OWNER BUILDER COURSE STUDY GUIDE
NEW SOUTH WALES

This is the third edition of the Abacus Training Owner Builder Study Guide; New South Wales.

The guide is basically divided into two separate but connected sections.

1) **Legal Requirements and the Application Process**
2) **Managing your Owner Builder Project**

The first part which includes section 1.0 through 1.4.8 details the legal responsibilities of owner-building in New South Wales and steps you through meeting your obligations in the Owner-Builder Process.

Section two provides generic information on project management and contract administration as it is applicable to Owner Builders constructing a typical domestic dwelling.

Specific requirements relating to our responsibilities in respect to insurance, inspections, certifications and workplace health and safety are further detailed throughout the following chapters.

This course is provided to assist prospective owner builders to:

1) successfully make application to the Department of Fair Trading New South Wales for the issue of an Owner-Builder permit and demonstrate their understanding of the legal responsibilities and requirements that control owner-builder works in New South Wales

2) to manage their project from the initial planning stages through to practical completion.

This course is presented as educational and guidance material, and when used together with our associated owner builder systems, becomes a general management tool and control program suitable for use in a typical owner-builder project.

Statutes, Laws and Regulations across the various Australian states and territories, vary in the requirements and qualifications needed to obtain an owner builder's permit or license, and these requirements need to be addressed pertinent to relevant local authority guidelines and rules.

This manual specifically addresses the requirements for Owner-Builders who are building in the New South Wales.

The system reinforces and underpins the knowledge obtained in the course and provides a guide to keep your works schedule on track and on budget.

All forms, letters and schedules provided in the associated Project Management and Safety Management Systems are accompanied by a written description of their use and an outline of their importance in the management of your project.

Each explanation is written and presented in plain language and, where we have considered it necessary, examples of worked spreadsheets, forms and letters are provided.

We know this system will help you maintain control over your project and increase the satisfaction, enjoyment and financial advantages that are possible when undertaking the role of an owner builder.

We wish you all the very best in your endeavours.

About the Author

The author and developer of this course is Rick Heaton, the Chief Executive Officer of Abacus Training which is a wholly owned subsidiary of Heaton Industrial Holdings Pty Ltd.

Rick brings over 12 years of experience in the design, production and presentation of quality education material to the building industry.

With industry experience in excess of 33 years, Rick has drawn on his knowledge and practical experience to ensure this system is relevant to the owner builder in the function of managing the construction of a single domestic dwelling.

Rick has had substantial involvement in various construction projects ranging from domestic dwellings to multi storey commercial developments, with specialist construction including hospitals and schools.

At industry level, Rick holds licenses in the disciplines of general and commercial building and is a licensed plumber, drainer and gasfitter and holds formal instructional, vocational training and assessment qualifications.

Rick recognises that the requirements of Owner Building in individual states and territories vary and that each project is different however, the basic principles of project management remain unchanged.

The next section explains the specific requirements of Owner-Building in New South Wales.

1.0 RESPONSIBILITIES OF AN OWNER-BUILDER

When you first decide to undertake a project as an owner-builder, you will need to gather a considerable amount of information.

In real terms your responsibility as an owner-builder can be broken down into three distinct areas.

- Your responsibility to yourself
- Your responsibility to the workers on your site
- Your responsibility to the community

Specific legal responsibility will be discussed in a later section in regards, taxation, insurances, site safety etc.

Your responsibility to yourself

This may appear obvious, but it is worth mentioning anyway:

- You have a responsibility to yourself and your family or partners to ensure that your hard earned dollars are used in the most effective way possible; and
- It is necessary to ensure your lifestyle, both personal and professional are not adversely affected through the performance of your functions as an Owner-Builder.

Remember like all things worthwhile, successfully managing the construction or renovation of a domestic dwelling will take considerable time and effort.

Having said this, if you remain organised and focused, commit the time and effort, the rewards can be great and the satisfaction immeasurable.

Your Responsibility to the Workers on Your Site

As an Owner-Builder, you are the Principal, Primary Contractor or responsible builder.

Along with these lofty titles comes some reasonably onerous obligations.

You are solely and totally responsible for providing and ensuring a safe and healthy working environment.

You must ensure the requirements of The NSW Occupational Health and Safety Act 2000 No 40 are complied with.

The text of this study guide is designed to give individuals an understanding of and an insight into the types of hazards which are likely to be found on a construction site.

