

Measurement and reporting of heritage assets - Insights from practice in New Zealand

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Abstract

Accounting for heritage assets has evolved, but continuing diversity in reporting practices remains problematic. Traditional cash-based budgets, which are still common in governmental accounting in some countries, ignore heritage assets as they are non-realizable and often do not generate revenue, yet they incur cash outflows to preserve them. The adoption of accrual accounting for recording heritage assets raises technical issues of recognition and measurement of such assets, both in the balance sheet and in income statements.

This chapter examines the financial reporting environment for heritage assets in New Zealand. The chapter provides evidence on the reporting practices of heritage assets by five of New Zealand's significant museums during the period 2011 to 2020, under IAS 16 and IPSAS 17 requirements. We analyse disclosures on heritage assets in the financial reports of these museums, including accounting policies, valuation and measurement, income statement impact, and related notes.

The findings suggest that, despite the existence of the IFRS (IAS 16) and IPSAS (IPSAS 17) reporting standards during this period, a variety of reporting practices exist among New Zealand museums, as heritage assets are recognised either at fair value or historical cost on the balance sheet or not recognised in the financial statements at all. These findings suggest substantial non-uniformity in the actual measurement and reporting of heritage assets and are of interest to policy makers and regulators, particularly in countries that are currently considering adoption of IPSAS.

1. Introduction

Heritage assets include items that are highly prized, generally irreplaceable, and thought to be in existence forever to be enjoyed by all. These assets are normally owned and managed by not-for-profit entities, which are often public sector entities or receive some financial support from local or central government.

Public sector accounting in many countries has undergone considerable changes in the last 30 years. Some governments have adopted accrual accounting and International Public Sector Accounting Standards (IPSAS), some adopted modified accrual accounting, while others remained with cash-based accounting. International Financial Reporting Standards (IFRS) for all sectors were adopted in 2005 in Australia and New Zealand, with New Zealand (NZ) in 2015 adopting IPSAS based standards for reporting in the public sector. The adoption of IPSAS standards and the harmonisation of public sector reporting, including accounting for heritage assets within the IPSAS framework in the European Union (European Commission, 2012), have generally been presented as favourable developments, responding to user needs.

One frequently cited obstacle to willingness to adopt IPSAS, has been the difficulty in applying accrual-based accounting standards to heritage asset accounting and reporting. Thus, the objective of this study is to provide evidence of the practice of accounting for heritage assets, using accrual-based standards for their recognition and measurement.

The current IPSAS 17 does not require that heritage assets be recognised. However, more recently, in response to the International Public Sector Accounting Standards Board (IPSASB) issuance of the Consultation Paper: Financial reporting for heritage in the public sector (IPSASB 2017a) and the related response letters (IPSASB 2017b, Aversano et al., 2020), there has been renewed interest in the recognition, measurement and reporting of heritage assets (De Wolf et al., 2021, Anessi-Pessina et al. 2019, Aversano et al., 2019). In addition, IPSASB in

2021 approved four measurement-related Exposure Drafts (EDs) for issue, one of those being the ED 78 *Property, Plant and Equipment*, where the proposed standard requires that heritage assets be recognised, subject to the requirements of reliable measurement that apply to other assets. Where heritage assets can't be reliably recognised, the proposed standard requires disclosures about any unrecognised heritage assets. The assumption of this new proposed standard is that recording and accounting for heritage assets should assist in managing and reporting the long-term sustainability of such assets.

Given NZ's history of IFRS use in all sectors for all types of assets and liabilities, followed by over five years of IPSAS-based public sector standards application, the results of NZ accounting and reporting practice for heritage assets analysis is likely to be of interest to policy makers and regulators around the world. This study examines the reporting on heritage assets by museums in NZ. The data in this study is collected from the financial statements of five significant and popular NZ museums in the period 2011-2020. During this study period, there were two reporting regimes and standards for heritage assets: IAS 16 (2011-2015) and IPSAS 17 (2016-2020). The information about valuation, measurement and disclosures for heritage assets is collected, analysed, and classified. Assessment of the comparability of disclosed information and its usefulness for sustainable management of heritage assets is provided. The findings suggest that, despite the existence of IFRS (IAS 16) and IPSAS (IPSAS 17) reporting standards during this period, a variety of reporting practices exist among NZ museums, as heritage assets are either recognised at fair value or historical cost on the balance sheet, or not recognised in the financial statements at all.

