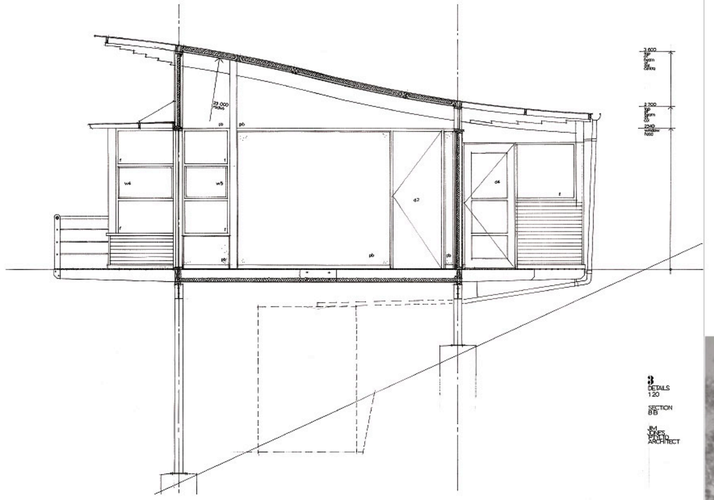
James Jones Lucaston, Tasmania, Australia Suber House



Architect: James Jones
Client: Margot and Ken Suber
Consultants: Gandy and Roberts Consulting Engineers
Builder: JR & JL Lewis
Beams, columns: Tasmanian Timber Engineering
Sub floor columns: 165mm dia mild steel
Sub floor beams: 200 UB 25 mild steel
Floor joists: Oregon pine
Columns: Tasmanian oak, glue-laminated, finger-jointed
Roof beams: Tasmanian oak, glue-laminated, finger-jointed, shaped to 25m radius
Infill studwork: Tasmanian oak
Flooring: Tasmanian oak and myrtle, tongue and groove
Decking: Celery top pine
Ceiling: Plywood
Roof purlins: Tasmanian oak slice-cut veneer, celery top pine
Windows and doors: Western red cedar
Roofing: Custom Blue Orb
zincalume, shaped to 25m radius
Internal walls: Plasterboard
Contract sum: A$89,000 (excluding deck, joinery)
Drawings: James Jones
Photographers: Leigh Woolley, James Jones
Model: David Krumins
Completed 1988

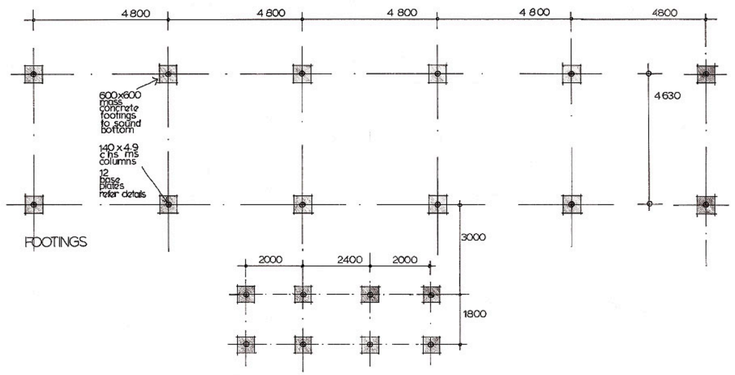
Architect's statement The house is located on a steep hillside overlooking a valley in southern Tasmania. The very difficult ground conditions, with exposed rock and a slope of 1:2, suggested a thin plan form, one room wide and thirty metres long, running with the contour. All main rooms enjoy the valley outlook, and access to decks and verandah with the living areas are oriented north.

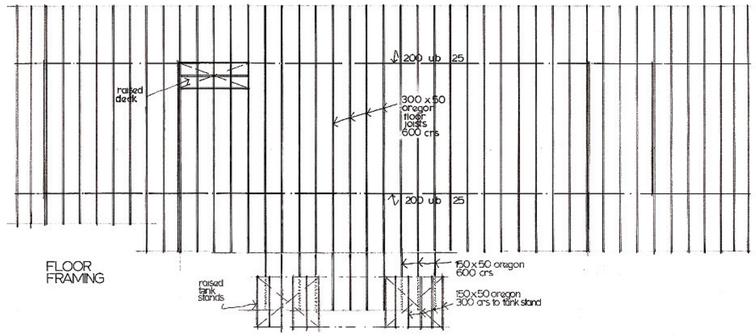
The only approach to the house is from above, making the roof design a central element. The idea here was to have one big, hovering roof in the landscape, with no flashings or roof plumbing other than a gutter. The roof acts as a screen to the house interior (for privacy from the public road above the site), and deflects the eye beyond and across the valley. Initially the gutter was conceived of as a huge longitudinal trough resting on structural water tanks – a reinterpretation of the Australian verandah – however this element remains unbuilt.

