

CHAPTER 15

PROPERTY, PLANT and EQUIPMENT

1. BACKGROUND

This chapter examines the accounting treatment prescribed in IAS 16 for property, plant and equipment and IAS 23 which provides for the capitalisation of borrowing costs to qualifying assets.

As explained in Chapter 1, the definition and the recognition criteria of property, plant and equipment are consistent with the definition and recognition of an asset found in the *Framework* and build on the *Framework* to refine the concepts so as to apply to property, plant and equipment.

The objective of IAS 16 is to provide information about property, plant and equipment so that the users of the financial statements can identify information about the entity's own investment in its property, plant and equipment and the changes in such investment. Such information is useful to users of the financial statements in making decisions about providing resources to the entity (such as buying, selling or holding equity and debt instruments, and providing or settling loans and other forms of credit).

2. DEFINITIONS AND SCOPE

IAS 16 paragraph 6, defines property, plant and equipment as tangible items that:

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

The cost of an item of property, plant and equipment is recognised as an asset if, and only if:

- it is probable that future economic benefits associated with the item will flow to the entity; and
- the cost of the item can be measured reliably.

For some items that satisfy the definition of an asset, significant judgment is required to evaluate whether such items satisfy the recognition criteria.

IAS 16 applies to all property, plant and equipment with the exception of:

- 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 (see IAS 41 – *Agriculture*);
- c) the recognition and measurement of exploration and evaluation assets (see IFRS 6 – *Exploration for and evaluation of mineral resources*); or
- d) mineral rights and mineral reserves (e.g. oil, natural gas and similar non-regenerative resources).

However, IAS 16 applies to property, plant and equipment used to develop or maintain the assets described in b) to d) above.

Paragraphs 8 and 11 clarifies the following:

- **Items such as spare parts, standby equipment and servicing equipment:** If items such as spare parts, standby equipment and servicing equipment meet the definition of property, plant and equipment, they are accounted for as such in terms of IAS 16. If such items do not meet the definition of property, plant and equipment, they are classified as inventory.
- Judgement is required in applying the recognition criteria to an entity's specific circumstances in order to determine what constitutes an item of property, plant and equipment. Thus it may be necessary to aggregate individually insignificant items and apply the criteria to the aggregate value.
- **Safety equipment:** Safety equipment that is indirectly necessary for the entity to obtain future economic benefits from its other assets is accounted for as property, plant and equipment.

Owner occupied 'investment property' is accounted for as property, plant and equipment.

In accordance with IAS 40 *Investment property* the reporting entity may elect to carry their investment properties in accordance with the benchmark accounting treatment of IAS 16 *Property, plant and equipment*, that is, the cost model.

3. INITIAL MEASUREMENT OF PROPERTY, PLANT AND EQUIPMENT

An item of property, plant and equipment that qualifies for recognition as an asset, shall initially be measured at cost. **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 standards or interpretations (e.g. IFRS 2 *Share-based payment*).

3.1 Cost – the basics

Cost is the purchase price and any directly attributable costs to bring the asset to the location and working condition necessary for it to be capable of operating in the manner intended by management. Cost therefore includes:

- the purchase price,
- import duties,
- non-refundable purchase taxes (e.g. VAT if non-refundable),
- employee benefit costs (arising directly from the construction or acquisition),
- site preparation,
- initial delivery and handling costs,
- installation costs (e.g. special foundations) and assembly costs,
- costs of testing the asset less any net selling proceeds from items produced during the testing phase; and
- professional fees.

Cost is reduced by the amount of any trade discounts, volume rebates and settlement discounts.

Illustrative example 15.1: The initial measurement of cost – basic issues

Four different companies acquired assets as follows:

Company A is a registered VAT vendor and purchased plant. The plant had a list price of R114 000. A special foundation for the plant was constructed by company A's employees at a material cost of R1 140 and a labour cost of R2 000. A 10% trade discount was negotiated on the list price of the plant.

Company B is a registered VAT vendor and purchased a passenger motor vehicle for the business and private use of the financial director. The car cost R114 000. A 10% settlement discount was negotiated.

Company C is not a registered VAT vendor and purchased plant at a cost of R114 000. An independent mechanical engineer charged R1 140 professional fees and R1 140 materials to modify the plant to fit the factory specifications.

Company D is a registered VAT vendor and acquired plant under a finance lease. The present value of the minimum lease payments was R114 000 and ownership passed to the lessee at the end of the lease for no additional payment. It cost R2 280 for the plant to be delivered to the factory site.

Assume:

- all transactions were entered into with registered VAT vendors,
- all amounts are inclusive of VAT,
- VAT is levied at 14%.

Required:

Calculate the cost at which the assets are to be recorded in the financial accounting records of each of the companies.

Solution:

	<i>Calculation:</i>	Company A Rand	Company B Rand	Company C Rand	Company D Rand
Purchase price	<i>A & D: R114 000 x 100/114</i>	100 000	114 000 ¹	114 000 ²	100 000
Trade discount	<i>A: 10%(R100 000)</i>	(10 000)	-	-	-
Special foundations:					
- materials	<i>A: R1 140 x 100/114</i>	1 000	-	-	-
- labour	<i>A: R2 000 given</i>	2 000	-	-	-
Settlement discount	<i>B: R114 000 x 10%</i>	-	(11 400)	-	-
Mechanical engineer:					
- professional fees		-	-	1 140 ²	-
- materials		-	-	1 140 ²	-
Delivery	<i>D: R2 280 x 100/114</i>	-	-	-	2 000
		93 000	102 600	116 280	102 000

¹ As the asset is a passenger motor vehicle, no input credit is allowed.

² Company C is not a registered VAT vendor; therefore the entity cannot claim any input credits.

3.2 Cost - more complex aspects

The cost of an item of property, plant and equipment includes any directly attributable costs to bring the asset to the location and working condition necessary for it to be capable of operating in the manner intended by management. Such costs also include:

- The costs of testing whether the asset is functioning properly reduced by the net proceeds from disposal of the output produced during the testing process. The cut-off for inclusion of testing expenses in the cost of an item is when the item is capable of operating in a manner intended by management. This clarifies that, for example, that the cost of an item excludes

initial operating losses and similar subsequent expenses.

- Any provision for the expected costs of dismantling and removing the asset and site restoration that have, in accordance with IAS 37, been recognised as a liability. Where recognition of the provision takes place subsequent to the initial measurement of the asset, it is added to the cost of the related item of property, plant and equipment only if it is incurred as a consequence of having used the item other than to have produced inventories. IFRIC 1 *Changes in Existing Decommissioning, Restoration and Similar Liabilities* addresses how the effect of a change (for example, a change in cash flows, discount rate or time period) in an existing liability is accounted for. These are discussed in part 10 of this chapter. Subsequent costs incurred as a result of using the asset to produce inventories are capitalised to the cost of the inventories. If the asset is being used to produce inventories, then depreciation of the asset is capitalised to inventories.

The following costs are excluded from the cost of property, plant and equipment:

- 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 staff costs of staff training);
- administration and other general overhead costs.

Costs of subsequently redeploying an asset are not capitalised (paragraph 20).

Illustrative example 15.2: The initial measurement of cost – more complex issues

On 1 January 20.1, Polluter Limited opened a new plant in Pietermaritzburg.

The following costs were incurred during January 20.1 in respect of the new plant (all excluding VAT):

	Rand
• invoiced price of the plant	60 000 000
• direct costs of testing of plant to ensure that it is operating in the manner intended by management	2 000 000
• proceeds from the sale of the goods produced in testing (as scrap)	(600 000)
• costs incurred in selling the scrap produced during testing	100 000
• plant opening function for dignitaries, staff and clients	1 000 000

From 1 February 20.1, the plant was ready to operate in the manner intended by management. The plant incurred an operating loss of R5 000 000 for the month ended 28 February 20.1, primarily due to initial low orders levels. Production levels reached break-even point in early March 20.1, and thereafter the plant operated profitably.

Environmental legislation requires that the site upon which the plant is developed be rehabilitated by Polluter Limited at the end of the plants useful economic life that has been reliably estimated at 10 years. On 1 January 20.1, an environmental restoration provision of R1 million was, in accordance with IAS 37, raised in this respect.

Required:

Calculate the cost of the plant in accordance with IAS 16 – *Property, plant and equipment*. Briefly support your answer.

Solution:

	Rand	Brief supporting reasons:
• invoiced price of the plant	60 000 000	<i>Incurred to ensure that the plant operates in the manner intended by management</i>
• direct costs of testing of plant	2 000 000	<i>Incurred to ensure that the plant operates in the manner intended by management</i>
• net proceeds from the sale of scrap produced in the testing process	(500 000)	<i>R600 000 proceeds from sale of scrap – R100 000 selling expenses incurred</i>
• plant opening function for dignitaries, staff and clients	-	<i>Incurred for marketing and general staff motivational reasons</i>
• operating loss (R5 000 000)	-	<i>Not included as incurred after 1 February 20.1</i>
• environmental restoration	1 000 000	<i>Included in cost as the provision has been raised in accordance with IAS 37</i>
	62 500 000	

3.3 Cost - items acquired in exchange for own equity instruments

If an item of property, plant and equipment is acquired in exchange for equity instruments of the entity, the cost of the item is equal to the fair value of the item received unless that fair value cannot be estimated reliably. If the entity cannot estimate reliably the fair value of the item received, the fair value of the item is measured by reference to the fair value of the equity instruments granted.

