
Freehold land	As freehold land is traded in an open and liquid market the valuation basis will be the market approach. Each parcel of land is unique, however, and the valuation will be determined by reference to the sales prices of similar or reference sales. Typically this will be determined at Level 2. However, there may be instances where there in an insufficient level of market evidence and the valuation will require significant assumptions resulting in Level 3.	2 or 3
Restricted land such as parkland	This type of land cannot be traded in an open market and its value is not linked to its income- generating capability. The valuation basis will be the cost approach (due to lack of observable market inputs for non-tradable land) and will be determined by reference to the sales prices of parcels of freehold land with similar characteristics (i.e. the cost of replacement). Where there is no observable market evidence of any comparable land, the valuation may require extensive assumptions and therefore the valuation input in this situation may be Level 3.	2 or 3
Residential buildings	As residential buildings are traded in an open and liquid market the valuation basis will be market approach. Each asset is unique, however, and the valuation will be determined by reference to the sales prices of similar or reference sales. Where there is no market (perhaps due remoteness or lack of supply or demand) the valuation may need to be undertaken using the cost approach. In this case the valuation input is likely to be Level 3	2 or 3
Commercial buildings	The values of these buildings are usually determined using either a market approach or an income approach by reference to sales or similar buildings and analysis of the gross and net areas, leasing rates, vacancy rates, outgoings and other factors. Depending on the level of market evidence and assumptions required the valuation input may be either Level 2 or Level 3	2 or 3
Specialised buildings	The nature of the public sector is that entities often have buildings that serve a specific purpose and as a consequence may have specialised features built into them or be in a specific location. As a consequence they are normally considered specialised buildings and valued at replacement cost. The building will be componentised into different parts and valued and depreciated separately. The cost will be determined by reference to actual construction costs of other similar or reference buildings, standard rates obtained from construction guides and, in some cases, costs developed from first principles using prices for materials and taking into account allowances for design and construction. Given the level of assumptions made to determine the valuation, input would typically be Level 3. However, there may be instances where some assets have recently been constructed and therefore there is clear observable market evidence of the cost. In these instances a Level 2 assignment may be warranted (taking into account overall materiality).	2 or 3

Asset type	Approach to Valuation	Level
Infrastructure operated as a for-profit entity	The nature of these assets is that their overall value is based on the income-generating capability of the business as a whole. As a consequence either a market approach or an income approach will be used, which takes into account the cash inflows and outflows with allowance made for risk, discount factors and a range of other information. These assets are also often subject to regulatory pricing; therefore, as pricing is outside the control of the entity, there may be significant uncertainty regarding future income streams. Given the level of assumptions used to determine the valuation the valuation input would typically be considered Level 3.	3
Infrastructure operated to provide a service to the community at no or a nominal fee.	These typically comprise the bulk of assets operated by the public sector and include assets such as roads, bridges, parks, footpaths, and water and sewerage infrastructure. These assets would be valued at replacement cost by reference to actual construction cost of similar assets, unit rates from construction guides, or costs developed from first principles using prices for materials and taking into account allowances for design and construction. Given the level of assumptions made to determine the valuation the valuation input would typically be Level 3. However, there may be instances where some assets have recently been constructed and therefore there is clear observable market evidence of the cost. In these instances a Level 2 assignment may be warranted (taking into account overall materiality).	2 or 3

6.11 Adjusting for Condition and Comparability

As noted previously the determination of Fair Value requires adjusting for changes in condition and location where market participants would also take those characteristics into account. (AASB13 paragraph 11).

This might include a relatively straight forward adjustment for the condition of the asset or making adjustments in value as a result of the assets location and the impact that has in the market. These adjustments may be observable or may require significant professional judgment.

For example an entity might control an asset which is set up to provide specific service or due to its past asset maintenance history is in a certain condition. Consideration needs to be given to how other market participants might see alternative uses for that asset which might include making changes to the design, location of even its condition. This is a critical part of determining the highest and best use.

As an example an entity might use a building for a specific purpose (warehouse) but due to its location and recent changes to the town planning scheme developers may consider the building ripe for redevelopment as a premium residential development. To determine Fair Value consideration needs to be given to the processes involved and associated costs of changing the condition of the asset.

Likewise an entity might own a parcel of undeveloped land. In determining the Fair Value consideration needs to be given to the alternative use (residential development) and the costs that would be incurred in obtained the relevant town planning approvals, construction costs, etc.

This may occur where the highest and best use for the asset is not the current use of the asset (refer section 4.1). In these circumstances, the cost to convert the asset to the highest and best use is taken into account, which may include the costs to obtain different zoning permissions and demolition costs (refer IFRS 13, Illustrative Example 2 and para BC69).

Similarly, the market participant may require the asset to be in a different location. This means that transport costs should be taken into account where the location of the asset is a characteristic of the asset. In contrast, transaction costs are not a characteristic of the asset and therefore should not be taken into account in fair value measurement (AASB 13, para 26).

A distinction, however, may need to be made between initial recognition and subsequent measurement. That is, transaction costs are included on initial recognition of investment property under AASB 140, para 20, but are excluded from subsequent measurement at fair value.[35]

6.12 Taking account of Characteristics and Restrictions

Fair value measurement of a particular asset is impacted by restrictions on the sale or use of an asset if market participants would take those restrictions into account when pricing the asset (AASB 13, para 11(b)).

Restrictions on the asset that are:

- *entity specific should not be taken into account because a potential buyer would not be subject to the restriction*
- *a characteristic of the asset should be taken into account because the restriction would transfer to the potential buyer with the asset* [36]

The issue of how to take account of restrictions placed over assets is perhaps one of the most commonly discussed aspects of valuation under the Australian Accounting Standards.

There are of course different types of restrictions and consideration needs to be given to the impact of such restrictions. As noted previously (under Exit Price) consideration needs to be given as to whether the restriction would pass from the seller to the buyer. Or in other words whether the restriction is an underlying embedded characteristic of the asset that does not change as the asset is transferred from one owner to the next.

In the case of assets openly traded in an open and liquid market (such as for motor vehicles or residential properties) the impact of these restrictions is inherently embedded within the market price.

However when assets are valued under the cost approach the owner of the asset is placed in the position of being the 'buyer' rather than the 'seller'. The value is based on what the owner (buyer) would have to pay to a third party (seller) in order to obtain the asset (that they already own). As a consequence any characteristics that are entity specific (such as being placed or sought) on the asset by the owner (such as its current use) are to be

35 NSW Treasury Valuation of Physical Non-Current Assets at Fair Value tpp 14-01 section 3.2

36 NSW Treasury Valuation of Physical Non-Current Assets at Fair Value tpp 14-01 section 3.3

excluded from consideration.

The Fair Value also needs to consider other alternative uses (highest and best use) that other market participants would consider when pricing the asset. In a previous example we referenced a land parcel acquired and used by a local government. In this case the land is owned by a council was used as a cemetery. The land was acquired for $10 million and then council undertook a process to rezone the land and restrict its use as a cemetery. In this example there are two types of restrictions to consider– those that transferred from the buyer to the seller (embedded within the asset) and those that were entity specific.

When trying to acquire the land council had to compete with a range of other market participants who could see a range of alternative uses for the land parcel. At the point of sale the only restrictions placed over the land were general restrictions governed by the local planning scheme. These restrictions were common to all potential buyers and as they would have transferred with the land would have needed to be taken into account when determining their offer. If they wished to change those restrictions (such as applying for a material change in use for the land) they would have needed to incorporate such estimates of costs in their offer.

However the restriction of the land being used solely as a cemetery is an entity specific restriction and therefore consideration of this restriction should be excluded from the determination of Fair Value. While the restriction is currently in place and council might have no intention of ever selling the land, such a restriction can be easily removed by the entity and the land sold to other market participants for alternative uses. There are many examples of local governments who have undertaken such or very similar transactions and typically the local government takes deliberate actions to maximise the return from such sales by enabling a 'material change in use' which provides for alternative uses superior to the existing town planning scheme for that specific location.

In this situation:

- its highest and best use is a cemetery
- the appropriate valuation technique is the cost approach (because there is no market and it cannot be sold)

Therefore consideration needs to be given to the market value of surrounding land of similar characteristics (size, location, undulation, proneness to flooding, etc.) given the potential other uses that are available to other market participants.

The characteristics may also include the relative condition of the asset (or component) and the cost that would be necessary to bring it back to 'as new'. i.e. The potential purchaser would normally take into account the cost of a new asset and what costs they would need to incur to restore the service potential back to 'as new'. For example – in pricing an offer for an asset they would take into account the value they could achieve from their preferred use and what it would take them to convert it from existing use to their preferred use. This would help establish the maximum price they would be prepared to pay.

7. IMPAIRMENT CONSIDERATIONS (AASB136)

Just as AASB13 provides a framework around the determination of Fair Value the Impairment Standard (AASB136) also provides an over-riding framework over the valuation of assets.

Irrespective of how the asset is valued (whether at historical cost or fair value) there is a requirement to assess at the end of the year whether there are any signs of impairment and where relevant adjust the valuation to the recoverable amount.

> *An entity shall assess at the end of each reporting period whether there is any indication that an asset may be impaired. If any such indication exists, the entity shall estimate the recoverable amount of the asset.*[37]

Essentially the standard requires a comparison between the carrying amount (being the figure reported in the financial statements) and the Recoverable Amount.

Revaluations are performed for an entire class of assets when the fair value is considered materially different from the carrying amount. In practice many entities adopt an annual revaluation process via indexation supported by comprehensive revaluations every three years. For impairment individual assets have to be considered annually for evidence of impairment and if such evidence exists, tested and if appropriate adjusted.

Physical damage, say by fire, might be a good reason why an individual asset in a class that is measured at fair value, is impaired when the rest of the class does not require revaluation. Other common examples include widespread damage to an infrastructure network as a consequence of a natural disaster or decisions made which lead to an existing asset now becoming obsolete or approved for demolition.

If the recoverable amount is less than the carrying amount the fair value needs to be adjusted downward to the lower figure.

The determination of the recoverable amount varies depending upon whether the entity is deemed to be a for-profit or not-for-profit entity. Irrespective of the type of entity, a comparison also needs to be made between the "Value in Use" and the "Fair Value less Cost to Sell".

For for-profit entities, such as public sector business entities or commercialised government entities, the value in use is the present value of cash flows expected to be generated from the asset. For not-for-profit entities either it will be the current replacement cost or, if the asset's value is primarily dependent on its cash-generating capability, it will be the present value of the cash flows expected to be generated.

The process is set out in the AASB136 Impairment decision tree included in Attachment C: Overview of specific accounting standards.

37 AASB136 Impairment (paragraph 9)

Most public sector entities are operated as not-for-profit entities with the value in use calculated as the current replacement cost. For these types of assets the fair value is also often calculated using the cost approach which determines the current replacement cost. In undertaking these calculations consideration also needs to be given to whether or not the entity would replace the asset if it were deprived of the asset. Such an assertion would ideally be supported by a board/council decision.

As a consequence, if the policy is to value these assets at Fair Value, the value in use will be the same as the fair value and by definition will always be higher than the "Fair Value less Cost to Sell". Therefore an impairment loss for this type of entity can occur only if the fair value has not been kept up to date and the carrying amount is greater than the fair value.

The AASB recognised that in practice that Fair Value determined using the cost approach and the Value in Use determined under AASB136 using current Replacement Cost are considered to result in the same result.

> *The Board noted that the definition of depreciated replacement cost in AASB 136 Impairment of Assets and the guidance on current replacement cost in AASB 13 Fair Value Measurement (paragraphs B8 and B9) are expected to result in values materially the same, and in practice valuers treat them interchangeably for the specialised assets being considered.*
>
> *These observations led the Board to the tentative view that the references in AASB 136 to DRC as a measure of value in use are not needed and may cause confusion, particularly for entities already fair valuing non-financial assets. A Basis for Conclusions will explain the rationale for the ED proposal.*[38]

Note that if the assets are valued at Historical Cost an impairment assessment is still required. This in turn requires an estimate of fair value if there are indicators of impairment. If the CRC or fair value less cost to sell is deemed to be less than the carrying amount an adjustment to the value is required.

8. AASB116 PROPERTY PLANT AND EQUIPMENT

There are a range of different accounting standards which deal with specific types of assets. However AASB116 Property Plant and Equipment is typically used to value the bulk of public and NFP sector assets. To assist in understanding we have included discussion of the three valuation techniques (market, income and cost) per AASB13 under this section. AASB116 also covers a range of specific areas such as depreciation expense and revaluation.

This section provides a brief overview of a range of key aspects and concepts covered by AASB116 and AASB13. They include:

- Initial Measurement and what constitutes the 'cost' of an asset
- Segmentation
- Componentisation
- Frequency of revaluations
- Revaluation by indexation
- Year-end requirements
- The Market approach
- The Income approach
- The Cost approach
- Depreciation Methods
- Other Requirements

8.1 Initial Measurement / Cost of an Asset

The initial recognition of most assets is done at cost. When revaluing using the replacement cost approach, it is therefore important to first understand what constitutes the cost of the asset. Cost is defined by AASB116 Property, Plant and Equipment as follows:

Cost is the amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire an asset at the time of its acquisition or construction or, where applicable, the amount attributed to that asset when initially recognised in accordance with other Australian Accounting Standards, for example, AASB 2 Share-based Payment.[39]

The costs of assets decision tree and capitalisation of borrowing costs decision tree (refer **Attachment C: Overview of specific accounting standards**) provide a visual guide to the aspects discussed below.

AASB116 Property, Plant and Equipment states that:

16 The cost of an item of Property, Plant and Equipment comprises:

(a) its purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates;

(b) any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management;

(c) the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity incurs either when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period.

17 Examples of directly attributable costs are:

39 AASB116 Property, Plant and Equipment (definitions)

(a) *costs of employee benefits (as defined in AASB 119 Employee Benefits) arising directly from the construction or acquisition of the item of property, plant and equipment;*

(b) *costs of site preparation;*

(c) *initial delivery and handling costs;*

(d) *installation and assembly costs;*

(e) *costs of testing whether the asset is functioning properly, after deducting the net proceeds from selling any items produced while bringing the asset to that location and condition (such as samples produced when testing equipment); and*

(f) *professional fees.*[40]

These different types of costs that can form part of the cost of an asset can be described as either being:

- direct costs (including initial, subsequent, borrowing, dismantling and third-party costs);
- indirect costs;

  or

- contributed costs.

8.1.1 Initial costs

Providing the cost satisfies the recognition criteria, any costs initially incurred in acquiring the asset are to be capitalised. This includes expenditure on items that may not produce any impact in terms of output, but are required due to new or changing requirements.

8.1.2 Subsequent costs

Typically the useful life of infrastructure assets is extended through a combination of maintenance and renewal. Using a road as an example, this would include pothole repairs, grading gravel roads, patch repairing, reseals, painting of new lines and major rehabilitation.

Cyclical maintenance and renewal assets differ from other assets in that their total life is extended over time via ongoing maintenance and renewal. As a consequence, an asset's total lifecycle cost can differ as a result of changing:

- maintenance costs;
- renewal treatments; and
- levels of service.

The assets are generally maintained via cyclical maintenance and renewal at a level that satisfies the community's expectation or at a defined level of service. This maintenance does not restore the consumed future economic benefit but simply keeps the asset on its lifecycle path. It may, however, have a significant impact on the time to next intervention.

When the asset is unable to meet the community's needs there are a number of possible outcomes. These include:

- Restore the future economic benefit through renewal or upgrade;
- Replace the asset with an alternative asset; and
- Change the community's expectations (reduced level of service).

40 AASB116 Property, Plant and Equipment

AASB116 Property, Plant and Equipment recognises the difference between the impacts of operational maintenance versus asset renewal. Providing the expenditure satisfies the recognition criteria (and it is material), it is to be capitalised.

The control of some assets also includes an obligation, either at the time of acquisition or as a consequence of having used the asset, to dismantle the asset or to restore the site on which it is located. A common example is the cost of restoration of landfill sites. Under the standards these liabilities must be estimated and included in the valuation of the asset.

Where the asset (normally land) is unable to be restored and as a consequence is contaminated, this will impact on the fair value of the asset either by recognising the reduced level of service potential provided by the asset or via an impairment adjustment.

Similarly, the operation of some assets requires the conduct of regular inspections. If these inspections satisfy the recognition criteria, they are to be included in the carrying amount of the asset as a replacement.

> *A condition of continuing to operate an item of property, plant and equipment (for example, an aircraft) may be performing regular major inspections for faults regardless of whether parts of the item are replaced. When each major inspection is performed, its cost is recognised in the carrying amount of the item of property, plant and equipment as a replacement if the recognition criteria are satisfied. Any remaining carrying amount of the cost of the previous inspection (as distinct from physical parts) is derecognised. This occurs regardless of whether the cost of the previous inspection was identified in the transaction in which the item was acquired or constructed. If necessary, the estimated cost of a future similar inspection may be used as an indication of what the cost of the existing inspection component was when the item was acquired or constructed.*[41]

The following table provides a summary of the types of expenditure incurred subsequent to initial acquisition. It covers all lifecycle costs other than the cost of the initial acquisition.

41 AASB116 Property Plant and Equipment (paragraph 14)

Table 2: Types of expenditure subsequent to initial acquisition

	Operational	Maintenance	Renewal	Upgrade	Disposal
Notes	Day-to-day running costs	May extend life of asset but by definition must either extend life by less than 12 months or be immaterial	May include part-disposal as part of the renewal or derecognition of existing asset	Improvement on original design	Total end of life disposal
Treatment	Expense	Expense	Capitalise	Capitalise	Expense (or Reduce Existing Liability)
Budget type	Recurrent	Recurrent	Capital	Capital	Capital
Funding	Non-discretionary	Non-discretionary	Non-discretionary	Discretionary	Discretionary (except if linked to renewal)
Examples	Salaries and wages Supplies Electricity Grass mowing Street cleaning Chemicals Water testing	Pothole patching Miscellaneous repairs Window replacement Patch leaking roof Grind footpath trip hazard Unblock pipes Replace broken sections of pipes Chemical treatment of pipes for tree root intrusion	New fit-out and painting of building Reseal road surface Gravel re-sheet Pump replacement Reline pipes Refurbishment Replace old with new Replace of part of segment of road, footpath, kerb etc.	Road widening Change road alignment Upgrade footpath from gravel to concrete Replace pumps with greater capacity Replace timber bridge with concrete bridge Extension to building	Demolition costs Removal of debris Repatriation of site (These costs should also be factored into the fair value if there is Is an obligation to do so. Under the historical cost approach a provision should be raised for any obligation for restoration costs.)

8.1.3 Borrowing costs

Because of the high acquisition cost of infrastructure assets, some are partly funded by way of borrowings. Under AASB123 the amount of interest shall be capitalised as part of the cost of the asset to the extent that the borrowing costs can be attributed to the acquisition of the asset.

However AASB123 provides that for NFP public sector entities they may elect to expense such costs.

> *Aus8.1 A not-for-profit public sector entity may elect to recognise borrowing costs as an expense in the period in which they are incurred regardless of how the borrowings are applied.*[42]

In the public sector most Australian jurisdictions mandate that such costs be expensed rather than capitalised. As such care needs to be taken to ensure compliance with the appropriate prescribed requirements.

If however the borrowing costs have been capitalised as part of the initial transaction cost of a an asset, then the requirements of AASB13 Fair Value Measurement, which demand that the fair value be calibrated to the value of the transaction costs, would mean that any subsequent revaluation should also include an allowance for the borrowing costs.

In some jurisdictions specific prescribed requirements have been issued that any subsequent revaluations exclude borrowing costs. If these were significant but were previously capitalised, however, a revaluation may result in a significant decrement in value with potential to impact the profit and loss account. Similarly, as the time between the initial capitalisation and the revaluation date increases, the reliability of assumptions regarding the initial borrowing costs also decreases.

It is recommended that a suitable policy covering this issue be developed by the entity and if relevant disclosed in the financial statements.

8.1.4 Compensation and third-party costs

The standards require that all costs that would be included in the initial cost of the asset be included in the valuation. This may include a range of costs that may not be immediately apparent.

AASB116 Property, Plant and Equipment states that total cost includes:

- purchase price including duties and taxes after deducting trade discounts and rebates;
- any costs directly attributable to bringing it to operation; and
- initial estimates of dismantling or rehabilitation where an obligation exists.

Examples include:

- sunk costs (originally incurred but never to be repeated—for example, making a cutting in the side of a mountain);
- reacquisition or reconstruction costs (based on the likely method used to reconstruct or acquire asset); and
- third-party costs (compensation or reconstruction of assets controlled by a third party—for example, relocation of third-party infrastructure to construct a dam, or reconstruction of a road belonging to a third party so pipes running underneath it can be replaced).

42 AASB123 Borrowing Costs

The cost of building a new road may include costs in relation to forced resumption of land, and relocation or reconstruction of assets held by third parties affected by the project. In this case, the costs "directly attributable to bringing the asset into operation" include:

- purchase of land (usually market value plus premium for compensation); and
- relocation/reconstruction of assets held by other parties (even though assets replaced are not controlled by the entity).

Likewise, as previously described by way of example under 'exit price', the replacement cost of a pipe under a road includes the cost to rip up and repair the road above it even though a different entity owns the road.

However, it is worth noting that this requirement poses a number of significant issues for revaluation, especially when the period between original construction (and payment of third-party costs) and the date of revaluation is significant. Over time, the detailed information about the transactions may be lost or forgotten and the inherent uncertainty regarding how to establish a current value for these payments may be high.

To deal with this issue, some jurisdictions have provided specific prescribed requirements that essentially require the costs to be capitalised as part of the original cost and to be either excluded from future valuations or immediately treated as an impairment adjustment.

For example:

> *Each entity must review its assets annually for impairment indicators, and assets recorded at fair value must be revalued each year. As part of these processes, agencies must assess what third party costs should remain as part of the carrying amount of the asset.*
>
> *If an agency determines the third party cost would not be incurred again when the asset is replaced the agency has the following options in relation to the initial recognition of third party cost/s:*
>
> - *Capitalise and subsequently impair the asset*
> - *Where the carrying value of the asset does not reflect the agency's capacity to derive future economic benefit or the asset's ability to deliver its full service potential there is an indication that the asset is impaired.*
> - *Any impairment is to be recognised in accordance with AASB 136 Impairment of Assets.*
> - *Capitalise and subsequently revalue the asset on the basis of the third party costs will not be incurred again.*[43]

Care needs to be taken to ensure compliance with the appropriate prescribed requirements.

8.1.5 Overheads

The cost of delivering a service using an asset includes both direct and indirect costs. These costs are incurred throughout the asset lifecycle including acquisition, operation, maintenance, renewal, upgrade or disposal.

Overheads is a general term often used to describe indirect costs.

> *Indirect costs in entities providing services from infrastructure include technical overheads for program and project management, survey, investigation, design and construction supervision and corporate overheads for general management, procurement, financial services, information technology, and human resource management.*[44]

Overheads are no different from any other asset cost in that, prior to being capitalised, they must qualify as part of the total cost of the asset as defined in AASB116. Most importantly, the cost is "directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management[45]".

44 IPWEA NAMS Australian Infrastructure Financial Management Guidelines Section 12.9

45 AASB116 Property Plant and Equipment (paragraph 16)

Overheads are commonly categorised into the following types:

Table 3: Overheads

Type	Examples	Common Approaches
Labour	Amount paid in addition to direct wages (e.g. leave loading) Amounts paid to others for direct benefit of employees (e.g. superannuation) Unproductive time (e.g. annual and long- service leave, or sick leave)	Based on percentage of wages Normally supported by time sheets and other wages records linking specific employees back to project
Materials	Cost of receiving, storing and issuing materials through a store Delivery and transport costs	Based on total cost of store as percentage of total value of stores issued. Normally supported by materials list used on project linked back to stores records
Technical	For example, engineering management, investigation, survey, design and supervision	Based on total cost of the expenditure for which the technical service is responsible as percentage of total cost of providing the technical service. Normally linked to timesheets and/or internal charge records showing linkage back to specific projects
Corporate	General management and services such as financial services, purchasing, human resources, information technology, work, health and safety	Not normally allocated unless can show direct link to specific project
Plant and equipment	Cost of operation, maintenance and replacement of plant and equipment	Normally charged directly to projects as internal plant hire. However, under AASB116 "any internal profits are eliminated in arriving at such costs"1

8.1.6 Contributed assets

Some entities (such as local governments) receive a significant number of assets as contributions. Typically these are assets constructed by developers and handed over or donated to the local government. Common examples are footpaths and kerb and guttering. Similarly, not-for-profit entities may receive donated assets. The construction and contribution of the asset may be a requirement for the issuance of a development permit. Because these are non-cash transactions there is a risk that they are not properly recorded.

AASB116 Property, Plant and Equipment requires that such assets be recognised as an acquisition cost equivalent to the fair value of the asset. The standard states:

> *The cost of such an item of Property, Plant and Equipment is measured at fair value unless (a) the exchange transaction lacks commercial substance or (b) the fair value of neither the asset received nor the asset given up is reliably measurable.*[46]

46 AASB116 Property Plant and Equipment (paragraph 24)

8.2 Segmentation

Some assets are identifiable as completely separate (for example, buildings) whereas others form part of a larger network or facility. This is especially so for lateral assets such as roads and pipes. Other examples include water treatment facilities, which may comprise a range of different assets.

For both asset management and valuation purposes it is important that the overall asset be separated into segments, with each segment recognised as a separate asset within the asset register. This allows the asset to be managed at a level that takes into account different dimensions, materials, condition and treatments.

Common approaches to segmentation are tabled below. Often the segments are a combination of various approaches based on local knowledge.

Table 4: Typical approaches to segmentation by asset class

Asset Category	Segment
Roads	Intersection to intersection
Footpaths	Based on chainage (new segment every defined distance)
Cycleways	
Kerb and channel	Change in design (materials, dimension)
Drains	Significant change in condition
	Known areas of different rate of consumption
Pipes	Node to node
	Manhole to manhole
Fences (very long)	Based on chainage (new segment every defined distance)
	Change in design (materials, dimension) Significant change in condition
	Known areas of different rate of consumption
Water treatment facility	Intake systems
	Raw water pump station
	Filters
	Settling tanks Chemical equipment
	Clear water reservoir

8.3 Componentisation

AASB116 Property, Plant and Equipment also requires that:

> *Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately.*[47]

The Basis for Conclusions that accompanies AASB116 Property, Plant and Equipment specifically states:

> *BC26 The Board's discussions about the potential improvements to the depreciation principle in the previous version of AASB116 included consideration of the unit of measure an entity uses to depreciate its items of property, plant and equipment. Of particular concern to the Board were situations in which the unit of measure is the "item as a whole" even though that item may be composed of significant parts with individually varying useful lives or consumption patterns. The Board did not believe that, in these situations, an entity's use of approximation techniques, such as a weighted average useful life for the item as a whole, resulted in depreciation that faithfully represents an entity's varying expectations for the significant parts.*
>
> *BC27 The Board sought to improve the previous version of AASB116 by proposing in the ED revisions to existing guidance on separating an item into its parts and then further clarifying in the Standard the need for an entity to depreciate separately any significant parts of an item of property, plant and equipment.*
>
> *By doing so an entity will also separately depreciate the item's remainder.*[48]

This means that assets comprised of:

- a number of significant parts;
- which have a different value; and;
- exhibit different useful lives or depreciation method;

are to be depreciated separately. This is commonly referred to as componentisation and is a critical aspect to ensuring the valuation is meaningful and accurate and can be used as a key input to the asset management planning process.

Componentisation of assets valued using the market approach

The determination of appropriate components for assets valued using the market approach is a process that requires considerable professional judgment. This is because the underlying value of the asset may bear no relation to the physical condition of the significant parts that comprise the cost to construct the asset. As a consequence there may be no identifiable nexus between the remaining useful life of the various parts and the assets level of remaining service potential (fair value).

Nevertheless due consideration needs to be given to componentisation. Some entities choose to adopt the same components for buildings valued using the market approach as they would use for buildings valued using the cost approach and allocate the market value across the various components using an arbitrary allocation. However, some treat the asset as having only one component on the basis that they are not significant parts that (if they were depreciated separately) would result in a materially different estimate of depreciation expense.

47 AASB116 Property Plant and Equipment (paragraph 43)

48 IAS16 Property Plant and Equipment Basis of Conclusion

Typically, however, there would be a separate component for each part that can be bought and sold independently of the other parts. A good example would be a commercial building comprising a number of separate strata titles.

Each strata title could be bought and sold independently of the others and has its own cost (value).

Componentisation of assets valued using the income approach

Fair value is based on the overall income-generating capability. However, the value needs to be allocated against the individual assets to enable depreciation calculations.

For these types of assets the total value is then allocated proportionally across the individual assets. The various depreciation assumptions are applied against each asset to then determine the amount of depreciation expense.

Componentisation of assets valued using the cost approach

Specialised buildings and community infrastructure are normally valued using the cost approach. For these assets the components should be selected based on the realities of the asset management planning process. In particular, consideration should be given to which components of the overall asset are managed separately from other parts and what types of treatments are used to maintain and renew the asset through cyclical maintenance and renewal.

This provides clear evidence of the parts that have a different useful life and depreciation method as well as significant cost. The information gained from this analysis will provide guidance on how the asset should be disaggregated down to its component parts.

For example, based on typical lifecycles and asset management treatment regimes, a road is typically broken into the following components:

- formation or earthwork (sometimes these are further separated);
- pavement; and
- surface.

This may then be supported by additional assets linked to the road such as:

- kerb and guttering;
- footpaths (left and right);
- traffic signals;
- traffic management devices;
- retaining walls; and
- others.

This split is logical and enables the data (such as condition and specifications) to be collected as part of the valuation exercise to feed directly into the asset management planning process.

To identify components, consider how the asset is managed from an asset management perspective and what parts comprise a significant cost but have a different useful life, give consideration to the following:

- Is cost significant (as a proportion of the whole asset) and does it exceed capitalisation threshold?
- Has it a different useful life or pattern of consumption of future economic benefit (all parts within the component should have same life and pattern)?
- Is the component separately identifiable, measurable and able to be separated from complex asset?
- Is it replaced or renewed at regular intervals or is it a sunk cost?
- Is it managed with specific capex treatments relatively independent of other components; and
- Due to risk or criticality does it need to be separated for asset management planning?

For financial reporting purposes entities may need to adopt a more detailed level of componentisation than used for asset management planning and valuation. This flows from the AASB's clarification regarding the definition of Residual Value (May 2015).

Key points from the AASB's decision were that:

- The Residual Value was the amount received upon its disposal.
- Disposal is the point when the control over the asset is relinquished
- As a consequence the Residual Value for most assets would be either nil or insignificant
- For assets which comprised components subject to regular renewal the AASB indicated that technically such **component needs to be split into a short-life part and a long-life part with each part separately depreciated**.
- The short-life and long-life parts are not required to be physically identifiable
- However – if the difference between the technically correct approach and the approach (where Residual Values are adopted for the long-life part) are immaterial the AASB stated that the use of Residual Values may be appropriate
- Depreciation is to be determined by reference to the Depreciable Amount. As such the formula for depreciation expense (assuming straight-line) is the (Gross –Residual Value) / Useful Life.

For example, for asset management purposes, buildings may have a component called roof. Depending on the asset management strategy of the entity the roofing iron might be replaced when it reaches a certain condition. In this scenario, for financial reporting purposes, the roof should be further componentised into roof short-life (re-roofing) and roof long-life (representing the trusses, etc.). Each would be depreciated over their respective useful life.

Componentisation thresholds

As with all accounting standards – consideration should always be given to the concept of materiality. In some cases it may be appropriate to only componentise assets above a certain threshold. However in doing so due care needs to be given to risks associated with determining the fair value (especially if using the cost approach) and depreciation expense.

Depreciation expense is required to be determined at the component level and as such there is a risk that depreciation expense may be incorrectly calculated if the asset is not appropriately componentised. Guidance on the need to appropriately componentise is provided in the AASB May 2015 decision on Residual Value.

While there are no hard or fast rules on how to determine an appropriate componentisation threshold due consideration should be given to the existing materiality thresholds (capitalisation and revaluation) and the associated risk of adopting a componentisation threshold different than the revaluation threshold.

Consideration should also be given to the type of information to be gathered from the valuation process and whether or not that information is to be used as source data for the asset management planning process. If so – it is important that condition and other data is collected at the component level for all assets subject to valuation.

Differences in componentisation for financial accounting and asset management

Ideally there would be a high correlation between the components used for financial reporting and for asset management.

However there are often situations where they are not the same. This includes instances where in response to the AASB May 2015 decision components are subject to regular renewal and as a consequence may need to be further componentised into short-life and long-life parts. This might also include instances where asset management components are split into short-life and long-life components as noted above.

Sometimes this is because the level of detail required for some asset management planning purposes is at a very detailed level and the cost/benefit associated with determining a valuation at this level is either not warranted or not practicable. For example: trying to place a value on the electricity circuits within a building. While the condition of the electricity circuit may be important for asset management planning it would be an overly expensive exercise to test and quantify the extent of these circuits in order to determine a separate accounting value. Such costs are more often than not captured as part of the overall cost of the building fit-out.

There may also be instances where a significant component with a different useful life is not specifically managed as part of the asset management system. For example: some entities tend to manage the floor and external and weight bearing structure of a building as one asset despite the floors typically having a different useful life and consumption profile to the external weight bearing structure.

When establishing the components for financial reporting due consideration should be given to the components used for asset management planning. However due consideration should also be given to the cost/benefit of producing valuation figures for relatively low value parts.

Components to be based on consumption profiles not inputs

AASB116 requires that the components be based on the assessment of parts that have a different useful life or experience a different pattern of consumption.

Sometimes however entities base their components on the different stages or parts of construction of the asset (such as design, structure, fittings, services) rather than basing the components on those significant parts that experience different consumption profiles. Such an approach is based on the 'inputs' to the construction rather than being based on how the asset's service potential is consumed.

While such an approach may enable the easy identification of the cost it results in difficulties trying to determine appropriate depreciation rates and consequential valuation at Fair Value (using the cost approach). As they do not correlate to how the service potential of the asset is consumed they fail to address the requirements of the standard and may materially misstate the Fair Value and associated depreciation expense.

8.4 Frequency of revaluation

The various prescribed requirements for some jurisdictions recommend that comprehensive revaluations (full inspection and validation) be undertaken every three years or at a maximum of five years where there is little evidence of material change. Desktop revaluations may be required annually.

However, AASB116 Property, Plant and Equipment requires that revaluations be undertaken regularly and mandates that an annual assessment be undertaken. If there are indicators of material differences, the entire class of asset must be revalued. As a result, any prescribed requirements setting out defined revaluation schedules should be seen only as a minimal guide.

> *Revaluations shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the end of the reporting period.*[49]

The most cost-effective way to satisfy the requirements is to undertake a comprehensive revaluation every three years with interim revaluations conducted annually via the use of indexation. These are commonly referred to as interim or desktop revaluations.

AASB116 does not mandate that such valuations be undertaken by external experts. It may be appropriate to undertake such valuations using internal staff. Irrespective of who provides the valuation it is critical that they possess the relevant qualifications, skills and knowledge to undertake the exercise and are able to supply audit with the necessary evidence and documentation.

49 AASB116 Property Plant and Equipment (paragraph 31)

8.5 Revaluation by indexation

Annual interim revaluations provide a number of significant benefits. They ensure:

- the asset registers are better maintained;
- figures are reported more accurately;
- entities save significant costs relating to complex accounting treatments;
- costs used for asset management planning purposes are maintained at current cost levels, ensuring more accurate budget forecasting; and
- capital works on existing assets that have been capitalised as a new asset are cleared, with the master asset restated to the new fair value.

If an annual desktop revaluation is not undertaken the entity is exposed to a number of risks. These include:

- the risk that the carrying amount does not reflect fair value;
- the risk of not being able to determine whether the carrying amount reflects fair value;
- the risk of asset registers getting out of control, with multiple entries for one physical asset (this is extremely common and makes asset management planning very difficult);
- the complexity of undertaking prospective depreciation calculations (some finance systems may not do this well);
- the complexity of creating separate impaired assets registers with separate depreciation calculations for the impairment;
- the risk of asset registers not being maintained, resulting in huge costs to rectify at comprehensive revaluation time (this is common and may lead to unnecessarily high valuation costs); and
- the risk of data used for financial planning and reporting being materially incorrect.

The valuation will be impacted by a range of factors, including:

- changes in the underlying cost or value (adjusted through the use of an appropriate index);
- changes in the level of remaining service potential (most likely from capital expenditure during the year or an impairment event); and
- changes in the other critical assumptions (such as the reassessment of useful life, residual value and pattern of consumption of future economic benefit).

As a consequence, care needs to be taken to ensure the interim revaluation includes appropriate consideration of all of these factors. This process should be well documented and supported by sufficient and appropriate audit evidence. For example:

- The index should be appropriate for the particular asset it is being applied against. Even within an asset class different indices would normally be applied to individual assets or different asset sub-types. For example, a different index is likely to be applied for residential properties and for commercial properties;

- The use of generic indices across large geographic areas or that do not take account of specific terrain or environmental characteristics may be too generic to be considered reliable (for the specific location or asset) from an audit perspective;
- Care needs to be taken to ensure the index is appropriate. Sometimes the name of a publicly available index provides an expectation that it relates to the particular type of asset being revalued. However, following detailed review of how that index is calculated it may become apparent that the name is misleading or relates to assets from a completely different market segment and therefore is not comparable;
- The valuation will need to take account of any new acquisitions (which may also need to be componentised) and disposals from the previous valuation;
- The valuation will need to take account of changes in the general condition or level of remaining service potential in individual assets since the previous valuation. As an interim measure revaluation normally provides for no (or very little) field inspection, and reliance will need to be placed on the asset management system and general ledger records of capital expenditure within the organisation to provide evidence regarding these changes; and
- The annual review of the underlying assumptions (such as useful life, residual value and pattern of consumption of future economic benefit) should be documented and used to support the valuation.

By their nature interim revaluations carry with them a degree of risk. This is because the application of indices and lack of physical inspection can result in significant movements in the underlying value or cost of the asset and the assessment of the level of remaining service potential.

The historical evidence with respect to costs and the wide variety of public sector assets indicates that the changes in costs from year to year are rarely insignificant. It is not uncommon for many asset classes to experience annual price movements of between 3 per cent and 10 per cent. It is therefore recommended that a comprehensive revaluation be carried out at an interval of no more than three years with interim revaluations performed on an annual basis.

8.6 Annual Review of assumptions and values

Some of the more commonly overlooked requirements are those that relate to year end. The accounting standards require the review of a range of aspects of valuation and depreciation as at the end of the year. These include the review of aspects impacting or indicators of:

- value;
- depreciation;
- impairment;

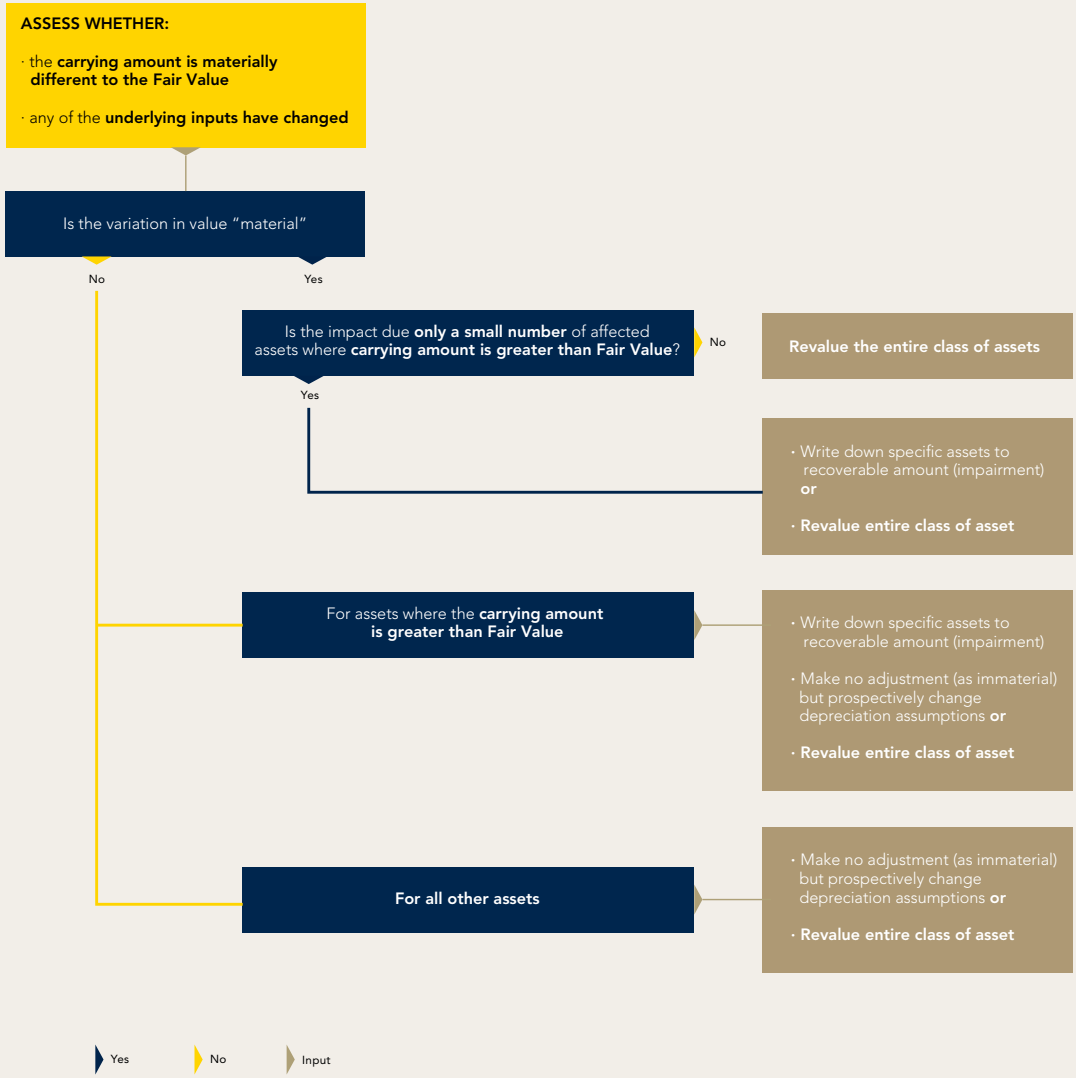
Attachment G: Year-end checklist provides a summary of key requirements and disclosures required by the various asset-related standards as at the end of the financial reporting period.

There may be a range of reasons behind such changes. These may include:

- change in the underlying unit rate, replacement cost or market value;
- changes resulting from an impairment event that affects a significant portion of the portfolio such as floods and other natural disasters or generic market adjustments;
- changes in condition or other factors that provide insight to the level of remaining service potential. This may include improvement via capital expenditure and maintenance, the result of impairment events that affect specific assets or as a result of updated asset management information (including dimension and condition data);
- changes in depreciation assumptions including:
  - useful life and remaining useful life (this may include assessment of changes in condition);
  - residual value; or
  - pattern of consumption of future economic benefit.

Depending on the result of the review the standards then provide a number of alternative scenarios as highlighted in the following diagram.

AASB116 PROPERTY PLANT AND EQUIPMENT



If there are some indicators that the current carrying amount is 'materially' different to the Fair Value then under AASB116 the entity is required to revalue the entire class of assets. AASB116 states:

> *31. After recognition as an asset, an item of property, plant and equipment whose fair value can be measured reliably shall be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Revaluations shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the reporting date.*[50]

However consideration also needs to be given to where such variance is:

- representative of general movements across the portfolio (such as due to changing prices, reassessment of underlying assumptions or perhaps even as a result of an extensive impairment event). In which case the entire class of asset is to be revalued; or
- whether the net change is immaterial for the bulk of the portfolio and the variance is due entirely to a very small number of specific assets (such as for a specific impairment event or market driven change that only affects specific assets). In this scenario there are a number of alternatives:
  - If for specific assets the Fair Value is now lower than the carrying amount – this represents an Impairment Loss and therefore under AASB136 the specific assets could be written down to the recoverable amount. However this also has implications for maintaining a separate records of impairment adjustments.
  - Despite the variance only being for specific assets the entity could still undertake a revaluation of the entire asset class.

If however the annual review identified a number of changes (such as reassessment of unit rate, condition, useful life, remaining useful life, pattern of consumption, residual value, indicators of obsolescence) but conclude that the net impact was 'not material' then there are a number of alternatives:

- If for specific assets the Fair Value is now lower than the carrying amount – this represents an Impairment Loss and therefore under AASB136 the specific assets could be written down to the recoverable amount. However this also has implications for maintaining a separate record of impairment adjustments. Given that the net impact is considered 'immaterial', an entity can choose to disregard this requirement under the materiality provisions of the standards.
- Despite the variance only producing an immaterial change the entity could still undertake a revaluation of the entire asset class. This is most commonly done using a 'desktop' approach and some jurisdictions require such an annual revaluation for specific sectors.
- Make no change to the valuation but adjust the variance depreciation assumptions so that the future depreciation calculations are based on the new assumptions.

50 AASB116 Property Plant and Equipment

8.7 Valuation using Market Approach

The market approach to fair value should be used only where there is an active and open market (such as for residential property) or there is existing market evidence for the sale of similar assets. Sometimes the market inputs will be based on a quotation system (such as for shares) where a quoted price is provided for assets that are homogenous and the purchaser either agrees to purchase at the quoted price or is unsuccessful in acquiring the asset. This is an example of a Level 1 (Quoted Price) market input.

However, for most public and NFP sector assets valued using the market approach the price is based on comparison to other, similar assets for which the market inputs are then adjusted to take account of condition and other comparability factors. This might include, for example, the market price for properties and evidence of construction costs. These are examples of Level 2 (Observable) market inputs.

If the asset is fundamentally tied to land and can be sold only in conjunction with the land, the asset must normally be valued by an appropriately qualified valuer. Depending on the jurisdiction, the valuer would be appropriately registered under legislation (as a Registered Valuer) or be members of a recognised professional body.

Market approach is normally determined by comparison to actual sales data for the same or similar assets. The valuer would normally identify a range of similar assets, adjust for differences in the assets, location, market and the timing of the sales, and provide a professional judgment of the expected value.

Reference may also be made to appropriate cost guides that provide industry or sector data on sales prices achieved for specific asset types. Examples include used motor vehicle price guides.

The evidence to support the valuation needs to be documented and made available to the auditor to enable the auditor to obtain sufficient and appropriate audit evidence. The approach taken (valuation techniques and inputs) also needs to be disclosed in accordance with AASB13 Fair Value Measurement.

8.8 Valuation using Income Approach

These are used for assets where the value is dependent on the asset's cash generating capability. Often they include commercial buildings and business operations (cash generating units).

The process to determine fair value based on the NPV or DCF approach has not been covered in this guide. Where such assets exist, guidance should be obtained from an appropriate expert such as a valuer or accountant. The following guidance is provided by the NSW Treasury:

> *The income approach converts future amounts to a single current (discounted) amount (AASB 13, Appendix A, defined terms). This includes present value techniques, option pricing models and the multi period excess earnings method (AASB 13, para B10-11).*
>
> *For specialised assets held by public sector entities, the income approach will generally be appropriate to for-profit entities or cash generating units of not-for-profit entities. The income approach may also be appropriate to valuing generalised property, such as office buildings, for either not-for-profit or for-profit entities.*

Where the income approach is applied in the public sector, the most common method is likely to be a present value technique.

AASB 13 discusses two different present value techniques: the discount rate adjustment technique and an expected cash flow technique. However, the Standard does not prescribe the use of a single specific technique (AASB 13, para B12).

The Standard outlines the following general principles when discussing present value techniques (AASB 13, para B14):

- *Cash flows and discount rates used should reflect assumptions that market participants would use when pricing*
- *Cash flows and discount rates should take into account only factors attributable to the asset being measured*
- *Discount rates should reflect assumptions consistent with those inherent in the cash flows*
- *Assumptions about cash flows and discount rates should be internally consistent*
- *Discount rates should be consistent with underlying economic factors of the currency.*

The Standard also clarifies that fair value measurement should include a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows (AASB 13, para B16). However risk is adjusted in different ways, as a discount rate adjustment or in an expected present value technique (AASB 13, para B17).

There is also additional guidance included in the IVSC Technical Information Paper 1 on Discounted Cash Flow.[51]

8.9 Valuation using Cost Approach

8.9.1 Introduction

The bulk of assets controlled by public and NFP sector entities would typically be valued using the cost approach. This approach is commonly referred to as the CRC Current Replacement Cost (CRC).

In addition to obvious assets such as specialised buildings and infrastructure (roads, bridges, water infrastructure, stormwater and marine protection walls), this should also be used for assets such as land where there is no active and liquid market (for example, parks). Note that some jurisdictions have legislation making it illegal for anyone other than a registered valuer/surveyor to provide a value for land. In this case an appropriately qualified and experienced valuer must be used.

To understand the process reference should be made to the fair value decision tree and the steps in the fair value process included as part of **Attachment C: Overview of specific accounting standards**.

51 NSW Treasury Valuation of Physical Non-Current Assets at Fair Value tpp 14-01 (pages 19 to 20)

The following provides greater guidance regarding some specific issues. In essence the valuer needs to determine the Replacement Cost and then based on consideration of the pattern of consumption, residual value, and other relevant indicators determine the value of the level of remaining service potential. As determining the level of depreciation consumed to date is a critical aspect of this approach the correct application of depreciation concepts embodies with AASB116 is paramount.

8.9.2 Replacement Cost

Having gained an appreciation of the types of costs that relate to an asset, the first step when using the cost approach is to calculate the replacement cost (RC). This is sometimes referred to as the Gross Replacement Cost (GRC). This is the cost of replacement prior to allowing for adjustments for accumulated depreciation and accumulated impairment. The calculation for this will differ depending upon:

- the nature of the asset;
- components;
- construction techniques ;
- whether you would reproduce the asset or replace it with a modern equivalent;
- whether there are any sunk costs that need to be taken into consideration; and
- allowance for any decommissioning or reinstatement costs.

Data to determine the gross replacement cost will be obtained from a range of sources. These may include:

- recent actual construction contracts and prices;
- similar or reference projects in other locations;
- industry construction guides; and
- theoretical first principles designs.

A critical part of the calculation will be its format and how the various variable costs are incorporated into the overall gross replacement cost for each component. For example, is the calculation based on:

- a dimension by unit rate,
- a combination of various costs,
- apportionment across various components, and
- how much allowance is made for different levels of quality or design specification?

Determining the assumed gross replacement cost (GRC) will require extensive professional judgment and may include engagement of an appropriate external expert (such as a valuer or engineer). It is important that sufficient and appropriate audit evidence to support the gross replacement cost is properly documented.

As a consequence, consideration needs to be given to whether the evidence is based on the total asset level and apportioned over the components, or developed at the component level and, if so, can it be based on data at a summary component level or does it need to be a complex calculation based on the sub-set of pieces that make up the component?

Similarly, consideration needs to be given to adjusting the difference in service potential between the existing asset and the potential replacing modern equivalent.

The following provides greater guidance regarding some specific issues regarding the determination of the Replacement Cost.

Inability to sell does not mean low value

In an active and liquid market both the amount to be realised upon sale and cost to acquire would be the same. However, when there is no such market the approach is fundamentally different. Where there is no market (because the land is restricted from sale) the asset needs to be valued based on what it would cost to replace the asset (cost approach). Rather than estimating what the entity would receive from sale of the asset (market or income approach), AASB13 Fair Value Measurement requires an estimate of what it would cost you to acquire the assets (replacement cost).

The fact that many public sector assets are generally not traded on an open market or may be zoned in such a way that they cannot be used for any other purpose does not reduce the service potential of the asset. The cost of acquisition basis measures what it would cost to acquire the asset, not what they could sell it for.

For example, public sector entities often acquire green space by purchasing freehold land at market value. They then rezone or place restrictions on that land; as a consequence the land may not be able to be sold or developed in the future. In this situation, the limitation on development does not reduce the service potential of the asset but instead, arguably, increases it as the land and its environmental and social benefits are now protected for future generations. Its fair value is the estimate of what it would cost to acquire the asset—that is, the market value of freehold land with similar characteristics.

Assets surplus to needs

Sometimes entities hold assets that are surplus to their needs. They are not used in any way to deliver outcomes for the organisation. Generally, efforts would be made to dispose of these assets and would be accounted for in accordance with AASB5 Non-Current Assets Held for Sale and Discontinued Operations. However, the nature of some of these assets is such that the entity is unable to dispose of the assets other than through demolition or possible sale of scrap materials.

In these situations, the service potential delivered by the asset is negligible and accordingly the replacement cost should be adjusted to reflect that the entity would not expend resources replacing such an asset. In effect the assets exhibit signs of impairment and should be written down to the recoverable amount under AASB136 Impairment of Assets.

These assets are considered surplus to needs and the service potential embodied within the asset is limited to what could be generated either by sale as is or by reuse of scrap material following demolition.

Reproduction or modern equivalent

Determining replacement cost will include consideration of whether the potential market participants would most likely replace the existing asset with a modern equivalent asset or would reproduce it in order to replace the asset's service potential. In some cases the most likely replacement method may be the less economical means (due to subjective factors), in which case the intended method of replacement would form the basis of estimating using the cost approach.

However, this does not mean the existence of a less expensive modern equivalent necessarily means the value of the modern equivalent should be used.

