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Bachelor of Commerce (B2001) | Level 2 • Part B Major | Monash University

Financial accounting

Course Code: ACC2100 • Module 2 Notes

Module 2: Property, Plant & Equipment Revaluation, Impairment & Intangible Assets

1. Initial Recognition, Cost Measurement & Valuation Models (AASB 116)

1.1 Recognition Criteria and Elements of Cost

AASB 116 Property, Plant and Equipment governs the accounting treatment for tangible non-current assets 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 reporting period. An item of property, plant, and equipment (PPE) is recognised as an asset if and only if: (a) it is probable that future economic benefits associated with the item will flow to the entity, and (b) the cost of the item can be measured reliably.

Upon initial recognition, an item of PPE is measured at **cost**. Under *AASB 116* paragraph 16, cost comprises three distinct elements:

1. **Purchase Price:** Invoice price including import duties and non-refundable purchase taxes (note that refundable Goods and Services Tax (GST) claimed as an input tax credit from the ATO is excluded from asset cost), after deducting trade discounts and rebates.
2. **Directly Attributable Costs:** Costs necessary to bring the asset to the location and condition required for it to operate in the manner intended by management. Examples include site preparation, initial delivery and handling, installation and assembly, professional fees (engineers, surveyors), and net testing costs of whether the asset is functioning properly. Administration and general overheads, staff training costs, and initial operating losses incurred while demand builds up are expensed immediately.
3. **Initial Estimate of Dismantling, Removal, and Restoration Costs:** The present value of unavoidable future obligations to dismantle the asset and restore the site (for example, remediating a mine site or removing leasehold structures under Australian environmental law), recognised simultaneously as a provision under *AASB 137*.

Where an entity acquires a major complex asset—such as a commercial aircraft or manufacturing furnace—whose significant parts have different useful lives or consumption patterns, *AASB 116* mandates **component accounting**. Each significant part is depreciated separately over its own useful life, and subsequent major inspections or component replacements are capitalised while the carrying amount of the replaced part is derecognised.

1.2 Subsequent Measurement: Cost Model vs Revaluation Model

After initial recognition, an entity must choose either the **cost model** or the **revaluation model** as its accounting policy and apply that policy consistently to an entire **class** of PPE (for instance, all Land and Buildings, or all Plant and Machinery). Selective cherry-picking of individual assets within the same class for upward revaluation is strictly prohibited.

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- **Cost Model:** The asset is carried at cost less any accumulated depreciation and any accumulated impairment losses.
- **Revaluation Model:** An asset whose fair value can be measured reliably is carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Revaluations must be conducted with sufficient regularity so that the carrying amount does not differ materially from that which would be determined using fair value at the end of the reporting period.

Fair value is determined in accordance with *AASB 13 Fair Value Measurement*, which defines fair value as the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date (an exit price). *AASB 13* establishes a three-level fair value hierarchy: **Level 1** (quoted prices in active markets for identical assets), **Level 2** (observable market inputs such as recent comparable commercial property sales per square metre), and **Level 3** (unobservable entity inputs such as depreciated replacement cost or discounted cash flows for specialised industrial plant).

2. Revaluation Mechanics: Increments, Decrements, Tax Effects & Disposals

2.1 Treatment of Accumulated Depreciation on Revaluation

When a depreciable item of PPE is revalued, any existing accumulated depreciation at the revaluation date must be addressed using one of two permitted methods under *AASB 116* paragraph 35:

1. **Elimination (Netting) Method (Most Common in Australian Practice):** Accumulated depreciation is eliminated against the gross carrying amount of the asset prior to adjusting the net carrying amount to the revalued fair value. Following this adjustment, the asset's gross balance equals its fair value and its accumulated depreciation resets to zero.
2. **Proportional Restatement Method:** Both the gross carrying amount and accumulated depreciation are restated proportionately so that the net carrying amount after revaluation equals the asset's fair value (commonly applied when assets are revalued by reference to an index to determine depreciated replacement cost).

2.2 Revaluation Increments, Decrements, and Reversal Symmetry

Because revaluation gains and losses are unrealised holding adjustments, *AASB 116* applies asymmetric rules that prevent entities from inflating profit or loss with unrealised gains while ensuring losses are promptly recognised unless backed by an existing asset-specific surplus. Crucially, increments and decrements must be tracked on an **asset-by-asset basis**—not netted across different assets within the same class.

