

FRS 102: Property, plant and equipment (Lecture A803 – 12.08 minutes)

Property, plant and equipment is dealt with in FRS 102 *The Financial Reporting Standard applicable in the UK and Republic of Ireland* in Section 17 *Property, Plant and Equipment*.

The term 'property, plant and equipment' is defined as:

Tangible assets 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.*

FRS 102
Glossary
**property, plant
and equipment**

Under the Accounting Regulations, fixed assets are defined slightly differently as assets which are '... intended for use on a continuing basis'.

FRS 102, Section 17 applies to:

- (a) property, plant and equipment (PPE); and
- (b) investment property which is rented to another group member and is measured under the cost model (as permitted by FRS 102, para 16.4A).

FRS 102, Section 17 does not apply to:

- (a) biological assets that are related to agricultural activity as these are dealt with in Section 34 *Specialised Activities*; and
- (b) mineral rights and mineral reserves, such as oil, natural gas and similar non-regenerative resources as these are also dealt with in Section 34.

To qualify for recognition on the balance sheet, FRS 102 contains two strict criteria which must be met. An entity can only recognise an asset on the balance sheet 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.*

FRS 102, para
17.4 (a) and (b)

These recognition criteria are also contained in FRS 102, Section 2 *Concepts and Pervasive Principles*, para 2.27. In addition, the definition of an asset also must be carefully considered because this is considered the 'backbone' underpinning the principles involved in the recognition of PPE on the balance sheet. The definition of 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.

FRS 102
Glossary **asset**

The definition above refers to 'control' as opposed to 'ownership'. An entity has

control over an item of PPE when it is able to determine what the item will be used for; how long it will be used for; and when it will be disposed of.

Example – Classification of assets in a holiday park

Harvey's Holiday Park owns several static caravans which are rented out to visitors during the season. The company has an accounting reference date of 31 December and on 30 November 2022 it decides to invest in five new caravans to replace five older ones. The older caravans will be put up for sale but will continue to be used in the business. The finance director has reclassified the older caravans as inventory on the basis that they can be sold at any time.

The new caravans held for rental are capitalised in the balance sheet as tangible fixed assets because they meet the definition of property, plant and equipment. Those held for sale should remain as tangible fixed assets until such time that they are sold because they continue to be used in the business (i.e. they will still generate an income stream for the entity).

Even if the old caravans were surplus to requirements, that, in itself, does not change the nature of the asset, hence they should not be reclassified as inventory.

1.1 Spare parts and servicing equipment

FRS 102 deals with the accounting for spare parts and servicing equipment at paragraph 17.5. Paragraph 17.5 recognises that such items are usually carried as inventory in the reporting entity's accounting records and are included in profit or loss as they are consumed. Consideration must, however, be given to major spare parts and stand-by equipment because such items are fixed assets under FRS 102 when the entity expects to use them for more than one accounting period and they meet the rest of the definition of PPE (otherwise they are classified as inventory and accounted for under FRS 102, Section 13 *Inventories*). A similar principle also applies if the spare parts and servicing equipment can only be used in connection with an item of fixed asset.

Example – Entity acquires spare parts

A garage is in the business of repairing cars and vans and prepares its financial statements under FRS 102, including the presentation and disclosure requirements of Section 1A. It acquires old vehicles to remove reusable parts and components in its day-to-day business.

These items are not spare parts for the entity's use in its own business and should not be classified as PPE. They should be treated as inventory and accounted for under Section 13 and valued at the lower of cost and estimated selling price less costs to complete and sell at each balance sheet date.

1.2 Component accounting

FRS 102 places emphasis on component accounting. Component accounting would be appropriate when certain parts (i.e. components) of an item of PPE might require replacement at regular intervals (the standard cites an example of a roof on a building). The

standard requires that the cost of replacing such a component is added to the carrying amount of the asset when the cost is incurred but only if the replacement part is expected to provide incremental future benefits to the company. The carrying value of the part(s) that have been replaced are derecognised from the accounts in the usual way.

