

NZ IAS 16

Measurement after recognition

- 29** An entity shall choose either the cost model in paragraph 30 or the revaluation model in paragraph 31 as its accounting policy and shall apply that policy to an entire class of property, plant and equipment.

Cost model

- 30** After recognition as an asset, an item of property, plant and equipment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Revaluation model

- 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 end of the reporting period.
- 32** The fair value of land and buildings is usually determined from market-based evidence by appraisal that is normally undertaken by professionally qualified valuers. The fair value of items of plant and equipment is usually their market value determined by appraisal.
- 33** If there is no market-based evidence of fair value because of the specialised nature of the item of property, plant and equipment and the item is rarely sold, except as part of a continuing business, an entity may need to estimate fair value using an income or a depreciated replacement cost approach.

Public Benefit Entities

NZ 33.1 In the context of this Standard and in relation to public benefit entities, depreciated replacement cost is a method of valuation that is based on an estimate of:

- (a) in the case of property:
 - (i) the fair value of land; plus

- (ii) the current gross replacement costs of improvements less allowances for physical deterioration, and optimisation for obsolescence and relevant surplus capacity; and
- (b) in the case of plant and equipment, the current gross replacement cost less allowances for physical deterioration, and optimisation for obsolescence and relevant surplus capacity.

NZ 33.2 Fair value is defined in paragraph 6 of this Standard. Depreciated replacement cost is an acceptable estimate of the fair value of an asset only where the fair value of the asset is not able to be reliably determined using market-based evidence in accordance with paragraph 33 of this Standard.

NZ 33.3 In the context of this Standard and in relation to public benefit entities, depreciated replacement cost is based on the reproduction cost of a specific asset. In principle, it reflects the service potential embodied in the asset. However, in some cases the reproduction cost of the specific asset is adjusted for optimisation in determining depreciated replacement cost.

NZ 33.4 Optimisation refers to the process by which a least-cost replacement option is determined for the remaining service potential of an asset. This process recognises that an asset may be technically obsolescent or over-engineered, or the asset may have greater capacity than that required. Hence optimisation minimises, rather than maximises, a resulting valuation where alternative lower cost replacement options are available. In determining depreciated replacement cost, optimisation is applied for obsolescence and relevant surplus capacity.

NZ 33.5 Obsolescence may arise from factors such as outmoded design and functionality of an asset and changed code requirements preventing reconstruction of an asset in its current form. In determining depreciated replacement cost, optimisation for obsolescence is made by reducing the reproduction cost of the specific asset held to the cost of a modern equivalent asset that provides equivalent service potential to that of the specific asset held.

- NZ 33.6 Surplus capacity may arise from either over-design or from surplus components of an asset. In determining depreciated replacement cost, optimisation is applied only to surplus capacity that is not required currently and for which there is no reasonable prospect it will ever be required in utilising an asset in its current form. Optimisation is not applied to surplus capacity that, while rarely or never used, is necessary for stand-by or for safety purposes.
- NZ 33.7 In determining depreciated replacement cost, the extent of any reduction in value for surplus capacity subject to optimisation depends on whether that surplus capacity has an alternative use to the current use of the asset. Where there is no alternative use, the optimised value of the surplus capacity is zero. Where there is an alternative use, the optimised value of the surplus capacity is the value of the highest and best alternative use of that capacity.
- NZ 33.8 To illustrate the distinction described in paragraph NZ 33.7 between surplus capacity not having an alternative use to the current use of the asset and that which does, consider the following example. Assume depreciated replacement cost is to be determined for a network of water pipes where the pipe diameter is greater than currently required or ever expected to be required (including that necessary for stand-by or for safety purposes). There is also a discrete segment of the piping network that is similarly not required for the current use of the asset but which can be closed off and used for other purposes, such as a liquid storage facility. In this case, the surplus diameter of the piping would be disregarded for valuation purposes but the surplus segment of the piping network would be valued at its highest and best alternative use.
- NZ 33.9 In most cases, surplus capacity subject to optimisation is expected to be disregarded in determining the depreciated replacement cost of an asset. Such surplus capacity is unlikely to have an alternative use unless it is physically and operationally separable from the required capacity.
- NZ 33.10 In determining depreciated replacement cost, optimisation for obsolescence and relevant surplus capacity is applied only to the extent that it reflects the most probable use of the asset that is physically possible, appropriately justified, legally permissible and financially feasible.
- NZ 33.11 As evident from the definition of depreciated replacement cost, optimisation is applied only in determining the depreciated replacement cost of plant and equipment and in determining an estimate of the value of the improvements component of the depreciated replacement cost of property. Optimisation is not applied in determining the value of the land component of the depreciated replacement cost of property. The value of the land component will always reflect the fair value of the actual land held, in terms of both its size and location.

- NZ 33.12 In instances where the land is underutilised, the fair value of the land will be determined by reference to the highest and best use of such land. For example, in a case where specialised manufacturing facilities are located in a prime central business district site but the operation would be able to be run from a smaller sized and/or less valuable alternative site offering the same service potential, the fair value of the land would be the open market value of the entire central business district-located site.
- NZ 33.13 The fair value of land would normally be determined from market-based evidence. However, in the rare instances where extensive works have been carried out in order to prepare land for use in the entity's business, available market evidence will normally relate to land of the same size and in the same general vicinity but which is priced for uses that are sub-optimal relative to the use for which the works were carried out. In these rare instances the fair value of the land should be determined by having regard to the replacement cost of the land. For example, consider the case where an airport or port company acquires a section of seabed, fills it in and builds a seawall in order to produce flat land for use in the entity's business. The reclaimed land is in the precise location where the entity requires land. Market evidence may exist for other land of the same size and in the same general vicinity as the reclaimed land, but that other land is not suitable for the use intended by the entity. Thus, the market evidence on the fair value of that other land is not relevant to the reclaimed land, and the best indicator of the fair value of the reclaimed land would be the replacement cost of that land. Land resulting from extensive works by a local or central government body in constructing new roading provides a similar example.
- NZ 33.14 If an entity elects to capitalise borrowing costs in accordance with NZ IAS 23, an amount equal to the amount of borrowing costs that would be embodied in the fair value of the asset is included as a component of depreciated replacement cost. The inclusion of such an amount as a component of depreciated replacement cost is consistent with the principle underlying the inclusion in the initial cost of an asset of borrowing costs eligible for capitalisation as permitted by NZ IAS 23. The amount to be included as a component of depreciated replacement cost is determined on the basis of the average debt-to-equity ratio and average cost of debt applicable to entities undertaking the same activities as the entity reporting.

- 34 The frequency of revaluations depends upon the changes in fair values of the items of property, plant and equipment being revalued. When the fair value of a revalued asset differs materially from its carrying amount, a further revaluation is required. Some items of property, plant and equipment experience significant and volatile changes in fair value, thus necessitating annual revaluation. Such frequent revaluations are unnecessary for items of