

Things You Need to Know When Building A New Home

Alica Thompson

Queensland University of Technology

Abstract

In the construction design industry, we see many clients who do not know much about the planning and permitting processes involved in building a house. I do not blame them — there is not much guidance to be found, and every city and state has its own unique regulations. Across the board, though, the process is the generally same with slight variances.

1 Introduction

In the home building and remodeling trades, the term "rough in" refers to the stage of construction after the basic framing is completed and the mechanical wiring, plumbing, and HVAC installations are completed, but before walls and ceilings are closed up with wallboard. This is the point at which work is reviewed by the building inspector. The absence of wall and floor coverings allows for easier modification if the rough in does not pass inspection or if the homeowner makes a change order to alter the project.

2 Choosing a builder

Before you get to the stage of choosing a builder, your research and design process will have yielded finished design documents to put out for tender by builders (see Preliminary research; The design process).

Two common ways to choose a builder are:

- ✓ Choose a preferred builder and invite them to prepare a quotation or 'tender' (and seek an alternative quotation to ensure competitive pricing)
- ✓ Call open or selective tenders from a range of builders and choose on the basis of price.

Each method delivers a builder and a quotation but one emphasises best price and the other, preferred builder. In either case, note in your tender documents that you are 'not obliged to accept the lowest or any tender'.

A designer generally helps choose builders to tender for a project, based on recommendations and past experience. Advertised open tenders deliver variable outcomes and often exclude smaller specialist builders who do not have time to tender for multiple projects.

Your choice of builder is almost as critical as your choice of designer.

The principal role of a builder is to coordinate the building works as project manager. This role includes supervising and coordinating each trade; sourcing, quantifying and coordinating delivery of materials; and, most importantly, quality-assuring the entire process.

Builders and tradespeople are understandably risk-averse and tend to manage risk by using tried and proven materials and practices. Sustainable outcomes often require the use of innovative materials and practices. To avoid problems later, ensure each builder is made aware of your commitment to a sustainable home when they are invited to tender.



Sourcing certified environmentally preferred materials (see Materials) at competitive rates and supervising tradespeople to ensure materials are correctly installed requires a builder who is prepared to 'go the extra step'. Choose a builder who is both trained in and committed to delivering sustainable outcomes. Familiarise yourself with environmental certification systems to inform your own decision or agreement.

Both Master Builders Australia (MBA) and the Housing Industry Association (HIA) train builders in sustainable practices. Choosing a builder with this training from their website listings is a good first step but does not guarantee delivery of best practice outcomes. References from satisfied clients are an effective quality assurance method. Both MBA and HIA run sustainability awards programs and the lists of past winners on their websites also provide a good indication of ability.

Committed builders:

- ✓ Carefully implement sustainability features as specified in the design
- ✓ Source and use recycled or reused materials

- ✓ Access environmentally certified materials and ensure they are ordered with adequate lead times
- ✓ Separate waste streams on site
- ✓ Instruct and even backcharge subcontractors who fail to use environmentally preferred practices
- ✓ Ensure that glues, resins, paints and finishes are indoor air quality friendly
- ✓ Conserve on-site biodiversity
- ✓ Install and maintain sediment control barriers.

Several certification schemes can independently certify products and services as environmentally sustainable. Good Environmental Choice Australia (GECA) is an independent, not-for-profit organisation that runs the internationally recognised Environmental Choice Australia Ecolabelling Program. Green Tick® is based on a life cycle assessment (LCA) of the effects of an operation down its supply chain.

Tender documents and contracts



In projects being tendered by more than one builder, this step precedes Step 1.

Tender documents must clearly identify any sustainability practices or materials certification requirements that are different from business as usual. Attach schedules to the tender documents that tenderers are required to sign.

Allaying builder concerns about the unfamiliar aspects of sustainable practice can reduce the amount they allow for unknown contingencies.