For example, there may be an old lighthouse constructed of stone. The alternative potential methods to replace the service potential embodied in the asset may include replacing it with a solar panel–powered light on top of a steel pole at considerably less cost than reproducing it using original construction techniques and materials. The alternatives, however, may also include reproducing the asset (either using traditional methods or using modern methods that replicate the traditional look) rather than replacing it with the modern equivalent. The second alternative reflects that the service potential of the asset embodies more than its originally designed function. The characteristics, in addition to being a working lighthouse, include additional service potential to the community through its capacity as a tourist draw card and its favoured use by the community as a location for recreation, a draw card for Sunday markets and a backdrop for wedding photos etc.

In this instance, if the potential market participants would be more likely to reproduce the asset using either traditional methods or modern methods that attempt to replicate the traditional look (rather than the modern and less costly equivalent), the replacement cost should be determined on this basis. This is because the modern equivalent does not provide the same level of future economic benefit.

This process can be quite difficult owing to the general lack of market participants and the analysis will need to be undertaken at the individual asset level. The valuer will also need to obtain evidence to support their valuation assumptions, and the auditors are likely to expect to see sufficient and appropriate evidence to support the valuation. The valuer will consider the likely replacement strategies and will need to form an opinion as to what the most likely approach market participants would adopt. In gaining this evidence the valuer will take into account a range of sources of information and their own professional judgment as well as representations made by the entity themselves.

In determining what the modern equivalent might be it is also important to take into account the concept of incremental optimisation. This concept was incorporated into SAP 1 Current Cost Accounting, which allowed progressive or incremental optimisation to the extent that it occurs in the normal course of business. In the case of networked assets the modern equivalent does not relate to replacing the network with an entirely different network of assets. It relates to what the existing asset would typically (in the current environment) be replaced with, given that over time there will be an incremental improvement in optimisation of the overall network.

Identification of all costs to be valued

The standards require all costs to be included in the valuation. This may include a range of costs that may not be immediately apparent. AASB116 Property, Plant and Equipment states that total cost includes:

- purchase price including duties and taxes after deducting trade discounts and rebates;
- any costs directly attributable to bringing it to operation; and
- initial estimates of dismantling or rehabilitation where an obligation exists.

Examples include:

- sunk costs (originally incurred but never to be repeated; for example, making a cutting in the side of a mountain). (Note that in some jurisdictions there may be overriding requirements that explicitly exclude these from the determination of the fair value.);
- reacquisition or reconstruction costs (based on likely method used to reconstruct or acquire assets); and
- third-party costs (compensation or reconstruction of assets controlled by a third party; for example, relocation of a third party's infrastructure to construct a dam.

Componentisation

AASB116 Property, Plant and Equipment requires that where a complex asset comprises a number of separate and significant components that have different useful lives, those components must be accounted for and depreciated separately. This requirement supports the asset management function in that assets are managed from an asset management perspective at the component level.

For example, roads would generally be split into formation, pavement and seal. Buildings would normally be split into floor, structure, roof, floor coverings, fit-out and various services. However as noted previously, depending on how the entity determines depreciation expense, there may be a need to split these components even further into short-life and long-life components.

Sunk costs, such as some types of earthworks, design costs and even compensation paid to third parties, may form a separate component depending upon the nature of how their service potential is consumed and the policies adopted by the entity for the valuation and depreciation of these sunk costs.

Adjusting for differences in utility

For each component, an estimate is required of what it would cost to replace or reconstruct at either reproduction or use of a modern equivalent. Sometimes this is straightforward (like-for-like) but it may be difficult due to changing technologies or in relation to costs only incurred when the asset was originally acquired (for example, compensation to third parties to relocate their assets).

If the modern equivalent is chosen for the reference, asset allowance must also be made to adjust for the differences in utility between the existing asset and the modern equivalent.

With changing technology and practices, it is often the case that the modern equivalent is designed or constructed differently or from different materials than the existing asset or has a different capacity or longer lifecycle. These differences represent differences in the total service potential of the existing asset and the modern equivalent.

For example, an existing four-metre-wide road may now be replaced with a six-metre-wide road. While both transport cars from A to B, they have different costs and deliver differing levels of service potential. The wider road may allow improved traffic speed, aesthetics and safety.

The difference in service potential between the existing asset and the modern equivalent needs to be adjusted so that the replacement cost represents the value of the total service potential embodied in the existing asset and not what it would be replaced with. This adjustment requires considerable professional judgment and the reasons for the adjustment need to be well documented.

Greenfield v. brownfield

These terms are engineering terms which are used primarily in the development of future cash flow projections and refer to what the cost would be if the site was a fresh site with no existing infrastructure or impediments (a greenfield site), or, in the case of a brownfield site, whether the costs reflect the need to work around existing assets and possibly include cost to dig up and replace existing infrastructure; work in tight conditions; work at night; and even employ safety officers. Clearly the difference in these costs can be significant.

Some agencies have adopted the brownfield approach to infrastructure assets as a default. They argue that some work (for example, making a cutting in the side of the mountain in order to construct a road) will never have to be redone, and therefore there is no replacement cost. However, these costs were necessarily incurred in order to construct the road and therefore should be included as part of the cost of the road.

This does not mean that the greenfield approach should be adopted as a default. Such an approach fails to recognise that the costs that would be incurred to replace the assets today would be different as a result of now having to work around existing infrastructure. For example an entity may need to replace a stormwater pipe that is located under a road. In this case the valuation would need to take account of the cost to rip and replace the road and include it as part of the replacement cost of the pipe.

AASB116 Property, Plant and Equipment requires that all costs be recognised when valuing using fair value. In some cases, the brownfield approach is appropriate, whereas in other circumstances the greenfield basis should be adopted. In other cases, neither represents fair value.

Neither the greenfield nor the brownfield method is necessarily correct and necessarily complies with the requirements of AASB116 Property, Plant and Equipment. These are engineering terms and are not defined or incorporated into the accounting literature. Depending upon the situation, either method may result in the exclusion of costs that should have been included or the inclusion of costs that should not have been included.

8.9.3 Patterns of consumption

One of the most difficult aspects of AASB116 Property, Plant and Equipment with respect to both valuation and depreciation is determining the pattern of consumption of future economic benefit. The impact of applying an incorrect pattern of consumption could be material.

AASB116 Property, Plant and Equipment mandates that:

> *The depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity.*[52]

It further states that:

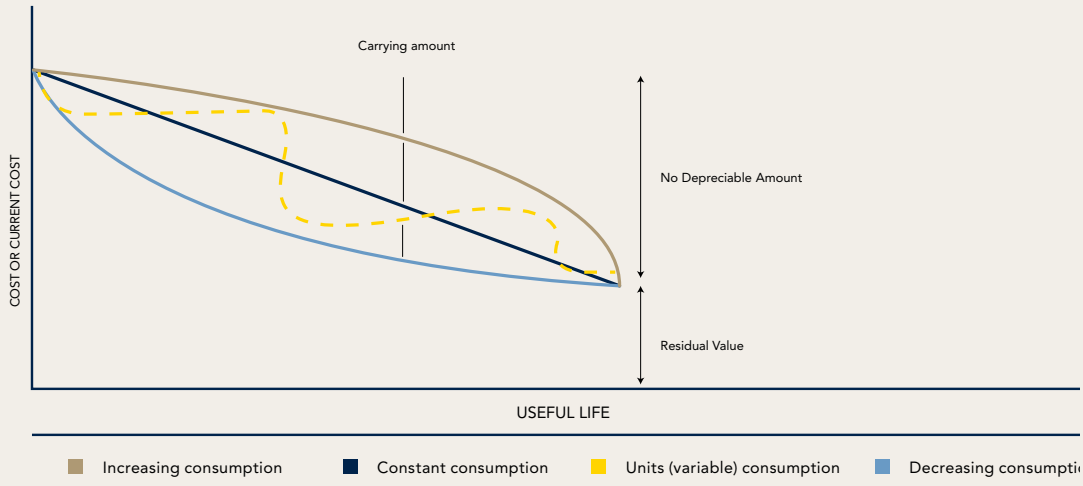
> *The depreciation method applied to an asset shall be reviewed at least at each financial year-end and, if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the asset, the method shall be changed to reflect the changed pattern. Such a change shall be accounted for as a change in an accounting estimate in accordance with AASB108.*[53]

The pattern of consumption of future economic benefits may take various forms and hence require a different method of depreciation, which includes but is not limited to:

- when consumption is constant over the useful life of the asset —straight-line method
- when consumption is greater in the early years and less in the later years —declining balance method
- when consumption increases as the asset approaches the end of its useful life—output/service basis method
- when consumption varies with outputs/ service—units of production method.[54]

The alternatives are shown in the attached diagram.

Figure 7: Accounting concepts NAMS Australian infrastructure financial management guidelines



52 AASB116 Property, Plant and Equipment (paragraph 60)

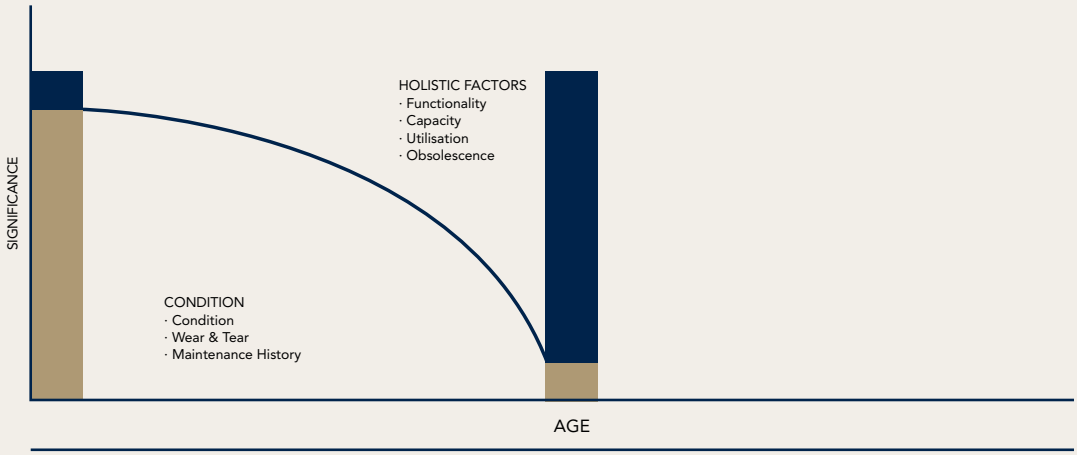
53 AASB116 Property, Plant and Equipment (paragraph 61)

54 NAMS Australian Infrastructure Financial Management Guidelines section 12.3

There are many reasons why assets experience different patterns of consumption. For example - Entities actively try to influence the rate of this consumption via improvements in their asset management strategy. An entity will typically implement a range of maintenance, operational and renewal strategies in order to maximise the service delivered by the asset whilst minimising the overall lifecycle cost. As an entity would incur greater overall lifecycle cost through poor asset management practices the rate of consumption of future economic benefit would also be greater. Hence the effectiveness of the overall asset management strategy will have an impact on the rate of depreciation experienced during the reporting period.

Typically assets that have a very long life are maintained in a reasonable condition and their life can be extended considerably beyond original design. For these assets, the biggest driver of consumption towards the end of their life tends to be obsolescence and other holistic factors rather than physical condition alone.

Typical relationship between consumption factors.



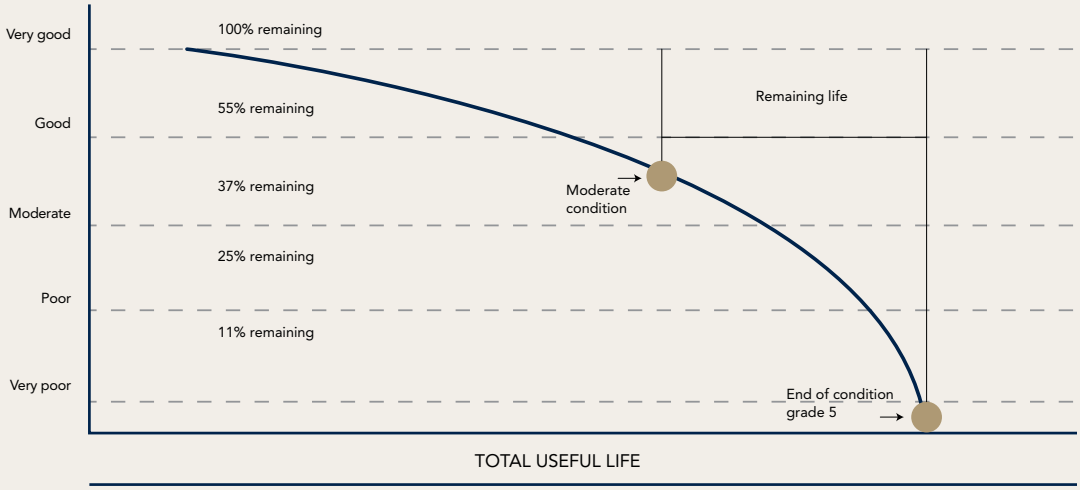
For example, the IPWEA Building Condition and Performance Assessment Guidelines Practice Note 3 notes that:

> *Condition degradation typically accelerates over time for building components, and accordingly, condition grades can be utilised through application of appropriate degradation models, to assess remaining useful life of these components.*[55]

55 IPWEA Buildings Condition and Reporting Assessment Guidelines PN3 (page 36)

The practice note demonstrates this through the following diagram.

Figure 9: Example of building degradation curve



It is important to highlight the difference between physical degradation and economic consumption. Care needs to be taken when using condition curves or models in the process of completing valuation and depreciation calculations. The physical degradation profiles may not necessarily take into account other relevant factors (such as functionality, capacity and obsolescence) and therefore may require the development of separate consumption curves or profiles. It is always important to remember that physical degradation is different from economic consumption and that due consideration needs to be given to the impact of wear and tear along with technical, legal and physical obsolescence.

Similarly, the impact of different asset management regimes and funding allocated to asset renewal and maintenance, along with changing community expectations about the level of service to be delivered using the asset, will impact on the assessment of the level of remaining service potential, as well as the expected pattern of consumption of the remaining service potential.

Due consideration needs to be given to identifying the pattern of consumption of future economic benefit and an appropriate method used to reflect the pattern in the determination of both fair value and depreciation expense. AASB116 requires that:

> *The entity selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. That method is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits.*[56]

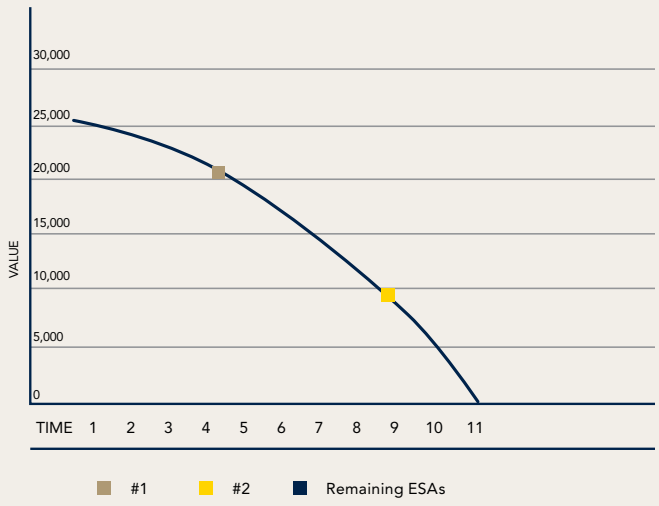
56 AASB116 Property Plant and Equipment (paragraph 62)

Care does need to be taken to ensure the method used also satisfies other relevant requirements (for example, AASB Interpretation 1030).

In determining the appropriate pattern of consumption of the future economic benefits, due consideration needs to be given to the drivers of consumption and potential impacts of aspects such as utilisation, functionality, capacity and obsolescence. It may be appropriate to develop lifecycle models for asset management planning that link the physical condition of the asset with an assessment of the remaining level of service potential. This might be expressed in terms of remaining useful life or remaining units.

For example – some entities link the number of Equivalent Standard Axels (ESA) to the level of remaining service potential for road pavements. To determine the pattern of consumption the model projects an average increase in ESAs from year to year as a result of an increased population, increased size of heavy vehicles and increased traffic projections. Based on this it may be appropriate to use the same model for the determination of depreciation expense. Whichever pattern of consumption of future economic benefit is selected, the entity should document their reasoning for applying this critical assumption.

Figure 10:



Remaining Condition	ESAs	#1	#2
0	25,959		
1	24,959		
2	23,759		
3	22,319		
4	20,591	20,591	
5	18,571		
6	16,029		
7	13,043		
8	9,460		9,460
9	5,160		
10	–		

It should be noted that the above example illustrates the situation when the level of remaining service potential is correlated to the level of assessed remaining ESAs. For some entities this may not be the case. Ultimately the entity needs to determine the factors that drive the consumption of the service potential, determine an appropriate pattern of consumption and document their reasoning. It should also be noted that physical condition will only be one factor involved in the consumption of economic benefit and as a result care needs to be taken to ensure it is not automatically assumed that there is a direct one-to-one relationship between physical condition and depreciation.

8.9.4 Condition or consumption scores

Assessing the level of remaining service potential for many assets is done using a condition or consumption scale. Despite a willingness by many to use the same scale for asset management planning purposes and asset valuation purposes, extreme care needs to be taken with the design of the scale.

The level of accuracy with condition assessment may differ for valuation and for asset management purposes. Asset management guides typically recommend broad scoring scales such as a five- or ten-point scale. While a broad scale like this may be sufficient for asset management planning, it is not appropriate for valuation because of the impact of materiality and the need for greater accuracy.

For example, a one-to-five scale (often used for asset management purposes) typically results in a change in value of 25 per cent between each rating. If used for valuation a slight change in condition may drive a change in score and would result in a 25 per cent change in the value. The risk of such large movements places doubts over the accuracy of the valuation.

It is therefore more appropriate to use scales for valuation that enable valuation within 1 per cent or 2 per cent graduations. Typically this is achieved by adapting a broad scale (used for asset management planning) and including incremental steps.

In accordance with the disclosure requirements of AASB13 the details of the scoring methodology and associated quantitative information (range of scores and relationship to the level of remaining service potential) will need to be disclosed in the financial statements. Note that this quantitative disclosure of a level 3 input is no longer required for some public sector assets.

8.9.5 Application of Depreciation concepts (including Australian Interpretations)

Fair value represents the level of remaining service potential (which in turn determines the amount of accumulated depreciation), and depreciation measures the rate of consumption of the future economic benefits.

As noted previously the AASB issued a decision regarding Residual Value in May 2015. The board papers that supported the decision highlighted that depreciation for valuation purposes is conceptually different than depreciation for financial reporting purposes. As such there not necessarily a direct link between the two and they may be determined independently of each other. For example the value of a residential property might be determined using market approach and the depreciation expense would be determined independently based on the various components and their expected useful life.

Likewise an asset may subject to regular renewal where the long-life part remains untouched. For valuation purposes, at a particular point in time, that part might be assessed as having full value (because a market participant would not need to expend resources to bring it back to 'as new') yet may still need to be depreciated to nil over an estimated remaining useful life.

However, despite this, there is common agreement that there should be a high degree of consistency between the assumptions used for valuation and those used for depreciation for assets valued using the cost approach.

The requirements relating to how to undertake depreciation calculations (per AASB116) are quite broad. They require that the depreciation method must:

- depreciate separately each part with a cost that is significant in relation to the total cost of the item (however, if different parts have the same depreciation method and useful life the parts can be joined as one part for depreciation purposes). This may also include splitting into short-life and long-life parts
- depreciate the depreciable amount;
- depreciate over the asset's useful life, where useful life of an asset is defined in terms of the asset's expected utility to the entity;
- be done in a systematic way;
- use a method that matches the expected pattern of consumption of the future economic benefit; and
- take into account physical usage, wear and tear, obsolescence, and legal and other limits.

It is generally assumed that most assets have a finite life and therefore their service potential will be consumed over an extended period. There are however two exceptions:

- typically land is not depreciated. However in some circumstances land may require depreciation. AASB116 (paragraph 58) states that *'With some exceptions, such as quarries and sites used for landfill, land has an unlimited useful life and therefore is not depreciated.'*

- Assets (or components) that are deemed to have an indefinite life. In this regard **Australian Interpretation 1055 Road Earthworks** specifically provides that where it is expected that the earthworks have an indefinite life then it is appropriate not to charge depreciation expense. However where there are indicators that the useful life is no longer 'indefinite' it is necessary to charge depreciation expense.

These requirements enable a variety of methods to be used, provided of course that the method satisfies all of the above requirements. For example, AASB116 suggests a range of methods including:

- the straight-line method, where the pattern of consumption of future economic benefit is expected to be constant over the useful life of the asset;
- the diminishing balance method and the units of production method, where the pattern of consumption of future economic benefit is expected to be a decreasing rate over the useful life; and
- the units of production method, where the pattern of consumption of future economic benefit is based on the expected use or output.

This does not limit the use of other methods, however, providing the underlying requirements are satisfied. Similarly, just because a method is listed above does not mean that it is appropriate. For example, if the pattern of consumption of future economic benefit is considered to be a pattern that results in an increasing rate of consumption over time, it would be inappropriate to use a diminishing balance method as this method employs a completely different pattern of consumption of future economic benefit.

There is a range of commonly used condition-based and consumption-based methods used globally. These methods are typically incorporated into proprietary software (such as road or pavement management systems, water infrastructure management systems, and specialised valuation software), but some are also available in the public domain.

There is additional guidance provided in **Australia through AASB Interpretation 1030. Depreciation of Long-Lived Physical Assets: Condition-Based Depreciation and Related Methods** states that the method must ensure:

- depreciation is calculated by reference to the depreciable amount;
- appropriate consideration is given to technical and commercial obsolescence;
- maintenance and capital expenditure are separately identified and accounted for in accordance with AASB 116;
- the renewals annuity method is not used; and
- depreciation is calculated separately for each component.

When selecting or designing an appropriate depreciation method, it should be remembered that the standards require that the entity selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset; and also that the method is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits.

Under the requirements of AASB13 Fair Value Measurement the entity also needs to disclose a range of information about the valuation process and assumptions used.

Assets with limited useful life (including recyclable assets)

Most assets are considered to have a limited useful life and as their service potential is consumed they need to be depreciated.

Some assets with a limited useful life receive only limited or no maintenance and once they are consumed are replaced in whole with a new asset. Examples include motor vehicles, computers, some pumps and electrical equipment.

However, some assets are commonly referred to as recyclable assets. These are assets whose useful life and service potential are regularly extended through ongoing maintenance, renewal and/or replacement of parts. These types of assets typically are required to provide a certain level of service to the community and are managed through an asset management process to replace or renew components or part-components at regular intervals in order to continue delivering an appropriate level of service. Examples include roads, bridges, buildings and water treatment facilities.

Recyclable assets differ from other assets in that their total life is extended over time via ongoing maintenance and renewal. As a consequence, an asset's total lifecycle cost can differ as a result of changing:

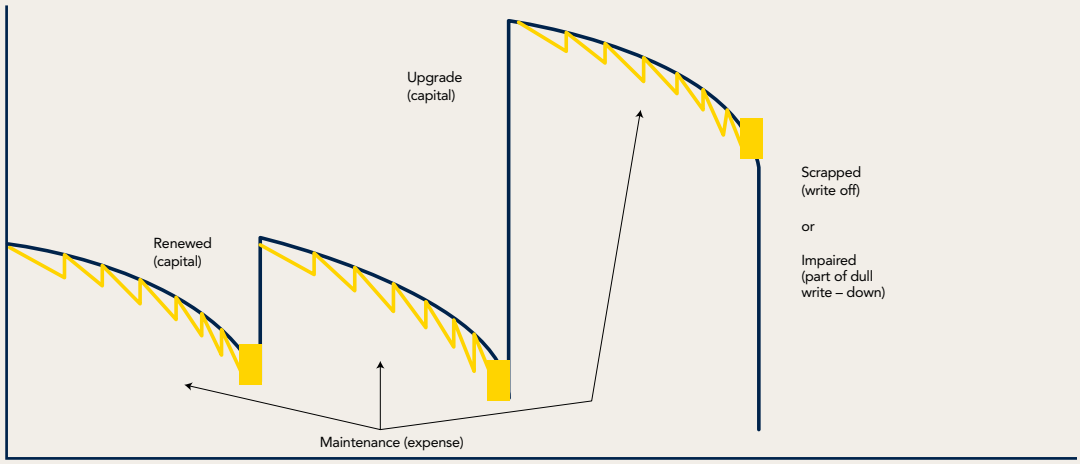
- maintenance costs;
- renewal treatments; and
- levels of service.

When the asset is unable to meet the community's needs there are a number of possible outcomes. These include:

- restore the future economic benefit through renewal or upgrade;
- replace the asset with an alternative asset; or
- change the community's expectations (reduced level of service).

The following diagram represents typical lifecycle outcomes.

Figure 11: Typical lifecycle outcomes for recycled assets



Understanding whether the service potential and useful life of the asset is extended through recycling is critical to the valuation and depreciation calculations.

Extension of an asset's useful life and service potential through recycling, directly impacts on the determination of a range of key inputs to the calculation of depreciation expense.

8.9.6 Residual value, depreciable amount and useful life

AASB116 Property, Plant and Equipment had defined residual value as:

> *The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.*[57]

It further defines the useful life as being:

> *The period over which an asset is expected to be available for use by an entity; or the number of production or similar units expected to be obtained from the asset by an entity.*[58]

Depreciable amount is defined as:

> *The cost of an asset, or other amount substituted for cost, less its residual value.*[59]

It is quite specific in that only the depreciable amount can be depreciated.

57 AASB116 Property, Plant and Equipment (definitions)
58 AASB116 Property, Plant and Equipment (definitions)
59 AASB116 Property, Plant and Equipment (definitions)

The May 2015 decision of the AASB has clarified that the end of the useful life of the asset is the point in time when the entity relinquishes control of the asset. Accordingly the Residual Value of assets such as roads is likely to be nil or insignificant. It is possible that assets such as buildings may have a greater amount of residual value if there is intention to dispose of them via sale at some point in the future. This also applies to motor-vehicles where there is an intention to sell or trade-in on a replacement vehicle

8.9.7 Depreciation Concepts for Recyclable Assets

The May 2015 decision of the AASB (regarding the definition of Residual Value) highlighted that for assets subject to regular renewal (recyclable assets):

- The renewal process results in two components with distinctly different useful lives:
  - Short-life (non-recyclable) component
  - Long-Life (recyclable) component
- To determine the correct depreciation expense both components would need to be determined and depreciated separately over their useful life using a method that matches the pattern of consumption.

However, the Board also noted that various shortcut methods may be considered by impacted entities, subject to materiality, including identifying the residual value as the separate component and using blended depreciation rates for the different components.

The literal application carries with it a number of implications. This includes the potential need to significantly increase the number of components in the asset register and to undertake reconciliations to ensure the total of the short-life and long-life components equal the total of the actual component. The split between these two components may change from year to year based on changes to the asset management plan.

Entities that have never componentised to this level (short-life and long-life) will need to split the existing components into two components. Analysis undertaken on the differences in approaches indicates that failure to componentise to this level is likely to lead to significant over-statement of depreciation.

The determination of the split between short-life and long-life components requires extensive consideration and needs to take into account the typical asset management practices that the entity employs. For example the value of the long-life part (recycled value) of a dam spillway is typically considered extremely high, as spillways are designed to last for a very long time and, assuming there is no obsolescence, will be maintained at a very high level through regular maintenance. If obsolescence became an issue the value of the long-life part (recycled value) would be reassessed as part of the annual revision of assumptions, resulting in either a change to the valuation and/or a prospective change in depreciation expense.

The same logic could also be applied to tunnels constructed for road or rail infrastructure. The cost of constructing the tunnel may be high, but once built the hole itself does not lose its service potential. The biggest risk is a collapse of the tunnel. As a result, the tunnel will be monitored and if there are any signs of cracking, for example, the problem will be quickly addressed to ensure the structural integrity of the tunnel is protected. The value of the long-life part (recycled value) of the tunnel therefore can often be considered to be very high. In some circumstances, however, it may be appropriate to change the value of the long-life part (recycled value) to nil. This would be most appropriate in instances where a decision is made to discontinue its use. Often in these situations the tunnel is simply closed off to public access.

Given the significance of these assumptions consideration needs to be given to the types of treatments (and their costs) that would typically be used by the entity to renew or restore the asset's service potential when it reaches the preferred or worst-case intervention point.

For example, a roof consists of roof sheeting as well as trusses. If the roof sheeting was damaged, or deteriorated to a point that there was significant water penetration, the entity would normally fix the problem before it became a major issue. However, if it were allowed to deteriorate even further and the roof sheeting needed complete replacement, the cost to bring the roof back to as-new would typically be the cost of replacing only the roof sheeting and not the trusses. Accordingly the value of the long-life part (recycled value) of the roof would be significant.

Clearly for some assets the value of the long-life part (recycled value) will be nil or negligible; however, for others it may be quite high depending upon the typical asset management treatments adopted by the organisation. It is critical that due consideration be given to the most likely renewal treatments and asset lifecycle in determining the useful life and appropriate level of residual value and value of the long-life part (recycled value) to be applied against each component.

The following example highlights the risk of assuming a zero residual value for the entire asset rather than either splitting into the short-life and long-life components or using a method that recognises the value in the asset that is preserved as a consequence of the future asset management treatments adopted by the entity. It shows that for this example the impact of not splitting the asset to this level results in an over-statement of depreciation expense of 40.7%.

Depreciation if components split into short-life and long-life parts										
	Short-life Part					Long-life part				
Component	Gross	Proportion	Gross	Useful life	Depreciation	Proportion	Gross	Useful life	Depreciation	Total Depreciation
A	40,000	70%	28,000	25	1,120	30%	12,000	100	120	1,240
B	35,000	50%	17,500	40	438	50%	17,500	160	109	547
C	25,000	60%	15,000	10	1,500	40%	10,000	40	250	1,750
	100,000									3,537

Depreciation if components not split into short-life and long-life parts			
Component	Gross	Useful life	Total Depreciation
A	40,000	25	1,600
B	35,000	40	875
C	25,000	10	2,500
	100,000		4,975
		Variance $	1,438.13
		Variance %	40.7%

8.9.8 Assessing remaining level of future economic benefit

This is the fundamental and most critical requirement of AASB116 Property, Plant and Equipment. Unfortunately, it is often the part of the process that receives the least attention. Entities may spend significant funds engaging external experts to determine the replacement cost but then use quick, simplistic methods to calculate the Fair Value (current replacement cost).

Critical to this step is an understanding of:

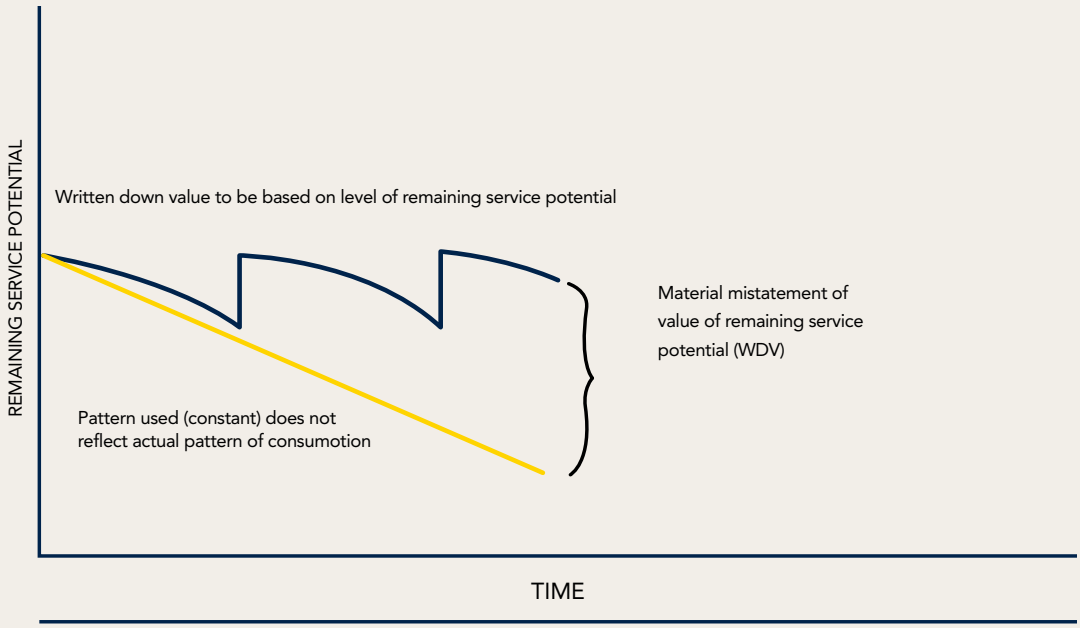
- how the assets are to be accounted for at the components level;
- the treatment of costs subsequent to initial acquisition;
- the factors that drive the consumption of the asset's service potential;
- the nature of how the assets' service potential is consumed; and
- the pattern in which the service potential is consumed.

Assets valued on the basis of replacement cost are generally complex assets and maintained through ongoing cyclical maintenance and renewal for an indefinite period of time in order to deliver outcomes at a service level that meet the community's needs. This pattern can be represented graphically as shown in the attached diagram.

Figure 14: Cyclical maintenance assets

Simply converting the gross cost to CRC Current Replacement Cost by the use of simplistic and subjective assumptions may result in material error in the calculation of the CRC Fair Value, with corresponding material error in the calculation of depreciation expense. This can also be graphically represented as follows:

Figure 15: Risk of applying incorrect pattern of consumption of future economic benefit



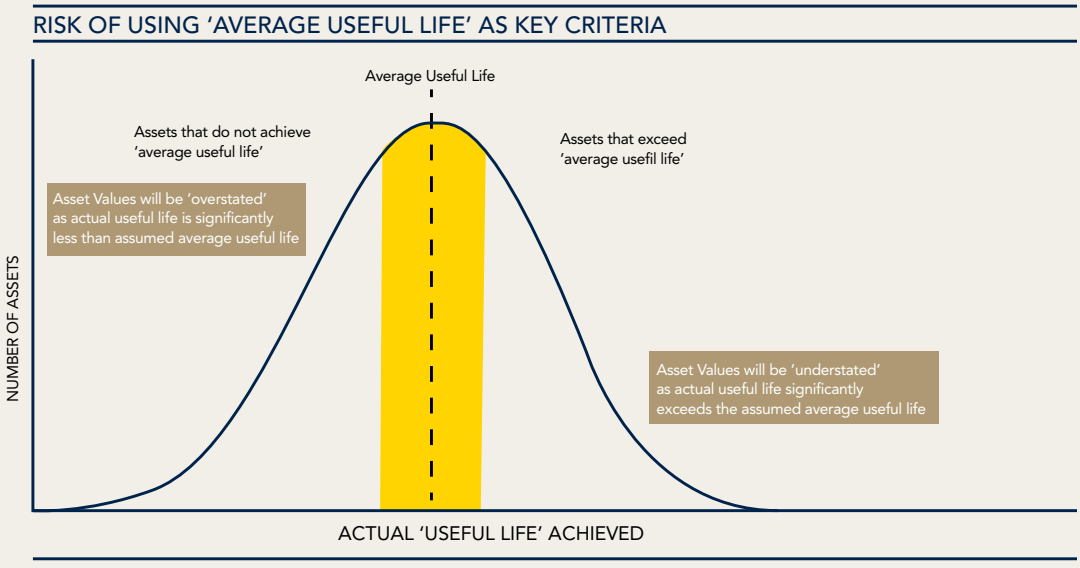
It is critical that the entity gain an understanding of their assets, how they are consumed and the factors that drive the consumption. Having gained this understanding, they then need to develop and implement a methodology that complies in all respects with AASB116 Property, Plant and Equipment and enables the determination of the level of remaining service potential.

There are a myriad approaches commonly used throughout the world to achieve this, with the best methods closely linked to asset management frameworks. Some of these approaches are discussed later in this guide.

One of the more common mistakes made by entities is to try to estimate the level of remaining service potential using factors that have no bearing on the measurement. A common example is the use of age to determine the level of remaining service potential for assets where there is no correlation between age and remaining service potential. While this approach is easy to calculate and easily understood, it may not result in a reasonable estimate of the level of remaining service potential. Its accuracy depends entirely upon the pattern of consumption of future economic benefit remaining constant and the underlying assumptions being extremely accurate.

For example – an entity may have undertaken extensive research across a portfolio of homogenous assets and based on that research calculated an average useful life. However, in reality some assets experience a shorter life and some a longer life. The reason for the variation may not be clear but might be caused by differing environmental factors, differing utilisation rates, different asset management strategies or for reasons which are not obvious. This is a typical scenario and results in a normal-curve distribution as shown below with many close to the mean but also with many significantly different from the mean. In this situation it would be inappropriate to base the valuation and depreciation on an average useful life given that there is a very low correlation between actual age and the level of remaining service potential.

Risk of using 'average useful life' as key criteria



This is why it is critical to understand the pattern of consumption of future economic benefit as well as the factors that indicate the level of remaining service potential. These same factors are the ones that asset managers use to make decisions about maintenance and renewal. It is also important to measure the level of remaining service potential at the individual asset level so that informed decisions can be made about individual assets (including asset management decisions).

The reality is that all assets within the same asset class will be consumed in different ways and at a different rate due to the impact of different factors. The aim is to gain an understanding of how the asset is consumed and what the relevant factors are, and to use this to assess the level of remaining service potential.

The risk of not taking into account the impact of recycling and renewal, and the typical asset management strategies adopted by the entity, can be demonstrated using the following example.

Example – Risk of not taking account of Recycling and Renewal

A new road is constructed in 1954 and the useful life of a road surface is estimated as being 16 years and to keep the example easy to understand it is assumed that the pattern of consumption is constant (straight-line). It is also assumed that the value of the recyclable component (long-life part) is 40% based on the typical asset management treatments adopted. The Replacement Cost is maintained at $100,000 to exclude the impact of changing values.

A revaluation is conducted in 1986. An assessment is made of the general condition of the short-life component of the road surface and as a result the remaining useful life (RUL) is assessed as being 12 years.

Using the standard straight-line formula of ((Replacement Cost less Residual Value)* RUL/Useful Life) + Residual Value the Fair Value has been calculated as follows. The first calculation does not recognise the value of recycled material and as a result does not split the asset into the short-life and long-life components:

Year of Commissioning	1954
Year of valuation	1986
Age	32
Remaining Useful Life (RUL) based on condition assessment	12

Calculations	
If not split into short-life and long-life components	
Replacement cost	100,000
Residual Value	–
Depreciable Amount	100,000
Age +	32
RUL	12
Useful life	44
Gross – RV	100,000
RV	–
RUL / Useful	27.3%
Fair value	27,273
Depreciation	2,273

The second calculation however does recognise that the asset is subject to recycling and accordingly splits the asset into the short-life and long-life components. However it bases the calculations on actual age (date of commissioning) alone rather than considering the past renewal history. For the purposes of valuation the remaining future economic benefit of the recyclable part is assessed as being 100%. As the asset is 32 years old the RUL of the long-life part is estimated to be 168 (200 – 32).

If split into short-life and long-life components (age based on date of commissioning)

	Short-life	Long-life	Total
Replacement cost	60,000	40,000	100,000
Residual Value	–	–	–
Depreciable Amount	60,000	40,000	100,000
Age +	32	32	
RUL	12	168	
Useful life	44	200	
Gross – RV	60,000	40,000	
RV	–		
RUL / Useful	27.3%		
Fair value	16,364	40,000	56,364
Depreciation	1,364	200	1,564

However both calculations are incorrect as they do not take into account the impact of the recycling. The road surface was renewed back to 'as new' in 1982 (year 12) and as a result the correct Fair Value should have been calculated as follows:

Correct Results: Takes into account renewal

	Short-life	Long-life	Total
Replacement cost	60,000	40,000	100,000
Residual Value	–	–	–
Depreciable Amount	60,000	40,000	100,000
Age +	4	32	
RUL	12	168	
Useful life	16	200	
Gross – RV	60,000	40,000	
RV	–		
RUL / Useful	75.0%		
Fair value	45,000	40,000	85,000
Depreciation	3,750	200	3,950

The impact of the errors are material as shown below.

Level of misstatement

	Correct	Not split	Variance
Fair value	85,000	27,273	-67.9%
Depreciation expense	3,950	2,273	-42.5%

	Correct	Based on actual age	Variance
Fair value	85,000	56,364	-33.7%
Depreciation expense	3,950	1,564	-60.4%

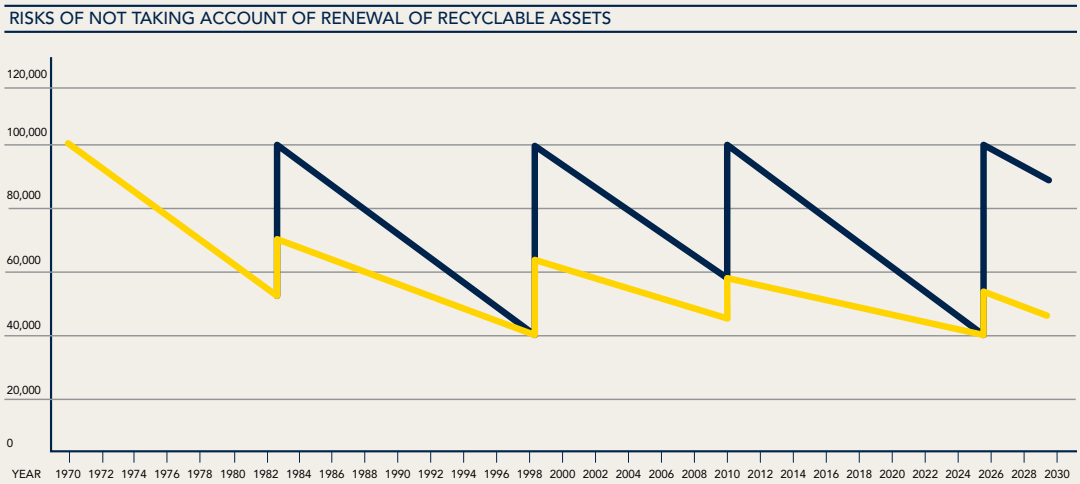
Depending on when subsequent valuations are undertaken and the timing and impact of various cyclical maintenance and renewal treatments the following table provides an indication of the potential level of misstatement driven purely by failing to take into account the impact of past renewal and future plans.

				Actual Level of Remaining Service Potential (%RSP) of Short-Life Part				
Year	Detail	Gross	Recyclable part	%RSP bg	%RSP consumed	Renewal	%RSP end	Closing Fair Value
30/6/1970	New surface	100,000	40%	100%			100%	100,000
30/6/1974		100,000	40%	100%	(25%)		75%	85,000
30/6/1978		100,000	40%	75%	(25%)		50%	70,000
30/6/1982	Renewed to 'as new'	100,000	40%	50%	(25%)	75%	100%	100,000
30/6/1986		100,000	40%	100%	(25%)		75%	85,000
30/6/1990		100,000	40%	75%	(25%)		50%	70,000
30/6/1994		100,000	40%	50%	(25%)		25%	55,000
30/6/1998	Renewed to 'as new'	100,000	40%	25%	(25%)	100%	100%	100,000
30/6/2002		100,000	40%	100%	(25%)		75%	85,000
30/6/2006		100,000	40%	75%	(25%)		50%	70,000
30/6/2010	Renewed to 'as new'	100,000	40%	50%	(25%)	75%	100%	100,000
30/6/2014		100,000	40%	100%	(25%)		75%	85,000
30/6/2018		100,000	40%	75%	(25%)		50%	75,000
30/6/2022		100,000	40%	50%	(25%)		25%	55,000
30/6/2026	Renewed to 'as new'	100,000	40%	25%	(25%)	100%	100%	100,000
30/6/2030		100,000	40%	100%	(25%)		75%	85,000

Calculation based on use Useful life and assessed condition					
Age	RUL (based on condition)	Total Useful life (Age + RUL)	Calculated %RSP Depr Amount	Calculated Fair Value	Error
0	16	16	100%	100,000	0.0%
4	12	16	75%	85,000	0.0%
8	8	16	50%	70,000	0.0%
12	16	28	57%	74,286	(25.7%)
16	12	28	43%	65,714	(22.7%)
20	8	28	29%	57,143	(18.4%)
24	4	28	14%	48,571	(11.7%)
28	16	44	36%	61,818	(38.2%)
32	12	44	27%	56,364	33.7%
36	8	44	18%	50,909	(27.3%)
40	16	56	29%	57,143	(42.9%)
44	12	56	21%	52,857	(37.8%)
48	8	56	14%	48,571	(30.6%)
52	4	56	7%	44,286	(19.5%)
56	16	72	22%	53,333	(46.7%)
60	12	72	17%	50,000	(41.2%)

These net differences in value can be seen in the following graph.

Risk of not taking account of renewal of recyclable assets



It should be acknowledged that this is a very basic example. In reality the level of recycling and renewal may not necessarily restore the asset back to 'as new' and as such trying to determine the 'age' or 'RUL' may require significant professional judgment. Likewise the 'pattern of consumption' is likely to change over time due to the impact of different factors and therefore consideration needs to given to the appropriate pattern to apply.

Furthermore the value of the long-life part (recyclable value) may change over time as a consequence of changing asset management strategies. For example the standard treatment for underground pipes was once to dig up the old pipe and totally replace it with a new pipe. However with changing technologies there is an ever increasing use of pipe relining. This technology costs considerably less than the previous strategy and effectively restores the service potential of the pipe to 'as new'. In effect the difference between the two represents a long-life part (recyclable value) of the asset.

As a result, for assets that are continually renewed through recycling, it may be more appropriate to use valuation methodologies that better align with the asset management frameworks. This might include different condition based or consumption based methodologies.

8.10 Depreciation Methods

8.10.1 Requirements

Depreciation is defined in AASB116 Property, Plant and Equipment as "the systematic allocation of the depreciable amount of an asset over its useful life".[60]

Key paragraphs of AASB116 Property, Plant and Equipment include:

43 Each part of an item of Property, Plant and Equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately.

50 The depreciable amount of an asset shall be allocated on a systematic basis over its useful life.

60 AASB116 Property, Plant and Equipment (definitions)

51 The residual value and the useful life of an asset shall be reviewed at least at each financial year-end and, if expectations differ from previous estimates, the change(s) shall be accounted for as a change in an accounting estimate in accordance with AASB108 Accounting Policies, Changes in Accounting Estimates and Errors.

60 The depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity.

61 The depreciation method applied to an asset shall be reviewed at least at each financial year-end and, if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the asset, the method shall be changed to reflect the changed pattern. Such a change shall be accounted for as a change in an accounting estimate in accordance with the AASB108.

The purpose of depreciation is to record the value (or cost) of the asset that has been consumed during the accounting period so that users of the financial statements can discern information about the entity's assets and the performance of the assets. Its purpose is solely that of a key performance indicator reported in the financial statements and is not intended for any other purpose.

Some entities have attempted to use depreciation for purposes other than as a measure of the value of the asset consumed during the year. For example, in the absence of a robust asset management plan and long-term financial plan many have used the figure as either:

- a de facto measure of the amount of future funding required to replace the existing asset (future funding needs), or
- a mechanism to set user charges or rates (budgeting) based on fully funding depreciation.

However, there is no direct relationship between depreciation and either future funding needs or as a rate-setting mechanism. Given the significant investment by public sector entities (such as local governments) in infrastructure assets and the associated proportion of total council funds allocated to the operation and maintenance of these assets, it is imperative that appropriate systems be put in place to better estimate the requirements for future funding needs (that is, asset replacement and renewal) and the true cost to provide (and therefore charge equitably) services to the community using the assets. This is achieved by the development of a robust asset management framework.

When determining the fair value of an asset the objective of the valuer is to calculate the value of the remaining level of future economic benefit (or service potential) embodied within the asset. Depending upon the most likely scenario, the fair value would be calculated after considering whether the asset would be reproduced or replaced with a modern equivalent. This choice provides an insight into the service potential delivered by the asset and hence how that service potential is consumed.

Depreciation expense is then calculated to estimate the amount of service potential that is expected to be consumed within the next 12 months.

The process and requirements can be demonstrated in the depreciation decision tree shown on the following page.

Figure 17: Depreciation decision tree

8.10.2 Choosing the appropriate method

Providing the depreciation method complies with the requirements of AASB116 Property, Plant and Equipment, any method of depreciation can be employed. However, care needs to be taken to ensure all aspects of AASB116 (and any other prescribed requirements) are complied with, including:

- The method that best matches the pattern of consumption of future economic benefit;
- Where the asset has a number of different components with varying patterns of consumption or useful life estimates, each component is to be depreciated separately;
- Depreciation is to be calculated on a systematic basis over its useful life; and
- A residual value needs to be determined and must not be depreciated.

As a minimum, the pattern of consumption of future economic benefit, useful life and residual value need to be reassessed at year end, and the depreciation method adjusted if there are any significant changes. This will include consideration of any changes in the future asset management plans.

Under AASB136 Impairment and AASB116 Property, Plant and Equipment there also needs to be a review of the relative price movement in gross cost (such as an index) and condition of the asset, along with the depreciation assumptions to determine whether the carrying amount differs significantly from the fair value.

Further guidance is also provided through authoritative Interpretations. Australia's **AASB Interpretation 1030 Depreciation of Long-Lived Physical Assets: Condition-Based Depreciation and Related Methods** states that the method must ensure:

- depreciation is calculated by reference to the depreciable amount;
- appropriate consideration is given to technical and commercial obsolescence;
- maintenance and capital expenditure are separately identified and accounted for in accordance with AASB 116;
- the renewals annuity method is not used; and
- depreciation is calculated separately for each component.

Additionally, as the final results need to withstand an extensive audit process, consideration needs to be given to ensure that the auditors will be able to obtain sufficient and appropriate evidence with respect to the critical assumptions adopted within the methodology and that the methodology is logical and consistent with the entity's understanding of how the asset's service potential is consumed.

This includes assumptions such as:

- the pattern of consumption of future economic benefit;
- useful life;
- residual value; and
- depreciable amount.

These aspects are discussed in greater detail in the following pages. AASB116 Property, Plant and Equipment requires that:

The entity selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. That method is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits.[61]

Common methods adopted by public sector entities include the following:

Table 5: Common depreciation methods

Straight-line
Factors used: Age only
Typically uses actual age plus Remaining Useful Life (RUL) to calculate a total useful life
CRC is then determined by (RC – Residual Value) * (R U L/total useful life) + residual value. If applied correctly this method is good for assets with a short and predictable useful life. However, for long-lived cyclical maintenance and renewal assets it is often incorrectly applied resulting in material misstatement. Care needs to be taken to ensure the critical assumptions reflect the asset lifecycle.
Condition-Based Depreciation
Factors used: Physical condition
Typically a degradation profile is created based on a model that correlates the physical condition to an estimated total lifecycle. Most commonly used with road pavements.
One issue with these methods is that they focus on physical deterioration and may not necessarily take into account obsolescence.
Consumption-Based Depreciation
Factors used: Holistic and component specific factors
Considers factors such as functionality, capacity, utilisation, obsolescence etc. at the whole-of-asset level. Then takes into account the physical condition and repair and maintenance history of the asset to determine the level of remaining service potential. A matrix is created to link the level of service to the valuation and depreciation.
Closely linked to asset management frameworks. Sometimes integrated into propriety valuation or asset management systems

8.10.3 The risk of using erroneous assumptions

Even if the correct depreciation method is used and the correct pattern of consumption of future economic benefit and other factors are properly taken into account, there is a risk of material misstatement if erroneous assumptions are used.

This is demonstrated in the following example.

Example: Implication from using different assumptions[62]

For the purpose of the exercise we have assumed that the pattern of consumption of future economic benefit is constant and therefore it is appropriate to use the straight-line method. We have also assumed that the revaluation was undertaken at the beginning of the financial year and the depreciation expense relates to the assumptions used to determine that valuation.

61 AASB116 Property Plant and Equipment (paragraph 62)

62 APV Valuers and Asset Management Technical Information Sheet (www.apv.net)

The following formulas are used to calculate the Current Replacement Cost (CRC) and depreciation:

CRC = (gross cost – residual value) × RUL / useful life + residual value

where RUL = useful life – age

depreciation expense =

(gross cost – residual value) / useful life CRC

While there is nothing fundamentally wrong with this calculation the example shows that applying erroneous assumptions can easily result in significant and material misstatement.

Irrespective of the method used, it is vitally important to understand whether the approach adopted uses the relevant information and results in the right answer.

This example demonstrates that, irrespective of which depreciation method you adopt:

- the same method can be applied in different ways if based on different assumptions;
- any approach that does not reflect the asset lifecycle can easily lead to material misstatement;
- using a simple approach may be quick and easy but may lead to very poor outcomes; and
- if your approach is flawed there is a high risk that your financial statements will also be materially incorrect.

This example shows how the same facts can be interpreted differently to produce materially different results for both valuation and depreciation.

To keep things simple we will assume that the gross replacement cost of the asset remains unchanged over time so that the resulting differences can be seen to be attributable purely to different approaches. The task is to determine the CRC (fair value) and depreciation expense for the following 12 months.

The basic assumptions are:

- Gross replacement cost: $100,000
- Date of original commissioning: 40 years ago
- Original assumptions: 45-year useful life (UL) with zero residual value
- Based on current condition assessment, the RUL is estimated at 30 years

The following table shows how by using different facts to drive your assumptions can result in significantly different results. Each row relies on varying levels of known information to determine the assumptions to be applied. In some cases the information is limited to what typically is recorded in financial asset registers whereas others also take into account detailed information sourced from the assert management system or the asset management plan.

