

Contemplating a sustainable renovation or extension?

Check out Planet Architecture top 10 tips.

Top tip No.1: Renovate rather than demolish

Most existing homes have great potential for becoming bright and airy and more economical too. Renovating is a better move environmentally as it saves materials and energy. You will find it easier on the wallet too.

Top tip No. 2: Rework the floor plan rather than extend

Sometimes, a floor plan is so dysfunctional that a well designed extension seems to be the only answer. Having a good look at the current layout sometimes allows to determine that the floor area is right and all you need is an internal remodel.

Hot tip No. 3: Extend only to one side of the house

Extensions adding a few square meters to multiple areas of the home are fiddly to build and will cost you a lot more per new square metre. So when possible, add a larger space on one side rather than smaller spaces on all sides.

Hot tip No. 4: Orient to the sun

We will never say it enough: bringing warming sunshine and plenty of natural light inside is the number one boost you can offer yourself and your home. See how living areas can be moved to the North side of the home, and think of bringing light from the roof if the North face of the home is on boundary or close to a fence. North facing verandahs are a curse for passive solar homes and are best located on any other side.

Hot tip No. 5: Bump up the insulation

Feel free to exceed minimum legal requirements for insulation in walls and roof by combining a good reflective insulation with a thick layer of fibre-free insulation. Weatherstrip windows and doors. Consider retrofitting double-glazing to your windows, and specify double-glazing for new ones.

Hot tip No. 6: Provide thermal mass

Unlike insulation which is light and acts like a doona on your bed, thermal mass is heavy and, when properly insulated, will provide year-round stability to the internal temperature of your home. Consider a concrete slab floor if you are extending or internal walls in brick or blockwork: they will stay warm long after you stop the heater at night and stay cool long after the sun has risen in summer!

Hot tip No.7: Conserve materials

Nothing beats the character of recycled bricks or timber. You can buy them or reuse them directly from your own building site! Specify green concrete, it uses recycled aggregate and a by-product ash to replace some of the cement – the curing of which produces vast amounts of carbon dioxide.

Keep to recycled hardwoods, plantation pine and avoid exotic timbers as most are not sustainably harvested. Fast-growing bamboo is fine for floors but specify the unfinished variety so you can have a non-toxic finish applied on site.

Hot tip No. 8: Protect indoor air quality.

Kitchen joinery is usually made of particle board or MDF which emit formaldehyde, a toxic gas. These boards are now available in the E0 (emission zero) variety, which has near zero emissions. Use natural paints instead of acrylics which coat your walls in plastic, and think of replacing toxic polyurethane finishes with fine linseed oil for timber. There are also natural glues for wood and tiles that can be used as healthy alternatives to conventional PVC-based ones. Avoid ducted heating which moves dust around and irritates the lungs, prefer hydronic panel heating or gas wall heaters.

Hot tip No. 9: Harvest sunlight and rainwater

Prefer round galvanized iron tanks (they have less embodied energy than the plastic ones) and solar panels with evacuated tubes, the most efficient type to date for water heating. Choose water efficient taps and shower heads. Take advantage of substantial rebates to install photo-voltaic panels to generate power and sell the surplus to the grid. While this type of equipment is initially costly, it will afford you some independence from water and energy companies.

Hot tip No.10: Small appliances are beautiful

Fridges, cooktops, ovens and barbeques now come in super large models which use a lot more energy than small to medium ones (for a comparable energy efficiency). They also contain more embodied energy. So keep an eye on actual energy consumption, not just on the star rating. Simpler and smaller models are best, Australian made is an additional bonus. Use compact-fluoro globes.