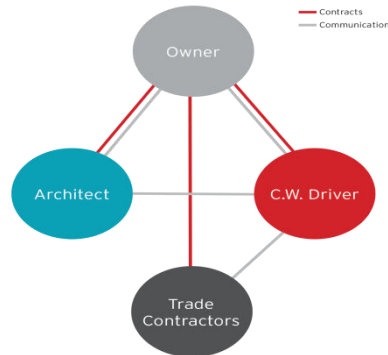
Contingency sums

Areas of unknown risk can be accommodated through contingency sums or allowances that can be called on to cover unexpected costs. They are often used to cover unexpected subsoil

and foundation related costs; increasingly they are being used to provide flexibility in choosing innovative sustainable technologies and practices.

Prime cost schedules

Another way to overcome risk aversion on the part of the builder is to 'nominate' subcontractors to supply and install innovative technologies and provide the builder with a 'schedule of allowances' (or 'prime cost schedule') to include in the tender.



Many designers choose and specify the exact make and model of important or high cost items such as windows and doors, solar hot water systems, smart metering and energy control systems, and on-site renewable energy generation. You or your designer can have these items quoted by preferred suppliers and nominated in the contract as

prime cost schedule items to avoid substitution of inappropriate or substandard products by competitive tenderers.

Preferred subcontractors

You can also nominate preferred subcontractors if you know a local green plumber, electrician or painter who is reliable and professional. Many builders have preferred subcontractors so negotiate this option carefully.

Lump sum versus cost plus

Choose between 'fixed price/lump sum' or 'cost plus'. These decisions are usually made before calling tenders but revisions may be negotiated with the chosen builder before contracts are signed. Lump sum tenders and contracts are generally effective at capping the budget but can encourage cost cutting that can compromise sustainable outcomes.

In cost plus scenarios, the builder nominates a percentage addition to materials costs for ordering and scheduling, and hourly rates for the builder and trades. These contracts require high levels of trust between owner and builder. While allowing the owner more control over expenditure decisions, they reduce builder responsibility for cost overruns. This can force cost cutting and loss of important sustainable features (e.g. photovoltaic arrays) as the budget is exhausted.

For tight budgets, fixed price contracts are generally preferable. If cost plus is used, quarantine budget allowances for sustainable features.

Contracts

Standard home building contracts are available from many sources including lending authorities and industry peak bodies. They form the basis of your legally binding agreement with your builder, and of any dispute resolution.

Choose a contract that strikes a reasonable balance between your needs and those of your builder. Clear dispute resolution provisions and nominated independent arbitrators are essential. Annex the builder's tender, council approved plans and specifications, certified engineering details and any schedules (prime cost, contingency sums or nominated suppliers/contractors) to the contract.

Have your solicitor and designer review your contract before signing.

Indicate sustainability requirements on specifications and include penalties for substituting inferior materials and products.

Tendering tips to ensure environmentally preferred outcomes

Drawings and specifications form part of the contract documentation. Ensure they clearly indicate sustainability requirements and include penalties for substitution of inferior materials and products.

Consider nominating important, high cost items such as windows in a prime cost schedule to avoid substitution by competitive tenderers.

Clearly describe sustainable methods or materials that are not yet standard building practice and include advice on how to implement or source them.

Include unambiguous instructions that prevent changes or substitution without approval by you or your designer.

Ask tendering builders to check tender documents for sustainability compliance risks and note or allow for any contingencies in their tender.

Ask builders to recommend alternative solutions that suit their trades and supply chains while delivering equal or improved environmental outcomes.

Consider the use of contracts that link payment to the achievement of specified environmental outcomes (e.g. details of environmentally certified materials, window and glazing specifications, and reuse or recycling details).

Develop a schedule of reusable materials (if you're renovating or demolishing an existing house) and negotiate their reuse with your builder.

Owner building



Some consumers choose to manage their own projects as owner builders. Unless you are experienced in housing construction, are fully conversant with local building practices and supply chains, and have sound working relationships with local trades, this option is fraught with risk.

Sustainable construction often requires tradespeople to adopt new practices and materials and this can be very difficult for an inexperienced owner builder to negotiate.

Construction supervision and certification

Many opportunities to achieve best practice sustainable outcomes are lost during construction. This is often due to lack of understanding of environmentally sound principles and practices by builders and tradespeople, or ineffective certification.

