

Appendix 4

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CASE STUDY

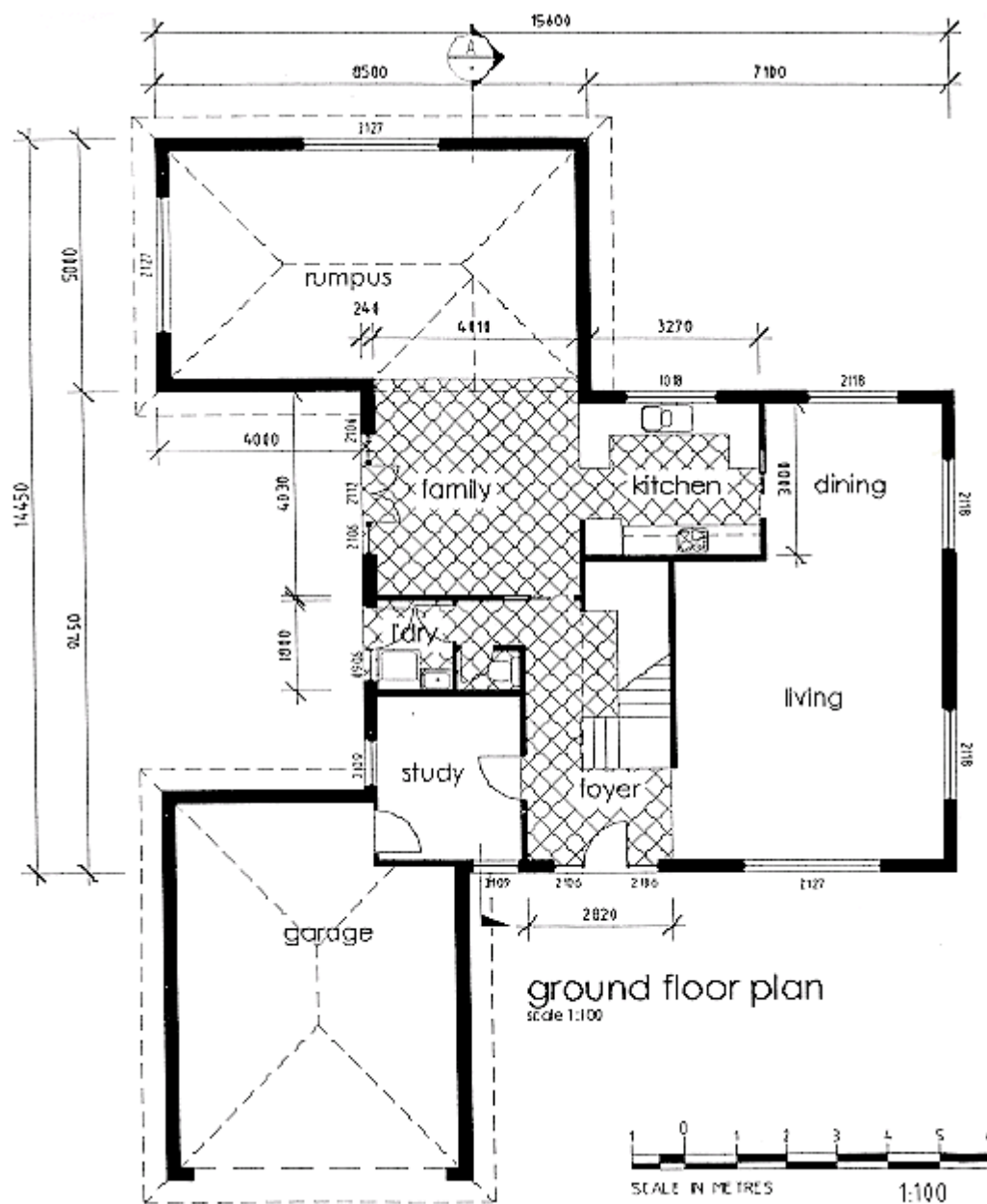
From 2 Stars to 5 Stars

This an example shows how a typical new home design will need to be modified to reach 5 Stars.

The design initially has a rating of only 2 stars. It features:

- 4 bedrooms with a total area of 250m²
- Brick veneer wall construction fitted with foil insulation
- Slab on ground floor
- Standard aluminium windows

GROUND FLOOR PLAN



Improvements to achieve 5 Stars: concrete slab (ground) floor

Key steps in going to 5 Stars from the current design are:

- Upgrade ceiling insulation to R 3.5
- Upgrade wall insulation to R 2.0
- Reduce glazing area of south and west windows by 4m² - to 25% of floor area
- Fit window frames with improved thermal performance
- Replace incandescent downlights low voltage units
- Install self closing exhaust fans
- Add sealing to gaps and cracks: foam around window frames; flexible sealant to architraves; weatherstrip external doors

Total estimated cost of modifications \$2300

Improvements to achieve 5 Star rating: timber ground floor

- Upgrade ceiling insulation to R 4.0
- Upgrade wall insulation to R 2.5
- Limit glazing area to 21% of floor area: reduce south windows by 4m², west windows by 6m², north windows by 2m²
- Fit window frames with improved thermal performance
- replace incandescent downlights with low voltage units
- Fit self closing exhaust fans
- Sealing to gaps and cracks: Foam around window frames; flexible sealant to architraves
- Weatherstrip external doors to high utility rooms; brush type to bottom of doors; weatherstrip external doors
- Fit external blinds to 50% of north windows and all west windows
- Create entrance lobby to separate living area: add door and wall between entry and living room

Total estimated cost of these modifications	\$4100
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