The findings of this study contribute to the current debate on whether and how IPSAS standards, particularly the proposed revised IPSAS standard 17 is, indeed, suitable for accounting, reporting and management of heritage assets. Moreover, this study provides much needed additional empirical evidence on the practice of accounting for heritage assets under

two different reporting regimes and standards: IFRS and IPSAS. Since there is currently a call by regulators of and participants in the public sector around the globe for countries that have adopted IPSAS to share their insights and experiences, these empirical findings from the practice inform the current debate on the ED 78 *Property, Plant and Equipment*, in terms of what can be learnt from the practice of accounting for, and reporting on, their heritage assets, particularly regarding the areas of measurement that result in the non-uniformity of heritage reporting practices among museums. The findings of this study suggest that standardisation of the reporting practice does assist transparency and visibility of heritage assets and highlight the importance of such assets as well as their need for preservation. However, the measurement of such assets remains problematic, owing to such factors as the cost of obtaining market valuations for heritage assets, and their indeterminable lives.

The remainder of the chapter proceeds as follows. Section 2 provides a literature review and theoretical foundations for the study and section 3 gives an overview of the reporting environment for heritage assets in NZ. Section 4 discusses the methodology and data collection procedures, while section 5 discusses the findings of an assessment of reporting practices of heritage assets by NZ museums during the 10-year period, 2011-2020, under IFRS (IAS 16) and IPSAS (IPSAS 17) regimes. Section 6 concludes the chapter.

2. Literature review and theoretical foundations

The recognition and disclosure of heritage assets in governmental financial statements have been driven by the underlying theoretical framing of public accountability, and by the information needs of the stakeholders of public sector financial reports (Rowles 1991; Micallef and Peirson 1997, Aversano and Christiaens, 2014). Rowles (1991) proposes that heritage assets are commercially quantifiable, despite often not being saleable. Micallef and Peirson (1997) consider that information about heritage assets is necessary to make informed

assessments about the allocation of public funds, as such information enables local government managers to discharge their accountability. In both the Italian and Flanders settings, Aversano and Christiaens (2014) and Aversano et al. (2019), found empirical evidence of strong interest among stakeholders in the heritage assets information contained in government financial statements, for ‘financial accountability’ and ‘public accountability’ reasons.

Several studies have examined the reporting practices of heritage assets. Hooper et al. (2005) examined accounting for heritage assets by NZ regional museums in the 2002-2003 period. They report resistance by managers of NZ regional museums to the imposition of the sector neutral (for profit) accounting standards on heritage assets, and a variety of approaches in interpreting the prescribed accounting standards relating to heritage assets. Similarly, West and Carnegie (2010) and Carnegie et al. (2013) report on accounting for Australia’s public universities’ library collections for the periods 2002-2006 and 2007-2011. Their study revealed considerable diversity and subjectivity in accounting practices. They describe the financial reporting of these entities as the ‘chaotic margin of accounting’.

A comparative study of heritage assets reporting practices in three countries: Italy, Germany, and the United Kingdom (UK) by Adam et al. (2011), showed considerable diversity in European local government accounting and reporting of heritage assets, raising questions regarding the usefulness of information about heritage assets and the comparability of what is reported in Europe. Anessi-Pessina et al. (2019) performed a comprehensive recent study of national accounting standards on heritage assets as used by 11 European countries and report a diversity of approaches adopted by the countries under analysis.

In Australia, Ferri, Sidaway and Carnegie (2021) examined responses to the heritage assets valuation requirement in Australia, during the period from 1992 to 2019. They report four

phases from the cross-sectional longitudinal analysis undertaken. Each phase is characterised by a distinctive nature of what they term as ‘the paradox of tensions’ regarding heritage valuation for financial reporting purposes. A longitudinal UK study conducted by Napier and Giovannoni (2021) examined the accounting practices for a collection of 77 pictures donated by Thomas Holloway to Royal Holloway College between 1881-2019. They found that the collection remained effectively invisible as an accounting object until 1999, when accounting requirements for heritage assets were first applied, even though, in the early 1990s, some of the collections were sold to generate a substantial endowment fund. Since 1999, and the application of accounting for heritage assets, the picture collection has been included in the College's balance sheets. Napier and Giovannoni (2021) conclude that, by requiring heritage assets to be included on the balance sheet, items that are held because of their cultural value are then forced to fit into the conceptual definition of an asset as something of economic value, with the expectation of generating either future returns or sales proceeds. They propose that these items are no longer thought of as heritage objects, but as potential sums of money, which may undermine the reasons for preserving them.

In 2006, the NZ Auditor-General noted that NZ museums and galleries have in place the required components for sound management of the heritage assets entrusted to them (OAG 2006). However, the financial reporting of most of the audited museums and galleries has been of concern to the NZ Auditor-General. This has largely been due to either non-compliance with the relevant NZ financial reporting standards on heritage assets, or to the variety of interpretations, in practice, when heritage assets are recognised and valued as part of museum collections (OAG 2006).