Keep the site clean by storing all waste in skips.

Supervision

Your builder is frequently called on to make decisions about materials and procedures that vary from those nominated in the plans and specifications due to trade preferences or unavailability of preferred materials. Builders refer these (often urgent) decisions to a supervisor for verification if one is nominated. If not, they may make expeditious but less sustainable choices.



Well-informed advice from experienced professionals can quality-assure decision making and ensure environmentally preferred choices.

Professional advice or project management by a committed, highly informed individual or company is critical to quality-assure the decision-making process and recommend environmentally preferred

alternatives such as those discussed throughout Your Home.

Many designers offer a supervision service as part of their fee structure. Architects in some states are prevented from offering project management services. If you adopt this role as owner, consult competent advisers or consultants to verify your decisions.

Project management or supervision adds substantial professional indemnity risk to a designer's insurance profile so many designers prefer a less formal advisory role. You should sight a project management endorsement on a current professional indemnity policy before formally appointing a supervisor or project manager.

Certification

Inspection and certification of your project at critical stages is required by law to confirm that it is built in accordance with the approved plans, specifications, relevant Australian Standards, Building Code of Australia and council regulations, to ensure structural integrity, health, safety and amenity.



These inspections can identify and rectify problems or omissions before they are built in. Reported instances of inadequate certification of sustainability compliance in several jurisdictions indicate that this important aspect is sometimes overlooked. If you are concerned, seek immediate advice from your designer or building sustainability assessor (see The design process).

Many private certifiers offer specialised environmental certification. Contact the Australian Institute of Building Surveyors (<https://aibs.com.au>) for more advice.

3 Know What's Involved Before Construction

Here's a step-by-step guide to understanding what's involved before construction for people planning to build their own residential property on an empty lot.

Is your lot an approved building site?

To make sure that your lot is an approved building site, look at the assessor's parcel map or tract map (for subdivisions) showing your lot. You can go to your city planning office and

request access to public maps. To locate your assessor's parcel number (APN), go to your county assessor's website. All property records are open to the public.

Once you have located your lot on a parcel/tract map, pay attention to notes and comments regarding your property. Most of the time, the notes should be self-explanatory such as "subject to building site approval" or "not an approved site." If you do not find a note, most likely your lot is an approved building site. Seek help of a planning official to avoid any confusion.

Where and what can you build?

Where and what you can build on your property is mostly governed by zoning setbacks, location of easements and zoning district guidelines. Therefore, you'll need to find out which zoning district your lot falls under and talk to the office of planning and zoning to find out how the use of your property is regulated.

3 Things to Know About Hiring a Contractor

Find out how to choose the right contractor for your project and set terms that keep both of you accountable and happy.

Know what you want. As the client, you are the one driving the process. Before speaking with contractors, spend time thinking about your goals for the project -- what it might look like, the amenities you want, and so on. If you don't know how to translate your goals into specific features or products, hire a design consultant or a design-build firm that can offer that service.

Get bids from several contractors. Three bids is considered the minimum number, but a half dozen will give you a clearer picture of how these companies stack up against each other. Not only will you get more perspective on appropriate costs, but also you'll get an idea of the caliber of work that each contractor will provide. For example, one contractor may offer a bargain rate and marginal work; another's high bid could indicate quality.

Do background checks. Even if a friend or relative has recommended a contractor that he or she has used before, you should establish some minimum credentials. Get the full company name and address, and make sure that the firm has a current state license and adequate insurance coverage. (Typically, this means at least a million dollars in liability and worker's compensation coverage.) Get license and policy numbers, then verify that they are current. Determine whether any formal complaints or legal actions have occurred in the past or are pending.

Investigate a contractor's work history and work habits. Some contractors are specialists and some are generalists, so make sure their abilities are appropriate to your project. Take time to see

their work firsthand, and look for three things: some similarity to your project, quality materials and workmanship, and consistent client satisfaction. Also, track small indicators that signal professionalism or a lack thereof. Are your phone calls returned in a timely manner? Are appointments and meeting times kept? Do company vehicles and/or dress code reflect pride and cleanliness? Carelessness in these small matters does not bode well for the quality of work.