YOU MUST ENSURE THE REQUIREMENTS OF THE NSW OCCUPATIONAL HEALTH AND SAFETY ACT ARE COMPLIED WITH IN RESPECT ALL ACTIVITIES ON YOUR SITE.
YOU MUST OBTAIN YOUR WHITE CARD

Further information in respect Health and safety issues for the construction industry can be obtained by visiting the following websites.

www.ohs.nsw.gov.au

www.nohsc.gov.au

These sites provide access to the Acts, Regulations and Codes of Conduct for construction work within New South Wales.

The two diagrams which follow, will assist you in planning your project and recognising areas of responsibility you will need to be aware of throughout the project.

These are identified as;

- Figure: 1.4.3(1) Planning Flow Chart and Responsibilities
- Figure: 1.4.3(2) Preliminary Checklist

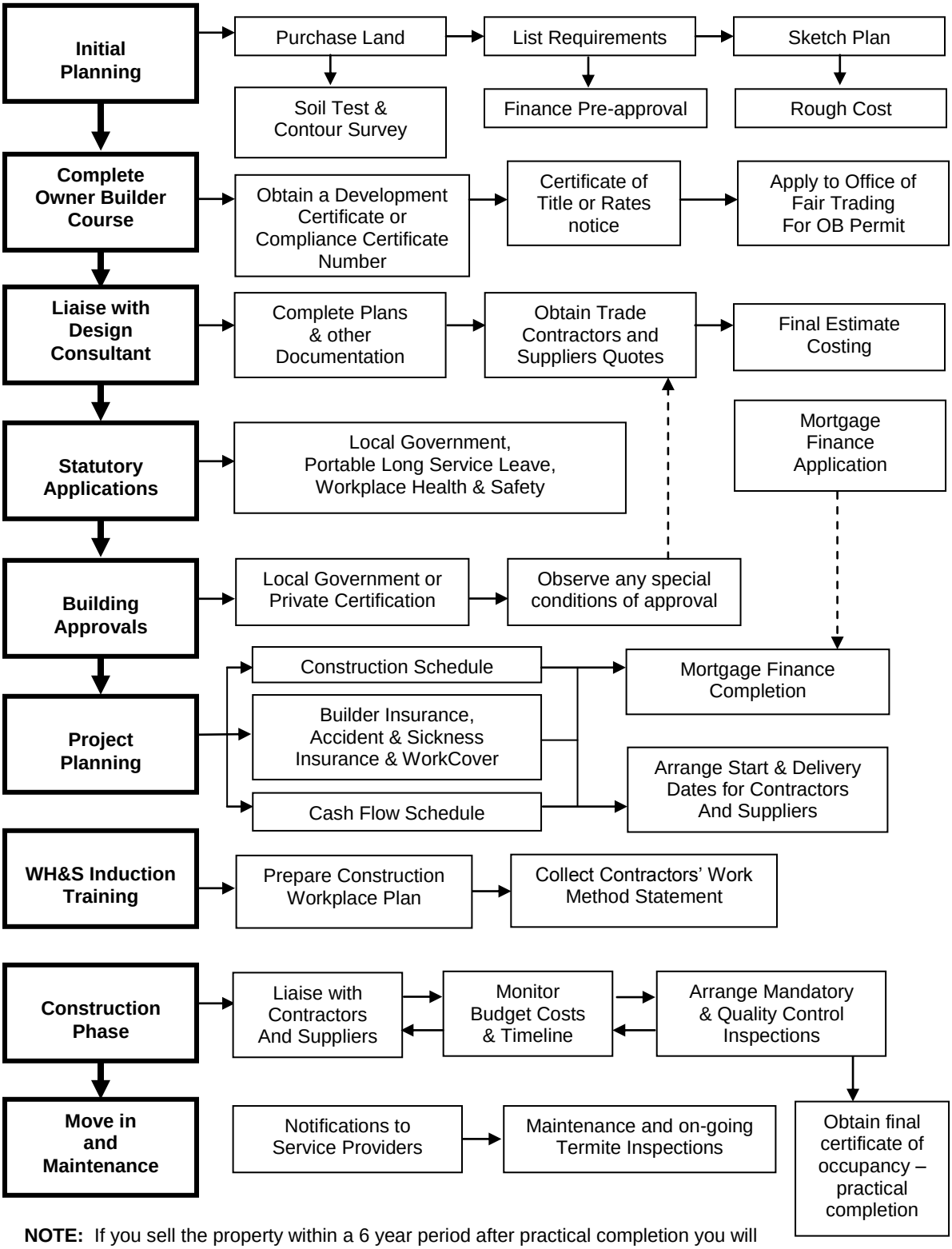
Take the time to familiarise yourself with them and refer back to them as often as necessary throughout the project to reinforce your understanding of specific roles and responsibilities.