Options	Comments	Component	Replacement Cost	Age	RUL	Useful Life	Fair Value	Depreciation Expenses
1	Based on the original design life assumptions without taking into account information held in the asset management system.		100,000	40	5	45	11,111	2,222
2	Asset is 40 years old an as RUL is assessed as 30 years the total Useful life =70 years.		100,000	40	30	70	42,857	1,429
3	This assumes the actual date of commissioning is unknown. As RUL is 30 and standard assessment of Useful life is 45 it is assumed the actual age must be 15 years.		100,000	15	30	45	66,667	2,222
4	From asset management system it is identified that despite being 40 years old the asset was renewed 10 years previously. As a result Useful life now estimated as 10+30 = 40.		100,000	10	30	40	75,000	2,500
5	From Asset Management Plan it is identified that asset will be renewed back to 'as new' in 5 years time at a cost of $50,000 with a UL of 45 years (40+5). The long-life part ($50,000) is never expected to be touched and is valued at $50,000. Current estimates are that Useful life of long-part is 150 years.	Short-life	50,000	40	5	45	5,556	1,111
		Long-life	50,000			150	50,000	333
		Total	100,000				55,556	1,444
6	Same as 3 except also takes into account updated information regarding renrewal undertaken 10 years previously. As a result the Useful life of the short-part is assessed as (10+5) = 15 years.	Short-life	50,000	15	5	20	12,500	2,500
		Long-life	50,000			150	50,000	333
		Total	100,000				62,500	2,833

Option 6 is based on the most detailed information and arguably provides the best estimates of both value and depreciation expense. However in the real world this level of detail may not be available for every asset in a large portfolio of individual assets and components. However, assuming that option 6 is deemed to provide the best estimates the level of misstatement produced by the other options.

Option	1	2	3	4	5	6
Fair value						
Calculated	11,111	42,857	66,667	75,000	55,556	62,500
Actual	62,500	62,500	62,500	62,500	62,500	62,500
Variance	-82.22%	-31.43%	6.67%	20.00%	-11.11%	0.00%
Depreciation						
Calculated	2,222	1,429	2,222	2,500	1,444	2,833
Actual	2,833	2,833	2,833	2,833	2,833	2,833
Variance	-21.57%	-49.58%	-21.57%	-11.76%	-49.02%	0.00%

The use of different assumptions, while applying the same methodology, results in significantly different results for the fair value CRC and depreciation expense calculations. The question of materiality needs to be assessed by the auditor. However, given the impact of the valuation and depreciation of infrastructure assets on the financial statements of asset- intensive public sector entities, if the most common (and easiest) approaches were adopted based on erroneous assumptions or only selected information the financial statements may be materially misstated.

8.10.4 Common approaches

The use of different depreciation methodologies will result in different impacts on the financial statements both in the current year as well as over the life of the asset. Ultimately it is the responsibility of the entity to determine how it depreciates its assets, but of course reference must be made back to the requirements of AASB116 Property, Plant and Equipment.

There is no one best method that should be applied across all assets. This guide does not promote or endorse any particular methodology. To be successful, the method must be cost effective and must reflect the pattern of consumption of the asset's service potential so as to enable the users of the financial statements to make sound economic decisions.

The purpose of the financial statements is to provide the general purpose financial statement users with information about the current financial status of the entity and its performance during the past 12 months. It is therefore critical that the statements reflect a true and fair view of the value of the assets as well as the amount of loss of value experienced via consumption (depreciation).

For an individual asset, if the rate of consumption is expected to be greater than the previous year, the depreciation method employed should also reflect an increase in the rate of consumption. If the rate of consumption is expected to be constant till

the end of life, the adoption of a straight-line method would be appropriate.

When selecting the best method to adopt, consideration should be given to:

- the nature and size of the portfolio;
- the risk of material misstatement;
- whether the asset tends to be renewed through recycling and maintenance;
- how often the asset is replaced;
- how the asset's service potential is consumed; and
- whether the information is reliable and relevant, enabling it to be used to assist in other decisions across the entity.

Straight-line depreciation

The straight-line method is the most simplistic, easiest understood, cost effective and as a result the most commonly applied method. Over the past two decades, as the understanding of how assets behave and are consumed has improved, some entities have moved away from straight-line towards other methods which apply non-linear patterns of consumption. Many entities however argue that the pattern of consumption for most assets is constant and therefore the straight-line method is appropriate for both short and long lived assets.

It is the entities responsibility for determining the pattern of consumption and if deemed to be constant the straight-line method is an appropriate choice. It should be used where:

- Pattern of consumption is assessed as constant;
- There is strong evidence to support the critical assumptions of useful life, RV and RUL;
- There is frequent revaluation and reassessment of the assumptions; and
- The assumptions reflect the asset management life cycles and treatments of the asset components.

Where there is little evidence to support the critical assumptions or there is a high level of uncertainty regarding future projections of when and what renewal will occur consideration should be given to whether other methods may be more appropriate.

Often the calculation for straight-line is based purely on age without due consideration being first given to asset condition and obsolescence. If appropriate consideration is not given to technical or commercial obsolescence, there is also a risk of non-compliance with the standards. Care also needs to be taken to ensure any adjustments resulting from a change in the RUL or RV are adjusted prospectively and not retrospectively.

The main advantages of the traditional approach to straight-line depreciation are its simplicity, cost effectiveness and ease of calculation.

The main disadvantages or risks of applying this method are:

- The difficulties experienced in trying to find evidence to support the critical assumptions (useful life, RUL and RV) when trying to depreciate long-lived assets such as roads, water, sewerage and buildings;
- As the estimated useful life increases the associated confidence levels in relation to key assumptions decreases resulting in an increased risk of misstatement.; and
- When using this approach care should be taken to ensure factors such as obsolescence are appropriately incorporated into the determination of the RUL.

The calculation is based on the following formula:

Depreciation Expense = (Gross – Residual Value) / Useful Life)

Where Gross = Replacement Cost or Market Value

Condition-based depreciation

Condition-based depreciation methods rely on a known correlation between the physical characteristics of the asset (for example, cracking, rutting, roughness, oxidisation) and the relevant remaining useful life.

It is generally considered appropriate only where the consumption of the asset is primarily dependent upon the physical condition of the asset. Care needs to be taken to ensure that the critical assumptions (correlation between each condition assessment and RUL) can be supported by sufficient and appropriate audit evidence.

In some cases, the RUL of asset may be affected by non-physical factors. In these circumstances, if appropriate consideration is not given to technical or commercial obsolescence, there is a risk of non-compliance with the standards.

The main advantages of condition-based depreciation are:

- It encourages the capture of data that supports both asset management (engineering) and accounting needs;
- The development of condition models provides a better understanding of the lifecycles and deterioration of the entity's physical assets and hence supports the asset management function;
- It enables the objective measure of where an asset is within its lifecycle;

The main disadvantages are:

- There is a high level of complexity and resources required to identify, measure and develop lifecycles based on specific condition scores. As a result these models tend to be developed for roads, sewerage and water assets only where the cost/benefit can be justified;
- Often standard models are adopted and not customised and validated for the particular entity. As a result, there is a risk that the model and measures may not be relevant or accurately reflect the level of remaining service potential or the rate of consumption for the particular entity; and
- The method tends to focus solely on physical condition, and as a result can be applied without due consideration being given to the impact of obsolescence. This would result in non-compliance with the standards.

S-curve

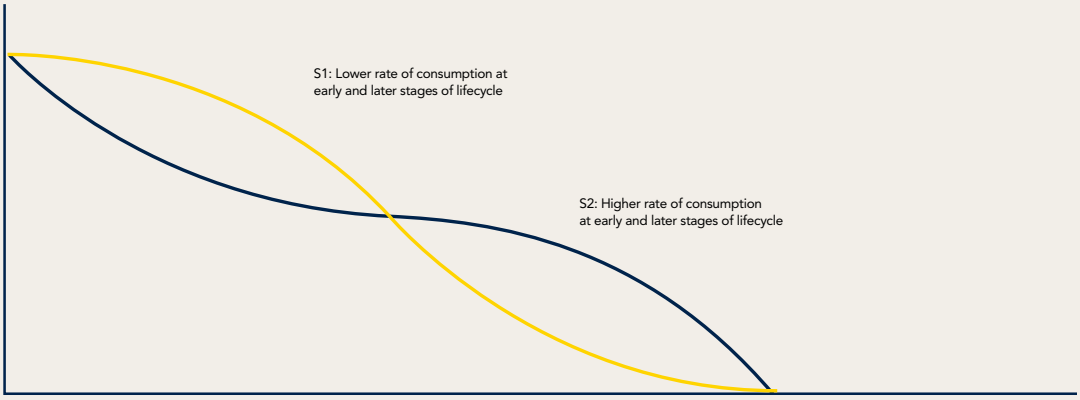
The S-curve pattern of consumption is occasionally used by experienced valuers where the pattern of consumption is considered to change from a pattern of high (or low) consumption in the early phases before flattening out and then either increasing (or decreasing) as the asset approaches the end of life.

Some valuers argue this pattern is suitable for some types of residential or commercial properties or even motor vehicles. They argue it more closely reflects the market price movements of assets commonly traded in open markets. There are a range of patterns commonly used with varying levels of variation from an equivalent straight- line pattern.

9.26 The S-curve is recommended where sufficient data is available for the valuer to be confident that the curve represents the likely reality. In some cases it presents the most realistic representation of an asset's depreciation by assuming that depreciation is at a low rate in the early years, then accelerates in the middle years and reduces again in the final years. However, some assets, such as plant, may have a different depreciation pattern (high at first rather than low).[63]

It can be represented as follows:

Figure 22: S-curve consumption pattern



63 RICS Red Book GN 6 Replacement cost method of valuation for financial reporting

Reducing balance methods

These methods provide for a higher depreciation charge in the first year of an asset's life and gradually decreasing charges in subsequent years. They are based on the assumption that the asset loses most of its value as soon as it is put into use and the rate of depreciation then reduces over time.

Under this method the written-down value is multiplied by a fixed rate.

Annual depreciation =
depreciation rate ×
book value at beginning of year

The most common rate used is double the straight-line rate. For this reason, this technique is referred to as the double-declining-balance method.

Example:

Assuming the asset has:

- Gross cost of $1,100 original cost
- Residual value of 100 age value
- The depreciable amount = $1,000
- A useful life of five years

The first step is to calculate straight-line depreciation rate by dividing the depreciable amount ($1,100 – 100) by the useful life (five years) = 20%. With the double declining balance method, as the name suggests, double that rate, or the 40 per cent depreciation rate, is used. The table below illustrates the double declining balance method of depreciation.

Year	Open	Open DRC	Depreciation Rate	Depreciation Expense	Accumulated	Closing DRC Depreciation
1	$1,000	$1,000	40%	$400	$400	$600
2	$600	$600	40%	$240	$240	$360
3	$360	$360	40%	$144	$144	$216
4	$216	$216	40%	$86	$86	$130
5	$130	$130	130 – 100	$30	$30	$100

When using the double declining balance method, the residual value is not considered in determining the annual depreciation, but the CRC value of the asset being depreciated is never brought below its salvage value, regardless of the method used. The process continues until the residual value, or the end of the asset's useful life, is reached. In the last year of depreciation a subtraction might be needed in order to prevent CRC from falling below estimated residual value.

Since double declining balance depreciation does not always depreciate an asset fully by its end of life, some methods also compute a straight-line depreciation each year, and apply the greater of the two. This has the effect of converting from declining balance depreciation to straight-line depreciation at a midpoint in the asset's life.

It is possible to find a rate that would allow for full depreciation by its end of life with the formula:

Depreciation Rate = 1 - n $\sqrt{\text{residual value/gross value}}$
where n is the estimated useful life of the asset.

Renewals annuity

The renewals annuity method cannot be used for financial reporting purposes. Its use is specifically prohibited by AASB Interpretation 1030.

However, its use for financial modelling as part of the asset management plan is highly recommended. The method assumes the existing assets will be maintained at a constant level of service via ongoing cyclical maintenance and renewal.

The net cash flows to undertake the maintenance and renewal are projected out over an extended period (for example, 20 years) and are then converted to an annuity to provide an annualised average cost to maintain the asset.

This method provides an estimate of the amount of funding required to meet future needs, and converts it to an annuity so that the relevant funds can be accumulated consistently and equitably over a long period. This avoids sudden significant variations in funding needs.

8.11 Other Requirements

8.11.1 Revaluation Adjustments

The accounting treatment for not-for-profit (including public sector NFP) entities is different than for for-profit entities.

For-Profit Entities

For 'for-profit' entities (including public sector for-profit entities' AASB116 requires that any decrements in individual assets be taken direct to Profit and Loss account except to the extent that they reverse a prior period increment (that was previously taken to the asset revaluation reserve. Likewise, any increments are taken direct to the asset revaluation reserve except to the extent that they reverse a prior period decrement.

> *39 If an asset's carrying amount is increased as a result of a revaluation, the increase shall be recognised in other comprehensive income and accumulated in equity under the heading of revaluation surplus. However, the increase shall be recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognised in profit or loss.*
>
> *40 If an asset's carrying amount is decreased as a result of a revaluation, the decrease shall be recognised in profit or loss. However, the decrease shall be recognised in other comprehensive income to the extent of any credit balance existing in the revaluation surplus in respect of that asset. The decrease recognised in other comprehensive income reduces the amount accumulated in equity under the heading of revaluation surplus.*[64]

64 AASB116 Property Plant and Equipment

Not-for-profit entities

However in the case of not-for-profit entities the AASBs provide that the increments and decrements for individual assets within an asset class are to be off-set against each other and the net increase or decrease adjusted as one entry for the asset class.

Aus39.1 Notwithstanding paragraph 39, in respect of not-for-profit entities, if the carrying amount of a class of assets is increased as a result of a revaluation, the net revaluation increase shall be recognised in other comprehensive income and accumulated in equity under the heading of revaluation surplus. However, the net revaluation increase shall be recognised in profit or loss to the extent that it reverses a net revaluation decrease of the same class of assets previously recognised in profit or loss.

Aus40.1 Notwithstanding paragraph 40, in respect of not-for-profit entities, if the carrying amount of a class of assets decreased as a result of a revaluation, the net revaluation decrease shall be recognised in profit or loss. However, the net revaluation decrease shall be recognised in other comprehensive income to the extent of any credit balance existing in any revaluation surplus in respect of that same class of asset. The net revaluation decrease recognised in other comprehensive income reduces the amount accumulated in equity under the heading of revaluation surplus.

Aus40.2 Notwithstanding paragraph 40, in respect of not-for-profit entities, revaluation increases and revaluation decreases relating to individual assets within a class of property, plant and equipment shall be offset against one another within that class but shall not be offset in respect of assets in different classes.[65]

8.11.2 Gross verses Net disclosure method

Under AASB116 entities can chose to either adopt the 'gross' or 'net' disclosure methods in order to disclose information about the values for each asset class in the financial statements. In most public sector jurisdictions the various prescribed requirements require that:

- Assets valued using the 'cost approach' be disclosed using the 'gross' method
- Assets valued using the 'market' or 'income' approaches be disclosed using the 'net' net method.

For example the QLD Treasury Non-Current Assets Policy (policy 4) also covers this and specifically says:

> As from reporting periods beginning on or after 1 July 2014, it is planned QTT policy that, for both specific appraisals and indexation:
>
> - *the gross method of revaluation be used by agencies for depreciable assets valued using a cost (e.g. depreciated replacement cost) approach, where estimation of obsolescence and remaining service potential of the existing asset, are integral to the valuation; and*

65 AASB116 Property Plant and Equipment

- *the net method of revaluation be used by agencies for depreciable assets valued using a market or income (e.g. discounted cash flow) approach.*[66]

AASB116 states:

35 When an item of property, plant and equipment is revalued, the carrying amount of that asset is adjusted to the revalued amount. At the date of the revaluation, the asset is treated in one of the following ways:

(a) the gross carrying amount is adjusted in a manner that is consistent with the revaluation of the carrying amount of the asset. For example, the gross carrying amount may be restated by reference to observable market data or it may be restated proportionately to the change in the carrying amount. The accumulated depreciation at the date of the revaluation is adjusted to equal the difference between the gross carrying amount and the carrying amount of the asset after taking into account accumulated impairment losses; or

(b) the accumulated depreciation is eliminated against the gross carrying amount of the asset.

35(a) is commonly referred to as the 'gross' disclosure method and 35(b) as the 'net' method.

Fundamentally the two different approaches are used because assets valued using the 'market' or 'income' approach have no 'gross' value as such. The Fair Value is simply either the result determined by comparing to sales of similar assets or via calculation after considering the projected cash inflows and outflows.

The 'cost' approach on the other hand requires the determination of a Gross Replacement Cost and then deducting Accumulated Depreciation in order to determine the Fair Value (Current Replacement Cost). The difference between these two figures provides useful information about how much of a portfolios service potential remains and has been consumed to date.

The model financial statements of most jurisdictions require (via the PP&E movements note) separate figures for 'gross', 'accumulated depreciation' and the resulting 'written down value'. As such there is an issue with reporting the corresponding 'gross' figure for assets where the 'net' disclosure method is required.

When valuing using the Income or Market approach there is no such thing as "Accumulated Depreciation" at the time of a revaluation because the valuation is not based on calculating such. The Fair Value is simply the market value based on either Income or Market approach. Hence for disclosure purposes both the Gross and Fair Value figures are the same. ie. there is no accumulated depreciation. However in future years any depreciation expense recorded will be recorded as accumulated depreciation.

66 Queensland Treasury Non-Current Assets Policies (2014)

For example a building is valued at Market for $100,000 with depreciation expense for the next year estimated as $2,000. At valuation Gross and Fair Value are shows as $100,000. After one year (assuming no revaluation has occurred) Gross remains at $100,000 and the Written Down Value is now $98,000 with Accumulated Depreciation = $2,000. In the following year (again assuming no further revaluation) the gross remains at $100,000, Written Down Value = $96,000 and accumulated depreciation now = $4,000. In the following year a revaluation is undertaken and accordingly there is no accumulated depreciation disclosed for assets valued which are subject to the net disclosure method.

Net v Gross Disclosure (based on valuation technique)

Gross value						
	Valuation technique	Disclosure method	Year 1	Year 2	Year 3	Year 4
			Revalued			Revalued
			$,000	$,000	$,000	$,000
Buildings	Market	Net	100,000	100,000	100,000	120,000
Buildings	Income	Net	100,000	100,000	100,000	120,000
Buildings	Cost	Gross	150,000	150,000	150,000	200,000
Buildings	Combined	Net	100,000	100,000	100,000	100,000
			450,000	**450,000**	**450,000**	**450,000**
Accumulated depreciation						
Buildings	Market		–	2,000	2,000	–
Buildings	Income		–	2,000	2,000	–
Buildings	Cost		50,000	52,000	54,000	80,000
Buildings	Combined		–	2,000	2,000	–
			50,000	**58,000**	**60,000**	**80,000**
Written down value						
Buildings	Market		100,000	98,000	98,000	120,000
Buildings	Income		100,000	98,000	98,000	120,000
Buildings	Cost		100,000	98,000	96,000	120,000
Buildings	Combined		100,000	98,000	98,000	100,000
			400,000	**392,000**	**390,000**	**460,000**

In the example above the buildings value using the 'cost' approach were disclosed using the 'gross' method. In year 4 when the assets were re-valued the journal to make the adjustment would have:

- increased the 'gross' from $150,000 to $200,000 (Dr Asset $50,000)
- increased the accumulated depreciation from $54,000 to $80,000 (Cr Accumulated Depreciation $26,000)
- resulting in a net revaluation increment of $24,000 (Cr Asset Revaluation Reserve $24,000).

8.11.3 Derecognition (via renewal)

The issue of part disposal through renewal of an asset has in the past created some discussion as to whether the whole part of the component replaced or renewed needed to be written off and how to treat the expenditure related to the renewal.

The introduction to AASB116 Property, Plant and Equipment addresses this issue.

> *An entity is required to derecognise the carrying amount of a part of an item of property, plant and equipment if that part has been replaced and the entity has included the cost of the replacement in the carrying amount of the item. The previous version of AASB116 did not extend it's derecognition principle to such parts; rather, its recognition principle for subsequent expenditures effectively precluded the cost of a replacement from being included in the carrying amount of the item.*[67]

Example:

Background

The following example uses the re-sealing of a road surface to demonstrate the correct accounting treatment and potential pitfalls. The example focuses only on the seal component.

Costs and calculations

Immediately prior to undertaking, capital expenditure to renew the seal was valued as follows.

Area (square metres)	10,000
Unit rate per sq. m.	$50
Gross replacement cost	$500,000
Assessed level of remaining service potential	64%
Assessed CRC (pre-renewal)	$320,000

The seal was then renewed resulting in a significant improvement in the level of remaining service potential.

Cost of renewal work	$250,000
Has the unit rate used to determine the GRC changed?	No
Has the overall gross service potential of the seal changed?	No
Assessed gross replacement cost	$500,000
Reassessed level of remaining service potential	95%
Assessed CRC (post renewal)	$475,000

While money was spent on the seal the reality is that the overall replacement cost did not change. Similarly, the impact of the $250,000 resulted only in a net increase in the CRC of $155,000 ($475,000 – $320,000).

Therefore if we included the cost of the replacement in the carrying amount of the item ($250,000) we also need to derecognise the carrying amount of a part of an item of property, plant and equipment if that part has been replaced. Working backwards, we would need to derecognise only $95,000 ($320,000 + $250,000 – $475,000).

Capitalise $250,000 and derecognise the part that has been replaced ($95,000)	GRC	Accum. Dep.	DRC	Cash	Dereconition
Opening balance (pre-renewal)	$500,000	($180,000)	$320,000		
Journals DR (cr)	$250,000		$250,000	($250,000)	
Journals DR (cr)	($250,000)	$155,000	($95,000)		$95,000
Results (balance post renewal)	$500,000	($25,000)	$475,000	($250,000)	$95,000
Correct result	$500,000	($25,000)	$475,000	($250,000)	$95,000
Error (amount)					
Error (%)	0.0%	0.0%	0.0%	0.0%	0.0%

The following represent examples of common (but incorrect) journal approaches. These demonstrate the potential for error.

Capitalise only $250,000 as CAPEX and make no change to existing asset	GRC	Accum. Dep.	DRC	Cash	Dereconition
Opening balance (pre-renewal)	$500,000	($180,000)	$320,000		
Journals DR (cr)	$250,000		$250,000	($250,000)	
Results (balance post renewal)	$750,000	($180,000)	$570,000	($250,000)	
Correct result	$500,000	($25,000)	$475,000	($250,000)	$95,000
Error (amount)	($250,000)	$155 000	($95,000)		$95,000
Error (%)	(50.0%)	(620.0%)	(20.0%)	0.0%	0.0%

Capitalise only $250,000 but write off full value of existing component	GRC	Accum. Dep.	DRC	Cash	Dereconition
Opening balance (pre-renewal)	$500,000	($180,000)	$320,000		
Journals DR (cr)	$250,000		$250,000	($250,000)	
Journals DR (cr)	($500,000)	$180,000	($320,000)		$320,000
Results (balance post renewal)	$250,000		$250,000	($250,000)	$320,000
Correct result	$500,000	($25,000)	$475,000	($250,000)	$95,000
Error (amount)	$250,000	($25,000)	$225,000		($225,000)
Error (%)	50.0%	0.0%	0.0%	0.0%	(236.8%)

To ensure the correct accounting treatment is adopted it is recommended that:

- expenditure be capitalised;
- value of the asset be immediately reassessed after the completion of the work. This is to include consideration of both the gross replacement cost and the fair value; and
- any difference between the new carrying amount and the new assessed value be immediately adjusted through derecognition.

In reality the adjustment may result in either an increase in value or a decrement in value. There will also need to be consideration of materiality and whether to take the adjustments to the profit and loss report or via the asset revaluation reserve. In practice, many organisations argue that such adjustments are immaterial when compared with the overall asset base, and choose to revalue the entire class of assets at year end and take the net impact through to the asset revaluation reserve.

Irrespective of the approach adopted, the policy should be discussed with your auditor in advance and well documented.

9. OTHER AASB STANDARDS

While this guide focuses on the valuation and depreciation of the most common types of assets controlled by public and NFP sector entities there is also are a range of standards or guidance which cover specific issues. Some of these have previously been covered within this guide where they relate to specific concepts. This includes:

- Australian interpretation 1030 **Depreciation of Long-Lived Physical Assets: Condition-Based Depreciation and Related Methods** – refer section titled Application of Depreciation concepts (including Australian Interpretations)
- Australian interpretation 1055 Road Earthworks - refer section titled Application of Depreciation concepts (including Australian Interpretations)
- Australian interpretation 12 Service Concession Arrangements (refer section titled Control under High Level Accounting Concepts)

The following provides guidance on a range of other specific accounting issues.

9.1 Land Under Roads (AASB1051)

One of the most discussed public sector asset issues over the past decade has been the valuation of land under roads (LUR). This relates only to the land and excludes the roads and other infrastructure which are valued in accordance with AASB116 Property Plant and Equipment.

For many years LUR had been excluded from the requirement to be valued. However in December 2007 the Australian Accounting Standards Board issued AASB 1051 Land Under Roads which mandated all LUR acquired after 1 July 2007 (for entities with financial year ended 30 June) to be brought to account.

The key issue for LUR is which entity 'controls' the asset and therefore is responsible for bringing it to account. In Queensland all LUR is deemed to be controlled by the State and therefore excluded from the financial statements of local governments. However in other jurisdictions the issue of control is not as clear cut resulting in a variety of different approaches. Before deciding whether or not to include LUR as an asset due consideration should be given to the facts and guidance provided within this guide in relation to the concept of 'control'.

There has also been significant debate about how such land should be valued. Essentially the approach is no different to the valuation of any other land asset. As there is usually no open and liquid market for LUR and its value is not determined by its income generating capability the 'cost' approach should be adopted. In some locations there will be observable evidence of actual amounts paid to resume land specifically for the construction of roads or other community purposes. However it is more likely that the replacement cost for LUR will be best estimated by reference to the market prices for land in the same location/region which has similar characteristics. As with restricted land - those characteristics which are entity specific should be excluded. This might include restrictions placed on the land by the entity (for example – following resumption from private land owners) or could be later

removed (for example – closing the road and changing its zoning and use for another purpose).

As this involves the valuation of land it is also important to note that under legislative requirements the valuations must be undertaken by an appropriately qualified and registered valuer. This also applies to revaluation by way of indexation.

A decision tree setting out the requirements of AASB1051Land Under Roads is included in **Attachment C Overview of Specific Accounting Standards**.

9.2 Assets Held for Sale (AASB5)

Assets held by public and NFP sector entities are usually held to provide services to the community. However, over time the need to continue to provide those services or the mechanism to provide those services may change. In such a situation it is common for the entity to offer the asset for sale.

Such a decision may also indicate a level of impairment or reduction in the service potential delivered by the asset. For example an entity may have a specialised building which was used to provide a specific community service. However, with changing needs the building is now considered surplus to needs and is offered up for sale.

Under AASB5 Assets held for sale it is first necessary to consider whether the asset is available for immediate sale and a sale is likely to occur within 12 months. If not – the asset does not qualify as being an asset held for sale and therefore needs to be valued in accordance with the existing appropriate standard. This however may lead to a revaluation decrement based on either impairment or a changed assessment of the service potential embodied within the asset (based on highest and best use to other market participants).

If however a sale is expected within 12 months the asset is to be valued in accordance with AASB5. The first step is to determine the carrying amount and then to compare that to the 'Fair Value less cost to sell'. The Fair Value should be reassessed to what was previously calculated as the decision to sell the asset may be an indicator that the service potential delivered by the asset has changed or has been impaired. Likewise the appropriate basis to determine the Fair Value may have changed from one basis (for example – cost) to another basis (for example – market).

If the carrying amount is greater than the 'Fair value less cost to sell' this represents an impairment loss and accordingly the asset value is to be reduced to the recoverable amount. However if the carrying amount is less than the 'Fair value less cost to sell' the carrying amount may stay unchanged (or the entity may still opt to revalue the asset down to the lower amount).

A decision tree setting out the requirements of AASB5 Assets held for sale is included in Attachment C Overview of Specific Accounting Standards.

9.3 Investment Properties (AASB140)

Investment properties are assets that are held primarily for rental income or capital appreciation. Just because a property is rented does not necessarily make it an investment property. For example – an entity may own a building that traditionally has been used for its own purposes but due to changing circumstances no longer requires that space and has decided to rent it either at a market rent or perhaps a subsidised rent. In this case the asset may not meet the definition of its 'primary' purpose being for income or capital appreciation.

Investment properties are usually traded in an open and liquid market and therefore (assuming they are to be re-valued) usually valued using the 'market' approach. However sometimes it may be more appropriate to use the 'income' approach to estimate the market value (Fair Value).

Where the entity values these assets at Fair Value and can reliably determine the market value these assets are to be re-valued annually with the net increase or decrease in value taken directly to the Profit and Loss account. Accordingly no depreciation expense is to be charged.

In rare cases where no market value can be determined (or where the asset is valued at cost) AASB140 requires that the asset be depreciated to nil (zero Residual Value) over the useful life.

A decision tree setting out the requirements of AASB140 Investment Properties is included in Attachment C Overview of Specific Accounting Standards.

9.4 Leased Assets (AASB117)

In recent years there has been significant debate regarding how to deal with assets subject to lease. This has included the development and later re-development of an Exposure Draft. Both these expose drafts proposed significant changes to how the current Australian Accounting Standard deals with assets subjected to lease. This includes the moving from the current concepts of operating and finance leases to other concepts.

Given the uncertainty regarding the future direction of this standard – no further discussion on these types of assets has been included in this version of the guide. However a decision tree setting out the requirements of the existing AASB117 Leases is included in **Attachment C Overview of Specific Accounting Standards**.

9.5 Other types of assets

There are a range of other Australian Accounting Standards that deal with specific types of assets which public and NFP sector entities sometimes control and value at Fair Value. These include:

- Inventories (AASB102)
- Intangible assets (AASB138)
- Agriculture (AASB141)

Given the limited application of these standards (at Fair Value) this guide has not provided extensive guidance. Instead an overview of each standard is included in **Attachment C Overview of Specific Accounting Standards**.

10. AASB13 DISCLOSURES

10.1 Overview

The first year adoption of AASB13 Fair Value Measurement (2013-14) proved to be challenging for many entities. This was primarily due to limited understanding of the new disclosure requirements and the resulting limited planning to fully prepare prior to the end of the financial year.

Combined with this limited understanding and preparation was that many valuations had been undertaken prior to the issuance of AASB13 and as a result the valuation reports and documentation provided by the respective valuers did not address the range of new disclosure requirements.

While most entities had a basic understanding of the new concepts and requirements there were also a range of new requirements which were quite subtle and as a result were not well implemented. This included disaggregating the AASB116 asset classifications into AASB13 'asset classes'. If this was not undertaken it was inherently difficult to describe the valuation techniques and inputs given that they were different for each AASB13 asset class.

As stated previously in this guide the nuance of AASB13 Fair Value Measurement is that it is not focused on the assets but instead is focused on how those assets are valued. It provides for a process that must be undertaken and sets out a range of explicit disclosures that are to be made about how the valuation was determined.

The new disclosures included a range of general disclosures as well as specific disclosures for each 'asset class'. The general disclosures include:

- Disclosures about accounting policies including:
  - The valuation hierarchy (what do levels 1,2 & 3 mean)
  - Policies about when to recognise transfers between levels 2 and 3 of the hierarchy
- Two new reconciliations
  - A reconciliation of all 'asset classes' to the Balance Sheet (so that the reader could be confident they have been provided with all the asset classes)
  - A reconciliation of movements between opening and closing balances but only for those assets classified as level 3 on the valuation hierarchy.

The standard then requires a range of specific disclosures for each 'asset class' based on assets that were valued using different methodologies, approaches, assumptions, characteristics or risk . The specific 'asset class' level disclosures include:

- Each 'asset class' to be classified by the approach used and the level of the 'valuation hierarchy'
- The valuation hierarchy to be based on the associated risk:
  - Level 1 – quoted price (zero risk)
  - Level 2 – Observable evidence (low to moderate risk)
  - Level 3 – Non-observable evidence (high to extreme risk)

- For level 2 and 3 'asset classes' that:
  - all significant inputs be identified and classified as level 1, 2 or 3
  - details were provided of the valuation techniques and underlying methodology
- For all significant level 3 inputs (assumptions) details are provided about:
  - where it came from (how it was developed ?)
  - how it was evaluated for reasonableness
  - quantitative information about the assumptions (e.g. min and max range)
  - the level of reliance that could be placed on it (sensitivity)
  - the resulting impact on the fair value calculation ($).

It should be noted that following the adoption of an exposure draft ED262 by the AASB in June 2015 that there have been some limited relief from these disclosures for public and NFP sector bodies. This limited relief applies only to specialised assets (such as infrastructure) that are valued under AASB116 using the cost approach. For these assets entities are no longer required to provide quantitative information about the level 3 inputs. Nor are they required to provide sensitivity disclosures. These disclosures however remain mandatory for other assets.

10.2 Required disclosures

The following tables provide an overview of the various disclosure requirements. Detailed information is included in Attachment G: Year-end checklist. Some disclosures are mandated with respect to all assets valued at fair value whereas some depend upon whether the fair value is deemed to be a recurring or non-recurring fair value measurement and also whether the valuation input is defined as being Level 1, 2 or 3.

Mandatory

Table 6: AASB 13 disclosures (general)

General Disclosures
An entity shall determine appropriate classes of assets and liabilities on the basis of the following: • the nature, characteristics and risks of the asset or liability; and • the level of the fair value hierarchy within which the fair value measurement is categorised.
An entity shall disclose and consistently follow its policy for determining when transfers between levels of the fair value hierarchy are deemed to have occurred. The policy about the timing of recognising transfers shall be the same for transfers into the levels as for transfers out of the levels. Examples of policies for determining the timing of transfers include the following: • the date of the event or change in circumstances that caused the transfer; • the beginning of the reporting period; and • the end of the reporting period.
If an entity makes an accounting policy decision to use the exception in paragraph 48 (application to financial assets and financial liabilities with offsetting positions in market risks or counterparty credit risk), it shall disclose that fact.

General Disclosures
For each class of assets and liabilities not measured at fair value in the statement of financial position but for which the fair value is disclosed, an entity shall disclose: • the level of fair value hierarchy; • for Levels 2 and 3 a description of the valuation techniques and inputs (if there has been a change, the change and reason for the change); and • a narrative description of the sensitivity of the fair value to changes in unobservable inputs.
An entity shall present the quantitative disclosures required by this standard in a tabular format unless another format is more appropriate. The valuation techniques and inputs used to determine fair value.
The fair value measurement at the end of the reporting period.
The level of the fair value hierarchy within which the fair value measurements are categorised in their entirety (Level 1, 2 or 3).

Recurring

Recurring fair value measurements of assets or liabilities are those that other accounting standards require or permit in the statement of financial position at the end of each reporting period.

Examples include the valuation of land, buildings, community and infrastructure assets, inventory and investment properties.

Table 7: AASB13 disclosures (recurring)

Level of input			Disclosure dependent upon level of valuation input
1	2	3	
•	•		The amounts of any transfers between Level 1 and Level 2 of the fair value hierarchy, the reasons for those transfers and the entity's policy for determining when transfers between levels are deemed to have occurred. Transfers into each level shall be disclosed and discussed separately from transfers out of each level.
	•	•	A description of the valuation technique(s) and the inputs used in the fair value measurement. If there has been a change in valuation technique (for example, changing from a market approach to an income approach or the use of an additional valuation technique), the entity shall disclose that change and the reason(s) for making it.
		•	The effect of the measurements on profit or loss or other comprehensive income for the period.
		•	Quantitative information about the significant unobservable inputs used in the fair value measurement. An entity is not required to create quantitative information to comply with this disclosure requirement if quantitative unobservable inputs are not developed by the entity when measuring fair value (for example, when an entity uses prices from prior transactions or third-party pricing information without adjustment). However, when providing this disclosure an entity cannot ignore quantitative unobservable inputs that are significant to the fair value measurement and are reasonably available to the entity.
		•	A reconciliation from the opening balances to the closing balances, disclosing separately changes during the period attributable to the following: • total gains or losses for the period recognised in profit or loss (at line item level); • total gains or losses for the period recognised in other comprehensive income (at line item level); • purchases, sales, issues and settlements; and • the amounts of any transfers into or out of Level 3, the reasons for those transfers and the entity's policy for determining when transfers between levels are deemed to have occurred. Transfers into Level 3 shall be disclosed and discussed separately from transfers out of Level 3.
		•	The amount of the total gains or losses for the period attributable to the change in unrealised gains or losses relating to those assets and liabilities held at the end of the reporting period (at the line item level)
		•	A description of the valuation processes used by the entity (including, for example, how an entity decides its valuation policies and procedures and analyses changes in fair value measurements from period to period)
		•	A narrative description of the sensitivity of the fair value measurement to changes in unobservable inputs. If there are interrelationships between those inputs and other unobservable inputs, provide a description of those interrelationships and of how they might magnify or mitigate the effect of changes in the unobservable inputs on the fair value measurement.
		•	If the highest and best use of a non-financial asset differs from its current use, an entity shall disclose that fact and why the non-financial asset is being used in a manner that differs from its highest and best use.

Non-recurring

Non-recurring fair value measurements of assets or liabilities are those that other accounting standards require or permit in the statement of financial position in particular circumstances. This happens when, for example, an entity measures an asset held for sale at fair value less costs to sell in accordance with AASB 5 Non-current Assets Held for Sale and Discontinued Operations because the asset's fair value less costs to sell is lower than its carrying amount.

Table 8: AASB13 disclosures (non-recurring)

Level of input			Disclosure dependent upon level of valuation input
1	2	3	
•	•	•	The reasons for the measurement (given that it is not required)
	•	•	A description of the valuation technique(s) and the inputs used in the fair value measurement. If there has been a change in valuation technique (for example, changing from a market approach to an income approach or the use of an additional valuation technique), the entity shall disclose that change and the reason(s) for making it.
		•	Quantitative information about the significant unobservable inputs used in the fair value measurement. An entity is not required to create quantitative information to comply with this disclosure requirement if quantitative unobservable inputs are not developed by the entity when measuring fair value (for example, when an entity uses prices from prior transactions or third-party pricing information without adjustment). However, when providing this disclosure an entity cannot ignore quantitative unobservable inputs that are significant to the fair value measurement and are reasonably available to the entity.
		•	A description of the valuation processes used by the entity (including, for example, how an entity decides its valuation policies and procedures and analyses changes in fair value measurements from period to period).

PREPARING FOR VALUATION

11. PRELIMINARY PLANNING AND TIMEFRAMES

For asset intensive entities the valuation and associated depreciation expense are highly material figures within the financial statements. Given the relative subjectivity of the process and associated audit risk it is critical that sufficient time be given to the process to ensure it is well planned, conducted and a quality review process is undertaken well before the year-end financial statement process begins. Any issues or uncertainties regarding the valuations should be addressed well before the start of the final audit process.

Entities should understand that they are only one of many entities who also require valuations for their financial statements and as a result at year end there is a major amount of valuation work that needs to be delivered in a relatively short period of time. This leads to bottlenecks and sometimes late delivery of valuations.

There are many steps in the valuation process and sufficient time needs to be allocated to each step. Typical steps include the following. Based on a 30 June end of financial year, the timeframes and associated milestones to ensure a smooth valuation process are:

Step	Weeks	Milestone
Entity gets data and prepares request to quote	8	Aug – Sept
Entity goes to market	2	Oct
Valuation firms prepare proposal	2	Oct
Entity assesses proposals and awards contract	5	Nov
Valuation firm appointed and work scheduled	1	Dec
Entity provides asset listing and other data	8	Dec – Feb
Entity confirms assumptions for valuer	3	Mar
Inspections and valuation preparation	8	Mar – Apr
Draft valuation report issued	1	May
Entity undertakes quality assurance review	4	May
Final Valuation Report issued (after any changes)	3	Jun
Audit review of valuation	4	Aug
Finalise accounts	4	Sept
Final audit review and sign off	4	Oct
Total weeks for project	**57**	

While the procurement process may vary from entity to entity the timeline highlights the need to start initial planning about eight to ten months prior to when the valuation is required for preparation of the financial statements. This means for entities with a 31 December year end planning should commence by March.

Given the audit risk associated with valuation and depreciation there is an increasing trend for entities to bring the delivery of valuations forward. This usually includes the delivery of an interim valuation more than six months prior to year end followed by a desktop update about one month prior to year end. This process should be encouraged as it enables the smoothing of workloads and provides entities with increased time to undertake detailed quality assurance reviews and to model the impact on budgets. It also provides the opportunity for external audit to review valuation and depreciation calculations well before the end of year audit process.

While the timeframe can be compressed and some steps will vary depending on the size and complexity of the portfolio as well as the efficiency of internal processes it is important that sufficient time is given to the overall project. The amount of time taken by internal processes to gather initial data, go to market, assess tenders, approve the appointment (especially if it requires board or council approval), provide data and answers to valuers, confirm assumptions, review preliminary results and undertake a final quality review should not be underestimated.

Early planning and going to the market within three or four months after the end of the financial year will enable the valuers to properly plan and smooth the workload similar to how auditors conduct audits. Ie, there will be a period of planning, interim work and then final delivery.

The speed of this process can also be improved via the use of preferred supplier arrangements. Most jurisdictions have such arrangements in place for state government entities as well as for local governments. These arrangements have been established previously to reduce red tape and minimise the cost of procurement. Examples include:

Table 10: Example preferred supplier arrangements

State	Preferred Supplier Arrangement	Who can use
QLD	Standing Offer Arrangement (DNRM1304) for the Provision of Valuation Services, administered through the Department of Natural Resources	State government agencies Local Governments
QLD	Local Buy Contract for Asset Management Services BUS 219-0811	Local Governments Government Authorities
NSW	NSW Local Government Procurement (LGP12.08-2 Engineering, Planning and Development and Community Professional Consulting Services)	Local Governments Not For Profit groups
SA	SA Local Government Procurement (LGAP) Professional Consulting Services	Local Governments Not For Profit groups
WA	Whole of Government Contracts Common Use Agreement – (CUA23706)	Government Agencies Local Governments Public benevolent institutions
WA	WALGA Preferred Suppliers Directory (Asset Management Consultancy Services)	Local Governments

(Note: there are no preferred supplier arrangements in Vic and Tas)

Many entities have also successfully reduced the timeframe by appointing valuation firms for a three to five year contracts involving a rotational approach covering all asset classes over the contract period. These typically also include the need to provide annual desktop updates on the asset classes not subject to comprehensive valuation in the relevant years.

12. ESTABLISH APPROPRIATE ACCOUNTING POLICIES

Prior to commencing the valuation process it is recommended that due consideration be given to reviewing the existing accounting policies. This includes:

- reviewing the asset hierarchy (asset types, segmentation, componentisation, component types) to ensure data collected will support both asset accounting and asset management needs
- reviewing materiality thresholds:
  - capitalisation thresholds
  - revaluation thresholds
- reviewing appropriateness of using 'Fair Value' for asset classes comprised of large numbers of small value or short life assets
- updating existing non-current asset polices (or establishing a new policy) to ensure they have been updated for recent changes to the accounting standards and conceptual framework.
- reviewing policies around frequency of revaluations.

For some entities the cost of undertaking valuations can be expensive. However the cost can often be significantly reduced by establishing appropriate polices that balance out the cost by reducing the number of assets to be physically inspected and valued. This is best managed by first developing and applying appropriate accounting policies. These in turn should be disclosed in the financial statements.

It is advisable to undertake an analysis of alternative policies and to discuss them with external audit early within the valuation process.

13. DATA HIERARCHY / ASSET REGISTERS

To enable efficient valuation and analysis it is critical that significant work be undertaken regarding the data structure (or hierarchy) prior to the creation of the asset register and data capture.

As the data is collected and the valuation progressed it is likely that the original asset hierarchy will be adjusted as new information is received about the portfolio.

Establishing the asset hierarchy or data structure will include consideration of aspects such as:

- general category;
- asset class, financial class and AASB13 asset class;
- facility;
- defining the asset level;
- segments;
- components;
- asset types and sub-types;
- component types and sub-types; and
- other attributes.

For example, it is common for a number of different assets to be linked together as a common facility that when combined provide the overall service. This may include a number of assets from within the same asset class as well as other assets spread across a range of vastly different asset classes.

For example, a community facility might include:

- land;
- buildings;
- parks and garden assets;
- roads;
- car parks;
- transport infrastructure;
- drainage;
- miscellaneous infrastructure such as water and electrical services; and
- flood lights.

From both an asset management and a governance perspective, it may be necessary to be able to identify the assets in relation to the overall facility. This may include gaining an understanding of the overall condition and functionality of the assets to enable development of a facility asset management plan. In the case of emergencies or natural disasters it also provides capability to quickly understand the entirety of the assets affected.

Care needs to be taken when establishing your asset register or asset listing that proper consideration is given to defining your data hierarchy, how various assumptions will be applied across the portfolio and how the final figures are to be reported and used for other purposes (such as asset management planning).

14. ENSURING ASSET REGISTER IS COMPLETE PRE-VALUATION

One of the greatest concerns for auditors when auditing a valuation is obtaining sufficient and appropriate evidence over the completeness of the asset register. This is also a challenge for those undertaking the valuation.

Public and NFP sector entities tend to control a large variety of assets and some, especially local governments, regularly acquire assets via contribution. As a result there may be no record of an acquisition in the general ledger as there has been no cash flow.

This issue is particularly difficult for entities undertaking a valuation for the first time and especially so if the valuation is a consequence of moving to accrual accounting for the first time. This is because cash accounting provides only a limited range of controls to ensure the asset register is kept up to date.

The experience from all jurisdictions suggests that the initial valuation will identify a significant number of assets not previously recorded in the asset register. Additionally, as valuations are undertaken in the remaining years there will be a range of assets identified that were previously missed or for which the issue of control remains unresolved.

From a pragmatic perspective, entities valuing assets for the first time should expect that the accuracy of the asset register will not be guaranteed following the initial valuation. In these situations the valuation itself will often provide the best method to identify and classify assets. Hence the valuation process serves an important part of the overall asset management framework. If you don't know what assets you own, where they are located or what condition they are in, it is pretty hard to demonstrate that you are managing them efficiently and effectively.

Whether you are undertaking the valuation for the first time or you are well experienced in the process, there are a few processes to ensure the asset register is as accurate and complete as possible. These include:

- cross-checking to other operational registers (such as Geo-spatial Information System, property rental registers, maintenance registers or asset management systems) (this may include external systems such as land title registers);
- verifying from the general ledger that all acquisitions and disposals have been correctly recorded in the asset register;
- undertaking an inspection of specific sites and ensuring all assets in the geographic location have been recorded in the register (the use of internet tools such as Google Maps can provide an easy way to see what is there without having to spend time and resources travelling to the location); and
- preparing the initial asset register and having operational staff confirm the completeness and accuracy of the register prior to distribution to the valuation team.

Having been provided with an asset register, the valuation team should also implement controls to ensure the register is as complete and accurate as possible. This includes:

- querying the ownership or control of assets that are sighted in the field but are not recorded in the asset register;
- selecting a range of sample sites and ensuring all asses in that location have been recorded in the asset register;
- obtaining an understanding of what processes the entity has undertaken to ensure the completeness and accuracy of the asset register prior to supplying it to the valuers; and
- undertaking property searches for land against land title systems.

15. SETTING, VALIDATION AND REASSESSMENT OF ASSUMPTIONS AND METHODOLOGY

Auditors in particular are becoming increasingly aware and concerned regarding the volatility and inconsistency of valuations and depreciation calculations. There are many drivers for this inconsistency including use of different methodologies and assumptions. As a result audit is becoming increasingly interested in the methodology and underlying assumptions.

It is therefore important that appropriate consideration is given upfront to an analysis of the methodology to ensure it fully complies with all aspects of the standards and also reflects the asset management reality. If the approach is overly simplistic, fails to address key aspects of the standards or does not link to data held within the asset management system there is a risk that the end results will not be fairly presented. Alternatively, overly complex approaches can increase the risk of errors as well.

It should also be acknowledged that the determination of Fair Value and the associated depreciation expense is an accounting exercise requiring extensive knowledge of more than a dozen accounting standards and associated interpretations. It requires a multi-disciplinary approach that uses engineering expertise to gather detail about the location, specifications and condition of assets and valuation expertise regarding the conduct of valuations and delivery of appropriate evidence. However, without the necessary accounting standard expertise there is a high risk that the resulting methodology will not fully comply with the accounting standards or will result in material misstatement.

AASB116 requires an annual assessment of key assumptions. This includes consideration of the appropriateness of compoentisation (including split between short-life and long-life parts), useful life, residual value and pattern of consumption. It also requires an assessment of whether the carrying amount is different than the Fair Value which then involves consideration of the methodology and underlying assumptions such as dimensions, specifications and condition.

It is important that these be reviewed annually (even if an external valuer is used to deliver the valuation) and that such reviews of the methodology and assumptions be documented. This documentation will provide evidence to the auditor regarding the validity and appropriateness of the methodology and assumptions.

To assist both practitioners and auditors we have included two pre-audit checklists as **Attachment D: Quality review checklists.** The first is designed specifically to cover the valuation methodology, whereas the second covers the asset valuation framework.

16. INSURANCE VALUATIONS

Entities may have a range of assets that they also insure. Typically entities take out insurance over buildings and associated structures and some forms of infrastructure assets. While roads and similar assets are not often insured, water treatment and processing facilities are sometimes covered under insurance policies.

The valuation for insurance purposes will be different from the values provided for financial reporting purposes. This is because the financial reporting valuations may be based on the market or income approach, which might be significantly different from the cost of replacement.

Even with assets valued at fair value using the cost approach, the insurance valuation may be significantly different because of a range of additional costs required to reinstate the asset, and the fair value adjusts for accumulated depreciation whereas insurance requires replacement with an "as new" asset.

To provide efficiencies and to minimise the cost of additional valuation work, it is recommended that entities consider undertaking relevant insurance valuations in conjunction with the financial reporting valuation process. Both valuation processes require consideration of the same factors, measurement of dimensions and an understanding of potential replacement costs. The extra effort for a valuer to determine the insurance valuation once they have calculated fair value using the cost approach is minimal. Essentially it requires adjusting the gross replacement cost (used to calculate fair value) for a range of allowances, such as:

- cost increases during the rebuilding period;
- cost of demolition and removal of debris;
- cost of all relevant professional fees including, but not limited to, architects, engineers, solicitors, surveyors and planning consultants;
- any foreseeable associated or incidental costs; and
- any additional costs due to planning restrictions or due to changes in regulations relating to fire, flood and occupational health and safety legislation.

Some insurance companies may offer to provide their own valuations for the assets they are insuring. However, consideration needs to be given to whether this represents a conflict of interest by the insurance company as the level of cover provided by them and the associate premiums are linked directly to their own valuations. The use of a valuation provided by a valuer independent of the insurance company will provide a higher level of confidence that the values are not overstated (to achieve a higher premium) or understated (to ensure payouts are minimised). It is critical that entities ensure their insurance policies provide for the appropriate level of cover.

Similarly, the insurance companies may offer to provide the financial reporting valuations as part of the insurance valuation process. As with any financial statement valuation, due consideration should also be given to the ability, qualifications and experience of the insurance valuer to undertake such valuations in accordance with the accounting standards. If they do not possess an expert understanding of the various accounting standards and concepts then they are unlikely to have the necessary skills and experience to undertake such valuations.

17. CHOOSING THE BEST STRATEGY

It should be remembered that the primary purpose of undertaking the fair value exercise is to provide values to be reported in the entity's financial statements. These in turn are usually audited by an external auditor. This process demonstrates accountability and stewardship and in turn allows those outside the organisation to judge the performance of the entity.

The goal is much more than simply to undertake some calculations. It is about developing and delivering a robust methodology and associated calculations that can withstand a rigorous external audit process and provide meaningful indicators of the entity's performance. If done properly the process also provides key information critical to the development of a robust asset management framework.

By design it includes:

- developing an appropriate non-current assets policy;
- developing an appropriate valuation and depreciation methodology that fully complies with all key aspects of AASB13, AASB116 and other relevant standards;
- ensuring the entity's asset register is complete and accurate and the assets recorded therein exist in good order;
- creating a data hierarchy and table of assumptions that can be applied against the asset and components of each asset and that take into account the asset management reality for each individual asset;
- determining the method and templates to undertake the actual calculations;
- gathering and documenting sufficient and appropriate evidence to support the underlying assumptions;
- implementing internal quality assurance;
- producing and signing off final reports and methodologies;
- being able to respond quickly to any audit queries; and
- implementing an annual process to assess and adjust for any changes in condition, unit rates, pattern of consumption of future economic benefit, useful life, residual value.

Ultimately it is up to the organisation how they will implement and deliver the fair value process. Consideration needs to be given to the associated risks, best use of resources and associated costs. The following table illustrates possible approaches and summarises the risks.

Table 11: Alternative valuation delivery options

Option	Option
Do-it-yourself and learning from your mistakes as you go. While the amount of funds spent directly on the valuation process may appear to be low (with no or limited budget impact) the actual cost may be considerably higher due to the hidden cost of general salaries and time spent developing knowledge, expertise and a methodology. It also includes a higher risk of implementing a poor methodology and ultimately not passing audit. It also includes the additional risk of key staff moving on, resulting in the entire process needing to be reinvented and databases recreated or reconciled.	Partnering with an external consultant using a collaborative approach. With the right consultant who has a good methodology and experience with fair value this could be a good option. The risk is that they may lack the actual capability to deliver and you will essentially be paying them to learn as they go at your expense. You may also find it difficult to locate a consultant willing to share their intellectual property. One way to entice potential suppliers into this arrangement is to offer to engage with them in a long-term strategic relationship.
Appointing external consultants to undertake the entire process. This is a good option for those with no or limited in-house expertise. However, as well as cost, another drawback may be that the entity will not have control over the data. Additionally, the consultants may not be experienced in fair value or may not have a fully compliant methodology. Data control is extremely important if you wish to change valuation firms in future years. There is also a risk that additional fees may be required for the consultant to respond to audit queries. To those considering this option, it is recommended that you undertake extensive due diligence to ensure that the methodology is fully compliant and to determine whether the consultant is prepared to support the valuation through the audit process.	Using specialised valuation software. This approach ensures you maintain total control over your data and it can be used for future valuations. Care needs to be taken when selecting an appropriate system to ensure that it can handle the range of assets you have, that the system is supported with good documentation and processes, that the methodology fully complies with all aspects of the standards, and that the outputs include all relevant reports and methodology documents (especially AASB13 disclosures). Essentially this software provides the capability and methodology upfront rather than entities having to reinvent the wheel.