Set boundaries for the job site. Let the company know you expect routine precautions, such as employee background checks for anyone who will have access to your home. Also, establish some ground rules about parking, bathroom use, smoking, and other issues that might concern you.

4 Questions to Ask Builder When Hire for Renovation

Choosing and hiring the right building contractor for your latest home project is no easy task.

The last thing you want to do is hire a cowboy builder or con artist, so you'll need a way of vetting potential contractors until you're feeling confident and comfortable with your selection.

I've been a contractor for many years now, taking over the family business Findley Roofing and Building from my father. Over that time I've been asked hundreds of questions, all of which I've been happy to answer with complete honesty.

People who ask me a ton of questions are savvy and feel completely confident they've made the right choice when they hire my company: if you're not sure how to vet your potential contractors, take a leaf out of their book.

Below I've compiled a list of the top 15 questions that you should be asking your potential contractors before you go in and hire them for your next home project. Whether your project is tiling a new roof, re-wiring the electrics, redesigning the garden or any other important home improvement work, use these questions to learn everything you need to know about the contractors you want to work with.

Some of these questions are essentials that I'm asked on a daily basis. Some are curveballs you can throw to eliminate cowboys, and others will test the expertise of contractors and give you an idea of what the quality of their work will be like.

Have you completed similar projects before?

A contractor that's completed similar or identical project to yours is a huge plus. Don't just ask in terms of the work, but ask about the property as well – does the contractor have experience working on your type of property and know its quirks?

If you want to delve a bit further to find out their past experiences, ask how long they've been in business, how business is going right now, what major projects they're proud of... then go online and check their website (it's the 21st century, they really should have one by now) to make sure the about page corroborates their story.

What is the estimated timeline for completion?

If they give you a very exact timeline when you've not given them much detail or they haven't completed a project like yours before, this could be a warning sign. I'd never over promise and under deliver: contractors should be honest, giving a rough estimate if they can and explaining why they can't be more exact.

If it seems too good to be true, and they can't elaborate on why it will take this long, I'd avoid this contractor. On the other hand, if they're honest and can explain why they're being so exact in the timeline, they could be the contractor for you.

4 What warranties are in place for your services and materials that are used?

This is an important question that I'm not asked enough. A good contractor will be able to give you realistic guarantees and outline them fully in writing. It's not good enough for a contractor to say yes you're covered for everything over the phone. It needs to be exact, in writing and agreed on.

If the contractor can provide you with insurance backed guarantee, that means any problems can be put right and paid for by the insurance company if the contractor goes out of business.

Some materials that contractors use may have manufacturer's warranty too, so ask for a list of which materials these are.

What other details do you need from me?

A good contractor who wants to do a good job will need plenty of details from you to give an accurate quote and timeline for the project. Contractors that need to be prompted with this question when they start suggesting figures and timelines should be assessed with suspicion – they could be pulling these out of thin air.

Can I see certificates of your insurance?

UK law states that contractors should have public liability insurance, so ask to see the certificates in person. If they've got employees then they are also legally obliged to have employer's liability insurance. If your contractor can't provide you with either certificate or evidence of insurance, cross them off the list straight away.

How do we deal with changes to the specification?

You'll want to know how things will work if an unexpected change happens – will you get a refund of whatever money you paid already? Will they put your house back to how it was before leaving? Find out their policy AND get it in writing. A professional contractor with plenty of experience should be able to answer this with confidence, even if they've never come across a problem in previous work.

What tools do you work with and how?

Asking this question now gives you time to warn the neighbours if the contractor is going to be noisy with drills, or parking a van full of tools on the kerb by your house each day. Asking for the name of each tool so you can research them and check they're suitable would be hard work and take up a lot of time. Instead, try asking what brand tools they prefer to use and why – a professional contractor will have picked out the best tools for the job, while an unprofessional will just be using whatever is cheap and available to them.

Pay attention when asking this question and if you don't understand the terminology, ask them to explain: professionals won't have a problem with this, you'll be able to tell that they know what they're talking about.