Lets now look at the specific responsibilities of an owner- builder as detailed on the Office of Fair Trading website.

- **Overseeing and supervising all tradespeople**
- **Ordering and delivering of all materials, and the management of the building site**
- **Obtaining all necessary Council and Authority approvals for the work**
- **Ensuring that the financial, taxation and insurance requirements of the building works are met, and fully compliant with all laws**
- **Providing a safe working environment**
- **Ensuring any contractor engaged is appropriately licensed to do the work contracted for.**

These will all be discussed in detail in the following sections of this text.

Figure 1.4.3(1) Key Responsibilities of an Owner Builder



NOTE: If you sell the property within a 6 year period after practical completion you will be required to take a Home Warranty Insurance for the balance of the period.

Figure 1.4.3(2)

Task No.	Task Particulars
1	Complete Owner Builders course
2	Select land or residence
3	Carry out searches, inquiries
4	Purchase property
5	Payment for conveyancing
6	Design and select a house plan
7	Obtain site survey and contour plan
8	Obtain soil test and foundation report
9	Check your budget costs to build
10	Provide design brief and final sketch to designer
11	Obtain preliminary design drawings
12	Obtain waste management soil test if required
13	Submit soil test and house designs to engineer
14	Collect final house designs and engineers drawings
15	Obtain development application – Council consent approvals
16	Obtain owner builders permit from the Office of Fair Trading
17	Lodge long service leave levy (50% rebate)
18	Lodge plans and all documents to private certifier or council
19	Prepare full budget for preliminaries and building costs
20	Prepare copies of plans for tendering from trades and suppliers
21	Send plans and details of specifics required to contractors Note: Obtain 3 estimates for each trade and supplier
22	Prepare a list of P.C items (Prime cost)
23	Prepare initial building schedule (Take out public holidays)
24	Obtain finance approval and submit all documents

25	Obtain all necessary insurances; WorkCover, public liability, construction insurance, personal sickness and accident and structural warranty.
26	Select successful contractors
27	Check contractors license bona fides
28	Sign contracts with trade contractors
29	Site record and file trade contractors insurance details a. WorkCover b. Contractors all risk (Public risk and liability) c. Personal sickness and accident d. If the contracts value is over $1,200, must take out home warranty insurance
30	Complete your Safety Induction “Green card” course
31	Prepare site safety plan
32	Obtain work method statements from trade contractors
33	Confirm account details with suppliers
34	Erect owner builder site sign if required
35	Erect site safety signs as required
36	Confirm starting dates with trade contractors (Amend building schedule if required)
37	Erect safety fencing where required
38	Erect erosion control systems as required
39	Make arrangements and pay for any temporary services
40	Check final budget for project
41	Obtain and finalise to date a site diary (1 day per page)
42	Finalise an effective filing system
43	Send commencement notification to financier & insurer
44	Set out site, building. Use a surveyor

1.1 Overseeing and supervising all Trades people

Initially, it will be necessary for you to select your trades people and suppliers.

To get a start, it is best to call on personal friends and contacts who either have the required skills and or qualifications or talk to people who have recently completed renovations or construction projects of their own.

Other methods of finding appropriate trades people or suppliers are:

- Yellow Pages
- Local Newspaper Classifieds
- Professional Associations
- Referrals
- Advertising, Sites Signs etc.

Once the site is established and the works have commenced, you will be responsible for supervising and coordinating the activities and tasks undertaken on site including the works performed by your contractors.

The amount of involvement you have and the time taken will make the difference between a successful project which runs on time and on budget and one which has costly overruns in both these critical areas.

Sound, accurate documentation and good interpersonal skills on site are essential in keeping the project 'on track'.

As the Owner-Builder you will need to visit the site regularly to inspect the quality and progress of works relative to the established schedule.

You will need to coordinate and manage the project to ensure all works are completed to a satisfactory standard, and as necessary engage appropriately qualified consultants to 'sign off' on the works.

Remember certain stages of the work or specific structural elements will require inspection and certification.

