



IAS 16 Property, plant and equipment

Objective

The objective of this Standard is to prescribe the accounting treatment for property, plant and equipment so that users of the financial statements can discern information about an entity's investment in its property, plant and equipment and the changes in such investment.

The principal issues in accounting for property, plant and equipment are the recognition of the assets, the determination of their carrying amounts and the depreciation charges and impairment losses to be recognised in relation to them.

Scope

This Standard shall be applied in accounting for property, plant and equipment except when another Standard requires or permits a different accounting treatment.

This Standard does not apply to:

- (a) property, plant and equipment classified as held for sale in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.
- (b) biological assets related to agricultural activity other than bearer plants (see IAS 41 *Agriculture*). This Standard applies to bearer plants but it does not apply to the produce on bearer plants.
- (c) the recognition and measurement of exploration and evaluation assets (see IFRS 6 *Exploration for and Evaluation of Mineral Resources*).
- (d) mineral rights and mineral reserves such as oil, natural gas and similar non-regenerative resources.

However, this Standard applies to property, plant and equipment used to develop or maintain the assets described in (b)–(d).

An entity using the cost model for investment property in accordance with IAS 40 *Investment Property* shall use the cost model in this Standard for owned investment property.

Effective date

An entity shall apply this Standard for annual periods beginning on or after 1 January 2005. Earlier application is encouraged. If an entity applies this Standard for a period beginning before 1 January 2005, it shall disclose that fact.

Defined terms

A *bearer plant* is a living plant that:

- (a) is used in the production or supply of agricultural produce;
- (b) is expected to bear produce for more than one period; and
- (c) has a remote likelihood of being sold as agricultural produce, except for incidental scrap sales.

The *carrying amount* of an asset is the amount at which an asset is recognised after deducting any accumulated depreciation and accumulated impairment losses.

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 the specific requirements of other IFRSs.

The *depreciable amount* is the cost of an asset, or other amount substituted for cost, less its residual value.

Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.

The *entity-specific value* is 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.

Fair value is 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 *impairment loss* is the amount by which the carrying amount of an asset exceeds its recoverable amount.

Property, plant and equipment are tangible items that:

- (a) are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- (b) are expected to be used during more than one period.

The *recoverable amount* is the higher of an asset's fair value less costs to sell and its value in use.

The *residual value* of an asset is 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.

Useful life is defined as:

- (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.

Recognition of property, plant and equipment

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.

Initial recognition of indirect costs

Items of property, plant and equipment may be acquired for safety or environmental reasons. The acquisition of such property, plant and equipment, although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for an entity to obtain the future economic benefits from its other assets.

Such items of property, plant and equipment qualify for recognition as assets because they enable an entity to derive future economic benefits from related assets in excess of what could be derived had those items not been acquired

Subsequent recognition of indirect costs

Day to day servicing:

- An entity does not recognise in the carrying amount of an item of property, plant and equipment the costs of the day-to-day servicing of the item. The purpose of these expenditures is often described as for the ‘repairs and maintenance’ are primarily the costs of labour and consumables, and may include the cost of small parts. These costs are expensed through profit and loss.

Replacement parts:

- Parts of some items of property, plant and equipment may require replacement at regular intervals or acquired to make a less frequently recurring replacement, an entity recognises in the carrying amount of an item of property, plant and equipment the cost of replacing part of such an item when that cost is incurred provided that the recognition criteria are met

Major inspections:

- Costs incurred for major inspections for faults regardless of whether parts of the item are replaced are recognised to the carrying amount of the item of property, plant and equipment.
- 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.

Measurement at recognition

An item of property, plant and equipment that qualifies for recognition as an asset shall be measured at its cost. The cost of a self-constructed asset is determined using the same principles as for an acquired asset. Bearer plants are accounted for in the same way as self-constructed items of property, plant and equipment before they are in the location and condition necessary to be capable of operating in the manner intended by management

The cost of an item of property, plant and equipment comprises:

- its purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates.
- 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.
- 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.

Examples of directly attributable costs are:

- costs of employee benefits (as defined in IAS 19 Employee Benefits) arising directly from the construction or acquisition of the item of property, plant and equipment;
- costs of site preparation;
- initial delivery and handling costs;
- installation and assembly costs;
- 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
- professional fees.

Examples of costs that are not costs of an item of property, plant and equipment are:

- costs of opening a new facility;
- costs of introducing a new product or service (including costs of advertising and promotional activities);
- costs of conducting business in a new location or with a new class of customer (including costs of staff training); and
- administration and other general overhead costs;
- incidental operations may occur before or during the construction or development activities and as incidental operations are not necessary to bring an item to the location and condition necessary for it to be capable of operating in the manner intended by management, the income and related expenses of incidental operations are recognised in profit or loss

Recognition of costs in the carrying amount of an item of property, plant and equipment **ceases** when the item is in the location and condition necessary for it to be capable of operating in the manner intended by management. Therefore, costs incurred in using or redeploying an item are not included in the carrying amount of that item.

