

Steel.



The advantage.



STEEL frame
S O L U T I O N S

'The Smart Way To Build'

Steel Frame Solutions.

The preferred choice for progressive builders

Not surprisingly the use of steel framing in domestic housing construction is rapidly on the rise.

Since beginning operations in 1999, Steel Frame Solutions has played a pivotal role in driving demand and growth for steel frame construction in residential housing.

Our extensive knowledge and experience in supply and manufacture and the consistency, accuracy and quality of our products combined with our leading-edge technologies and our willingness to invest in dedicated state-of-the-art systems and processes, places us at the forefront of an industry segment that will ultimately overtake timber.

These are just some of the reasons why Steel Frame Solutions is fast becoming the preferred choice for more and more progressive builders throughout Australia. But there's a lot more to our business than simply manufacture and supply of high quality steel framing.

Design and Drafting

It could be argued that our Design and Drafting department is the epicentre of our entire operation. At Steel Frame Solutions we use the latest technology for plans and documentation to ensure the products we deliver are of the absolute highest quality. The Design and Drafting department prepares all the relevant documentation for manufacture, on-site construction, councils and surveyors on all types of projects both residential and commercial.

We also provide design or construction assistance if required to architects, engineers, developers, builders and carpenters to ensure the Steel Frame Solutions system is matched perfectly to their needs.

Structural Certification

Steel Frame Solutions frames are certified by an engineering package developed by Bluescope Steel. The certification is based on the requirements set out by the relevant Australian Standards and the Building Code of Australia. Steel Frame Solutions is also a Quality Endorsed Company.





Training

Steel Frame Solutions has always worked closely with The National Association of Steel-Framed Housing (NASH), TAFE, the Housing Industry of Australia (HIA) and the Master Builders Association (MBA) to develop steel framing courses for builders, carpenters and frame erectors.

On completion of a course, participants will have extended their skills to include steel-framed construction and receive a Certificate of Completion. Trades people with formal carpentry qualifications will receive a Statement of Attainment for the nationally endorsed competency standards.

For further information regarding the NASH Steel-Framed Housing Courses available throughout Australia contact Ken Watson, *Executive Director of NASH* on (03) 9809 1333, email nashic@ozemail.co.au or visit the association's website at www.nash.asn.au.

Technical Information

All Steel Frame Solutions frames come with job specific details and documentation. You can call us direct in Victoria on (03) 5338 4800 or in South Australia on (08) 8285 3811 for further assistance or information. We offer quick and concise answers to any queries, whether they come from site, architects/designers or builders.

Key Features

Steel Frame Solutions frames are;

- Easy for follow-on trades to work with
- Straight and true, will not warp or shrink
- 100% termite-proof, no need for chemicals
- Durable, strong and lightweight
- Environmentally considerate
- Non-combustible
- 100% recyclable
- Guaranteed by a 50 year warranty*

*Conditions apply.



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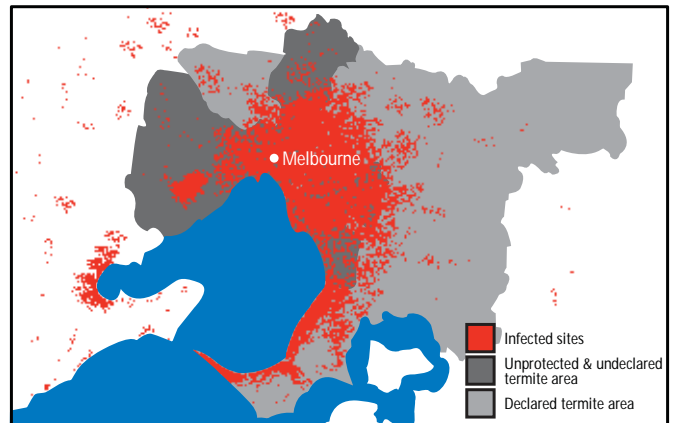
'The Smart Way To Build'

