



heads-up guide

BUDGET IS NOT A DIRTY WORD

Designing and building a new home is a tall order, especially if you've never done it before. Costs can quickly spiral out of control so read on for some tips on how to stay on track.

Firstly, don't be afraid to talk frankly about budget with your designer, there is nothing worse than falling in love with a design only to find out you can't afford to build it.

Budget & Planning

- Work out your **overall** budget, this sounds easy but there is a lot to consider. There may be items to be completed after handover, and these items need to be accounted for in your budget. Check with your designer and builder what is included as this can vary dramatically. Don't forget landscaping.
- As part of our Step 1 Design Review, the DRC requests a probable order of cost (POC) from your designer. This POC is very preliminary and should be used only as an indication of the cost of construction. In establishing a POC, the designer acknowledges that complete construction of the home should be achievable within your budget.

However, remember that home building costs (calculated quarterly as the Building Price Index) vary over time. Over recent years, they have increased at an average 5% per annum.

Cost saving tips during the schematic design:

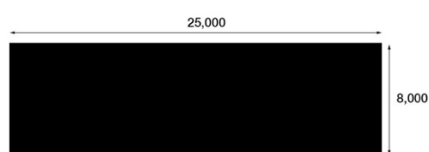
Clever design will have the most impact on construction cost.

- Size size size. It is important to realise that each additional square metre will cost you, not only in construction, but also throughout the lifetime of the home; in heating and cooling, cleaning and maintenance. Consider which spaces you need, how they will be utilised and whether some spaces might serve multiple purposes.

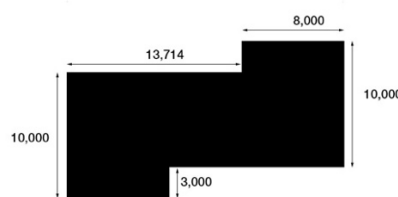
Keep the size of entries, hallways and other circulation spaces to a minimum. Large grand entries may look impressive but when you look at the materials used to construct, furnish and heat them, you might consider instead investing in a clever and beautiful feature elsewhere in the build.

- Design narrow building forms to optimise cooling breezes and winter sun. These buildings are not only cheaper to build than homes that are irregular in shape, they also have a lower wall-to-floor area ratio meaning that they will perform better thermally. (see figure 1)

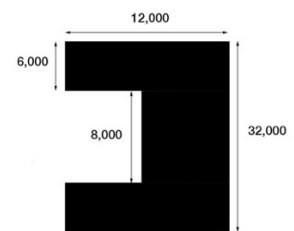
Floor area of all 3 building types - 200m²



Building A (Wall length 66m)



Building B (Wall length 69m)



Building C (Wall length 74m)

Figure 1: Buildings A, B and C have the same 200m² floor area but increasing external wall area. This in turn increases construction cost and reduces thermal performance in Melbourne's climate.

- Large open spaces with no supporting walls/columns may require more engineering and the use of expensive structural steel. Designing a structurally smart home will minimise, if not totally exclude, the need for structural steel in most residential builds. It is important to brief your engineer accordingly, requesting that they substitute steel with structural timber where possible. Many will simply specify steel out of habit.

Steel is yuck for many reasons. It is expensive, has significant embodied energy and, in most instances, will require expensive crane hire or similar for installation.

Provided the structural timber members used instead are sourced in accordance with MCDG R30 from the Mullum Creek Timber Design Guide, your budget and the planet will thank you.

- Minimise changes in levels where possible, saving money and making your home more accessible. Designing homes for universal access helps not only for the elderly or mobility impaired. Anyone who has had a sports injury knows stairs are not your friend when you are on crutches, even going to the bathroom can be problematic if you must go up and down stairs to get there.

Cost saving tips during construction documentation:

- Quantity surveyors (QS) can save you from nasty surprises. Engage a reputable QS so that you can see what effect additions or substitutions in materials etc. will have on your bottom line.
- As mentioned above, properly briefing your engineer is crucial before they are engaged. Discuss this with your designer. The cheapest engineer for your job is not necessarily the best choice and may cost you significantly more in the constructed outcome.

