



**BROWN
ENGINEERING
GROUP**

**BUILDING A STEEL
STRUCTURE?**

Check out our tips!

You've got a new project requiring a steel structure and building work.

Going through your mind is... *'Oh man!, how am I going to get this done amongst everything else on my plate?'* The new project has, 'HEADACHE' written all over it! You've got a business to run, a job to do and probably don't need an extra project right now! That said, you are making a significant investment and it needs to be done properly. How can you get it done in the most cost effective and pain free manner?



1

USE A GREAT PROJECT MANAGER

- It all starts and ends with project management.
- You are probably reluctant to hire a Project Manager; YOU DON'T HAVE TO!
- Great Structural Steel contractors will have competent Project Managers that can guide you through the process and keep you away from the pit falls.



2

KNOW YOUR SITE... GET IT SURVEYED, DO YOUR DUE DILIGENCE AND START OFF ON THE RIGHT FOOT

- We have seen projects get off to the wrong start here! Mistakes here can cost more than the project itself.
- At Brown Engineering Group we have seen clients rush to buy a piece of land from an agent, look at it from the roadside and say, 'we'll take it!' In that particular case a land deal was done and when Brown Engineering surveyed the site behind the 'maize field' in the middle of the site was an open municipal sewer which could not be built over, consequently the land had to be sold for a lesser value and the project was delayed.
- Another common costly mistake is not knowing your site boundary pegs and building lines. We have witnessed clients commencing construction only to find out that they were encroaching on a neighbouring stand. To move building foundations at this point is a massive cost and a gross error!
- Know your soils. Foundation costs vary hugely if piled foundations are required vs standard pad and stub column foundations – this can throw out budgets if soil reports are not done.
- Our advice here is to get a topographical survey and soil report done. We often feel this is THE BEST money spent on the whole job.
- Added to the above a drone survey is hugely helpful, something Brown Engineering Group can do and costs very little for the perspective it gives.

EXPERT ADVICE AT A GLANCE

- Information gathered during physical due diligence can significantly impact decisions.
- A drone survey is hugely helpful and costs very little for the perspective it gives.



3

GET A BASE BUILDING BUDGET QUICKLY

- Know early on what you are in for in terms of dollars and cents.
- So often we see clients get lost in the details and specifications only to gawp at the final price after all the bells, whistles and accessories have been added to the quote.
- A base building budget is something that can happen super-fast, you will know the starting budget and can build up the spec from there.



4

TAKE TIME TO BRIEF AND GET IT RIGHT, KNOW YOUR OPTIONS!

- When buying a steel building you are trying to balance the cost, time and quality triangle to best suit your needs.
- This all starts with having a steel building contractor that can extract a good brief from you.
- It makes no sense for a steel building contractor to try sell you an expensive bespoke solution when maybe they have a standard product that costs half the price and takes half the time because the materials are in stock.
- Our advice here is to use a contractor who can guide you well through the briefing process to determine what it is that you really want and need.



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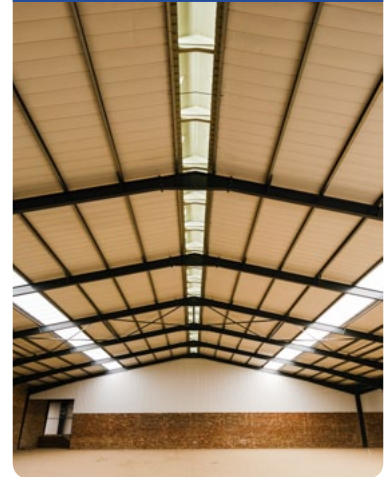
PLANNING, PLANNING, PLANNING!