It is important to ensure these inspections are included in the works schedule and conducted in a timely manner to minimise any delays to the works

1.2 Ordering and Delivering of Materials

Section 4.15 and 4.16 plus the 4.14 (Heath and Safety) discuss ordering, payment, processing, handling and storage of materials on site.

1.3 Obtaining all necessary Council Approvals

Council Approvals

- In section 4.3 of this manual, we looked at how to get an owner-builder permit, and the information you will be required to provide to the Office of Fair Trading.

Let's now look at the steps involved in the approval process.

We have included a brief glossary of terms which will assist you in understanding the acronyms, jargon and technical wording found in the various forms, applications, consents and guides utilized during the planning and approval process.
Glossary of Terms

- **Building Code of Australia (BCA)**

A uniform set of technical provisions for the design and construction of buildings throughout Australia.

- **Complying Development Certificate**

A certificate which allows a complying development to be carried out.

- **Development Application (DA)**

An application for consent to carry out local development but does not include an application for a complying development certificate.

- **Development Consent**

Consent to carry out local development.

- **Development Control Plan (DCP)**

Detailed guideline that illustrates the types of controls that apply to a particular type of development or development in a particular area. A DCP refines or supplements a regional environmental plan or local environmental plan and is made according to the Environmental Planning and Assessment Act 1979.

- **Local Environmental Plan (LEP)**

The principal legal document for controlling development at the council level. The zoning provisions establish permissibility of uses and standards regulate the extent of development. They are prepared by councils and approved by the Minister (after public exhibition).

For example, the LEP which applies to the Sutherland Shire is called the Sutherland Shire Local Environmental Plan 2000.

- **Principal Certifying Authority (PCA)**

A council or private accredited certifier that oversees the building process.

- **Zoning**

The system of categorising land uses as prohibited, requiring consent or not requiring consent within particular areas. Zones (such as residential or commercial) are detailed in plan form and explained in environmental plans.

An overview of the Development Approval Process

DEVELOPMENT APPLICATION (Approved by council)	• Preliminary enquiries with council • Lodge your development application with council. • Council considers the impacts of the proposal. • If satisfactory, the council will give you a development consent subject to conditions. • You need to check with council about options for the following stages of the process, including fees payable.
CONSTRUCTION CERTIFICATE Issued by council or an accredited certifier	• Apply for your construction certificate either to council or a qualified professional in the private sector - an "accredited certifier". • Council or an accredited certifier checks that the plans and specifications of your proposal will comply with the relevant conditions of the consent and detailed standards, including the Building Code of Australia.
APPLICANT APPOINTS PRINCIPAL CERTIFYING AUTHORITY AND NOTIFIES COUNCIL	• Before any works start on the site, you must appoint a principal certifying authority (PCA) - this can be either council or an accredited certifier. • Confirm what inspections will be done, the fee and other requirements. • Two days notice before work begins must be provided to the council (if you have appointed a PCA)
BUILDING WORK BEGINS	• Work begins in accordance with the development consent, including any conditions, and the construction certificate. • PCA to determine inspection stages. • It is likely that your builder will advise the PCA of stages of work to allow the required inspections to be done.
OCCUPATION CERTIFICATE Completion of works	• After the works are concluded satisfactorily and you provide a fire safety certificate, if required, the PCA will issue the occupation certificate.

The above process is detailed in “Guiding Development and Better Outcomes, produced by the Department of Urban Affairs and Planning 1999. (now Department of Infrastructure Planning and Natural Resources)

What is a Development Application?

A Development Application or DA is a formal request for permission to carry out proposed development.

Development is legally defined as:

- The erection, including alteration in whole or part, of a building
- Work in, on, over or under land;
- The use of land or a building;
- The subdivision of land; or
- The strata subdivision of a building.

Do I need to make a DA?

You will probably need to make a Development Application if you propose to do any of the following:

- Erect a new building or structure including, outbuildings, swimming pools, retaining walls etc;
- Add to or alter an existing building;
- Demolish a building;
- Demolish or alter a building or place that is a heritage item or that is within a Heritage Conservation Area;
- Change the use of an existing building or premises to another use;
- Subdivide land or strata subdivide a building;
- Display or erect an advertising sign
- Carry out earthworks, excavation or filling.

Your local council will generally have a Local Environmental Plan which will detail minor permissible development that does not require consent.