Do you know what sort of building permissions I will need for this project?

This is a good question. If you're clueless about this then a good contractor should be able to point you in the right direction – if they offer to obtain any necessary building permissions, then just ask to see them to be sure, double check with the council that it has really gone through, and make sure you ask if the contractor will charge for these services.

If you already know the answer then you'll be testing their knowledge and expertise.

Are there previous customers or trade references I can contact?

Unfortunately, we live in a world where online reviews can be faked. Ask if there's anyone you can contact who will verify the contractor and their work. This doesn't necessarily have to be a client of theirs if the contractor isn't permitted to share details of previous clients. As a contractor, I've worked with many people who'd be happy to verify my expertise, from those at the BBC's DIY SOS to business owners I've worked on office roofs for.

If something doesn't feel quite right, don't hesitate to ask around the local community to see if anyone has had dealings with this contractor before. Another tip would be to call the company and ask who you need to speak to about issues with previous work. Do they have a process or a department to deal with such enquiries or do they take your name and never follow up the supposed after sales service request?

Who will be working on the project?

Will it be the contractor themselves or an employee of theirs? If they're bringing along an apprentice or other workers, find out what their job role is and what they're responsible for. I ensure that all my employees are trained to the high standard I work to – ask your contractor if his workers are trained similarly, or if they are subcontractors.

It's not necessarily a bad thing if your contractor is going to be subcontracting extra work; if they can explain why it's needed. This shows they're being honest about how much work they can handle by themselves, they've got the experience to know when to bring in extra pairs of hands. This shows that they're really thinking the project through. Just make sure to find out who the subcontractors are and ask why he trusts them – do your own research into their business too.

How will you clean up every working day and at the end of the project?

Will they be working until the evening when you'd rather have the house to yourself? Find out what parts of your home will be a building site and for how long, get them to add this to the written schedule if it's not already on there. They might bring a skip and take away all the construction rubbish and trash with them, or that might be your responsibility.

5 Everything you need to know before building a house

Building a new house can be exciting, even life changing, but all the experts agree on one thing. Careful planning beforehand is essential.

“You might have an aspirational view on what you would like, but the reality is what you can actually afford,” she says. “You need to speak to a bank or a broker, because without a budget and having finance in place you can't really move to the next step.”

The first step involves some realistic calculations on the costs you will face in future years as well as the realities of the present. This can involve considering a range of factors, anything from increasing school fees for the kids to annual holiday plans.

There's also the “chicken-or-egg” question of whether it's best to buy land first, then look for a suitable house design. It's best to choose the land first. This avoids any traps of selecting a design that doesn't suit a plot of land.

“Because I have a building background I used to think the emotional attachment comes from the home, but since being at Stockland I've realised customers fall in love with a neighbourhood soon after they move in,” she says.

“During the course of their search they might have looked at many display homes, but they drive through one of our masterplanned communities first and think this is where they

really want to live. That's where we come in, and where our vision of creating wonderful communities to live in is so important."

Here are three basic tips for those building their first home:

- ✓ When choosing the right community to live in, consider the local services you will need such as shopping, transport, education and childcare, as well as things that can add to your quality of life like sporting, recreation and entertainment facilities.
- ✓ When choosing a block, make sure its size suits both your budget and the house design you have in mind. Also check for any height or setback restrictions, and consider the energy savings that can be made by choosing the right solar orientation.
- ✓ Do as much research as you can to find a reputable builder you feel you can trust. Visit display villages to see what designs are available, and if any friends or relatives have recently built a house, ask for their advice and recommendations.

"Our customers can visit display villages within our communities, see the range of homes there, and the house and land packages we have with different builders," Cihan says.

The regulations vary in each state regarding what home designs will be suitable for a particular block plus some builders might choose not to build on certain lots. "For example, in some areas, builders won't build on blocks with more than a three-metre fall. We may have parts of our community with sloping blocks that are elevated around parklands or lakes so these houses need to be built a certain way," she says.

"There are custom builders who can provide designs for that, so it's a matter of finding the right block and the right builder for the kind of house you want."