Component depreciation is also a feature of FRS 102. Component depreciation is appropriate when the major components of an item of fixed asset have a significantly different useful economic life than the rest of the asset. Examples frequently cited include the linings of blast furnaces and the engines of aircraft. When the major components of a fixed asset have significantly shorter lives than the main asset itself, FRS 102 would require the entity to depreciate each such component separately over its useful life.

Example – Component depreciation

Sunnie Ltd manufactures chemicals for use in domestic cleaning products. It purchased a new machine on 1 January 2022 for £60,000 that is expected to have a useful economic life of ten years with a nil residual value at the end of this useful economic life. The company identifies the following major components:

Component A:	Cost £8,500 with a useful life of four years
Component B:	Cost £7,200 with a useful life of three years
Component C:	Cost £6,500 with a useful life of five years

In this example, the cost attributable to the remainder of the asset is £37,800. The company will depreciate components A, B and C over their useful lives of four, three and five years respectively. The remainder of the machine is treated as a single asset and is depreciated over ten years. The depreciation charges in year 1 if component accounting is not used and if component accounting is used can be compared as follows:

<u>No component accounting</u>	<u>Component accounting</u>
£60,000 ÷ 10 years = <u>£6,000</u>	Component A: £8,500 ÷ 4 years £2,125
	Component B: £7,200 ÷ 3 years £2,400
	Component C: £6,500 ÷ 5 years £1,300
	Remaining asset: £37,800 ÷ 10 years <u>£3,780</u>
	Total depreciation <u>£9,605</u>

In the above example, while the depreciation charge is essentially higher under component accounting, this is representative of the fact that various major components of the asset have significantly shorter lives than the main asset itself and therefore gives a more representative depreciation charge than if the asset were written off over ten years as a single asset.

1.3 Initial recognition of PPE

PPE are initially recognised at cost. Cost can be made up of several components, including:

- the initial purchase price;

- irrecoverable taxes;
- duties;
- legal fees;
- brokerage fees;
- other costs directly attributable¹ to bringing the asset to its location and condition intended by management; and
- borrowing costs capitalised in accordance with paragraph 25.2.

However, paragraph 17.11 specifically disallows certain types of expenditure from forming part of the cost of an asset and include:

- the costs of opening a new facility;
- the costs of introducing a new product or service, including advertising costs and promotional activities;
- costs of conducting business in a new location or with a new class of customer and this includes staff training; and
- administration and other general overhead costs.

Ordinarily the cost of an item of fixed asset is the cash price equivalent at the date of recognition and this will usually be found on the supplier's invoice. If, however, payment is deferred beyond normal credit terms, then the cost price is the present value of all future payments.

Example – Identification of costs to be capitalised

Birchwood Co Ltd acquired a machine from a supplier based in the USA and incurred expenditure relating to the following:

1. Costs of purchase including import duties.
2. Costs of transporting the equipment to its site in a factory in Birmingham.
3. Labour and material costs incurred in modifying the equipment to meet the specific needs of the entity's potential customers.
4. Training costs relating to staff directly involved in operating the machinery.
5. Operating losses incurred between the time the equipment was ready for use and when it was operating at full capacity (when customer order levels were on target).

Items 1, 2 and 3 are capitalised as they satisfy the test of being necessary in bringing the item of

¹ The term 'directly attributable' is not defined in FRS 102 but should be taken to mean any costs which the entity would have avoided had it not entered into the transaction in the first place.

equipment to its intended location and operating condition.

Items 4 and 5 do not satisfy the capitalisation criteria and must be recognised as expenses in the period in which they are incurred. Training costs are not part of the directly attributable costs of bringing the machine to the location and condition necessary for it to be capable of operating as intended by management because this would be the case regardless of the fact that the staff need training to use it.

Operating losses do not qualify to be included in the cost of the new machine because these are not costs directly attributable to bringing the machine to the location and condition necessary for it to be capable of operating as intended by management. Such losses are an inherent business risk.

1.4 Subsequent measurement

After initial recognition, FRS 102 allows two subsequent measurement bases for PPE:

- the cost model; and
- the revaluation model.

Cost model

Under the cost model, items of PPE are measured at cost less depreciation less impairment losses.