Typically, the development of in-house valuation capability will also require either an external consultant or source to provide external information to support the assumptions. It will also need the involvement, training and retention of relevant staff.

Other common issues with appointing external consultants include ensuring that the scope of work is clearly defined and the information provided to valuers is complete and accurate. If this approach is used it is recommended that key stakeholders, such as auditors, are heavily involved in the process.

The initial valuation is the start of an ongoing annual process. It is therefore important that entities take the time to put the right processes, procedures and methodologies in place to ensure resources are not wasted.

If done correctly, the valuation process provides core input to the asset management framework by capturing essential data such as asset location, components and condition. By adopting an asset management approach, the valuation exercise becomes an ongoing operational requirement, feeds directly into the asset management plan and adds value rather than being seen as a compliance cost.

Whatever approach is taken, because those charged with the governance are responsible for the financial statements they are similarly responsible for the valuation outcomes and therefore they need to fully understand the approach taken, including assumptions used. Reliance on experts cannot abrogate this responsibility.

18. QUALIFICATIONS, EXPERTISE AND EXPERIENCE OF THE VALUATION TEAM

Irrespective of whether the entity uses an in-house or external resources to undertake the project it is essential that the person providing the valuation has the appropriate qualifications, expertise and experience. The capability and experience of the valuation team will be a prime area of interest to the auditor.

The scope of work requires extensive expertise in a range of accounting standards (which are forever evolving) as well as expertise in valuation. Depending on the nature of the asset subject to valuation this may also require some engineering, valuer or other technical expertise. As a consequence the valuation process typically requires a multi-disciplinary approach where the team members provide input relevant to their area of expertise. This may involve a collaborative approach between external experts and in-house technical officers. For example the in-house staff may provide the asset register and key data (such as location, specifications, condition, future plans, etc) while the external financial reporting valuation experts will use that information to produce fully compliant valuations in accordance with the AASBs as well as associated valuation reports and documentation.

Whether an entity chooses to use in-house resources, engage an external expert or use a collaborative approach to undertake the valuation, consideration needs to be given to a range of issues. These include the following questions:

- What type of expert should I use?
- What qualifications do they need?
- How do I assess their capability to undertake the project?
- What factors should I use to assess one potential supplier (including internal staff) against another?
- How do I ensure I am going to get value for money?
- What will be the role of entity management and staff?
- How do I put together a tender proposal and what needs to be included?

These are all difficult questions and there is no one right answer. Before starting the selection process it is important that agreement is reached around the methodology to be used for selecting the valuer. The following may provide some guidance. It should be noted that this guidance is provided purely from the experience of the author. Entities should consider their own experiences, requirements and procurement practices when considering how to engage an external expert.

In some jurisdictions there is legislation requiring a person who values land to be a registered valuer with formal tertiary and professional qualifications. Examples include qualifying as a Registered Valuer (under jurisdictional legislation), holding RICS (Royal Institute of Chartered Surveyors), API (Australian Property Institute) or equivalent professional membership.

As land and buildings are fundamentally linked and the accounting standards require the land to be separated out into a different asset class, it is normal practice for a registered valuer to undertake the valuation of land, buildings and any other associated structures as one project. This may include valuing the associated hardstand, fences, retaining walls and other improvements such as swimming pools.

Infrastructure (such as roads, water, sewerage, utilities and marine assets) valuation, on the other hand, would typically include the use of engineers, accountants and valuers. The engineers may be either in-house or external engineers employed by either a valuation firm or an engineering firm. Care does need to be taken to ensure the engineers concerned have a high level of understanding and experience with both the accounting standards and the valuation methodology. If not, the underlying valuation and depreciation methodology may be materially flawed. The use of a multidisciplinary approach is recommended as each profession is typically required to provide the necessary knowledge, skills and technical expertise. While an engineer may have extensive knowledge of the infrastructure asset's design, purpose and cost, they may not have the necessary understanding of accounting concepts or valuation methodologies and techniques

required to determine the Fair Value and provide the necessary information for note disclosure in accordance with the accounting standards.

It is critical that care is taken to ensure the expert used to provide or take a key role in the valuation not only possesses the right qualifications but also has relevant experience and expertise. Being an engineer or a valuer does not necessarily mean they have the experience or capability to undertake specialised valuations of this nature. Valuations of specialised buildings or infrastructure undertaken to comply with the accounting standards require detailed technical knowledge of the accounting standards as well as valuation techniques and methodology. To quote:

> *It is dangerous to assume that because someone is a RICS member and a registered valuer that they have those necessary knowledge and skills which can only come from previous experience of such assets or the markets in which they sit. It is equally dangerous to assume that because the firm tendering is well known, that it has valuers on its team that have previous experience of assets like yours. These areas should be explored in the tender evaluation and you should ask tenders to submit details of the relevant experience of their team.*[68]

Specialist assets, such as art work, should be valued by a valuer with the appropriate specialist valuation qualifications, experience and resources.

How do I assess their capability to undertake the project?

There is a range of factors to consider when assessing the relative value for money offered by the various potential suppliers. Price is of course important but when engaging professionals to provide a professional service (such as valuation) it is normal practice to evaluate potential suppliers using a quality price model.

It will also be important that the valuer (whether internal or external) operates independently and there is no perceived conflict of interest. For example – if the firm also is engaged in the sale of the property or is also proving insurance over the portfolio.

The factors often considered for evaluation, in addition to standard criteria such as independence and absence of conflict of interest, are listed below. Of course it is up to the entity to determine what is important to them.

68 "The Terrier", Journal of the Association of Chartered Estate Surveyor. (Autumn 2012, page 44) :Asset Valuation Commissioning" article by Chris Brain – CIPFA

Table 12: Typical tender evaluation criteria

Criteria	Aspects
Methodology	Is the methodology sound and logical, and does it comply with all aspects of the AASB and other prescribed requirements—in particular, residual value, patterns of consumption based on key drivers, and scoring methodology?
	Can the project be delivered on time?
	Will the data gathered also benefit the entity through improved asset management planning? Do they understand what is required?
	Will the outputs include all necessary documentation to satisfy the audit process? (This includes an extensive detailed methodology document.)
Relevant skills	Do the relevant staff have the proper qualifications?
	What is their public profile?
	Are they recognised as leaders in this field?
Relevant experience	How many valuations of this type have they done before?
	Are they experienced in this sector and type of asset?
	What is their knowledge and experience with valuations under the accounting standards?
Track record	Has their work ever suffered an audit qualification?
	What do their referees say about their performance? What do they do to ensure a clean audit certificate?
	Ability and willingness to add value
	Can they form a strategic relationship and work with the entity to provide added value?
	Do they possess additional skills that can be leveraged?
	What do their referees say about their performance?
Quality assurance	Do they have ISO 9001 certification?
	If not, what processes do they have in place to ensure quality management?

How do I ensure I will get value for money?

The New Zealand Transport Authority Procurement Policy is commonly considered to be a leading best practice procurement model. This model focuses on obtaining value for money and states its purpose as follows:

The purpose of procurement is to:

- *maintain the value for money outcomes identified by ensuring that the expected value is delivered, the expected quality is provided and the expected cost and time is not exceeded; and*
- *where possible, enhance the value for money outcomes identified by enabling the identification of a solution with more value (e.g. higher quality), or at a lower whole-of-life cost than anticipated in the initial value for money evaluation."*[69]

In the context of procurement, value for money has been defined as:

- *"the best available outcome for the money spent in procuring the agency's needs" (Australia New Zealand Government Procurement Agreement);*
- *"the best possible outcome for the total cost of ownership" (the guidance provided by the OAG); and*
- *"the optimum combination of whole-of-life costs and quality (or fitness for purpose) of the good or service to meet the user's requirement" (HM Treasury, United Kingdom).*

The above definitions are underpinned by a number of common concepts:

- *Benefits derived from procurement-related activities can be maintained or enhanced through the procurement process;*
- *Cost alone is not a reliable indicator of value for money; and*
- *Economic, social and environmental costs and benefits inform the procurement whole-of-life value assessment.*[70]

The whole-of-life assessment within the procurement process requires less focus on the upfront price and more recognition that best value is obtained by looking at the overall value associated with the asset or service over its life.[71]

This highlights that value for money does not necessarily mean lowest price. It involves finding the optimal outcome when taking into account:

- quality;
- time; and
- cost.

The manual lists the following supplier selection methods:

- direct appointment;
- lowest price conforming;
- purchaser nominated price;
- price quality; and
- quality-based.

69 New Zealand Transport Agency's Procurement Manual (www.nzta.govt.nz/resources/procurement-manual/index.html)

70 New Zealand Transport Agency's Procurement Manual

71 New Zealand Transport Agency's Procurement Manual

Depending upon the strategic procurement approach adopted by the entity, it may be appropriate to use a direct appointment method. This would be done in situations where there is a long-term agreement or arrangement in place and where the valuer provides a range of value- added activities in addition to the delivery of specific projects. This enables the entity to work with a specific supplier and build a long-term relationship that benefits both organisations. If an entity adopts this approach it should ensure that it is in compliance with the entity's governance policies, that the justifications and approvals are appropriately recorded and that the arrangement and relationship are regularly reviewed to ensure that the expected benefits are still achieved.

If it is necessary to go to a quotation or tender process, while there is a range of approaches that may be used to appoint a valuer, the price quality method is usually considered most appropriate when engaging a supplier of professional services.

Methods such as the lowest conforming tender priced should be used only in situations where the products purchased are homogenous with no difference in the quality that will be delivered by alternative suppliers. This is not normally considered appropriate for the engagement of professional services.

Professional services are often very difficult to precisely describe and therefore any price competition has to be carefully managed. The NZTA expects that use of the lowest price conforming supplier selection method to select a professional services supplier will be rare. The price quality method of supplier selection is better suited to the purchase of professional services because the purchaser can distinguish between suppliers on the basis of their quality attributes, including their experience, skills, track record and their understanding of what the purchaser requires, but again the outputs which suppliers must price have to be specified precisely.[72]

The quality price method involves consideration of non-price attributes and the price.

The non-price attributes include (but are not limited to):

- *relevant experience—the supplier's previous experience in technical areas relevant to the outputs being purchased;*
- *relevant skills—the competence of the personnel that the supplier proposes to use, with particular regard to their skills and experience in areas relevant to the outputs being purchased;*
- *methodology—the procedures the supplier proposes to use to achieve the specified end result;*
- *track record—the supplier's record of delivering works or services to the quality standards required, on time and within budget;*

- *resources—the equipment, including facilities and intellectual property, that the supplier proposes to use to deliver the outputs; and*
- *financial viability—the supplier's ability to access the financial resources required to deliver the outputs to be purchased.*[73]

The process is relatively simple. It involves grading of the non-price attributes with no consideration given to the price. If a supplier's tender does not comply with every requirement of the non-price criteria, it is excluded from further evaluation on the basis that it does not deliver the minimum level of quality or satisfy time restrictions.

A mathematical weighting system is then generally used to weight the difference in quality, which is then used to adjust the submitted prices.

The tender with the lowest adjusted price is then selected as the winning tender, provided the overall price remains acceptable.

Details of this process and an example calculation are included in Attachment F: NZTA price quality model.

What will be my role?

Irrespective of whether an external or internal valuer is appointed to complete the project, responsibility for the valuation rests with management. This means that the entity must put appropriate governance processes in place to ensure the valuation is delivered to the appropriate quality and on time.

This may include:

- meeting regularly with the valuer and obtaining updates on progress;
- establishing a process to ensure all communications between the entity, valuer and auditor are directed to the correct people and in a timely manner;
- establishing a range of policies that will feed directly into the valuation process (these may include thresholds, assumptions and method of depreciation);
- liaising with both the valuer and the auditor to ensure a consistent understanding of the methodology and process, and addressing any audit issues as a matter of priority;
- providing essential data to the valuer or ensuring the data provided by other sections of the entity is complete and accurate;
- reviewing the underlying methodology and assumptions for reasonableness and documenting the results of the review; and
- reviewing the final valuation report and results for reasonableness and obvious errors (this process also needs to be documented for audit evidence).

How do I put together a tender proposal and what needs to be included?

It is important that if the use of external resources or purchase of software is required that such resources be acquired in accordance with the entity's purchasing policy.

The public sector in particular is often regarded as being highly bureaucratic with excessive levels of red tape. This can be seen especially in common tender approaches. While there are reasons why organisations may choose to use the same tender documentation across all contracts irrespective of the likely quantum of the contract price and associated work and risks, the use of extensive tender documentation can be counterproductive to receiving value for money. Often these processes are driven around internal efficiencies rather than ensuring the process gets a good result.

Anecdotally, many suppliers assess the size and complexity of the tender documentation against the relative size of the likely contract price and choose not to submit tenders. If the work involved in putting a quote together is significant and there is a low chance of winning the tender, they make a business decision that the cost and associated risk exceeds the potential benefit and therefore choose not to submit a price.

It is therefore important if you wish to receive the best value for money that the quotation or tender process reflects the relative size, price and risk of the job. For example, requiring the completion of a 140-page document for a likely small or moderate fee will result in a low number of proposals. Similarly, including a very large professional indemnity insurance requirement is counterproductive if it rules out the firms best able to deliver the service, especially given the generally low risk associated with financial statement valuations of public sector assets. The net result is that only very large firms can satisfy the tender specification and their fees by nature include a margin to cover the unnecessary level of additional public liability insurance cover.

For contracts with a low or moderate fee consideration should be given to using a direct appointment process based on existing standard offer arrangements or a strategic procurement strategy.

If it is necessary to go to a process involving the submission of proposals, care should be taken to ensure the cost of the process does not exceed the potential benefit to be gained from a quotation process.

For a small or moderate estimated contract price the process should be limited to a quotation with minimal specification. A more formal tender process should be used only for very large projects.

A sample quotation specification has been included as **Attachment E: Pro forma tender specification and instructions to valuers**. It is recommended that such quotation specifications focus on the outcomes to be achieved, key criteria and the requirements to be complied with, rather than setting out the entity's own views of how every aspect should be completed.

While in some circumstances the entity's own methodology may be appropriate, a potential supplier may be able to undertake the project more efficiently or using a better approach. There is also the risk that the specification may not comply with the prescribed requirements.

Working with the tenderers to get the best outcome

While you are looking for the best outcome for your organisation, it is important to appreciate that potential suppliers are also looking for the best outcome for their own organisation. They will not bother providing a quote if:

- the process is too difficult;
- there are too many unknowns; and
- the timeframes or other requirements are unrealistic. When putting together the information to be supplied as part of the tender or quotation process or engaging in discussions, consider the comments in Table 4.

Table 4: Tender specification considerations

Consideration	Comments
Format and content of data supplied to the potential suppliers	Supplying asset registers in PDF form, or not supplying sufficient data, limits the ability of potential suppliers to analyse the data and develop the most efficient strategy. Either supply the data in Excel format or provide summary-level data and an example of what will be supplied to the winning tenderer.
Use and design of tender templates	While entity-developed templates that ensure consistency for every tender within your own organisation look great, they generally create a huge problem for tenderers. They sometimes: • are supplied in PDF format (so they can't be edited), resulting in the tenderer needing to re-create the form • include the same assessment criteria applied to every potential contract instead of what is relevant to a valuation project. • include the same level of insurance cover, irrespective of whether the risk is low (such as for valuation) or relates to the construction of a multimillion-dollar, high-risk project. As the cost of professional indemnity insurance is particularly high, a limit set too high will restrict the range of firms that will apply, and limit the selection to firms that have a high overhead, which they need to recover through their fees. • include text boxes and other formatting requirements that impede the ability of the supplier to adequately address the criteria. It is important to make the process of completing the documentation as efficient as possible for the tenderers. • Are overly complex and large given the potential size of the contract price. The greater the amount of information sought and the complexity of the document, the more time it takes for a tenderer to complete your document. Unless the contract is expected to be considerable, it may be more appropriate to let the tenderers use their own templates with a proviso that they address your specific evaluation criteria.

Consideration	Comments
Time frames for tender process and scheduling of work	The timeframe is critical, and many organisations place unrealistic timeframes on potential tenderers. Recognise that the valuers also work in a busy industry and need to schedule their work to meet the financial reporting timeframes of all their clients. As a consequence they experience peaks and troughs in their workload. To ensure you get the best outcome it is advisable to go to market at least nine months before financial year end with an aim of appointing within two months of the tender release. This enables the valuers to schedule their workload, provide you with a better price and ensure the final report is delivered on time for you to meet your financial reporting deadlines.
Setting out the scope of work	Specifying exactly how you think the valuation should be conducted and calculated may be counterproductive and may lead to a limitation of the scope of the work. Recognise that you are engaging professionals to undertake a project that requires specialised expertise. As experts they should be able to suggest the option that provides the best value for money. Consider limiting the scope of works to the outcomes required and allow the tender to specify the best way to achieve the outcome.
Handling questions and respecting the intellectual property rights of tenderers	The potential suppliers may want to ask questions to ensure they fully understand the requirements. It is therefore important that an officer is made available to answer questions. This person needs to understand what is required as an output of the project (as opposed to the tender process). Similarly, it is important to recognise that the discussions may include a mix of clarification of the requirements as well as discussion about particular approaches or about aspects relating to the intellectual property of the supplier. Care needs to be taken to ensure the rights of the potential supplier are not abused by disclosing to other suppliers confidential or sensitive information resulting from those discussions. Information distributed to other potential suppliers should be limited to clarification of the requirements.

Final thoughts on procurement

In the public sector value for money is and always must be a major factor. However, it must be well understood that value for money does not mean lowest price. Price should be a determining factor only once it has been established that all of the following factors are fully satisfied. Otherwise you will have paid money to get something that did not meet your needs and that will always be poor value for money.

Key issues to consider when evaluating potential suppliers include the following:

- Does the methodology fully comply with all aspects of the applicable accounting standards?
  - Have all assets above the revaluation threshold been appropriately componentised to allow depreciation calculations?
  - It is sound and logical and reflects the asset management lifecycle of the entity?
  - Is it appropriately based on the factors that drive the consumption of the assets service potential?
  - Have all key assumptions been stated and can they be supported by sufficient and appropriate audit evidence?
  - Will the valuer guarantee full compliance with applicable accounting standards and any other relevant requirements?
  - Does the valuer's proposal advise why it is reasonable to expect that material provided as a result of their work would be likely to meet the requirements of an auditor, and what steps they will take, under what conditions and costs, to meet any audit?
  - Will the valuer provide the data and audit evidence in correct and agreed format?
  - Will the data gathered be useful and add value to the organisation. For example, the data includes condition assessments based on the asset management framework and can be used to feed directly into the asset management planning process.
- Are the professional reputation, experience and skills of the valuer to undertake the specialist work beyond reproach?
  - Registered valuers are used for land and buildings.
  - Engineers or specialist valuers are used for infrastructure (appropriate experience and skills).
  - The valuer has a sound record of performance.
  - The valuer can clearly demonstrate their methodology, compliance with the prescribed requirements and general credibility (they know what they are talking about).
  - The valuer can clearly demonstrate an understanding of the accounting standards, other prescribed requirements and the audit process.

- The valuer asks the right questions to understand the nature and scope of the work rather than just putting a price in.
- The valuer will continue to support and add value to the entity and develop the client relationship well after delivery of the project. This might, for example, include ensuring all audit queries are addressed and the valuation data can be used by the organisation for asset management planning purposes.
- They are easy to work with and respond to queries in a timely manner.
- They are willing to provide access to the raw data used in the valuation process; and
- They agree to any restrictions on the use of entity information provided to the valuer

19. ISSUING INSTRUCTIONS

Once a valuer (whether internal or external) is appointed it is important that the scope of work and deliverables are clearly documented. This is best done via the issue of formal instructions to the valuer. However care needs to be taken to ensure the instructions are well designed and clearly set out what is required and what is to be delivered.

Unfortunately in the past some instructions to valuers have not been well defined or have excluded essential requirements (such as the information required for AASB13 disclosures).The issue then comes when further information is required or there is a difference in understanding of what outputs are required and the supplier argues that it was out of scope and as a result demands additional fees.

Care needs to be taken to ensure the instructions issued are not just a copy of instructions issued in previous years and that they have been updated to reflect recent changes in the standards or requirements and also reflect the specific outputs required.

A sample instruction to valuers has been included as **Attachment E: Pro forma tender specification and instructions to valuers.**

POST-VALUATION CONSIDERATIONS

20. POST DELIVERY EVALUATION

Once the valuation has been completed it is recommended that a post delivery evaluation be undertaken. This may include a quality assurance check over the valuation. However the main aim is to understand whether the project was performed on time and to a high quality and ultimately that the entity received value for money. The information gathered from this exercise should then be used to make improvements with future projects. This might include design and evaluation of future tenders and specification of the scope of work.

Some aspects to consider are:

- Did you get 'value for money'?
- Was the scope of work well designed?
- Did you get what you thought you were going to get?
- If there were material changes in the results – were they expected or assessed as being appropriate?
- Are you able to explain movements between the current and previous valuation?
- Did the valuer perform to expectations? Consider:
  - Did they understanding the scope of work
  - What was the quality of their work communications
  - Were they willingness to add value
  - Did you receive value for money
  - Were all timelines met? If not … who was at fault (internal or external?)
  - If there were issues with timeliness – was the cause of the issue the valuer or due to internal delays in supplying necessary data or information?
- Could the audit process have been improved?
- Have you provided the valuer with any feedback that could improve how they deliver their services to you?

21. UPLOADING VALUATION DATA

Once the valuation is completed the entity would normally upload the new valuation into the asset register so that depreciation calculations can be made in future years. This will typically involve uploading each component as an individual record with a field indicating the details of the master asset to which it belongs. This enables the depreciation to be calculated for each component but an overall value to be reported for each asset.

The process would normally involve the identification of key fields (such as Replacement Cost, fair value, useful life, residual value and depreciation rate), which are then uploaded to the system via a data file (such as a CSV file or spreadsheet). Controls should be established to ensure that the register "post upload" agrees in total with the valuation results.

This process can become quite complex, however, depending on the impact and extent of changes between the pre-valuation and post-valuation asset registers. In addition to changes for new assets and assets disposed, there may be:

- changes in the asset hierarchy (different components or asset classes);
- removal of multiple entries that relate to individual assets (this often occurs as a result if capital expenditure recorded as a new item rather than as a direct adjustment against the relevant component); and
- changes in designation of or transfers between asset classes.

Owing to the complexity that can sometimes occur and the volume of transactions, the time taken to undertake this process and complete reconciliations can be significant. There is also often a significant time lag between the upload process and the completion of the audit process.

The time and effort involved in completing this process should not be underestimated. It is recommended that the process and data requirements (including format) be discussed well in advance with the various stakeholders involved. The process should also be well documented to facilitate improvements to the process in future years.

AUDIT CONSIDERATIONS

22. ROLE OF AUDIT

In the public sector and for most NFP sector entities an essential part of the accountability framework is or the financial statements to be audited by an external and independent auditor. The auditor is then required to provide an opinion that the financial statements present fairly the financial performance or position of the entity. As a result when undertaking a valuation it is critical that due cognisance is given to the need to be able to satisfy audit's needs. This generally includes providing evidence to satisfy audit assertions including:

- Completeness
- Rights and obligations
- Existence
- Valuation and allocation

This chapter focuses on a range of valuation and depreciation related issues from an auditor's perspective. It must be emphasised that the objective of the valuation process is to provide meaningful information to the users of the financial statements. It is the responsibility of management to ensure the process and assumptions used produce results which in turn provide meaningful information. Such information may be used both internally as well as by external users.

This guide is intended for a wide audience including a range on non-technical and technical practitioners. This includes auditors as well as those involved in the process and higher level management.

The aim of this chapter is to provide non-auditors with an appreciation of aspects of the process from an auditor's perspective. This will provide insight to assist those involved in the process prepare for the audit process as well as assist in improving the overall quality and relevance of the Information produced from the valuation process. It includes practical information for management in preparing for an audit to be undertaken.

23. ASSESSING MANAGEMENTS UNDERSTANDING

An auditor will need to take into account a range of factors. These include risk and their assessment of the overall control environment. In relation to asset valuation and depreciation auditors will be concerned with management's level of understanding of the valuation process and subsequent results. In particular these include:

- Understanding significant movements from year to year;
- Understanding the processes and methodology used to undertake the project;
- Being able to explain the key assumptions, judgments and estimates used and how they were applied, and
- Provide necessary evidence and documentation to support valuation.

Understanding significant movements from year to year

Auditors will typically be interested in understanding the movement in both valuations and depreciation from year to year and a standard audit step is to compare the net movement in value and percentage between the current year and the previous year.

Each year the entity is required to review the appropriateness of both the valuation and depreciation figures and if there are significant changes it will either revalue the asset and/or prospectively adjust depreciation. Even with the use of desktop valuations by way of indexation it is quite common for entities to experience significant movements in both valuation and depreciation calculations. There may be many causes for this. Examples include changes in the underlying assumptions, the impact of impairment due to natural disasters or even a change in valuation firm or methodology.

If entities are unable to explain the reason behind significant movements in these critical figures auditors can become somewhat uncomfortable about management's understanding and the reasonableness of the figures. It is recommended that a detailed analysis of the net movements be undertaken each year to provide the appropriate level of assurance to the auditors.

Understanding the processes and methodology used to undertake the project

Similar to the previous issue auditors need to understand the processes and methodology used to undertake the valuation or depreciation calculations. This includes both the valuation process itself (such as being clear about the key assumptions and how they were applied) as well as the various governance processes put in place to deliver the project. Auditor's can become quite concerned if the entity is unable to explain the processes or provide a reasonable understanding of the methodology used. This may be more difficult in cases where the entity uses specialised asset management or valuation software or external experts. Ultimately, responsibility rests with those charged with governance.

Most asset management systems used by entities include a range of algorithms which are protected by patent or are the intellectual property of the particular product. Examples include the development of health indices or condition ratings based on a range of physical characteristics. These in turn may be used to determine the Remaining Useful Life of the asset. In these situations the entity

must be able to explain to the auditor how the calculation is performed and the key factors used in the calculation. Ideally the entity should also be able to demonstrate that the outputs produced by the system are reasonable and can be relied upon. Appropriate evidence and documentation is necessary to enable the auditor to satisfy the requirements of the auditing standards.

Different external experts may also have developed their own processes and algorithms which represent the intellectual property of the expert. As with asset management systems the entity should be able to explain to the auditor the overall process, methodology and key assumptions used. Entities need to weigh the possible consequences if because of intellectual property concerns experts are unable to provide information that may be necessary for those charged with governance to form a view on the valuation or associated calculations. Where doubts exist, the external auditors should be consulted.

Being able to explain the key assumptions used and how they were applied.

While essentially the same as the previous paragraph there is a need for the entity to be able to explain and justify the various assumptions used within the valuation. While an entity may appoint an external expert to undertake the valuation that expert will be relying on the information provided by the entity to set the range of assumptions. Ultimately it the entity is responsible for the valuation. It must be acknowledged that the external expert can only go on what they see and what they are told and they are more than likely to be unaware of wider issues relating to obsolescence or the internal political environment.

It is recommended that all assumptions used to drive the valuation are examined in detail by the entity and relevant documentation of the review provided to the auditor to evidence the review. Given that the entity has undertaken the review it therefore holds that the entity should be able to explain the assumptions used and demonstrate that they are reasonable.

24. PREPARING FOR AUDIT

Key elements of an effective asset valuation framework

To ensure the valuation process is conducted efficiently and to a high quality it is important to develop a good asset valuation framework.

In the 2011 review of the valuation of the water sector assets of Victoria the Auditor-General of Victoria noted that:

> *The revaluation of land, buildings and infrastructure assets can significantly alter the values disclosed in an entity's financial report. Effective internal controls in relation to asset valuations are therefore important and will mitigate the following strategic and operational risks:*
>
> - *failure to engage, understand and manage the valuation process;*
> - *lack of co-ordination with stakeholders;*
> - *lack of data integrity;*
> - *inability to maintain accurate and current asset information;*
> - *recording of incorrect asset values; and*
> - *failure to comply with regulatory and legislative requirements.*
>
> *Effective asset valuation controls and processes include:*
>
> - *comprehensive policies and procedures;*
> - *appropriate management practices; and*
> - *sound governance and oversight.*[74]

The Auditor-General also identified the following key elements of an effective asset valuation framework.

74 VAGO Water Entities: Results of the 2010-11 Audits 2011-12-12 (page 60)

Table 14: Key elements of an effective valuation framework[75]

Component	Key Elements

Policies and procedures	• Measurement and valuation of non-current physical assets policy
	• Guidelines should:
	  • contain an objective;
	  • specify the scope of the policy;
	  • specify the frequency of the policy;
	  • should be reviewed and updated;
	  • require assets to be valued at a component level;
	  • specify the valuation approach for determining fair value;
	  • refer to applicable financial reporting framework and its requirements; and
	  • be comprehensive
	• Policy and guidelines approved by the board.

Management practices	• Terms of engagement with the quality valuer documented; agreed with management; and aligned with the requirements of the exercise.
	• Comprehensive and regular reporting to management and board.
	• Relevance of valuation methodology reviewed.
	• Reasonableness of the valuation result assessed considering:
	  • appropriateness of sample selection, sample size and mix of physical and desktop assessments;
	  • appropriateness of the unit costs/indices's applied;
	  • asset condition considered when assessing useful lives; and
	  • reasonableness of the movement in asset value given management understanding of the assets.
	• Recommendation by management to the board regarding adoption of valuation results.
	• Management periodic review of policy, procedures and practices.

Government and oversight	• Policy and procedures approved by the board. • Periodic review of policies by management and board. • Compliance with approved policy and procedures monitored. • Proposed valuation methodology reviewed. • Reasonableness of the fair values assessed. • Fair values adopted for financial reporting.

Source: Victorian Auditor-General's Office

75 VAGO Water Entities: Results of the 2010-11 Audits 2011-12: 12 (page 60)

Auditors will apply ASA 540 Auditing Accounting Estimates Including Fair Value Accouinting Estimates and Related Disclosures when auditing fair value measurements. Key aspects of that standard are that it requires the auditor to:

(a) obtain an understanding of the entity and its environment to provide a basis for the identification and assessment of the risks of material misstatement for accounting estimates;

(b) design and perform audit procedures to respond to the assessed risks of material misstatement of an entity's accounting estimates;

(c) perform further substantive procedures in response to any identified significant risks;

(d) evaluate the reasonableness of accounting estimates, and their disclosure in the financial report; and

(e) obtain written representations from management about the reasonableness of significant assumptions used by it in making accounting estimates.[76]

Tips

The following tips are recommended to facilitate the external audit process and an appropriate valuation:

Involve audit at earliest phases of planning for the valuation

This would include discussions on asset classes to be valued; general approach and methodology; software being used; components; use of external experts; audit process; and what they are looking for in terms of sufficient and appropriate evidence, including potential intellectual property issues if an external expert is going to be used. This provides audit with the opportunity to identify and discuss potential issues and their expectations. Inviting their involvement also creates a better working relationship and opens communication channels.

Create clear lines for communication

This includes communicating with external experts such as valuers. It is important that audit knows who to talk to and how to get hold of them. If you are using external experts, ensure they understand the role of audit and are happy to field audit queries (even six months after final delivery).

Likewise it is important that audit is instructed that any technical issues regarding the valuation are discussed directly with the expert (whether in-house or external) who provided the technical input. This is to ensure that the incorrect information is not provided to audit by people who were not part of the technical decision making process and could make misleading statements resulting in audit drawing incorrect conclusions.

76 ASA 540 *Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures – Main Features*

Once the draft valuation methodology is developed invite audit to provide feedback

This will include defining the valuation basis; the method used to calculate gross replacement cost; components; factors used to determine depreciation; condition scoring matrix; and patterns of consumption. While they may not want to express an opinion on the appropriateness of the methodology, this step does provide the opportunity to identify potential issues. Better to address the issues before too much work begins than have a major issue at financial statement time.

Involve audit in discussions regarding use of sampling and appropriateness of sample sizes

While there are no specific rules on sample size, auditors are very familiar with the concept from an audit sample selection perspective. In determining the sampling approach due consideration needs to be given to materiality, stratification of the portfolio and risk of error.

Document key assumptions and have them reviewed and approved

While some assumptions will be unique for individual assets you will need to develop default assumptions for the different asset types within each asset class. The auditors will want to obtain sufficient and appropriate evidence of the reasonableness of these assumptions. One of the best ways of doing this is to document the assumptions, including the reasoning behind each assumption, and to have a reviewing officer or team independently review and approve the assumptions.

This approach is a standard control of any quality management system and affords the auditors comfort over the reasonableness of the default assumptions.

Invite audit to attend some inspections

While they may not want to attend inspections, it provides an opportunity for audit to see how the valuation methodology is translated in practice, in particular how condition scoring and estimates of remaining useful life are assessed. This also provides an opportunity for audit to assess the competence and capability of the people undertaking the inspections.

Undertake and document post-valuation checks

Having completed the valuation calculations it is important to scrutinise the data for obvious errors, incorrect assumptions and missing data. Any documentation to demonstrate that this was undertaken (such as validation checks, emails, spreadsheets and reports) should be retained for review by audit.

This quality management control reassures audit about the quality, completeness and accuracy of the calculations.

Ensure audit has access to all data, calculations and supporting documentation

Audit will want to undertake its own analysis of the results, as well as undertake recalculation if considered necessary, and select samples for substantive testing. They will also want to add the totals to agree to the valuation report and figures posted to the general ledger, and be able to file the supporting spreadsheet or report electronically in their audit software. Judgments, estimates and assumptions represent key risks for auditors and entities will therefore need to provide appropriate documentation and evidence. It's important to ensure the final reports are all in agreement!

Provide audit with final, signed output

Ideally this would include scanned copies of:

- valuation certificate;
- valuation report;
- asset listings spreadsheet;
- final approved valuation methodology including assumptions; and
- quality control review conducted by internal officers.

Pre-audit checklists

To assist both practitioners and auditors we have included two pre-audit checklists as **Attachment D: Quality review checklists**. The first is designed specifically to cover the valuation methodology, whereas the second covers the asset valuation framework.

GUIDANCE FOR SPECIFIC ASSET TYPES

25. INTRODUCTION

The public and NFP sector tends to control a wide range of assets. Examples include, but are not limited to, the following.

Table 16: Typical asset classes

General Category	Asset Class
Land and buildings	• Land • Land improvements • Landfill • Buildings (using market approach) • Buildings (using an income approach) • Buildings and Other Structures (using cost approach) • Building contents
Miscellaneous	• Art works • Fleet • Plant and equipment
Parks and gardens	• Parks and open space • Playgrounds
Road infrastructure	• Roads and Bridges • Culverts • Kerb and channel • Traffic signals • Traffic management devices (TMDs) Road furniture and signs • Street lighting
Stormwater and drainage infrastructure	• Drains • Stormwater pits and civil assets • Gross pollutant traps (GPTs)
Water infrastructure	• Water mains • Water meters and services • Water equipment and civil assets • Dams, weirs and canals
Sewerage infrastructure	• Sewerage pipes • Sewerage manholes • Sewerage equipment and civil assets
Miscellaneous infrastructure	• Major civil assets • Marine assets • Footpaths and cycle ways

The following guidance is provided for a selection of these different asset types. It is important to note that the following guidance is provided based on typical or common approaches. Ultimately it is the responsibility of the entity to adopt and approach whichever is appropriate given the entity's particular circumstances and requirements. Likewise if the valuation is being undertaken for a reason other than financial reporting (such as market appraisal) it may be appropriate to use a different approach.

Determining the appropriate approach requires professional judgment and in doing so it is critical that the person exercising that judgment has the appropriate skills and knowledge of the various accounting standards and accounting framework. Just following general guidance or the approach that was used in previous years may result in material error.

26. LAND

In some jurisdictions it is illegal for anyone other than an appropriately qualified valuer to value land. This may also apply to the application of an index against a valuation previously provided by a valuer. However, in other jurisdictions it may be appropriate for management to supply their own valuation, provided appropriate disclosure is provided. Care needs to be taken to ensure relevant legislative requirements are not breached.

Land that can be traded in an open market

Land that would require what's known as freehold title can be openly traded. It may also exhibit indicators of some form of impairment, such as being flood prone or contaminated. This type of land would normally be valued at market value by a valuer.

In doing so the valuer will take account of restrictions in its use, the underlying characteristics of the land and potential alternative uses that other market participants might see as a higher and better use (after taking into account issues of legal feasibility, financial costs and likely returns, etc).

For example a site may have been traditionally used as a church and child care facility. In undertaking the valuation the valuer will consider whether that site could also be used as a residential or commercial development (not withstanding that this might require a range of legal, planning costs and construction costs).

Land that cannot be traded in an open market

In the public sector a significant amount of land is designated as crown land or reserve, or has specific restrictions placed upon it that precludes it from being traded in the market. Similarly, not-for-profit entities may control buildings that sit on reserve or public land (such as scout halls and sporting club houses). Because the asset cannot be traded in an open market it would be inappropriate to use a 'market' approach. Accordingly the valuation will be based on either the income or the cost approach.

The income approach should be used only if its value is primarily dependent on its income-generating capability. The use of discounted lease streams to provide access to sections of the community that could not afford to pay the lease at a full market rate would indicate that the value of the asset will not depend on its cash-generating capability, neither is it an orderly transaction. Any income approach should be undertaken only by a properly qualified professional (valuer or accountant).

As a result the bulk of this type of land needs to be valued using the 'cost' approach. This requires gaining an understanding of the characteristics of the land and determining how much it would cost to acquire it if it were owned by a third party and you had to purchase it from them. In order to acquire such land it would need to be held by another party. In order for the other party to hold the land they would need to hold it in freehold title. This means it would not have self- imposed restrictions such as the inability for it to be traded. AASB 13 Fair Value Measurement also requires that the fair value be calibrated to any transaction costs incurred.

Logically a landowner will attempt to get the maximum value for their site. Despite the entity wishing to restrict its future use, the landowner will not be willing to sell it at a discounted rate if other market participants are willing to pay a higher price for it. As a result, self-imposed restrictions or restrictions that can be removed through rezoning are irrelevant. The cost should be the same as the market value of the site assuming it was available for sale (therefore it must be held in freehold title) and not subject to any restrictions that can be removed. A good example that demonstrates this is a council in NSW who recently sold a parcel of land for over $100m. This land had previously been used as a community park and had been classified as 'community land' meaning that it could not be sold and had a range of restrictions in place regarding its use. However over a number of years undertook a legal process to change these restrictions to enable sale and then place a 'material change in use' of it in order to maximise the return from its sale.

Land Under Roads (LUR)

The approach used to value LUR should be no different to the valuation of land where there is no open market, Valuing such land using the 'cost' approach also makes logical sense from an accounting perspective.

For example, assume an entity resumed land to construct a road and paid the previous owners a figure of $10 million as compensation. The value is initially based on the market value of land as previously used and zoned (residential etc.). The $10 million would be capitalised in the books (as it was necessarily incurred). When revalued the fair value should remain at $10 million (assuming no price change) as AASB13 Fair Value Measurement requires the fair value to be calibrated to the transactional cost.

The valuation basis for restricted land (unless there is a market or its value is determined by its income-generating capability) should be determined using the cost approach. This will be determined by assessing the market value of comparable sites. It might, for example, include the average price per hectare of land in close proximity with similar characteristics.

27. BUILDINGS

In the public and NFP sector buildings are typically classified as being either general purpose or special purpose. It should be noted that this guide covers the public and NFP sector. Assets held by for-profit entities (including cash generating units) would normally be valued using the market or income approach.

General purpose buildings are buildings that are normally available for purchase in the open market whereas special purpose buildings tend to include buildings constructed for a specific purpose that are not normally available for purchase in the open market. Examples include:

Table 17: Examples of types of buildings

General Purpose	Special Purpose
Residential houses and units traded in an open market	Any building not located on freehold title
Office blocks (on freehold title)	Council chambers, halls, depots, toilets, bus shelters, shelters and pergolas in parks, aquatic centres
Commercial buildings (on freehold title)	Court houses, correctional facilities, police stations, fire and ambulance stations, administration centres, transport depots, workshops
Warehouses or industrial buildings (on freehold title)	Hospitals, schools, universities
Commercial child care (on freehold title)	Community based child care or aged care facilities (including accommodation units)
Investment properties	Churches, chapels and other religious buildings, community halls and facilities
	Major sporting facilities and grandstands, transport hubs and centres,

General purpose

The market approach will need to be determined for the entire site (including all structures, land and improvements) as the market evidence of sale includes the entire site. Once determined the total site value needs to be allocated against the land and buildings. As this involves the valuation of land it would normally be undertaken by an appropriately qualified valuer.

Having determined the overall market value of the site (either by direct market comparison or using the income approach), the valuer needs to determine the value of the land component. This is typically done using the vacant land rate. The difference between the overall market value and the land component is the building part.

Componentisation

The determination of components can be quite problematic for buildings valued using the market approach. This is because there may be no direct link between the condition of the various components and the overall value of the property. In other words there may be no nexus between the level of remaining service potential (market value) and the rate of consumption of that service potential (depreciation) at the component level.

For this reason some practitioners prefer to componentise the asset at the level where a component has its own market value (often referred to as being separable). For example if the property was a block of units or terrace houses, as each unit could be independently bought and sold each unit would be classified as a separate component. The same would apply for strata title units in a commercial building. In some circumstances (such as when the units will not be made available for individual sale), it may be appropriate to value and depreciate the entire building as one asset.

The standard does however require that assets be componentised for the purposes of depreciation. In doing so due consideration should be given to the cost/benefit of the exercise and the potential for material error.

Gross value disclosure

As noted previously in the guide the 'net' method of disclosure is the only appropriate method for assets valued using either the 'market' or 'income' approaches. This is because there is no 'gross value' as such. However due to formatting issues with the disclosure note relating to movements in the value of Property Plant and Equipment (where a gross method of disclosure is required) the Fair Value at the time of valuation should be shown as both the net and gross values. In the subsequent years the net value (Fair Value) will reduce by the amount of accumulated depreciation since the last valuation.

Pattern of consumption of future economic benefit and depreciation

The determination of the appropriate pattern of consumption of future economic benefit for assets valued at market approach is particularly difficult. This is because for any individual asset the factors that drive the determination of value can be highly varied and their impact can also change significantly in a very short period of time.

The valuer should give due consideration to evidence from the market in order to assess what the pattern of consumption of future economic benefit has been in the past and use professional judgment to determine whether the pattern in the future is likely to be:

- constant;
- increasing curve;
- decreasing curve;
- S-curve; and
- some other pattern.

Consideration also needs to be given to whether the building or units contain a residual value. If it is likely the building will eventually be decommissioned and removed, the residual value is likely to be nil. However, if the building exhibits heritage or other similar characteristics, could potentially be sold and is unlikely to be demolished, it is possible that a residual value does exist and needs to be taken into account.

These assumptions need to be well documented and applied appropriately to perform the depreciation calculations.

Special purpose

These typically comprise buildings and structures that are constructed with special properties or designs, or built in specific locations or on non-freehold land, which means these assets cannot be bought and sold in an open and liquid market. The various assets may comprise an overall facility that delivers a particular service to the community, in which case they need to be valued using the cost approach. Examples include hospitals, prisons, council administration buildings, courthouses, aquatic centres and works depots.

Identification of the asset within the facility

These types of asset can become quite complex. There may be a number of different buildings or other structures on the same site; one building may sit on a number of different land titles; or multiple assets may sit across a range of separate land titles.

The types of assets on the site may include a range of buildings as well as a range of other structures such as:

- car ports and pergolas;
- footpaths;
- fences;
- retaining walls;
- swimming pools;
- sport or recreational facilities;
- fountains and water features;
- hardstand and parking areas;
- landscaping and gardens; and
- security lighting.

Each of these should be valued as separate assets with their own features, characteristics, condition, costs and depreciation. Together they comprise the total cost of the facility. It should be noted that there is no clear definition of the difference between a building and a structure. It is up to the entity to determine this as part of the asset hierarchy. However in the valuation industry it is standard practice to differentiate buildings from other structures by the existence of a roof.

Table 18: Common building and other structure assets

Buildings	Other Structures
Buildings	Hardstands
Sheds	Fences
Pergolas	Retaining walls
Covered walkways	Security lights
Shade structures	Footpaths
Bus shelters	Fountains and water features
Toilets	Swimming pools
	Sporting facilities
	Landscaping and gardens
	Irrigation systems

Thresholds

Consideration also needs to be given to setting appropriate capitalisation and revaluation thresholds.

The capitalisation threshold should be established for each asset class at an appropriate level. This level will vary from organisation to organisation, and in the public sector guidance or instruction is often provided by overriding prescribed requirements such as those issued by some Treasuries. All assets with an estimated value above this level need to be recorded in the asset register and brought to account.

Assets below this level should be expensed. However, given the nature of these assets it may be appropriate to record them in a register of portable and attractive items and implement appropriate annual inventory procedures to account for their existence.

A 'revaluation threshold' should also be established that provides for a level where the risk of not revaluing the assets below this threshold is considered to be less than the cost involved in including them in the revaluation. While setting this threshold is subjective and requires professional judgment, typically it is set where the value of assets subject to the revaluation is greater than 70 or 80 per cent.

Depending on the nature of the portfolio and the percentage of assets included in the revaluation exercise, it may be appropriate to either:

- keep those assets excluded from the revaluation at their existing values and continue depreciating them; or
- adjust the valuation of the assets excluded from the valuation by use an appropriate index. This typically would be calculated from the results of the actual valuation;

For example, given a capitalisation threshold of $5,000 it would be appropriate to:

- set a revaluation threshold of $20,000 if 85 per cent of the value of the total portfolio was expected to be greater than $20,000; and
- adjust the value of the assets below $20,000 by the average percentage increase in cost that was determined for the assets above $20,000.

Componentisation

Each asset will need to be componentised to allow for condition assessment and determination of depreciation expense. Each component should:

- be significant in cost (for asset management purposes, however, many organisations choose to treat some parts with lower costs as a separate component);
- have a different useful life or depreciation pattern; Typical components include the following. However, consideration needs to be given to the level of detail required given the size and nature of the associated facility asset. The conclusions reached from this analysis should be incorporated into the entity's non-current assets policy or valuation and depreciation methodology.
- separately identify the short-life and long-life parts consistent with the AASB decision of May 2015. This will be critical to the determination of depreciation expense.

Table 19: Typical components (buildings and other structures)

Buildings	Other Structures
Floor	**Hardstands Earthworks** Pavement Surface
Envelope/structure	**Fences Posts Rails**
Floor coverings	Fence material
Internal fit out	**Retaining walls**
Roof	Structure
Mechanical services Transportation services	**Security lights**
Fire and safety services Heating services	Poles
	Lights
	Footpaths
	Left
	Right
	Fountains and water features
	Structure Pump Controller
	Swimming pools
	Pool
	Filtration and dosing system
	Pumps
	Sporting facilities (e.g. tennis court) Court
	Fence
	Lighting
	Landscaping and gardens
	Soft scaping Garden beds Structures Furniture Services
	Irrigation systems
	Pipes Sprinklers Pumps Controllers

Determining the gross replacement cost

The cost will typically be determined by one or a combination of:

- recent construction costs by the entity or a similar entity;
- details provided from an industry construction guide;
- benchmarks against similar entities; and
- valuer's in-house cost databases.

The source of data and process used to arrive at the final cost need to be well documented. They also need to be assessed against the level of valuation input as specified in AASB13 Fair Value Measurement, as different levels have a significant impact on the level of disclosure required in the financial statements.

Pattern of consumption of future economic benefit and depreciation

Due consideration needs to be given to the:

- factors that drive the economic consumption of the asset and each component;
- likely pattern of consumption of future economic benefit for each component; and
- likely asset management treatments and subsequent impact on useful life and residual value for each component.

The drivers of consumption are usually holistic (such as functionality, capacity, utilisation, obsolescence, equitable access and safety) and component-specific (such as physical condition and maintenance history). Typically, as buildings age, the impact of the holistic factors becomes increasingly important and physical condition less important.

Once assessed, these and the assessed pattern of consumption of future economic benefit need to be documented and used within an appropriate valuation and depreciation methodology to determine the level of consumed future economic benefit (accumulated depreciation) and depreciation expense.

It is also important to document the evidence to support the key assumption used to support the valuation. If this is not possible, it may indicate that the methodology being adopted is not appropriate and therefore consideration should be given to using an alternative methodology.

Using a weighted average depreciation rate across the whole building

In the past some jurisdictions have recommend the use of a weighted average depreciation expense, which is then applied to the value of the entire building.

This method is not appropriate.

In the Basis for Conclusions supporting AASB116 Property, Plant and Equipment it was noted that:

> *Of particular concern to the Board were situations in which the unit of measure is the item as a whole, even though that item may be composed of significant parts with individually varying useful lives or consumption patterns. The Board did not believe that, in these situations, an entity's use of approximation techniques, such as a weighted average useful life for the item as a whole, resulted in depreciation that faithfully represents an entity's varying expectations for the significant parts.*[77]

Special purpose buildings with change of use

Sometimes the use of special purpose buildings will change over time. For example a building may have been used for a specific purpose for many years but due to changing the needs (such as changes in capacity) a new facility is constructed. As a consequence the existing building is no longer required to deliver this service.

The entity has a number of options. This might include demolition but often the decision is made to use that building for another purpose (such as office accommodation). This is especially so when the building is considered to have 'heritage' value or there is an over-riding desire to retain a consistency of aesthetics in a particular location. While the building may be used for a different purpose it may be that the design of the building is not ideal given its new use.

The valuation process for these types of buildings needs to consider what underlying service potential is delivered by the asset. For example it might be the case that if the building was significantly damaged that the building would be demolished and replaced with a modern design. This would indicate that the replacement cost should either be very low (because it is essentially surplus to needs) or should be based on the cost of the modern equivalent.

However, if it more likely that the building would be reconstructed based on traditional building practices (such as in order to restore the heritage value) then this would indicate that the replacement cost should be based on reconstruction.

77 AASB116 Property, Plant and Equipment Basis for Conclusions BC26

Special purpose building deemed surplus to needs

In some circumstances an entity may have buildings, or parts thereof, which are effectively surplus to needs. They may still be used (simply because they are there) but if they were to experience significant damage it is likely that they would not be replaced.

In some cases it might be that the asset was bequeathed or donated to an entity with an over-riding restriction that it cannot be sold. While the intent of such bequests is admirable such restrictions can sometime place an unexpected burden on entities some time later in the assets life. For example the building may no longer provide any service potential to the entity but funds are required to be directed to its maintenance which could otherwise be used to deliver services.

If it is determined that the asset is surplus to needs and would not be replaced then this would indicate that the service potential delivered by the building is very low or even non-existent. In such case the replacement cost of this service potential will be very low and the associated Fair Value even lower.

In making this assessment due consideration needs to be given to the level of obsolescence. For example, in 2014 the Victorian Auditor-General issued a qualified opinion on the accounts of the State of Victoria due to the state recording a significant write-down of the education sector on the basis of obsolescence despite evidence to the contrary. The Report to Parliament stated:

> *On 2 October 2014 a qualified audit opinion was issued on the Annual Financial Report of the State of Victoria, 2013–14 (AFR) on the basis that we do not agree with the accounting policy used to assess the level of economic obsolescence in schools.*
>
> *The state has determined that seven out of every 10 Victorian schools are partly economically obsolete. It has therefore written down $1.58 billion of taxpayers' investments in those schools buildings as at 30 June 2014. However, those schools are continuing to deliver educational outcomes for the citizens of Victoria and had recently received significant investments of taxpayer funds through Commonwealth and state government funding programs. Further, in our review of the practices applied across other Australian jurisdictions we found that Victoria is alone in its approach to this matter.*[78]

28. INFRASTRUCTURE ASSETS

Road Infrastructure

Road infrastructure typically comprises a range of different asset types, which, due to their different nature, characteristics and asset management regimes, should be classified as different asset classes (as per AASB13). Typically these include:

- sealed roads;
- unsealed roads;
- bridges;
- culverts;
- kerb and channel (gutters);
- traffic signals;
- traffic management devices ;
- road furniture and signs;
- street lighting;
- footpaths and cycle ways; and
- stormwater and drainage.

Segmentation

The bulk of these types of assets are commonly referred to as lateral assets, because they stretch for some distance. As such these assets need to be segmented.

Each segment should be homogeneous in that it should comprise the same characteristics (such as width and material) and have the same condition across the entire segment. Once the overall portfolio is segmented into these different sub-populations, the valuation can then be performed efficiently using a range of assumptions.

In an urban environment it is usual to break the segments of a lateral asset, e.g., a road, into intersections.

However, in a rural environment the distance between intersections may be long, with the road experiencing significant change in the underlying characteristics and condition. In this situation it is advisable to set a maximum segment length and to set in places smaller segments where that part of the road network is expected to have a different consumption pattern from other parts.

For example, a rural local government may set a maximum segment length of 1,000 metres. However, it may have shorter lengths in areas of known flooding or that experience particularly heavy traffic or loads. Therefore the road may be segmented as set out in table 20 below.

