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Property, Plant and Equipment

Study Unit 11

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Study Unit 11: Property, Plant and Equipment

Introduction

Lecture 1

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What do we need to know about PPE?

- Recognition
- Measurement
  - Initial measurement
  - Subsequent measurement (Historical cost)
    - Depreciation
  - Disposal
- Disclosure

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What is PPE?

- Definition
  - Tangible items
    - Held for use in production or supply of goods or services, or
    - Rental to others, or
    - For administrative purposes
  - Expected to be used during more than one period
  - Intention is to use these assets to generate revenue from operations rather than to sell them.

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Initial Recognition

- First meet definition of asset
- Then IAS 16 restates the Framework recognition criteria:
  - Probable that future economic benefits associated with the item will flow to the entity; AND
  - The cost can be measured reliably

Note: Ownership is not part of the recognition criteria!

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PPE: Examples

- Land and Buildings
- Machinery and equipment
- Vehicles
- Furniture

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Measurement

Lecture 2

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How do we measure PPE?

- We measure PPE at two stages:
  - Initial measurement
    - Purchase of PPE (Acquisitions)
  - Subsequent measurement (Historical Cost)
    - Depreciation

- Disposals

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Initial Measurement

Lecture 3

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Initial measurement: COST

Purchase / Acquisitions: Cash price equivalent

- Purchase price + import duties + non-refundable taxes – trade discounts – rebates – VAT
- Include any costs to bring PPE to ***location and condition necessary*** for it to be capable of operating in the manner intended by management
  - E.g., transport, installation, assembly, delivery, etc
- Include ***dismantling, removing and rehabilitation provisions***
  - obligation which arises as a result of erecting/installing PPE

HISTORICAL COST

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Recording the acquisition of PPE

- Capitalisation: Debiting the asset account (Machinery, Furniture, Land & Buildings etc)
- ALL machinery will be recorded in the same account, thus you can't differentiate between different machines, purchase dates, costs etc
  - Fixed Asset Register
- Reconcile the Fixed Asset Register with the relevant asset account at yearend

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Subsequent costs

Subsequent costs are capitalised only if they meet the general recognition criteria

- Future economic benefits are probable
- Cost can be measured reliably

- Costs of day-to-day servicing are expensed as incurred
- Recognise cost of replacing part of PPE item when incurred
- Recognise major inspection cost as replacement
- Derecognise replaced parts (physical or otherwise)

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Subsequent Measurement:

Depreciation

Lecture 4

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Remember Accrual Basis?

- The accrual basis means that we must account for costs where the related income is earned, thus, we have to account for the 'cost of using the asset' as we use it
  - Depreciation

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Depreciation

- Aim:
  - To systematically allocate cost of asset to expense (land excluded) over its useful life
  - not to keep pace with fair value
- Depreciable amount equals:
  - Cost or an amount that replaces cost (such as revalued amount)
  - Less the residual value (RV)

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Depreciation (cont.)

- **Recognise in profit/loss**
- Depreciable amount allocated on systematic basis over Useful Life (UL)
- Reviewed at least at each reporting date:
  - residual value (RV)
  - useful life (UL)
  - depreciation method
- Change in residual value, useful life or depreciation method is a change in estimate, therefore adjust current and future periods
- Cease depreciation when RV > CA

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Depreciation (cont.)

In location and condition necessary for it to operate in manner intended by management

- Starts when **PPE is available for use**
- Ends when PPE is classified as available for sale or when derecognised
- Land = unlimited UL
  - therefore not depreciated unless it includes costs of site restoration, then depreciate *this* component over benefit period
- **Depreciation method** shall reflect the **pattern in which FEB** are expected to be consumed
  - Reviewed and accounted for as a change in estimate under IAS 8

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Useful life and residual value

- Definition of 'Useful life'
  - period over which asset is expected to be available for use by an entity / number of production or similar units expected to be obtained from asset
  - Not necessarily the same as economic life!
  - Entity specific
- Must be reviewed at least annually

- Definition of 'residual value'
  - amount that could be received at reporting date if the asset were in the condition that it will be at expected disposal date i.e. END OF USEFUL LIFE
  - does not include expected future inflation
- Must be reviewed at least annually

Lecture 5

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Systematic basis…..

- Depreciation may be calculated using a variety of methods, three common ones are:
  - The straight line method
  - The diminishing (reducing) balance method
  - The units of production method

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Recording depreciation

Lecture 6

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Recording

- Regardless of the calculation method, the journals will be the same
  - Debit: Depreciation (expense)

    Credit: Accumulated Depreciation: Machinery
- This will always allow us to differentiate between the historical cost and the depreciation

Carrying Value = Historical Cost – Accumulated Depreciation

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Methods for calculating depreciation: Straight-line

Lecture 7

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What does this mean?