In practice, the cost model is the most popular model and applies to most assets. Generally, all assets are depreciable assets and hence will be subject to depreciation except in the case of land which does not usually depreciate.

FRS 102, para 17.13 states that the cost of an item of PPE is the cash price equivalent at the recognition date. Where payment is deferred beyond normal credit terms, the cost is the present value of all future payments.

Example – Deferred payment terms

Philbin Ltd enters into a transaction to acquire four machines at a cost of £650,000. Repayment is over three years in annual payments of £250,000. This gives an implicit rate of interest of 7.51% calculated using the internal rate of return function in Excel as follows:

The arrangement is profiled as follows:

	Opening balance	Interest at 7.51%	Cash flow	Closing balance
	£	£	£	£
Year 1	650,000	48,815	(250,000)	448,815
Year 2	448,815	33,706	(250,000)	232,521

Year 3	232,521	17,479	(250,000)	-
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Year 1	£
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Dr PPE additions	650,000
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Dr Interest payable (P&L)	48,815
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Cr Bank	250,000
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Cr Trade creditors	448,815
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Year 2

Dr Interest payable (P&L)	33,706
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Cr Trade payable	33,706
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Dr Trade payable	250,000
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Cr Bank	250,000
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Year 3

Dr Interest payable (P&L)	17,479
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Cr Trade payable	17,479
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Dr Trade payable	250,000
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Cr Bank	250,000
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At the end of year 1, the balance owing to the supplier is split between the current liability of £216,294 (£448,815 - £232,521) and the non-current portion of £232,521 to comply with the statutory formats of the balance sheet.

Revaluation model

FRS 102 allows an entity to subsequently measure items of PPE using the revaluation model. Under the revaluation model, PPE are carried at their latest revaluation amount less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

Revaluation frequency

FRS 102 does not prescribe a set time limit for revaluations. Paragraph 17.15B says 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 end of the reporting period. Therefore, some items of revalued PPE may go several years without a revaluation being undertaken, but these would tend to be assets whose fair value remains relatively static over a long period of time. Conversely, some assets (such as properties) may require revaluations on a much more regular basis. The judgement call that is required here is to consider whether the carrying value of the revalued assets is materially higher or lower than its fair value; if it is, then a revaluation is needed.

Revaluation gains are taken to a revaluation reserve within equity and are reported as other comprehensive income. The exception to this would be where the revaluation gain reverses a previous revaluation loss that has been reported in profit or loss in respect **of the same asset**. A revaluation loss is taken to the revaluation reserve to the extent of a surplus on the revaluation reserve in respect **of the same asset** with any excess being taken to the profit and loss account (there cannot be a debit balance on the revaluation reserve). Care must be taken not to offset gains and losses of one revalued asset against gains and losses of another revalued asset, hence the phrase '... of the same asset' being emphasised above.

The statutory formats of the balance sheet require the revaluation reserve to be disclosed below 'Share premium account'. Prior to the amendments to company law by virtue of The Companies, Partnerships and Groups (Accounts and Reports) Regulations 2015 (SI 2015/980), the revaluation reserve did not have to be called that. SI 2015/980 removed this flexibility by deleting the words '*... but need not be shown under that name*' in para 35(2) of the Regulations. Hence, the revaluation reserve must no longer be referred to by another name in the statutory balance sheet.

Entities are free to decide which types of assets are subjected to revaluation. However, in practice, the main assets that are subjected to the revaluation model are buildings. Other items such as plant and machinery may also be revalued. Where an asset is subject to the revaluation model, then all assets within that same class of asset must also be revalued. This rule is in place to stop entities from deliberately revaluing assets which may have increased in value and leaving out those that have either not increased or have decreased.

For clarity, the term 'class of asset' is defined as:

*A grouping of **assets** of a similar nature and use in an entity's operations.*

Example – Revaluation loss with a subsequent revaluation gain

On 31 March 2021, Runcorn Ltd revalued an asset which had a carrying value of £100,000 down to £70,000. The revaluation reserve in respect of this asset stood at £20,000. Deferred tax has been ignored for the purposes of this example.