As a guide, this type of development is basically split into two categories:

- Exempt Development; and
- Complying Development

Exempt Development is minor or small scale development that will have minimal environmental impact and therefore does not need a development consent. Exempt developments will generally be defined in the Local Environmental Plan for each council. They will be accompanied by a set of standards that the development must

meet in order to be carried out as exempt. Exempt development is the type of development which would have previously not required a building approval.

Examples of exempt development (residential) include:

- Awnings
- Decks and Patios
- Pergolas
- Retaining Walls

Complying Development is also development which is routine in nature that, providing it complies with the standards contained or listed in the councils Local Environmental Plan, a Complying Development Certificate is all that is needed to carry out the proposal. Complying Development Certificates have the same value as a Development Consent, but they certify that the development proposal complies with all the preset standards. Council or an Accredited Certifier can issue a Complying Development Certificate.

Examples of complying developments (residential) include:

- Cubby Houses
- Fences
- Garages

What is a Private Accredited Certifier?

An Accredited Certifier is a professional person accredited by an Accreditation Board approved by the Government.

An Accredited Certifier will only be accredited if they meet high quality standards and hold appropriate insurances.

An Accredited Certifier may be used by both an applicant and council to confirm or check compliance with predetermined standards.

They will be able to certify whether applications for complying development conform to the standards set by council.

They will also be able to certify that a building has been inspected and construction meets all appropriate standards such as the Building Code of Australia (BCA).

Council Policies

It is important to gain a sound understanding of how your particular council determines their specific requirements in respect to developments.

Before you start designing or planning your project it would be wise to call your local council and discuss specific requirements in respect:

- Environmental Planning Legislation;
- Local Environmental Planning;
- Development Control Plans; and
- Relevant council policies.

Generally councils have trained customer service staff who can provide the necessary and relevant information.

In addition, some councils will be happy to schedule a Pre-Application Discussion.

Where this occurs, it will most likely take place at council offices, be informal and have a council environmental assessment officer present.

A written record of the meeting should be kept.

Do I need approval from any other Authorities?

It is the owner-builders responsibility to identify all other authorities who have approval requirement in respect of their development.

Under the planning laws, you must indicate on your application whether you require approval from another government agency or authority which is additional to your development consent.

If your proposal does require another approval it is generally dealt with as an “integrated development”

Council will refer such applications to the relevant agency to obtain their ‘general terms of approval’.

These requirements will then be incorporated into the conditions of any development consent issued by the council.

The following table details some of the other agencies which may be involved and the relevant Acts that may affect your proposal.

Approval Body	Law Requiring Approval
Heritage Council	s.58 Heritage Act 1977
Roads and Traffic Authority	s.138 Roads Act 1993
Environmental Protection Agency	Licenses under ss.17A, 17C and 17D and approvals under s.171 of the Pollution Control Act and licenses under s.44 of the Waste Minimisation Act.
Department of Sustainable Natural Resources	Part 3A, Rivers and Foreshores Improvement Act 1948, ss.10, 13A, 18F, 20B, 20CA, 20L, 116 and Part 8, Water Act 1912.
National Parks and Wildlife Service	S.90 National Parks and Wildlife Act 1994.
NSW Fisheries	S.144, 201,and 205 of the Fisheries Management Act 1994.
NSW Rural Fire Service	S.91 of the Environmental Planning and Assessment Act 1979, and S.100 of the Rural Fires Act 1997.

How do I lodge my completed application?

It is usually best to lodge your application personally, that way council staff will run through a checklist to ensure all the necessary documentation is included.

This will help prevent unnecessary delays due to an incomplete application being lodged.

The documentation you will need to present will include:

- All required plans and supporting documentations such as specifications etc;
- Proof of landowner consent;
- A signed application form;
- Pay the development application fees; and
- Pay the building industry Long Service Levy (claim your 50% rebate)

Fees for the approval are usually based on the estimated cost of development and, the Building Industry Long Service Levy is payable if the building work value exceeds $25,000.00

As an owner-builder you are responsible for ensuring the scope of works undertaken are compliant in the following areas:

- The owner-builder permit is specific in respect the project and site to which it is issued.

Works can only be conducted on the work site described in the permit
and the works associated and identified by the DA or the Complying Development Number.

- You may not undertake any specialist works such as plumbing or electrical unless you hold licences to cover such works.

It is important that these works are completed only by appropriately licenced and qualified tradespeople to ensure the ongoing safety of the residents, occupants and subsequent visitor to the completed dwelling.
The installation of these services is governed by the relative statutes, standards and regulations, the use of appropriately licenced tradespeople will help in ensuring each of these requirements and regulations are fully satisfied.