Componentisation

Each asset will need to be componentised to allow for condition assessment and determination of depreciation expense. Each component should:

- be significant in cost (for asset management purposes, however, many organisations choose to treat some parts with lower costs as a separate component); and
- have a different useful life or depreciation pattern.
- Separately identify the short-life and long-life parts consistent with the AASB decision of May 2015. This will be critical to the determination of depreciation expense.

Table 20: Example road segments

Asset Name	Segment Number	Chainage Start	Chainage End	Length
Queens Road (0–1000)	1	0	1000	1000
Queens Road (1000–1780)	2	1000	1780	780
Queens Road (1780–2100)	3	1780	2100	320
Queens Road (2100–3100)	4	2100	3100	1000
Queens Road (3100–4100)	5	3100	4100	1000
Queens Road (4100–4750)	6	4100	4750	650
Queens Road (4750–5000)	7	4750	5000	250

The following components are often used by many organisations to define the asset hierarchy. It should be noted there is no clear guidance on how assets should be componentised. Ultimately it is up to the entity to determine the level of componentisation required. In doing so, consideration needs to be given to the level of detail required for asset management planning as well as financial reporting after taking into account the size, value and nature of the asset.

Table 21: Typical components (roads infrastructure)

Asset Class	Component
Sealed roads	Seal Pavement Formation Earthworks (if significantly different from formation)
Unsealed roads	Surface Formation Earthworks (if significantly different from formation)
Bridges	Superstructure Substructure Rails Surface/decking Note: If bridges are small, one component only may suffice.
Culverts	Culvert
Kerb and channel	Left kerb Right kerb Traffic islands
Traffic signals	Poles Signals Controllers Audio systems
Traffic management devices	Device (TMDs)
Road furniture and signs	Asset
Street lighting	Poles Lights
Footpaths and cycle ways	Left Right
Stormwater and drainage	Pipes and drains (closed pipe, open channel and drains) Stormwater pits and civil assets Gross pollutant traps (GPTs)

Determining the gross replacement cost

The cost will typically be determined by one or a combination of:

- recent construction costs by the entity or a similar entity;
- details provided from an industry construction guide;
- benchmarks against similar entities; and
- valuer's in-house cost databases.

The source of data and process used to arrive at the final cost needs to be well documented. It also needs to be assessed against the level of valuation input as specified in AASB13 Fair Value Measurement, as different levels have a significant impact on the level of disclosure required in the financial statements.

Pattern of consumption of future economic benefit and depreciation

Due consideration needs to be given to the:

- factors that drive the economic consumption of the asset and each component;
- likely pattern of consumption of future economic benefit for each component; and
- likely asset management treatments and subsequent impact on useful life and residual value for each component.

The drivers of consumption are usually holistic (such as functionality, capacity, utilisation, obsolescence, safety and traffic congestion) and component-specific (such as physical condition and maintenance history). Typically, as roads age, the impact of the holistic factors becomes more important. Similarly, over the past 100 years the volume, size and weight of vehicles has also increased, leading to the need to design bigger and better new roads or undertake significant renewal work on existing roads. Often this may also lead to the construction of new infrastructure to relieve the stress on the existing network or solve specific traffic congestion issues.

Once assessed the above factors, and the assessed pattern of consumption of future economic benefit, need to be documented and used within an appropriate valuation and depreciation methodology to determine the level of consumed future economic benefit (accumulated depreciation) and depreciation expense.

For some asset types (such as bridges and road pavements) there are a range of sophisticated engineering modelling tools which are used on a day-to-day basis to model, asses and manage the respective assets. Some are based on degradation profiles which are correlated to an estimated remaining useful life where as others adopt more sophisticated valuation and depreciation models. For example BRIMOS (Bridge Monitoring System), which is an advanced structural health technology, uses a range of sophisticated measures to assess bridge assets (excluding timber) to enable accurate life cycle curves to be created, after taking into account the assets functionality, capacity and utilization. These in turn can be used to value and depreciate the asset ensuring that the engineering asset managers and asset accountants use the same source data.

It is also important to document the evidence to support the key assumption used to support the valuation. If this is not possible it may be an indicator that the methodology being adopted may not be appropriate, and therefore consideration should be given to using an alternative methodology.

Other Infrastructure

The process for all other infrastructure (such as water and sewerage infrastructure, marine assets, major civil assets, major fences, levies and barrier walls, etc) is the same as for roads. It includes the identification of the appropriate:

- segments;
- components;
- costs;
- factors that drive the consumption;
- asset lifecycle and treatments, and subsequent impact on useful life and residual value; and
- valuation and depreciation methodology.

Typical components include the following. However, consideration needs to be given to the amount of detail required, because of the size and nature of the associated facility asset. The conclusions reached from this analysis should be incorporated into the entity's non-current assets policy or valuation and depreciation methodology.

Table 22: Typical components (other infrastructure)

Asset Class	Component
Water mains	Mains Valves
Water meters and services	Meters Services
Water equipment and civil assets	Civil Mechanical Electrical
Dams, weirs and canals	Civil Mechanical Electrical
Sewerage mains	Pipes
Sewerage manholes	Manhole
Sewerage equipment and civil assets	Civil Mechanical Electrical
Major civil assets	Civil Mechanical Electrical
Marine assets	Civil Mechanical Electrical

29. NETWORKED ASSETS

There are a range of different definitions for what comprises networked assets. For the purpose of this guide they are defined as:

> *Interconnected assets that rely on each other to provide a service. If a network asset is removed the system may not function to full capacity.*

Common examples include:

- Electricity distribution network
- Water reticulation network
- Sewerage and waste water network
- Bulk water supply network
- Computer and information technology network
- Transport ticketing and logging systems
- Traffic signals and live camera control systems

Depending on the nature of the entity and purpose for operating the assets the approach to valuation may be different. Consideration needs to be given to this purpose in order to identify the 'unit of account'.

29.1 Income generating

Some public and NFP sector entities are fundamentally not-for-profit but way operate a network of assets as an independent business unit in order to generate income. Typically these include commercialized water businesses units.

Likewise some public sector entities operate in the commercial world as a for-profit entity and sometimes in competition with private sector entities. Examples include electricity generators, distributors and retailers.

These types of entities are operated to generate profits and as a result to return dividends to the owning entity. As a result they would normally be considered to be a 'for-profit' entity.

For these types of operations the 'unit of account' would normally be identified as either the whole of entity or for each different division or scheme. As the primary objective is the generation of profits these types of networked assets would normally be valued using the 'income' approach.

Undertaking these valuations is a highly complex process and should only be undertaken by professionals with the appropriate expertise.

29.2 Service Delivery

Many public and NFP sector entities however also operate the same or very similar assets where the principle objective is not the generation of profit. For example a local government may provide water and sewerage services to their community as part of general council business. While they may recover fees through a general service charge there is an expectation that the service will continue be provided even if the revenue received is lower than the cost to provide the service.

Likewise an entity may provide services over a wide geographical area and as a consequence of its remote and dispersed locations operate via an extensive information and data technology network. Such a system way be connected wirelessly, via designated cable or even via private or public cloud facilities. It may include a range of servers, communication equipment, routers and personal computers.

As the primary purpose of these networks is not the generation of profit it is unlikely that either the 'market' or 'income' approaches would be appropriate to value the network. These are normally valued using the 'cost' approach.

While the assets would normally be valued at the individual asset/component level (for example – pipes and pits, ticket machines, routers, servers, etc) consideration needs to be given to the nature of what the service being delivered and whether there is a less costly alternative delivery mechanism. For example over the past decade most transport ticketing systems have evolved from manual printed or embossed tickets to electronic passes that customers top-up online. i.e In determining the gross replacement cost due consideration needs to be given to the cost of the modern equivalent and consideration of technical and functional obsolescence.

30. GROUPED ASSETS

Grouped assets are portfolios of homogenous-type assets that individually fall below the recognition threshold but when considered in combination are material in value and should therefore be recorded on the balance sheet. This principle should not be used for assets that have fundamentally different characteristics, as this will result in incorrect assumptions about useful life and depreciation.

To determine what constitutes a grouped asset, consideration should be given to the following:

- Items being considered are below the recognition threshold level on an individual basis yet when considered as a whole are material;
- Individual items are homogenous in nature and typically purchased rather than constructed; and
- Useful lives and consumption patterns of individual items are approximately the same.

Examples typically include:

- road signs and furniture;
- parking meters;
- waste disposal bins; and
- water reticulation meters.

In some cases entities may choose to record grouped assets as one asset in the asset register with all new purchases capitalised as a new addition. In this scenario the accounting policy often specifies for the asset class to be valued at historical cost with depreciation based on an average useful life using the straight-line method. The account balance will still require support by way of an asset register.

However, it may be necessary to monitor the condition of each grouped asset for asset management or risk purposes. In this situation the assets will need to be individually identified and condition assessed. This provides the opportunity to value on either historical cost or fair value.

31. PLANT AND EQUIPMENT

Entities will have a range of assets, which are typically grouped together as plant and equipment. Like most asset types there is typically a small number of assets with high value and a large number of assets with low value. Examples include:

- Motor vehicles (cars, utes)
- Trucks (including specialised attached equipment)
- Earthmoving and large equipment (graders, dozers, bob cats, front end loaders, etc)
- General plant (tractors and implements, large generators, forklifts, dingos, pumps, quad bikes, etc)
- Minor plant (brush cutters, mowers, tools, drills, grinders, lathes, etc)
- Furniture and fittings (tables, desks, chairs, shelving, compactus, etc)
- Office equipment (photocopiers, kitchen appliances, window mounted air-conditioning, etc)

Because this is a 'catch all' asset class it contains a range of different types of assets it may also result in the need to apply different approaches to the valuation. For example some items (such as motor vehicles and some trucks) are traded in an open and liquid market and therefore it would be most appropriate to value these assets using the market approach. In contrast – a truck which has been heavily customised for a specific purpose (such as a bush fire appliance) may be more appropriately valued using the cost approach. In accordance with the requirements of AASB13 the use of different techniques would indicate that these would need to be separated into different 'asset classes' for the purposes of AASB13 disclosure.

Given that for many asset intensive public and NFP sector entities the total value of plant and equipment is often very low when compared to the other assets (land, buildings and infrastructure) it is important that due consideration be given first to setting an appropriate accounting policy.

For example it may be not be cost effective to value all of these assets at fair value given the large number of assets required to be inspected and the relative low value of many of these assets. Although not directly addressed by accounting standards, this issue is typically managed via the creation of a policy that specifies different valuation and depreciation approaches for sub-classes of assets, depending upon the relative materiality levels and risk of material misstatement. This approach is acceptable provided the information included in the financial statements is not significantly different as a result.

The assets are defined as being either minor or major plant:

- Minor: items of plant and equipment that do not satisfy the definition of a major item of plant and equipment. Typically these are recorded at historical cost and depreciated on the straight-line basis; and
- Major: items above a high value threshold that also exhibit a useful life of greater than five years. Typically these are valued at fair value and depreciated on an appropriate basis.

Care does, however, need to be taken to ensure the approach adopted is consistent with the approved non- current assets policy and other prescribed requirements.

32. AGED CARE / RETIREMENT VILLAGES

These facilities there are usually a combination of aged care facilities (funded partly by federal government subsidies) and independent living units (ILU). These are then supported by a range of community and special purpose buildings and infrastructure (such as aqua therapy pools and community halls). The valuation also needs to take into account the value of the land upon which the facility sits.

Typically the ILU are sold based on a right to occupy where an amount is paid up front and when the occupier leaves they (or their estate) are paid a set percentage of the original purchase price or eventual sale price based on their length of stay. The difference is then used to fund refurbishment of the unit prior to sale to the next inhabitant.

The aged care facilities are operated based on a range of fees for occupation of the bed. Some hold 'bed licences' whereas there are also many facilities that operate without bed licences. 'Bed Licences' are issued by the federal government and provide the holding organisations subsidies based on the number of occupied aged care beds. Different subsidies are paid depending upon the level of care required by the occupant. The occupants are also required to pay a differing range of fees based on their assessed income and assets. The 'bed licences' can be transferred between different aged care facilities and as such represent an intangible asset.

Facilities operated as a cash generating units

As with networked assets some aged care or retirement villages are operated primarily to generate profits and as such should be valued as a cash generating unit using a market based approach. This whole of business valuation will include consideration of the market value of the underlying land, projected cash inflows and outflows and any allocated bed licences. Most likely approach would include assessing both the market and income value and may also involve consideration of the current replacement cost. Consideration also needs to be given as to whether the retirement village facilities are run as a separate business unit to the aged care facilities and therefore should be valued as separate 'units of account'.

Facilities operated as a community service

In many cases however retirement villages and aged care facilities are operated by religious or community based organisations where the facilities provide a service to the community and are not operated primarily to generate profits (albeit they may operate in a commercial manner).

It is important to note that both the for-profit and not-for-profit facilities receive the same subsidies and funding from the federal government. For example centres hold bed licences for aged care and the federal government provides set funding based on the number of licensed aged care beds.

In valuing these types of facilities consideration needs to be given to whether there is any evidence of an overall market value. For example if there was a sale of a comparable facility then this would provide some high level evidence to support the fair value. However the nature of these facilities is such that they tend to be unique with a different mix of location, services, accommodation and pricing structures. As such the ability to access direct market evidence is usually limited. As a result it is more likely that the unit of account should be determined at the individual asset level rather than the whole of facility level.

The price offered for ILU is usually based on the relative market price of similar accommodation in the surrounding location. However the price is normally not negotiable and two identical units may sometimes be priced differently due to differences in the inclusions (such as whether furnished or not) and other market factors.

For example the following factors can cause high volatility in prices for Independent living units (ILU's):

- Historic sales
- Long Settlement Dates – advanced agreed sales with no need immediate requirement to occupy
- Current asking prices & availability in location / surrounding towns
- Furnished / not furnished
- Refurbished as part of new occupant (built in to price)
- Demand & Supply – within a two month period that a retirement village can go from plenty of vacancy to sold out.

As a result a collective approach of considering all of the above factors together is usually required to ensure consistency.

Often the villages do however have a price schedule which is relatively consistent across the various types of accommodation. However it should be noted that this price is for the 'right to occupy' rather than the physical asset. As a result it may be appropriate to estimate the Fair Value using either this price, the cost approach or use a combination of both. Ultimately it will require the professional judgment of the valuer to determine what value best reflects the Fair Value. Whichever method is selected should be well documented along with the reasons for adopting that approach.

Aged Care facilities receive funding based on the specific licence. However the facilities also typically include a range of communal facilities. The funding received by the entity is also tied to the bed licence which can be traded independently to the physical assets. As such the 'bed licence' represents an intangible asset and therefore the physical assets (buildings) should be valued using the 'cost' approach.

There is also an issue with the valuation of the land. If the value of the ILU is based on the purchase price of each ILU then this price inherently includes the value of the land upon which the building sits. The valuer usually provides a notional split of land value, and apportioned the land value to either the ILU area or the care facility (say 60% area to ILU's and 40% area to care facilities / hostels / high care / special care etc).

33. ART, MUSEUM AND LIBRARY COLLECTIONS

The valuation of collections such as libraries and museums has also traditionally posed a significant challenge when arriving at fair value. The nature of these collections is that:

- they comprise a very large variety of items, ranging from some of very small value to some with extremely high values;
- the service potential embodied within each individual item and how it is consumed can vary significantly depending upon the item's nature, the community's changing levels of appreciation of the item and aesthetics, or even the discovery or acquisition of new items;
- the valuation approach can vary from item to item with individual items (or sub-collections) based on the market, income or cost approach; and
- the cost of valuing each individual item often significantly outweighs the benefit achieved from the valuation exercise.

Unfortunately, there are no hard and fast rules on how best to deal with these types of assets. It is a matter of considering the cost–benefit of valuation and risks associated with the adopted approach. **Attachment H: Example guidance on Collections—Libraries and Museums** provides an example of Queensland has dealt with this challenge.

34. HERITAGE AND CULTURAL ASSETS

The valuation of heritage and cultural assets has traditionally presented many challenges. These include assets like historic buildings or structures, art works, documents and objects of historical significance. There is no dispute that these types of assets hold immense intrinsic value for the community. However, by their nature these assets tend to be unique and irreplaceable.

As a consequence, there is often no (or a very limited) market in which to apply the market approach, and while some assets can be reproduced or repaired using original construction techniques and materials, this arguably tends to diminish their historical or cultural significance. Also, how do you replace a collection of extinct butterflies?

Some assets may also be used for operational purposes whereas others are preserved only for their heritage or cultural value. The approach for valuation should be no different than for non-heritage or non-cultural assets.

Where an item is unique and cannot be replaced or restored, this may suggest that it cannot be reliably measured. In this case, the asset does not satisfy the recognition criteria and should not be brought to account as an asset. However, appropriate disclosure should be provided in the notes to the accounts.

Additionally the value of the asset to the community may not depend on its physical condition. It might be argued that as long as it is protected from future deterioration, it does not have a limited life and therefore may not require depreciation.

35. WATER LICENCES

Most jurisdictions have tradeable water access licences. These were typically created as a consequence of severe drought conditions across Australia and as a strategy to manage access to water and ensuring water is shared between the environment, towns and cities, and farmers and industry as well as for Aboriginal cultural activities.

They usually cover surface water and ground water and typically allow trading of access rights within specific schemes. For example in Queensland the licences are issued under a Resource Operation Plan (ROP) based on a geographical region. The licence is not tied to the land (so it can be traded between parties) but can only be traded within the ROP (so to control the total amount of water that can taken from a specific catchment or scheme). The licences and details of all trades are recorded in the Water Allocations Register (WAR).

While the various schemes have been in operation for a number of years there has been a varied range of activity. Generally the water allocations were either allocated for low or no fees (based on historical or traditional use) or via an open auction process.

The auction process effectively established the market value of the licences for each scheme at that time. Since then the various schemes have experienced very different levels of activity. Some schemes have a depth of transactions whereas others have only experienced a very low number of transactions. Given the lack of transactions the establishment of a market value for the licences can be problematic.

The water allocations are an intangible asset and covered by AASB138. This provides that for NFP entities the value can be recorded at 'cost' or 'fair value'. The allocations have typically been valued at 'cost' since initial purchase. As these assets have been acquired to protect in times of drought it is usually to assume they have an indefinite life and accordingly under AASB138 they are not normally amortised.

There is however a requirement under AASB136 Impairment to assess annually whether the assets have been impaired. In particular: whether the carrying amount is higher than the recoverable amount. For NFP entities the recoverable amount is the Fair Value.

If there was sufficient depth of market (as recorded in the water allocations register) the Fair Value could be determined based on the observable evidence of those sales. However if there are no or very few sales this might indicate they have lost value (impairment) or alternatively it might indicate that the holders have purchased the licences to protect into the future and as a result have no desire to sell (therefore no evidence of impairment).

Due consideration needs to be given to the why the level of trading is low and professional judgment exercised to determine whether there are indicators of impairment which in turn would require a diminution in value. For example – the licences are critical in times of drought (El Nino) but may be deliberately kept (and not used) in times when there is an abundance of rain (La Nina). This does not necessarily mean that the value of the licence has been impaired. As these licences are usually acquired as a long term insurance against drought it may be that the value always remains strong.

36. SERVICE CONCESSION ARRANGEMENTS: GRANTOR

ED261 Service Concession Arrangements: Grantor was issued by the AASB in July 2015.

In Australia, service concession arrangements are entered into by public and private sector entities to develop and deliver major infrastructure assets for public services. A service concession arrangement generally involves an operator (a private sector entity) constructing a public infrastructure asset (a service concession asset) and providing public services, such as operating and maintaining the infrastructure on behalf of the grantor (the public sector entity) for an agreed period. Examples of service concession assets include roads, utilities distribution, prisons and hospitals. The common terms used to describe these arrangements include Public Private Partnerships, Build-Own-Operate arrangements and Build-Own-Operate-Transfer arrangements.

In exchange for the asset and services, the grantor makes payments to the operator or grants the operator a right to charge users of the service concession asset.

Currently, there is no specific Australian Accounting Standard that prescribes the accounting for a service concession arrangement from the grantor's (public sector entity) perspective.

The lack of a specific Australian Accounting Standard that prescribes the accounting for a service concession arrangement from the grantor's (public sector entity) perspective has resulted in divergence in the accounting for such arrangements. Consequently, some public sector entities recognise service concession assets and liabilities in their statement of financial position while others do not. Given the increasing number and value of service concession arrangements, it is important that the AASB issue an accounting Standard to address the lack of guidance in relation to accounting for such arrangements.[79]

Main Features of this Exposure Draft

The proposals in this Exposure Draft are aligned with the requirements of IPSAS 32 for a grantor to recognise an asset provided by an operator that is used in a service concession arrangement and a corresponding liability.

The main impacts of the proposals are potentially:

(a) an increase in the recognition of assets and liabilities associated with a service concession arrangement in the statement of financial position for entities that currently are not recognising service concession assets and liabilities. In particular, this impacts a service concession arrangement that involves the public sector grantor granting the private sector operator a right to earn revenue from a third-party user of the service concession asset. This type of arrangement may not be currently recognised by some grantors. To the extent that such arrangements

79 ED261 Service Concession Arrangements: Grantor

meet the recognition and measurement criteria of the [draft] Standard, they would need to be recognised in the statement of financial position as a service concession asset and liability; and

(b) earlier recognition of assets and liabilities of a service concession arrangement. That is, assets and liabilities would be recognised during the period in which the assets are constructed or developed. This contrasts to the, current practice of recognising assets and liabilities of a service concession arrangement only at the end of the construction period.

The following outlines the proposals in further detail.

Scope of Proposals

The proposals in this Exposure Draft are applicable to arrangements that involve an operator providing public services related to a service concession asset on behalf of the grantor for a specified period of time.

Recognition and Measurement

The Exposure Draft proposes that the grantor would:

(a) recognise an asset provided by the operator, including an upgrade to an existing asset of the grantor, when the grantor controls the asset. The Exposure Draft proposes the criteria for determining when the grantor has control of the asset;

(b) recognise a service concession asset that is under construction or development when the recognition criteria for the asset is met during the period in which it is constructed or developed;

(c) initially measure the service concession asset provided by the operator at fair value in accordance with AASB 13 Fair Value Measurement. Subsequent to the initial recognition of the asset, the service concession asset is accounted for in accordance with AASB 116 Property, Plant and Equipment or AASB 138 Intangible Assets, as appropriate; and

(d) recognise a corresponding liability measured at the fair value of the service concession asset, adjusted for any other consideration between the grantor and the operator. The liability would be recognised using either of the following two models:

(i) Financial liability model

This model would apply where the grantor has an obligation to deliver cash or another financial asset to the operator for the delivery of the service concession asset. This model requires the grantor to allocate the payments to the operator under the contract and account for them as a reduction in the liability recognised, a finance charge and charges for services provided by the operator;

(ii) Grant of a right to the operator model

This model would apply where the grantor does not have an obligation to deliver cash or another asset to the operator for the delivery of the service concession asset. The grantor instead grants the operator the right to earn revenue from third-party users of the service concession asset. This model requires the grantor to recognise a liability reflecting the unearned portion of the revenue arising from the exchange of the assets between the grantor and the operator. The grantor would recognise the revenue according to the substance of the service concession arrangement and reduce the liability as the revenue is recognised.[80]

The illustrative example provides an example of how this standard would apply in relation to a service concession arrangement involving a road asset.

Arrangement Terms (Common to All Three Examples)

IE2 In these examples, monetary amounts are denominated in 'currency units' (CU).

IE3 These terms are common to the three examples that follow:

IE4 The terms of the arrangement require an operator to construct a road – completing construction within two years—and maintain and operate the road to a specified standard for eight years (ie years 3–10). The arrangement is within the scope of this [draft] Standard and the road meets the conditions for recognition of a service concession asset in paragraph 8 (or paragraph 9 for a whole-of-life asset).

IE5 The terms of the arrangement also require the operator to resurface the road when the original surface has deteriorated below a specified condition. The operator estimates that it will have to undertake the resurfacing at the end of year 8 at a fair value of CU110. The compensation to the operator for this service is included in the predetermined series of payments and/or the revenue the operator has the right to earn from the service concession asset or another revenue-generating asset granted to the operator by the grantor.

IE6 It is assumed that the original road surface is a separate component of the service concession asset and meets the criteria for recognition specified in AASB 116 when the service concession asset is initially recognised. It is further assumed that there is sufficient certainty regarding the timing and amount of the resurfacing work for it to be recognised as a separate component when the resurfacing occurs.1 It is assumed that the expected cost of the resurfacing can be used to estimate the initial cost of the surface layers recognised as a separate component of the service concession asset. The road surface is therefore recognised as a separate component of the initial fair value of the service concession asset and measured at the estimated fair value of the resurfacing and depreciated over years 3–8. This depreciation period is shorter than that for the road base, and takes into account that resurfacing would ordinarily occur over six years, rather than 25 years. During the construction phase, it is assumed that only the road base is constructed in year 1, and that the road only becomes ready to use at the end of year 2.

IE7 Recognition of the replacement component of the road surface as a separate component of the service concession asset in year 8 also results in an increase in the liability recognised by the grantor. Where the liability relates to the grant of a right to the operator model, additional revenue in respect of this increase is recognised evenly over the term of the arrangement. However, if the expenditure represented an improvement in service potential such as a new traffic lane rather than restoration to original service capability then it would be appropriate to instead recognise revenue relevant to that improvement only once it has occurred.

IE8 At the beginning of year 3, the total fair value of the road is CU1,050, comprised of CU940 related to the construction of the base layers and CU110 related to construction of the surface layers. The fair value of the surface layers is used to estimate the fair value of the resurfacing (which is treated as a replacement component in accordance with AASB 116). The estimated life of surface layers (ie, six years) is also used to estimate the depreciation of the replacement component in years 9 and 10. The total initial fair value of the road is lower than the present value of the series of predetermined payments pertaining to the asset, where applicable.

IE9 The road base has an economic life of 25 years. Annual depreciation is taken by the grantor on a straight-line basis. It is therefore CU38 (CU940/25) for the base layers. The surface layers are depreciated over 6 years (years 3–8 for the original component, and starting in year 9 for the replacement component). Annual depreciation related to the surface layers is CU18 (CU110/6).[81]

81 ED261 Service Concession Arrangements: Grantor Illustrative Examples

LINKAGE TO ASSET MANAGEMENT

Financial aspects

By definition public sector bodies are responsible for the provision of services to the community and as a consequence are responsible for the administration of public monies and the management of publicly owned assets. The community, in turn, expects that those in charge of public monies and assets will exercise their responsibilities diligently, effectively and efficiently. This is often referred to as good governance.

In the case of asset-intensive public and NFP sector entities, this includes operating the assets cost effectively and not overcharging for their use, while providing an appropriate level of service. As a consequence there is an expectation that the relevant entity will deliver good asset management, financial management and accountability.

Asset accounting, asset management and financial management focus on three key financial aspects:

- The cost to deliver the service. This includes the full lifecycle cost, which includes the costs of: ;
  - acquisition;
  - maintenance;
  - operation;
  - renewal;
  - upgrade;
  - disposal; and
  - restoration.

The source of funding (revenue). Examples include:

- grants;
- rates and taxes;
- fees and charges;
- internal reserves; and
- borrowings.

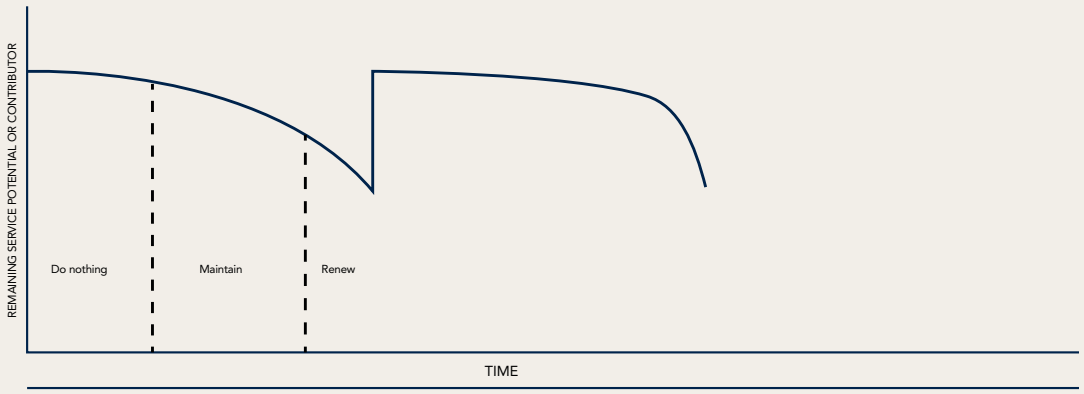
Accountability and performance measurement. These are provided via the financial statements as:

- valuation;
- depreciation; and
- disclosures.

Each of these financial aspects, even if they relate to the same asset portfolio and use similar or the same terminology, such as depreciation or replacement cost, are calculated for different purposes and may be based on different assumptions. Accordingly, care is needed to ensure that the various concepts and figures are not confused or used for the incorrect purpose.

This is particularly so for those assets commonly termed cyclical maintenance and renewal assets. Typically, they are long-lived assets whose future economic benefits (also referred to as service potential) are regularly restored or renewed through ongoing cyclical maintenance and renewal of the various components that together comprise the aggregated asset. The management strategy of these types of assets can be graphically represented as follows.

Figure 23: Typical Asset management strategy of a cyclical maintenance and renewal



As a consequence of cyclical maintenance and renewal (regular renewal through capital expenditure), the total asset life may be regularly extended. Changes to the levels of maintenance and renewal also result in changes to future funding needs. Some assets will wear out or be consumed more quickly than other similar assets, depending on the environment, maintenance effectiveness, the availability of funding and other local factors. Similarly, the asset may become technically obsolete despite being maintained in a good physical condition.

Good governance

Definitions of corporate governance are many and varied. Broadly speaking, *corporate governance generally refers to the processes by which organisations are directed, controlled and held to account. It encompasses authority, accountability, stewardship, leadership, direction and control exercised in the organisation.*[82]

In lay terms good governance refers to everything you do in order to achieve your objectives, typically including policies, procedures, processes, organisational structure and plans.

82 Australian National Audit Office "Principles and Better Practices —Corporate Governance in Commonwealth Authorities and Companies" 1999

To provide good corporate governance it is important that the funds used to deliver services are invested wisely so as to provide an appropriate level of service for the community in the long term in the most cost-effective way. This should be done in such a way as to achieve sustainability and to allow interested parties to be able to assess the performance and ensure accountability. Part of the challenge is integrating the various financial categories.

The financial statements are the primary mechanism used by entities to provide accountability and allow the public to assess their overall financial performance. The financial statements are designed to provide a snapshot of the position (the statement of financial position) and performance (the statement of comprehensive income) of an entity. They are a record of what has transpired during the year. Given the significant resources controlled by asset-intensive entities it is therefore important that the financial statements reflect a view consistent with the asset management reality (as reflected in Asset Management Plans).

In order to fully satisfy their objective of financial reporting, it is a prerequisite that asset accounting and asset management be integrated. In order to do this the asset accounting must be driven by an assessment of the asset's lifecycle and condition, taking into account both holistic and physical factors such as functionality, capacity, utilisation and obsolescence.

Integrating asset accounting and asset management

Over the past two decades, in many countries, and especially in Australia, there have been continuing calls for the integration of asset accounting and asset management. To some extent this has been based on a desire for accountants and engineers to speak the same language, reduce confusion and produce efficiencies from using the same information.

The integration of asset accounting and asset management, however, is not achieved simply by substituting figures produced for one purpose with figures required for another. Valuation/depreciation, asset management planning and pricing decisions should be based on a consistent understanding of the asset lifecycle and asset condition, but different purposes and assumptions lead to different outcomes.

The valuation and depreciation figures should be based on the lifecycle, condition and factors driving the consumption of the asset. Typically, infrastructure or specialised public sector assets are valued using the cost approach, with the replacement cost used to determine fair value based on the cost to replace the service potential delivered by the existing asset.

The asset management plan should be based on these same aspects in conjunction with an understanding of alternative capital expenditure treatments, maintenance and operational costs and differing levels of service. However, for this purpose the replacement costs are an estimate of future funding needs (lifecycle costs), which typically bear little or no relation to the fair value or depreciation expense.

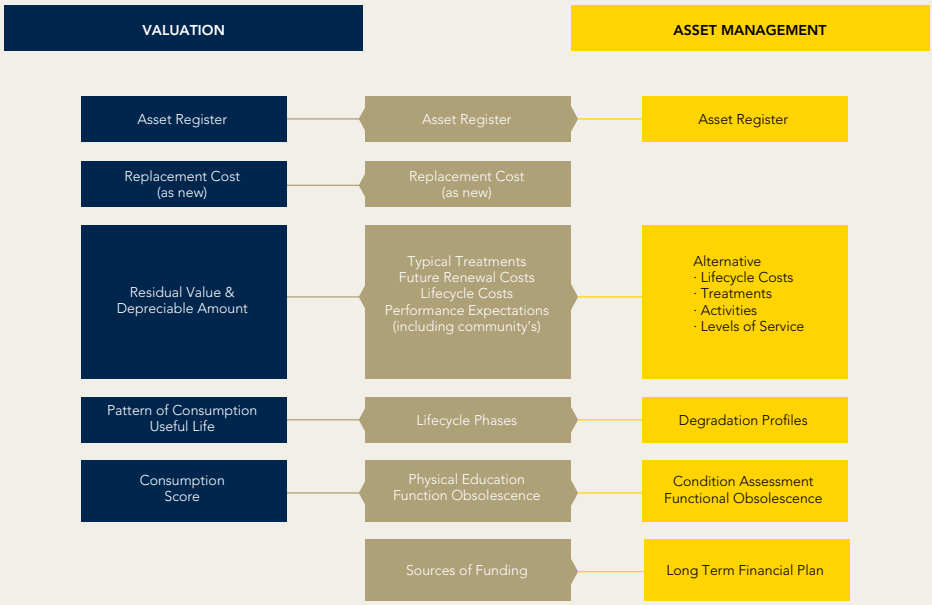
The amount an entity charges to supply a service also needs to take into account the asset's lifecycle and condition and factors driving the consumption of the asset. It should also take into account the likely future funding requirements sourced from the asset management plan.

Price setting in the public sector may also be based on a regulatory pricing regime where pricing is based on an approach such as depreciated optimised replacement cost (DORC), modern equivalent asset (MEA), economic value in use or renewal annuity model. These approaches differ in some aspects but are closely aligned in that calculation of replacement cost and depreciation is based on an assumption of the entity providing the service efficiently, so that the users do not pay for services delivered inefficiently. As a result, it may exclude the value of additional service potential delivered by the asset that is surplus to the needs of an efficient business.

The aim is to force entities under these regimes to limit their revenue generation capability so that inefficiency in their operations is not rewarded with higher prices. The depreciation method applied under these regimes delivers a consistent and low variation in price over an extended period (in order to ensure inter-generation equity), whereas fair value is aimed at reporting the actual loss of future economic benefit over the financial year.

The following diagram demonstrates that typical sources of information used for both asset accounting and asset management. It highlights that some common information is used for both purposes but that depending on the purpose a range of other information is required.

Valuation and depreciation chart



Valuation and depreciation

The financial statements are designed to provide users with information that enables them to make informed decisions. Fair value reflects the value of the remaining level of future economic benefit at reporting date. However, the depreciation expense reflects the future economic benefit expected to be consumed during the next 12 months.

It is therefore critical that the fair value and depreciation expense figures reflect the reality of managing the asset. If, assuming valued using the cost approach, the assets have been maintained well and are in good condition, and there are no concerns over future obsolescence, the fair value should reflect a high CRC fair value as a percentage of the gross replacement cost (RC).

The financial statement results are an output of the asset management performance. They do not drive asset management.

Depreciation expense measures the estimated economic value of service potential consumed during the financial year. It has no relationship to the amount of future funding required to meet changing community needs and expectations.

Depreciation is not a cost of providing a service. It is a measure of the expected amount of service potential expected to be consumed over the year. The cost to provide the service includes the lifecycle costs: costs to acquire, maintain, operate, renew and dispose of the asset. Irrespective of the depreciation methodology adopted, the actual cost to deliver the service will not change as a result of changing the depreciation methodology. The cost to deliver the service will change only as a consequence of changes in the lifecycle costs.

Asset management

> *Asset management is the process of organising, planning, designing and controlling the acquisition, care, refurbishment, and disposal of infrastructure and engineering assets to support the delivery of services. It is a systematic, structured process covering the whole life of physical assets.*
>
> *The objective of asset management is to optimise the service delivery potential of assets and to minimise related risks and costs and ensure positive enhancement of natural and social capital over an asset lifecycle. Good governance and the intelligent deployment of business systems, processes and human resources are key aspects of this endeavour.*[83]

83 AAMCoG—Guide to Integrated Strategic Asset Management 2011 (www.aamcog.com)

In practical terms the goal of asset management is to provide an appropriate (not necessarily the best) level of service in the long term in the most cost-effective way. This includes consideration of all service-level aspects including financial, environmental, social and governance. By definition it involves analysis of alternative asset management and maintenance regimes incorporating different intervention points, treatments that in turn deliver different levels of service and whole-of-lifecycle costs.

If an entity chooses to intervene at a different phase of the asset lifecycle, this in turn results in a different level of service, future capital expenditure and maintenance costs. In order to find the strategy that returns an appropriate level of service with the best whole-of-lifecycle cost, detailed analysis needs to be conducted. This should take into account the asset lifecycle, the factors that drive decisions, alternative treatments and maintenance costs. There is no correlation between the strategy's future funding needs, fair value and depreciation.

The International Asset Management Standard (ISO 55000) was published in January 2014. This suite of standards espouses the principles of asset management and the requirements of an Asset Management System (AMS).

It includes:

- ISO 55000 Asset management —Overview, principles and terminology;
- ISO 55001 Asset management— Management System—Requirements; and
- ISO 55002 Asset management— Management systems—Guidelines on the application of ISO 55001.

The ISO 5500x suite introduces the subject of asset management, specifies the requirements for a management system to manage assets (called the "Asset Management System") and offers information on the tailoring of the asset management system.

The 5500x suite describes both the "what" and the "why" of asset management. The suite deliberately avoids any discussion of the detail of "how" to develop the processes and procedures through which an organisation might implement the management of its assets.

Within ISO 5500x suite, asset management is defined as "the coordinated activities of an organisation to realise value from assets". The value that may be delivered by asset management includes, but is not limited to, financial performance, managed risk, services and outputs, corporate/social responsibility, compliance and reputation.

The ISO 5500x suite provides for the development and documentation of an Asset Management System (AMS). As such, the suite has requirements for:

- documenting the agreed stakeholder decision-making criteria for use within the organisation's AMS;
- documenting the asset management principles and the organisational roles and responsibilities thereof within the company asset management policy;
- implementing the principles of asset management within the AMS;
- specifying which "assets" are to be part of the AMS, for the purposes of certification;
- the use of risk-based decision making within the AMS that integrates technical and financial decision making while recognising the requirements of relevant Accounting Standard requirements;
- implementation of continual improvement approaches; and
- development and implementation of asset management plans that achieve the requirements of the organisational strategic plan.

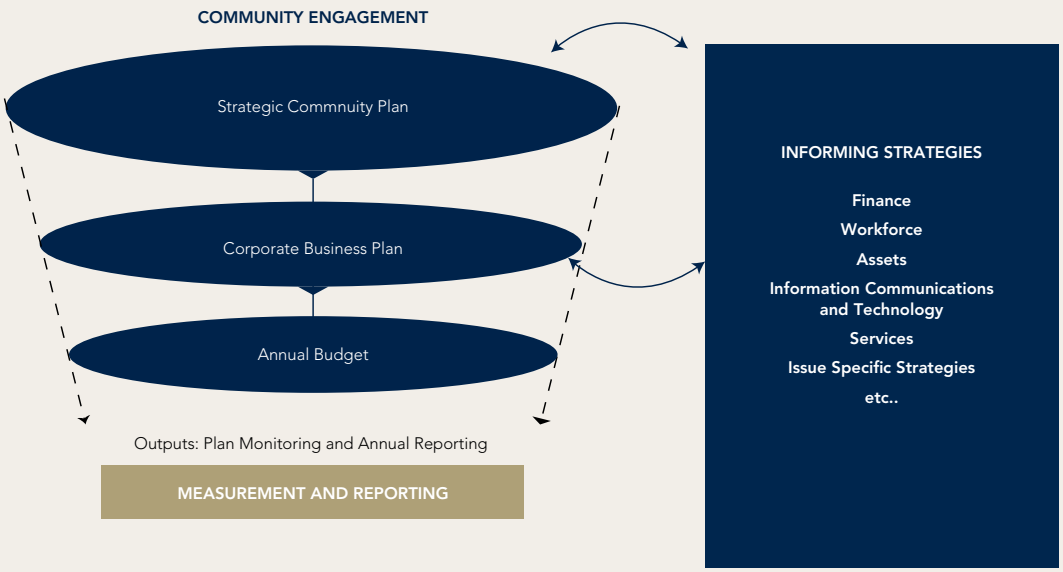
The ISO 5500x suite requires the use of risk-based decision making that provides solutions to achieve a demonstrable balance between risk, cost and performance. Such ability would enable the organisation to demonstrate the causal relationship between changes in one parameter (e.g. risk) to any consequent change in the other two.

It is important to note that there is a fundamental difference between 'asset management' and 'management of the asset'. Asset Management is a strategic process that enables entities to understand the services that they deliver and to optimise the delivery of those services (at an appropriate level of service) over the long term in the most cost-effective manner. This involves:

- Looking well into the future (20 years plus)
- understanding the needs and wants of your client base,
- analysing projected demographic, technical and environmental changes
- consideration of what you currently provide and how you do that,
- consideration of whether that could or should be delivered differently
- whether that translates into needing to change the asset mix (perhaps even rationalisation of the portfolio)
- whether there are ways to reduce the lifecycle cost by making changes to the frequency and type of asset management treatments applied to the assets

It should be noted that there is a distinction between strategic asset management, tactical asset management and operational asset management. In the public sector a number of jurisdictions have adopted a relatively consistent Integrated Planning and Reporting Framework (IP&R) based on the requirements of the National Asset Management Framework issued by the Council of Local Government Ministers in 2007. At a conceptual level it highlights the need to engage with the community to determine what is needed and to optimise the level of that service against the cost to provide that service. This then feeds directly into the development of a strategic community plan which then feeds directly into the corporate business plan and eventually is translated into annual budgets. It can be represented as follows:

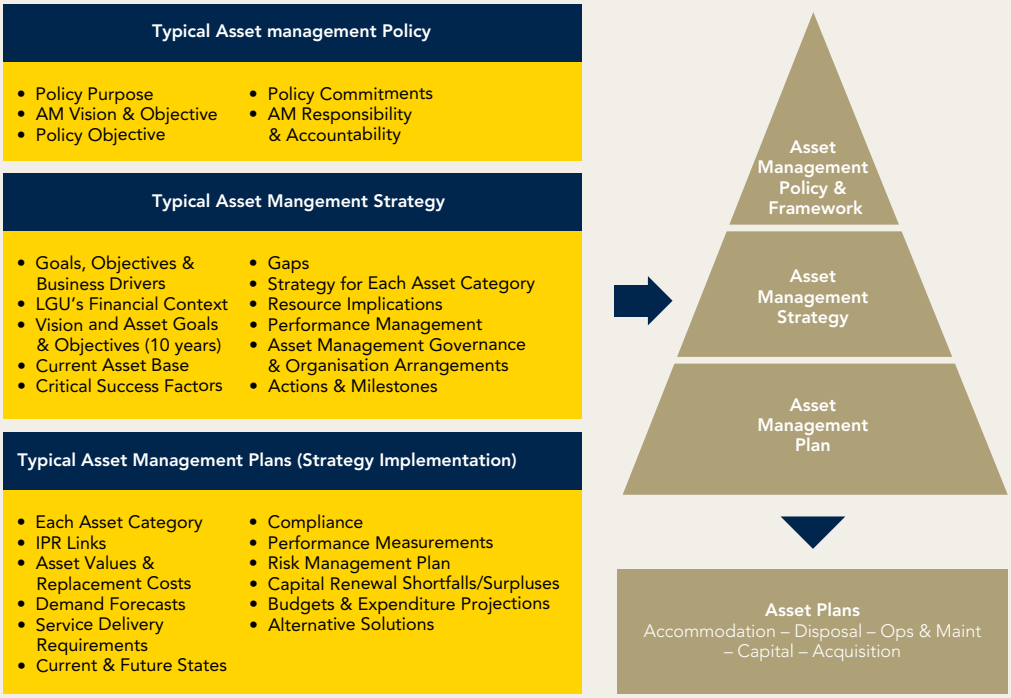
Community Engagement chart[81]



This process flows throughout the organisation and requires different levels of involvement in the process depending upon the level of responsibility. Lower levels of the organisation working directly on service delivery are normally more heavily involved with operational asset management (maintenance management, etc) whereas the highest levels of the organisation are normally more heavily involved with strategic asset management.

The framework includes the development of an Asset Management Policy, Asset Management Strategy and range of Asset Management Plans. They typically include:

Typical asset management Policy diagram[85]



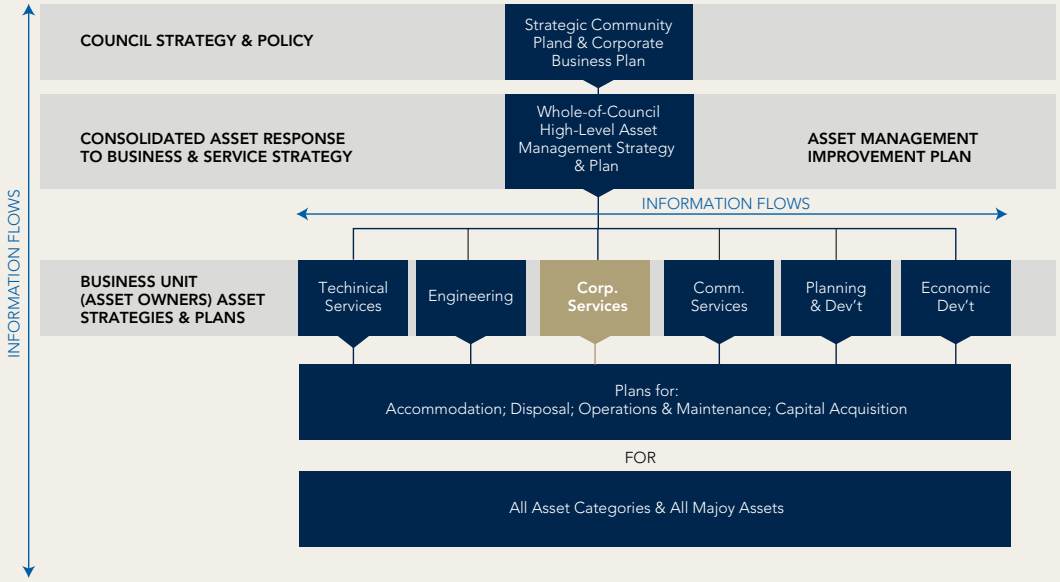
85 Trevor Seymour-Jones (TSJ Consulting and Advisory)

In many organisations the role of asset management has been delegated to technical areas (such as engineering or technical services). Operational and tactical asset management clearly should be managed as such (as the asset owners). However as strategic asset management cuts across the entire organisation and is a fundamental corporate governance responsibility it is critical that all key departments are involved with key direction provided by the highest levels of the management. This would normally include boards and councils and the senior executive team. This is especially so given that the delivery of services using assets is often responsible for over 90% of total expenditure in asset intensive entities (via acquisition, operation, maintenance, renewal and disposal)

Due the need for cross-department facilitation this is normally managed through the creation of an asset management committee which is comprised of the Directors of the major departments within the organisation. Due to the criticality of financial analysis in the development of these plans it is critical that the finance section take a key role in the asset management committee.

The following diagram provides an example of how the relationship between the different asset management roles and how the responsibilities are shared across the organisation.

Figure 27: Whole of organisation asset management[86]



86 Trevor Seymour Jones (TSJ Consulting and Advisory)

Strategic modelling and asset management planning

There are many elements to strategic asset management. Due consideration needs to be given to the following elements:

Environmental: Greater appreciation of the interaction between built assets and the natural environment.

Sustainability: Ensures that the social, economic and environmental needs of a community are met and kept healthy for future generations (Sustainability Victoria, 2010).

Resilience: Increased emphasis on the asset, the environment and the community to respond to and recover from external impacts.

Whole-of-life asset management: Requires that decisions and actions across the entire lifecycle of the asset from design to disposal be considered.

Increased community demands: Information and communication technology (ICT) advances have led to higher citizen expectations for immediate and localised services. Closer alignment of policies, resources and projects will deliver better quality, more efficient and timely built assets.

Information management: Information needs and capabilities are more demanding and complex.

Expanded governance arrangements: Assets are now owned, governed and operated by an expanded set of decision-makers. Thus alongside conventional governance forms, there is now an array of hybrid models such as public–private partnerships, alliance and relational contracts. More innovative and variable governance approaches are required for these different models to manage the unique risks and opportunities associated with them.[87]

The product of taking all these factors into account is an asset management plan that includes the development of a long-term financial plan (LTFP). Ideally the LTFP should be developed using an optimised decision model that incorporates the following:

- the factors that the community uses (consciously and subconsciously) to assess the level of service that they are receiving from the asset;
- the asset lifecycle (including degradation and economic consumption);
- what assets you have and what condition they are in (including assessment of component-specific and holistic factors) This information should be provided as an output of the valuation exercise;
- the community's and the organisation's preferred levels of service (using strategic modelling, these will need to be negotiated through community consultation);

87 AAMCoG—Guide to Integrated Strategic Asset Management 2011 (www.aamcog.com)

- what types of renewal treatments are undertaken (capital) and their costs;
- what types of maintenance activities are undertaken (maintenance) and their costs;
- reasons why you undertake the treatments (that is, the factors that drive asset management decisions, such as overall condition, cracking, rutting, aesthetics, capacity, functionality, complaints, breakages, blockages);
- the optimum time to undertake the various maintenance and renewal treatments;
- operating and any other costs (such as employee costs, running costs, carbon credits or sustainability costs);
- future funding sources and availability (including rates, grants and fees and charges); and
- likely future context including drivers (such as demographics, climate change) that will impact on aspects now and into the future including financial, environmental, social and governance.

Having modelled a range of scenarios via an optimised decision engine you will be in a position to make an informed decision (taking into account future predictions) that weighs up the full lifecycle cost of delivering the service against the resulting level of service delivered by the selected strategy. Typically, the final agreed strategy is negotiated with the community through a formal community consultation process.

No link between depreciation and future funding requirements

The introductory paragraph of this section of the guide notes that there are three different financial aspects of public sector assets. These are:

- the cost to provide the service;
- sources of funding; and
- accountability and performance measurement.

It should be noted that there is no direct relationship between the depreciation expense and either the costs of providing the service or the source of funding to cover those costs.

To provide good governance an asset-intensive organisation should develop an asset management plan that addresses a number of key aspects such as Level of Service, Risk and Performance. This includes determining the most cost-effective way of delivering the service at an acceptable level and determining how best to fund those costs.

It is important to note that "depreciation" is a non-cash accounting estimate of the amount of future economic benefit estimated to be consumed over a 12-month period. It is not an actual cost of delivering a service, neither is it a source of revenue. Accordingly, the use of depreciation as a proxy estimate of future funding needs should be discouraged in favour of the development of robust asset management plans and their associated budget.

Intergenerational equity (each generation paying its fair share of the cost to deliver a service) should be based on calculating the long-term lifecycle costs (such as 20 years) to deliver the service and then converting that cost to an Average Annualised Cost. The actual short- term projections as well as the long-term average cost are then used to feed directly into budgets and cash flow projections to ensure rates or fees and charges are set appropriately and intergenerational equity is preserved. In some circumstances the depreciation expense calculation may be similar to the average annualised cost. However, in other circumstances there may be large differences in the amounts. Accordingly, given the significant costs involved, care needs to be taken to ensure budgets and cash flow projections are based on and support the asset management framework.

Differences in terminology

A traditional barrier to the integration of accounting and the engineering aspects of asset management has been the use of the same terminology but with different meanings. The following table provides a summary of common terminology and the differing meanings for asset management and accounting purposes.

Care needs to be taken in a multi-disciplinary team to ensure a consistent interpretation when discussing asset accounting or asset management.