- Sadly, the bulk of steel building projects are needed yesterday as little planning and forethought has gone into the process.
- Lack of planning can really cost money as short cuts are taken at the last minute in order to get the project done. Sometimes gross errors can occur from last minute rushed decisions.
- Often, we see clients scramble for a building just as the rains arrive each year!
- With a bit of forethought and planning, many risks can be avoided.
- If a project gets off to a rushed start it can result in a nightmare all the way through. The finished outcome which is less than desirable leaves the client stressed and unhappy with the contractor.
- Remember, you need to be conversant in the local ordinances, any structural work must be done in accordance with Town Planning Protocol. Approved Plans and Structural Certificates are required, this can be daunting and frustrating, but stress can be removed if you use a good structural steel contractor to guide you through this process.
- Our advice is plan ahead – define the scheme well, have no surprises with the budget and the job will comply with building regulations and be a great experience as opposed to a nightmare.



EXPERT ADVICE AT A GLANCE

- Plan ahead.
- Comply with building regulations.
- Seek solid advice.
- Define the scheme well.
- Have no surprises with the budget.



6

KNOW WHAT YOU ARE BUYING

- We have seen so many clients make the mistake of assuming inclusions in the given price. This can lead to tensions on the project once it gets going. For example: *'I thought the concrete floor was included'*, can have a catastrophic impact on your budget and lead to a shortage of funds to complete your project. You may think this is a silly example but trust us this has happened before!
- Our advice is to use a contractor who has a thorough checklist and can take you through the bill of quantities and quote to understand what you are buying, what is included vs not included. A good contractor should clearly define **EXCLUSIONS**.



EXPERT ADVICE AT A GLANCE

- Check your quotes and bill of quantities carefully.
- Check exclusions verses inclusions.



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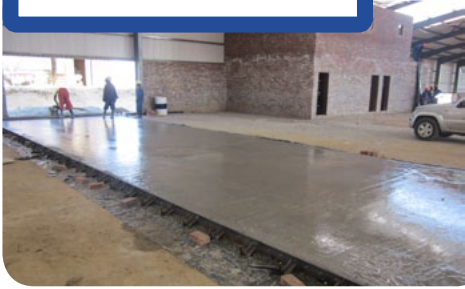
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DONT GET STUCK IN THE CONCRETE!

- If there is a challenging area that costs customers money it is concrete work. So often clients say to us, 'Don't worry about the foundations, I know a builder who is really good and has given me a really great price for the concrete foundation work'.
- We have done work for clients that opted for the route above only to have professional engineers condemn the work so badly done that the job had to be started over. More commonly, builders lacking experience will give a client poor concrete quality that may fail.
- Hold down bolt layouts are another snag area which inexperienced builders get badly wrong. Bolts need to be placed within 10mm of the correct height and location on plan. On a 40-50m building this takes some experience! When bolts are laid out wrongly, the best case scenario is that the steel structure will have to be adjusted, resulting in extra costs and delays. In a worst case scenario, inexperienced contractors have had bolts as much as 100mm out of place, resulting in the concrete been demolished and done again!

**EXPERT
ADVICE AT
A GLANCE**

- **Employ a building contractor with an experienced concrete crew who will get solid foundations right for you first time!**



8

LOCKDOWN DESIGN WORK!

- Once prices have been agreed and a deposit has been paid, design work will commence.
- Design work is a finite period in a project which necessitates finalising and signing off, and the sooner the better, some clients don't get this.
- We have been part of simple projects that have taken over one year to complete! Why? Often because clients do not lock in the design and sign off so that fabrication can commence. Worse still, they allow fabrication to commence and then change the design afterwards.
- This does not mean design changes cannot be accommodated down the line – they can, but it's important to know that changes incur further costs and can delay a project.
- Late design changes come with a higher chance of unforeseen expenses and errors in the overall process.