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Revaluation Direction	Prior Revaluation History for That Specific Asset	Accounting Treatment Under AASB 116
Revaluation Increment (Fair Value > Carrying Amount)	No prior revaluation decrement recognised in Profit or Loss.	Recognise the entire increment in **Other Comprehensive Income (OCI)** and accumulate it in equity under **Asset Revaluation Surplus** (non-reclassifiable OCI).
Revaluation Increment (Fair Value > Carrying Amount)	Prior revaluation decrement was previously expensed in Profit or Loss.	Recognise in **Profit or Loss** (as Revaluation Increment / Reversal of Decrement) to the extent that it reverses a prior decrement of the *same* asset; any excess above that prior loss is credited to **OCI / Asset Revaluation Surplus**.
Revaluation Decrement (Fair Value < Carrying Amount)	No existing credit balance in Asset Revaluation Surplus for that asset.	Recognise the entire decrement immediately as an expense in **Profit or Loss** (Loss on Revaluation).
Revaluation Decrement (Fair Value < Carrying Amount)	Existing credit balance in Asset Revaluation Surplus for that asset.	Recognise in **OCI** (debiting **Asset Revaluation Surplus**) to the extent of the existing credit balance in respect of that *same* asset; any remaining deficit is expensed in **Profit or Loss**.

2.3 Tax-Effect Interaction and Derecognition Transfers

Under Australian tax law, asset revaluations are ignored for income tax purposes—the ATO only recognises historical cost for capital allowances (depreciation) and Capital Gains Tax (CGT). Consequently, when a depreciable asset or land is revalued upward, its accounting carrying amount exceeds its tax base ($CA > TB$), creating or increasing a **taxable temporary difference (TTD)** and a corresponding **Deferred Tax Liability (DTL)** under *AASB 112*. Because the revaluation increment itself is recognised in OCI, *AASB 112* paragraph 61A requires the related deferred tax expense to be recognised directly in **OCI** rather than profit or loss, reducing the net Asset Revaluation Surplus to the after-tax increment:

$$\Delta\text{Revaluation Surplus (Net of Tax)} = (\text{FV} - \text{CA}) \times (1 - t)$$

Where: FV is the asset's fair value at the revaluation date, CA is the asset's pre-revaluation carrying amount, and t is the corporate tax rate (typically 30% in Australia). As the revalued asset is subsequently depreciated over its remaining useful life, the higher accounting depreciation reduces

profit relative to tax depreciation, gradually reversing the TTD and releasing the DTL through profit or loss.

Upon disposal or retirement of a revalued asset, any remaining balance in the Asset Revaluation Surplus relating to that asset is **never reclassified through profit or loss**; instead, under *AASB 116* paragraph 41, the entity may transfer the surplus directly to **Retained Earnings** (Dr Asset Revaluation Surplus / Cr Retained Earnings). Profit or loss on disposal is calculated purely as net disposal proceeds minus carrying amount at the date of sale.

2.4 Worked Multi-Year Revaluation Numerical Schedule (AUD)

Melbourne Precision Engineering Ltd acquires a commercial warehouse building (excluding land) on 1 July 2024 for A$1,000,000. The building has an estimated useful life of 20 years, zero residual value, and is depreciated straight-line (A$50,000/year). The company uses the revaluation model for buildings and applies a 30% corporate tax rate. For ATO tax purposes, the building is depreciated at 2.5% per annum straight-line (A$25,000/year). Fair values obtained from independent registered valuers are: A$1,170,000 at 30 June 2026, and A$825,000 at 30 June 2028. The building is sold on 1 July 2028 for A$840,000.

Step 1: Status at 30 June 2026 (End of Year 2) Prior to Revaluation

Accumulated depreciation for 2 years (FY2025 and FY2026) is 2 × 50,000 = A$100,000. Pre-revaluation carrying amount is 1,000,000 − 100,000 = A$900,000. Comparing this to the 30 June 2026 fair value of A$1,170,000 yields a gross revaluation increment of:

$$\text{Gross Increment}_{30\ \text{Jun}\ 2026} = 1{,}170{,}000 - 900{,}000 = \text{AUD}\ 270{,}000$$

Where: 1,170,000 is the independent valuation at 30 June 2026, and 900,000 is the depreciated carrying amount immediately prior to revaluation. Deferred tax on the revaluation increment (at 30%) is 270,000 × 0.30 = A$81,000, leaving a net-of-tax Asset Revaluation Surplus of 270,000 − 81,000 = A$189,000.

Step 2: Depreciation in FY2027 and FY2028 (Years 3 and 4)

At 1 July 2026, the building's carrying amount is A$1,170,000 and its remaining useful life is 18 years (20 − 2 years). Revised annual depreciation is:

$$\text{Annual Depreciation}_{2027\text{–}2028} = \frac{1{,}170{,}000 - 0}{18} = \text{AUD}\ 65{,}000\ \text{per annum}$$

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Where: 1,170,000 is the revalued carrying amount at 30 June 2026 and $18 $is the remaining useful life in years. Over FY 2027 and FY 2028, cumulative depreciation is 2 \times 65,000 = A130,000$, reducing the carrying amount at 30 June 2028 prior to the second revaluation to 1,170,000 – 130,000 = A$1,040,000.