The revaluation loss on 31 March 2021 is recorded as follows:

	£
Dr Revaluation reserve	20,000
Dr Loss on revaluation (P&L)	10,000
Cr Property, plant and equipment	30,000

Being revaluation loss as at 31 March 2021

On 31 March 2022, the fair value of the asset had increased to £110,000 and the finance director wishes to incorporate this fair value gain into the financial statements. The entries are:

	£
Dr Property, plant and equipment	40,000
Cr Gain on revaluation (P&L)	10,000
Cr Revaluation reserve	30,000

Being revaluation gain as at 31 March 2022

The revaluation gain is not taken wholly to the revaluation reserve as £10,000 of it reverses the previously recognised revaluation loss in respect of the asset.

Relevant deferred tax adjustments would also be made as this is a non-monetary asset subject to revaluation.

Determining fair value

FRS 102, paras 17.15C and 17.15D refer to the determination of fair value for the purpose of applying the revaluation model. FRS 102, para 17.15C states that the fair value of land and buildings is derived from market-based evidence which is usually obtained by appraisal by professionally qualified valuers. Such professionally qualified valuers would include chartered surveyors. Fair value in respect of plant and equipment is usually derived from their market value determined by appraisal. This could be obtained from a dealer in such plant and equipment.

Where there is no market-based evidence of fair value due to the asset being specialised in nature (e.g. a school building), and the item is rarely sold, except as part of a continuing business, the entity may need to estimate fair value using an income or depreciated replacement cost approach.

The term 'depreciated replacement cost' is defined as:

*The most economic cost required for the entity to replace the **service potential** of an **asset** (including the amount that the entity will receive from its disposal at the end of its **useful life**) at the **reporting date**.*

FRS 102
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**depreciated
replacement
cost**

Deferred tax

Where an entity adopts the revaluation model, deferred tax must be brought into account in accordance with the requirements of FRS 102, para 29.8 (as non-monetary assets subject to revaluation attract deferred tax consequences). Deferred tax is measured at the tax rates and allowances that have been enacted or substantively enacted by the reporting date and which will apply when the timing differences reverse.

As noted in the quarter 1 update, the headline rate of corporation tax is due to increase to 25% on 1 April 2023. This tax rate became substantively enacted on 24 May 2021 and hence for balance sheet dates ending on or after 24 May 2021, deferred tax is calculated as follows:

- At 19% where the entity's taxable profits are expected to be £50,000 or less.
- At 25% where the entity's taxable profits are expected to be more than £250,000.
- At the marginal rate where the entity's taxable profits are expected to fall between £50,001 and £250,000.

Deferred tax recognised in respect of revalued items of PPE is taken to the revaluation reserve.

Transfer between revaluation reserve and retained earnings

The Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (SI 2008/410) and The Small Companies and Groups (Accounts and Directors' Report Regulations 2008) (SI 2008/409) state that an amount may be transferred from the revaluation reserve to retained earnings (profit and loss reserves) if the amount was previously charged to that account or represents realised profit. There is no specific requirement to make this transfer as the Act uses the word 'may'. However, if the transfer is not done, the balance on retained earnings will understate the profits available for distribution. It is worth noting that even where this adjustment is made, there is no guarantee that the balance on retained earnings is the same as the amount of profit available for distribution.

There are two types of transfer that can be done in this respect:

- Each year, a transfer from the revaluation reserve to retained earnings equivalent to the excess depreciation that has been charged in respect of the revalued asset (i.e. the depreciation charged under the revaluation model less the depreciation that would have been charged under the cost model).
- When the entity disposes of the asset, the balance remaining on the revaluation reserve is transferred to retained earnings.

1.5 Depreciation

All items of PPE must be depreciated; although in most cases, land will not depreciate as this is considered to have an indefinite useful life. FRS 102 does not stipulate which assets must be subjected to which depreciation methods; however, in practice the straight-line and reducing balance (sometimes referred to as the 'diminishing balance method') are used. In a manufacturing company, it may be appropriate to use the 'usage method' of depreciation for certain types of machinery. Under the usage method, depreciation is only charged when an asset is being used; hence under this method the depreciation charge can be nil while there is no production.