- We assume that we will 'use' the value of the asset equally over time, thus, if an asset has a useful life of 4 years, we will depreciate ¼ of the value every year
- We deduct the residual value of the asset before we depreciate it, since we will realise the residual value through disposal, trade-in etc

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Pro-rated depreciation

- Although we talk in 'years', straight-line depreciation is a product of 'time', thus, if we buy the asset half-way through the year, we would depreciate it for half the year.
- This is called pro-rating the depreciation
  - Eg: If your annual depreciation would have been R100 000, and you purchased it 7 months into the year, there are only 5 more months in the financial year in which you would 'use' the asset, thus:

    100 000 / 12 X 5 = 41 667

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Example

- Study Guide Page 231, Exercise 11.1

Note: The depreciation journals do not affect the asset account

Note the disclosure of the Asset in the Financial Statements and the Notes to the Financial Statements

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Methods for calculating depreciation: Dimishing Balance

Lecture 8

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What does this mean?

- We assume that we 'use' a greater portion of the asset's value in the first years of the useful life
- The effect of this is that the depreciation charged will decrease every year
- Instead of using the cost as a basis for depreciation every year (as in straight-line), we use the carrying value

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Example

- Study Guide Page 231, (continued on page 235) Exercise 11.1

Note: The depreciation percentage remains fixed, but the actual depreciation is reduced every year

Note that we do not use the depreciable amount for this method (ie: the residual value is not deducted from the cost)

Based on this, we would never get to a zero balance

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Methods for calculating depreciation: Units of production

Lecture 9

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What does this mean?

- Instead of using time to calculate depreciation, we use the units of production
- We identify (if applicable) how many units the asset will produce in it's useful life. This will give us a depreciation per unit
- We can then allocate this to the actual units produced in that period

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Example

- Study Guide Page 231, (continued on page 238) Exercise 11.1

Note: We use the depreciable amount here, ie: we deduct the residual value from the cost before calculating depreciation

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Disposal of assets

Lecture 10

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What is disposal?

- The entity can 'get rid' of the assets in the following ways:
  - Demolish the asset
  - Sell the asset
  - Trade the asset in on the purchase of another asset
- Regardless of the method of disposal, the entries are similar

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What do we need to record for disposals?

- Record the proceeds of the disposal (if applicable)
- Update the depreciation up to the date of disposal
- Remove the cost and accumulated depreciation from the books
- Determine and record whether a profit or loss was made on the disposal

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Disposal of assets: Scrapping the asset

Lecture 11

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Example: GJ

- This example is for a R10 000 machine that was written down to zero before disposal (ie: Carrying value = 0)
- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Accumulated Depreciation: Machinery	B7	10 000	
	Machinery	B6		10 000
	Scrapping of machinery written off			

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Example: Posting to GL

Dr **Machinery** **B6** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Balance	b/d	10 000		28 Feb	Accumulated Depreciation	GJ1	10 000

Dr **Accumulated Depreciation: Machinery** **B7** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery	GJ1	10 000		28 Feb	Balance	b/d	10 000

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Example: GJ

- This example is for a R10 000 machine that was written down to R1 000 before disposal (ie: Accumulated Depr = R9 000)

- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Accumulated Depreciation: Machinery	B7	9 000	
	Loss on scrapping of asset	N4	1 000	
	Machinery	B6		10 000
	Scrapping of machinery			

Lecture 11

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Example: Posting to GL

Dr **Machinery** **B6** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Balance	b/d	10 000		28 Feb	Accumulated Depreciation	GJ1	9 000
					28 Feb	Loss on scrapped asset	GJ1	1 000

Dr **Accumulated Depreciation: Machinery** **B7** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery	GJ1	9 000		28 Feb	Balance	b/d	9 000

Dr **Loss on scrapping of asset** **N4** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery	GJ1	1 000					

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Study Unit 11: Property, Plant and Equipment

Disposal of assets: Selling the asset

Lecture 12

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How does the sale of an asset differ from scrapping?

- The business will receive proceeds for the sale of the asset
  - Can be higher than the carrying amount of the asset (Profit)
  - Can be lower than the carrying amount of the asset (Loss)
- A realisation account is used to determine the profit / loss. All the related items are transferred to the realisation account, and the balance will be the profit / loss on disposal, which will be journalised to a profit / loss account

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Example 1: Selling price > CA

- R10 000 machine that was written down to R1 000 before disposal (ie: Accumulated Depr = R9 000). Sold for R3 000

- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Bank		3 000	
	Machinery Realisation Account			3 000
	Receipt of the selling price for the machine sold			

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Example 1: Selling price > CA

- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Machinery Realisation Account		10 000	
	Machinery			10 000
	Transfer of the cost for the sale of machinery			

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Example 1: Selling price > CA

- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Accumulated Depreciation: Machinery		9 000	
	Machinery			9 000
	Realisation Account			
	Transfer of the accumulated depreciation for the sale of machinery			

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Example 1: Posting to GL

Dr **Machinery** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Balance	b/d	10 000		28 Feb	Machinery Realisation Account	GJ1	10 000

Dr **Accumulated Depreciation: Machinery** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery Realisation Account	GJ1	9 000		28 Feb	Balance	b/d	9 000