Step 3: Revaluation Decrement at 30 June 2028

Fair value at 30 June 2028 is A$825,000, creating a gross revaluation decrement of:

$$\text{Gross Decrement}_{30\text{ Jun }2028} = 825{,}000 - 1{,}040{,}000 = -\text{AUD } 215{,}000$$

Where: 825,000 is the fair value at 30 June 2028 and 1,040,000 is the carrying amount before revaluation. Note carefully how the decrement is split: the company holds an unadjusted pre-tax revaluation reserve equivalent of A$270,000 (net balance A$189,000 in Asset Revaluation Surplus plus A$81,000 DTL associated with the reserve). Because the entire A$215,000 gross decrement does not exceed the A$270,000 gross surplus previously credited to OCI for this building, the entire decrement reverses the prior increment through OCI! Specifically, OCI absorbs a gross debit of A$215,000, comprising a net debit to Asset Revaluation Surplus of 215,000 × (1 – 0.30) = A$150,500 and a reversal of the OCI Deferred Tax Liability of 215,000 × 0.30 = A$64,500. After this entry, the remaining Asset Revaluation Surplus balance is 189,000 – 150,500 = A$38,500.

Step 4: Disposal on 1 July 2028

Selling the building for A$840,000 when its carrying amount is A$825,000 generates a gain on disposal in profit or loss of 840,000 – 825,000 = A$15,000. Simultaneously, the remaining Asset Revaluation Surplus of A$38,500 is transferred directly to Retained Earnings.

Date	Journal Entry Account	Debit (AUD)	Credit (AUD)
30 Jun 2026	Accumulated Depreciation – Building	100,000	
	Building (Eliminate accumulated depreciation)		100,000
30 Jun 2026	Building (Increase to fair value A$1,170,000)	270,000	
	Gain on Revaluation – OCI		270,000
30 Jun 2026	Income Tax Expense – OCI (270,000 × 30%)	81,000	
	Deferred Tax Liability		81,000
30 Jun 2026	Gain on Revaluation – OCI (Net)	189,000	
	Asset Revaluation Surplus (Equity)		189,000
30 Jun 2028	Accumulated Depreciation – Building (2 × 65,000)	130,000	

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Date	Journal Entry Account	Debit (AUD)	Credit (AUD)
	Building		130,000
30 Jun 2028	Loss on Revaluation – OCI	215,000	
	Building		215,000
30 Jun 2028	Deferred Tax Liability	64,500	
	Income Tax Benefit – OCI (215,000 × 30%)		64,500
30 Jun 2028	Asset Revaluation Surplus (Equity)	150,500	
	Loss on Revaluation – OCI (Net)		150,500
1 Jul 2028	Cash at Bank	840,000	
	Building		825,000
	Gain on Disposal of Building (P&L)		15,000
1 Jul 2028	Asset Revaluation Surplus (Equity)	38,500	
	Retained Earnings		38,500

2.5 Proportional Restatement Method & Interaction with Subsequent Impairment

While Australian entities overwhelmingly adopt the elimination (netting) method at revaluation, *AASB 116* paragraph 35(a) permits the **proportional restatement method**, under which both gross cost and accumulated depreciation are scaled by the exact ratio of revalued fair value to pre-revaluation net carrying amount. Returning to Melbourne Precision Engineering Ltd's building at 30 June 2026 (Gross Cost A$1,000,000; Accumulated Depreciation A$100,000; Net Carrying Amount A$900,000; Fair Value A$1,170,000), the scaling factor is:

$$k = \frac{\text{Fair Value}}{\text{Pre-Revaluation Net Carrying Amount}} = \frac{1{,}170{,}000}{900{,}000} = 1.30$$

Where: k is the proportional restatement multiplier ($1.30, reflecting a 30% uplift). Multiplying both accounts by 1.30 yields a restated Gross Building balance of A$1,300,000 (an increase of A$300,000) and a restated Accumulated Depreciation balance of A$130,000 (an increase of A$30,000). The net carrying amount increases by 300,000 − 30,000 = A$270,000 to exactly A$1,170,000 (Dr Building A$300,000 / Cr Accumulated Depreciation A$30,000 / Cr Gain on Revaluation – OCI A$270,000). Both methods produce identical net carrying amounts, identical OCI increments, and identical future annual depreciation (A$65,000/year over the remaining 18 years).