Compliance Inspections

For the construction of an entire home, the following building inspections are compulsory under the Integrated Planning Act 1997 and must be carried out by either a Building Certifier or a competent person authorized by the Building Certifier:

- Footings
- Slab-on-ground
- Frame (i.e. ready for roof)
- House Final

For the construction of an entire home, the following plumbing inspections are compulsory under the Metropolitan Water Supply and Sewage Act 1909. These can only be carried out by your Local Government Plumbing Inspector.

- Drainage – under slab
- Plumbing rough-in
- Drain test
- Plumbing final

Generally, the Building Certifier will need at least one or two days notice prior to the time when the inspection is to be carried out.

You will also have to provide copies of the following certificates to the Building Certifier, where relevant to your project:

- Wet seal – for tiled showers
- Glass – for windows and sliding glass doors
- Termite management system
- Roof trusses
- Any engineers certificates
- Energy rating

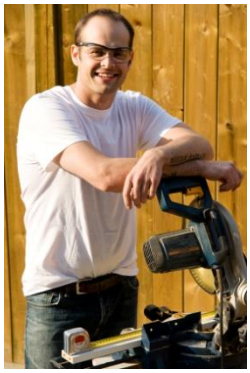
This manual contains information either directly or indirectly through included text and or links to fact sheets or standard forms.

In the early stages, the best source of information will be the New South Wales Department of Fair Trading website and your Local Council or nominated Private Certifier.

To get you started, we have taken much of the content of the owner-builder application form and provided further detail on how to access, compile and complete the required information.

The form is included as a .pdf file which you can recall, print off and work through following our guidelines.

Owner-builders Responsibility as stated on the Department of Fair Trading Website



Under the Home Building Act 1989, you are required to obtain an Owner-builders Permit if you wish to perform building works to a value of $5,000.00 or more on your own property.

If the value of the works exceeds or is equal to $12,000.00 you must complete an approved owner-builder course.

The value of building works must be determined by calculating the cost of all materials and the cost of a licensed contractor to complete the works under a commercial agreement (contract), including GST.

There are penalties for falsely stating the value of works, and you may be excluded from obtaining another permit for 5 years.

Additionally, you would not be permitted to undertake the works included on the associated owner-builder Permit.

Following are extracts taken directly from the Department of fair Trading website which outlines your requirements as an owner-builder.

As an owner-builder, you are responsible for:

- *overseeing and supervising all tradespeople*
- *ordering of materials and management of the building site*
- *obtaining all necessary council and authority approvals*
- *ensuring that the financial, taxation and insurance requirements of the building work are met and fully comply with all laws*
- *being aware of your obligations under the* ***Workers Compensation Act 1987*** *and* ***Occupational Health and Safety Act 2000*** *and providing a safe work environment that complies with* ***WorkCover*** *requirements*
- *ensuring any contractor engaged is appropriately licensed and insured to do the work contracted for*
- *warranting that the work and materials will be fit for the purpose and that the work results in a dwelling fit for occupation.*

Do your sums before you start and ask yourself if any saving you will make is worth the time and responsibility it will take. As an owner-builder you are guaranteeing the work you undertake.

It is an offence under the ***Home Building Act*** *(maximum penalty $22,000) for the holder of an owner-builder permit to:*

- *knowingly engage an unlicensed contractor*
- *lend your permit to another person*
- *refuse to disclose to an authorised officer the names and addresses of contractors working on the site.*

If you don't want the responsibility of being an owner-builder, you should be wary of a builder who suggests you obtain an owner-builder permit while they do all the building work for you.

This may be a ploy where the builder is shirking responsibility, is unlicensed, or is unable to get necessary insurance.

What works can owner-builder's carry out?

Domestic building works are the only type of works permitted under an owner-builder permit.

You cannot carry out works on a multiple dwelling (other than a dual occupancy) or on any building intended for commercial or industrial use.

You can however carry out works on an existing unit, these works are limited to, repair, renovation, alteration, extension or improvement.

The following extract from the Department of Fair Trading website outlines:

An owner-builder is an individual who does owner-builder work and holds a permit for that work.

What is owner-builder work?

