



IAS 16 – Property, Plant & Equipment – Revaluations.

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This article deals with IAS 16 Property, Plant and Equipment (PPE) and the accounting treatment for revaluation of tangible non-current assets

Introduction

IAS 16 deals with PPE which are tangible assets that are held for use in the production of goods or delivery of services or for an administrative purpose, and are expected to be used for more than one accounting period i.e. are 'non-current' in nature. Typical examples of PPE include land, buildings, equipment, furniture and fixtures, motor vehicles, ships, aircraft and plant and machinery.

Measurement at recognition

The only allowable model for initial recognition of PPE is at cost as per IAS 16.

Measurement after recognition

There are two allowable models for measurement of PPE after initial recognition;

- Cost model, or
- Revaluation model

Revaluation Model

After initial recognition as an asset, PPE shall be carried at a revalued amount provided its fair value can be measured reliably.

This revalued amount is its

- Fair value at the date of revaluation
less any subsequent accumulated depreciation and
less any subsequent accumulated impairment losses.

Revaluations need to be made with sufficient regularity to ensure that the carrying value does not differ materially from that which would be determined using fair value at the end of the reporting period.

The frequency of revaluations depends upon the changes in fair values of the items of PPE being revalued. If the fair value of a revalued asset differs materially from its carrying value, then a further revaluation is required. If a PPE experiences significant and volatile changes in its fair value, it may be necessary to revalue on an annual basis. Otherwise, every three to five years may be an acceptable time period between revaluations.

For example, if we take the property market in Ireland over the last ten years, the period between 2001 and 2007 was where buildings, in general, experienced high increases in their market value due to low interest rates, ready availability of credit and confidence in the sector. As a result, property prices increased sizeably in value annually and therefore, if a company was using the revaluation method in relation to buildings, there may have been a necessity to revalue the buildings annually, using a professionally qualified valuer, to ensure that the company complied with IAS 16. From 2007, property prices in Ireland have plummeted and again, a company may have to revalue annually due to the sizeable decreases year-on-year in property prices so as to comply with the standard.

When an item of PPE is revalued, there are two methods of dealing with accumulated depreciation with the most commonly used method being the following whereby;

- Accumulated depreciation is eliminated against the gross carrying value of the asset and the net amount restated to the revalued amount of the asset.

Example

A building was purchased on the 1st January 2006 at a cost of €100 million. It is being depreciated over 50 years. The company decided to use the revaluation model for valuing buildings in 2011 and at the 31st December 2011, the building was valued at €80 million by a professional valuer.

Solution

By the 31st December 2011, the asset has been depreciated for 6 years. This means that the accumulated depreciation is €12 million (€100 million / 50 years * 6 years). Per IAS16, this accumulated depreciation is netted against the cost;

	€
Cost	100 million
less Accumulated Depreciation	<u>12 million</u>
Carrying Value	88 million

This carrying value of €88 million is compared against the revalued amount of €80 million and a revaluation loss of €8 million needs to be accounted for.

Revaluation & Class of Assets

If PPE is revalued, then the entire class of PPE to which that asset belongs also needs to be revalued i.e. if a company owns 5 buildings which it uses for storing grain and they decide to revalue 1 building, then per IAS 16, all buildings have to be revalued as they belong to the same class or category under PPE i.e. they are of a similar nature and use in the company's operations

Revaluation Gains

If an asset's carrying amount is increased as a result of a revaluation, the increase shall be recognised in the Other Comprehensive Income (OCI) section of the Statement of Comprehensive Income (SOCi) and included in the Equity section of the Statement of Financial Position (SOFp) under the heading of a revaluation surplus. The double entry for this is shown on the following page:

Dr.	PPE – Non-Current Assets (SOFP)	X	
Cr.	OCI (SOCI)		X

Example

A company revalued their land from €200,000 to €300,000. The profit for the year from normal day to day activities of the company is €350,000 and at the start of the year there was a revaluation surplus of €75,000. The retained earnings at the start of the year amounted to €120,000.

The ledger entry and the extracts from the SOCI and SOFP for this revaluation are shown below:

Solution

The ledger entry is as follows:

		€	€
Dr.	PPE (SOFP)	100,000	
Cr.	OCI (SOCI)		100,000

Extract from SOCI

Profit for the Year	350,000	
Other Comprehensive Income		
Revaluation Gain from Land	<u>100,000</u>	
Total Comprehensive Income for the Year		<u>450,000</u>

Extract from SOFP

Non-Current Assets		
PPE	<u>300,000</u>	
Total Non-Current Assets		<u>300,000</u>
Equity		
Retained Earnings	(120,000 + 350,000)	470,000
Revaluation Surplus	(75,000 + 100,000)	<u>175,000</u>
Total Equity		<u>645,000</u>

Note that the Total Comprehensive Income amount of €450,000 is taken to the Equity section of the SOFP but €350,000 of it goes to retained earnings and the €100,000 revaluation gain is added to the revaluation surplus.