3.4 Cost - items acquired in a barter transaction

The cost of the item received in a barter transaction is measured at its fair value unless,

- (a) the exchange transaction lacks commercial substance (see paragraph 25) or
- (b) the fair value of neither the asset received nor given up is reliably measured.

If the acquired asset is not measured at fair value, its cost is measured at the carrying amount of the asset given up.

3.5 Cost - imported property, plant and equipment

IAS 21 *The effects of changes in foreign exchange rates* paragraph 21 provides that a foreign currency transaction shall be recorded, on initial recognition in the functional currency, by applying to the foreign currency amount the spot exchange rate between the functional currency and the foreign currency at the date of the transaction. (For examples illustrating these principles, see the chapter on *Foreign Currency Transactions*.)

3.6 Component parts and regular major inspections

Although IAS 16 does not use the expression 'component', the standard effectively uses a component approach in accounting for property, plant and equipment in that it refers to a single asset having different parts (see paragraphs 13 and 43). An entity allocates the amount initially recognised to its significant parts and depreciates each such part. Examples of such circumstances are:

3.6.1 Component parts

- an airline effectively accounts for its aircraft as three separate items of property, plant and equipment namely: jet engines, plane bodies, and interior fittings; and
- a ceramic manufacturer effectively account for furnaces and furnace linings as separate items of property, plant and equipment.

3.6.2 Regular major inspections

Some items of property, plant and equipment must be inspected for faults periodically, as a condition of continuing to operate the asset. The cost of such major inspections may be included as a separate component of the asset upon initial recognition. If not invoiced for separately, this amount can be

estimated. The separate component is depreciated over the expected period to the next inspection. Should the inspection take place before expected, then the remaining carrying amount of the prior inspection is written off, and the new inspection cost capitalised. The costs of day-to-day servicing are recognised in profit or loss as incurred.

Illustrative example 15.3: Component parts and regular major inspections

On 1 January 20.1, the risks and rewards of ownership of a new Lear jet passed to Flight Limited. The jet, which is to provide international mobility to the company's most senior executives, cost R40 million (excluding VAT). The company intends keeping the jet until it is obsolete (i.e. 20 years) at which time it is expected to have no residual value. Although the invoice did not provide an analysis of the purchase price, it can reasonably be allocated as follows:

	Rand	Additional information:
• engines	20 000 000	<i>Estimated useful life 10 years with no residual value</i>
• airframe	14 000 000	<i>Estimated useful life 20 years with no residual value</i>
• furniture and fittings	4 000 000	<i>Estimated useful life 5 years with no residual value</i>
• inspection costs	2 000 000	<i>Such inspections are required by aviation authorities every two years</i>
	40 000 000	

PART A:

Required:

Compute the amount of depreciation to be expensed by Flight Limited in respect of the jet for the year ended 31 December 20.1.

Solution:

Depreciation expense in respect of the jet for the year ended 31 December 20.1.

	Rand	Additional information:
• engines	2 000 000	<i>R20 000 000/10 years</i>
• airframe	700 000	<i>R14 000 000/20 years</i>
• furniture and fittings	800 000	<i>R4 000 000/5 years</i>
• inspection costs	1 000 000	<i>R2 000 000/2 years</i>
	4 500 000	

PART B:

Additional information:

On 30 June 20.2, for reasons of convenience, the company undertook the requisite inspection six months earlier than required by the aviation authorities. The cost of the inspection was R2 200 000 and the next scheduled inspection is 30 June 20.4.

Required:

Briefly outline how Flight Limited shall account for the inspection cost during 20.2, in accordance with IAS 16 *Property, plant and equipment*.

Solution:

In its interim financial statements for the six month period ended 30 June 20.2, Flight Limited would provide depreciation of R500 000 in respect of the pre-existing inspection cost component of the jet. This would reduce the carrying amount of this component to R500 000 at 30 June 20.2.

In its 20.2 annual financial statements, depreciation of R1 050 000 (ie R500 000 January to June on original inspection costs + R550 000 July to December on 'new' inspection costs) would be computed. Further, the remaining carrying amount at 30 June 20.2 of R500 000 on the original inspection costs would also be expensed on 30 June 20.2 (i.e. when the premature current year inspection took place).

The carrying amount of the inspection cost component of the jet is therefore R1 650 000 at 31 December 20.2.

4. ACCOUNTING FOR GOVERNMENT GRANTS AND DISCLOSURE OF GOVERNMENT ASSISTANCE

IAS 20 paragraph 24 provides that government grants related to assets shall be presented in the statement of financial position either:

- as deferred income, or
- by deducting the grant in arriving at the carrying amount of the asset.

Repayments of government grants are accounted for as a change in accounting estimate.

Where the reporting entity deducts the grant in arriving at the carrying amount of the asset, then with respect to grants that become repayable (e.g. revoked), the repayment is recorded by adjusting the carrying amount of the asset, and accounted for as a change in estimate (on the cumulative catch-up method).

A 2008 amendment to IAS 20 includes the benefit of a government loan at a below-market rate of interest as a government grant. This benefit which is accounted in accordance with IAS 20, is measured as the difference between the initial carrying value of the loan determined in accordance with IAS 39 and the proceeds received.

Illustrative example 15.4: Government grants

Construction Limited purchase an item of plant on 1 January 20.0. The plant costs R100 000 and has a useful life of 4 years and a nil residual value. Depreciation is calculated using the straight-line method.

On 3 January, the local government authority award and pay Construction Limited a grant of 20% of the cost (R20 000) towards the cost of the plant as it has met certain qualifying conditions under a scheme currently being promoted to encourage investment.

Required:

Show how the plant and government grant will be disclosed in the financial statements for the years 20.0 to 20.3.

Solution:

Grant is recognised as deferred income

Statement of Financial Position Note	20.0 Rand	20.1 Rand	20.2 Rand	20.3 Rand
Property, plant and equipment				
At the beginning of the year				
Cost	-	100 000	100 000	100 000
Accumulated depreciation	-	(25 000)	(50 000)	(75 000)
Carrying amount at beginning of year	-	75 000	50 000	25 000
Current year movements				
Additions	100 000			
Depreciation [R100 000/4 years]	(25 000)	(25 000)	(25 000)	(25 000)
Carrying amount at year end	75 000	50 000	25 000	0
Deferred income	15 000	10 000	5 000	0

Statement of Comprehensive Income	20.0 Rand	20.1 Rand	20.2 Rand	20.3 Rand
Depreciation	25 000	25 000	25 000	25 000
Subsidy in respect of depreciable asset	(5 000)	(5 000)	(5 000)	(5 000)
	<u>20 000</u>	<u>20 000</u>	<u>20 000</u>	<u>20 000</u>
<i>Grant is deducted in arriving at carrying amount of the asset</i>				
Statement of Financial Position Note	20.0 Rand	20.1 Rand	20.2 Rand	20.3 Rand
Property, plant and equipment				
At the beginning of the year				
Cost	-	100 000	100 000	100 000
Subsidy	-	(20 000)	(20 000)	(20 000)
Accumulated depreciation	-	(20 000)	(40 000)	(60 000)
Carrying amount at beginning of year	<u>-</u>	<u>60 000</u>	<u>40 000</u>	<u>20 000</u>
Current year movements				
Additions	100 000	-	-	-
Subsidy	(20 000)	-	-	-
Depreciation [(R100 000 – R20 000)/4 years]	(20 000)	(20 000)	(20 000)	(20 000)
Carrying amount at year end	<u>60 000</u>	<u>40 000</u>	<u>20 000</u>	<u>0</u>
Made up as follows:				
Cost	100 000	100 000	100 000	100 000
Subsidy	(20 000)	(20 000)	(20 000)	(20 000)
Accumulated depreciation	(20 000)	(40 000)	(60 000)	(80 000)
	<u>60 000</u>	<u>40 000</u>	<u>20 000</u>	<u>0</u>
Statement of Comprehensive Income				
Depreciation	<u>20 000</u>	<u>20 000</u>	<u>20 000</u>	<u>20 000</u>

Government grants relating to income

IAS 20 requires grants relating to income to be presented either separately or as “other income” in the statement of comprehensive income or to be deducted from the related expense.

Disclosure

- The accounting policy adopted for government grants, including the methods of presentation adopted in the financial statements;
- The nature and extent of such grants recognised in the financial statements and an indication of other forms of government assistance from which the entity has directly benefited; and
- Unfulfilled conditions and other contingencies attaching to government assistance that has been recognised.

5. COST – SELF-CONSTRUCTED ASSETS (INCLUDING BORROWING COSTS)

The cost of a self-constructed asset is determined using the same principles as for an acquired asset. The costs of a self-constructed asset includes, in addition to the components of costs in respect of the purchased assets:

- costs of construction (excluding internal profit and abnormal wastage),
- costs of employee benefits arising directly from the construction of the item, and
- borrowing costs capitalised in accordance with IAS 23.