An essential interaction arises when an asset carried under the *AASB 116* revaluation model subsequently becomes impaired under *AASB 136* (for example, because its Value in Use falls below fair value minus costs of disposal, or market prices collapse between formal revaluation cycles). Under *AASB 136* paragraph 60, an impairment loss on a revalued asset is treated as a revaluation decrement: it is recognised in **Other Comprehensive Income** (debiting Asset Revaluation Surplus, net of tax) to the extent of any existing credit balance in the revaluation surplus for that *specific asset*, with only the residual shortfall exceeding the asset's prior surplus charged as an Impairment Loss in **Profit or Loss**.

3. Impairment of Assets and Cash-Generating Units (AASB 136)

3.1 Impairment Triggers and Recoverable Amount Measurement

AASB 136 Impairment of Assets ensures that assets are not carried in the Statement of Financial Position at amounts exceeding the economic benefits expected to be recovered from using or selling them. At the end of each reporting period, an entity must assess whether there is any indication that an asset may be impaired. External indicators include significant declines in market value, adverse technological, regulatory, or climate-policy shifts (such as carbon pricing or transition risks disclosed under *AASB S2*), increases in market interest rates raising discount rates, and carrying amount of net assets exceeding market capitalisation on the ASX. Internal indicators include physical obsolescence or damage, plans to discontinue or restructure an operation, and worse-than-budgeted economic performance.

Irrespective of whether any impairment indicator exists, three categories of assets must be tested for impairment **at least annually**: (1) intangible assets with an indefinite useful life, (2) intangible assets not yet available for use (such as capitalised development in progress), and (3) goodwill acquired in a business combination.

An asset is impaired when its **Carrying Amount (CA)** exceeds its **Recoverable Amount (RA)**. Recoverable amount is defined as the higher of an asset's (or CGU's) Fair Value Less Costs of Disposal (FVLCD) and its Value in Use (VIU):

$$\mathrm{RA} = \max(\mathrm{FVLCD},\ \mathrm{VIU})$$

Where: RA is Recoverable Amount, FVLCD is Fair Value Less Costs of Disposal (the exit price under *AASB 13* less incremental transaction costs such as legal fees, stamp duty, and dismantling costs to prepare the asset for sale), and VIU is Value in Use, computed as the present value of future pre-tax net cash flows expected to be derived from continuing use of the asset and its ultimate disposal:

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$$\text{VIU} = \sum_{t=1}^{n} \frac{CF_t}{(1+r)^t} + \frac{TV_n}{(1+r)^n}$$

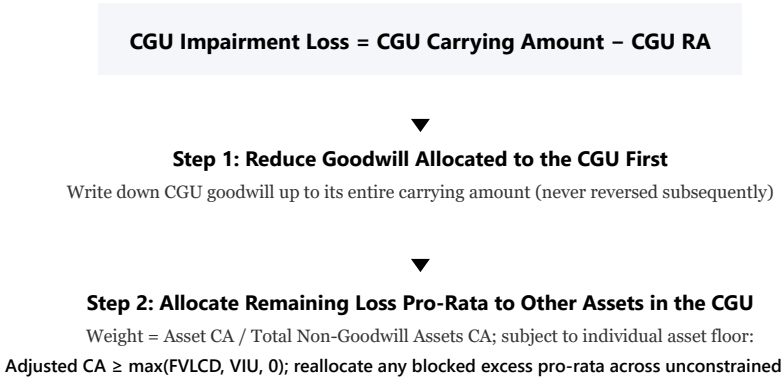
Where: CF_t is the estimated pre-tax net cash inflow in period t (derived from reasonable management budgets up to five years, excluding cash flows from future uncommitted restructurings, asset enhancements, income tax receipts/payments, and financing activities), TV_n is the terminal or disposal value at the end of year n, and r is a pre-tax discount rate reflecting current market assessments of the time value of money and risks specific to the asset for which future cash flow estimates have not been adjusted.

If either FVLCD or VIU exceeds the carrying amount, the asset is not impaired and it is unnecessary to estimate the other measure. When $\text{CA} > \text{RA}$, the impairment loss $(\text{CA} - \text{RA})$ is recognised immediately in profit or loss for assets measured under the cost model; for revalued assets under *AASB 116*, the impairment loss is treated as a revaluation decrement—charged first to OCI/Asset Revaluation Surplus to the extent of any existing credit balance for that asset, and any excess to profit or loss. Following impairment, depreciation is recalculated over the remaining useful life based on the reduced carrying amount.

3.2 Cash-Generating Units (CGUs) and Goodwill Allocation

Individual non-current assets frequently do not generate cash inflows independently of other assets (for example, a single bottling conveyor within a beverage plant, or an individual retail store within a chain). Where it is impossible to estimate the recoverable amount of an individual asset, *AASB 136* requires the entity to determine the recoverable amount of the **Cash-Generating Unit (CGU)** to which the asset belongs—defined as the smallest identifiable group of assets that generates cash inflows largely independent of the cash inflows from other assets or groups of assets.