Building with Steel Frame Solutions frames has its benefits

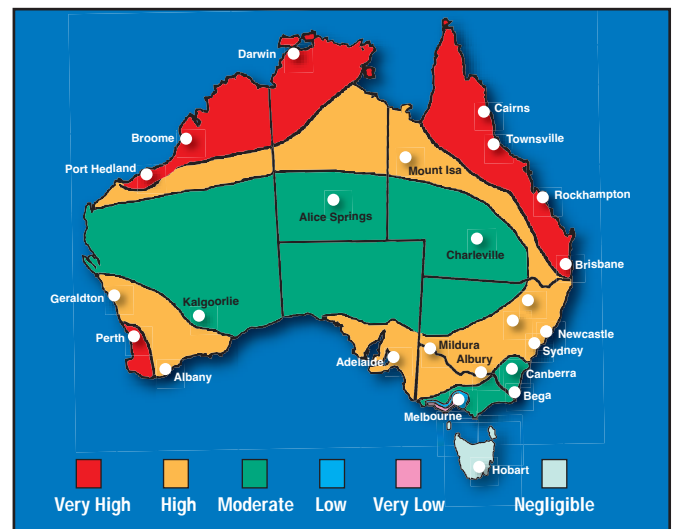
Steel Frame Solutions frames are the smart way to build. They're quick to erect and are designed around basic construction principles. Pre-fabrication and modern fixing techniques make construction simple, requiring minimal on-site supervision. Follow-on trades have the added benefit of pre-punched holes for services so no more drilling. Our frames are dimensionally stable, they will not twist, warp, sag or shrink and they stay perfectly straight which means fewer call-backs. The benefit to you is that you can have more homes under construction at any one time. The weather certainly won't alter the quality of the frame and you will never have to straighten walls to prepare for plasterboard.

Steel framing is also 100% termite proof. There is no need for any expensive chemical or mechanical barriers. But that's not the only OH&S benefit. Due to the use of high tensile steel, Steel Frame Solutions frames are strong, but also lightweight. This means you can actually run smaller construction teams with less expensive tools! Pre-fabrication reduces site wastage and a cleaner site means less likelihood of accidental trips or injuries.

Agreed lead times and guaranteed on-time deliveries not only help you plan your time and your trades but also reduces the risk of theft from site. In the unlikely event of theft of steel frames from sites, because of our extensive client base across Victoria and South Australia, we can replace materials quickly, helping you to stay on schedule.



Termites infest unprotected and undeclared areas in Melbourne and surrounds
Source: CSIRO 2005



Termite hazard in Australia





Steel Frame Solutions offers steel wall frames and trusses, structural steel solutions, intermediate and sub floor systems, roof battens and ceiling battens. We manufacture our products to suit almost any floor plan or construction style. Every Steel Frame Solutions frame comes with structural certification and is engineered for life. Another major benefit of building with Steel Frame Solutions is that your reputation and your customers are covered by a 50 year Bluescope Steel warranty*.

A Steel Frame Solutions frame offers you greater design freedom than other materials. Our trusses offer excellent spanning capabilities, so you can enjoy newfound freedom with large open space designs. Open plan living is integral with contemporary designs and steel framing is the best way to achieve maximum open spaces. Steel Frame Solutions frames are compatible with all other building products, internal and external linings, and they are well suited for steep or sloping sites.

For the environmentally conscious builder, steel framing is 100% recyclable. Currently 60% of all steel used in Australia is made from recycled scrap. When steel is recycled, it can be recreated to exact performance and structural criteria. To put steel framing into perspective, an average house frame can be fabricated by recycling around 6 cars or alternatively the use of a timber frame will consume around 40 to 50 trees.



'The Smart Way To Build'

Frequently asked questions

Q. As a builder, why should I build in steel?

A. In a nutshell, because all indications are that consumer driven demand for steel framed homes is rapidly increasing. Steel frames represent the future of house framing due to continual product improvement and consumer awareness programs offered by us. People are more conscious of the continual threat from termites. With steel frame construction you build the major termite management into the building, rather than add it on. A steel framed house is a quality product that delivers to the customer long-term peace of mind and cost savings. Callbacks are reduced and your reputation can be enhanced. Although steel frames require slightly different techniques they are quick and easy to erect. Because steel has consistent strength and complies with strict standards and tight tolerances, every stud is a good stud. Steel frames are lightweight and easy to handle, time is not lost sorting to select suitable pieces, there is no need for call backs to straighten framework on-site, and wastage of material is reduced.

Q. Is steel framing expensive?

A. No. Steel framing is very competitive on price, particularly when you consider its quality. A steel frame gives value for money. It is a premium quality product that sets the benchmark. It has many advantages over timber, even the best quality timber. The fact is that discerning buyers are increasingly demanding steel frames. A Steel Frame Solutions frame remains straight and true, even if exposed to the weather for an extended time.

Q. Will the Steel Frame Solutions system be approved by councils and lending authorities?

A. Yes. Steel Frame Solutions provides 'Certification Documents' to satisfy council requirements as a matter of routine, and lending authorities see steel framing as an excellent long-term investment.