Owner-builder work is any work (including supervision and co-ordination) involved in the construction of, or alterations, repairs or additions to, a dwelling (which includes a house, terrace, town-house, garage, swimming pool and certain other structures and improvements):

- *where the reasonable market cost (including labour and materials) exceeds **$5,000**, and*
- *which relates to a single dwelling or dual occupancy:*
  - *that requires development consent under **Part 4 of the Environmental Planning and Assessment Act 1979,** or*
  - *that is a complying development within the meaning of that Act.*

What works can I not conduct myself?

You cannot personally carry out any building works which involve, plumbing, drainage, gasfitting, electrical, termite management or waterproofing, asbestos removal or scaffolding unless you hold the appropriate occupational or trade contractors license.

These works must be carried out and certified by appropriately licensed trade contractors.

Additionally, the Department provides details on certain limitations that affect the issue of an owner-builder permit.

The following extract from the Department of Fair Trading website outlines:

What are my limitations under an owner-builder permit?

An owner-builder permit is not a building licence. It does not allow you to:

- *do work other than the project covered by the development application or complying development certificate*
- *do specialist work such as electrical, plumbing, gasfitting, air-conditioning and refrigeration work (unless you hold a licence for such work).*

Only one owner-builder permit can be issued within any 5 year period, unless the application and any earlier permit relate to the same land or unless special circumstances exist.

How often can I get an Owner-builders Permit?

You cannot obtain another permit within five years from the date of issue of a previous permit unless the Department of Fair Trading is satisfied there are special circumstances, and an exemption has been approved. (see above)

How do I get a Permit?

To apply for an owner-builders permit you must apply at a Fair Trading Centre, complete an application form, pay a fee and provide specific information.

The following extract from the Department of Fair Trading website outlines the process:

How do I get an owner-builder permit?

To get an owner-builder permit, you must apply at a Fair Trading Centre and show that:

- you are over 18 years old
- you own the land or have a prescribed interest in the land (certificate of title or rate notice)
- you live or intend to live in the completed home or one dwelling of the dual occupancy as your principal residence.

You must also provide:

- a description and address of the proposed work with a copy of the plans and council development application number or complying development certificate number
- the owner-builder permit application fee
- evidence that you have completed an approved owner-builder course, where the value of the proposed work is over $12,000.

A permit cannot be issued for work that has already commenced.

For information on approved owner-builder courses and equivalent qualifications, the following publications are available:

- *Owner-builders approved courses*
- *Owner-builders approved equivalent qualifications*.

There are no exemptions from the need to complete a course unless you hold an approved equivalent qualification.

A spouse or relative will not be issued with an owner-builder permit for their partner's or family's land.

Also, there are specific rules for applicants where a company owns the land. Contact Fair Trading for details.

Let's now look at the Application and step through the contents:

1.4 Application for Owner-Builder Permit

1.4.1 Applicant Details

This section of the application form requires you to enter the requested details of all persons listed on the title.

The nominated Permit Holder will be the one required to complete the course of instruction where the value of works is $12,000.00 or more.

All persons on the title are prohibited from taking out another permit for a period of 5 years.

The applicant's details are to include:

- Surname and given name of the person making the application
- Date of Birth
- Gender
- Postal Address
- Phone contact details

Note: The applicant must be over 18 years of age and must be the owner of the property.

NSW OFFICE OF Fair Trading DEPARTMENT OF COMMERCE for consumers & traders
ABN 54 625 095 406

APPLICATION FOR OWNER - BUILDER PERMIT
Home Building Act 1989

Please read the explanatory information before completing the form.
The form should be completed in black ink and BLOCK LETTERS.
An owner-builder permit is only required if the market value of the work (labour and materials) exceeds $5000.

1 Details of Applicant *(only one owner can apply)*

Surname:

Given Names:

Date of Birth: / / Age Years ☐ Male ☐ Female

Note: Permits cannot be issued to persons under 18 years.

Postal Address:

Postcode:

Home Telephone: Business Telephone:

1.4.2 Supporting Documentation

You must provide attached to the application, the following certified copies of the following documents:

- Proof of legal ownership, rates notice, land title or similar
- Copy of the plans submitted to council or private certifier to obtain a Construction Certificate.

  Note: This process is undertaken before the owner-builder permit is applied for and is part of the development application process. For more details on this process see the included flow chart on page ... of this manual)
- Where the property is owned by a company, proof of the individual shareholding is required. You should discuss these requirements with your local Fair Trading Centre.
- Evidenc of completion of approved course means a certified copy of the awarded certificate and the associated course providers approval/accrediatation number if applicable.