Because goodwill does not generate independent cash flows, goodwill acquired in a business combination must be allocated from the acquisition date to each of the acquirer's CGUs (or groups of CGUs) expected to benefit from the synergies of the combination. Corporate assets (such as a head-office building or central IT infrastructure) that contribute to multiple CGUs are allocated on a reasonable and consistent basis (such as relative carrying amounts or floor space) where practicable; if an unallocated corporate asset cannot be reasonably allocated, a two-level "bottom-up and top-down" test is performed.



When allocating a CGU impairment loss under *AASB 136* paragraph 104, entities must obey two strict rules:

1. **Mandatory Priority Order:** First reduce the carrying amount of any goodwill allocated to the CGU; then allocate any remaining impairment loss to the other assets of the unit pro-rata on the basis of the carrying amount of each asset in the unit.
2. **Individual Asset Carrying Amount Floor:** In allocating an impairment loss, an entity shall *not* reduce the carrying amount of an individual asset below the highest of: (a) its FVLCD (if measurable), (b) its VIU (if determinable), and (c) zero. Any amount of the impairment loss that would otherwise have been allocated to a floor-constrained asset must be reallocated pro-rata across the remaining unconstrained assets of the CGU.

3.3 Reversal of Impairment Losses

At each reporting date, an entity assesses whether previously recognised impairment losses for assets other than goodwill may no longer exist or may have decreased. If recoverable amount increases due to a change in the estimates used to determine recoverable amount (not merely the passage of time), the impairment loss is reversed. However, under *AASB 136* paragraph 117, the increased carrying amount of an asset attributable to a reversal must **not exceed the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised in prior years**. Reversals are credited to profit or loss (or OCI if the asset is carried at revalued amount). Crucially, under paragraph 124, **an impairment loss recognised for goodwill shall NEVER be reversed in a subsequent period**, because any subsequent recovery in recoverable amount represents internally generated goodwill, whose recognition is strictly prohibited.

3.4 Worked CGU Impairment Allocation Example with Asset Floor (AUD)

Tasman Timber Processing Ltd operates a regional sawmill CGU whose net assets at 30 June 2027 (all carried under the cost model) are: Goodwill A$150,000; Factory Building A$500,000; Sawmill Plant & Equipment A$350,000; and Delivery Fleet A$150,000 (Total CGU Carrying Amount = A$1,150,000). Due to regional timber supply restrictions, management estimates the CGU's FVLCD at A$790,000. Management forecasts pre-tax net cash inflows of A$240,000 per year for the next 4 years plus a Year 4 terminal disposal value of A$120,000, using a pre-tax discount rate of 10% per annum. Separately, the Factory Building has an independent FVLCD of A$460,000, while the FVLCD and VIU of the Plant and Delivery Fleet are not individually determinable.

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Step 1: Compute CGU Value in Use (VIU) and Recoverable Amount

Using present value factors at r = 10% ($0.9091, 0.8264, 0.7513, 0.6830$):

$$\text{VIU} = \frac{240{,}000}{1.10^1} + \frac{240{,}000}{1.10^2} + \frac{240{,}000}{1.10^3} + \frac{240{,}000 + 120{,}000}{1.10^4}$$

Where: 240,000 is the annual pre-tax operating cash flow for Years 1–4, 120,000 is the Year 4 terminal net disposal cash flow, and $0.10 is the pre-tax discount rate. Computing each term gives $218,182 + 198,347 + 180,316 + 245,885 = A$842,730 (rounding to nearest dollar: PV = 240,000 × 3.169865 + 120,000 × 0.683013 = 760,768 + 81,962 = A$842,730). Comparing VIU = A$842,730 with FVLCD = A$790,000, the CGU Recoverable Amount is RA = A$842,730.

Step 2: Determine Total Impairment Loss and Write Down Goodwill First

Total CGU Impairment Loss = 1,150,000 − 842,730 = A$307,270. Under Step 1 of the cascade, Goodwill of A$150,000 is written down in full to A$0. The remaining impairment loss to be allocated across the three non-goodwill assets (whose combined carrying amount is 500,000 + 350,000 + 150,000 = A$1,000,000) is 307,270 − 150,000 = A$157,270.

