

AI Constructions Group – Materials Guide

Hebel (AAC Panels)

What it is:

Autoclaved Aerated Concrete (AAC) panels used for external walls and feature facades. Great for modern builds with clean lines and improved thermal comfort.

Best for:

Lightweight walling, thermal performance, modern rendered facades

Where used:

External walls (selected designs), Feature facades, Upper levels (weight reduction), Acoustic upgrade zones (where specified)

Pros:

- Thermal comfort improvement
- Fire resistance
- Lightweight vs masonry
- Smooth modern finish (render-ready)

Cons:

- Needs experienced installers
- Detailing around fixings is critical
- Upfront cost can be higher than basic masonry

Ideas:

- Pair with vertical battens for contrast
- Rendered Hebel + black windows for a sharp modern look
- Shadow-gaps around entry feature walls

Brick vs Lightweight Cladding

What it is:

Brick offers durability and thermal mass; lightweight cladding offers design flexibility and modern looks. Many premium builds combine both.

Best for:

Balancing durability, cost, style and speed

Where used:

Front facades, Upper-storey feature areas, Side/rear elevations where articulation is needed

Pros:

- Brick: low maintenance & durable
- Cladding: modern and flexible
- Hybrid: best of both worlds

Cons:

- Brick can increase structure/footing demands
- Some claddings require more detailing and maintenance
- Colour matching across materials needs care

Ideas:

- Brick sides + cladding front feature
- Brick base + lightweight upper level
- Textured cladding at entry to frame the door

Double Glazing & Low-E Glass

What it is:

Double glazing reduces heat transfer; Low-E coatings reflect heat while maintaining light. Great for Canberra climates and comfort-focused builds.

Best for:

Energy efficiency, comfort, noise reduction

Where used:

Living areas, West-facing elevations, Bedrooms (noise control), Large glazing zones

Pros:

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- Better comfort year-round
- Lower condensation risk
- Noise reduction
- Improves energy performance

Cons:

- Higher upfront cost
- Frame choice matters (thermal break improves performance)
- Lead times can vary

Ideas:

- Highlight windows for privacy + light
- Full-height glazing to living (with shading)
- Black frames for contrast

Insulation Systems (Wall/Ceiling)

What it is:

Insulation is one of the best value upgrades. A good system considers ceiling batts, wall batts, and airtightness details.

Best for:

Comfort, NCC compliance, energy savings

Where used:

Ceilings and roof spaces, External walls, Garage adjacency walls (comfort)

Pros:

- Improves comfort
- Reduces energy costs
- Better acoustic performance (some systems)

Cons:

- Needs correct installation (gaps reduce performance)
- Some upgrades impact build sequencing

Ideas:

- Upgrade insulation in bedrooms & living
- Add acoustic batts to theatre/office walls

Colorbond Roofing & Profiles

What it is:

Colorbond steel roofing is popular for modern Australian homes. Profile choice can impact street appeal and drainage detail.

Best for:

Modern look, durability, colour control

Where used:

Roofing, Fascia/gutters, Feature awnings

Pros:

- Durable and lightweight
- Modern colour options
- Fast installation

Cons:

- Rain noise without correct sarking/insulation
- Profile/detailing affects final look

Ideas:

- Matte finishes for premium appearance
- Black roof + light facade contrast

WPC / Composite Cladding

What it is:

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Wood-plastic composite cladding provides a modern, warm look without frequent repainting like some natural timbers.

Best for:

Timber-look aesthetics with lower maintenance

Where used:

Entry features, Upper storey accents, Alfresco feature walls

Pros:

- Modern timber look
- Lower maintenance
- Consistent colour/finish

Cons:

- Quality varies by brand
- Detailing and ventilation gaps are important

Ideas:

- Vertical cladding at entry portal
- Combine with render for contrast

LED Strip Lighting & Shadow Gaps

What it is:

Recessed LED lighting and shadow gaps elevate interiors with soft indirect light and architectural depth.

Best for:

Premium mood lighting and modern detailing

Where used:

Curtain pelmets, Hallways, Living feature walls, Vanities and stair zones

Pros:

- Premium feel
- Great ambience
- Modern finish

Cons:

- Needs planning early (power + recess)
- Driver access must be considered

Ideas:

- Curtain recess lighting in bedrooms
- Floating vanity LED underglow

Stone Benchtops (Engineered vs Natural)

What it is:

Stone tops transform kitchens and bathrooms. Engineered stones offer consistency; natural stones offer unique character.

Best for:

Kitchen impact, durability, resale appeal

Where used:

Kitchen island, Bathroom vanities, Laundry benches

Pros:

- High-end appearance
- Durable (with care)
- Wide range of styles

Cons:

- Edge detailing affects cost
- Some natural stones require sealing
- Lead times can apply

Ideas:

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- Waterfall edge to island
- Bold veining with simple cabinetry