In relation to revaluation gains on PPE, an increase or gain shall be recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognised in profit or loss.

Example

A company revalued their land from €200,000 to €300,000. Previously, the same land had been revalued downwards from €260,000 to €200,000 creating a revaluation loss of €60,000 which was taken to profit or loss as there was no revaluation surplus as this was the first time the asset had been revalued. The profit for this year from normal day to day activities of the company before revaluation is €300,000 and at the start of the year the retained earnings amounted to €150,000.

The ledger entry and the extracts from the SOCI and SOFP for this transaction are shown below:

Solution

The ledger entry is as follows:

	€	€
Dr. PPE (SOFP)	100,000	
Cr. Profit or Loss (SOCl)		60,000
Cr. OCI (SOCl)		40,000

Extract from SOCl

Profit for the Year	300,000	
Revaluation Gain	<u>60,000</u>	
Profit for the Year	360,000	
Other Comprehensive Income		
Revaluation Gain from Land	<u>40,000</u>	
Total Comprehensive Income for the Year		<u>400,000</u>

Extract from SOFP

Non-Current Assets		
PPE	<u>300,000</u>	
Total Non-Current Assets		<u>300,000</u>
Equity		
Retained Earnings (150,000 + 360,000)	510,000	
Revaluation Surplus	<u>40,000</u>	
Total Equity		<u>550,000</u>

Revaluation Losses

If an asset's carrying amount is decreased as a result of a revaluation, the decrease shall be recognised in profit or loss. However, the decrease shall be recognised in OCI to the extent of any credit balance existing in the revaluation surplus in respect of that asset. The decrease recognised in OCI reduces the amount accumulated in equity under the heading of revaluation surplus. The double entry for this is as follows:

Dr.	OCI (SOCl) (If Revaluation Surplus already in Accounts)	X	
Cr.	PPE – Non-Current Asset (SOFP)		X

Up to the maximum of a revaluation surplus and the balance being accounted as follows:

Dr.	Profit or Loss (SOCl)	X	
Cr.	PPE – Non-Current Assets (SOFP)		X

Example

A company revalued their land from €500,000 to €400,000. The profit for the year from normal day to day activities of the company is €300,000 and at the start of the year there was a revaluation surplus of €75,000. The retained earnings at the start of the year amounted to €180,000.

The ledger entry and the extracts from the SOCl and SOFP for this transaction follow:

Solution

The ledger entry is as follows:

	€	€
Dr. OCI (SOCl)	75,000	
Dr. Profit of Loss (SOCl)	25,000	
Cr. PPE (SOFP)		100,000

Extract from SOCl

Profit for the Year	300,000
Revaluation Loss	<u>(25,000)</u>
Profit for the Year	275,000

Other Comprehensive Income

Revaluation Loss	<u>(75,000)</u>
Total Comprehensive Income for the Year	<u>200,000</u>

<u>Extract from SOFP</u>		€	€
Non-Current Assets			
PPE		<u>400,000</u>	
Total Non-Current Assets			<u>400,000</u>
Equity			
Retained Earnings	(180,000 + 275,000)	455,000	
Revaluation Surplus	(75,000 - 75,000)	<u>0</u>	
Total Equity			<u>455,000</u>

Note that the Total Comprehensive Income amount of €200,000 is taken to the Equity section of the SOFP but €275,000 of it goes to retained earnings and the €75,000 revaluation loss is taken from the revaluation surplus brought forward.

The revaluation surplus included in equity in respect of PPE may be transferred directly to retained earnings when the asset is derecognised. This may involve transferring the whole of the surplus when the asset is retired or disposed of. Alternatively, some of the surplus may be transferred as the asset is used by an entity. In such a case, the amount of the surplus transferred would be the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on the asset's original cost.

Transfers from revaluation surplus to retained earnings are not made through profit or loss but instead through the statement of changes in equity.

Example of the Impact of a Revaluation at the Start or End of a Year

The following is an extract from the trial balance of Listra Limited for the year ended 31st December 2010

	€	€
Land	400,000	
Building at Cost	1,600,000	
Accumulated Depreciation – Buildings		800,000
Retained Earnings at 1 st January 2010		200,000
Revaluation Surplus		150,000
Profit for the year before any adjustments		400,000

Notes:

1. Depreciation to date on buildings has been on a cost basis and has been at the rate of 5% of cost on a straight line basis.
2. Land is not being depreciated

Question:

Prepare a working for PPE and the relevant extracts from the published accounts for the 2010 financial year based on the following requirements

- The land and buildings were revalued at the 1st January 2010 at €1,450,000 of which land amounted to €450,000 or
- The land and buildings were revalued at the 31st December 2010 at €1,450,000 of which land amounted to €450,000.