Step 3: Pro-Rata Allocation and Individual Asset Floor Reallocation

- **Initial Pro-Rata Allocation of A$157,270:**
  - Factory Building (500,000 / 1,000,000 = 50%): 0.50 × 157,270 = A$78,635, which would reduce Carrying Amount to 500,000 − 78,635 = A$421,365.
  - Sawmill Plant (350,000 / 1,000,000 = 35%): 0.35 × 157,270 = A$55,045.
  - Delivery Fleet (150,000 / 1,000,000 = 15%): 0.15 × 157,270 = A$23,590.
- **Apply Floor Constraint to Factory Building:** Because the Factory Building has a known FVLCD of A$460,000, its carrying amount cannot be written down below A$460,000. Therefore, the maximum impairment loss allocable to the Factory Building is 500,000 − 460,000 = A$40,000. The blocked excess loss of 78,635 − 40,000 = A$38,635 must be reallocated pro-rata between the Sawmill Plant and Delivery Fleet based on their pre-impairment carrying amounts (350,000 : 150,000, i.e., 70% : 30%):
  - Reallocated to Sawmill Plant: 38,635 × 350,000 / 500,000 = 38,635 × 0.70 = A$27,045 (Total loss = 55,045 + 27,045 = A$82,090).
  - Reallocated to Delivery Fleet: 38,635 × 150,000 / 500,000 = 38,635 × 0.30 = A$11,590 (Total loss = 23,590 + 11,590 = A$35,180).

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CGU Asset	Pre-Impairment CA (AUD)	Initial Loss Allocation (AUD)	Floor Reallocation (AUD)	Final Impairment Loss (AUD)	Post-Impairment CA (AUD)
Goodwill	150,000	(150,000)	—	(150,000)	0
Factory Building (FVLCD A$460k)	500,000	(78,635)	38,635	(40,000)	460,000
Sawmill Plant & Equipment	350,000	(55,045)	(27,045)	(82,090)	267,910
Delivery Fleet	150,000	(23,590)	(11,590)	(35,180)	114,820
Total CGU	**1,150,000**	**(307,270)**	**0**	**(307,270)**	**842,730**

The journal entry at 30 June 2027 records Dr Impairment Loss (P&L) A$307,270; Cr Goodwill A$150,000; Cr Accumulated Impairment – Factory Building A$40,000; Cr Accumulated Impairment – Sawmill Plant A$82,090; Cr Accumulated Impairment – Delivery Fleet A$35,180. Note also that under *AASB 112*, goodwill impairment is not tax-deductible, whereas the A$157,270 write-down on depreciable PPE creates deductible temporary differences (reducing DTL or creating DTA) of 157,270 × 30% = A$47,181.

4. Intangible Assets and Research & Development (AASB 138)

4.1 Definition, Identifiability, and Recognition Prohibitions

AASB 138 Intangible Assets defines an intangible asset as an identifiable non-monetary asset without physical substance. To satisfy the asset recognition criteria, an intangible item must meet three core attributes: **identifiability**, **control** over a resource, and expected **future economic benefits**. Identifiability distinguishes an intangible asset from goodwill and requires that the item is either *separable* (capable of being separated or divided from the entity and sold, transferred, licensed, rented, or exchanged) or *arises from contractual or other legal rights* (such as patents, software licences, mining exploration rights, or franchise agreements).

Because internally created intangible value is difficult to separate from the ongoing cost of running the business as a whole, *AASB 138* imposes strict recognition prohibitions:

- **Internally Generated Goodwill (para 48):** Never recognised as an asset because it is not an identifiable resource controlled by the entity that can be measured reliably at cost.
- **Internally Generated Brands, Mastheads, Publishing Titles, and Customer Lists (para 63):** Expenditure incurred internally on building brand loyalty, newspaper mastheads, or customer relationships cannot be distinguished from the cost of developing the business as a whole and must **always be expensed** as incurred. (By contrast, if a brand or customer list is acquired separately or as part of a business combination under *AASB 3*, it is recognised at fair value.)

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- **Start-up, Training, Advertising, and Relocation Costs (para 69):** Always expensed immediately, regardless of future revenue expectations.

4.2 Research Phase vs Development Phase Capitalisation Criteria

For internally generated intangible assets arising from innovation projects (such as proprietary industrial software, pharmaceutical formulations, or clean-energy manufacturing processes), *AASB 138* divides project activity into a **research phase** and a **development phase**. If an entity cannot clearly distinguish the research phase from the development phase of an internal project, it must treat all expenditure on that project as if it were incurred in the research phase only.

Project Phase	Nature of Activities	Mandatory Accounting Treatment Under AASB 138
Research Phase (paras 54–56)	Original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding (e.g., laboratory discovery, evaluating alternative materials or algorithms).	**Expense immediately in Profit or Loss** as incurred. No intangible asset may be recognised. Research costs expensed in a prior period can **never be reinstated** (capitalised retroactively) even if the project later becomes commercially viable.
Development Phase (paras 57–62)	Application of research findings or other knowledge to a plan or design for the production of new or substantially improved materials, devices, products, processes, systems, or services prior to commercial production or use (e.g., designing, constructing, and testing prototypes or pilot plants).	**Mandatory capitalisation** as an Intangible Asset (Development Asset) if and only if the entity can demonstrate **ALL SIX** criteria in para 57 simultaneously. Expenditure incurred *prior* to meeting all six criteria is expensed permanently; qualifying expenditure incurred *after* that threshold date is capitalised.