3. Heritage assets reporting in New Zealand

Heritage assets are assets that are generally easy to identify but hard to define. The Valuation Guidance for Cultural and Heritage Assets prepared by NZ Treasury in 2002 states that:

heritage and cultural assets are those assets that are held for the duration of their physical lives because of their unique cultural, historical, geographical, scientific, and/or environmental attributes.

Internationally, art and heritage assets are generally included in the accounting standards for property, plant and equipment. The IPSAS Board (of the International Federation of Accountants) issued IPSAS 17 ‘Property, Plant and Equipment’. This standard provides guidance for an entity that elects to recognise heritage assets. Overall, heritage assets are exempt from the compulsory application of IPSAS 17. However, where heritage assets are recognised, disclosure requirements of IPSAS 17 do apply, while the measurement requirements of the standard are optional. The IPSASB Conceptual Framework for General Purpose Financial Reporting by public sector entities also includes heritage assets in the public sector assets category, and explicitly excludes symbolic values as a measurement tool. The framework suggests that, where it is impossible or very costly, to obtain a valuation, it is important to provide adequate disclosures about assets such as heritage assets (IPSASB, 2014).

There are detailed requirements for the initial recognition and subsequent measurement of property, plant and equipment in IPSAS 17. That is, property, plant and equipment are usually measured at cost initially, where cost comprises the purchase price and any costs directly attributable to bringing the assets to the location and condition necessary for them to be operated in the manner intended by management. If the item is acquired through a non-exchange transaction, its cost is measured at its fair value at the date of acquisition. Subsequently, property, plant and equipment are measured either at cost, less any accumulated depreciation and any accumulated impairment losses, or at a revalued amount, that being its

fair value at the date of revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses, where applicable. The revalued amount of a property plant and equipment item is usually determined by reference to its market value, and it involves expert valuation. Where it is difficult to determine the market value of an asset, the fair value may be determined by reference to other items with similar characteristics, in similar locations and circumstances. Where no market-based evidence is available, fair value can, under current IPSAS 17, be determined by using the reproduction cost, depreciated replacement cost or restoration cost.

For more than two decades, NZ has followed a sector neutral approach to financial reporting and standard setting, where the same accounting standards applied to all entities in all sectors: for profit, not-for-profit, and the public sector. From 1991 to 2005 public sector entities adopted generally accepted accounting practice as used in private sector. This period included the adoption of IFRS in for-profit entities with minor modifications for the public sector in 2007. The suitability of IFRS for the public sector has been questioned (Brady, 2007), and in 2011 the standard setters in NZ decided to adopt a sector-specific, standard-setting approach with multiple tiers for each sector. The implementation of IFRS resulted in problems and inconsistencies in financial reporting in the NZ public and not-for-profit sectors (Botica-Redmayne *et al.*, 2021). In 2014, the basis for accounting standards in NZ's public sector changed, this time to IPSAS, and has been applied from 2015.

In NZ, the guidance for accounting for heritage assets was included in the accounting standards on Property, Plant and Equipment (PPE) NZ IAS 16 from 2011-2015. The first NZ standard on PPE, FRS 3, did not address any issues unique to heritage assets. NZ IAS 16 permitted revaluation of all items of PPE, including heritage assets.

From 2015, the PPE accounting standard for the NZ public sector became IPSAS 17. IPSAS 17 does not currently mandate the recognition of heritage assets. If an entity does recognise heritage assets, IPSAS 17 requires that the entity disclose certain information about those heritage assets. However, IPSAS 17 does not require that the entity applies the measurement requirements in IPSAS 17 to those heritage assets. An entity applying IPSAS 17 could, therefore, elect not to recognise heritage assets, or to recognise heritage assets but not to assign them an amount in the statement of financial position. This situation is to change according to the currently on-issue IPSASB exposure draft, IPSAS 17 ED 78: *Property, Plant and Equipment*. The ED 78 proposes that the revised IPSAS 17 should require heritage assets to be recognised, subject to the same requirements about reliable measurement as other assets, and should also require disclosure of unrecognised heritage assets. In addition, the revised standard is to provide implementation guidance and examples of heritage assets. That guidance is not part of the current IPSAS 17. The guide outlines three factors to consider when assessing if a heritage asset has an indefinite life, which are: the period for which it provides service potential; usage; and preservation. It also provides guidance in relation to the current value measurement of heritage assets.

In NZ, consistent with the principles of IFRS NZ IAS 16, the New Zealand Accounting Standards Board (NZASB)¹ decided that the IPSAS 17 requirements were not appropriate in the NZ context (XRB, 2021) when they became the standard in practice. This is explained in the standard NZ PBE IPSAS 17 Application Guidance - Accounting for Heritage Assets (XRB, 2021):

¹ The accounting and auditing standards setting body in New Zealand is the External Reporting Board (XRB). The XRB comprises of two technical boards (Committees under the Crown Entities Act), namely the New Zealand Accounting Standards Board (NZASB), which is responsible for financial reporting standards; and the New Zealand Auditing & Assurance Standards Board (NZAuASB) which is responsible for auditing and assurance standards.