Please note that the original life of the buildings has not changed as a result of the revaluation and the residual value of the buildings is estimated at the date of revaluation to be €400,000

Solution**Revaluation of Land & Buildings at the 1st January 2010****PPE Working**

	Land €	Buildings €	Total €
Cost	400,000	1,600,000	2,000,000
Accumulated Depreciation	0	(800,000)	(800,000)
Carrying Value at 1 st January 2010	400,000	800,000	1,200,000
Revaluation Gain	50,000	200,000	250,000
Carrying Value after revaluation	450,000	1,000,000	1,450,000
Depreciation – Buildings (Note 1)		(60,000)	(60,000)
Carrying Value at 31 st December 2010	<u>450,000</u>	<u>940,000</u>	<u>1,390,000</u>

Note 1 – Depreciation of Buildings

Formula for Depreciation of Assets after Revaluation is as follows:

$$\frac{\text{Revalued Amount} - \text{Residual Value}}{\text{Remaining Useful Life}}$$

At this stage, the Revalued Amount = €1,000,000, the Residual Value = €400,000 but the remaining useful life has to be calculated.

What was the expected useful life of the buildings?

Based on the information in the question, the asset would have been depreciated at the rate of 5% each year. Therefore, the asset, at this rate of depreciation, would have been depreciated over 20 years (100% / 5% each year) and consequently, the expected useful life of the building is 20 years.

How many years of the useful life have been used before revaluation?

If the asset was being depreciated at the rate of 5% per year, then the depreciation each year would be €80,000 i.e. €1,600,000 x 5%. Given that the accumulated depreciation at the start of the year is €800,000, the asset must have been depreciated for 10 years by the 1st January 2010 (€800,000 ÷ €80,000 = 10 Years). The question tells us that the original useful life does not change as a result of the revaluation. Therefore, the remaining useful life is 10 years (20 years original useful life – 10 years of the buildings being depreciated).

The depreciation of the revalued buildings can now be calculated as follows:

$$\frac{\text{Revalued Amount} - \text{Residual Value}}{\text{Remaining Useful Life}} = \frac{\text{€1,000,000} - \text{€400,000}}{10 \text{ Years}} = \frac{\text{€600,000}}{10 \text{ Years}} = \text{€60,000 depreciation per year}$$

The ledger entry is as follows:

		€	€
Dr.	PPE (SOFP)	250,000	
Cr.	OCI (SOCI)		250,000
Dr.	Depreciation Expense (SOCI)	60,000	
Cr.	PPE (SOFP)		60,000

Extract from SOCI

Profit for the Year	400,000	
Depreciation – Buildings	<u>(60,000)</u>	
Profit for the Year	340,000	
Other Comprehensive Income		
Revaluation Gain from PPE	<u>250,000</u>	
Total Comprehensive Income for the Year		<u>590,000</u>

Extract from SOFP

Non-Current Assets			
PPE		<u>1,390,000</u>	
Total Non-Current Assets			<u>1,390,000</u>
Equity			
Retained Earnings	(200,000 + 340,000)	540,000	
Revaluation Surplus	(150,000 + 250,000)	<u>400,000</u>	
Total Equity			<u>940,000</u>

Revaluation of Land & Buildings at the 31st December 2010

PPE Working

	Land €	Buildings €	Total €
Cost	400,000	1,600,000	2,000,000
Accumulated Depreciation	<u>0</u>	<u>(800,000)</u>	<u>(800,000)</u>
Carrying Value at 1 st January 2010	400,000	800,000	1,200,000
Depreciation – Buildings (Note 1)		<u>(80,000)</u>	<u>(80,000)</u>
Carrying Value after depreciation	400,000	720,000	1,120,000
Revaluation Gain	<u>50,000</u>	<u>280,000</u>	<u>330,000</u>
Carrying Value at 31 st December 2010	<u>450,000</u>	<u>1,000,000</u>	<u>1,450,000</u>

Note 1 – Depreciation of Buildings

If the asset was being depreciated at the rate of 5% per year, and the revaluation takes place at the end of the year, i.e. the asset should be depreciated for a full year at the cost basis rate of depreciation, and therefore, the depreciation for 2010 would be €80,000 i.e. €1,600,000 x 5%.

The ledger entry is as follows:

		€	€
Dr.	PPE (SOF)	330,000	
Cr.	OCI (SOCI)		330,000
Dr.	Depreciation Expense (SOCI)	80,000	
Cr.	PPE (SOF)		80,000

Extract from SOCI

Profit for the Year	400,000	
Depreciation – Buildings	<u>(80,000)</u>	
Profit for the Year	320,000	
Other Comprehensive Income		
Revaluation Gain from PPE	<u>330,000</u>	
Total Comprehensive Income for the Year		<u>650,000</u>

Extract from SOFP

Non-Current Assets			
PPE		<u>1,450,000</u>	
Total Non-Current Assets			<u>1,450,000</u>
Equity			
Retained Earnings	(200,000 + 320,000)	520,000	
Revaluation Surplus	(150,000 + 330,000)	<u>480,000</u>	
Total Equity			<u>1,000,000</u>