Income and expenses in respect of incidental operations (that are not necessary to bring the asset to the location and working condition necessary for it to be capable of operating in the manner intended by management) in connection with the construction or development of an item of property, plant and equipment, are recognised in profit or loss for the period (i.e. they are not capitalised). Paragraph 21 of IAS 16 gives the example of a building site that is operated as a parking lot prior to the commencement of construction. This would apply even where the parking lot operates whilst construction is underway.

5.1 Capitalisation of borrowing costs

The core principle in IAS 23 is that borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset shall be capitalised as part of the cost of that asset. Prior to this revision, entities were given the choice as to whether to expense borrowing costs or to capitalise borrowing costs in respect of qualifying assets.

Qualifying assets commonly include property, plant and equipment, investment property and inventories produced under construction contracts. Inventories consisting of investments and products produced by repetitive production lines over short time periods are specifically excluded. The most important feature of *qualifying assets* is that they must take a substantial period of time to get ready for their intended use or sale.

Borrowing costs include:

- Interest expense calculated using the effective rate method as described in IAS 39 *Financial Instruments: Recognition and Measurement*,
- finance charges on finance leases, and
- exchange differences arising from foreign borrowings to the extent that they represent interest rate differentials (possibly calculated with reference to inflation rate differentials).

Borrowing costs exclude the actual or imputed cost of equity, including preference share capital not classified as a liability.

Preference shares which in terms of IAS 32 are classified as liabilities, would fall into the definition of borrowing costs, whilst those classified as equity would not. It is possible for a single class of preference share to have both an equity part and a liability part (e.g. fixed rate preference shares compulsorily convertible into ordinary shares under specified fixed terms on a specific date). The convertible preference shares would be presented in the financial statements in two separate parts (equity and liability) and only the costs apportioned to the liability portion may be capitalised in accordance with IAS 23. A similar situation arises in respect of compulsorily convertible debentures.

The borrowing costs associated with preference shares (classified as liabilities) include:

- interest (in the form of the preference dividend),
- amortised discounts and premiums on issue and redemption, and
- issue costs.

The amount of borrowing costs capitalised will depend upon the source of the funds utilised to construct the asset.

- Where specific loans are raised to fund the production of the asset, then the costs attached to those funds, reduced by the earnings from the investment of the surplus loaned funds, are capitalised (provided all of the criteria for capitalisation are met).
- Where general funds are used, a suitable weighted average capitalisation rate is utilised. These capitalised borrowing costs cannot exceed the actual borrowing cost of the reporting entity for that period. (Only borrowing costs that have actually been incurred may be capitalised.)

Borrowing costs may only be capitalised from the date upon which (and to the extent that) all of the following apply:

- expenditures are being incurred on the qualifying asset (reduced by progress payments received),
- borrowing costs are being incurred, and
- activities to prepare the asset have begun (including technical and administrative activities prior to construction, but excluding the act of merely holding an asset).

Capitalisation ceases when substantially all activities to prepare the asset are completed. Therefore no capitalisation occurs after construction has been completed, irrespective of whether the asset is held as property, plant and equipment or inventory.

Capitalisation is suspended when activities on the development of the asset are stopped for extended periods of time, unless the interruption is required as an integral part of the production process (e.g. special foundations that take 1 month to dry).

Illustrative example 15.5: Funds are borrowed specifically for the purpose of obtaining a qualifying asset

On 1 January 20.1, R500 000 was borrowed at 15% p.a. to finance the construction of a qualifying asset. Construction commenced on 1 March 20.1 and expenditure was incurred at R40 000 per month from March to December inclusive. Interest on investments at short call were as follows:

	January to February 20.1	March to December 20.1
	Rand	Rand
Surplus funds relating to R500 000 borrowed	8 000	24 000
Other surplus funds	3 000	20 000
	11 000	44 000

Interest may only be capitalised as from the date on which all of the following requirements are met:

- expenditures are incurred - from 1 March 20.1,
- borrowing costs are incurred – from 1 January 20.1, and
- activities are in progress – from 1 March 20.1.

Capitalisation of borrowing costs therefore commences on 1 March 20.1 (i.e. when all three conditions are satisfied).

Since the funding is by way of a specific loan, interest paid less interest received on surplus specific loan monies invested, is capitalised for the financial year ended 31 December 20.1.

	<i>Calculation:</i>	Rand
Interest paid on specific loan: 1 March to 31 December 20.1	<i>15%(R500 000) x 10/12 months</i>	62 500
Interest on investment of specific surplus funds: 1 March to 31 December 20.1		(24 000)
To be capitalized		38 500

Included in notes to the statement of comprehensive income:

	Rand
Other income: interest (<i>R11 000 January to February + R44 000 March to December</i>)	55 000
Deducted from borrowing costs capitalised	(24 000)
	31 000
Borrowing costs incurred (<i>R500 000 x 15%</i>)	75 000
Borrowing costs capitalized	(62 500)
Borrowing costs expensed	12 500

In 20.2 the expenditure continues at R40 000 per month for a further three months, at the end of which the asset was ready for its intended use. Interest at 15% was paid on the loan of R500 000 for the whole of 20.2.

Borrowing costs are capitalised in 20.2 for the period January to March. According to paragraph 22 of IAS 23, capitalisation of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete. Therefore, interest to be capitalised for the year ended 31 December 20.2 is R18 750 ($R500\,000 \times 15\% \times 3/12$). The amount capitalized would be reduced by interest income on the surplus funds invested.

Note: In this illustration, the pattern of the expenditure made is ignored for the purpose of calculating the borrowing costs to be capitalised. This is because when the loan is a specific loan, then the borrowing costs to be capitalised are the actual borrowing costs incurred on the specific loan less interest income on temporary investment of that specific loan.

Illustrative example 15.6: Capitalisation of borrowing costs on non-specific loans (excluding compounding)

The following loans were outstanding during 20.1:

- R100 000 at 12% for the whole year
- R50 000 at 10% for the period 1 January to 30 April
- R60 000 at 11% for the period 1 July to 31 December

Expenditures on the asset were as follows:

- Prior to January 20.1 – R15 000 (i.e. balance b/f)
- January to March – R10 000 per month
- April to August – R12 000 per month
- September to December – R13 000 per month

The above expenditures were incurred evenly during each month.

Required:

Calculate the amount of borrowing costs that may be capitalised for the year ended 31 December 20.1.

Solution:

Step 1: Calculate the weighted average interest rate on the loans:

<i>Calculation:</i>	Rand	<i>Time apportionment:</i>	Rand
$R100\,000 \times 12\%$	12 000	$100\,000 \times 12/12\text{ months}$	100 000
$R50\,000 \times 10\% \times 4/12$	1 667	$50\,000 \times 4/12\text{ months}$	16 667
$R60\,000 \times 11\% \times 6/12$	3 300	$60\,000 \times 6/12\text{ months}$	30 000
Total borrowing costs	16 967	<i>Average balance</i>	146 667
	(A)		(B)

The weighted average interest rate = $R16\,967(A)/R146\,667(B) = 11,57\%$

Note: IAS 23 does not give any guidance on this calculation and other valid calculations are acceptable. For instance, a weighted average interest rate (or capitalisation rate) could be calculated more frequently than annually.

Step 2: Calculate the amount to be capitalised:

	<i>Calculation:</i>	Average loan funds utilised Rand	Computed borrowing Costs Rand
January to March:	$R15\ 000 + (R10\ 000 \text{ per month } \times 3 \text{ months})/2$ $R30\ 000 \times 11,57\% \times 3/12 \text{ months}$	30 000	868
April to August:	$R15\ 000 + R30\ 000 + (R12\ 000 \times 5)/2$ $R75\ 000 \times 11,57\% \times 5/12 \text{ months}$	75 000	3 616
September to December:	$R15\ 000 + R30\ 000 + R60\ 000 + (R13\ 000 \times 4)/2$ $R131\ 000 \times 11,57\% \times 4/12 \text{ months}$	131 000	5 052
To be capitalised			<u>9 536</u>

The amount that is capitalised may not exceed the actual borrowing costs incurred (paragraph 14). As the amount calculated above is less than R16 967(A), R9 536 may be capitalised.

Explanation:

At the beginning of January, R15 000 had been spent. From January to March, a further R10 000 was spent each month. Because the expenditure was made during the month (i.e. the R10 000 built up from R0 at the beginning of the month to R10 000 at the end of the month) it needs to be averaged. Therefore a total of R30 000 was spent over the 3 months – or the average expenditure for those 3 months was R15 000. (At the beginning of the 3 months R 0 was spent and by the end of the 3 months, R30 000 had been spent – the middle point or average point would be R15 000.) Therefore, the first calculation is the R15 000 spent for the whole of the 3 months plus the R15 000 average expenditure during the 3 months multiplied by the interest rate for 3 months. Alternatively, each month could be averaged:

20.1	<i>Calculation:</i>	Rand
1 January	$R15\ 000 \text{ (already spent)} \times 3/12 \times 11,57\% =$	433.875
January	$R10\ 000 \times 1/2 \text{ (i.e. average)} \times 3/12 \times 11,57\% =$	144.625
February	$R10\ 000 \times 1/2 \text{ (i.e. average)} \times 3/12 \times 11,57\% =$	144.625
March	$R10\ 000 \times 1/2 \text{ (i.e. average)} \times 3/12 \times 11,57\% =$	144.625
	<i>Borrowing cost for January to March (see above – R868)</i>	<u>867.750</u>

Note: When calculating the borrowing costs for the next period, the previous expenditures must be brought forward as these amounts represent expenditures which have already been made.

