Steel VS Concrete&Bricks VS Wood

It’s no secret that steel structures are typically a better choice than most other materials like wood and even brick, but what about concrete? Concrete has been a construction staple for years, it’s hard to think of something else being a better option; but prefab steel takes that title for a number of reasons! There is a reason why more and more municipal building departments have outlawed brick buildings; they're beautiful but are significantly more vulnerable to Mother Nature. Not only does this affect the lifespan of a brick building, it can also increase the time, cost, and labor involved in building it.

Durable

Concrete may be hard and strong generally, but it’s still a mix of sand, gravel and chemicals bonded with water to keep it all together. Even in its solid state, it has the potential to shrink, shift, decay and even crack – things that don’t happen to steel in the least.

Safe

Both during and after the construction process, steel is much safer than handing concrete and bricks. Our prefab buildings are partially constructed off site, meaning there is much less room for accidents since there's no raw materials to cut, bend or pour into place. Also, as soon as a prefab steel structure is completed, it's already in its strongest state – while concrete needs a bit of time to dry and cure. Not only that, they're better able to handle stronger outdoor elements from the moment the building goes up instead of having to wait.

Speedy Construction

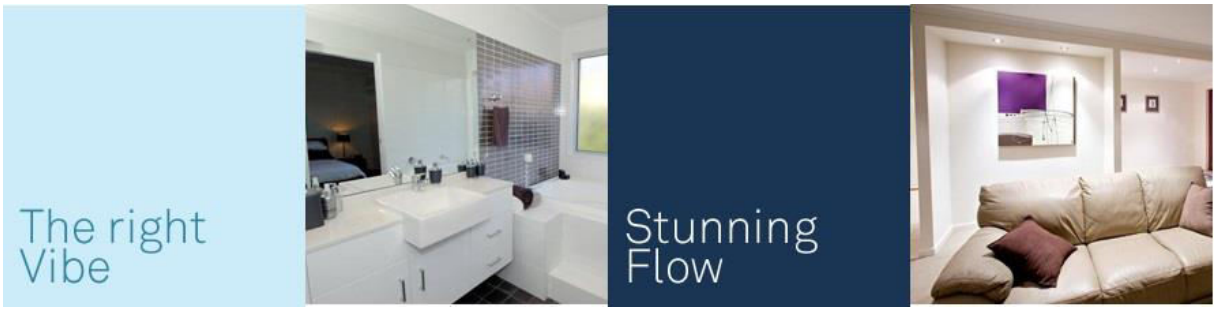
Prefab steel is far ahead of concrete in this regard. Since many of the parts themselves are put together off-site, the process starts before they even get to you and your job site. Depending on the size of your project, this can cut a project that would normally take a few weeks or even months with concrete down to a mere few days from start to finish. From expert engineering to innovative design, you'll save plenty of time putting the structure up in comparison to concrete that needs to be poured and allowed to set – something that might be further delayed with bad weather or moisture.

Cost

Having a simpler and quicker construction process affects the cost in quite a few ways. In addition to lower up front costs in comparison to the raw materials to create a similarly sized building, you will always not need as money laborers, particularly specialized contractors, on site to get your job done. You can anticipate saving around 10% between the costs of building with concrete instead of building with concrete afterwards.

Flexibility

What might be the best feature of steel structures is their flexibility and the ability to do renovations later after the fact. Our steel structures have no obstructive support beams, meaning the interior is completely open concept and able to be used however works best. With steel buildings, whatever you might need in your building's interior can be done as long as you plan the customization early on in the project. You can also do renovations and expansions down the line with very little disruption to the rst of the structure. With concrete, you will have to demolish plenty of the structure in order to add on newer areas and more space.



A building's frame is its backbone so it's essential that it's safe & secure. Read more about building your home with steel vs timber frames or bricks

In the debate on steel vs timber frames, there are many misconceptions and myths that confuse home builders. It is important to understand the options available and the implications that your choice can have on future costs and circumstances for your home, when deciding whether to build your home with steel vs timber frames.

The risks associated with building with timber frames

It is fair to suggest that timber is fast becoming the old fashioned way to build. It allows construction errors to be rectified on-site with a hammer and nail – which is cheap and easy for the builder but not very reassuring for the homeowner. Timber also contains natural weaknesses and is susceptible to damage.

Timber is a natural cellulose material and is milled with all its natural imperfections and inherent weaknesses. Timber frames are susceptible to damage in both termite infestation and internal surface stress fractures, the costs of which can be substantial. In comparison, BC steel frames and trusses, are engineered to be stronger, more secure, and most importantly, termite proof.

According to research conducted by Archicentre, one in five Australian and USA homes will suffer termite infestation within a five year period[1]. Repair costs are commonly in excess of 40[2] k. Termite inspections and preventative treatments cost an additional 1.8k a year[3], with no guarantee of even preventing a termite attack. When it comes to protecting your home from termites, in the steel vs timber frames debate, steel is clearly the superior choice.

BC steel frames are engineered and fixed with patented brackets and connections. These unique and clever connections eliminate movement, and therefore prevent noise. When deciding between steel vs timber frames for your new home, know that BC steel frames are expertly engineered for silence. In contrast to BC steel constructions being riveted and bolted into place, timber frames are butt jointed and fixed with nails. As the product reacts to atmospheric moisture, heat and cold, it shifts and warps, allowing movement and therefore noise.

Steel vs Timber Frames: movement

Slight movements in house framing can result in what many refer to as ‘creaking’. It is a common misconception that steel frames in particular are ‘noisy’. Most framing products experience some movement at fixing points, however it is important to note that not all frames experience noise. Unlike timber and other steel framing systems,

Another common problem caused by frame movement is the cracking of plasterboard. Being a water-based cellulose product, timber shrinks and expands according to environmental conditions. It does so at a rate that directly conflicts with plasterboard, causing the lining surface to crack, the peaking of ceiling joints and cracked cornices[4].

Unlike timber, BC steel frames are backed by a **30 Year Warranty*** and do not warp, twist or shrink, providing a solid and true frame for plasterboard. This eliminates the surface splitting and cracked cornice problems associated with frame movement. In the debate on steel vs timber frames, BC steel frames is the smart choice for keeping your walls straight and true.

Steel vs timber frames in environmental impact

Environmentally aware home builders often ask the question, “Are steel or timber frames better for the environment?”. Using steel frames conserves forests and prevents the need for the demolition of natural vegetation to make way for plantations. Furthermore, the precision design and manufacture of BC steel frames ensures that there is very little waste product during the manufacture or building process. Whereas, due to the imperfect nature of timber, wastage must occur when cutting timber pieces to the desired length, and to remove flawed areas. BC steel frames are 100% recyclable and are made from a percentage of recycled steel. Conversely, timber frames are non-recyclable and are created from new trees every time.

It is also environmentally important that your home is energy efficient in the long term. BC steel framing creates better seals around windows and doors, and when combined with insulation, creates highly efficient thermal regulation. This reduces the amount of heating and cooling required in your home, dramatically reducing your long-term energy consumption compared to timber frames. When deciding on steel vs timber frames for your new home, keep in mind the long term cost of energy bills on the environment and on your wallet. For more information read our page on