The NZASB noted that for many years NZ GAAP has required that entities recognise and measure heritage assets in the same way as other items of property, plant, and equipment and that accordingly, many heritage assets have been recognised and measured. The NZASB did not identify any reasons why the requirements in relation to heritage assets should be less than that required in NZ IAS 16 *Property, Plant and Equipment*.

However, at the time the standards setters also noted that there are some instances where heritage assets cannot be measured reliably and are, therefore, not recognised in the statement of financial position. Their position has been that although non-recognition of heritage assets in such circumstances is appropriate, heritage assets should be recognised when they can be reliably measured (XRB, 2021). Consequently, the IPSAS 17 was modified for application in NZ by requiring application of the recognition and measurement requirements in that Standard to heritage assets when they can be reliably measured.

Given the recent consultations on ED 78, the New Zealand standard setter, i.e., the External Reporting Board (XRB), in consultation with constituents, has provided feedback in relation to the unique indigenous Māori cultural heritage of NZ and the reporting on such heritage assets (XRB, 2021b). The view presented is that the unique characteristics of Māori heritage items in New Zealand, means that attributing a financial value to them can be particularly challenging when applying recognition and measurement principles for accounting purposes (Wild, 2013; XRB, 2021b). This is because Māori people view themselves as custodians of Māori heritage for past, present and future generations. Conceptually, that view is different to the one-dimensional concept of control by a reporting entity that is the accounting concept underlying the accounting and reporting of assets.

Although a Māori heritage item may reside in a museum, “ownership” is still usually attributed to the Māori people whose culture it represents. In the context of Māori guardianship, the Māori people consider attributing any monetary value to an item of Māori heritage disrespectful. To that end the XRB’s view is that there needs to be a consideration given to different forms of guardianships and ownership of heritage in financial reporting, as well as to the fact that, where appropriate, financial values for heritage assets cannot be determined, since recognising such assets at a nominal value of one currency unit is not an appropriate measurement basis for such assets. That way of accounting for heritage assets would be perceived as offensive and culturally insensitive, given the New Zealand view of heritage, and would promote inconsistent measurement practices (XRB, 2021b).

Thus, in view of NZ’s history of IFRS use in all sectors and for all types of assets and liabilities, followed by application of IPSAS-based standards in the New Zealand Public Sector in the last five years, and with the introduction of additional requirements regarding the recognition of heritage assets in the ED 78, this study investigates reporting by New Zealand museums in the period between 2011-2020 to provide evidence of the actual reporting practices of heritage assets under these two standards regimes, i.e., IAS 16 (2011-2015) and IPSAS 17 (2016-2020).

4. Methodology and Data collection

There are 423 museums listed on the NZ Museums website <https://www.nz museums.co.nz/>. We selected five museums: the largest museum from each of the four main NZ cities (Auckland, Wellington, Christchurch, and Dunedin) and one from a regional area (Whanganui). They are: The Museum of New Zealand Te Papa Tongarewa, Auckland Museum, Canterbury Museum, Whanganui Regional Museum, and Otago Museum. Like previous heritage assets studies, this study uses the case study approach to document accounting and reporting on heritage assets. Adam et al. (2011) used six case studies, two in

each of the three countries under observation. West and Carnegie (2010) surveyed 36 Australian public university libraries. Previous NZ studies (Hooper et al. 2005; OAG 2006) distinguish between centrally funded museums and what they term ‘regional or local museums’. Hooper et al. (2005) analyse three large regional museums, and OAG (2006) discusses practices of 13 local museums. In this study, we focus on the four museums in the largest city centres in NZ and a regional museum to provide some representation of NZ museums in general.

The data in this study is collected from the financial statements of NZ museums in the period 2011-2020, located on each museum’s website. During this study period there were two reporting regimes and standards, IAS 16 (2011-2015) and IPSAS 17 (2016-2020). Consistent with previous literature on conceptual difficulties in accounting for heritage assets using accrual accounting methods for such assets (Carnegie and Wolnizer 1996, 1999; Barton 2000, 2005), we collected information about accounting policy on valuation and measurement, reported information on the balance sheet, and the impact of depreciation and disclosures about heritage assets on the income statement.

We conduct our analysis by comparing the recognised and disclosed information about heritage assets in the financial statements of these NZ museums under each of the accounting standards regimes, i.e., firstly, IAS 16 (2011-2016) and secondly, IPSAS 17 (2016-2020). Thus, the differences and similarities in the reporting practices of these museums are highlighted under each standard’s regime.