To the extent that funds are borrowed generally and used for the purpose of obtaining a qualifying asset, the amount of borrowing costs eligible for capitalisation shall be determined by applying a capitalisation rate to the expenditures on that asset. The capitalisation rate shall be the weighted average of the borrowing costs applicable to the borrowings of the entity that are outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs capitalised during a period shall not exceed the amount of borrowing costs incurred during that period (paragraph 14).

Therefore, if the funds are borrowed generally, the borrowing costs to be capitalised are calculated by determining the actual expenditures made, and then applying an interest rate to those expenditures.

Group financial statements

In preparing group financial statements, care must be exercised to eliminate intragroup interest, which has been capitalised to assets (e.g. interest on a loan from the parent capitalised by a subsidiary).

Deferred taxation

Deferred taxation frequently arises in respect of assets to which borrowing costs have been capitalised. Where the qualifying asset is depreciable, the carrying amount of the asset is increased by the capitalised interest without a corresponding increase in the tax base of the asset. Revenue Services typically allows interest as a deduction when it is incurred BUT where the interest is classified as pre-production interest, it is allowed as a deduction upon the commencement of production. The company expenses capitalised interest in the form of depreciation over the useful life of the asset.

Compounding

IAS 23 does not cover the issue of compounding, that is, when should the actual interest paid be included in the expenditures and then interest calculated on the interest, which is now part of the expenditures. A general rule is that it is necessary to compound interest as frequently as interest is compounded or paid on the corresponding loan.

6. SUBSEQUENT EXPENDITURE

The same recognition principles used for initial recognition are used for subsequent expenditure. Thus, subsequent expenditure relating to an item of property, plant and equipment that has been recognised (other than expenditure incurred in replacing or renewing a component of such an item) is added to the carrying amount of the asset if, and only if:

- it is probable that future economic benefits associated with the item will flow to the entity; and
- the costs of the item can be measured reliably.

All other subsequent expenditure, such as day-to-day servicing, is recognised as an expense in the period in which it is incurred.

If property, plant and equipment is acquired in a state of disrepair, the subsequent expenditure to restore the item to its true potential is capitalised to the cost of the asset. Similarly, restoration expenditure incurred subsequent to impairment is likely to qualify for capitalisation.

Illustrative example 15.7: Subsequent expenditure

During 20.1, three different companies acquired assets as follows:

Company A, a VAT vendor, purchased a building that was in a state of disrepair for R5 000 000 (including transfer duty). The building was acquired to house the company's administrative headquarters, once restored. Estimated costs of R1 500 000 are required to restore the building to its true potential.

Company B, a company that is not a VAT vendor, purchased plant at a cost of R116 280.

Company C, a VAT vendor, paid R4 560 000 for a furnace that it intends keeping until it is obsolete (i.e. 4 years). The furnace lining constituted 25% of the total cost of the furnace. It was anticipated that the furnace lining would need to be replaced on 1 January 20.3. The furnace lining is accounted for as a separate component of the asset.

Assume:

- all transactions were entered into with registered VAT vendors, and
- VAT is levied at 14% and all amounts that are subject to VAT are stated inclusive of VAT.

During July 20.2, the companies made the following expenditures in respect of the assets:

- *Company A* paid R1 710 000 to a building restoration company in respect of the restoration of the building that was carried out in its entirety during 20.2.

- *Company B* paid R2 280 in respect of routine maintenance and R11 400 on a new computer card for the plant, whose useful life had always been estimated to be the same as that of the plant (i.e. it was not accounted for as a separate component, and replacement was not previously anticipated). However, the new card substantially increased the quality of the plant's output and greatly reduced the plant's reject rate, thus substantially reducing the cost per unit of output. The new card had no effect on the plant's capacity.
- *Company C* paid R1 710 000 for a new lining for the furnace. The replacement lining embodies new technology that will extend the useful life of the furnace as a whole (without any further replacement of the lining) by an additional two years. The replacement was undertaken prematurely primarily for reasons of convenience. R200 000 was also paid in respect of routine maintenance.

Required:

Calculate the amount, if any, to be capitalised to the cost of the assets in respect of the subsequent expenditures undertaken during July 20.2.

Solution:

	<i>Explanation and calculation:</i>	Company A Rand	Company B Rand	Company C Rand
Routine maintenance	<i>Expensed</i>	n/a	-	n/a
Building restoration	<i>Capitalised net of VAT (i.e. 100/114 x R1 710 000)</i>	1 500 000	n/a	n/a
Furnace lining	<i>Capitalised net of VAT (i.e. 100/114 x R1 710 000) as the separately accounted for component is replaced. The remaining carrying amount of the old lining would be expensed.</i>	n/a	n/a	1 500 000
Computer card	<i>Capitalised inclusive of VAT as Company B is not a VAT vendor</i>	n/a	11 400	n/a
		-	11 400	1 500 000

Note: Subsequent expenditures that are not capitalised to the carrying amount of the asset are expensed in arriving at profit or loss for the period.

Subsequent expenditure incurred to restore an item of property, plant and equipment that became depleted through impairments, is capitalised if the general recognition criteria in IAS 16 are met.

7. DEPRECIATION

7.1 Key definitions (paragraph 6)

Depreciation is the systematic allocation of the *depreciable amount* of an asset over its useful life. Depreciation is thus a process of allocation and not valuation.

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

Useful life is either:

- the period over which an asset is expected to be available for use by the entity; or
- the number of production or similar units expected to be obtained from the asset by the entity.

Residual value is defined as follows:

- 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 was already of the age and in the condition expected at the end of its useful life.

7.2 Accounting for 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 is depreciated separately.

The depreciable amount of an item of property, plant and equipment is allocated on a systematic basis over its useful life.

The depreciable amount is determined after deducting its residual value, which is often insignificant and therefore immaterial. If however the residual value of an asset is greater than the asset's carrying amount, the asset's depreciation is zero unless until its residual value subsequently decreases to an amount below the asset's carrying amount.

The depreciation charge for each period shall be recognised as an expense unless it is included in the carrying amount of another asset. Thus, if an entity uses an asset to construct another asset, then the depreciation on the asset being used, is capitalised to the cost of the asset under construction.

Depreciation of an asset begins when it is available for use and 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.

The useful life shall be estimated after considering:

- expected usage,
- expected physical wear and tear,
- technical or commercial obsolescence, and
- legal or similar limits on the use of the asset (e.g. a finance lease in terms of which the transfer of ownership to the lessee at the end of the lease is not reasonably assured, shall be depreciated over the shorter of the lease term and the leased asset's expected useful life).

Land and buildings are separable assets and are dealt with separately for accounting purposes. Land is usually not depreciated. Buildings are depreciable assets as they have a limited life. An increase in the value of land on which a building stands does not affect the determination of the useful life of the building.

7.3 Depreciation methods

The depreciation method used for an asset is selected based on the expected pattern of the consumption of future economic benefits embodied in the asset, and is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits.

The depreciation charge for a period is usually recognised as an expense unless the asset is being used to manufacture another asset, in which case the depreciation constitutes part of the cost of the asset under construction.

7.4 Review of depreciation method

The depreciation method is reviewed at least at each financial year-end. Where the depreciation method is changed to reflect a significant change in the expected pattern of the consumption of future economic benefits from those assets, the change is accounted for as a change in an accounting estimate, and the depreciation charge for the current and future periods are adjusted.

Illustrative example 15.8: Depreciation method

A manufacturing company that regularly replaces its plant so as to minimise disruptions to production, changed their replacement policy, during the current year, as follows:

- Old asset management policy – replace plant every three years, irrespective of its condition.
- New asset management policy – replace plant when it has produced 120 000 units of output, irrespective of its age.

Required:

1) Briefly describe which method of depreciation method is appropriate under:

- the old asset management policy, and
- the new asset management policy.

2) Briefly describe how the change in depreciation method should be accounted for.

Solution:

Under the old policy where plant was replaced every three years irrespective of its usage, depreciation should be allocated on the straight-line method over the three-year period as that reflects the pattern in which the plant's future economic benefits are consumed by the enterprise.

Under the new policy where plant is replaced once it has produced 120 000 units of output, irrespective of its age, depreciation should be allocated based on the number of units produced in the period as a fraction of the 120 000 units to be produced over the plant's useful economic life. This reflects the pattern in which the plant's future economic benefits are consumed by the enterprise.

The change in depreciation method should, in accordance with IAS 8, be accounted for prospectively as a change in accounting estimate. This requires the carrying amount of the plant at the beginning of the period of the change to be allocated evenly over the remaining units to be produced by the plant under the new asset management policy.