Table 23: Different Interpretations of common terms in asset management and asset accounting

Term	Asset Management (Engineering)	Accounting	Notes
Replacement cost	This generally refers to the amount of expenditure the entity will need to undertake for a specific project.	This releases to what it would cost to replace the existing asset asset with an "as new" asset with the same level of service potential.	There are commonly differences between these two figures as there may be parts that will not need to be replaced in the future or there may be differences between what exists and what is planned to replace the existing asset.
Maintenance expenditure	This relies to expenditure that does not increase the service potential of the asset above the original design and is undertaken to keep the asset performing on its typical lifecycle path.	An entity is not to capitalise the day-to-dayservicing of the item. Costs of day-today servicing are primarily the costs of labour and consumables and may include the cost of small parts. The purpose of these expenditures are often described as for 'repairs and maintenance' of the item. The standard also requires that where part of a component is replaced is to be capitalised provided it satifies the recognition criteria. Accordingly such subsequent expenditure would normally only be expressed if was deemed not to be material.	The definition and treatment of day-to-dayservicing costs are similar for both asset management and asset accounting. Differences often occur in relation to expenditure that improves the condition or increases the remaining useful life of the asset (from current state) does not extend it beyond the original designlife. In accounting terms, this subsequent expenditure would be capitalised (providing it is material) whereas for asset management purposes it is often considered as "maintenance" expenditure.
Renewals	This typically refers to expenditure used to bring the asset back to or close to an "as new" condition. It differs from maintenance in that it is typically more material in value. Some agencies treat this as capital expenditure for budgeting purposes, whereas other include it in the maintenance budget.	This type of expenditure is "capital in nature". However the term "renewals" often refers to the "renewals annuity" depreciation method, which attempts to estimate depreciation based on the average annualised cost expected over an extended period to keep the asset operating	The renewal annuities method of depreciation does not comply with the accounting standards and has been specifically excluded in some jurisdictions (e.g AASB interpretation 1030)

Table 23: Different Interpretations of common terms in asset management and asset accounting (continued)

Term	Asset Management (Engineering)	Accounting	Notes
Upgrade expenditure	This expenditure used to extend the capacity or service potential of the asset above that currently designed. For asset management purposes it is considered capital expenditure.	This type of expenditure is "capital in nature"	Generally there is no disagreement with this term.
Operational expenditure	This is expenditure incurred to operate the asset. It may include salaries and wages, supplies and materials, and other day-to-day costs.	It includes day-to-day costs and costs that do not provide a benefit lasting longer than 12 months.	Salaries and wages to operate the assets may sometimes be classified separately from operating costs in the general ledger.
Capital expenditure	This typically relates to expenditure that extends the asset's service potential or useful life beyond that originally designed.	This refers to any expenditure that increases the service potential or extends the remaining useful life from that currently remaining in the asset.	Expenditure that improves the asset from its current position (but not more than the original design) may be excluded from the asset management approach but is deemed to be capital under the accounting standards.
Useful life	This is often (but not always) interpreted as the period from original commissioning to the time of decommissioning and includes a number of expected major renewals.	This is the period in which the asset is expected to be available for use or the number of production or similar units expected to be obtained by the entity.	The major renewal of an asset represents the creation of a new asset in accounting terms and therefore also represents the disposal of the asset at the point of major renewal. As a result the useful life under each approach can be significantly different and represent different things.

Table 23: Different Interpretations of common terms in asset management and asset accounting (continued)

Term	Asset Management (Engineering)	Accounting	Notes
Remaining useful life	This is often (but not always) interpreted as the period from assessments to the theoretical focal end of life if major renewal is not undertaken. Alternatively it is sometimes considered to be the useful life less the age to date.	This is the period from the time of assessment to the end of the useful life as previously determined.	As with useful life, different interpretations can result in significant differences.
Condition Score	These typically use a 5 or 10 point scale to asses the relative physical condition of the asset. These in turn are used to model the asset lifecycle and alternative asset management treatments.	The conditional or consumption score is used to assess the level of remaining service potential and will typically take into account the physical condition of the assets as well as aspects relating to functionality, capacity, utilisation and obsolescence. For valuation purposes the scale typically requires a greater number of points on the scale than those used for asset management planning.	While the terms are the same they often represent significantly different things that are often misinterpreted as being the same. Scores used for asset accounting tend to cover a broader view and measure the level of remaining service potential, whereas asset management scores tend to focus on physical degradation.

APPENDICES AND ATTACHMENTS

APPENDIX 1: ACRONYMS

AAMCoG	Australian Asset Management Collaborative Group
AASB	Australian Accounting Standards Board
AMS	Asset Management System
CGU	Cash-generating units
CPA	CPA Australia
DCF	Discounted cash flow
CRCCRC	Current replacement cost
GRC	Gross replacement cost
IAASB	International Auditing and Assurance Standards Board
IASB	International Accounting Standards Board
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standards
IPSAS	International Public Sector Accounting Standards
IPSASB	International Public Sector Accounting Standards Board
IPWEA	Institute of Public Works Engineers Association
KPI	Key performance indicators
LTFP	Long-term financial plan
MEA	Modern equivalent asset
MV	Market value
NFP	Not for profit
NPV	Net present value
RICS	Royal Institute of Chartered Surveyors
RSP	Remaining Service Potential
RUL	Remaining useful life
RV	Residual value
UL	Useful life
WDV	Written down value

APPENDIX 2: GLOSSARY

Active market (AASB 13)	A market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.
Agricultural activity (AASB141)	The management by an entity of the biological transformation and harvest of biological assets for sale or for conversion into agricultural produce or into additional biological assets.
Agricultural produce (AASB141)	The harvested product of the entity's biological assets.
Amortisation (AASB138)	The systematic allocation of the depreciable amount of an intangible asset over its useful life.
Asset (AASB138)	A resource: controlled by an entity as a result of past events; and from which future economic benefits are expected to flow to the entity.
Asset lifecycle	The total period from when an asset is initially created until its final disposal. It includes all activities such as acquisition, maintenance, renewal, upgrade and disposal.
Asset management (ISO 55000)	The coordinated activities of an organisation to realise value from assets. The value that may be delivered by asset management includes, but is not limited to, financial performance, managed risk, services and outputs, corporate/social responsibility, compliance and reputation.
Asset management framework	The policies, processes, controls, systems and governance arrangements put in place aimed at ensuring an appropriate level of service is delivered to the community in the long term in the most cost-effective manner.
Biological asset (AASB141)	A living animal or plant.
Biological transformation (AASB141)	Comprises the processes of growth, degeneration, production and procreation that cause qualitative or quantitative changes in a biological asset.
Borrowing costs (AASB123)	Interest and other costs that an entity incurs in connection with the borrowing of funds.
Capital expenditure (capex)	Expenditure that, based on its existing condition, either extends the useful life of an asset or leads to an increase in its remaining service potential.
Carrying amount (AASB116) (AASB136) **Carrying amount (AASB140) (AASB141)**	The amount at which an asset is recognised after deducting any accumulated depreciation (amortisation) and accumulated impairment losses thereon. The amount at which an asset is recognised in the statement of financial position.
Cash-generating unit CGU (AASB136)	The smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets.
Commencement of the lease term (AASB117)	The date from which the lessee is entitled to exercise its right to use the leased asset. It is the date of initial recognition of the lease—that is, the recognition of the assets, liabilities, income or expenses resulting from the lease, as appropriate.
Component	A significant part of a complex asset that has a different useful life or pattern of consumption of future economic benefit from the other significant parts.

Comprehensive valuation	A revaluation that entails significant levels of physical inspection and evaluation of all appropriate aspects such as methodology, assumptions and unit rates.
Condition-based depreciation	Depreciation method used to determine physical deterioration and based on a correlation between the physical characteristics and condition of an asset.
Consumption-based depreciation	Depreciation method used to determine economic consumption and based on consideration of holistic (functionality, capacity, utilisation, obsolescence) as well as the physical characteristics and condition of an asset.
Contingent rent (AASB117)	The portion of the lease payments that is not fixed in amount but is based on the future amount of a factor that changes other than with the passage of time (for example, the percentage of future sales, amount of future use, future price indices and future market rates of interest).
Control	The potential to contribute, directly or indirectly, to the delivery of relevant goods or services in accordance with the entity's objectives of a particular volume, quantity and quality to its beneficiaries including the ability to restrict access of others to those benefits.
Corporate assets (AASB136)	Assets other than goodwill that contribute to the future cash flows of both the cash-generating unit under review and other cash-generating units.
Corporate governance	Everything that you do in order to achieve your objectives. Typically this includes such things as policies, procedures, processes, organisation structure and plans.
Cost (AASB116) (AASB140)	The amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire an asset at the time of its acquisition or construction or, where applicable, the amount attributed to that asset when initially recognised in accordance with the specific requirements of other AASBs—for example, AASB 2 Share-based Payment.
Cost approach (AASB 13)	A valuation technique that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as replacement cost).
Costs of disposal (AASB136)	Incremental costs directly attributable to the disposal of an asset or cash-generating unit, excluding finance costs and income tax expense.
Costs to sell for a group of biological assets (AASB141)	The incremental costs directly attributable to the disposal of an asset, excluding finance costs and income taxes.
Current replacement cost	The gross replacement cost less any accumulated depreciation. It reflects the level of remaining service potential embodied in an asset based on the replacement cost.
Cyclical maintenance and renewal assets	Assets whose life and service potential is regularly extended through ongoing maintenance and renewal.
Depreciated optimised replacement cost (DORC)	A method used to value assets based on an assumption that the asset is efficient with no excess or surplus capacity and based on current costs after allowing for consumed service potential.
Discounted cash flow (DCF)	An income approach method used to calculate market value. It is based on analysis of cash inflows and outflows, discount rates, beta risk and alternative scenarios.
Depreciable amount (AASB116) (AASB136) (AASB138)	The cost of an asset, or other amount substituted for cost less its residual value.

Depreciation (amortisation) **(AASB116) (AASB136)**	The systematic allocation of the depreciable amount of an asset over its useful life.
Development (AASB138)	The application of research findings or other knowledge to a plan or design for the production of new or substantially improved materials, devices, products, processes, systems or services before the start of commercial production or use.
Economic life (AASB117)	Either: • the period over which an asset is expected to be economically usable by one or more users; or • the number of production or similar units expected to be obtained from the asset by one or more users.
Entity-specific value (AASB116) (AASB138)	The present value of the cash flows an entity expects to arise from the continuing use of an asset, and from its disposal at the end of its useful life, or expects to incur when settling a liability.
Entry price (AASB 13)	The price paid to acquire an asset or received to assume a liability in an exchange transaction.
Exit price (AASB 13)	The price that would be received to sell an asset or paid to transfer a liability.
Expected cash flow (AASB 13)	The probability-weighted average (that is, the mean of the distribution) of possible future cash flows.
Fair value (AASB 13)	The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.
Fair value less costs to sell (AASB136)	The amount obtainable from the sale of an asset or cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.
Finance lease (AASB117)	A lease that transfers substantially all the risks and rewards incidental to ownership of an asset. Title may or may not eventually be transferred.
Future economic benefit	The potential to contribute, directly or indirectly, to the delivery of goods and services in accordance with the entity's objectives of a particular volume, quantity or quality to its beneficiaries.
Gross replacement cost (GRC)	The cost of replacing the total potential future economic benefit of the existing asset using either reproduction or modern equivalents after taking into account any differences in the utility of the existing asset and the modern equivalent.
Government grants (AASB141), (AASB120)	Assistance by government in the form of transfers of resources to an entity in return for past or future compliance with certain conditions relating to the operating activities of the entity. They exclude those forms of government assistance which cannot reasonably have a value placed upon them and transactions with government which cannot be distinguished from the normal trading transactions of the entity
Gross investment in the lease (AASB117)	The aggregate of: the minimum lease payments receivable by the lessor under a finance lease; and any unguaranteed residual value accruing to the lessor.
Group of biological assets **(AASB141)**	An aggregation of similar living animals or plants.

Gross replacement cost	The value of an asset based on replacement cost prior to the deduction of any accumulated depreciation.
Guaranteed residual value (AASB117)	For a lessee, that part of the residual value that is guaranteed by the lessee or by a party related to the lessee (the amount of the guarantee being the maximum amount that could, in any event, become payable). For a lessor, that part of the residual value that is guaranteed by the lessee or by a third party unrelated to the lessor that is financially capable of discharging the obligations under the guarantee.
Harvest (AASB141)	The detachment of produce from a biological asset or the cessation of a biological asset's life processes.
Highest and best use (AASB 13)	The use of a non-financial asset by market participants that would maximise the value of the asset or the group of assets and liabilities (for example, a business) within which the asset would be used.
Impairment loss (AASB116) (AASB138) (AASB136)	The amount by which the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount.
Inception of the lease (AASB117)	The earlier of the date of the lease agreement and the date of commitment by the parties to the principal provisions of the lease. As at this date: a lease is classified as either an operating or a finance lease; and in the case of a finance lease, the amounts to be recognised at the commencement of the lease term are determined.
Income approach (AASB 13)	Valuation techniques that convert future amounts (for example, cash flows or income and expenses) to a single current (that is, discounted) amount. The fair value measurement is determined on the basis of the value indicated by current market expectations about those future amounts.
Initial direct costs (AASB117)	Incremental costs that are directly attributable to negotiating and arranging a lease, except for such costs incurred by manufacturer or dealer lessors.
Inputs (AASB 13)	The assumptions that market participants would use when pricing the asset or liability, including assumptions about risk, such as the following: • the risk inherent in a particular valuation technique used to measure fair value (such as a pricing model); and • the risk inherent in the inputs to the valuation technique. • Inputs may be observable or unobservable.
Intangible asset (AASB138)	An identifiable non-monetary asset without physical substance.
Interest rate implicit in the lease (AASB117)	The discount rate that, at the inception of the lease, causes the aggregate present value of: • the minimum lease payments; and • the unguaranteed residual value to be equal to the sum of: • the fair value of the leased asset; and • any initial direct costs of the lessor.
Interim revaluation by indexation	Also referred to as a desktop valuation. This type of valuation is based purely on indexation rates and adjustments for additions, deletions and changes in condition (for example, impairment). It should be limited to a maximum of two or three years between comprehensive valuations.

Inventories (AASB102)	Assets held: • for sale in the ordinary course of business; • in the process of production for such sale; or • in the form of materials or supplies to be consumed in the production process or in the rendering of services.
Investment property (AASB140)	Property (land or a building—or part of a building—or both) held (by the owner or by the lessee under a finance lease) to earn rentals or for capital appreciation or both, rather than for: • use in the production or supply of goods or services or for administrative purposes; or • sale in the ordinary course of business.
International valuation standards (IVS)	Valuation standards issued by the International Valuation Standards Committee.
Land under roads (AASB 1051)	Land under roadways, and road reserves, including land under footpaths, nature strips and median strips.
Lease (AASB117)	An agreement whereby the lessor conveys to the lessee in return for a payment or series of payments the right to use an asset for an agreed period of time.
Lease term (AASB117)	The non-cancellable period for which the lessee has contracted to lease the asset, together with any further terms for which the lessee has the option to continue to lease the asset, with or without further payment, when at the inception of the lease it is reasonably certain that the lessee will exercise the option.
Lessee's incremental borrowing rate of interest (AASB117)	The rate of interest the lessee would have to pay on a similar lease or, if that is not determinable, the rate that, at the inception of the lease, the lessee would incur to borrow over a similar term, and with a similar security, the funds necessary to purchase the asset.
Level 1 inputs (AASB 13)	Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
Level 2 inputs (AASB 13)	Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
Level 3 inputs (AASB 13)	Unobservable inputs for the asset or liability.
Level of service	The defined service quality for a particular service against which its service performance can be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental impact, acceptability and cost.
Maintenance expenditure	Expenditure that either does not result in an increase in useful life or service potential, or is immaterial and enables the asset to keep performing on its typical lifecycle path.
Market approach (AASB 13)	A valuation technique that uses prices and other relevant information generated by market transactions involving identical or comparable (that is, similar) assets, liabilities or a group of assets and liabilities, such as a business.

Market participants (AASB 13)	Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics: They are independent of each other; that is, they are not related parties as defined in AASB 124, although the price in a related party transaction may be used as an input to a fair value measurement if the entity has evidence that the transaction was entered into at market terms. They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary. They are able to enter into a transaction for the asset or liability. They are willing to enter into a transaction for the asset or liability; that is, they are motivated but not forced or otherwise compelled to do so.
Market value	The price that would be exchanged between a willing buyer and a willing seller in an open and liquid market.
Market-corroborated inputs (AASB 13)	Inputs that are derived principally from, or corroborated by, observable market data by correlation or other means.
Minimum lease payments (AASB117)	The payments over the lease term that the lessee is or can be required to make, excluding contingent rent, costs for services and taxes to be paid by and reimbursed to the lessor, together with: • for a lessee, any amounts guaranteed by the lessee or by a party related to the lessee; or • for a lessor, any residual value guaranteed to the lessor by: the lessee; a party related to the lessee; or • a third party unrelated to the lessor that is financially capable of discharging the obligations under the guarantee. However, if the lessee has an option to purchase the asset at a price that is expected to be sufficiently lower than fair value at the date the option becomes exercisable for it to be reasonably certain, at the inception of the lease, that the option will be exercised, the minimum lease payments comprise the minimum payments payable over the lease term to the expected date of exercise of this purchase option and the payment required to exercise it.
Monetary assets (AASB138)	Money held and assets to be received in fixed or determinable amounts of money.
Most advantageous market (AASB 13)	The market that maximises the amount that would be received to sell the asset or minimises the amount that would be paid to transfer the liability, after taking into account transaction costs and transport costs.
Net investment in the lease (AASB117)	The gross investment in the lease discounted at the interest rate implicit in the lease.
Net realisable value (AASB102)	The estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.
Non-cancellable lease (AASB117)	A lease that is cancellable only: upon the occurrence of some remote contingency; with the permission of the lessor; if the lessee enters into a new lease for the same or an equivalent asset with the same lessor; or upon payment by the lessee of such an additional amount that, at inception of the lease, continuation of the lease is reasonably certain.

Non-performance risk (AASB 13)	The risk that an entity will not fulfil an obligation. Non-performance risk includes, but may not be limited to, the entity's own credit risk.
Net present value (NPV)	Refer: Discounted cash flow.
Observable inputs (AASB 13)	Inputs that are developed using market data, such as publicly available information about actual events or transactions, and that reflect the assumptions that market participants would use when pricing the asset or liability.
Operating lease (AASB117)	A lease other than a finance lease.
Orderly transaction (AASB 13)	A transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities. It is not a forced transaction (for example, a forced liquidation or distress sale).
Owner-occupied property (AASB140)	Property held (by the owner or by the lessee under a finance lease) for use in the production or supply of goods or services or for administrative purposes.
Pattern of consumption of future economic benefit	The pattern in which the asset's future economic benefits are expected to be consumed by the entity. This may be constant, increasing, decreasing or variable.
Principal market (AASB 13)	The market with the greatest volume and level of activity for the asset or liability.
Property, plant and equipment (AASB116)	Tangible items that: are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and are expected to be used during more than one period.
Public sector	The term "public sector" refers to national governments, regional (e.g., state, provincial, territorial) governments, local (e.g., city, town) governments and related governmental entities (e.g., agencies, boards, commissions and enterprises); Typically their financial reporting requirements will be specified by Treasury or some form of prescribed requirement backed by legislation.
Qualifying asset (AASB123)	An asset that necessarily takes a substantial period of time to get ready for its intended use or sale.
Recoverable amount (AASB116) (AASB136)	The higher of an asset's fair value less costs to sell and its value in use.
Renewal	Expenditure that extends the useful life or increases the service potential of the asset beyond its current condition but not exceeding its current maximum design level (for example, re-sealing of a road).
Renewals annuity	A method of depreciation that uses the annualised cost of future renewal costs as a proxy for depreciation expense. This method is not allowed under the AASB as it assumes the assets will be maintained in a constant state and the calculation is not based on the depreciable amount of the asset. However, this method is an ideal tool for asset management planning purposes.
Research (AASB138)	Original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding.
Residual value (AASB116)	The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

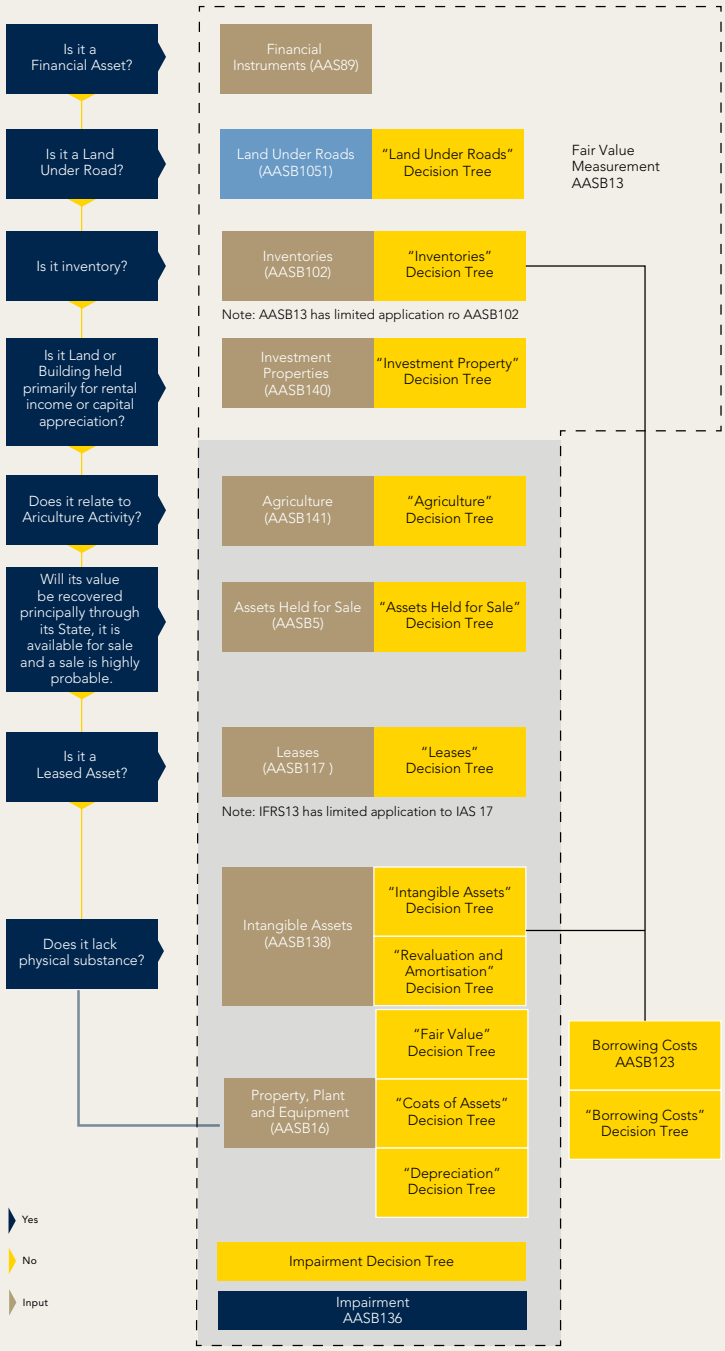
Risk premium (AASB 13)	Compensation sought by risk-averse market participants for bearing the uncertainty inherent in the cash flows of an asset or a liability; also referred to as a risk adjustment.
Remaining useful life (RUL)	The time remaining until an asset ceases to provide the required level of service or reaches the end of its economic usefulness.
Service potential	Refer: Future economic benefit.
Straight-line depreciation	Depreciation method used to determine the current replacement cost where the pattern of consumption of future economic benefit is considered to be constant over a period of time, and the calculation is based on age and remaining useful life.
Transaction costs (AASB13)	The costs to sell an asset or transfer a liability in the principal (or most advantageous) market for the asset or liability that are directly attributable to the disposal of the asset or the transfer of the liability and meet both of the following criteria: They result directly from and are essential to that transaction. They would not have been incurred by the entity had the decision to sell the asset or transfer the liability not been made (similar to costs to sell, as defined in AASB 5).
Transport costs (AASB 13)	The costs that would be incurred to transport an asset from its current location to its principal (or most advantageous) market.
Unearned finance income (AASB117)	The difference between: the gross investment in the lease; and the net investment in the lease.
Unguaranteed residual value (AASB117)	That portion of the residual value of the leased asset, the realisation of which by the lessor is not assured or is guaranteed solely by a party related to the lessor.
Unit of account (AASB 13)	The level at which an asset or a liability is aggregated or disaggregated in a standard for recognition purposes.
Unobservable inputs (AASB 13)	Inputs for which market data is not available and that are developed using the best information available about the assumptions that market participants would use when pricing the asset or liability.
Upgrade	Expenditure that extends the useful life or increases the service potential of the asset beyond its current maximum design level—for example, widening a road to add an extra traffic lane or improve safety.
Useful life (AASB116) (AASB136) (AASB138)	Either (a) the period over which an asset is expected to be available for use by an entity or (b) the number of production or similar units expected to be obtained from the asset by an entity.
Useful life (AASB117)	The estimated remaining period, from the commencement of the lease term, without limitation by the lease term, over which the economic benefits embodied in the asset are expected to be consumed by the entity.
Value in use (AASB136)	The present value of the future cash flows expected to be derived from an asset or cash-generating unit.
Written down value (WDV)	Refer: Carrying amount.
Whole-of-lifecycle cost	All the costs associated with control of an asset. They include the costs of acquisition, operation, maintenance, renewal, upgrade and disposal.

ATTACHMENT A: RELEVANT AASB STANDARDS AND INTERPRETATIONS

AASB Standard	Name
AASB102	Inventories
AASB 9	Financial Instruments
AASB 5	Non-current Assets Held for Sale and Discontinued Operations
AASB 13	Fair Value Measurement (mandatory for financial statements commencing on or after 1 January 2013 with early adoption permitted)
AASB116	Property, Plant and Equipment
AASB117	Leases
AASB123	Borrowing Costs
AASB136	Impairment of Assets
AASB138	Intangible Assets
AASB140	Investment Property
AASB141	Agriculture
AASB1051	Land Under Roads
AASB1049	Whole-of-government and general government sector financial reporting
AASB Interpretation 1	Changes in existing Decommissioning, Restoration and Similar Liabilities
AASB Interpretation 12	Service Concession Arrangements
AASB Interpretation 1030	Depreciation of Long-Lived Physical Assets: Condition-Based Depreciation and Related Methods
AASB Interpretation 1055	Accounting for Road Earthworks

ATTACHMENT B: INTERRELATIONSHIP OF THE ACCOUNTING STANDARDS

Valuation of Assets decision tree



ATTACHMENT C: OVERVIEW OF SPECIFIC ACCOUNTING STANDARDS

There is a range of accounting standards as listed in Attachment A that relate to the valuation and depreciation of assets in the public sector. The following decision trees provide an easy-to-understand overview of the requirements of the most relevant standards.

It should be noted that these provide only a summary of key requirements as they relate to the valuation and depreciation of assets in the public sector. Reference should always be made back to the original standard when researching a specific issue.

The decision trees are in the following order:

AASB13 Fair Value Measurement

AASB116 Property, Plant and Equipment

AASB123 Borrowing Costs (note some differences between some other NFP specific requirements)

AASB136 Impairment of Assets

AASB5 Assets Held for Sale

AASB140 Investment Property

AASB117 Leases

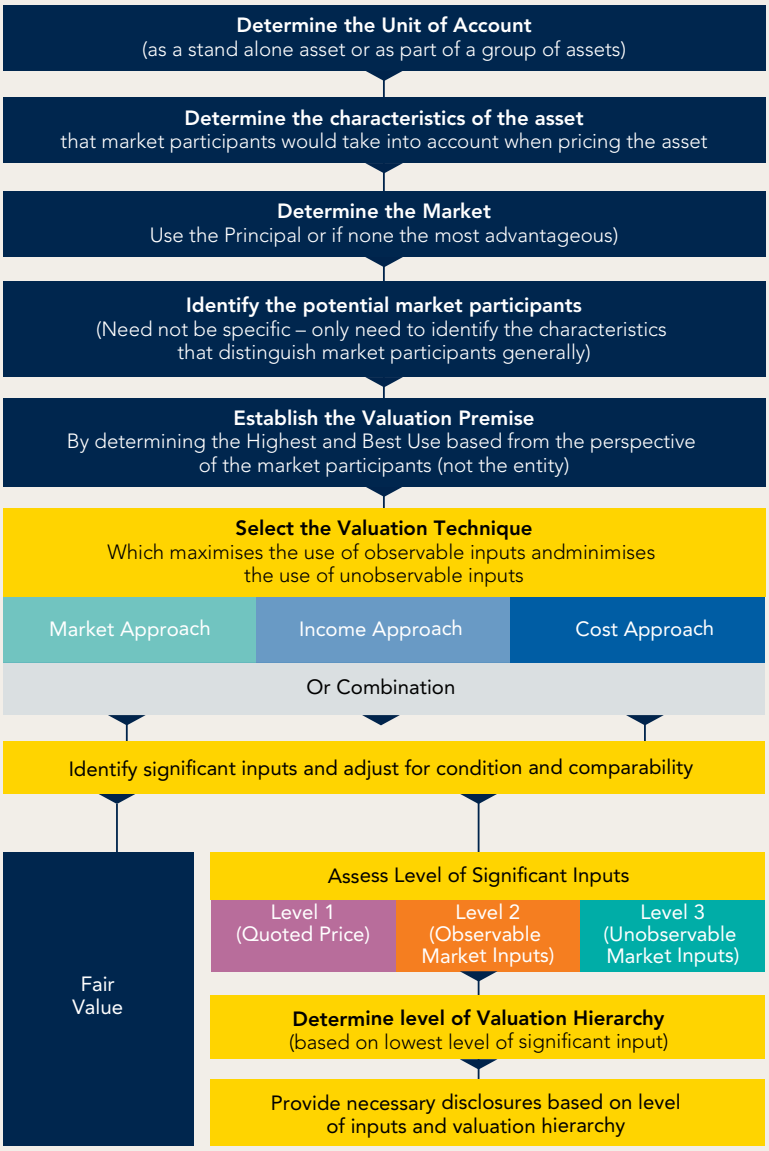
AASB138 Intangible Assets

AASB102 Inventories

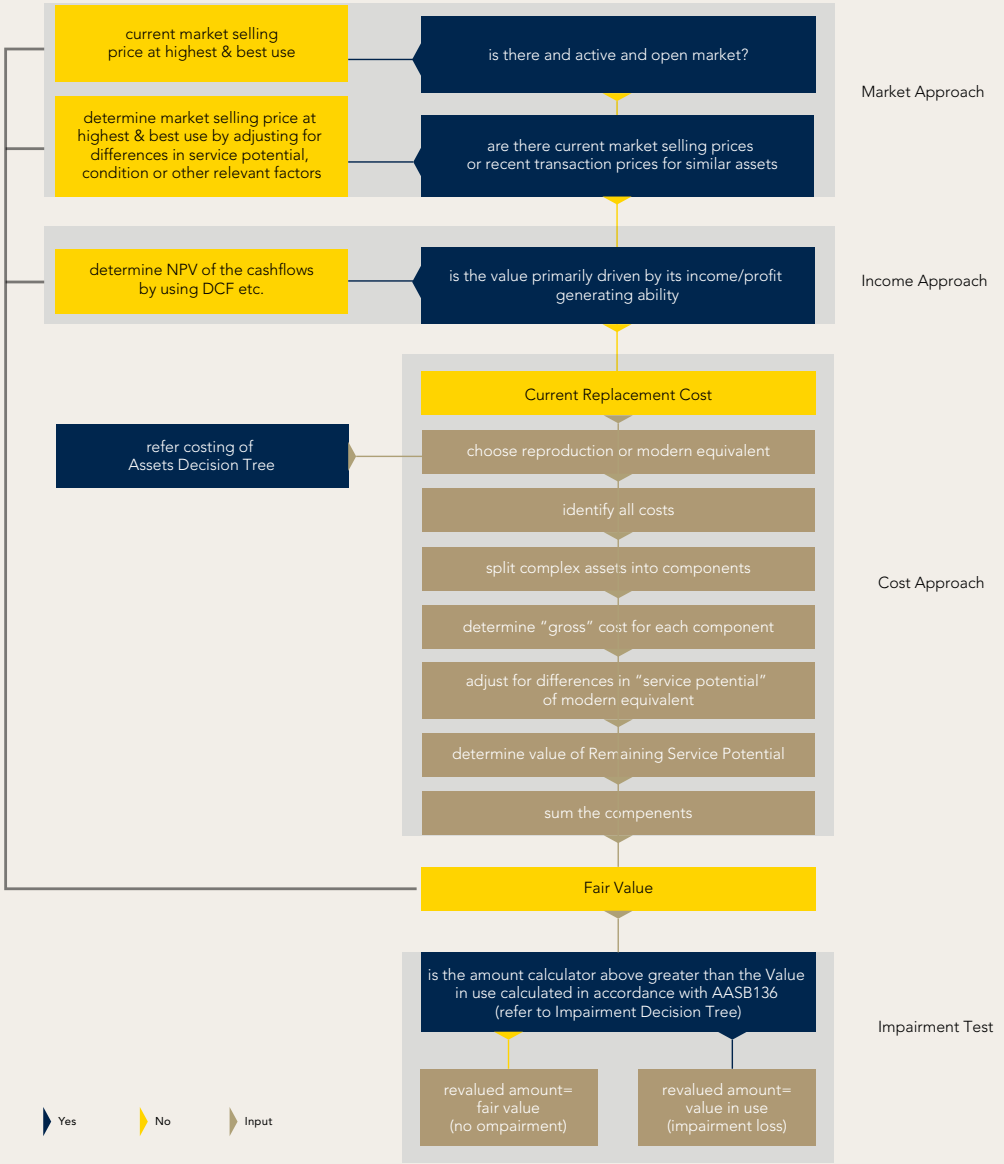
AASB141 Agriculture

AASB1051 Land Under Roads.

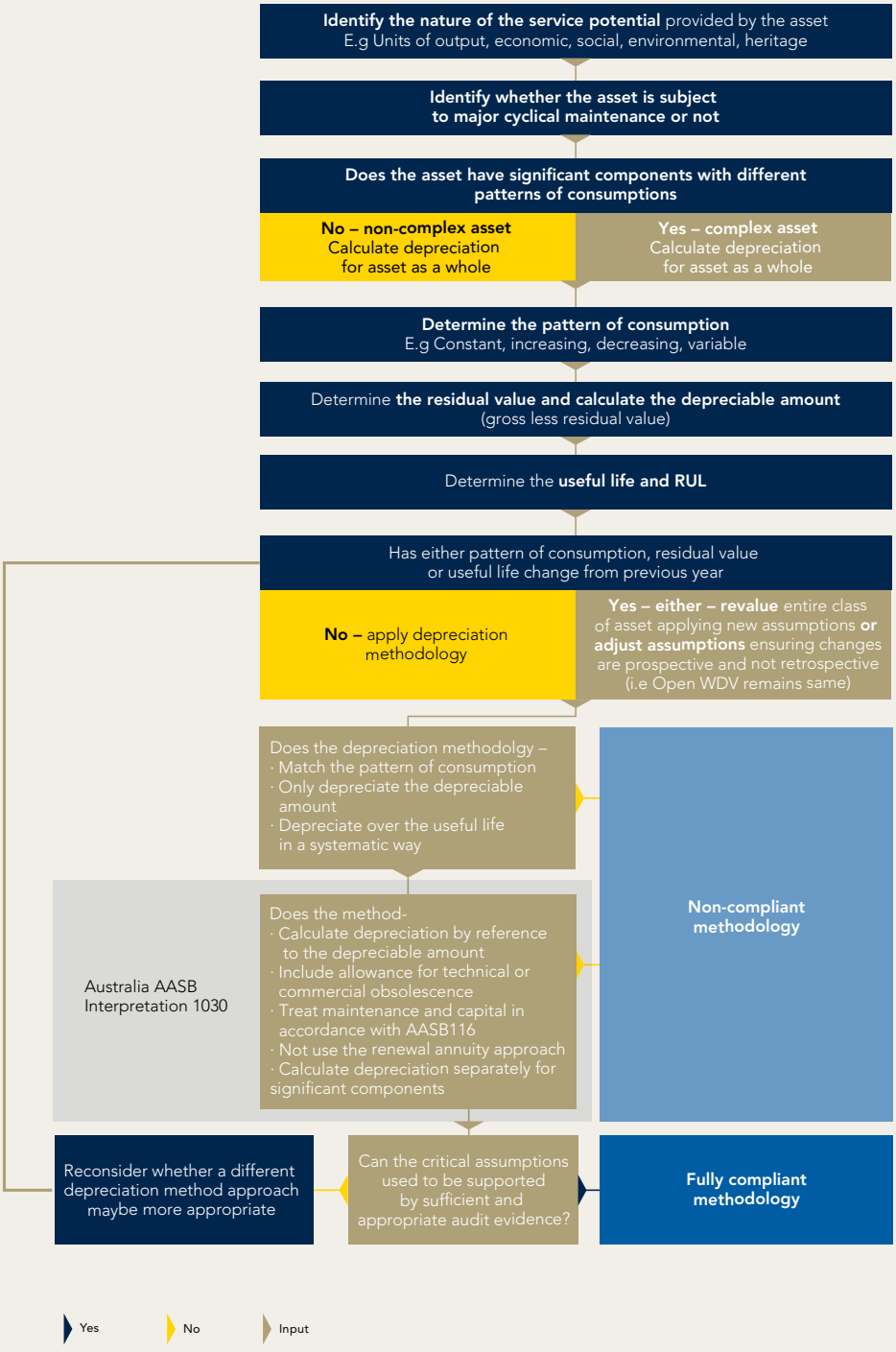
AASB13 Fair value of non-financial assets decision tree



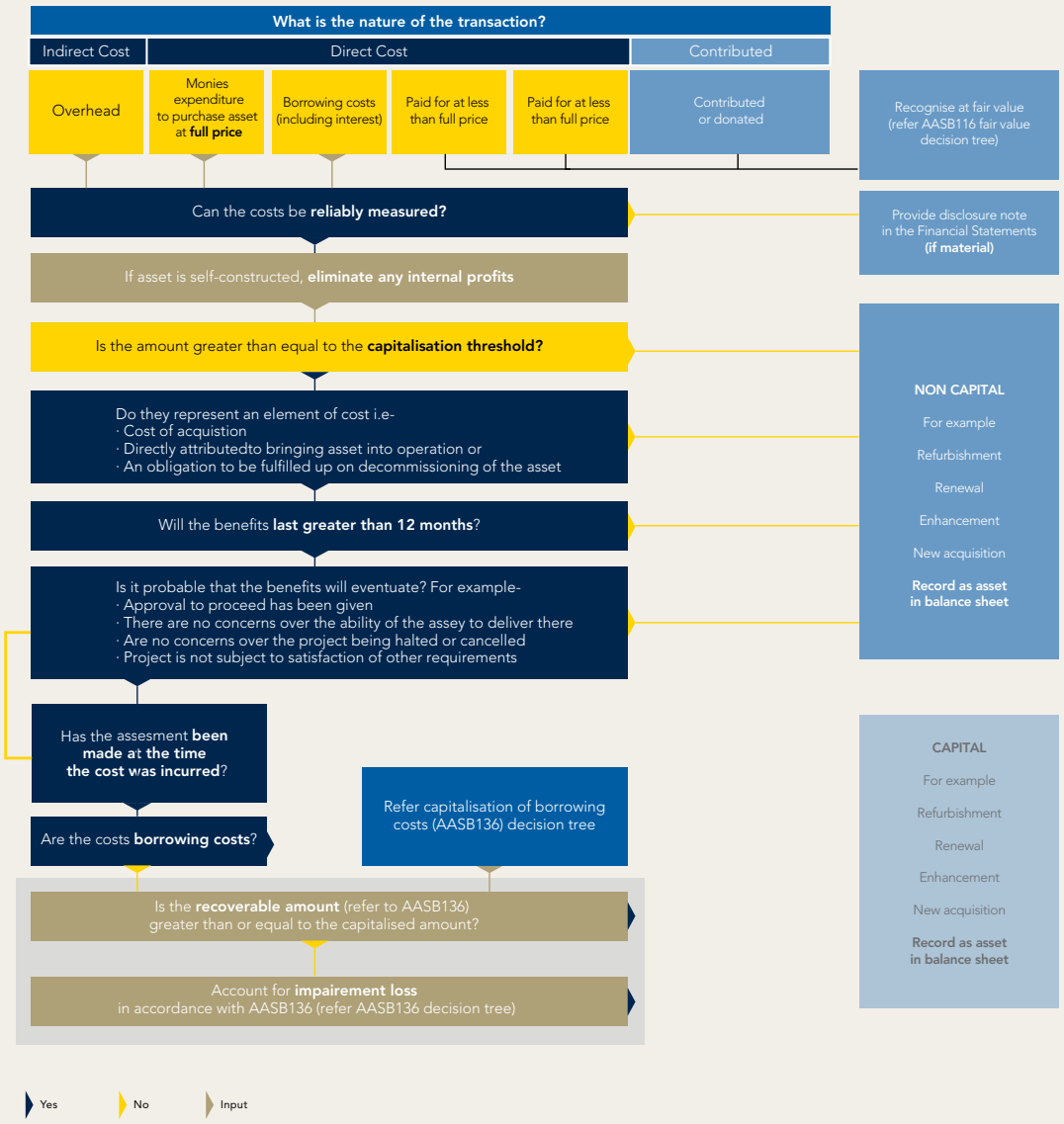
AASB116 Fair value decision tree



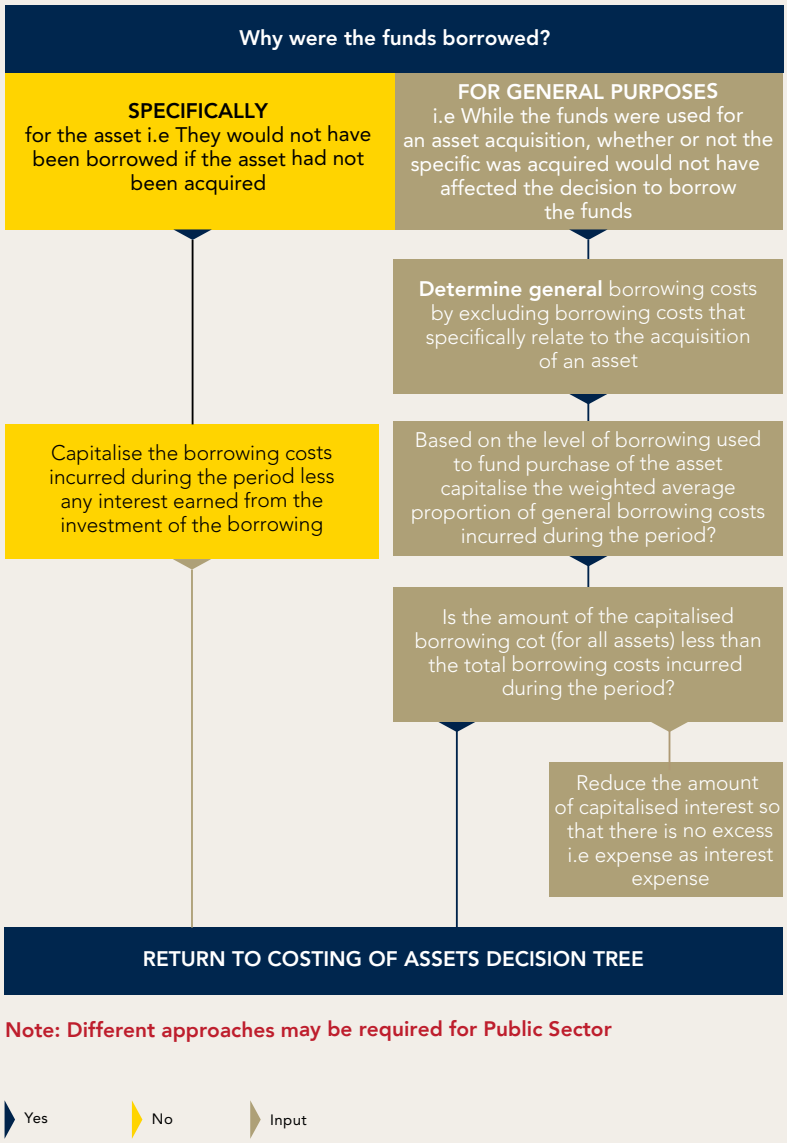
AASB116 Depreciation decision tree



AASB116 Cost decision tree



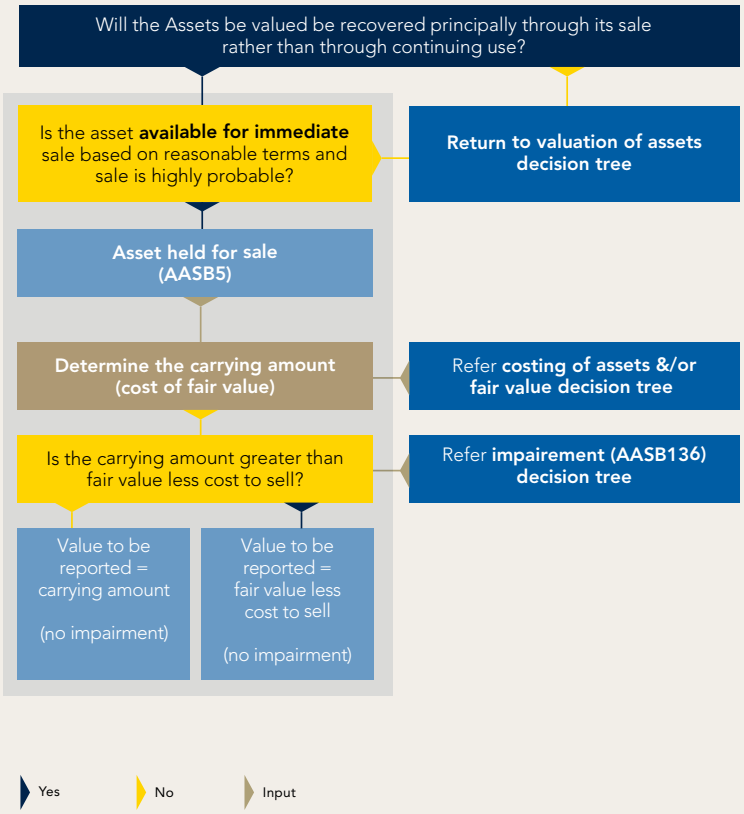
AASB123 Borrowing costs decision tree



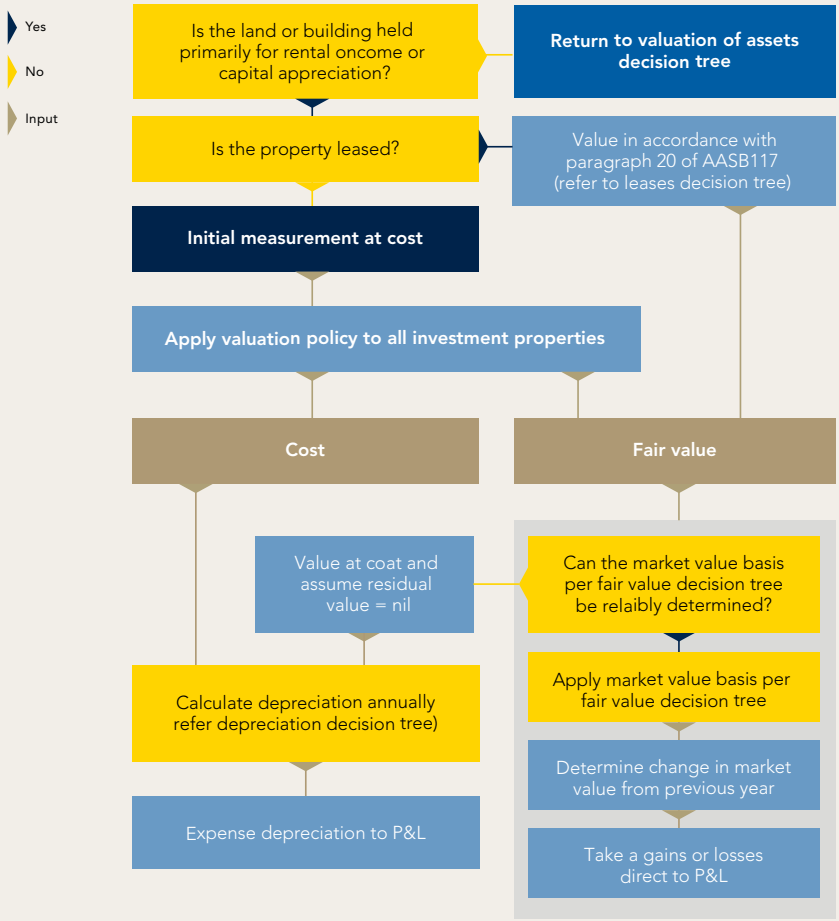
Note: Different approaches may be required for Public Sector

AASB136 Impairment decision tree

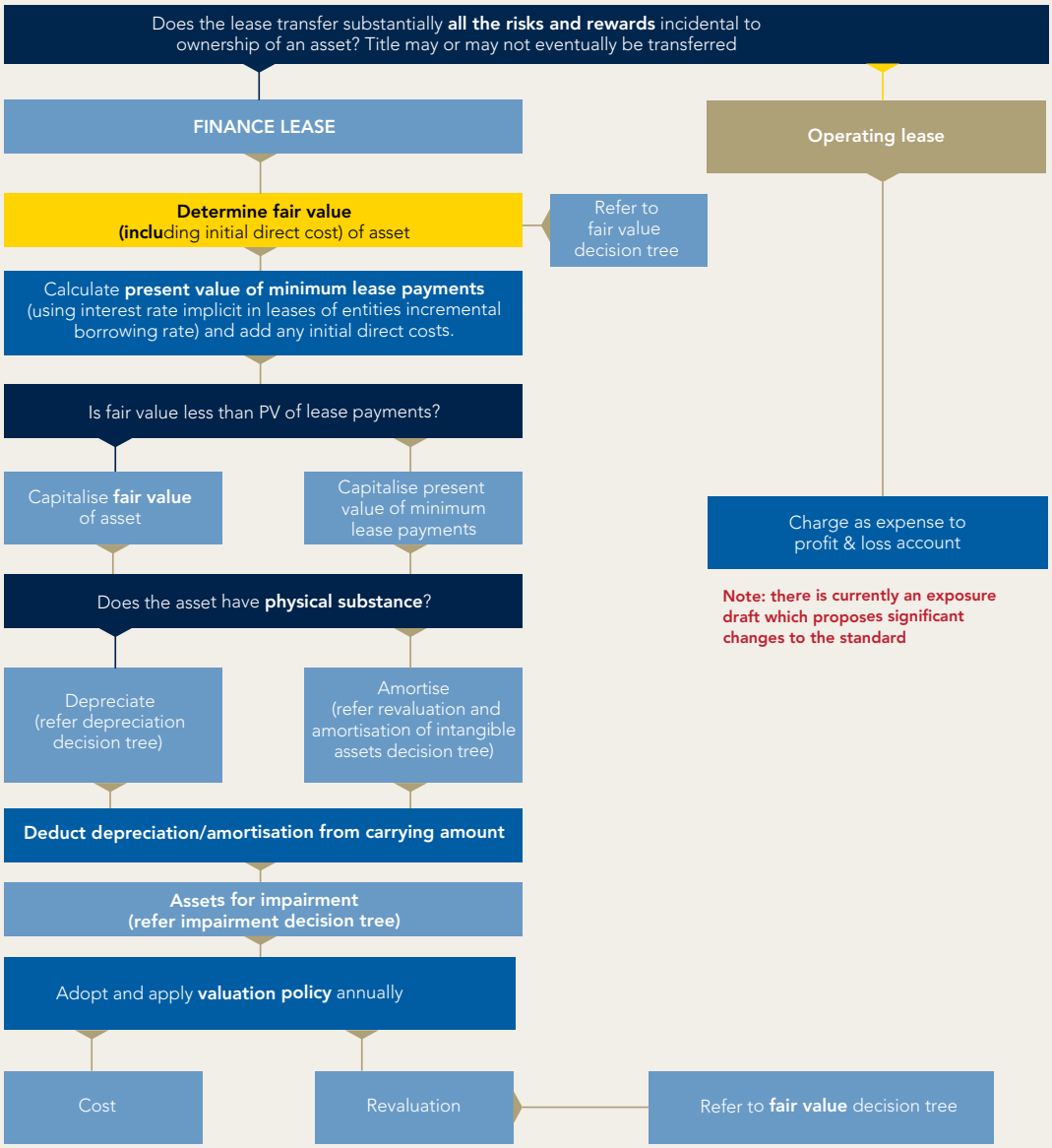
AASB5 Assets held for sale and discontinued operations decision tree



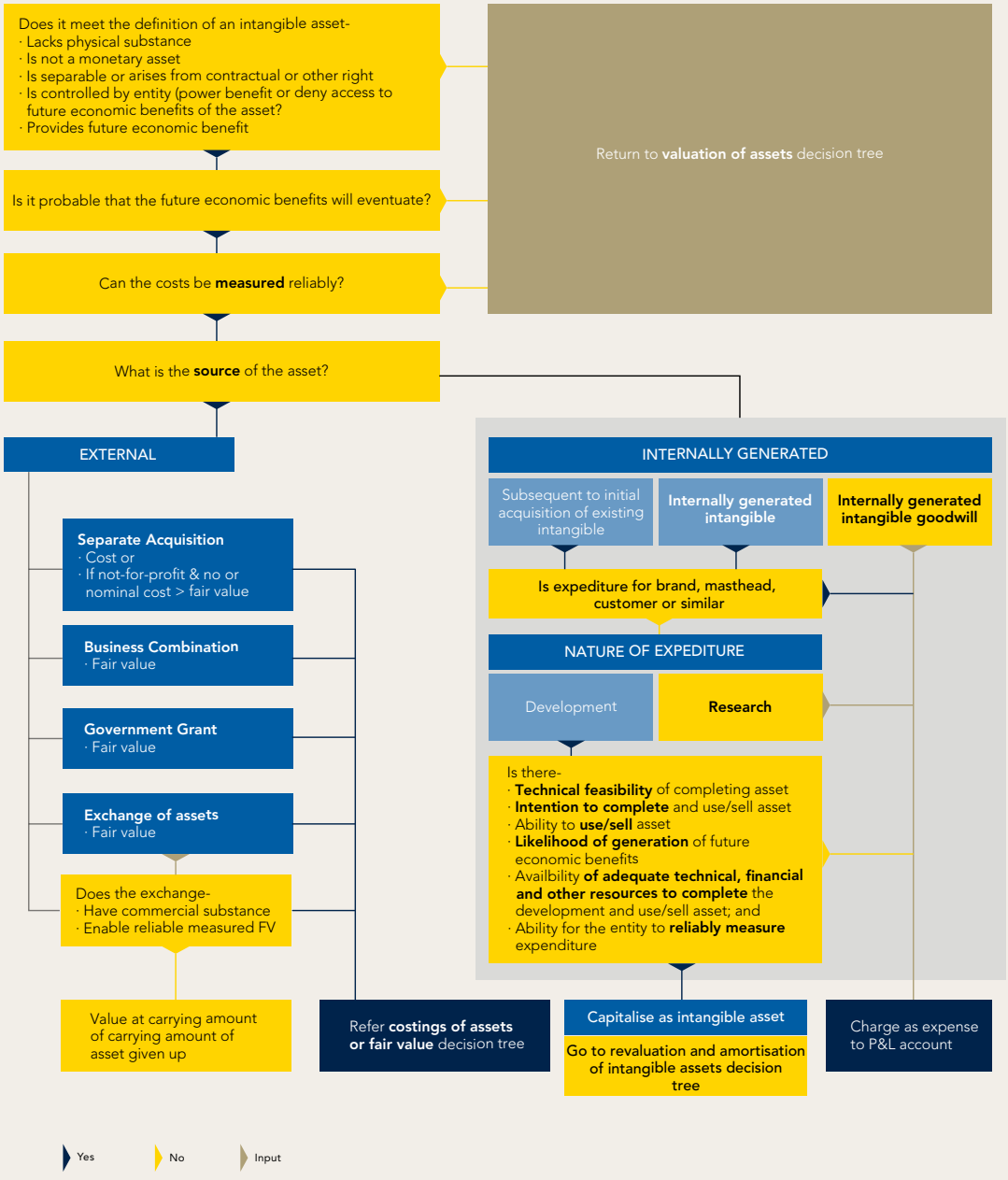
AASB140 Investment property decision tree