Q. Will I need costly tools to build a steel frame home?

A. No. You actually require fewer tools to build a steel frame than what you would require for a timber frame.

Q. Will I be able to find qualified plumbers and electricians to work on the steel frame?

A. These trades have been working on commercial steel buildings for years and they find steel framed houses very easy. In fact many prefer steel frames because all of the

studs are pre-punched, making for easier installation of cables and pipes.

Q. Is steel framing noisy?

A. No. The CSIRO conducted a study in which they surveyed a number of occupants of steel framed dwellings. They published the results in Building Materials and Equipment, Vol. 17. They found that most occupants either reported no sound emitted from the frame, or if they did, said that it constituted no problem. In considering the occurrence of thermal noises in steel framed houses it should be kept in mind that considerable noise may be apparent in conventional dwellings. In fact four of the subjects volunteered the information that there was less noise in their present homes than in timber brick veneer houses they had occupied previously.

Q. Why won't a steel frame rust?

A. Steel frames are made of steel protected against corrosion by a hot-dipped metallic coating of a zinc-aluminum alloy. These coatings conform to the appropriate Australian standards or their equivalent. In external applications such as roofing these products are exposed to the elements and have excellent durability, so in less exposed applications such as inside the building envelope they weather far more slowly. Where there are cut edges the galvanic action, or sacrificial protection, of the coatings protects the exposed steel edge against corrosion.

Q. Is a steel frame safe when exposed to a live electric wire?

A. Yes. Steel frames are safe because they are earthed. It is a requirement that all new housing be fitted with circuit breaking safety devices, so there is little chance of you touching anything live. A broken or pierced wire in a timber frame can remain live and leaking current can cause troublesome faults and fire risk.

Q. I have heard that steel frames are made of thin steel. How do I know they will be strong enough?

A. The properties of steel are known and consistent, and conform to Australian standards or their equivalent. Steel framing components are designed around those properties with an extra allowance included for safety. The Steel Frame Solutions system uses high tensile steel components with appropriate jointing methods, and is engineered to pass strict performance tests.



Q. Do homes with steel look different?

A. Yes, they look better. Walls, ceilings and roofs do not have ripples or bumps in them and there are no “nail pops” in the plasterboard linings. Roofs of steel-framed homes do not sag over time, so the finished job keeps looking good. In fact because of steel's strength you can design your home with larger open spaces whilst the exterior looks like any normal home.

Q. How much flexibility do I have with design?

A. Freedom of floor plan and architectural style is practically unlimited. Steel Frame Solutions can produce almost any one or two storey home design seen in the Australian market today. Furthermore, it is possible to produce designs in steel that are difficult with other materials. By taking advantage of this feature you can often build with less expense than by using more conventional materials.

Q. Does a steel frame interfere with radio or television reception?

A. No. Electro-magnetic waves can diffract around steel as easily as timber. Waves pass through the spaces between the studs, allowing the use of all household appliances without any interference.

Q. How does a steel frame perform in a fire?

A. When a fire breaks out in a building the safety of individuals is paramount. Unless quickly brought under control, a fire can intensify and spread at frightening speed and therefore it is most important to have warning devices installed and for people to be able to get out of the building as quickly as possible. Smoke and heated air and/or asphyxiating gases are responsible for about 75% of fatalities in house fires. A steel frame will not burn. It will not therefore contribute to the fire or its spreading, and will not release smoke and carbon dioxide. Electrical faults cause many fires in wall cavities. An electrical fault cannot ignite a steel frame. If fire gets into the ceiling and ignites timber trusses it can spread very rapidly to the rest of the house. In a bushfire the point of ignition is often the roof cavity when burning embers are blown in under the eaves or tiles. House fires have been known to break through ceilings into the roof cavity. A steel roof truss cannot be ignited in either of these ways.

Q. Have steel framed buildings been proven over time?

A. Yes. In Australia steel framing has been used successfully in housing since the early 1950s. The Australian steel framing industry has a well-earned reputation for being highly innovative. Today's framing represents the results of years of research, testing and product improvement. It is a thoroughly engineered product. In responding to the needs of the Australian customer, the steel framing industry in Australia leads the world with its technology. Don't forget that steel frames have been used in commercial buildings for many years because of their superior attributes.

Q. What underlies the quality of a steel frame?

A. The steel in a Steel Frame Solutions frame is produced by Bluescope Steel, a quality-accredited producer to appropriate National Standard Specifications. The components are precision manufactured and assembled to very tight tolerances using advanced techniques. Computer-aided design, computer-controlled manufacture, and advanced engineering, ensure the home buyer gets the design he or she wants, and that installation is quick and easy. Strength and performance are engineered into the frame.



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