7.5 Review of useful life

The useful life of an asset shall be reviewed at least at each financial year end and, if expectations differ from previous estimates, the change(s) is accounted for as a change in accounting estimate in accordance with IAS 8 *Accounting policies, changes in accounting estimates and errors* (paragraph 51).

Illustrative example 15.9: Review of useful life

On 1 January 20.1, a manufacturing company acquired an item of plant at a cost of R1 million.

The company depreciates the plant on the straight-line method to a nil residual value.

During 20.3, due to previously unforeseen technological advancements, the company revised the expected useful life of the asset from 10 years (measured from date of acquisition) to 7 years (measured from the date of acquisition).

On 31 December 20.3, the plant was, in accordance with IAS 36, tested for impairment but was found not to be impaired, as its recoverable amount was in excess of its carrying amount.

Required:

Compute the amount of the depreciation to be expensed during the year ended 31 December 20.3.

Solution:

	<i>Calculation:</i>	Rand
Carrying amount at 1 January 20.3	<i>R1 million x 8/10 years remaining useful life</i>	<u>800 000</u>
Depreciation expense 20.3	<i>R800 000 carrying amount/5 years remaining useful life at 1 January 20.3</i>	<u>160 000</u>

7.6 Review of residual value

The residual value of an asset shall be reviewed at least at each financial year end and, if expectations differ from previous estimates, the change(s) is accounted for as a change in accounting estimate.

Illustrative example 15.10: Review of residual value

On 1 January 20.1, a shipping company acquired an oil tanker at a cost of R1 000 million.

The company intends replacing the oil tanker when it is ten years old and depreciates it on the straight-line method over ten years to its estimated residual value.

Due to inflation, the residual value of the oil tanker increased during 20.1 to 20.7. However, from 20.8 to 20.10, due to decreased demand for second hand oil tankers as a result of continuing conflict in the Middle East, the residual value decreased. The residual values were as follows:

- 1 January 20.1 – R500 million
- 31 December 20.1 – R550 million
- 31 December 20.2 – R605 million
- 31 December 20.3 – R666 million
- 31 December 20.4 – R732 million
- 31 December 20.5 – R805 million
- 31 December 20.6 – R886 million
- 31 December 20.7 – R974 million
- 31 December 20.8 – R850 million
- 31 December 20.9 – R840 million
- 31 December 20.10 – R830 million.

Required:

Compute the amount of the depreciation (the oil tanker is carried at depreciated historic cost) to be expensed during each of the years ended 31 December 20.1 to 20.10.

Solution (using the reallocation method):

	<i>Calculation:</i>	Rand
1 January 20.1 - cost		1 000 000 000
31 December 20.1 – depreciation	<i>(R1 000 000 000 cost – R550 000 000 residual value)/10 years</i>	(45 000 000)
31 December 20.1 – carrying amount		955 000 000
31 December 20.2 - depreciation	<i>(R955 000 000 – R605 000 000 residual value)/9 years</i>	(38 888 889)
31 December 20.2 – carrying amount		916 111 111
31 December 20.3 - depreciation	<i>(R916 111 111 – R666 000 000)/8 years</i>	(31 263 889)
31 December 20.3 – carrying amount		884 847 222
31 December 20.4 - depreciation	<i>(R884 847 222 – R732 000 000)/7 years</i>	(21 835 317)
31 December 20.4 – carrying amount		863 011 905
31 December 20.5 - depreciation	<i>(R863 011 905 – R805 000 000)/6 years</i>	(9 668 651)
31 December 20.5 – carrying amount		853 343 254
31 December 20.6 –no depreciation	<i>No depreciation as residual value exceeds carrying amount</i>	-
31 December 20.6 – carrying amount		853 343 254
31 December 20.7 –no depreciation	<i>No depreciation as residual value exceeds carrying amount</i>	-
31 December 20.7 – carrying amount		853 343 254
31 December 20.8 – depreciation	<i>(853 343 254 – 850 000 000)/3 years</i>	1 114 418
31 December 20.8 – carrying amount		852 228 836
31 December 20.9 – depreciation	<i>(852 228 836 – 840 000 000)2 years</i>	(6 114 418)
31 December 20.9 – carrying amount		846 114 418
31 December 20.10 – depreciation	<i>(846 114 418 – 830 000 000)/1 year</i>	(16 114 418)
31 December 20.10 – carrying amount		830 000 000

Note: Because this is a change in estimate, the disclosures required in respect of IAS 8 should be made. The nature and the amount of the change in the current year must be disclosed. This can be calculated by comparing the depreciation expense using the new estimate to the depreciation expense of the previous year (i.e. the depreciation expense using the previous estimate). Thus for 20.2, a difference of R6 111 111 would be disclosed (R38 888 889 depreciation expense for 20.2 using the new estimate – R45 000 000 depreciation expense if estimate has not changed).

7.7 Temporarily idle

Depreciation does not cease when an asset becomes temporarily idle or is retired from active use unless the asset is classified as held for sale, or included in a disposal group that is classified as held for sale. In addition such assets would in accordance with IAS 36 be tested for impairment at least annually (paragraph 55).

8. REVALUATIONS OF PROPERTY PLANT AND EQUIPMENT

8.1 Key definitions

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 (IFRS 13 para. 9).

Carrying amount is the amount at which an asset is recognised after deducting any accumulated depreciation and accumulated impairment losses (IAS 23 para. 6).

8.2 Background to revaluations

IAS 16 provides two alternative accounting models under which property, plant and equipment is carried subsequent to initial recognition:

- The cost model: Property, plant and equipment is measured at cost less accumulated depreciation and any accumulated impairment losses.

- The revaluation model: Property, plant and equipment is measured at revalued amount less subsequent accumulated depreciation and any subsequent accumulated impairment losses. Revaluations shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from its fair value at the statement of financial position date (paragraph 31).

The frequency of revaluations will vary depending on the volatility of changes in the fair value of the category of property, plant and equipment being revalued. Some items may require annual revaluation whilst others may be revalued at intervals of up to 5 years.

A class of property, plant and equipment can be carried under the revaluation model only if its fair value can be measured reliably.

The fair value of land and buildings and plant and equipment is usually its market value for existing use, determined by appraisal performed by professionally qualified valuers. Only in exceptional cases, where the market value cannot be established, would plant and equipment be valued at using an income or depreciated replacement cost approach.

When an item of property, plant and equipment is revalued, the entire class to which that asset belongs shall be revalued (paragraph 36). It is preferable that the entire class be revalued simultaneously, however a rolling basis revaluation is acceptable provided that the entire class is revalued within a short period of time and the revaluations are kept up to date.

8.3 Accounting for revaluations

Upon revaluation, accumulated depreciation recorded to the date of revaluation is either (paragraph 35):

- restated proportionally with the change in the gross carrying amount of the asset (the gross replacement method), or
- eliminated against the gross carrying amount of the asset. The resultant net carrying amount is then restated (the net replacement method).

IAS 16 paragraph 39 requires the increase in the carrying amount of the revalued asset to be recognised in other comprehensive income and accumulated in equity under the heading of revaluation surplus. However, to the extent that it reverses a revaluation decrease of the same asset previously recognised as an expense, it shall be recognised as income. If an asset's carrying amount is decreased as a result of a revaluation, the decrease shall be recognised in profit or loss. However, to the extent that there is any credit balance existing in the revaluation reserve in respect of that asset, the decrease is recognised in other comprehensive income.

The revaluation of property, plant and equipment will usually result in deferred taxation, as there would be an increase in the asset's carrying amount without a corresponding increase in its tax base. The revaluation surplus reserve is thus created net of the deferred tax arising from the revaluation. The deferred tax movement is however disclosed separately in the Note to the Revaluation Surplus.

An entity may transfer periodically the realised portion of the revaluation surplus reserve to retained earnings as the asset is used up or disposed. These transfers are made net of any related deferred taxation. Entities are required (paragraph 77 (f)) to disclose any restrictions on the distribution of the balance of the revaluation surplus to shareholders. This may suggest that standard setters prefer that the realised portion remain in a separate reserve (apart from accumulated depreciation) available to finance in part the replacement of the revalued assets.

Entities could transfer the realised portion of the revaluation surplus reserve directly to an asset replacement reserve. This may or may not be supplemented by additional transfers from retained

earnings to the asset replacement reserve. The entity's accounting policy shall be disclosed, clarifying these matters for users.

When an entity adopts a policy of revaluing a particular class of property, plant and equipment for the first time, that decision constitutes a change in accounting policy. However, IAS 8 requires this change in accounting policy to be accounted for as a revaluation in the current reporting period (i.e. retrospective adjustments are not required).

Illustrative example 15.11: Accumulated depreciation (two scenarios)

On 1 January 20.0, a company decides to revalue its plant for the first time. The company intends keeping the plant in its existing use.

The company depreciates plant on the straight-line basis to a nil residual value over 10 years.

The corporate normal tax rate is 35%.

Details of the company's plant on 1 January 20.0 are as follows:

	Plant A R'000	Plant B R'000
Cost	5 000	8 000
Accumulated depreciation	(2 000)	(3 000)
Carrying amount	<u>3 000</u>	<u>5 000</u>
Fair value in existing use	<u>10 000</u>	<u>20 000</u>

Required:

Prepare the journal entries to record the revaluation under each of the following scenarios:

Scenario 1

Accumulated depreciation recorded to the date of revaluation is restated proportionally with the change in the gross carrying amount of the asset (the gross replacement method).