5. Findings and Discussion

Table 1 outlines the accounting policy, presentation on the balance sheet and the income statement, and disclosures in the notes of the financial statements for the reporting of heritage

assets by the five NZ museums. We also include an assessment of auditors' opinions. We report the findings during the two reporting regimes, IFRS and IPSAS.

2011-2015 – IAS 16

During the period 2011-2015 under the IFRS IAS 16 requirements, the analysis of accounting policies for the five museums selected show a variety of approaches to recognition and valuation of heritage assets. Three museums (Te Papa, Auckland and Whanganui) use historical cost or valuation to record their heritage assets/collections when such collections are purchased, and the fair value for donated assets.

The cost of acquisition of heritage assets at the Canterbury Museum is charged to the statement of comprehensive income. This approach is justified by the statement that heritage assets include collection items or artefacts of cultural or historical significance. This finding for Canterbury Museum is consistent with findings reported by Hooper et al. (2005) where, at that time, the Canterbury Museum and Otago Museum refused to comply with accounting standards relating to heritage assets.

Three museums (Canterbury, Whanganui and Otago) received modified (qualified) audit reports as a result of their non-recognition of collection assets and their depreciation, in accordance with IAS 16.

Since 2005, the Otago Museum modified its policies to recognise heritage assets acquired after 1 July 2001 at their fair value on acquisition. Otago heritage assets acquired before 1 July 2001 are shown at nil value, on the basis that it is too costly to revalue them.

Museums measure donated heritage assets either at fair value or nil value. It appears that obtaining market valuations for heritage assets is costly, and this tends to discourage museums from valuing such assets. This finding is consistent with observations by the NZ Auditor

General (OAG 2006), who noted that many museums in their study faced a time-consuming task of collecting, consolidating, standardising, verifying and maintaining object information from records that are often fragmented, incomplete and unreliable. The NZ OAG suggested that museums needed to work together and agree on collection management standards and related performance measures. According to NZ OAG, the capability of NZ museum management varies, and collaboration is suggested, as well as identification of unmet demand for advice and support. The Auditor-General in 2006 noted resource constraints for the museum sector, and the resulting inability to meet professional standards in order to improve the reporting on heritage assets. That, in the view of the OAG, raises questions concerning the long-term governance and funding of museums.

Under the IAS 16 regime, the reporting of heritage assets on the balance sheet, also varies from separate disclosure to combining heritage assets with other property, plant and equipment. For the museums that revalue heritage assets and report them separately, such assets generally represent a high proportion of total assets (e.g., the heritage assets of the Wanganui Regional Museum represent 96% of total assets by value). This also appears to be the case, even for museums that do not recognise heritage assets. For example, the Canterbury Museum does not recognise heritage assets on the balance sheet, but the management discussion in the annual report states that its heritage assets are worth NZ\$600 million. However, no disclosure of such assets is presented in the financial statements.

The highest level of consistency between the five museums under observation during the IAS 16 regime is regarding the impact of the heritage assets on the income statement. None of the five museums depreciate heritage assets, on the assumption that such assets have indeterminable lives, or that the amount of depreciation was negligible. One museum (Canterbury Museum) writes off heritage assets as a charge (as the cost of new acquisitions) to income.

The quality of disclosure of heritage assets in the notes to the accounts varies from comprehensive, including the breakdown of various categories, to no disclosure at all. For example, the note to the accounts of the Museum of New Zealand, Te Papa, identifies 12 categories of heritage assets showing acquisitions, donations, and changes in valuations in each category, while Whanganui Regional Museum, Otago Museum and Auckland Museum have no disclosures about heritage assets at all in the notes to the financial statements.

Table 1. The reporting of heritage assets in the financial statements of the five most popular NZ museums