Dr **Bank** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery Realisation Account	GJ1	3 000					

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Example 1: Posting to GL

Dr **Machinery realisation account** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery (Cost)	GJ 1	10 000		28 Feb	Accumulated Depreciation: Machinery	GJ1	9 000
					28 Feb	Bank	GJ1	3 000
			12 000					12 000

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Example 1: Selling price > CA

- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Machinery Realisation Account		2 000	
	Profit on sale of non-current asset			2 000
	Transfer of profit on sale of machinery			

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Example 1: Posting to GL

Dr **Machinery realisation account** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery (Cost)	GJ1	10 000		28 Feb	Accumulated Depreciation: Machinery	GJ1	9 000
28 Feb	Profit on sale of non-current asset	GJ1	2 000		28 Feb	Bank	GJ1	3 000
			12 000					12 000

Dr **Profit on sale of non-current asset** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
					28 Feb	Machinery Realisation Account	GJ1	2 000

Lecture 12

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Example 2: Selling price < CA

- R15 000 machine that was written down to R4 000 before disposal (ie: Accumulated Depr = R11 000). Sold for R2 500
- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Bank		2 500	
	Machinery Realisation Account			2 500
	Receipt of the selling price for the machine sold			

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Example 2: Selling price < CA

- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Machinery Realisation Account		15 000	
	Machinery			15 000
	Transfer of the cost for the sale of machinery			

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Example 2: Selling price < CA

- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Accumulated Depreciation: Machinery		11 000	
	Machinery Realisation Account			11 000
	Transfer of the accumulated depreciation for the sale of machinery			

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Example 2: Posting to GL

Dr **Machinery** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Balance	b/d	15 000		28 Feb	Machinery Realisation Account	GJ1	15 000

Dr **Accumulated Depreciation: Machinery** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery Realisation Account	GJ1	11 000		28 Feb	Balance	b/d	11 000

Dr **Bank** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery Realisation Account	GJ1	2 500					

Lecture 13

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Example 2: Posting to GL

Dr **Machinery realisation account** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery (Cost)	GJ 1	15 000		28 Feb	Accumulated Depreciation: Machinery	GJ1	11 000
					28 Feb	Bank	GJ1	2 500
			15 000					15 000

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Example 2: Selling price < CA

- General Journal

General Journal – February 2013 GJ1

Date	Details	Fol	Debit	Credit
28 Feb	Loss on sale of non-current asset		1 500	
	Machinery Realisation Account			1 500
	Transfer of loss on sale of machinery			

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Example 2: Posting to GL

Dr **Machinery realisation account** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery (Cost)	GJ1	15 000		28 Feb	Accumulated Depreciation: Machinery	GJ1	11 000
					28 Feb	Bank	GJ1	2 500
					28 Feb	Loss on sale of non-current asset	GJ1	1 500
			15 000					15 000

Dr **Loss on sale of non-current asset** **Cr**

Date	Details	Fol	Amount		Date	Details	Fol	Amount
28 Feb	Machinery Realisation Account	GJ1	1 500					

Lecture 13

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Study Unit 11: Property, Plant and Equipment

Disposal of assets: Trade-in of the asset

Lecture 14

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How does the trade-in of an asset differ from the sale?

- The business doesn't receive 'proceeds' for the disposal, so there will be no Bank account entry
- The trade-in does, however, reduce the cost of the new asset
  - Thus, we credit the trade-in value to the new asset account, which indicates the reduction in the cost
- We still use the Realisation Account to calculate the profit / loss on the disposal

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Study Unit 11: Property, Plant and Equipment

Disclosing PPE in the Financial Statements

Lecture 15

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Disclosure includes:

- The disclosure must include the following for each class of asset:
  - Measurement bases
  - Depreciation methods
  - Useful lives
  - Gross Carrying Amount and Accumulated Depreciation at the beginning and the end of the year

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Disclosure includes:

- Reconcilation of the Carrying Amount at the beginning of the year to the Carrying Amount at the end of the year, showing:
  - Additions
  - Disposals
  - Increases or decreases in values due to revaluation
  - Impairment losses and impairment losses reversed
  - Depreciation
  - Any other movements

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Statement of Financial Position

Non-Current Assets		
Property, plant and equipment	Note 2	xxx
Intangible assets		xxx
Other Financial assets		xxx

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Accounting Policy note

Property, Plant and Equipment

PPE is initially recognised at cost price. No depreciation is written off on land and buildings. Vehicles, machinery and furniture are subsequently measured at historical cost less accumulated depreciation and impairment losses.

Depreciation is written off at a rate deemed sufficient to reduce the carrying amounts of the assets over their estimated useful lives to their estimated residual values.

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Accounting Policy note (cont)

Vehicles - 20% per annum on the straight-line method
Machinery - 20% per annum on the diminishing-balance method
Furniture - 10% on the straight-line method
Depreciation is charged to profit or loss for the period. Gains or losses on disposal are determined by comparing the proceeds with the carrying amount of the asset. The net amount is included in the profit or loss for the period