Scenario 2

Accumulated depreciation recorded to the date of revaluation is eliminated against the gross carrying amount of the asset. The resultant net carrying amount is then restated (the net replacement method).

Solution:

	<i>Calculation:</i>	<i>Scenario 1</i>		<i>Scenario 2</i>	
		Debit R'000	Credit R'000	Debit R'000	Credit R'000
Plant A					
Plant – valuation	<i>SI: 10 000/3 000 x 5 000</i>	16 667		10 000	
Plant – cost	<i>Given</i>		5 000		5 000
Accumulated depreciation	<i>SI: (10 000/3 000 x 2 000) – 2 000</i>		4 667	2 000	
Revaluation surplus - OCI	<i>65%(10 000 – 3 000)</i>		4 550		4 550
Deferred taxation (SOFP)	<i>35%(10 000 – 3 000)</i>		2 450		2 450
<i>1 January 20.0: Revaluation</i>					
Plant B					
Plant – valuation	<i>SI: 20 000/5 000 x 8 000</i>	32 000		20 000	
Plant – cost	<i>Given</i>		8 000		8 000
Accumulated depreciation	<i>SI: (20 000/5 000 x 3 000) – 3 000</i>		9 000	3 000	
Revaluation surplus - OCI	<i>(20 000 – 5 000) x (1 – 35% tax)</i>		9 750		9 750
Deferred taxation (SOFP)	<i>35%(20 000 – 5 000)</i>		5 250		5 250
<i>1 January 20.0: Revaluation</i>					

8.4 More complex deferred taxation implications of revaluations

The previous illustrative examples have illustrated the deferred tax implications arising from the revaluation of depreciable property, plant and equipment. Some of the more complex situations warrant further explanation.

Exemption from deferred taxation

IAS 12 paragraph 15 exempts specified taxable temporary differences from deferred taxation. It should be noted that this exemption does not apply to the revalued portion of the asset. In South Africa this is important when considering the revaluation of administration buildings that do not qualify for capital allowances. This matter is dealt with in detail in the taxation chapter of this text.

The expected method of realisation

IAS 12 paragraph 51 provides that the measurement of deferred tax shall reflect the tax consequences that would follow from the manner in which the entity expects to recover the carrying amount of its assets. This impacts on asset revaluations as assets may be revalued with either an intention of disposal or continuing in use. These tax consequences may be summarised as follows:

- The tax consequences of disposal are limited to the recoupment of past capital allowances, and capital gains tax, if any on disposal.
- The tax consequences of continued use arise from the taxable future profits underpinning the asset revaluation (i.e. the asset will generate profits 'from the sale of goods' in excess of the depreciation expensed in earning such profits).

Thus the intention of the entity with regard to the realisation of the asset determines the extent of the deferred tax liability arising from the revaluation of the asset.

In South Africa, capital gains tax on the expected capital gain, where the intention of management is to dispose of the revalued asset, will be included in the measurement of the deferred taxation balance.

In interpreting IAS 12, SIC 21 clarifies that the deferred tax consequences of revaluing non-depreciable items of property, plant and equipment (e.g. land) shall be measured at the amount that would arise were the land to be sold, even where management intend to keep the land in existing use. Land cannot be used up and therefore can only be realised through sale. Capital gains tax effects will therefore arise from the revaluation of a non-depreciable item of property, plant and equipment even where it is the entity's intention to keep the asset in use.

Illustrative example 15.12: Expected method of realisation of revalued asset

On 1 January 20.0, a company revalued its plant. Accumulated depreciation is reversed against the carrying amount of the plant immediately prior to revaluation.

The company depreciates plant on the straight-line basis to nil residual value over 10 years.

The corporate normal income tax rate is 30%, and capital gains tax has always been in effect.

South African Revenue Services allows wear and tear on the straight-line method at 20% per annum.

Details of the company's plant on 1 January 20.0 are as follows

	Plant A	Plant B
	R'000	R'000
Cost	5 000	8 000
Accumulated depreciation	(2 000)	(3 000)
Carrying amount	<u>3 000</u>	<u>5 000</u>
Fair value in existing use (as determined by independent valuer)	<u>10 000</u>	<u>20 000</u>

Required:

Prepare the 20.0 journal entries to record the revaluation of property, plant and equipment under each of the following scenarios:

Scenario 1: The company intends keeping the plant in its existing use.

Scenario 2: The company intends disposing of the plant in the foreseeable future.

Solution:

	Calculation:	Keep asset Scenario 1		Sell asset Scenario 2	
		Debit R'000	Credit R'000	Debit R'000	Credit R'000
Plant A					
Plant – valuation	Given	10 000		10 000	
Plant – cost	Given		5 000		5 000
Accumulated depreciation	Given	2 000		2 000	
Deferred taxation (SOFP)	S1: 30%(R10 000 – R3 000 DHC) S2: 30%(R5 000 – R3 000 DHC) + 30% x 50% x (R10 000 – R5 000)		2 100		1 350
Revaluation surplus OCI	S1: (R10 000 – R3 000) – R2 100 tax S2: (R10 000 – R3 000) – R1 350 tax		4 900		5 650

1 January 20.0: Revaluation

Plant B

Plant – valuation	Given	20 000		20 000	
Plant – cost	Given		8 000		8 000
Accumulated depreciation	Given	3 000		3 000	
Deferred taxation (SOFP)	S1: 30%(R20 000 revalued – R5 000) S2: 30%(R8 000 cost – R5 000 CA) + 30% x 50% x (R20 000 – R8 000 cost)		4 500		2 700
Revaluation surplus - OCI	S1: (R20 000 – R5 000) – R4 500 tax S2: (R20 000 – R5 000) – R2 700 tax		10 500		12 300

1 January 20.0: Revaluation

Workings:

Deferred taxation Plant A (Scenario 1 - in existing use)

	Carrying amount Rand	Tax base Rand	Temporary difference Rand	Deferred tax Rand	
1 January 20.0	3 000 000	1 000 000	2 000 000	600 000	credit
Revaluation	7 000 000	-	7 000 000	2 100 000	credit
1 January 20.0	<u>10 000 000</u>	<u>1 000 000</u>	<u>9 000 000</u>	<u>2 700 000</u>	credit

Deferred taxation - Plant A (Scenario 2 - intention to sell)

	Carrying amount Rand	Tax base Rand	Temporary difference Rand	Deferred tax Rand	
1 January 20.0	3 000 000	1 000 000	2 000 000	600 000	credit
Revaluation	7 000 000	-	7 000 000	1 350 000 ¹	credit
1 January 20.0	<u>10 000 000</u>	<u>1 000 000</u>	<u>9 000 000</u>	<u>1 950 000²</u>	credit

Deferred taxation Plant B (Scenario 1 - in existing use)

	Carrying amount Rand	Tax base Rand	Temporary difference Rand	Deferred tax Rand	
1 January 20.0	5 000 000	2 000 000	3 000 000	900 000	credit
Revaluation	15 000 000	-	15 000 000	4 500 000	credit
1 January 20.0	<u>20 000 000</u>	<u>2 000 000</u>	<u>18 000 000</u>	<u>5 400 000</u>	credit

Deferred taxation - Plant B (Scenario 2 - intention to sell)

	Carrying amount Rand	Tax base Rand	Temporary difference Rand	Deferred taxation Rand	
1 January 20.0	5 000 000	2 000 000	3 000 000	900 000	credit
Revaluation	15 000 000	-	15 000 000	2 700 000 ¹	credit
31 December 20.0	20 000 000	2 000 000	18 000 000	3 600 000 ²	credit

¹ **Plant A:** $30\%(R5\ 000\ 000\ \text{cost} - R3\ 000\ 000\ \text{carrying amount})$ expected recoupment net of deferred tax already provided for + $30\% \times 50\% \times (R10\ 000\ 000\ \text{value} - R5\ 000\ 000\ \text{cost})$ expected capital gains tax
Plant B: $30\%(R8\ 000\ 000\ \text{cost} - R5\ 000\ 000\ \text{carrying amount})$ expected recoupment net of deferred tax already provided for + $30\% \times 50\% \times (R20\ 000\ 000\ \text{value} - R8\ 000\ 000\ \text{cost})$ expected capital gains tax

² **Plant A:** $30\%(R5\ 000\ 000\ \text{cost} - R1\ 000\ 000\ \text{tax base})$ expected recoupment + $30\% \times 50\% \times (R10\ 000\ 000\ \text{value} - R5\ 000\ 000\ \text{cost})$ expected capital gains tax
Plant B: $30\%(R8\ 000\ 000\ \text{cost} - R2\ 000\ 000\ \text{tax base})$ expected recoupment + $30\% \times 50\% \times (R20\ 000\ 000\ \text{value} - R8\ 000\ 000\ \text{cost})$ expected capital gains tax

8.5 Change of intention

In 8.4 above, it was established that the measurement of deferred tax in respect of revalued assets is dependent upon the tax consequences that are expected to flow from the entity's intended method of realising the asset. Where the entity's intention with regard to the method of realisation changes, it follows that the deferred taxation balance (and consequently the revaluation surplus reserve) may require adjustment. However, adjustments in respect of property, plant and equipment on which taxation allowances are granted by Revenue Services, will only require adjustment where both of the following conditions are met:

- the item of property, plant and equipment has been revalued, and
- its carrying amount is in excess of its base amount (i.e. original cost had capital gains tax always been in effect).