Museum	Period Standards	Accounting policy	Reporting on the balance sheet	The impact on the income statement	Disclosure in the notes	Audit opinion
(1) The Museum of New Zealand Te Papa Tongarewa	2011-2014 NZ IAS 16	Collections are recorded at cost or valuation, except for the natural environment collections which are shown at replacement cost. The revaluations are debited or credited to a revaluation reserve. Collections have an indefinite life and are not depreciable.	Collections are shown as separate items and as non-current assets. Collections represent about 67-69% of total assets of the museum.	No impact as collections are not depreciable and any changes in valuations are shown on the revaluation reserve.	A note on collections detailing 12 categories of collections, showing acquisitions, donations, and changes in valuations.	unqualified
	2015-2020 PBE IPSAS 17	No change - Collections are recorded at cost or valuation, except for the natural environment collections, which are shown at replacement cost. The revaluations are debited or credited to a revaluation reserve. Collections have an indefinite life and are not depreciable.	No change - Collections are shown as separate items and as non-current assets. Collections represent about 66-69% of total assets of the museum.	No change - No impact as collections are not depreciable and any changes in valuations are shown on the revaluation reserve.	A reduction of the number of collections - A note on collections detailing 8 categories of collections, showing acquisitions, donations, and changes in valuations.	unqualified
(2) Auckland Museum	2011-2015 NZ IAS 16	Collections are included in PPE and recorded at cost less accumulated depreciation and impairment. Donated assets with fair value over NZ\$1000 are recorded at fair value. The asset lives are indeterminable and depreciation amount is negligible.	Collections are included in PPE and are not shown separately. Collections represent about 55-56% of total assets of the museum.	There is no depreciation recorded. Donated collections are shown as revenue on the income statement.	There was no separate disclosure of collections. The note outlines changes in cost and accumulated depreciation of PPE.	unqualified
	2015-2020 PBE IPSAS 17	With the introduction of <i>PBE IPSAS 17</i> , there was a policy change from 2016 onwards. The new policy states that heritage assets were carefully analysed and the conclusion that these assets do not meet the <i>PBE IPSAS 17</i> recognition criteria was drawn. They are to be described in the financial statements for their utility, uniqueness, and community value. Financial value will not be assigned. Costs to acquire heritage assets will be processed through special purposes expenses in the income statement.	Collections are not reported on the balance sheet from 2016. In line with new policy, The <i>Change in accounting policy statement</i> indicates that collections recognised on the prior balance sheet were derecognised, resulting in reduction of assets from \$482m to \$216m.	No depreciation for collections is reported. Purchases of heritage assets during the year were expensed.	Categories of heritage assets and their significance are discussed, as well as 7 reasons leading to the decision not to recognise heritage assets.	unqualified

Museum	Period Standards	Accounting policy	Reporting on the balance sheet	The impact on the income statement	Disclosure in the notes	Audit opinion
(3) Canterbury Museum	2011-14 NZ IAS 16	Heritage assets include collection items or artefacts of cultural or historical significance. The cost of acquisitions of heritage assets is charged to the statement of comprehensive income. It is the policy of the museum to write off collection acquisitions and not to attribute a monetary value to items gifted to the collection. It acknowledges that the non-recognition of donated heritage assets is not consistent with NZ IAS 16. It also acknowledges lack of consistency with NZ IAS 16 in not assessing assets for impairment.	Heritage assets are not recognised.	The cost of acquisition of heritage assets is charged as expense in the statement of income.	Management's report acknowledges that the museum houses NZ\$2.1 million of heritage assets worth more than NZ\$600 million. However, there were no disclosures in the notes to the financial statements.	Qualified opinion – non recognition of Museum collection assets
	2015-20 PBE IPSAS 17	No change. The cost of acquisitions of heritage assets is charged to the statement of income. It is the policy of the museum to write off collection acquisitions and not to attribute a monetary value to items gifted to the collection. It acknowledges that the non-recognition of donated heritage assets is not consistent with PBE IPSAS 17.	Heritage assets are not recognised.	No change. The cost of acquisition of heritage assets is charged to the statement of income.	No change. The note further states that PBE IPSAS 17 has not been followed because the fair values of heritage assets cannot be reliably measured. An argument that gifts to the collections are iconic, historic, irreplaceable, having no market and, consequently, no ascribable financial value is made. The huge potential financial and administrative burden associated with complying with PBE IPSAS 17 is also mentioned.	Adverse opinion - Museum has not recognised its heritage assets and has not recognised associated depreciation expense. Museum also has not included a description of these heritage assets, including their significance and nature, or an estimate of their value.

Museum	Period Standards	Accounting policy	Reporting on the balance sheet	The impact on the income statement	Disclosure in the notes	Audit opinion
(4) Whanganui Regional Museum	2011-15 NZ IAS 16	Collections are valued at cost or market value. Increase in the valuation of collections is credited to the collection revaluation reserve. Depreciation is not applied because collections often have an indefinite useful life and are usually not of a depreciable nature. As from 2012 collections were undergoing a process of incremental valuation. Periodically, sub-collection valuations are carried out by a qualified valuer.	Collections are shown on the balance sheet as a non-current asset. Collections recognised on the balance sheet represent about 96-97% of total assets.	Donated collections are recognised as income. Collections are not depreciated.	From 2013, a note outlining 3 categories of heritage assets that have been revalued and the years in which they were revalued.	The auditor's opinion is modified for not valuing collection at fair value.
	2017-20 Simple format reporting. No public accountability	Heritage assets are split into two classes in 2017. One group includes five categories of collections that are valued at cost based on external valuation. The other class of heritage assets includes just one category, Newspapers, recorded at nil value.	Collections are shown on the balance sheet as a non-current asset. Collections recognised on the balance sheet represent about 96-97% of total assets.	Donated collections are recognised as income. Collections are not depreciated.	A note outlining four categories of heritage assets that have been revalued and the years in which they were revalued.	Unqualified