The six cumulative capitalisation criteria in *AASB 138* paragraph 57 require the entity to demonstrate:

1. **Technical feasibility** of completing the intangible asset so that it will be available for use or sale.
2. **Intention** to complete the intangible asset and use or sell it.
3. **Ability** to use or sell the intangible asset.
4. **How the intangible asset will generate probable future economic benefits** (demonstrating the existence of a market for the output or the asset itself, or internal usefulness).
5. **Availability of adequate technical, financial, and other resources** to complete the development and to use or sell the intangible asset.
6. **Ability to measure reliably** the expenditure attributable to the intangible asset during its development.

4.3 Subsequent Measurement, Useful Life & Amortisation

After initial recognition, intangible assets may be measured under the cost model or—only in the rare circumstance where an active market exists for identical items (e.g., freely traded Australian taxi licences or fishing/water quotas)—the revaluation model. An entity must assess whether an intangible asset's useful life is **finite** or **indefinite**:

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- **Finite Useful Life:** Amortised on a systematic basis over the best estimate of its useful life (capped by any shorter contractual or legal life unless renewal is virtually cost-free and certain), commencing when the asset is available for use. Residual value is presumed to be zero unless a third-party commitment or active market exists.
- **Indefinite Useful Life:** "Indefinite" means no foreseeable limit to the period over which the asset is expected to generate net cash inflows—not "infinite". Indefinite-life intangibles (such as certain acquired trademarks or perpetual broadcast licences) are **not amortised**, but must be tested for impairment annually and whenever an impairment indicator arises under *AASB 136*.

4.4 Worked Numerical Example: R&D Project Accounting & Tax-Effect Schedule (AUD)

BioMed Australia Ltd commenced an internal project on 1 July 2025 to develop a diagnostic biosensor device. The company's financial year ends on 30 June, and the corporate tax rate is 30%. Under Australian tax legislation (ignoring concessional R&D tax offset nuances for simplicity of temporary-difference illustration), assume all R&D cash expenditure is immediately deductible for tax purposes as incurred (meaning the tax base of any capitalised Development Asset is A$0). Project milestones and expenditures are as follows:

- **1 July 2025 – 31 December 2025 (Research Phase):** Basic feasibility trials and laboratory exploration costing A$180,000.
- **1 January 2026 – 31 March 2026 (Early Development):** Prototype engineering costing A$120,000. However, commercial market validation and dedicated board funding approval were not secured until **1 April 2026**, when all six criteria of *AASB 138* paragraph 57 were formally satisfied.
- **1 April 2026 – 30 June 2026 (Qualifying Development):** Directly attributable prototype validation, clinical software coding, and patent registration fees costing A$260,000, plus A$30,000 of staff sales-training costs in preparation for launch.
- **1 July 2026 – 31 December 2026 (Final Qualifying Development):** Final tooling and regulatory approval testing costing A$190,000. On **1 January 2027**, the biosensor asset is ready for commercial production and sale, with an estimated finite useful life of 5 years and zero residual value.

Step 1: Classify Expenditures in FY2026 and FY2027

- **FY2026 (Year ended 30 June 2026):**
  - Research phase (A$180,000) → Expensed immediately in Profit or Loss.
  - Early development prior to 1 April 2026 (A$120,000) → Expensed permanently in Profit or Loss (cannot be reinstated once criteria are met on 1 April 2026).
  - Staff sales-training costs (A$30,000) → Expensed immediately under *AASB 138* paragraph 69(b).
  - Total FY2026 R&D and training expense = 180,000 + 120,000 + 30,000 = A$330,000.
  - Qualifying development expenditure (1 April – 30 June 2026) = A$260,000 → Capitalised as Intangible Asset (Development Asset in Progress).
- **FY2027 (Year ended 30 June 2027):**
  - Qualifying development expenditure (1 July – 31 December 2026) = A$190,000 → Capitalised, bringing total gross capitalised cost at 1 January 2027 to 260,000 + 190,000 = A$450,000.

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- Half-year amortisation from 1 January 2027 to 30 June 2027 (6 months of a 5-year / 60-month finite useful life):

$$\text{Amortisation}_{\text{FY2027}} = \frac{\text{Cost} - \text{RV}}{\text{Useful Life}} \times \frac{6}{12} = \frac{450{,}000 - 0}{5} \times \frac{6}{12} = \text{AUD } 45{,}000$$

Where: Cost is the total capitalised development asset cost (A$450,000), RV is the residual value (A$0), Useful Life is 5 years, and 6 / 12 reflects availability for commercial use from 1 January 2027 to 30 June 2027. Carrying amount at 30 June 2027 is 450,000 − 45,000 = A$405,000.