Illustrative example 15.13: Change in intention

An item of plant was recorded as follows on 31 December 20.5 when management changed their intention from keeping the asset in existing use to disposing of the asset in the foreseeable future:

	Carrying Amount Rand
Revalued amount	2 000 000
Accumulated depreciation	(1 200 000)
Carrying amount	800 000
Tax base	200 000

The corporate normal income tax rate is 30%.

Consider the following scenarios:

Scenario:

1. the original cost of the asset was R1 500 000 and the base amount (CGT) is R1 500 000;
2. the original cost of the asset was R1 500 000 and the base amount (CGT) is R900 000;
3. the original cost of the asset was R500 000 and the base amount (CGT) is R1 000 000;
4. the original cost of the asset was R500 000 and the base amount (CGT) is R500 000.

Required:

Prepare the journal entry, if any, in respect of the change of intention.

Solution:

No adjustment is required in respect of *scenario 1* and *scenario 2*, as the taxation effects following from realising the asset through sale (recoupment of wear and tear) equate to those arising from keeping the asset in use (profit on sale of goods). This situation arises as the revalued asset's carrying amount is less than both:

- its original cost, and
- its base amount (CGT).

Note: Capital gains tax will only arise on gains in excess of the base amount.

	<i>Calculation:</i>	Debit Rand	Credit Rand
Scenario 3:			
Deferred taxation liability	<i>30%(R800 000 CA – R500 000 cost) as not subject to</i>	90 000	
Revaluation surplus - OCI	<i>recoupment in excess of original cost and not subject to</i>		90 000
	<i>capital gains tax as is below the base amount.</i>		
<i>31 December 20.5: Adjustment due to change of intention to sell the asset</i>			
Scenario 4:			
Deferred taxation liability	<i>(30% income tax – 15% effective capital gains tax rate) x</i>	45 000	
Revaluation surplus - OCI	<i>(R800 000 CA – R500 000 base amount)</i>		45 000
<i>31 December 20.5: Adjustment due to change of intention to sell the asset.</i>			

Note: In *scenario 4*, at the time of revaluation, deferred tax was provided for at 30%. Had it been known then that the intention was to dispose the asset, then deferred tax would have been provided for at the effective capital gains rate (i.e. 15%). Consequently, 15% x (carrying amount – base amount) must be reversed from the deferred tax balance.

Circular 01/06 *Disclosures in relation to deferred tax* (issued by the South African Institute of Chartered Accountants) clarifies that if an item of plant is likely to be used for a period before it is sold, then the future economic benefits embodied in the carrying amount of the plant will be recovered through both use and sale with the result that different tax rates will apply to these differences. This is discussed in more detail in the Chapter 6 - *Taxation*.

9. IMPAIRMENT TESTING

The carrying amount of an item or group of similar items of property, plant and equipment shall be reviewed at reporting date where there is an indication that assets may be impaired. In accordance with IAS 36, an asset is impaired when its recoverable amount has declined below the carrying amount. Where such a decline has occurred, the carrying amount shall be reduced to the recoverable amount, and the reduction shall be recognised immediately as an expense, except to the extent that it reverses a prior period revaluation.

A subsequent increase in the recoverable amount shall be written back when the circumstances and events that led to the write-down or write-off cease to exist and there is persuasive evidence that the new circumstances and events will persist for the foreseeable future. The amount written back shall be reduced by the amount that would have been recognised as depreciation had the write-down or write-off not occurred.

Accounting for impairments (and reversals thereof) is covered in Chapter 20 – *Impairment of Assets*.

10. COMPENSATION FOR IMPAIRMENTS AND RELATED REPLACEMENTS

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 (paragraph 65).

Four separate economic events can be identified in a compensated impairment or loss. IAS 16 requires that each of the four identified separate economic benefits be accounted for separately as follows:

- The impairment, if any, is recorded in accordance with IAS 36 *Impairment of assets*;

- The retirement or disposal, if any, shall be recorded in accordance with IAS 16 *Property, plant and equipment*;
- The compensation (monetary or non-monetary) shall be included in profit or loss when it becomes receivable; and
- The cost of restoring, purchasing or constructing property plant and equipment as replacement for the impaired, lost or given up item are accounted for in terms of IAS 16. If the recognition criteria are met, these costs are capitalised to the cost of the asset.

Illustrative example 15.14: Compensation for impairments

Plant with a carrying amount of R10 000 000 (original cost: R20 000 000) was impaired to its scrap value of R1 000 000 when striking workers vandalised it. The company's insurers immediately settled the claim by presenting the company with a R40 000 000 cheque (i.e. the plant was insured at its replacement cost). The company used R20 000 000 of the insurance proceeds to partially restore the plant and the balance of the amount was utilised to reduce borrowings.

Required:

Prepare the journal entries to record the above matters in sufficient detail so as to facilitate disclosure in the company's annual financial statements.

Solution:

	<i>Calculation:</i>	Debit R'000	Credit R'000
Impairment expense	<i>R10 million CA – R1 million scrap value</i>	9 000	
Accumulated impairment - plant			9 000
<i>Impairment of asset due to vandalism</i>			
Bank	<i>given</i>	40 000	
Operating profit - insurance proceeds ¹			40 000
<i>Insurance proceeds in respect of vandalised plant</i>			
Plant – cost	<i>given</i>	20 000	
Bank			20 000
<i>Restoration of plant</i>			

¹ Separately disclosable item on the face of the statement of comprehensive income or in the notes to the financial statements (paragraph 74(d).

11. DERECOGNITION

An item of property, plant and equipment shall be derecognised on disposal or when no future economic benefits are expected to flow from its use or disposal (paragraph 67).

Gains or losses arising from the retirement or disposal shall be determined as the difference between the net disposal proceeds and the carrying amount of the asset, and shall be included in profit or loss for the period in which the retirement or disposal occurs (exceptions apply in respect of sale and leaseback transactions that are accounted for in accordance with IAS 17 *Leases*).

Disposal proceeds are measured at the fair value of the consideration receivable. Where receipt of the proceeds is deferred, disposal proceeds are measured at the cash price equivalent and interest revenue is recognised using the effective interest rate method.

12. CHANGES IN EXISTING DECOMMISSIONING, RESTORATION AND SIMILAR LIABILITIES

IAS 16 requires that the cost of property, plant and equipment includes the initial estimate of the costs of dismantling and removing the item and restoring the site which, as a consequence of acquiring or using the item for purposes other than to produce inventories, the entity incurred a liability.

IFRIC 1 *Changes in Existing Decommissioning, Restoration and Similar Liabilities* addresses how the effect of a change (i.e. in the cash flows, discount rate or time period) in the measurement of the liability should be accounted for.

IFRIC 1 requires that if the asset is carried under **the cost model**, then:

- (a) subject to (b), changes in the liability shall be added to, or deducted from, the cost of the related asset in the current period.
- (b) the amount deducted from the cost of the asset shall not exceed its carrying amount. If a decrease in the liability exceeds the carrying amount of the asset, the excess shall be recognised immediately in profit or loss.
- (c) if the adjustment results in an addition to the cost of an asset, the entity shall consider whether this is an indication that the new carrying amount of the asset may not be fully recoverable. If it is such an indication, the entity shall test the asset for impairment by estimating its recoverable amount, and shall account for any impairment loss, in accordance with IAS 36.

The adjusted depreciable amount of the asset is depreciated over its useful life. Therefore, once the related asset has reached the end of its useful life, all subsequent changes in the liability shall be recognised in profit or loss. The periodic unwinding of the discount is recognised in profit or loss as a finance cost and may not be capitalised under IAS 23.

Illustrative example 15.15: Entity uses the cost model and has recognised a decommissioning liability

An entity has a coal power plant and a related decommissioning liability. The initial cost of the plant was R120 million which included decommissioning costs of R10 million (calculated as the present value of R70,4 million payable in 40 years time at a risk adjusted rate of 5%). The plant started operating on 1 January 20.0 and has a useful life of 40 years. On 31 December 20.3 the entity estimated that the net present value of the decommissioning liability had decreased by R5 million as a result of technological changes. (The risk adjusted rate of 5% is still considered appropriate.)

Required:

Prepare the journal entries for the financial years ended 31 December 20.0, and 20.3 and 20.4 in respect of the plant and the change in the liability. Ignore deferred taxation and assume that the entity operates a single plant account (i.e. do not differentiate between cost and accumulated depreciation).