FRS 102, para 17.21 provides factors which the entity must consider when determining the useful life of an asset as follows:

- (a) *The expected usage of the asset. Usage is assessed by reference to the asset's expected capacity or physical output.* FRS 102, para 17.21 (a) to (d)
- (b) *Expected physical wear and tear, which depends on operational factors such as the number of shifts for which the asset is to be used and the repair and maintenance programme, and the care and maintenance of the asset while idle.*
- (c) *Technical or commercial obsolescence arising from changes or improvements in production, or from a change in the market demand for the product or service output of the asset.*
- (d) *Legal or similar limits on the use of the asset, such as the expiry dates of related leases.*

If an entity changes its depreciation method (for example, depreciating an asset at 33% on a straight-line basis instead of 25% on a reducing balance basis), then this represents a change in estimation technique (a change in accounting estimate). This type of change is not applied retrospectively because changes in estimation are accounted for prospectively; only changes in accounting policy are applied retrospectively and a change in depreciation method is not a change in accounting policy.

Depreciation must begin when the asset is available for use. The term 'available for use' means when the asset is in the location and condition necessary for it to be capable of operating in the manner intended by management.

Example – Asset unavailable for use

Tennyson Ltd has a year end of 31 October 2022. On 30 October 2022, a new office building was completed but was awaiting approval and sign-off by the Health and Safety inspector. This is due to take place on 6 December 2022 at which point the new building will become available for use (subject to the Health and Safety inspector being satisfied that it is suitable for occupancy).

In the financial statements for the year ended 31 October 2022, the asset will not be depreciated. This is because the asset was not available for use by the balance sheet date.

Depreciation ceases when the asset is derecognised (i.e. sold or scrapped). Any decision to sell an asset may trigger the impairment requirements of FRS 102, Section 27 *Impairment of Assets* if disposal is to take place earlier than planned.

Depreciation does not cease when the asset becomes idle, or management decides to sell it because it has become retired from active use. As noted above, it ceases when the asset is derecognised.

1.6 Depreciable amount

The term 'depreciable amount' is defined as:

*The cost of an **asset**, or other amount substituted for cost (in the **financial statements**), less its **residual value**.*

FRS 102
Glossary
**depreciable
amount**

The depreciable amount of an asset is calculated as cost less residual value. The balance is then depreciated over the asset's useful economic life.

Under FRS 102, residual values are based on the price which an entity would **currently** obtain if it were to dispose of the asset less 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. This means that depreciation charges could fluctuate from one period to the next because the depreciable amount could go up or down depending on what happens with the residual value. In most cases, the fluctuation is immaterial.

1.7 Impairment

It is important to remember a fundamental principle that underpins financial reporting which is that assets must not be stated in the balance sheet at any more than recoverable amount. If assets are overstated this clearly results in the accounts becoming misleading.

To achieve this, management must review the entity's assets at each balance sheet date to identify if there are indicators that any asset is impaired. If an asset is impaired, the requirements of FRS 102, Section 27 *Impairment of Assets* will apply, and this involves calculating recoverable amount and comparing recoverable amount to the carrying amount. If carrying amount is higher than recoverable amount, the difference is recognised as an impairment loss in profit or loss.

If the entity is going to be reimbursed for an asset that is impaired; for example, if an insurance company is going to reimburse the entity for a vehicle that has been damaged in an accident, then that compensation can only be recognised as a debtor when its receipt is **virtually certain**. Note the term 'virtually certain' is not the same as 'probable'. The term 'probable' is defined as 'more likely than not'; virtually certain is not defined in FRS 102 and in practice there would have to be official confirmation from the third party that they do intend to reimburse the entity.

Impairments can be reversed when the circumstances giving rise to the impairment cease to apply. Impairments can only be reversed to bring the carrying amount of the asset up to the value which would have been stated – net of depreciation/amortisation – had no impairment been recognised. It must also be emphasised that impairment losses in respect of goodwill must never be reversed.