The inclusion of continuous ground slab insulation is a perfect example of where you can spend money during design development to save it again down the track. Get your engineer to really consider how continuous insulation can be achieved referring to the Mullum Creek Ground Slab Insulation Guide. They might charge you an extra \$1000 because the task requires some computations and attention to detail. However, attempting to save this money will result in a much higher cost during construction (easily 20 times more), because of both the labour and quantity of insulation material involved in a non-engineered solution.

- Make sure that your architect or building designer thoroughly documents your job for construction purposes. The more detailed and comprehensive your construction documentation and specifications are, the more accurately your builder can price the job and minimise variations during construction. Vague detailing may result in the builder allowing extra in their price for head scratching.
- Be wary of builders' preliminary estimates. They are often prepared from incomplete documentation, and in attempting to secure your business, they may not be conservative enough in naming their price.
- Don't skimp on the quality of the construction fabric of your home as this should endure for the life of the building. Robes, kitchens cabinets, fitting and fixtures will come and go, but walls, windows and insulation (or lack thereof) are forever.
- Be sure that you are spending money on items that deliver real bang for your buck, and that operational costs are included in any cost analysis. For example, a heat pump hot water service (HWS) may be priced slightly higher than a gas boosted rooftop solar water heating unit. However, factor in also the cost of tapping and metering off the street gas main, running consequently large diameter copper piping from there to an instantaneous gas HWS, and committing to a quarterly gas service charge. You may then find that the heat pump is considerably cheaper to install as well as much cheaper to run.
- On the other hand, when you're pricing heating, cooling and ventilation (HVAC) systems for your home, make sure that your system supplier/installer is aware that yours will be a 7.5 star home, and that this will almost halve the peak operating load on the HVAC system required to maintain comfortable temperatures in your home. Smaller sized units cost less to install and, provided your home is not huge, can also avoid the need for a 3-phase power supply. Purchasing a smaller system will be cheaper and you may be able to find a more energy efficient option. We have anecdotally heard from residents of homes at Mullum Creek that their expensive HVAC systems remain drastically under-utilised due to the increased thermal performance of the house. A more detailed infosheet on this subject will follow.

Choosing the right builder:

Choosing your builder is one of the most important decisions you will make with regards to the construction of your home. You will be working closely together for many months before, during and after construction. Selecting a builder, who you can communicate and collaborate well with, will make the process more enjoyable and help you stay on budget. Things to check before you sign your contract with the builder:

- Confirm what is included in your contract. Don't assume that, because it is on the drawing, it is included in the cost. Check the written specifications and contract preliminaries to confirm that it is included.
- Check that prime cost sums (PCs) and other provisional allowances will cover the cost of the items you would like.

For example, if there is a PC amount for tiles, go to a tile store and make sure that the amount allowed covers the types of tiles you want (their retail cost, grout and waterproofing agents).

- Check whether your builder has a preferred supplier and if that will limit your choice with prime cost items. Check carefully for exclusions, and 'owner supplied' items. If items are owner supplied, confirm whether they are covered under the builders' warranty insurance and meet Australian construction requirements.
- You may have sub-contractors that you have used before and would like to use again. Check with your builder that they will be happy to use these sub-contractors and have them formally nominated in your contract. Depending on the trade, you may be able to get some tradespeople in after handover, in which case you could exclude their work from your contract. But recognise that your Builder will not take responsibility for '*work by others*' nor will his/her home warranty insurance cover it.
- Ask to see some of your prospective builder's previous work and speak to former clients if possible. Look at work that is currently under construction, look at site cleanliness and see what excess materials are being thrown away. Excessive amounts of waste indicates that the builder over-estimates materials requirements, and ultimately you will be paying for this. Tidy building sites and tradesmen's vans are signs of comprehensively well organised, competent and efficient building operations.
- Finally, make sure that your builder talks to the DRC before they begin construction. This will ensure that they are well briefed on requirements at Mullum Creek and will avoid costly mistakes and associated delays when materials need to be replaced.

Cost saving tips during construction:

- Recycle offcuts and unwanted items from your site. Ask your builder to store any items you may be able to use later. Bricks and timber can often be reused in your garden. This will also reduce the amount of rubbish that will be removed from your site.