Source: 1E1 of IFRIC 1 adapted

Solution:

Journals

	<i>Calculation: R'000</i>	Debit R'000	Credit R'000
20.0			
Plant	<i>Given</i>	120 000	
Decommissioning liability			10 000
Bank/Creditor			110 000
<i>1 January 20.0 acquisition of plant (assumed)</i>			
Depreciation – plant	<i>R120 000/40 years</i>	3 000	
Plant			3 000
<i>31 December 20.0: Depreciation for the year</i>			

Interest expense	$5\% \times R10\ 000$	500	
Decommissioning liability			500
<i>31 December 20.0: Expense for the year</i>			
20.3			
Depreciation – plant	$R120\ 000/40\ \text{years}$	3 000	
Plant			3 000
<i>31 December 20.3: Depreciation for the year</i>			
Interest expense	(W1)	579	
Decommissioning liability			579
<i>31 December 20.3: Expense for the year</i>			
Decommissioning liability		5 000	
Plant			5 000
<i>31 December 20.3: Change in liability</i>			
20.4			
Depreciation	$[R120\ 000 - (R120\ 000 \times 4/40) - R\ 5\ 000]/36\ \text{years}$	2 861	
Plant			2 861
<i>31 December 20.4: Depreciation for year</i>			
Interest expense	(W1)	358	
Decommissioning liability			358
<i>31 December 20.4: Expense for year</i>			
Workings:			
(W1) Liability	<i>Calculation:</i>	R'000	
01.01.20.0	<i>Given</i>	10 000	
31.12.20.0	$5\% \times R10\ 000$	500	
		<hr/>	
		10 500	
31.12.20.1	$5\% \times R10\ 500$	525	
		<hr/>	
		11 025	
31.12.20.2	$5\% \times R11\ 025$	551	
		<hr/>	
		11 576	
31.12.20.3	$5\% \times R11\ 576$	579	
Change in liability		(5 000)	
		<hr/>	
		7 155	
31.12.20.4	$5\% \times R7\ 155$	358	
		etc.	

If the related asset is carried under **the revaluation model**, then:

- (a) changes in the liability alter the revaluation surplus or deficit previously recognised on that asset, so that:
- (i) a decrease in the liability shall (subject to (b)) be credited directly to revaluation surplus in equity, except that it shall be recognised in profit or loss to the extent that it reverses a revaluation deficit on the asset that was previously recognised in profit or loss;
 - (ii) an increase in the liability shall be recognised in profit or loss, except that it shall be debited directly to revaluation surplus in equity to the extent of any credit balance existing in the revaluation surplus in respect of that asset.

- (b) in the event that a decrease in the liability exceeds the carrying amount that would have been recognised had the asset been carried under the cost model, the excess shall be recognised immediately in profit or loss.
- (c) a change in the liability is an indication that the asset may have to be revalued in order to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the statement of financial position date. Any such revaluation shall be taken into account in determining the amounts to be taken to profit or loss and equity under (a). If a revaluation is necessary, all assets of that class shall be revalued.
- (d) IAS 1 requires disclosure on the face of the statement of changes in equity of each item of income or expense that is recognised directly in equity. In complying with this requirement, the change in the revaluation surplus arising from a change in the liability shall be separately identified and disclosed as such.

The adjusted depreciable amount of the asset is depreciated over its useful life. Therefore, once the related asset has reached the end of its useful life, all subsequent changes in the liability shall be recognised in profit or loss. The periodic unwinding of the discount is recognised in profit or loss as a finance cost and may not be capitalised under IAS 23.

Illustrative example 15.16: Entity uses the revaluation model and has recognised a decommissioning liability

Using the same information as before, assume the entity revalues the plant at 31 December 20.2 for the first time. At that date, a valuation of R115 million is obtained after deducting R11,6 million for decommissioning costs. On 31 December 20.3 as a result of technological changes the entity estimated that the net present value of the decommissioning liability has decreased by R5 million. On 31 December 20.3 a further valuation is obtained of R107 million for plant net of a decommissioning provision of R7,155 million. (The risk adjusted rate of 5% is still considered appropriate.)

Required:

Prepare the journal entries for the financial years ended 31 December 20.2 to 20.3 in respect of the plant and the change in the liability. Ignore deferred taxation and assume that the entity operates a single plant account (i.e. do not differentiate between cost and accumulated depreciation).

Solution:	<i>Calculation: R'000</i>	Debit R'000	Credit R'000
<u>Journals</u>			
20.2			
Depreciation – plant	<i>R120 000/40 years</i>	3 000	
Plant			3 000
<i>31 December 20.2: Depreciation for the year</i>			
Interest expense	<i>(W1) above</i>	551	
Decommissioning liability			551
<i>31 December 20.2: Interest expense for the year</i>			
Plant (revalued amount)	<i>(R115 000 + R11 600)</i>	126 600	
Plant (carrying amount at cost)	<i>(R120 000 x 37/40)</i>		111 000
Revaluation surplus - OCI	<i>(R126 600 RA – R111 000 DHC)</i>		15 600
<i>31 December 20.2: Plant revalued</i>			
20.3			
Interest expense	<i>(W1) above</i>	579	
Decommissioning liability			579
<i>31 December 20.3: Interest expense for the year</i>			
Depreciation – plant	<i>R126 600/37 years</i>	3 422	
Plant			3 422
<i>31 December 20.3: Depreciation for the year</i>			

Decommissioning liability		5 000	
Revaluation surplus - OCI	<i>[R5 000 is less than DHC (R120 000 x 36/40) ∴ credit OCI]</i>		5 000
<i>31 December 20.3: Change in liability</i>			
Revaluation surplus - OCI	<i>[(R107 000 + R 7 155) – (R126 600 – R3422)]</i>	9 023	
Plant			9 023
<i>31 December 20.3: Revaluation surplus debited as deficit does not exceed revaluation surplus</i>			

13. PRESENTATION AND DISCLOSURE

13.1 Presentation

IAS 1 *Presentation of Financial Statements* paragraph 54(a) requires property, plant and equipment to be presented as a separate line item on the face of the statement of financial position.

13.2 Disclosure

Property, plant and equipment disclosure requirements may be summarised as follows:

Accounting policies note

- Measurement bases used for determining the gross carrying amount of each class of property, plant and equipment (73(a));
- The depreciation methods used for each class of property, plant and equipment (73(b));
- The useful lives or the depreciation rates used for each class of property, plant and equipment (73(c));
- The accounting policy for site restoration costs (IAS 37);
- Accounting policy adopted for government grants related to assets, including the methods of presentation adopted (IAS 20 paragraph 39(a)).

Note to profit or loss for the year

- Material items of income or expense on disposals of items of property, plant and equipment (IAS 1 paragraph 98);
- Amount of compensation received from third parties for the impairment or loss of items of property, plant and equipment (74(d));
- Depreciation¹ allocated by class of property, plant and equipment (paragraph 64(d)).

¹ This amount includes depreciation expensed and depreciation capitalised as part of the cost of other assets.

Note to finance costs

The following must be disclosed in respect of borrowing costs (all references to IAS 23):

- The amount of borrowing cost capitalised during the period (26(a)); and
- The capitalisation rate used in determining the amount of borrowing costs eligible for capitalisation (26(b)).

Note to property, plant and equipment

In respect of each class of property, plant and equipment (IAS 16 paragraphs 73(a) – (ix)):

- The measurement bases used for determining the gross carrying amount,
- The gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period, and

- A reconciliation of the carrying amount at the beginning and end of the period showing the following as separate reconciling line items:
 - additions,
 - 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 impairment losses recognised or reversed directly to other comprehensive income,
 - impairment losses recognised in profit or loss,
 - impairments 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 entity,
 - other changes (e.g. where an investment property becomes an owner-occupied property).

Disclose also (paragraphs 74 (a) to (d)):

- the existence and amounts of restrictions on title, and property, plant and equipment pledged as security for liabilities;
- the amount of expenditures capitalised in respect of property, plant and equipment in the course of construction;
- the amount of contractual commitments for the acquisition of property, plant and equipment; and
- if not disclosed separately on the face of 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.

Where 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:

- the effective date of revaluation,
- whether or not an independent valuer was involved,
- the depreciated historic cost (net of impairments) of each revalued class of property, plant and equipment.

On face of the statement of changes in equity (or the note to the revaluation surplus reserve where a statement of changes in equity is not presented)

The following detail shall be disclosed:

- the revaluation surplus, detailing the movements for the period (77(f)).

Note to the revaluation surplus

The following details shall be disclosed (77(f)):

- any restrictions on the distribution of the balance to the shareholders,
- the change for the period.

14. SUMMARY

This chapter has described the accounting treatment for property, plant and equipment in terms of IAS 16. It has also provided comprehensive coverage of the disclosure requirements. It must be noted, particularly when accounting for revaluations, that the accounting for property, plant and equipment will often have a deferred tax implication.

It is important to note that IAS 16 is based on the concepts found in the *Framework*, and that the principles found in IAS 16 should be applied in accounting for property, plant and equipment.

These deferred tax implications are covered more appropriately in Chapter 6 *Taxation* and the reader is therefore directed to that chapter for detailed coverage of the tax implications resulting from the accounting for property, plant and equipment.

If an item of Property, Plant and Equipment is revalued, then IFRS 13, *Fair Value Measurement*, provides further details and disclosures which need to be taken into account.