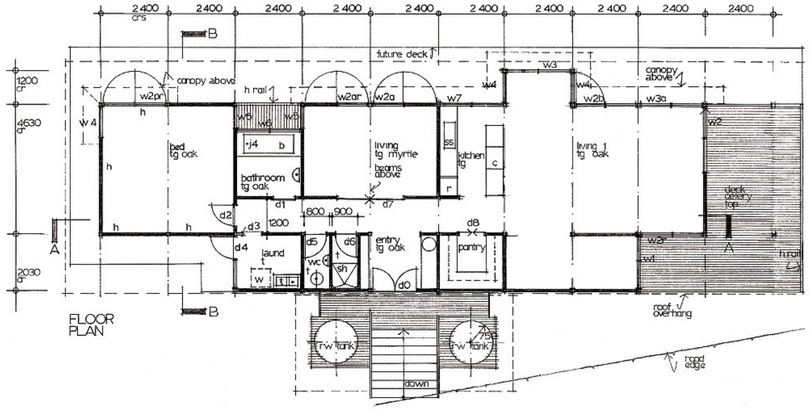
Being remote from town services and threatened by bushfire, the building conserves its own water supply, with water tanks, a fire hose reel and generator located beneath the floor. The roof area is about 200m^2, providing adequate rainwater catchment area, with 130m^2 of enclosed interior space beneath.

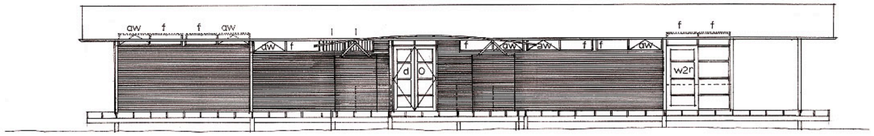
Curved laminated Tasmanian oak roof beams bring the roof and ceiling alive and accentuate the view up, out, and into the landscape beyond. The modern Tasmanian vernacular is a skillion roof: I put a gentle warp in it. It is a sine wave drawn with a compass constructed from my father's yardstick – the kind of compass that geography teachers once used for pointing to places on maps. The roof beams are double-curved, forming a low-slung sine wave with a twenty-five-metre radius. The idea of a repetitive cross section came about through a desire for economy. Beam laminates are feathered or stepped at each outer end, giving a thin leading edge. Double-curved, corrugated steel sheeting completes the roof. **James Jones**

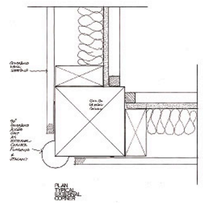
Commencing at ground level with isolated concrete piers supporting steel columns and beams, the building form is a single repetitive structural section. At floor level the material changes to timber, with laminated Tasmanian oak columns and roof beams as the primary frame, timber studwork in-fill, and window and doors as drop-in panels, allowing planning flexibility. The laminated curved roof beams were developed through models and working drawings, mainly at 1:2 and the 1:20 section.
Plywood sheets form the ceiling and fit between dressed roof purlins. Plywood thickness was determined by deciding to follow the roof beam geometry (without precurving) and detailed to sit neatly on top of beam edges. Plywood joints are expressed as 5mm shadows to avoid edge or cover strips, and to allow dimensional tolerance given the double-curve geometry.
External walls are sheeted with corrugated steel running horizontally, with steel ridge caps employed as vertical corner flashings, with corrugated profiles expressed.
Internal wall panels are sheet plaster up to 2400mm high, with glass inserts to the underside of beams to accentuate the hovering roof.
To achieve economy, the mathematical dimensions (whether structural section, material size, room dimension, glazed apertures, span or height) were all tightly controlled, from the initial sketch through to documentation. The building was detailed for tender at scales of 1:100, 1:20 and 1:2.]]

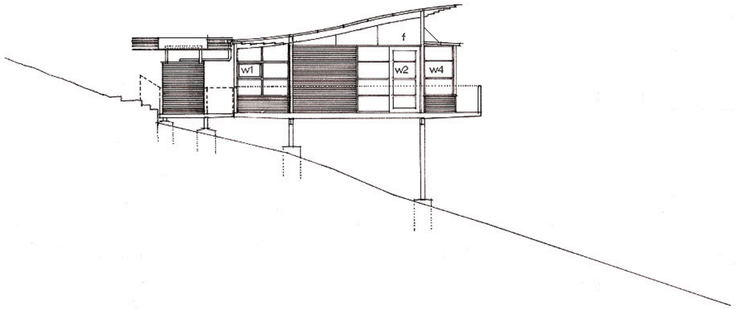


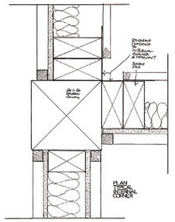


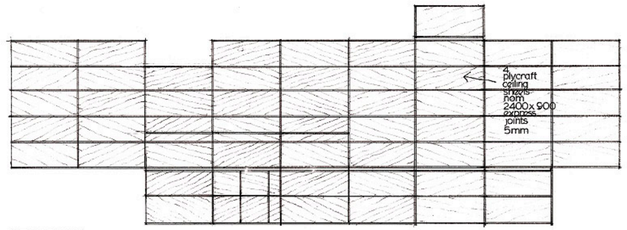












REFLECTED CEILING