

# A RAPID AND DURABLE FLOORING SYSTEM

WHY DIG PIER HOLES OR WAIT FOR CONCRETE TO SET?

Eco-Villa's galvanised steel based flooring and foundation system provides a durable and rapid, fire and termite resistant foundation for any home or decking solution.

Through years of experience, Australian company Eco-Villa Australasia has developed a unique sub-floor system comprised of galvanised steel tophat bearers and joists. Each subfloor system is engineered to suit construction and environmental demands resulting in a quicker build, less wastage and a stronger subfloor.

With four different profiles (90, 150, 230 and 300mm) available, as well as suitable edge finishes, optimal spans of up to 5m for joists and 9m for purlins, are able to be achieved. The purlins also provide an ideal option for curved or skillion roofs.

With no requirement for concrete and easily adjusted pier heights, the subfloor foundations can be completed in a significantly reduced timeframe in comparison to competitors' systems. This system is cheaper than other comparable steel and timber systems on the market.

Fabricated from warp free and recyclable 1.2mm zinc coated galvanised steel, the foundations

and sub-floor system are termite proof, corrosion resistant and able to withstand many environmental disasters such as floods, earthquakes and fires. Another feature is that the bearers, joists and purlins can be cut to length to 12 metres, minimising wastage and dramatically reducing build times.

## **Simplicity of construction and cost effectiveness:**

The tophat and anchor flooring system has been designed to be easy and adjustable from the design phase through to the transport and construction stage.

Transport costs are reduced as the tophats can be easily stacked on top of each other, allowing efficient transport and handling from factory to site without the volume or weight of timber or tubular steel sections.

Once on site, the tophats can be lifted manually without the use of a crane, thus they can be carried and installed virtually anywhere, and, as they can be cut to length and overlapped, are popular choices for remote locations.

Without need for land excavation and/or concrete and reinforcement, the foundations and subfloor can be assembled by an owner builder in a substantially shorter time frame, saving time and the resulting costs associated with the various excavation, concrete and building trades that are required with other systems. It is a one stop shop that is applicable to most situations.

Once the easily installed foundations are completed and screwed using self drilling tek screws, the bearers and joists can be fixed into position. The floor is then levelled and insulation and flooring fixed in place.

## **A raised foundation:**

With minimal earth disturbance, the subfloor system can be elevated from 350 mm to 2.6 metres above the ground, allowing excellent building flexibility as well as space for living or storage.

The elevated foundation works well in sloping and flood prone areas, low level flooding and water flow under the house will not affect the dwelling above or allow the accumulation of debris around the piers.

Easy adjustment of pier lengths and subfloor heights, combined with a reduced number of anchor points, allows the system to be used on flat or sloping land with ease and has minimal impact in ecologically or geologically sensitive areas.

## **Fire resistant:**

Galvanised steel is naturally non-combustible and can be utilised safely in bushfire prone zones as is. Satisfying up to BAL 40 (and Flame Zone with appropriate wall cladding) bushfire requirements, the tophats are able to serve as purlins, bearers and joists and in conjunction with a steel frame, eliminate the need for wood, rendering the structure non-combustible. When used in conjunction with Australian made 'Green Insulation', steel cladding, and fire resistant windows and shutters, your home is supplied with high levels of fire protection, limiting ignition and restricting propagation.

## **Environmentally conscious:**

The steel used is both reusable and recyclable and requires no treatment for termite resistance. Each flooring system is cut to length and supplied with the respective layout, minimising wastage of both time and resources. Combined with reduced excavation and ground disturbance, this system provides an ideal solution for ecologically sensitive areas.

Throughout the duration of the building life there are considerable cost reductions in choosing to use a steel frame foundation, concerning both ease and flexibility of construction as well as maintenance during the building's life.

The Cost of supply starts at \$55/m<sup>2</sup>, which includes the foundations and bearers and joists.

## **Company history:**

Eco-Villa Australasia was developed due to an increasing demand of steel frame housing and the need to provide consumers with a complete custom design option and building system.

Eco-Villa's team of designers, engineers and builders work to reflect the environmental focus of the company and its products, aiming to produce products and dwellings that are environmentally sustainable and cost effective.

Each project is individually designed and evaluated to meet the objectives of the project.

## **Eco-Villa Australasia**

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*The anchors provide a concrete free alternative and provide a low impact solution.*



*The bearer and joist system combines to form a flat and sturdy building platform ready for any house or deck.*







*It is a logical choice for owner builders, whether building on flat or sloping land or in termite or fire prone areas.*