Step 2: Tax-Effect Summary (AASB 112)

At 30 June 2026, the carrying amount of the capitalised Development Asset is A$260,000 and its tax base is A$0, creating a TTD of A$260,000 and a closing DTL of 260,000 × 30% = A$78,000 (charged to deferred tax expense in P&L). At 30 June 2027, the net carrying amount is A$405,000 and tax base remains A$0, increasing the TTD to A$405,000 and closing DTL to 405,000 × 30% = A$121,500 (requiring an incremental credit to DTL of 121,500 − 78,000 = A$43,500).

Period / Date	Journal Entry Account	Debit (AUD)	Credit (AUD)
FY2026	Research & Development Expense (P&L)	300,000	
	Staff Training Expense (P&L)	30,000	
	Development Asset – In Progress (Intangible Asset)	260,000	
	Cash / Payables / Accrued Payroll		590,000
30 Jun 2026	Income Tax Expense (Deferred)	78,000	
	Deferred Tax Liability		78,000
1 Jul–31 Dec 2026	Development Asset (Intangible Asset)	190,000	
	Cash / Payables		190,000
30 Jun 2027	Amortisation Expense – Development Asset (P&L)	45,000	
	Accumulated Amortisation – Development Asset		45,000
30 Jun 2027	Income Tax Expense (Deferred)	43,500	
	Deferred Tax Liability (121,500 − 78,000)		43,500

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4.5 Cloud Computing (SaaS) Arrangements & Impairment Reversal Cap Proof

In contemporary Australian corporate reporting, entities routinely implement cloud-based Enterprise Resource Planning (ERP) platforms under Software-as-a-Service (SaaS) contracts. Applying the IFRS Interpretations Committee Agenda Decision on *Configuration or Customisation Costs in a Cloud Computing Arrangement (IAS 38 / AASB 138)*, a customer generally does **not** control the underlying cloud software (because the SaaS vendor retains ownership, hosting control, and update rights, and the customer merely receives a right of access over the contract term). Consequently:

- **Configuration and Customisation Costs:** Where configuration/customisation modifies vendor-owned cloud software without creating a separate software code asset controlled by the customer, the costs are **expensed as incurred** when the configuration services are received (or recognised as a prepayment over the SaaS access term if performed by the SaaS vendor and not distinct from the software access service).
- **Customer-Controlled Bridging Code:** Only if expenditure creates a distinct, separable interface or custom application programming interface (API) module controlled exclusively by the Australian entity—and all *AASB 138* recognition criteria are satisfied—may that standalone software asset be capitalised.

Worked Proof: Ceiling on Reversal of an Impairment Loss (AASB 136 para 117)

To illustrate why an impairment reversal cannot restore an asset above its depreciated historical carrying amount, consider a specialised bottling machine acquired by Gippsland Dairy Ltd on 1 July 2023 for A$600,000 (10-year useful life, straight-line, zero residual value, cost model). Annual depreciation in FY2024 and FY2025 was A$60,000, reducing the carrying amount at 30 June 2025 to 600,000 – 120,000 = A$480,000. At 30 June 2025, an impairment test measured Recoverable Amount at A$320,000, so an Impairment Loss of 480,000 – 320,000 = A$160,000 was expensed. Over FY2026 and FY2027 (2 years of the remaining 8-year life), depreciation was 320,000 / 8 = A$40,000/year, reducing the carrying amount at 30 June 2027 to 320,000 – 80,000 = A$240,000.

Suppose dairy export demand rebounds strongly by 30 June 2027 and the machine's Recoverable Amount is reassessed at A$410,000. Although Recoverable Amount (A$410,000) exceeds the impaired carrying amount (A$240,000) by A$170,000, the entity **cannot** write the machine back up to A$410,000! Under *AASB 136* paragraph 117, the reversal is capped at the carrying amount that would have existed at 30 June 2027 had no impairment occurred in 2025 (4 years of original depreciation at A$60,000/year):

$$\text{Reversal Ceiling}_{30\ \text{Jun}\ 2027} = 600{,}000 - (4 \times 60{,}000) = \text{AUD}\ 360{,}000$$

Where: 600,000 is original cost, 4 is elapsed years from 1 July 2023 to 30 June 2027, and 60,000 is original annual depreciation. Therefore, the carrying amount is increased from A$240,000 to A$360,000, and the maximum permissible **Reversal of Impairment Loss** credited to Profit or Loss

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at 30 June 2027 is 360,000 − 240,000 = A$120,000 (Dr Accumulated Impairment – Machine A$120,000 / Cr Reversal of Impairment Loss – P&L A$120,000). From 1 July 2027 onward, annual depreciation over the remaining 6 years reverts to 360,000 / 6 = A$60,000/year.

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