Museum	Period Standards	Accounting policy	Reporting on the balance sheet	The impact on the income statement	Disclosure in the notes	Audit opinion
(5) Otago Museum	2011-2015 NZ IAS 16	Heritage assets acquired before 30 June 2001 are recognised at cost, nil value as mostly are donated. All assets acquired after 1 July 2001 are recognised at fair value on acquisition. The majority of heritage assets were acquired before 2001 and therefore have nil value. It is cost prohibitive to revalue them.	Heritage assets are not recognised on the balance sheet. Qualified audit reports for 2011-2015 (NZ IAS 16) and 2016-2020 (PBE IPSAS 17).	No depreciation is recognised. Qualified audit reports for 2011-2015 (NZ IAS 16) and 2016-2020 (PBE IPSAS 17).	A note stating that the adopted policy undervalues the heritage assets of the museum, but the board is convinced that the true value of the heritage assets is immense. It is stated that should the assets be sold; their value will be very substantial. Acknowledges that since 2016, accounting standards require that donated assets be valued at fair value and prescribes that the difference between cost and fair value be recognised as revenue in the Statement of Financial Performance. It concludes that "A fair value for donated assets received has not been determined for all donated assets as it was not considered possible or practical to value them."	Modified audit opinion stating that the museum has not recognised the collection assets owned in the statement of financial position, nor the associated depreciation expense in the statement of financial performance. This is a departure from NZ IAS 16.

Museum	Period Standards	Accounting policy	Reporting on the balance sheet	The impact on the income statement	Disclosure in the notes	Audit opinion
	2016-2020 PBE IPSAS 17	No change. Heritage assets acquired before 30 June 2001 are recognised at cost, nil value as mostly are donated. All assets acquired after 1 July 2001 are recognised at fair value on acquisition. The majority of heritage assets were acquired before 2001 and therefore have nil value. It is cost prohibitive to revalue them.	No change. Heritage assets are not recognised on the balance sheet.	No change. no depreciation or revenue from donated assets is recognised.	A note stating that the adopted policy undervalues the heritage assets of the museum, but the board is convinced that the true value of the heritage assets is immense. It is stated that should the assets be sold their value will be very substantial. Acknowledges that since 2016, accounting standards require that donated assets be valued at fair value and prescribes that the difference between cost and fair value be recognised as revenue in the Statement of Financial Performance. It concludes that "A fair value for donated assets received has not been determined for all donated assets as it was not considered possible or practical to value them."	Qualified audit opinion. The museum has not recognised heritage assets on the balance sheet and donated assets as revenue in the performance statement, a departure from PBE IPSAS 17.

2016-2020 – IPSAS 17

Under IPSAS 17 from 2016-2020, there was no impact from heritage assets on the financial statements of Te Papa. Heritage assets continued to be recorded at cost or valuation, except for the natural environment collections, which are shown at replacement cost. The revaluations are debited or credited to a revaluation reserve. As heritage assets are considered to have an indefinite life, they are not depreciated. Te Papa financial statements continue to receive unqualified audit reports.

PBE IPSAS 17 had a significant impact on the financial statements of the Auckland Museum that led to the de-recognition of heritage assets from 2016 onwards. The new policy states that heritage assets were carefully analysed, and the conclusion reached that these assets did not meet the PBE IPSAS 17 recognition criteria. Heritage assets are described in the financial statements for their utility, uniqueness, and community value. Financial values are not assigned to heritage assets. The costs to acquire heritage assets are expensed in the income statement. The financial statements of Auckland Museum continue to receive unqualified audit reports. The non-recognition of heritage assets by Auckland museum is not consistent with the position of the NZ standard setters, who wanted heritage assets to continue being recognised in the way they were recognised under IAS 16 (XRB, 2021).

Canterbury Museum did not change its accounting policy with the adoption of PBE IPSAS 17. It does not recognise heritage assets on the balance sheet, and the cost of acquisition of heritage assets is charged to the statement of income. Although the accounting policy of Canterbury Museum is similar to the accounting policy of Auckland Museum, Canterbury financial statements are qualified by the auditors, while Auckland's are not. Canterbury Museum financial statements received an adverse audit opinion. The auditors have justified the adverse opinion, as Canterbury Museum has not recognised its heritage assets and has not recognised

the associated depreciation expense. Further, the Museum has not included a description of these heritage assets, including their significance and nature, or an estimate of their value.