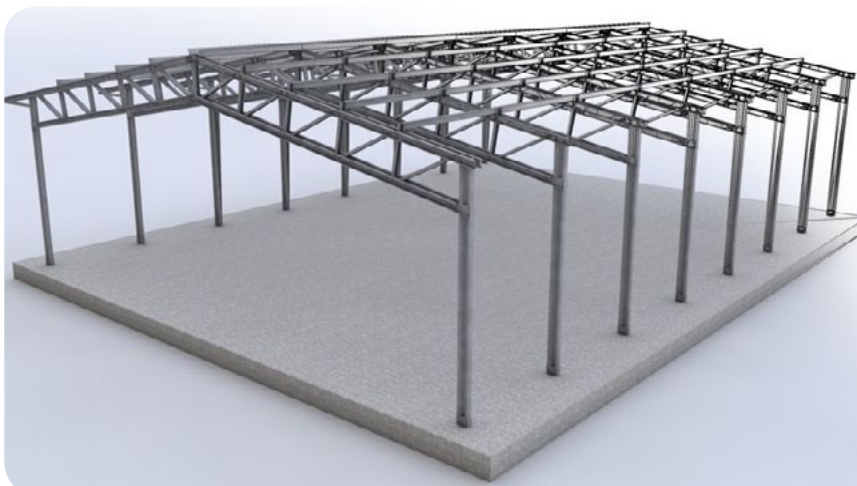
**EXPERT
ADVICE AT
A GLANCE**

- **It's important to utilise a qualified and reputable contractor to help you to lock in the design and sign off blueprints before commencement of fabrication. Design-freezing means all parties can plan and execute effectively.**
- **Avoid late design changes.**

9

GET A MODEL!

- Today's best steel building contractors should be able to very quickly provide a client with an accurate 3D model.
- This really helps clients understand the look and feel of their building and identify snags and design queries quickly.



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UNDERSTAND YOUR ACCESSORIES AND ASSOCIATED OPTIONS

- Many clients fail to understand and budget for accessories required to make the building operational.
- The list of accessories can be quite long: insulation, guttering, ventilation, windows, doors, natural roof lighting, awnings, canopies etc. A good steel contractor will guide you through the entire process, so you won't miss anything vital and can help you select the best option for your needs.



**EXPERT
ADVICE AT
A GLANCE**

Use a steel building company with experienced Project Managers who can take you through the pros and cons of the different accessories and the requirements for them.

11

BE AWARE OF BUYING ON PRICE ONLY - SERVICE AND BACK UP COUNT TOO!

- We have had clients complain that we don't compete on price with buying a steel structure on the international market.
- You will always find someone who can promise to do the job a little cheaper.
- Clients need to be aware of some of the pit falls of buying a steel structure from the international market:
 - The international competitors compete on a very price driven model.
 - Certain companies on the market can use what we call 'downgraded' beams. These are beams that cost less from steel mills due to tolerance and quality problems. They do not come with certified mill certificates to validate their structural integrity.
 - International outfits don't always give the best service after shipping, leaving a host of problems for the client when they try and erect the structure and variations are required or parts have been fabricated defectively and do not fit.
 - Understand your all in cost, does it include extras such as logistics, shipping, port costs, duty and rigging.
- For best service and less headaches with the installation, our advice is to go local. A great steel contractor can have a project manager out at site within hours and quite possibly have the problem rectified the same day.



- Think twice before procuring a steel structure from an international supplier, initial costs may be reduced but you could be left vulnerable if you experience problems when erecting the structure and require long term backup support.
- For the best service and less headaches, opt for a local contractor who can have a project manager out at site within hours and who can, all being well, rectify your problem the same day.
- Understand your true costs.

12

IT CAN AND SHOULD BE DONE QUICKLY!

- Ever been past a building site and seen a steel building that you were sure wasn't there yesterday?
- You could be right – it is likely it wasn't there yesterday!
- When it comes to installation, structural steel projects which are well planned and executed should happen quickly! This is the hallmark of a great steel contractor – execution of the installation is swift.

FOLLOW THESE TIPS AND YOU WILL BE WELL ON YOUR WAY TO OWNING A STRUCTURE THAT MATCHES YOUR EVERY REQUIREMENT.

Want to know about steel or a specific type of structure?



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