For example, the following costs are not included in the carrying amount of an item of property, plant and equipment:

- (a) costs incurred while an item capable of operating in the manner intended by management has yet to be brought into use or is operated at less than full capacity;
- (b) initial operating losses, such as those incurred while demand for the item's output builds up; and
- (c) costs of relocating or re-organising part or all of an entity's operations.

Cash price equivalent

The cost of an item of property, plant and equipment is the cash price equivalent at the recognition date. If payment is deferred beyond normal credit terms, the difference between the cash price equivalent and the total payment is recognised as interest over the period of credit unless such interest is capitalised in accordance with IAS 23 *Borrowing Costs*.

Asset exchange

One or more items of property, plant and equipment may be acquired in exchange for a non-monetary asset or assets, or a combination of monetary and non-monetary assets. The following discussion refers simply to an exchange of one non-monetary asset for another, but it also applies to all exchanges described in the preceding sentence.

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.

The acquired item is measured in this way even if an entity cannot immediately derecognise the asset given up. If the acquired item is not measured at fair value, its cost is measured at the carrying amount of the asset given up.

An entity determines whether an exchange transaction has commercial substance by considering the extent to which its future cash flows are expected to change as a result of the transaction. An exchange transaction has commercial substance if:

- (a) the configuration (risk, timing and amount) of the cash flows of the asset received differs from the configuration of the cash flows of the asset transferred; or
- (b) the entity-specific value of the portion of the entity's operations affected by the transaction changes as a result of the exchange; and
- (c) the difference in (a) or (b) is significant relative to the fair value of the assets exchanged.

For the purpose of determining whether an exchange transaction has commercial substance, the entity-specific value of the portion of the entity's operations affected by the transaction shall reflect post-tax cash flows. The result of these analyses may be clear without an entity having to perform detailed calculations.

The fair value of an asset is reliably measurable if:

- (a) the variability in the range of reasonable fair value measurements is not significant for that asset; or
- (b) the probabilities of the various estimates within the range can be reasonably assessed and used when measuring fair value.

If an entity is able to measure reliably the fair value of either the asset received or the asset given up, then the fair value of the asset given up is used to measure the cost of the asset received unless the fair value of the asset received is more clearly evident.

Government assistance

The carrying amount of an item of property, plant and equipment may be reduced by government grants in accordance with IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance*.

Measurement after recognition

An entity shall choose either the cost model or the revaluation model as its accounting policy and shall apply that policy to an entire class of property, plant and equipment.

Cost model

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

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.

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. 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.

Revaluation changes shall be accounted for as follows:

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; or
- 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

If an asset's carrying amount is decreased as a result of a revaluation:

- the decrease shall be recognised in profit or loss; or
- 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.

The effects of taxes on income, if any, resulting from the revaluation of property, plant and equipment are recognised and disclosed in accordance with IAS 12 *Income Taxes*.

The revaluation surplus included in equity in respect of an item of property, plant and equipment may be transferred directly to retained earnings when the asset is derecognised. This may involve transferring the whole of the surplus when the asset is retired or disposed of. However, some of the surplus may be transferred as the asset is used by an entity. In such a case, the amount of the surplus transferred would be the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on the asset's original cost. Transfers from revaluation surplus to retained earnings are not made through profit or loss.

Depreciation

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.

The depreciation charge for each period shall be recognised in profit or loss unless it is included in the carrying amount of another asset. The depreciable amount of an asset shall be allocated on a systematic basis over its useful life and shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity.

A variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life. These methods include:

- straight-line method, the diminishing balance method and the units of production method. Straight-line depreciation results in a constant charge over the useful life if the asset's residual value does not change.
- diminishing balance method results in a decreasing charge over the useful life.
- units of production method result in a charge based on the expected use or output.

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.

The depreciable amount of an asset is determined after deducting its residual value. In practice, the residual value of an asset is often insignificant and therefore immaterial in the calculation of the depreciable amount.

The **residual value** of an asset may increase to an amount equal to or greater than the asset's carrying amount. If it does, the asset's depreciation charge is zero unless and until its residual value subsequently decreases to an amount below the asset's carrying amount. Depreciation is recognised even if the fair value of the asset exceeds its carrying amount, as long as the asset's residual value does not exceed its carrying amount. Repair and maintenance of an asset do not negate the need to depreciate it.