The Otago Museum has not changed its accounting policy for heritage assets. It does not recognise heritage assets acquired prior to the end of June 2001, which accounts for most of its heritage assets, but recognises heritage assets acquired after that date at fair value. The financial statements of the Otago Museum continue to be qualified by its auditors, Audit NZ. The qualified audit opinion is made on the basis that the museum has not recognised heritage assets on the balance sheet, or donated assets as revenue in the income statement: a departure from PBE IPSAS 17.

The Whanganui Museum did not adopt PBE IPSAS 17 in 2017 as it has no public accountability, and its expenditures are less than \$2m. It adopted the simple format reporting for Tier 3. Under this simple reporting format, heritage assets are valued at cost, based on external valuation, except one category, Newspapers, which are recorded at nil value. While the financial statements received qualified audit reports previously under IAS 16, the simple reporting format in 2017 received an unqualified audit opinion.

The findings of this study, show that the diversity in reporting of heritage assets in New Zealand persists. The change from IAS 16 standard to a specific public sector standard, PBE IPSAS 17, has not made a significant impact on reporting practices. If anything, it has led to further inconsistencies, including inconsistencies in how museums disclose information about heritage assets, in addition to the resulting inconsistencies in audit opinions. That is because the IPSAS Conceptual Framework and IPSAS 17 provide slightly more interpretative freedom for heritage assets than was the case under IAS 16. The cultural issues relating to Māori heritage assets held by New Zealand museums further contribute to divergence from the reporting standard and to inconsistencies in practice. The question that remains is: what is then the purpose of recognition

and reporting heritage assets in the face of these difficulties? If the recognition of heritage assets is driven mainly by a need for accountability and for decision making purposes, then standardising practice might be helpful, and the revised IPSAS 17 is a step in the right direction. That is, as our data shows, the recognition of heritage assets can provide transparency and visibility, thus, highlighting the importance of such assets and the need for their preservation. However, the completeness, verifiability and comparability of heritage assets reported information in the financial statements remains problematic, as highlighted by Anessi-Pessina et al. (2019). In addition, the issue of the danger that heritage assets are being captured for their economic, rather than their cultural value, as suggested by Napier and Giovannoni (2021), also remains.

6. Conclusion

The difficulties in applying accrual-based accounting for the reporting of heritage assets is an obstacle frequently stated for its adoption, and more recently for the adoption of IPSAS standards. Various studies of the actual practice of accounting for, and reporting of, heritage assets show a variety of approaches and great inconsistencies (Hooper et al. 2005; West and Carnegie 2010; Adam et al. 2011, Carnegie et al. 2013, Aversano and Christiaens 2014, Anessi-Pessina 2019).

This study investigates and documents current practice in reporting heritage assets by New Zealand museums in the years 2011-20 and provides an update on the current situation with standardisation of practice. The findings show that there is continuing variability in the practice of accounting for heritage assets in NZ. There is some evidence of coercive isomorphism owing to pressure from standard setters to apply an accounting standard developed for property, plant and equipment, to heritage asset accounting in New Zealand.

The continuing issue is the cost of obtaining market valuations for heritage assets, and that tends to discourage museums from valuing such assets. In addition, the collections of heritage assets in the museums under observation are generally not recognised as assets in the balance sheet and are not depreciated owing to the assumption that such assets have indeterminable lives. Furthermore, the cultural issues idiosyncratic to Māori heritage assets also contribute to the difficulties in reporting practice. This supports previous findings by Hooper et al. (2005), West and Carnegie (2010) and the NZ Auditor General (OAG 2006) that there is significant divergence in the financial reporting practices for heritage assets. However, standardisation of reporting practices does assist the transparency and visibility of heritage assets, highlighting the importance of such assets and the need for their preservation.

The emphasis on qualitative disclosure of heritage assets by museums in this study also supports previous studies (Aversano and Christiaens 2014) on the importance of qualitative information in financial reporting for heritage assets, from the public accountability and stakeholder information needs theoretical points of view.

The findings of this study have implications for the current debate on whether IPSAS standards, particularly IPSAS 17, and ED 78 Property, Plant and Equipment, can significantly improve the reporting, visibility, and management of heritage assets. In particular, the findings show areas of measurement that result in the non-uniformity of heritage reporting practices among NZ museums. Therefore, this study contributes to the long-lasting debate on heritage assets and the best way to account for them and represent them in the financial statements. Lastly, the findings on the current practice of IPSAS 17 in accounting for and reporting heritage assets are of interest to policymakers and regulators in countries that are currently adopting or considering IPSAS 17. The limitations of this study are the usual limitations associated with small populations and case study-based research, particularly the non-generalisability of the study findings. Future research of heritage assets accounting practice by NZ museums could explore

surveys of management and conduct in-depth interviews with management on their particular accounting choices and disclosures.

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