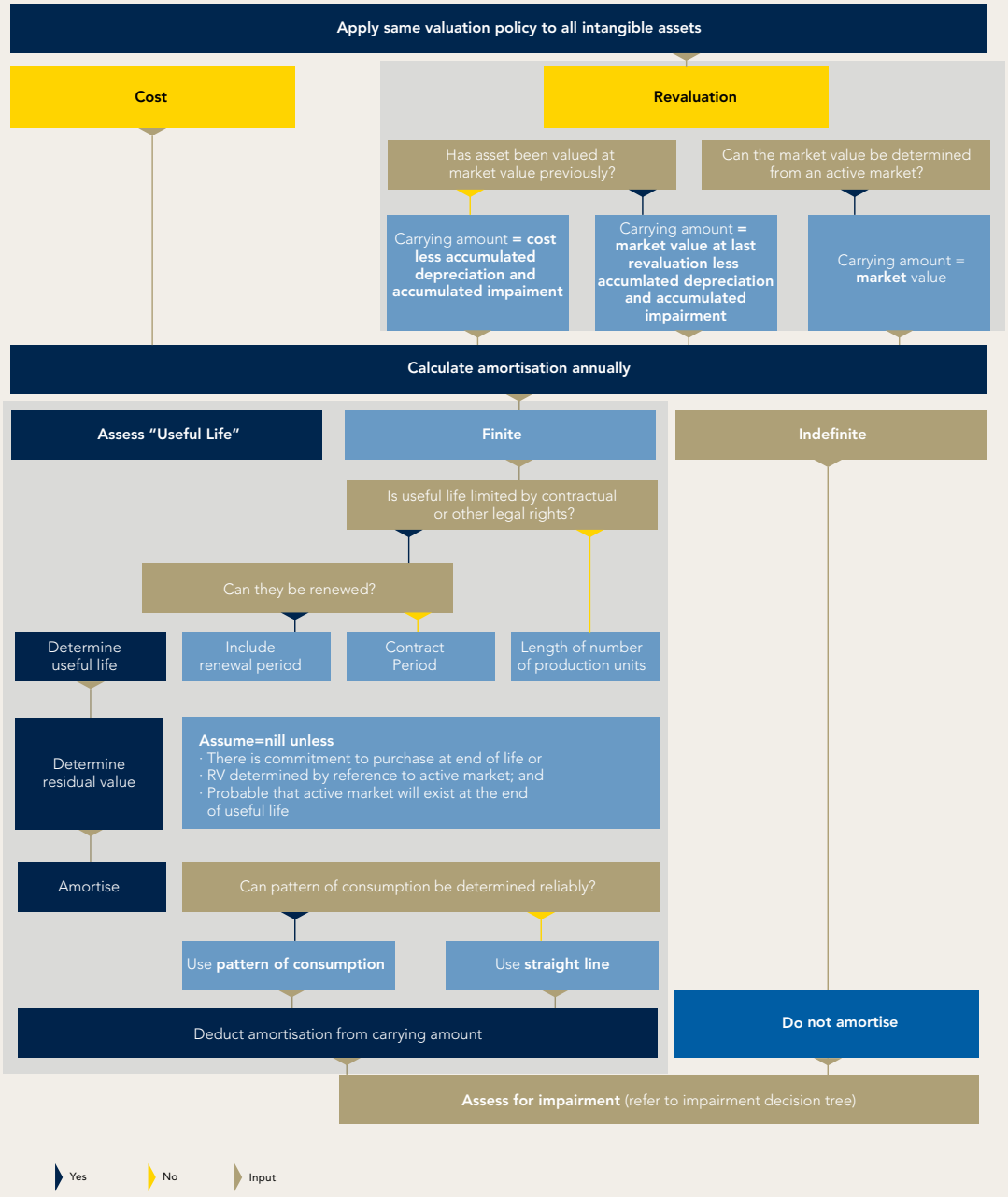
AASB117 Leases decision tree



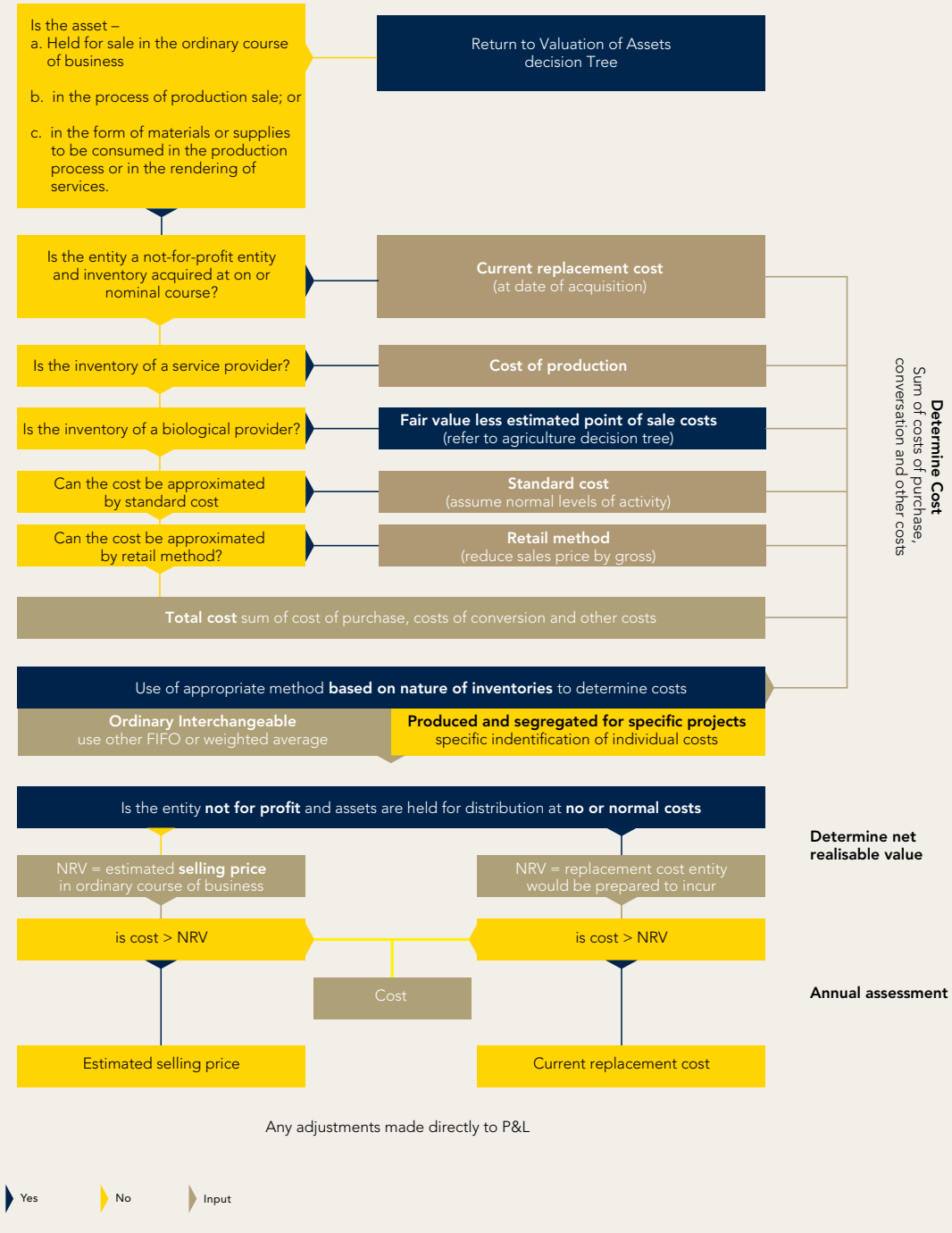
AASB138 Intangible assets decision tree



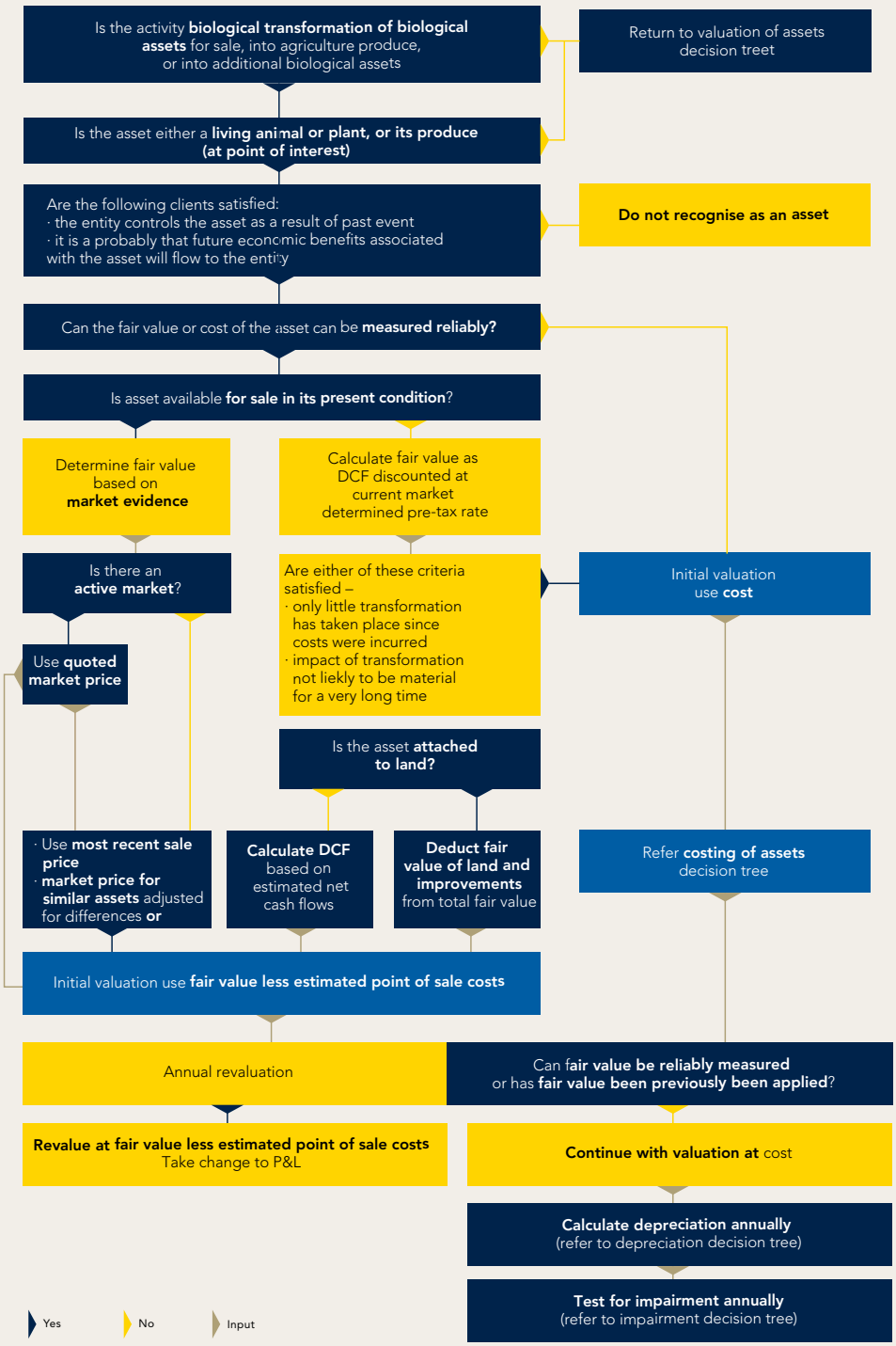
AASB138 Intangible assets revaluation and amortisation decision tree



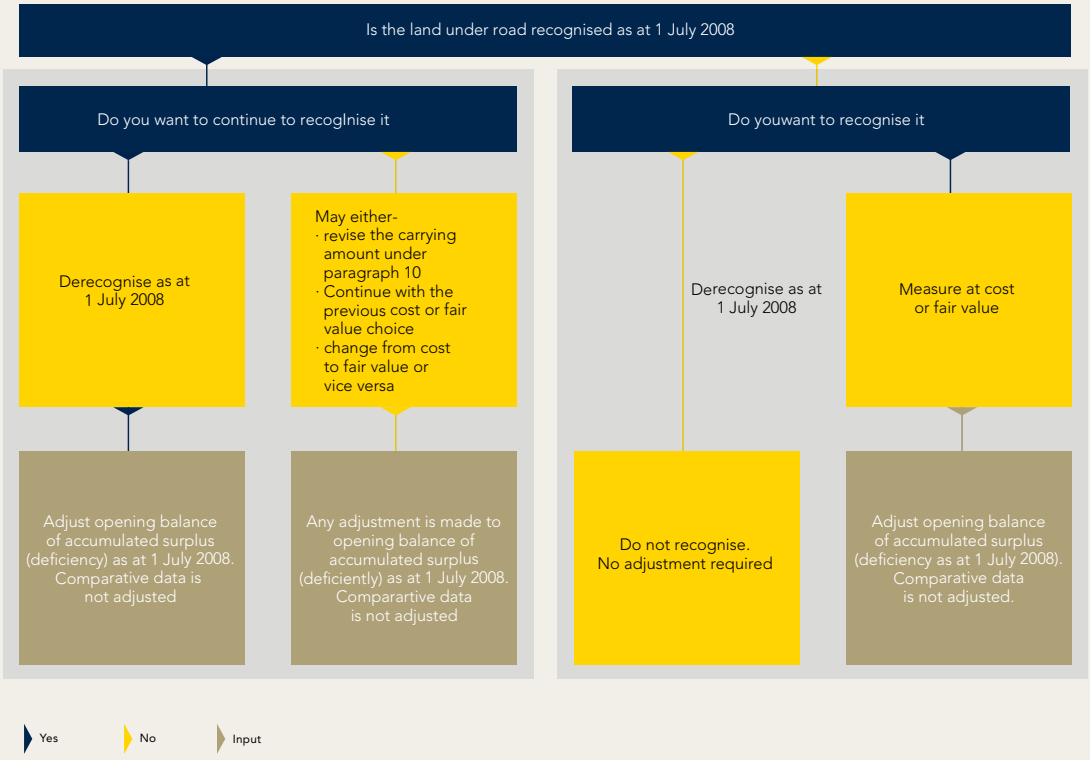
AASB102 Inventories decision tree



AASB141 Agriculture decision tree



AASB1051 Land under roads decision tree



ATTACHMENT D: QUALITY REVIEW CHECKLISTS

This includes two papers setting out a range of quality review considerations. They have been adapted from Technical Information Sheets previously issued by APV Valuers and Asset Management.

The first relates specifically to the valuation and depreciation methodology, whereas the second relates to the overall asset valuation framework. It should be noted that this checklist focuses on the cost approach to valuation. However the underlying concepts can also be applied to both market and income based approaches.

Valuation and depreciation quality review considerations (methodology)

This pre-audit checklist has been developed to assist entities to undertake a quality review of their valuation and depreciation figures prior to the external audit review.

Instances of non-compliance should be reviewed in light of the overall materiality and either amended or reasons for the non-compliance documented and provided to the auditor.

The checklist is not exhaustive but covers common issues and requirements of the relevant prescribed requirements.

Fair value considerations

Consideration	Ref	Compliance?
Asset register		
Has the asset register been established and maintained appropriately so that all assets are recorded at an appropriate level (that is, segments and components); and can they be identified (through location and description)?		
Fair value methodology		
Does the methodology take into account the various factors that drive the consumption of the asset's service potential? For example, is it based purely on age or does it take into account physical condition, obsolescence, functionality, capacity, safety standards and changing community expectations?	1	
Does the methodology take into account that the asset experiences cyclical maintenance and renewal and/or renewal? Consider whether the calculation of CRC is still based on original date of commissioning or whether it is adjusted to reflect the most recent renewal.	2	
Have the assets been split into components to enable proper valuation and depreciation? If a threshold for componentisation has been set, is the threshold appropriate?	3	
Has a separate value and depreciation expense been determined for each component? If not, has the decision not to do so been tested to ensure that it has not produced material misstatement?	3	
Has sufficient and appropriate evidence been produced to support the critical assumptions? Consider evidence to support the GRC, condition, pattern of consumption of future economic benefit, useful life, RUL and residual value.	4	
Is the result of the valuation consistent with the asset management system? Compare the CRC as a percentage of gross replacement cost with condition data provided by the engineers.	5	
Date of last effective valuation	6	
Consider the length of time since the last revaluation and whether it is likely that the fair value has moved materially since that time. That is, does the CRC reflect a true and fair view of the fair value of the assets? Have the underlying assumptions been assessed at the end of the year and considered in light of the valuation?		
Assessing independent experts	7	
Did the person giving the valuation possess the appropriate qualifications, experience and independence? Was the scope of the valuation exercise limited in some way? Did they fully understand the requirements of the accounting standards?		
Appropriateness of valuation indices	8	
If indices were used to do the valuation:		
Were the indices appropriate and relevant for the specific assets being revalued? Are the indices reasonable based on market movements and prior year indices? Were they applied correctly to the asset class?		
If not applied by an external valuer, do the financial statements clearly indicate the valuation has been provided by management and not the valuer?		
Did the revaluation also include assessment of additions, deletions and changes in condition?		

Depreciation expense considerations

Consideration	Ref	Compliance?
Review the depreciation methodology policy		
How has depreciation expense been calculated? Does the methodology take into account the various factors that drive the consumption of the asset's service potential or is it based on age alone? Does the method used ensure compliance with the accounting standards and other prescribed requirements?	1	
Does the method take into account regular cyclical maintenance and renewal/renewal?	2	
Does the method attempt to match the pattern of consumption of the asset's service potential? Is the pattern adopted consistent with the engineer's understanding of how the asset is consumed? If not, which is correct?	1 & 9	
Has depreciation been calculated for each component?	3	

Reference notes

1 AASB116 requires: "The depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity".

It is imperative that the methodology take into account the factors that drive the consumption of the asset's service potential. For cyclical maintenance and renewal assets (such as buildings, roads, water and sewerage) age alone may be irrelevant in measuring how much service potential has been consumed.

The International Infrastructure Management Manual (published by IPWEA) provides guidance on the types of factors that impact on the rate of consumption of the asset's service potential. They include such factors as:

- physical wear and tear;
- functionality;
- capacity;
- utilisation;
- obsolescence; and
- changing requirements (including safety, legislation and design specifications).

Failure of the methodology to take into account the various factors may result in non-compliance with the accounting standards.

2 Assets such as buildings and infrastructure regularly experience cyclical maintenance and renewal. This is to maintain the asset at a level that provides the appropriate level of service to the community. As a consequence of this regular maintenance and renewal, the asset's life is extended beyond what it would have been if the maintenance work was not completed. The effect is that the original date of commissioning of the asset now becomes irrelevant. If used in the calculation of the CRC, there is an extreme risk that the calculation of both CRC and depreciation expense will be materially misstated.

To demonstrate, consider the following scenario:

- The asset was originally commissioned 40 years ago;
- Based on current condition the RUL is assessed as another 40 years;
- The gross cost of the asset is $50,000; and
- Every 15 years the asset is renewed at a cost of $15,000, which restores the asset back to as new with a design life of 50 years.

Using the straight-line method, the calculation of CRC and depreciation expense could be done in a number of different ways depending on how you interpret the assumptions.

	Method A	Method B	Method C
Gross	$50,000	$50,000	$50,000
Age	40 years (since date of commissioning)	40 years (since date of commissioning)	10 years (date since last renewal)
RUL	40 years (based on current condition)	Five years (based on estimated RUL until next renewal)	Five years (based on estimated RUL until next renewal)
Useful life (Age + RUL = UL)	80 years	45 years	15 years
Residual value	Nil (assets like these never sold)	$35,000 (gross less renewal to bring back to as new)	$35,000 (gross less renewal to bring back to as new)
Depreciation (Gross – RV) / UL	$625 ($50,000 – 0) / 80	$333 ($50,000 – $35,000) / 45	$1,000 ($50,000 – $35,000) / 5

Only method C calculates the CRC and depreciation expense correctly. The impact of the errors for methods A and B are as follows:

	Method A	Method B	Method C
CRC	$25,000	$36,667	$40,000
%Error	(37.5%)	(8.3%)	–
Depreciation	$625	$333	$1,000
%Error	(37.5%)	(66.7%)	–

3 AASB116 (Paragraph 43) requires that: "each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately".

Due consideration also needs to be given to materiality. In order to ensure the valuation process is cost effective, it is normal practice to adopt thresholds to ensure that money is not wasted on collecting data or undertaking calculations that do not warrant the additional cost. Depending on the size of the asset portfolio, the level of threshold for asset recognition may vary.

However, the issue is whether a threshold set to disaggregate an asset into components is appropriate and whether it will allow the valuation and associated depreciation to be materially correct. From a practical perspective, the valuation of any structure (irrespective of value) requires the valuer to consider the individual components, their construction material, likely replacement strategies and the physical condition of each component. Two buildings that are identical in design and construction but the components of which are in different condition will result in significantly different values and depreciation profiles.

As a general rule, all complex assets need to be componentised as per AASB116. However, if a componentisation threshold has been established there needs to be sufficient and appropriate evidence that the valuation and associated depreciation would not have been materially different if the assets had been componentised. Similarly, the valuer will need to justify how they arrived at a valuation if they didn't consider the individual components.

Failure to obtain such evidence would impair the ability to assess whether the CRC and associated depreciation expense is materially correct.

4 There are a number of auditing standards that have a direct impact in relation to infrastructure assets.

In essence, and without over simplifying the audit process, in relation to infrastructure assets, they require the auditor to:

- obtain sufficient and appropriate evidence of the completeness and accuracy of the asset register;
- assess the appropriateness and logic of the valuation and depreciation methodologies;
- ensure that the methodologies fully comply with the accounting standards (in particular AASB116 Property, Plant and Equipment);
- assess the competence, experience and objectivity of any experts used within the valuation and depreciation exercise;
- obtain representations from management over a range of issues; and
- obtain sufficient and appropriate evidence to support the critical assumptions used within the methodology.

5 Not only does the auditor have to take into account what they are told, they must also draw on knowledge gained from other sources and consider whether the information supplied is consistent with the information supplied by other sections within the same entity.

Of critical importance is the need to consider the financial statement information in the light of the asset management information. For example, the auditor could compare the CRC expressed as a percentage of gross replacement cost against condition data provided by the engineers. These should be consistent. If the engineers (via their asset management plans) indicate the condition of the asset portfolio is good, the accounting figures should reflect the same. If they don't, this most likely indicates that the valuation methodology does not accurately reflect the level of remaining service potential and therefore materially misstates the CRC and associated depreciation expense.

6 AASB116 requires that "revaluations shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the reporting date".

AASB116 states: "Some items of property, plant and equipment experience significant and volatile changes in fair value, thus necessitating annual revaluation".

In relation to a period of three to five years, it further states that this would only apply to items where there is insignificant change in value. "Such frequent revaluations are unnecessary for items of property, plant and equipment with only insignificant changes in fair value. Instead, it may be necessary to revalue the item only every three or five years."

Consider:

- whether it is likely that the fair value has moved by more than 5 per cent since the last date of valuation;
- the length of time since the last comprehensive revaluation (three years is generally considered the maximum); and
- whether appropriate indices or desktop updates have been applied in the interim years.

7 Just because you're an accountant does not mean you have the experience, expertise and specialist knowledge to do specialised tax or insolvency work. The same applies to experts being used to value specialised public sector assets.

Sometimes the decision of which valuer to appoint is made on price alone without due consideration being given to the ability of the valuer to provide an output that fully complies with all prescribed requirements.

Consider:

- the valuer's experience in valuing specialised public sector assets (years, number of clients, qualifications);
- their reputation and past performance (qualifications, client feedback);
- their approach and methodology; and
- their understanding of the applicable accounting standards.

8 Sometimes entities take it upon themselves to apply an index to a previous valuation. While there is nothing necessarily wrong with this practice, it is imperative that the index used is appropriate for the specific asset. There is a range of indices available both publicly and via subscription to specific cost guides. The incorrect application of these indices could lead to material misstatement. The use of one generic index across all asset classes or an entire asset class is also likely to lead to material misstatement.

   If a entity applies an index to an external valuer's valuation, it becomes a management valuation and the associated disclosure statements need to be amended accordingly.

9 Traditionally some entities have adopted the straight- line approach to valuation and depreciation as a default. However, AASB116 states that "the depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity".

   It further states: "The entity selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. That method is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits."

Accordingly, the adoption of a particular pattern (straight-line or otherwise) without due consideration of the actual expected pattern of consumption of future economic benefit will result in non-compliance with the standards and typically will lead to material misstatement.

Valuation and depreciation quality review considerations (valuation framework)

How do you ensure you are prepared for your auditors?

Auditors are concerned with more than just calculations. Under the auditing standards they need to gain assurance with respect to a number of audit representations. This includes gaining sufficient and appropriate audit evidence enabling them to certify that they have obtained the necessary comfort.

While not exhaustive, the following list provides an overview of some key aspects that should be covered to ensure the safe passage of audit. We suggest that it be used as a checklist in preparation for the annual audit. The processes are split into those that should be done before or during the valuation and those which should be completed after the valuation. Details of each process are included on the pages following the checklist.

Pre-valuation and during the valuation	Done?	Post-valuation	Done?
Plan but don't over-design.		Document and confirm key aspects of the non-current assets policy.	
Get the valuation procurement process right.		Document in detail the final valuation and depreciation methodology.	
Engage audit in the process sooner rather than later.		Document the process used to undertake the valuation, including how the evidence was captured.	
Create clear lines for communication.		Annually review unit rates and gross replacement cost.	
Once the draft valuation methodology is developed invite audit to provide feedback.		Annually review factors and assumptions critical to the calculation of the CRC and depreciation (including impairment).	
Involve audit in discussions regarding use of sampling and appropriateness of sample sizes.		Document the process and results of an internal review by management.	
Review the asset register to ensure it is complete and accurate.		Undertake some high-level analytics and compare with previous years' results.	
Review the asset register to ensure dimension and valuation critical data is accurate.		Complete a movement reconciliation supported by appropriate details for each movement.	
Invite audit to attend some inspections.			

Pre-valuation and during the valuation

Many mistakes are made prior to the valuation even being started. Any underlying problems with the methodology or even the capability of those responsible for delivering the valuation will impact on the whole of the project.

To ensure these problems do not occur, action needs to be taken before conducting inspections. This includes such things as cleaning and validating the asset register as much as possible.

Prior to and during the valuation the following processes should be undertaken and assessed for performance.

Process: pre-valuation and during valuation	Explanation	Done?
Plan but don't overdesign. A good plan is essential to a good outcome, but planning to the finest detail or overdesigning may lead to critical and/or costly mistakes. Valuation is a specialised profession requiring specialist knowledge of the assets, accounting standards, valuation standards and appropriate experience. Sometimes people without the necessary skills or experience develop overly complex, inefficient and often non-compliant approaches based on their understanding of what is required.	If you are going to engage experts (whether internal or external) to do the work for you, respect that they have greater knowledge in the area and allow them to advise on the best and most cost-effective way to undertake the project. Rather than tell the expert how to do their job, it is better to first get their advice and then ask questions to ensure their plan meets your needs. A poorly designed or inefficient approach established at the beginning of the project will impact on every stage of the project. If it is non-compliant or seriously flawed, it will significantly increase the audit risk.	
Get the valuation procurement process right. Make sure you understand what is important, that the analysis is undertaken by those who know what to look for and that you are going to get what you need. The aim is to procure value for money, which requires a comparison of value (quality and output received) against the cost to acquire it. Sometimes procurement processes get in the way of making the best decisions. Sometimes this is because: • a weighting system is used, which skews everything towards price at the expense of more important aspects; • the analysis of the tender is undertaken by people who don't really understand what is needed; • the tender specification is focused on doing something a particular (but substandard, non-compliant or inefficient) way rather than achieving the necessary outcome; • the process is based on making life easy for the tender panel by reducing the number of tenders to analyse. This is often achieved by setting a range of entity-wide mandatory factors that are irrelevant to the ability to deliver the project.	The impact of asset-related balances (valuation and depreciation) on the financial statements typically causes audit the most angst and concern. This is due to their high materiality, subjectivity and complexity. It therefore makes sense that appropriate effort is put into ensuring the procurement process delivers the firm best able to deliver value for money and full compliance. Aspects such as the methodology, experience, past performance, guarantee of an unqualified audit report, ability to value-add, quality management certification, ability to liaise with auditors and post-valuation service are more important than price alone. Price is always important but if the final product turns out to be substandard or non-compliant, even though cheap, it will be a complete waste of money. Best practice procurement dictates that for these types of services a price/quality evaluation model could be utilised where price is excluded from weightings. Each tender should be assessed from a quality perspective using the same criteria, and then cost should be considered, with objective reasoning being given if it is proposed to accept a tender that is more expensive than one that meets the minimum quality standards.	

Process: pre-valuation and during valuation	Explanation	Done?
Engage audit in the process sooner rather than later. This would include discussions on asset classes to be valued, general approach and methodology, software being used, components, use of external experts, audit process and what they are looking for in terms of sufficient and appropriate evidence.	This provides audit with the opportunity to identify and discuss potential issues and their expectations. Inviting their involvement also creates a better working relationship and opens communication channels. If there are any potential issues, or audit's expectation of what is required is different from yours, it is critical that these be identified at the start. This allows any issues to be addressed rather than becoming a stumbling block at the end of the audit process.	
Create clear lines for communication. This also includes communicating with external experts such as valuers. It is important that audit knows who to talk to and how to get hold of them. If you are using external experts, ensure they understand the role of audit and are happy to field audit queries (even six months after final delivery).	During the peak audit season auditors work under extreme pressure and timeframes. If they identify an issue or need information it must be provided as quickly and as accurately as possible. The longer it takes to provide the necessary response (or if the response leads to other concerns), the longer it will take to finalise the audit and allow the financial statements to be signed off. Rather than trying to answer all the queries yourself (and potentially providing a misleading response), instruct the auditor to talk directly to the person who knows best how to answer the query. If work was performed by an external expert, instruct the auditor to discuss the issues directly with the external expert.	
Once the draft valuation methodology is developed invite audit to provide feedback. This will include defining the valuation basis, method to calculate gross replacement cost, components, factors used to determine depreciation, condition scoring matrix and patterns of consumption. Care needs to be taken if reliance is placed on an Asset Management or other system producing the valuation and depreciation calculations. While they may indicate their ability to produce valuations and depreciation calculations In accordance with the standards such assurances need to be assessed. This would include a review of the methodology and assumptions and ability of the system to provide all necessary outputs required from the valuation. This will include methodology documents, support for assumptions and information necessary to complete AASB13 disclosures.	While audit may not want to express an opinion on the appropriateness of the methodology, it does provide the opportunity to identify potential issues. Better to address the issues before too much work begins than have a major issue arise at financial statement time. Audit needs be comfortable with the approach, methodology, algorithms and outputs. Gaining an understanding of these using an Asset Management system may be difficult. It is important for audit to be comfortable that management be able to clearly explain these to audit.	

Process: pre-valuation and during valuation	Explanation	Done?
Involve audit in discussions regarding use of sampling and appropriateness of sample sizes. The determination of a suitable sample size may be made using professional judgment, or in some cases may require extensive and complex mathematical formulae. There are no hard and fast rules on how this must be done, and individual auditors may have different opinions about what constitutes an appropriate sample size based on the size and nature of the portfolio. Management needs to have an understanding of audit materiality and how this impacts on audit processes.	While there are no specific rules on determining the appropriate valuation sample size, auditors are very familiar with the concept. In determining the valuation sampling approach, due consideration needs to be given to materiality, stratification of the portfolio and risk of error. The inherent audit risk associated with a portfolio of a very large number of homogeneous assets (such as roads, footpaths, drains and pipes) is very low and therefore a very small sample size may be appropriate but will need to vary depending on confidence over the accuracy of existing condition data. In contrast, some asset portfolios (such as specialised buildings) tend to include few assets that could be deemed to be the same. As a result, the sample size may need to include 100 per cent or all assets over a certain materiality threshold.	
Review the asset register to ensure it is complete and accurate. This will include removing any in-year capex accounts from the register and updating the condition rating of assets affected by the capex. Ideally there should be documented evidence to show that this review was undertaken and to report the results. All assets scrapped or disposed of during the year should also be removed from the asset register (at the time of disposal), with the resulting profit or loss reconciled to the income statement. Consideration also needs to be given to other controls that can be put in place to verify the completeness of the asset register.	Asset registers can very easily become inaccurate or incomplete for a range of reasons. Typically new assets are acquired by the entity (either by purchase or by contribution) and while they may be updated in the asset management system, they may not be updated in the asset register. Likewise, disposals may be updated in one but not all registers. If the starting point for the valuation is inaccurate, the valuation and depreciation calculations will also be inaccurate. This review needs to be undertaken by in-house staff that have a more intimate knowledge of the portfolio than external consultants. It is important for asset management and finance staff to work together to review and proof the accuracy of all asset registers.	
Review the asset register to ensure dimension and valuation critical data is accurate. This may include direct reconciliation to Geo-spatial Information System or other systems and comparison of total area and length with previous year's register. Ideally there should be documented evidence to show that this review was undertaken and to report the results.	As entities are improving their data they often find they need to make changes to critical data such as lengths, widths and material type. These changes can create big changes in valuations, so accuracy is important. While the data gathering may be done by either internal or external staff, it is critical that the results be reviewed by internal staff and signed off as evidence of the review. It is important that the accounting treatment for adjustments to existing assets is appropriate.	

Process: pre-valuation and during valuation	Explanation	Done?
Invite audit to attend some inspections.	While they may not necessarily want to attend inspections, it provides an opportunity for audit to see how the valuation methodology is translated in practice—in particular, how condition scoring and estimates of remaining useful life are assessed. This also provides an opportunity for audit to assess the competence and capability of the people undertaking the inspections.	

Post-valuation

Once the valuation is complete there is a range of processes that should be completed. Essentially these relate to documenting what actually happened, how it was done, the assumptions used, the outcomes achieved and a range of quality assurance processes.

This information will form the primary evidence used to undertake the auditors' substantive testing procedures, and should be provided to the auditor as an audit package.

Process: Post-valuation	Explanation	Done?
Document and confirm key aspects of the non-current assets policy. These need to include definitions, policies addressing the requirements of the accounting standards and other prescribed requirements, and management's decisions with respect to how the valuation and depreciation were undertaken. The policy needs to be properly authorised and reviewed on a regular basis.	The non-current assets policy sets out a range of rules that dictate definitions, policies, and specifically how the valuation and depreciation calculations are to be done. This includes such things as thresholds, valuation basis, depreciation method and management assumptions. The auditor needs to understand these boundaries, ensuring they comply with the prescribed requirements and the calculations have been completed in accordance with the policies.	

Process: Post-valuation	Explanation	Done?
Document in detail the final valuation and depreciation methodology used to produce the valuation and depreciation calculations adopted in the financial statements. This sets out how the methodology used addressed the various aspects of the accounting standards. It details the asset hierarchy and needs to demonstrate the accounting concepts, the calculations, key assumptions, and how the raw data was used to determine the level of remaining service potential and the expected rate of consumption of that service potential. AASB116 includes a number of mandatory requirements that at a minimum need to be addressed in the methodology. These include: • Method to determine fair value for CRC: • determination of cost • residual value and useful life (linked) • pattern of consumption of future economic benefit. The methodology also needs to set out the key assumptions used and the appropriateness of using those assumptions.	This is the most important piece of audit evidence that the auditor needs to gather. It provides the auditor with the complete picture of how the valuation and depreciation calculations were completed. It also provides key evidence that enables the auditor to gain assurance of a number of critical audit assertions and to judge compliance of the methodology against the prescribed requirements and methodologies used by other entities. Without a clearly documented methodology the audit will need to ask an inordinate number of questions to gain the necessary information. This, in turn, will result only in increased audit time, cost and no doubt confusion or uncertainty. With a comprehensive, well-documented and fully compliant methodology the auditor instantly gains a higher level of confidence in the approach and, as various audit assertions can be easily satisfied, typically results in a lower audit risk assessment and should aid in a quicker and easier audit process. The auditor will of course still need to test the principles and assumptions in the methodology, so it needs to accurately reflect the actual assumptions, processes and calculations used to produce the valuation and depreciation calculations.	
Document the process used to undertake the valuation, including how the evidence was captured. This needs to detail aspects such as: high overview of the valuation process the data capture process (completeness) sampling and validation the quality assurance process. Even if the valuation is outsourced to an external firm it is critical that the internal process be fully documented.	While a methodology document explains how the calculations were completed, the auditor needs to gain evidence specifically about how the valuation process was implemented, what controls were put in place and how decisions were made about matters such as sampling. This enables the auditor to gain assurance that the policy and methodology were both implemented as described and that reliance can be placed on the output. Without a clearly documented process the auditor will need to obtain the evidence by asking questions across the organisation. Often this leads to inconsistency in responses and further confusion, which may result in the auditor spending additional and unnecessary time investigating concerns raised from those queries.	

Process: Post-valuation	Explanation	Done?
Annually review unit rates and gross replacement cost. Ideally there should be documented evidence to show that this review was undertaken and to report the results. The entity needs to document the pricing/ indexation references it intends to use each year in the asset accounting manual.	AASB116 requires a review at the end of the year to assess whether there is any evidence to suggest the carrying amount is significantly different from the fair value. By nature this includes a review of the GRC. Even if an entity adopts a policy of revaluing every three years, the prescribed requirements mandate that the annual review be undertaken and if there is evidence of a material change a revaluation must be undertaken. Quantification of the annual movement in fair value must be documented so the auditor can assess the materiality of fair value increments and decrements.	
Annually review factors and assumptions critical to the calculation of the CRC and depreciation (including impairment). Ideally there should be documented evidence to show that this review was undertaken and to report the results.	AASB116 and AASB136 require a review at the end of the year to assess whether there is any evidence to suggest the carrying amount is significantly different from the fair value. By nature this includes a review of the assumptions that drive the calculation of the CRC (fair value) and depreciation expense. Even if an entity adopts a policy of revaluing every three years, the prescribed requirements mandate that the annual review be undertaken and if there is evidence of a material change a revaluation must be undertaken. The review needs to clearly document that the following aspects were reviewed and confirm the appropriateness of (or show relevant changes made in regard to): • condition assessments (including impairment) • residual value • pattern of consumption of future economic benefit useful life and remaining useful life.	

Process: Post-valuation	Explanation	Done?
Document the process and results of an internal review by management for accuracy, reasonableness, quality and consistency with the entity's understanding of the portfolio. This essentially requires management to critically assess the outcomes of the valuation, and to validate the accuracy and appropriateness of the key assumptions relied upon.	The responsibility for the figures reported in the financial statements rests with management. Even if an external valuer is appointed, it is the responsibility of management to review the results and critically assess the outcomes of the valuation. This includes reasonableness, consistency, appropriateness and accuracy. Auditors are becoming more concerned about entities that accept work without checking it against the prescribed requirements, contract specifications or their own knowledge. If a review is undertaken and documented, the auditor is able to obtain some assurance regarding management controls. This will aid in the audit process and may result in time and cost savings. Asset management personnel should provide evidence that a quality control process has been undertaken that provides assurance on the accuracy, completeness and valuation of all assets. Finance personnel should ensure that they review the information provided to them prior to finalising the financial report.	
Undertake some high-level analytics and compare with previous years' results. One year is sufficient but up to five years would be ideal. This should include comparison (at asset class level) of: • GRC (percentage and amount of change) • CRC (percentage and amount of change) • CRC as a percentage of change • depreciation expense (percentage and amount of change) • depreciation expense as a percentage of GRC • minimum, maximum and average depreciation rates applied by asset type • minimum, maximum and average unit rates applied by asset type.	Auditors need to assess the competence of management and their understanding of the results. The conduct of high-level analytics supported by management's explanation about the findings provides the auditor with a high level of assurance over the competency of the management and the relative strength of the governance framework. The results also enable the auditor to identify significant trends and areas of audit focus, as well as gain evidence over key disclosures provided in the financial statements.	

Process: Post-valuation	Explanation	Done?
Complete a movement reconciliation supported by appropriate details for each movement. This reconciliation is mandated by AASB116 as a disclosure note to the statements. It is essential that the various figures be validated and tied back to a list of assets or transactions that represent each figure.	If there is one thing that will cause serious grief during the audit it is a movement reconciliation that does not add or agree to the general ledger. This reconciliation with supporting details forms an essential part of every organisation's financial statement work papers. It enables the auditor to identify major movements in account balances and to identify areas of audit focus and risk. It also provides the auditor with assurance that the account balance has been tested and validated and that it reconciles to the general ledger. It gives assurance over completeness and accuracy. Failure to complete the reconciliation prior to the audit visit could result in errors being detected as part of the audit, resulting in changes to the financial statements and increased audit concerns and risk. The following roll-forwards should be prepared: • Each asset register with depreciation expense, profit/loss on sale, opening and closing cost/fair value and accumulated depreciation reconciled to the general ledger control accounts; • Asset additions should be reconciled to the cash flow statement after adjusting for capital creditors and non-cash contributions; • The asset revaluation reserve movements should be reconciled to each asset register and supporting fair value indexation calculations.	

ATTACHMENT E: PRO FORMA TENDER SPECIFICATION AND INSTRUCTIONS TO VALUERS

Pro-Forma Tender Specification

Example quotation/tender specification

Name of entity

Provision of asset valuation services

Name of quote/tender:	Provision of asset valuation services
Closing time:	Time and date of closing
Number:	Tender reference

1 Quotation/tender details

Item	Detail
Project manager	Name and contact numbers of project manager
Due date and time	Time and date of closing
Delivery address	Address of tender delivery and any special requirements, such as electronic lodgement only or marked tender box, and the number of copies required.

2 Services to be provided

[Name of entity] is seeking expressions of interest for the provision of valuation services for a three (3) year period. Council is required to capture and value its assets and account for them according to accounting standards and other prescribed requirements to ensure good asset management practices and accurate and reliable accounting treatment.

The project involves:

- The valuation of the following asset classes as at [day and month of year-end] each year as follows at fair value (FV). A comprehensive (Comp) valuation will involve physical inspection (although a sampling approach may be utilised as appropriate). A desktop revaluation (Desk) will not require inspection by the valuer although updated condition data will be provided by [entity] to assist the valuer with these valuations; and
- [Name of entity] also aims to develop a long-term strategic relationship with the successful tenderer. Accordingly, the supplier is requested to incorporate into the quote a price for the ad hoc provision of general asset accounting and asset valuation advice.

Some asset classes will also require the provision of insurance values (Ins).

Asset class	Basis	Revaluation threshold	2013	2014	2015
Land	FV	$1	Comp	Desk	Desk
Buildings	FV and Ins	$10,000	Comp	Desk	Desk
Other structures	FV and Ins	$2,000	Comp	Desk	Desk
Roads infrastructure	FV	$1	Comp	Desk	Desk
Water and sewerage infrastructure	FV	$1	Comp	Desk	Desk
Parks and recreational assets	FV	$2,000	Comp	Desk	Desk
Other					

The outputs are to include:

Type of information	Details

[Data to be provided]	The key valuation data to be produced from the valuation report includes:
	• Asset level
	• Gross value (either MV or GRC)
	• Fair value
	• Component level
	  • Gross replacement cost, accumulated depreciation and WDV Condition or consumption score
	  • Pattern of consumption of future economic benefit
	  • Residual value Useful life and RUL
	  • Depreciation rate
	  • Depreciation expense
	  • Financial Statement Disclosure Information
	Information relevant to disclosures required under AASB13 Fair Value Measurement. For example, this may include information about level of valuation input, valuation techniques, and significant inputs and sensitivity of valuations with respect to Level 3 valuation inputs.

Timing	Draft report to be provided by <date for draft report> Final report to be provided by <date for final report>
Valuation report and certificate	Signed original report setting out the process, results, limitations, qualification of the valuer, valuation certificate and summary data.
Electronic valuation report	To be provided in either Microsoft Excel or an electronic database listing each asset and component, underlying assumptions and results with hyperlinked photographs, and GIS coordinates (where appropriate). The ability for the entity to access the electronic data and use it to upload to other systems is critical.
Valuation and depreciation methodology	The valuation is required to be supported by appropriate documentation setting out the underlying methodology, process and evidence used to produce the valuation. This needs to make reference back to the underlying accounting standards and demonstrate full compliance with all aspects of the prescribed requirements.

Type of information	Details
Audit liaison	The valuer is required to follow up and liaise with the external auditor or [name of entity] with respect to any issues relating to their processes, methodology and evidence gathered in relation to the valuation. This may include the provision of source data to the auditor. Any fees associated with this process are to be included in the overall quoted fee.

3 BACKGROUND INFORMATION

To assist the valuer gain an understanding of the project the following information is provided regarding [name of entity].

Type of information	Details
Type of entity	For example, local government
Key contact	Name and details of key contact
Location (head office)	Address and contact details
Location of assets	Provide overview of: • types of assets held • geographical spread of the assets • special instructions regarding access and inspections.
Overview of the business	Provide overview of what the entity does, including: • types of assets held services provided • customer base/community demographics other.
Linkage to other systems or processes	Provide details of other systems or processes that may impact on the delivery of the data and conduct of the valuation. For example: • financial asset register asset management system • integration into asset management plan existing sources of data condition information.

A detailed listing of assets will be provided to potential suppliers by contacting [contact officer] direct via email on [contact office email address].

Or

Detailed listings of the assets to be valued are included in the attached Excel spreadsheets. The following information is provided for quick analysis.

Asset class	No. Assets	Valuation basis	Last comp	Current fair value
Land	3,000	MV and CRC	2009	$56 million
Buildings	600	MV and CRC	2009	$67 million
Other structures	350	CRC	2009	$45 million
Roads infrastructure	25,400	CRC	2009	$470 million
Water and sewerage infrastructure	32,300	CRC	2009	$370 million
Parks and recreational assets	890	CRC	2009	$8 million
Other				

4 Definitions and prescribed requirements

The valuation is required to comply with all aspects of the relevant accounting standards and other Prescribed Requirements. These include (but are not limited to):

AASB	Accounting Standard
AASB 13	Fair Value Measurement
AASB116	Property, Plant and Equipment
AASB 136	Impairment
AASB 5	Assets Held for Sale
AASB 140	Investment Properties
	List jurisdiction specific requirements (for example, Treasury policies)

For the purposes of the exercise the following definitions apply:

Active market	A market in which all the following conditions exist: (a) the items traded within the market are homogeneous (b) willing buyers and sellers can normally be found at any time, and (c) prices are available to the public.
Component	A significant part of a complex asset that has a different useful life or pattern of consumption of future economic benefit from the other significant parts.
Comprehensive valuation	A revaluation that entails significant levels of physical inspection and evaluation of all appropriate aspects such as methodology, assumptions and unit rates.
Depreciable amount	The cost of an asset, or other amount substituted for cost, less its residual value.
Current replacement cost	The gross replacement cost less any accumulated depreciation. It reflects the level of remaining service potential embodied in an asset based on the replacement cost.
Depreciation	The systematic allocation of the depreciable amount of an asset over its useful life, which reflects the pattern in which the asset's future economic benefits are expected to be consumed by the entity.
Fair value	The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price).

Gross replacement cost	The cost of replacing the total potential future economic benefit of the existing asset using either reproduction or modern equivalents after taking into account any differences in the utility of the existing asset and the modern equivalent.
Interim revaluation by indexation	Also referred to as a desktop valuation. This type of valuation is based purely on indexation rates and adjustments for additions, deletions and changes in condition (for example, impairment). It should be limited to a maximum of two or three years between comprehensive valuations.
Market value	The price that would be exchanged between a willing buyer and seller in an open and liquid market.
Pattern of consumption of future economic benefit	The pattern in which the asset's future economic benefits are expected to be consumed by the entity. This may be constant, increasing, decreasing or variable.
Residual value	The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset was already of the age and in the condition expected at the end of its useful life.
Remaining useful life	The time remaining until an asset ceases to provide the required level of service or reaches the end of its economic usefulness.
Useful life	The period over which an asset is expected to be available for use by an entity; or the number of production or similar units expected to be obtained from the asset by an entity.

5 Specific requirements of the contract

1. Comprehensive valuation

- All assets to be revalued at fair value in full compliance with the prescribed requirements and relevant guides as listed in the section "Services to be provided";
- This includes valuing each asset as appropriate using the market, income or cost approach. With respect to the cost approach, this includes:
  - identifying all relevant costs
  - splitting complex assets into components (all assets above revaluation threshold)
  - determining gross replacement cost for each component
  - adjusting for the differences in service potential between existing asset and modern equivalent or reference asset
  - determining remaining service potential based on condition, obsolescence, the entity's asset management strategies and other relevant factors.
- The valuation is to be supported by a valuation report which incorporates a valuation certificate, detailed description of the methodology employed and all relevant information required to enable the entity to comply with AASB13 Fair Value Measurement disclosure requirements
- "Fair value" means the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). This is not necessarily the market selling price of the asset. Rather, it should be regarded as the maximum value that agency management would rationally pay to acquire the asset if it did not currently hold it, taking into account:

  - the cost of replacing or reproducing the asset, if management intend to replace it
  - the remaining useful life and condition of the asset
  - cash flows from future use and disposal.
- Fair value will be determined as follows:
  - where there is a quoted or an active and liquid market, using the market approach
  - where the value of the asset is primarily driven by its income/profit-generating capability, using the income approach.

Otherwise, using the cost approach.

- Where appropriate, complex assets are to be componentised in accordance with the requirements of the accounting standards at a level that enables determination of depreciation for each component as well as integration into the entity's asset management framework. All assets above the revaluation threshold are to be componentised;
- All valuations are to be completed with an effective date of [day and month of year end] each year;
- All valuations are to be supported by sufficient and appropriate audit evidence to enable our auditors to satisfy their professional requirements;
- The valuation and depreciation methodology must comply with all aspects of the accounting standards. In particular the depreciation methodology must:
  - be based on the relevant factors that drive the consumption of the asset's future economic benefits
  - reflect the asset management lifecycle of the asset
  - include allowance for an appropriate residual value
  - depreciate the depreciable amount over the useful life
  - use a method that matches the pattern of consumption of future economic benefit
  - be systematic.
- Where indicated, insurance valuations are also to be provided for each asset. In determining the insurance valuation, adequate allowances will be made for:
  - cost increases during the rebuilding period
  - cost of demolition and removal of debris
  - cost of all relevant professional fees including, but not limited to, architect's, engineer's, solicitor's, surveyor's and planning consultant's
  - any foreseeable associated or incidental costs
  - any additional costs due to planning restrictions or changes in regulations relating to fire, flood and occupational health and safety legislation.

2. Annual desktop revaluations

Updates will be required by [desktop update due date] each year to enable the timely completion of financial statements.

Documentation and supporting information to support the valuation are to be provided.

3. Provision of general asset accounting and asset management advice

Provide an hourly rate for ad hoc asset accounting and asset valuation advice (phone and email support).

Provide an hourly and daily rate for face-to-face meetings, workshops or the production of detailed written reports or research as required.

6 Evaluation criteria

In addition to price, the evaluation criteria include a range of mandatory and qualitative criteria.

The criteria and their respective weightings are as follows. Please ensure your proposal specifically addresses each criterion.

Criteria	Type	Weighting
1	Meets timeframe	Yes/No
2	Insurance coverage	Yes/No
3	Methodology (including full compliance and timeframe)	40%
4	Relevant skills	20%
5	Relevant experience	15%
6	Track record	15%
7	Ability and willingness to add value	5%
8	Quality assurance	5%
		100%

If a supplier is unable to satisfy all criteria they may be eliminated from the tender process. However, they may still submit an alternative tender. If so they must:

- explain in detail the reason for non-compliance; and
- set out an alternative strategy for consideration by the evaluation panel.

The non-price criteria are described as follows.

1. Meets timeframe

The specification requires the draft to be delivered by [date for draft report] with the final report to be delivered by [date for final report].

The response for this criterion is either Yes or No.

2. Insurance coverage

The following insurance is required. Please provide the following information and indicate whether you satisfy the minimum requirements with a Yes or No.