The **useful life** of an asset is defined in terms of the asset's expected utility to the entity. The asset management policy of the entity may involve the disposal of assets after a specified time or after consumption of a specified proportion of the future economic benefits embodied in the asset. Therefore, the useful life of an asset may be shorter than its economic life. The estimation of the useful life of the asset is a matter of judgement based on the experience of the entity with similar assets.

Depreciation of an asset begins when it is available for use, i.e. when it is in the location and condition necessary for it to be capable of operating in the manner intended by management.

Depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale (or included in a disposal group that is classified as held for sale) and the date that the asset is derecognised.

Therefore, depreciation does not cease when the asset becomes idle or is retired from active use unless the asset is fully depreciated. However, under usage methods of depreciation the depreciation charge can be zero while there is no production.

The residual value and the useful life and depreciation method 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 IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*.

A depreciation method that is based on revenue that is generated by an activity that includes the use of an asset is not appropriate. The revenue generated by an activity that includes the use of an asset generally reflects factors other than the consumption of the economic benefits of the asset. For example, revenue is affected by other inputs and processes, selling activities and changes in sales volumes and prices. The price component of revenue may be affected by inflation, which has no bearing upon the way in which an asset is consumed.

Impairment

To determine whether an item of property, plant and equipment is impaired, an entity applies IAS 36 *Impairment of Assets*. That Standard explains how an entity reviews the carrying amount of its assets, how it determines the recoverable amount of an asset, and when it recognises, or reverses the recognition of, an impairment loss.

Compensation for impairment

Compensation from third parties for items of property, plant and equipment that were impaired, lost or given up shall be included in profit or loss when the compensation becomes receivable.

Derecognition

The carrying amount of an item of property, plant and equipment shall be derecognised:

- (a) on disposal; or
- (b) when no future economic benefits are expected from its use or disposal.

The gain or loss arising from the derecognition of an item of property, plant and equipment shall be determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

The gain or loss shall be included in profit or loss when the item is derecognised (unless IFRS 16 *Leases* requires otherwise on a sale and leaseback). Gains shall not be classified as revenue.

However, an entity that, in the course of its ordinary activities, routinely sells items of property, plant and equipment that it has held for rental to others shall transfer such assets to inventories at their carrying amount when they cease to be rented and become held for sale. The proceeds from the sale of such assets shall be recognised as revenue in accordance with IFRS 15 *Revenue from Contracts with Customers*. IFRS 5 does not apply when assets that are held for sale in the ordinary course of business are transferred to inventories.

Presentation and disclosure

An entity shall present and disclose information that enables users of the financial statements about the entity's investment in its property, plant and equipment and the changes in such investment.

In the Notes to the financial statement:

- (a) The financial statements shall disclose, for each class of property, plant and equipment:
 - (i) the measurement bases used for determining the gross carrying amount;
 - (ii) the depreciation methods used;
 - (iii) the useful lives or the depreciation rates used;
 - (iv) the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period; and
 - (v) a reconciliation of the carrying amount at the beginning and end of the period showing:
 - additions;

In the Notes to the financial statement:

- assets classified as held for sale or included in a disposal group classified as held for sale and other disposals;
 - acquisitions through business combinations;
 - increases or decreases resulting from revaluations and from impairment losses recognised or reversed in other comprehensive income;
 - impairment losses recognised in profit or loss;
 - impairment losses reversed in profit or loss;
 - depreciation;
 - the net exchange differences arising on the translation of the financial statements from the functional currency into a different presentation currency, including the translation of a foreign operation into the presentation currency of the reporting entity; and
 - other changes.
- (b) The financial statements shall also disclose:
- (i) the existence and amounts of restrictions on title, and property, plant and equipment pledged as security for liabilities;
 - (ii) the amount of expenditures recognised in the carrying amount of an item of property, plant and equipment in the course of its construction;
 - (iii) the amount of contractual commitments for the acquisition of property, plant and equipment; and
 - (iv) 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.
- (c) If items of property, plant and equipment are stated at revalued amounts, the following shall be disclosed in addition to the disclosures required by IFRS 13 *Fair Value Measurement*:
- (i) the effective date of the revaluation;
 - (ii) whether an independent valuer was involved;
 - (iii) 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; and
 - (iv) the revaluation surplus, indicating the change for the period and any restrictions on the distribution of the balance to shareholders.

Users of financial statements may also find the following information relevant to their needs:

- (a) the carrying amount of temporarily idle property, plant and equipment;
- (b) the gross carrying amount of any fully depreciated property, plant and equipment that is still in use;
- (c) the carrying amount of property, plant and equipment retired from active use and not classified as held for sale; and
- (d) when the cost model is used, the fair value of property, plant and equipment when this is materially different from the carrying amount.