6 What I wish I knew before I bought a house

Dream homes can turn into nightmares, especially if you're building for the first time. Construction is a complex process, with legal and financial considerations adding to the potential for confusion and disappointment for first home buyers.

"Unless you've built a new home before, you're unlikely to be familiar with all the steps involved in bringing your great Australian dream to fruition," says Stockland Group Executive and CEO of Residential, Andrew Whitson.

Whitson believes there are "many advantages" to building rather than purchasing an established home, such as energy efficiency, modern finishes and appliances, and less maintenance.

"One important area to understand is the difference between buying a block of land that is already built and registered, versus buying off-the-plan," he explains.

"When buying off-the-plan, you are purchasing a block that has not yet been completed, so you may not be able to physically inspect it right away. The advantage of this type of block is

that you have a little more time to plan your new home and may even be able to save a little extra before the block is finished and the title registered.”

The more you take the time to understand the steps involved in buying land and the building process, the easier it will generally be. And don't be afraid to ask lots of questions,” he says.

“It is very important to choose a design that will fit on your block and fit in with your budget. This is your first home so it may not have everything you want in an ideal home, but be proud that you are about to become a home owner,” he says.

This was a key lesson that Metyam learned during his own building process. “You have to limit and define your budget,” he says, and then add more for unexpected costs. He says some of the “shocks” were “big money” items such as the driveway, soil test and landscaping.

Living in a bushfire zone also added to expenses, as different building materials were required and there were other associated costs. Not all expenses relate to the builder, he says. There are also council and government fees.

While the couple had some unexpected costs, they also managed to save more by forward planning. They had originally planned for a pool, but decided against it when they discovered there was a public one nearby. However, his advice is to make sure there's going to be access if you want to put a pool in later.

“Think about access via the side and through the garage, because once you've constructed the house, it becomes very hard to do backyard improvements without access,” he advises.

Metyam also believes this forward planning should apply to things such as electrical and data points, heating, cooling and lighting. These are the types of things people can be tempted to skimp on the first time round, by reasoning they can be added later. However, installation can cost a lot more after the build is complete.

“Ask the builder to put points in and get an electrician through later,” he says, emphasising the need to get these things done during the initial stage.

Metyam also advises taking your time to analyse how you'll live in the space. It's much easier to move a wall when it is still simply a couple of lines on a plan rather than once you've moved in. He says walking through display homes so they could really visualise the home was a huge advantage, and helped the couple avoid making major mistakes.

Conclusion

A contract should include start and completion dates, information on applicable building permits and fees (typically handled by the contractor, but legally your responsibility), a description of what products and services are to be provided by the contractor, payment terms, subcontractor issues (such as license and insurance verification and warranty of

workmanship), and the consequences of default by either party. Default can include a contractor's failure to pay subcontractors; the contract should exclude you from liability in the event that occurs.

Reference

Nikhil Choudhary, 2017 | Building A House On A Lot? Know What's Involved Before Construction | forbes.com | Retrieved 05 Sep 2018

<https://www.forbes.com/sites/forbesrealestatecouncil/2017/10/24/building-a-house-on-a-lot-know-whats-involved-before-construction>

Lee Wallender, 2018 | What Does the Term "Rough-In" Mean? | thespruce.com | Retrieved 05 Sep 2018

<https://www.thespruce.com/what-does-rough-in-mean-1821746>

Balluff Leuze Consultants | Retrieved 07 Sep 2018

<http://www.balluff-leuze.com.au/>

Bill LaHay, 2018 | 8 Things to Know About Hiring a Contractor | bhg.com | Retrieved 06 Sep 2018

<https://www.bhg.com/home-improvement/advice/things-to-know-about-hiring-a-contractor/>

Dave's DIY Tips, 2017 | 15 Essential Questions to Ask Before Hiring a Building Contractor

| davesdiytips.com | Retrieved 14 Sep 2018

<https://www.davesdiytips.com/vetting-building-contractors/>

Metyam | Transitioning from renter to first home buyer | domain.com.au | Retrieved 14 Sep 2018

<https://www.domain.com.au/sponsor/wish-knew-bought-house/>