Insurance	Amount required
Public liability	$10 million
Professional indemnity	$5 million
Workers' compensation	

For each policy please advise:

- amount of coverage held;
- name of insurer;
- policy number;
- expiry date;
- excess; and
- whether you satisfy the minimum requirements (Yes or No).

3. Methodology (including full compliance and timeframe)

Proposals should include a discussion of the valuation methodology to be used and the proposed process to be followed.

Details of all output should be tendered as part of your proposal.

Examples of the proposed reporting format should be included as part of the fee proposal.

It is critical that this section address the items identified in services to be provided and specific requirements of the contract sections.

4. Relevant skills

Proposals should include curriculum vitae detailing relevant qualifications and expertise for all team members including subcontractors. Where subcontractors are used, your quotation should clearly identify that part of the project to be undertaken by the subcontractors.

5. Relevant experience

Proposals should outline your experience and reputation with respect to:

- the valuation of these types of assets;
- this sector;
- provision of advice, consulting and training with respect to asset accounting and asset valuation; and
- contributions (of a professional or technical nature) made for the benefit of the sector as whole.

In particular the proposal should also outline details of any other experience or expertise that may be relevant or provide the potential to add extra value to [name of entity] as a consequence of being awarded this contract.

6. Track record

Proposals should provide details of their track record in successfully completing projects of this nature.

In particular, provide details of:

- the number of these types of valuations completed over the past three years;
- details of whether qualified audits resulted due to asset/depreciation/valuation problems;
- contact details for referees; and
- relevant information that provides an indicator of actual performance.

7. Ability and willingness to add value

The values of assets held by [name of entity] are significant and due to their impact across the various services delivered by the entity it is desirable to build a long-term strategic relationship that provides [name of entity] with added value.

Proposals are to include information that will provide an indication of the potential to develop such a relationship. In particular they should provide information about:

- the ability and desire to establish a long-term relationship with [name of entity];
- contributing to the development of better practices across the sector or within specific entities with particular focus on asset accounting, asset valuation, asset management and corporate governance;
- your ability to deliver all services in-house; and
- relevant information that provides an indicator of actual performance.

8. Quality assurance

Proposals should indicate the processes they have in place to ensure a high level of quality assurance. Entities with independent third-party ISO:9001 quality management will be afforded full marks.

7 Pricing schedule

All costs are to be quoted as a fixed price (inclusive of travel, ancillary and tax costs) using the following schedule.

Activity	Rate	Price (Inclusive of travel, ancillary costs and tax)
Valuation of assets	Total	
Provision of ad hoc advice	Per hour	
(email and phone support)		
Provision of ad hoc advice (meetings, workshops, detailed reports and research)	Per hour Per day	

Date issued: [date of issue]

Pro-Forma Evaluation Scoring Template

Sample evaluation scoring template

	Type	Score	Comments
1	Meets timeframe		
2	Insurance coverage		

3	Methodology
	• Satisfies all requirements of services to be provided ;
	• Market approach—approach is compliant;
	• Income approach—approach is compliant;
	• Cost approach—approach is compliant and includes:;
	  • identifying all costs
	  • splitting complex assets into components
	  • determining gross replacement cost for each component after adjusting for the differences in service potential between existing asset and modern equivalent or reference asset.
	• Fair value is based on assessment of condition, obsolescence, the entity's asset management strategies and other relevant factors;
	• Componentisation is appropriately applied for all assets above the revaluation threshold;
	• The depreciation methodology fully complies with all aspects of the accounting standards. In particular, the depreciation methodology must:;
	  • be based on the relevant factors that drive the consumption of the asset's future economic benefits
	  • reflect the asset management lifecycle of the asset
	  • include allowance for an appropriate residual value
	  • depreciate the depreciable amount over the useful life
	  • use a method that matches the pattern of consumption of future economic benefit
	  • be systematic.
	• The valuation will be supported by sufficient and appropriate audit evidence;
	• The outputs include appropriate information to enable satisfaction of the disclosure requirements of AASB 13 Fair Value Measurement;
	• Where relevant the insurance valuations will be established on an appropriate basis.		

4	Relevant skills • Appropriate qualifications		

	Type	Score	Comments
5	Relevant experience • These types of assets; • This sector; • Provision of advice, consulting and training ; • Contributions (of a professional or technical nature) ; • Potential to add value		
6	Track record • The number of these type of valuations completed over the past three years; • History of qualified audits; • Referees' comments; • Relevant information that provides an indicator of actual performance		
7	Ability and willingness to add value • The ability and desire to establish long-term relationships ; • Contribution to the development of better practices across the sector; • Ability to deliver all services in-house; • Relevant information that provides an indicator of actual performance		
8	Quality assurance • ISO:9001 Quality Management; • Feedback from customers under ISO:9001 framework		

Pro-Forma Instruction to Valuers Template

Instructions to valuers

Date: [insert date]
Address: [Insert address]

Dear Sir/Madam

Instruction—valuation of non-current assets of [Insert agency name]

[Insert name of valuation firm] has been appointed to undertake the revaluation of non-current physical assets for [insert agency name]. The revaluation will be used for the preparation of the financial reports for the period ended [insert date of end of financial period].

Services to be provided

The project involves:

- The comprehensive valuation of the following asset classes at fair value as at [date of valuation]. A comprehensive (Comp) valuation will involve physical inspection (although a sampling approach may be used as appropriate). ;
- A desktop revaluation (Desk) as at [insert day and month of year end]. This will not require inspection by the valuer, although updated condition data will be provided by [insert agency name] to assist the valuer with these valuations; and
- Some asset classes will also require the provision of insurance values (Ins).

Asset class	Basis	Revaluation threshold	2013	2014	2015
Land	FV	$1	Comp	Desk	Desk
Buildings	FV and Ins	$10,000	Comp	Desk	Desk
Other structures	FV and Ins	$2,000	Comp	Desk	Desk
Roads infrastructure	FV	$1	Comp	Desk	Desk
Water and sewerage infrastructure	FV	$1	Comp	Desk	Desk
Parks and recreational assets	FV	$2,000	Comp	Desk	Desk
Other					

The outputs are to include:

Type of information	Details

Data to be provided	The key valuation data to be produced from the valuation report include:
	• Asset level
	• Gross value (either MV or GRC)
	• Fair value
	• Component level
	  • Gross replacement cost, accumulated depreciation and Fair Value
	  • Condition or consumption score
	  • Pattern of consumption of future economic benefit
	  • Residual value Useful life and RUL
	  • Depreciation rate
	  • Depreciation expense
	  • Financial Statement Disclosure Information
	Information relevant to disclosures required under AASB13 Fair Value. For example, this may include information about level of valuation input, valuation techniques and significant inputs and sensitivity of valuations with respect to Level 3 valuation inputs.

Timing	Draft report to be provided by [date for draft report] Final report to be provided by [date for final report]
Valuation report and certificate	Signed original report setting out the process, results, limitations, qualification of the valuer, valuation certificate and summary data.
Electronic valuation report	To be provided on either Microsoft Excel or an electronic database, listing each asset and component, underlying assumptions and results with hyperlinked photographs and GIS coordinates (where appropriate). The ability for [insert agency name] to access the electronic data and use it to upload to other systems is critical.
Valuation and depreciation methodology	The valuation is required to be supported by appropriate documentation setting out the underlying methodology, process and evidence used to produce the valuation. This needs to make reference back to the underlying accounting standards and demonstrate full compliance with all aspects of the prescribed requirements.
Audit liaison	The valuer is required to follow up and liaise with the external auditor of [insert agency name] with respect to any issues relating to their processes, methodology and evidence gathered in relation to the valuation. This may include the provision of source data to the auditor. Under the requirements of this contract you are duly authorised to liaise directly with the external auditor or QAO on behalf of council as necessary to resolve any potential audit issues.

To assist the valuer to gain an understanding of the project the following information is provided.

Type of information	Details
Type of entity	For example: local government
Key contact	Name and details of key contact
Location (head office)	Address and contact details
Location of assets	Provide overview of: • types of assets held • geographical spread of the assets • special instructions regarding access and inspections.
Overview of the business	Provide overview of what the entity does, including: • types of assets held services provided • customer base/community demographics other.
Linkage to other systems or processes	Provide details of other systems or processes that may impact on the delivery of the data and conduct of the valuation. For example: • financial asset register asset management system • integration into asset management plan existing sources of data condition information.
External auditor	Provide details of key audit contacts: • Name of audit firm • Key contact and their details.

Detailed listings of the assets to be valued are included in the attached Excel spreadsheets. The following information is provided for quick analysis.

Asset class	No. Assets	Valuation basis	Last comp.	Current crc
Land	3,000	MV & CRC	2009	$56 million
Buildings	600	MV & CRC	2009	$67 million
Other structures	350	CRC	2009	$45 million
Roads infrastructure	25,400	CRC	2009	$470 million
Water and sewerage infrastructure	32,300	CRC	2009	$370 million
Parks and recreational assets	890	CRC	2009	$8 million
Other				

Definitions and prescribed requirements

The valuation is required to comply with all aspects of the relevant accounting standards and other prescribed requirements. These include (but are not limited to):

AASB	Accounting standard
AASB 13	Fair Value Measurement
AASB116	Property, Plant and Equipment
AASB136	Impairment
AASB 5	Assets Held for Sale
AASB 140	Investment Properties
	List jurisdiction specific requirements (for example, Treasury policies)

For the purposes of the exercise the following definitions apply.

Active market	A market in which all the following conditions exist: (a) The items traded within the market are homogeneous. (b) Willing buyers and sellers can normally be found at any time. (c) Prices are available to the public.
Component	A significant part of a complex asset that has a different useful life or pattern of consumption of future economic benefit from the other significant parts.
Comprehensive valuation	A revaluation that entails significant levels of physical inspection and evaluation of all appropriate aspects such as methodology, assumptions and unit rates.
Depreciable amount	The cost of an asset, or other amount substituted for cost, less its residual value.
Current replacement cost	The gross replacement cost less any accumulated depreciation. It reflects the level of remaining service potential embodied in an asset based on the replacement cost.
Depreciation	The systematic allocation of the depreciable amount of an asset over its useful life, which reflects the pattern in which the asset's future economic benefits are expected to be consumed by the entity.
Fair value	The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price).
Gross replacement cost	The cost of replacing the total potential future economic benefit of the existing asset, using either reproduction or modern equivalents, after taking into account any differences in the utility of the existing asset and the modern equivalent.
Interim revaluation by indexation	Also referred to as a desktop valuation. This type of valuation is based purely on indexation rates and adjustments for additions, deletions and changes in condition (for example, impairment). It should be limited to a maximum of two or three years between comprehensive valuations.
Market value	The price that would be exchanged between a willing buyer and seller in an open and liquid market.
Pattern of consumption of future economic benefit	The pattern in which the asset's future economic benefits are expected to be consumed by the entity. This may be constant, increasing, decreasing or variable.

Residual value	The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset was already of the age and in the condition expected at the end of its useful life.
Remaining useful life	The time remaining until an asset ceases to provide the required level of service, or reaches the end of its economic usefulness.
Useful life	The period over which an asset is expected to be available for use by an entity; or the number of production or similar units expected to be obtained from the asset by an entity.

Specific requirements of the contract

4. Comprehensive valuation

- All assets to be revalued at fair value in full compliance with the prescribed requirements and relevant guides as listed in the section on services to be provided;
- This includes valuing each asset as appropriate using methods that maximise the use of observable market inputs and adopting the appropriate valuation technique. This includes the market, income or cost approach. With respect to the replacement cost approach this includes:
  - identifying all costs
  - splitting complex assets into components (all assets above revaluation threshold)
  - determining gross replacement cost for each component
  - adjusting for the differences in service potential between existing asset and modern equivalent or reference asset
  - determining remaining service potential based on condition, obsolescence, the entity's asset management strategies and other relevant factors.
- "Fair value" means the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). This is not necessarily the market selling price of the asset. Rather, it should be regarded as the maximum value that agency management would rationally pay to acquire the asset if it did not currently hold it, taking into account:
  - the cost of replacing or reproducing the asset, if management intend to replace it
  - the remaining useful life and condition of the asset
  - cash flows from future use and disposal.
- Fair value will be determined as follows:
  - where there is a quoted or an active and liquid market, using the market approach
  - where the value of the asset is primarily driven by its income/profit-generating capability, using the income approach

Otherwise, using the cost approach.

- Where appropriate, complex assets are to be componentised in accordance with the requirements of the accounting standards at a level that enables determination of depreciation for each component as well as integration into the entity's asset management framework;

- All valuations are to be completed with an effective date of [day and month of year end] each year;
- All valuations are to be supported by sufficient and appropriate audit evidence to enable our auditors to satisfy their professional requirements;
- Where indicated, insurance valuations are also to be provided for each asset. In determining the insurance valuation adequate allowances will be made for:
  - cost increases during the rebuilding period
  - cost of demolition and removal of debris
  - cost of all relevant professional fees including, but not limited to, architect's, engineer's, solicitor's, surveyor's and planning consultant's;
  - any foreseeable associated or incidental costs; and
  - any additional costs due to planning restrictions or changes in regulations relating to fire, flood, and occupational health and safety legislation.

5. Annual desktop revaluations

- Updates will be required by [desktop update due date] each year to enable the timely completion of financial statements; and
- Documentation and supporting information to support the valuation are to be provided.

Yours . . .

ATTACHMENT F: NZTA PRICE QUALITY MODEL

The following is an extract from Appendix C of the New Zealand Transport Authority Procurement Manual and details the price quality model. A sample calculation is also included. This manual is commonly referred to as an international best practice model. The price quality modelis considered the most appropriate for the appointment of professional services (such as valuers).

Price quality

Price quality is a supplier selection method where the quality attributes of suppliers whose proposals meet the RFP's requirements are graded, and the preferred supplier is selected by balancing price and quality through the use of a formula.

Using price quality

Price quality should be used where the approved organisation determines that best value for money will be obtained by having suppliers compete on both price and quality, and selecting the supplier that offers the best combination of the two.

The process an approved organisation goes through to decide how much more to pay for additional quality is clearly shown.

Proposal evaluation procedure

When selecting a supplier using the price quality method, approved organisations must use the following proposal evaluation procedure.

Separation of non-price and price information

- Proposals must be submitted in two separate envelopes. Envelope 1 must contain all proposal information other than the price. Envelope 2 must contain the price information; and
- Approved organisations must complete steps 1–5 before opening envelope 2.

Step 1: Grade the non-price attributes.

- Open envelope 1;
- Determine that the proposal is within the RFP's scope and requirements;
- Grade each non-price attribute for each proposal from 0 to 100; and
- Reject (exclude from further consideration) any proposal that fails against an attribute.

Step 2: Calculate the weighted sum margin.

- Multiply the weight (specified in the RFP) by the grade for each non-price attribute and divide by 100. The result is the index for each non-price attribute;
- Add all the indices for each proposal. The result is the weighted sum of the non-price attribute grades; and
- Deduct the lowest weighted sum from each proposal's weighted sum. The result is the weighted sum margin for each proposal.

Step 3: Calculate the supplier quality premium.

- Calculate the supplier quality premium for each proposal using the following formula:
- Supplier quality premium = estimate × (weighted sum margin / price weight); and
- The estimate used in the formula must exclude any amount fixed by the approved organisation, such as any provisional sums contained within the schedule of quantities.

Step 4: Confirm the supplier quality premium.

- Review the supplier quality premium calculated for each proposal;
- Confirm that the supplier quality premium for each proposal represents the amount more that the approved organisation is prepared to pay for a higher quality supplier;
- Replace any supplier quality premium with an acceptable figure if the review shows that any supplier quality premium does not represent the extra amount that the approved organisation is prepared to pay; and
- Confirm the new figure with those responsible for determining the preferred supplier.

Step 5: Calculate the added value premium.

- Calculate the supplier quality premium for alternative proposals by following steps 1–4 above;
- Calculate the added value premium for each alternative proposal by following t he method set out in section 10.17: Added value premium; and
- Complete steps 1–5 before opening envelope 2.

Step 6: Identify the preferred supplier.

- Open envelope 2.
- Deduct each proposal's supplier quality premium and each alternative proposal's added value premium from the price.
- The preferred supplier is the supplier that presents the proposal that is within the RFP's scope and requirements, passes on all non-price attributes and has the lowest price less supplier quality premium and less any added value premium.

Guidelines for proposal evaluation

Rules and guidelines on the selection, weighting and evaluation of non-price attributes are set out in section 10.14: Non-price proposal evaluation attributes.

Section 10.15: Price and price weight sets out the relevant requirements for price and price weight.

The RFP must establish the criteria that may lead to a non-price attribute being evaluated as a fail and any other criteria that may lead to the rejection of a proposal.

Testing the price quality method

Before using the price quality method, an approved organisation must fully understand how the method works. The choices made will influence the proposal evaluation outcome because of their impact on the supplier quality premium values—the amount more that the purchaser is prepared to pay for a higher quality proposal. Supplier quality premiums are influenced by:

- the price estimate;
- chosen non-price attributes;
- how the non-price attributes are graded (the spread of grades);

- weights given to the non-price attributes; and
- weight given to price.

All these impact on the supplier quality premiums, but the most significant impact typically arises from the weight given to price.

The attribute weight setting tool is available to help set the weights for the price and non-price attributes. The price quality evaluation tool will also assist with this testing.

Grading the non-price attributes for alternative and non-alternative proposals.

Grade the non-price attributes of all proposals, including alternative proposals.

Alternative proposals should not be evaluated until step 5.

This separation will help ensure that the evaluation of the supplier (the main focus of the non-price attribute evaluation) is separated from the evaluation of differences in the output offered under an alternative proposal (usually the main focus of the alternative proposal evaluation). The distinctions between the two—the supplier and the output offered—are then more easily drawn. See section 10.17: Added value premium.

Information and guidelines on how to grade non-price attributes are in section 10.14: Non-price proposal evaluation attributes.

Guidelines for proposal evaluation (continued)

The estimate used in the supplier quality premium formula must be included in the RFP to ensure that the process is transparent.

As noted in step 3 above, any amount fixed by the approved organisation must be excluded from the estimate. These amounts are usually a provisional sum, a prime cost sum or a contingency sum.

Any provisional, prime or contingency sum priced by a supplier when preparing a proposal and not fixed by the approved organisation must be included in the estimate.

The estimate is for the part of the output that the supplier is required to price.

Confirming the supplier quality premium

The review of each proposal's supplier quality premium (step 4) is intended to confirm that no supplier quality premium is too high or too low. If the review concludes that one or more supplier quality premium values should be adjusted, then the conclusion and its reasons must be recorded.

The NZTA expects that use of the permission (in step 4) to adjust one or more of the supplier quality premium values will be used only rarely and its use will be limited to those exceptional occasions when the proposal evaluation process reveals something that could not have been anticipated by a capable purchaser. Before using this permission, the purchaser should consider seeking specific legal advice.

Approved organisations should be mindful of the heightened possibility of a hostile response from proposal submitters if they choose to use this permission in a way that could not have been foreseen by those submitting proposals.

Supplier quality premium values must not be adjusted for an arbitrary or irrelevant reason. Adjustment will in most instances be viewed by suppliers as an admission by the purchaser that some aspect of the procurement procedure design was wrong.

For example, when a decision is made to adjust all values by a fixed percentage, this will be seen as an admission that the chosen price weight was wrong.

Approved organisations should state in the RFP that the supplier quality premium values calculated by the price quality method formula at step 3 may be adjusted in certain circumstances. Where the approved organisation can identify the circumstances under which such an adjustment may occur, then, in the interests of transparency, it should outline those circumstances in the RFP.

Disclosing the results of the evaluation process

Approved organisations should advise each proposal submitter of the value of their supplier quality premium, and how it differed from the preferred supplier's supplier quality premium.

Alternative proposals

Price quality can accommodate alternative proposals. Alternative proposals must be evaluated in accordance with the proposal evaluation procedure described above.

When using price quality for professional services, true alternative proposals are unlikely to be received. In most cases, professional services proposals are in effect all alternatives. This issue is further discussed in section 10.16: Alternative proposals.

Negotiation

The approved organisation may negotiate with the preferred supplier, providing any negotiations are carried out in accordance with the RFP's requirements. See section 10.12: RFP contents and conformity and section 10.18: Use of negotiation in a supplier selection process.

Example calculation

source: NZ Transport Authority Procurement Manual

Step 1: Grade the non-price attributes

Company A and E are excluded from further evaluation as both failed an essential non-cash attributes.

Company A was experienced in this type of work but the methodology did not take into account critical aspects of AASB116 Company E did not have any staff with appropriate qualifications.

			Tender evaluations by company (0-100)				
Criteria	Type	Weighting	COY A	COY B	COY C	COY D	COY E
1	Meets timeframe	Yes/No	Yes	Yes	Yes	Yes	No
2	Insurance Coverage	Yes/No	No	Yes	Yes	Yes	Yes
3	Methodology (including full compliance & timeframe)	30%	Non-compliant	90	75	50	30
4	Relevant skills	20%	85	100	65	60	75
5	Relevant experience	20%	85	100	20	30	75
6	Track Record	20%	50	100	95	45	95
7	Ability and Willingness to add value	5%	100	80	70	50	100
8	Quality assurance	5%	20	100	75	50	100
		100%	Non-compliant	570	400	285	Non-compliant

Step 2: Calculate the weighted sum margin

Criteria	Type	Weighting	Tender evaluations by company (0-100)				
			COY A	COY B	COY C	COY D	COY E
1	Meets timeframe	Yes/No					
2	Insurance Coverage	Yes/No					
3	Methodology (including full compliance & timeframe)	30%		27.00%	22.50%	15.00%	
4	Relevant skills	20%		20.00%	13.00%	12.00%	
5	Relevant experience	20%		20.00%	4.00%	6.00%	
6	Track Record	20%		20.00%	19.00%	9.00%	
7	Ability and Willingness to add value	5%		4.00%	3.50%	2.50%	
8	Quality assurance	5%		5.00%	3.75%	2.50%	
	Weighted sum of the non-price attribute grades	100%	Non-compliant	96.00%	65.75%	47.00%	Non-compliant
	Deduct the lowest weighted sum			-47.00%	-47.00%	-47.00%	
	Weighted sum margin			49.00%	18.75%	0.00%	

		Tender evaluations by company (0-100)				
		COY A	COY B	COY C	COY D	COY E
Estimate of likely cost for project			100,000	100,000	100,000	
Weighted sum margin			49.00%	18.75%	0.00%	
Price Weight Options	Price Weight premium per grade					
20	4.00		196,000	75,000	-	
25	3.00		147,000	56,250	-	
30	2.33		114,333	43,750	-	
35	1.86		91,000	34,821	-	
Supplier Quality Premium			114,333	43,750	-	

Premium per grade point calculated as the Non-Price Weighting divided by Price Weighting eg. If Price weighting = 30% the calculation is 70%/30% = 2.33

20% to 30% is typically used for evaluation for the provision of professional services depending upon level of specialisation required and risks associated with poor quality or non-compliance. If Professional Indemnity Insurance level requirements are assessed as high (>$5m) the price weighting should be low (<30%).

Step 4: Confirm the supplier quality premium

The use of 30% weight on price is c onsidered appropriate

- At 25% the Supplier Quality Premium for the superior tender is 147,000
- At 30% the Supplier Quality Premium for the superior tender is 114,333
- At 35% the Supplier Quality Premium for the superior tender is 91,000

However given the critical need to have a fully compliant methodology and use a firm with the right experience and track record in order to reduce risk of audit issues the use of a 30% weighting for price is considered appropriate.

Step 5 Calculate the added value premium

No alternative tenders were submitted.

Step 6 Identify the preferred supplier

	Tender evaluations by company (0-100)				
	A	B	C	D	E
Open Envelope (Price Quoted)	45,000	170,000	110,000	75,000	85,000
Less Supplier Quality Premium		(114,333)	(43,750)	0	
Adjusted Tender Price	Non-compliant	55,667	66,250	75,000	Non-compliant
		Winning tender			

ATTACHMENT G: YEAR-END CHECKLIST

Year-end checklist

The accounting standards require the review of a range of aspects of valuations as at the end of the year. These include the review of aspects impacting or indicators of:

- value;
- depreciation; and
- impairment.

The following checklist provides a summary of key requirements and disclosures required by the various asset-related standards as at the end of the financial reporting period.

Please note that this checklist does not include all requirements of the various standards. It includes only those that relate to year end, and specifically for the types of assets held by the public sectors.

Miscellaneous considerations (all standards)	
Requirements	**Done?**
Were the underlying asset accounting policies reviewed to ensure consistency, relevance and accuracy?	
Was there an internal review of the overall results and analysis for reasonableness, accuracy and compliance?	

AASB 13 Fair Value Measurement AASB116 Property, Plant And Equipment AASB136 Impairment	
Requirements	**Done?**
Valuation and impairment (AASB 13, AASB116, AASB136)	
Review of market/gross replacement cost	
Was there a review of the underlying: • market value (MV or income approach) • gross replacement cost? This should include review of unit rates, indices, key assumptions and market information. It should also be well documented and supported with appropriate audit evidence.	
Review of level of condition	
Was there a review done of the underlying condition of the assets? A change in condition will not impact on the gross replacement cost but will impact on the fair value. This should also be well documented and supported with appropriate audit evidence.	
Assessing for indicators of impairment	
Are there any indicators of impairment? If so, unless a revaluation was undertaken, the individual assets need to be adjusted to recoverable amount.	

Requirements	Done?
Review of other key assumptions Were the following reviewed? • Pattern of consumption of future economic benefit • Residual value • Useful life and RUL This should be well documented and supported with appropriate audit evidence.	
Determine whether difference between carrying amount and fair value is material Assuming the review of the key assumptions identified changes from those applied in the previous year, was the difference between the carrying amount and the fair value assessed for materiality?	
Revalue the entire asset class if impact is material If the impact of the difference between the carrying amount and the fair value was material, was the asset class revalued?	
Adjusting for impairment Assuming the net difference between the carrying amount and the fair value was not material but the carrying amount of individual assets was greater than the fair value, were those affected assets written down to the recoverable amount (impairment)?	
Adjusting for reversal of impairment If there were indicators that the impairment no longer exists, has the impairment been reversed?	
Impairment journals Were all impairment journals processed correctly? If the assets were valued at cost, any adjustments should be entered directly into the profit and loss, and for assets that were revalued, any adjustments should be entered against the asset revaluation reserve (but only to the extent that it reverses a prior period revaluation increment). Any remaining balance should be entered into the profit and loss.	
Depreciation expense (AASB116) Prospectively adjusting depreciation Assuming the net difference between the carrying amount and the fair value was not material but there were differences in key assumptions (irrespective of whether the assets' value was adjusted), was the associated depreciation for the affected assets adjusted prospectively?	
Disclosures (AASB 13 Fair Value Measurement)	**Done?**
Determination of asset classes Did the financial statement separate the assets into different asset classes based on: • the nature, characteristics and risks of the asset; and • the level of the fair value hierarchy within which the fair value measurement is categorised?	

Disclosures (AASB 13 Fair Value Measurement)	Done?

Transfers between levels of the fair value hierarchy

Did the entity disclose and consistently follow its policy for determining when transfers between levels of the fair value hierarchy are deemed to have occurred?

The policy about the timing of recognising transfers shall be the same for transfers into the levels as for transfers out of the levels. Examples of policies for determining the timing of transfers include the following:

- the date of the event or change in circumstances that caused the transfer;
- the beginning of the reporting period;
- the end of the reporting period.

Assets not measured at fair value but for which the fair value is disclosed

Were the following disclosures provided?

- The level of fair value hierarchy;
- For Levels 2 and 3, a description of the valuation techniques and inputs (if there has been a change the change and reason for the change);
- A narrative description of the sensitivity of the fair value to changes in unobservable inputs.

Tabular format

Were all quantitative disclosures provided in a tabular format unless another format was more appropriate?

Valuation techniques and inputs

Were the valuation techniques and inputs used to determine fair value appropriately disclosed?

Fair value measurement

Were the fair value measurements reported (at the end of the reporting period) for all assets required to be measured at fair value?

Fair value level of input hierarchy

Were the fair values within which the fair value measurements are categorised reported in their entirety (Level 1, 2 or 3)?

Disclosures (AASB 13 Fair Value Measurement)	Done?
Recurring fair value measurements	
Were the following disclosures provided for each AASB13 asset class?	
• The amount of transfers between Levels 1 and 2	
• Description of the valuation techniques and inputs for Levels 2 and 3, including any changes and reasons for the changes	
• For Level 3:	
• Effect on measurement of profit and loss or other comprehensive income	
• Quantitative information about the significant unobservable inputs (except if they were not developed by the entity)	
• Reconciliation from the opening balance to the closing balance	
• Amount of total gains or losses for the period attributable to the change in unrealised gains or losses relating to those assets and liabilities held at the end of the reporting period (at the line item level)	
• A description of the valuation processes used by the entity (including, for example, how an entity decides its valuation policies and procedures, and analyses changes in fair value measurements from period to period)	
• A narrative description of the sensitivity of the fair value measurement to changes in unobservable inputs and if there are interrelationships between t hose inputs and other unobservable inputs a description of those interrelationships and of how they might magnify or mitigate the effect of changes in the unobservable inputs on the fair value measurement	
• If the highest and best use of a non-financial asset differs from its current use, and why the non- financial asset is being used in a manner that differs from its highest and best use.	
Non-recurring fair value measurements	
Were the following disclosures provided?	
• Reasons for the measurement, given that it is not required	
• Description of the valuation techniques and inputs for Levels 2 and 3, including any changes and reasons for the changes	
For Level 3:	
• Quantitative information about the significant unobservable inputs (unless they were not developed by the entity)	
• A description of the valuation processes used by the entity (including, for example, how an entity decides its valuation policies and procedures, and analyses changes in fair value measurements from period to period).	

Disclosures (AASB116 Property, Plant And Equipment)	Done?
Valuation methodology and assumptions For each class of property, plant and equipment: • the measurement bases used for determining the gross carrying amount • the depreciation methods used • the useful lives or the depreciation rates used • the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period • a reconciliation of the carrying amount at the beginning and end of the period.	
Miscellaneous disclosures Details about: • the existence and amounts of restrictions on title, and property, plant and equipment pledged as security for liabilities • the expenditures recognised in the carrying amount of an item of property, plant and equipment in the course of its construction • the amount of contractual commitments for the acquisition of property, plant and equipment • if it is not disclosed separately in the statement of comprehensive income, the amount of compensation from third parties for items of property, plant and equipment that were impaired, lost or given up that is included in profit or loss.	
Depreciation methodology and assumptions Details about the depreciation methodology including: • the depreciation methods adopted • the estimated useful lives or depreciation rates • the amount of depreciation expense and accumulated depreciation • information that allows users to review the policies selected by management and enables comparisons to be made with other entities.	
Changes in accounting estimates The nature and effect of a change in an accounting estimate that has an effect in the current period or is expected to have an effect in subsequent periods. This includes changes arising from changes in estimates with respect to: • residual values • the estimated costs of dismantling, removing or restoring items of property, plant and equipment • useful lives • depreciation methods.	

Disclosures (AASB116 Property, Plant And Equipment)	Done?

Details about the valuation

Including:

- the effective date of the revaluation
- whether an independent valuer was involved
- for each revalued class of property, plant and equipment, the carrying amount that would have been recognised had the assets been carried under the cost model (does not apply to Australian not-for-profit entities)
- the revaluation surplus, indicating the change for the period and any restrictions on the distribution of the balance to shareholders.

Disclosures (AASB136 Impairment)	Done?

Impairment amounts

For each class of assets:

- the amount of impairment losses recognised in profit or loss during the period and the line item(s) of the statement of comprehensive income in which those impairment losses are included
- the amount of reversals of impairment losses recognised in profit or loss during the period and the line item(s) of the statement of comprehensive income in which those impairment losses are reversed
- the amount of impairment losses on revalued assets recognised in other comprehensive income during the period
- the amount of reversals of impairment losses on revalued assets recognised in other comprehensive income during the period.

Segment disclosures

For entities that report segment information in accordance with AASB 8, for each reportable segment:

- the amount of impairment losses recognised in profit or loss and in other comprehensive income during the period
- the amount of reversals of impairment losses recognised in profit or loss and in other comprehensive income during the period.

Disclosures (AASB136 Impairment)	Done?

Material impairment transactions

For each material impairment loss recognised or reversed during the period:

- the events and circumstances that led to the recognition or reversal of the impairment loss
- the amount of the impairment loss recognised or reversed
- for an individual asset:
  - the nature of the asset, and
  - if the entity reports segment information in accordance with AASB 8, the reportable segment to which the asset belongs.

For a cash-generating unit:

- a description of the cash-generating unit (such as whether it is a product line, a plant, a business operation, a geographical area or a reportable segment, as defined in AASB 8)
- the amount of the impairment loss recognised or reversed by class of assets and, if the entity reports segment information in accordance with AASB 8, by reportable segment
- if the aggregation of assets for identifying the cash-generating unit has changed since the previous estimate of the cash-generating unit's recoverable amount (if any), a description of the current and former way of aggregating assets and the reasons for changing the way the cash-generating unit is identified.
- whether the recoverable amount of the asset (cash-generating unit) is its fair value less costs to sell or its value in use;
- if recoverable amount is fair value less costs to sell, the basis used to determine fair value less costs to sell (such as whether fair value was determined by reference to an active market)
- if recoverable amount is value in use, the discount rate(s) used in the current estimate and previous estimate (if any) of value in use.

Aggregate impairment results

For transactions not disclosed as material, information at the aggregate level for losses and reversals:

- the main classes of assets affected by impairment losses and the main classes of assets affected by reversals of impairment losses; and
- the main events and circumstances that led to the recognition of these impairment losses and reversals of impairment losses.

Goodwill

If any portion of the goodwill acquired in a business combination during the period has not been allocated to a cash-generating unit (group of units) at the end of the reporting period, the amount of the unallocated goodwill shall be disclosed together with the reasons why that amount remains unallocated.

Recoverable amounts of cash-generating units containing goodwill or intangible assets with indefinite useful lives

Have the various disclosures included in paragraphs 134 and 135 been provided?

Asset held for sale (AASB 5)	Done?
Requirements	
Classification	
Were assets held for sale recognised as a separate asset class in the statement of financial position?	
Depreciation	
Did depreciation cease from the time the assets were defined as being held for sale?	
Reassessment	
Were the assets previously held for sale assessed to see whether they still satisfied the definition?	
Journals	
Were appropriate journals processed for assets that are no longer considered held for sale?	

DISCLOSURES (AASB 5 ASSETS HELD FOR SALE)	Done?

Cash-generating units with goodwill or intangible assets

Have the disclosures required in paragraph 134 been provided? These include:

- the carrying amount of goodwill
- the carrying amount of intangible assets with indefinite useful lives
- the basis on which the recoverable amount has been determined
- if based on value in use:
  - a description of each key assumption
  - a description of management's approach to determining the value
  - the period over which management has projected cash flows
  - the growth rate used to extrapolate cash flow projections
  - the discount rate(s) applied to the cash flow projections

if the recoverable amount is based on fair value less costs to sell, the methodology used to determine fair value less costs to sell and if not determined using an observable market price:

- a description of each key assumption
- a description of management's approach to determining the value
- the period over which management has projected cash flows
- the growth rate used to extrapolate cash flow projections
- the discount rate(s) applied to the cash flow projections

if a reasonably possible change in a key assumption on which management has based its determination of the unit's (group of units') recoverable amount would cause the unit's (group of units') carrying amount to exceed its recoverable amount:

- the amount by which the units' (group of units') recoverable amount exceeds its carrying amount
- the value assigned to the key assumption
- the amount by which the value assigned to the key assumption must change, after incorporating any consequential effects of that change on the other variables used to measure recoverable amount, in order for the unit's (group of units') recoverable amount to be equal to its carrying amount.

Investment property (AASB 140)	Done?
Requirements	
Unless the accounting policy is to record these assets at cost, have all investment properties been revalued at the end of the financial reporting period?	
If there was a revaluation, was the net movement taken directly to the profit and loss?	
If the assets were valued at cost and were also not classified as held for sale, was depreciation expense calculated in accordance with AASB116?	

Disclosures (AASB 140 Investment Property)	Done?
Valuation model	
Are investment properties valued on either the fair value model or the cost model?	
Fair value—operating leases	
If using the fair value model, are property interests held under operating leases classified and accounted for as investment property, and if so in what circumstances?	
Classification is difficult	
When classification is difficult (see paragraph 14), the criteria it uses to distinguish investment property from owner-occupied property and from property held for sale in the ordinary course of business.	
Methods and significant assumptions	
The methods and significant assumptions applied in determining the fair value of investment property, including a statement whether the determination of fair value was supported by market evidence or was more heavily based on other factors (which the entity shall disclose) because of the nature of the property and lack of comparable market data.	
Qualifications of the valuer	
The extent to which the fair value of investment property (as measured or disclosed in the financial statements) is based on a valuation by an independent valuer who holds a recognised and relevant professional qualification and has recent experience in the location and category of the investment property being valued. If there has been no such valuation, that fact shall be disclosed.	
Associated income and expenses	
The amounts recognised in profit or loss for:	
• rental income from investment property	
• direct operating expenses (including repairs and maintenance) arising from investment property that generated rental income during the period	
• direct operating expenses (including repairs and maintenance) arising from investment property that did not generate rental income during the period	
• the cumulative change in fair value recognised in profit or loss on a sale of investment property from a pool of assets in which the cost model is used into a pool in which the fair value model is used (see paragraph 32C).	
Restrictions	
The existence and amounts of restrictions on the reliability of investment property or the remittance of income and proceeds of disposal.	

Disclosures (AASB 140 Investment Property)	Done?

Contractual obligations

Contractual obligations to purchase, construct or develop investment property or for repairs, maintenance or enhancements.

Fair value model disclosures

In addition to the disclosures required by paragraph 75:

- a reconciliation between the carrying amounts of investment property at the beginning and end of the period
- when a valuation obtained for investment property is adjusted significantly for the purpose of the financial statements, a reconciliation between the valuation obtained and the adjusted valuation included in the financial statements
- in the exceptional cases where there is an inability to determine fair value reliably, the reconciliation between opening and closing balance shall disclose amounts relating to that investment property separately from amounts relating to other investment property. In addition, an entity shall disclose:
  - a description of the investment property
  - an explanation of why fair value cannot be determined reliably
  - if possible, the range of estimates within which fair value is highly likely to lie
  - on disposal of investment property not carried at fair value:

(i) the fact that the entity has disposed of investment property not carried at fair value;

(ii) the carrying amount of that investment property at the time of sale; and

(iii) the amount of gain or loss recognised.

Disclosures (AASB 140 Investment Property)	Done?

Cost model disclosures

In addition to the disclosures required by paragraph 75:

- the depreciation methods used;
- the useful lives or the depreciation rates used;
- the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period;
- a reconciliation of the carrying amount of investment property at the beginning and end of the period, showing the following:
  - additions, disclosing separately those additions resulting from acquisitions and those resulting from subsequent expenditure recognised as an asset
  - additions resulting from acquisitions through business combinations
  - assets classified as held for sale or included in a disposal group classified as held for sale in accordance with AASB 5 and other disposal
  - depreciation
  - the amount of impairment losses recognised, and the amount of impairment losses reversed, during the period in accordance with AASB136
  - the net exchange differences arising on the translation of the financial statements into a different presentation currency, and on translation of a foreign operation into the presentation currency of the reporting entity
  - transfers to and from inventories and owner-occupied property other changes, and
- the fair value of investment property. In the exceptional cases described in paragraph 53, when an entity cannot determine the fair value of the investment property reliably, it shall disclose:
  - a description of the investment property
  - an explanation of why fair value cannot be determined reliably
  - if possible, the range of estimates within which fair value is highly likely to lie.

Leases (AASB 117)	
Disclosures (AASWB 117 Leases)	**Done?**

Lessees—financial leases

In addition to meeting the requirements of AASB 7 Financial Instruments:

- for each class of asset, the net carrying amount at the end of the reporting period
- a reconciliation between the total of future minimum lease payments at the end of the reporting period, and their present value. In addition, an entity shall disclose the total of future minimum lease payments at the end of the reporting period, and their present value, for each of the following periods:
  - not later than one year
  - later than one year and not later than five years
  - later than five years, and
- contingent rents recognised as an expense in the period
- the total of future minimum sublease payments expected to be received under non- cancellable subleases at the end of the reporting period
- a general description of the lessee's material leasing arrangements including, but not limited to, the following:
  - the basis on which contingent rent payable is determined
  - the existence and terms of renewal or purchase options and escalation clauses
  - restrictions imposed by lease arrangements, such as those concerning dividends, additional debt and further leasing.

Lessees—operating leases

In addition to meeting the requirements of AASB 7:

- the total of future minimum lease payments under non-cancellable operating leases for each of the following periods:
  - not later than one year
  - later than one year and not later than five years
  - later than five years
- the total of future minimum sublease payments expected to be received under non-cancellable subleases at the end of the reporting period
- lease and sublease payments recognised as an expense in the period, with separate amounts for minimum lease payments, contingent rents, and sublease payments
- a general description of the lessee's significant leasing arrangements including, but not limited to, the following:
  - the basis on which contingent rent payable is determined
  - the existence and terms of renewal or purchase options and escalation clauses
  - restrictions imposed by lease arrangements, such as those concerning dividends, additional debt and further leasing.

Leases (AASB 117)	
Disclosures (AASWB 117 Leases)	**Done?**

Lessors—financial leases

In addition to meeting the requirements in AASB 7:

- a reconciliation between the gross investment in the lease at the end of the reporting period, and the present value of minimum lease payments receivable at the end of the reporting period. In addition, an entity shall disclose the gross investment in the lease and the present value of minimum lease payments receivable at the end of the reporting period, for each of the following periods:
  - not later than one year
  - later than one year and not later than five years
  - later than five years
- unearned finance income
- the unguaranteed residual values accruing to the benefit of the lessor
- the accumulated allowance for uncollectible minimum lease payments receivable
- contingent rents recognised as income in the period
- a general description of the lessor's material leasing arrangements.

Lessors—operating leases

In addition to meeting the requirements of AASB 7:

- the future minimum lease payments under non-cancellable operating leases in the aggregate and for each of the following periods:
  - not later than one year
  - later than one year and not later than five years
  - later than five years
- total contingent rents recognised as income in the period, and
- a general description of the lessor's leasing arrangements.

Intangible assets (AASB 138)	
Requirements	**Done?**
Review amortisation period and method Has the amortisation period and method for an intangible asset with a finite useful life been reviewed at the end of the financial year? Have any changes been accounted for as changes in accounting estimates in accordance with AASB 138?	
Impairment testing In accordance with AASB136, have all intangible assets with an indefinite useful life been tested for impairment by comparing their recoverable amount with their carrying amount?	
Review of assets with indefinite useful life Have assets deemed to have an indefinite useful life (and therefore not being amortised) been reviewed to determine whether events and circumstances continue to support an indefinite useful life assessment for that asset? If they do not, the change in the useful life assessment from indefinite to finite shall be accounted for as a change in an accounting estimate in accordance with AASB108.	
Disclosures (AASB 1338 Intangibles)	**Done?**
General disclosures Distinguishing between internally generated intangible assets and other intangible assets, the following points need to be addressed: • whether the useful lives are indefinite or finite and, if finite, the useful lives or the amortisation rates used • the amortisation methods used for intangible assets with finite useful lives • the gross carrying amount and any accumulated amortisation (aggregated with accumulated impairment losses) at the beginning and end of the period • the line item(s) of the statement of comprehensive income in which any amortisation of intangible assets is included • a reconciliation of the carrying amount at the beginning and end of the period.	
Changes in accounting estimates that have a material effect The nature and amount of a change in an accounting estimate that has a material effect in the current period, or is expected to have a material effect in subsequent periods. Such disclosure may arise from changes in: • the assessment of an intangible asset's useful life • the amortisation method or • residual values.	

Disclosures (AASB 1338 Intangibles)	Done?

Specific disclosures

Have the following been disclosed where relevant?

- for an intangible asset assessed as having an indefinite useful life, the carrying amount of that asset and the reasons supporting the assessment of an indefinite useful life
- a description, the carrying amount and remaining amortisation period of any individual intangible asset that is material to the entity's financial statements
- for intangible assets acquired by way of a government grant and initially recognised at fair value (see paragraph 44):
  - the fair value initially recognised for these assets
  - their carrying amount
  - whether they are measured after recognition under the cost model or the revaluation model
- the existence and carrying amounts of intangible assets whose title is restricted and the carrying amounts of intangible assets pledged as security for liabilities, and
- the amount of contractual commitments for the acquisition of intangible assets.

Intangible assets measured after recognition using the revaluation model

- By class of intangible assets:
  - the effective date of the revaluation
  - the carrying amount of revalued intangible assets
  - the carrying amount that would have been recognised had the revalued class of intangible assets been measured after recognition using the cost model in paragraph 74
- The amount of the revaluation surplus that relates to intangible assets at the beginning and end of the period, indicating the changes during the period and any restrictions on the distribution of the balance to shareholders, and
- The methods and significant assumptions applied in estimating the assets' fair values.

Research and development expenditure

The aggregate amount of research and development expenditure recognised as an expense during the period.

Optional additional information

These matters are encouraged, but not required, to be disclosed:

- a description of any fully amortised intangible asset that is still in use, and
- a brief description of significant intangible assets controlled by the entity but not recognised as assets because they did not meet the recognition criteria in this standard or because they were acquired or generated before the version of IAS 38 Intangible Assets issued in 1998 was effective.

Inventories (AASB 102)	
Disclosures (AASB 102 Inventories)	**Done?**

Policies and results

Were the following disclosed?

(a) the accounting policies adopted in measuring inventories, including the cost formula used

(b) the total carrying amount of inventories and the carrying amount in classifications appropriate to the entity

(c) the carrying amount of inventories carried at fair value less costs to sell

(d) the amount of inventories recognised as an expense during the period

(e) the amount of any write-down of inventories recognised as an expense in the period in accordance with paragraph 34

(f) the amount of any reversal of any write-down that is recognised as a reduction in the amount of inventories recognised as an expense in the period in accordance with paragraph 34

(g) the circumstances or events that led to the reversal of a write-down of inventories in accordance with paragraph 34

(h) the carrying amount of inventories pledged as security for liabilities.

Agriculture (AASB 141)	
Disclosures (AASB 141 Agriculture)	**Done?**

Aggregate gain or loss

The aggregate gain or loss arising during the current period on initial recognition of biological assets and agricultural produce and from the change in fair value less costs to sell biological assets.

Description of each group

A description of each group of biological assets.

Nature of and estimates of quantities

If not disclosed elsewhere in information published with the financial statements:

- the nature of its activities involving each group of biological assets
- non-financial measures or estimates of the physical quantities of:
  - each group of the entity's biological assets at the end of the period, and
  - output of agricultural produce during the period.

Methods and assumptions

The methods and significant assumptions applied in determining the fair value of each group of agricultural produce at the point of harvest and each group of biological assets.

Fair value less cost to sell

The fair value less costs to sell of agricultural produce harvested during the period, determined at the point of harvest.

Agriculture (AASB 141)	
Disclosures (AASB 141 Agriculture)	**Done?**

Restrictions, commitments and risk management strategies

Details about:

- the existence and carrying amounts of biological assets whose title is restricted, and the carrying amounts of biological assets pledged as security for liabilities
- the amount of commitments for the development or acquisition of biological assets, and
- financial risk management strategies related to agricultural activity.

Reconciliation in movements

A reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the current period. The reconciliation shall include:

- the gain or loss arising from changes in fair value less costs to sell
- increases due to purchases
- decreases attributable to sales and biological assets classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with AASB 5
- decreases due to harvest
- increases resulting from business combinations
- net exchange differences arising on the translation of financial statements into a different presentation currency, and on the translation of a foreign operation into the presentation currency of the reporting entity
- other changes.

Where fair value cannot be measured reliably: general disclosures

Where an entity measures biological assets at their cost less any accumulated depreciation and any accumulated impairment losses

(see paragraph 30) at the end of the period, the entity shall disclose for such biological assets:

- a description of the biological assets
- an explanation of why fair value cannot be measured reliably
- if possible, the range of estimates within which fair value is highly likely to lie
- the depreciation method used
- the useful lives or the depreciation rates used
- the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period.

Where fair value cannot be measured reliably: disposals

If, during the current period, an entity measures biological assets at their cost less any accumulated depreciation and any accumulated impairment losses (see paragraph 30), an entity shall disclose any gain or loss recognised on disposal of such biological assets and the reconciliation required by paragraph 50 shall disclose amounts related to such biological assets separately. In addition, the reconciliation shall include the following amounts included in profit or loss related to those biological assets:

- impairment losses
- reversals of impairment losses
- depreciation.

Agriculture (AASB 141)	
Disclosures (AASB 141 Agriculture)	**Done?**

Where fair value previously could not be measured reliably, but has become reliably measurable

If the fair value of biological assets previously measured at their cost less any accumulated depreciation and any accumulated impairment losses becomes reliably measurable during the current period, an entity shall disclose for those biological assets:

- a description of the biological assets
- an explanation of why fair value has become reliably measurable
- the effect of the change.

Government grants

The following related to agricultural activity is covered by this standard:

- the nature and extent of government grants recognised in the financial statements
- unfulfilled conditions and other contingencies attaching to government grants
- significant decreases expected in the level of government grants.

ATTACHMENT H: EXAMPLE GUIDANCE ON COLLECTIONS—LIBRARIES AND MUSEUMS

The following paragraphs (abridged) provide guidance from the Queensland Treasury Non-Current Assets Policies.

Collections typically are structured into three distinct groups:

- common use collections;
- reference collections; and
- heritage collections.

It is important that the entity establish an appropriate policy with respect to the different types of collections and appropriate disclosure is provided in the financial statements.

Items are to be allocated across the different collections by agencies, based on their attributes. For example, items making up a medical library may be split across the collection types, based on their attributes (that is, some parts of the medical library may be heritage, while others may be reference or common use). In addition, periodicals, subscriptions and electronic media with archive access can be split over the three classification types.

Professional judgment will be required to assess the characteristics of each item to determine its correct classification. In determining the correct classification, considerations may include:

- the useful life of the material—is it limited, long term or indefinite?
- how the items are stored and used; and
- the nature of library expenditure within that category—for example, regular replacement of holdings or expenses related to controlling the environment in which the asset is used.

Common-use collections

A common-use collection is usually comprised of a large number of low-value items that are used in the day-to-day operations of the library (such as undergraduate textbooks and technical publications). These items, in most instances, may be borrowed. Because of a pattern of declining use, obsolescence and physical deterioration over time, library materials in these collections generally have a short period of service potential. Individual items are continually being updated and replaced.

The greatest usage of items within these collections would occur within the first year, with a rapid decline over subsequent years. In recognition of their limited life and the cost/benefit of valuing collections with a high turnover of material, common-use items are to be expensed on acquisition.

Reference collections

Reference collections usually include both general and specialised items. These items usually cannot be borrowed but are available for use, even if archived. Generally these items have variable uses (for example, undergraduate and research purposes), and have a longer useful life than common-use collections, but are not held indefinitely. Where possible, these items would generally be replaced if lost or damaged.

Based on their longer periods of service potential to the library, material reference collections are to be capitalised and recognised at fair value. Fair value is to be determined using average replacement cost, based on the average cost of purchases over a period considered to most closely provide an accurate average value for the collection. This cost is to be applied to all capitalised materials in the collection at year end. It is considered that a five-year period would provide an accurate average value; however, a longer or shorter period may be used at management discretion where this is justified.

Agencies must undertake an annual assessment to determine the rate at which the reference collection should be depreciated. If it is considered appropriate to depreciate the collection, then a useful life must be determined, applied and disclosed.

If it is determined that the collection should not be depreciated, the reasons must be clearly documented and included in the notes to the financial statements. Reasons for not depreciating the collection may include:

- the inherent complexity involved in determining a common useful life for the collection. Developing a useful life for a library collection involves consideration of a complex combination of the;
  - physical life—how long the item will last, taking into account user populations and climatic conditions or subject matter; and
  - relevant life—the period during which the content or subject matter is relevant to the user population of the various categories of library materials. In practice, an agency may not be able to reliably determine a useful life; and
- based on the characteristics of the collection, the useful life may be sufficiently long that the resultant depreciation expense would be immaterial in amount.

Heritage collections

A heritage collection is a permanently retained collection that because of its heritage, cultural or historic value is worth preserving indefinitely, and to which sufficient resources are committed to preserve and protect the collection and its service potential. The collection is generally held for public exhibition, for education or to provide a service to the community. Heritage collections are not usually available for sale, redeployment or an alternative use.

Where available, market valuations in an active and liquid market must be used. If there is no active and liquid market, the current market price of similar assets can be used, or the cost of replacing the future economic benefits contained in the asset can be applied.

If it is not possible to determine a fair value for the heritage collection, it is not to be recognised on the Statement of Financial Position but rather disclosed as a note to the financial statements. This disclosure should state:

- a description of the nature of the collection;
- the purposes for which it is held;
- the reason why its heritage value cannot be reliably estimated; and
- to the extent practicable, the annual costs of maintenance/preservation.

Despite the acknowledged difficulties involved, agencies are required to make every effort to value heritage collections at their fair value.

Heritage collections are generally subject to stringent curatorial preservation techniques. As a result, they may have an indefinite life, may be held in perpetuity and appreciate in value. For any heritage/cultural asset that is not depreciated, curatorial and preservation policies would have to be demonstrated to be in place to justify the non-depreciation, as per guidance contained in AASB 116 Property, Plant and Equipment.[85]

85 Queensland Treasury Non-Current Assets Policies (Feb 2012) (www.treasury.qld