2 Supporting Documentation

The following original documents (or certified copies) MUST be provided:

Office Use Only Sighted

- Proof of legal ownership of land, e.g. copy of current rate notice. ☐
- Copy of plans submitted to Council including a site plan. ☐
- If the property is owned by a company, proof of the applicant's shareholding including evidence that all shares are owned by individuals. ☐
- Evidence of approved training if construction work will exceed $12,000: ☐ ☐

Owner Builder Course Provider:

Dated: / /

1.4.3 Application Fee

The prescribed fee can be calculated from information provided on the Fair Trading website, at the time of publication of this manual the fee was $143.00 for new applications.

This included a processing fee of $55.00.

A warning is included that an unspecified portion of the fee payable is retained if the application is unsuccessful.

> **3 Application fee:**
> The prescribed fee must accompany the application - see Home Building licence fees and charges at: www.fairtrading.nsw.gov.au/building or ask at your local Fair Trading Centre.

1.4.4 Details of Building Work

In this section, the applicant is required to provide details of the real property description and a brief statement of the building works. An example would be:

"The building works at the above address are of a single storey domestic dwelling of 350 square meters.

The construction is brick veneer with aluminium framed doors and windows and several feature panels of timber cladding.

The roof covering is concrete tiles."

Additionally you are required in this section to provide evidence of development application and consent together with the Construction certificate number that has been issued against these works.

A statement of the value of the proposed works is required (remember, this is based on a fair market value, similar to the price you would expect to pay if you contracted a builder to complete the works)

You must state that you intend to live in the premises once completed and indicate if you have been issued an owner-builder permit against this or any other property in the preceding 5 years.

4 Details of Building Work:

Lot/Portion/Street Number: Street:

Town/Suburb: Postcode:

Council Area:

Brief Description of work including size and type of construction:

Council Development Application Number:

Complying Development Certificate Number:

Construction Certificate No:

Market value of building work: $

5 Do you intend to reside at the above address? ☐ No ☐ Yes

6 Have you been granted an Owner Builder permit for building work carried out on land other than the above during the past 5 years? ☐ No ☐ Yes

If yes, provide the details of the previous Permit number:

In addtion, provide the address and a description of the previous work - *see (1) and (2) on Page 2*:

Page 1 of 3

(1) Address of previous building work:

Lot/Portion/Street Number: Street:

Town/Suburb: Postcode:

(2) Description of previous building work:

1.4.5 Applicants Declaration

7 Do you understand that:

- It is an offence for the holder of an owner builder permit to knowingly engage an unlicensed contractor, lend your permit to another person, or refuse to disclose names and addresses of contractors working on site? ☐ No ☐ Yes
- Owner-builder permits are not applicable to any commercial application? ☐ No ☐ Yes
- Owner-builder permits are applicable to single dwelling or dual occupancy only? ☐ No ☐ Yes
- You must own the land on which you are building? ☐ No ☐ Yes
- The house you are building or improving must be used as your home? ☐ No ☐ Yes
- You cannot obtain more than one owner-builder permit within 5 years unless you are building on or improving the same property, unless you demonstrate special circumstances? ☐ No ☐ Yes
- If you engage a contractor to do work over $12,000 on your project, the contractor must take out home warranty insurance and give a certificate of insurance to you? ☐ No ☐ Yes
- If and when you sell this dwelling within 6 years of completion of the work and the project was more than $12 000 (labour and materials), you must attach the following to the contract of sale:
  1. a note that an owner-builder permit was issued in relation to the work and that the work done under the permit required home warranty insurance ; and
  2. the certificate of home warranty insurance. ☐ No ☐ Yes
- If you do not include the note and the insurance certificate the purchaser can void the sale, unless you had arranged the insurance before entering into the sale of contract. In this case, you must provide the certificate of insurance prior to settlement. ☐ No ☐ Yes

DECLARATION BY APPLICANT
(PENALTY FOR FALSE STATEMENT $2 200)

8 The Applicant for this permit:

- authorises the Office of Fair Trading to make any enquries and to receive and disclose any information which is relevant to the applicant's initial and ongoing eligibility to hold this permit;
- acknowledges that information will be placed on a register open to the public in accordance with the Home Building Act 1989;
- has a right to seek access to and correction of information supplied; and
- accepts that failure to supply information required on this form may delay the processing of the application

Signature of Applicant: _____ Date: ____/____/____

Sections 7 and 8 of the application require you as the applicant to make a declaration that:

a) You understand your responsibilities as an owner-builder and the restriction which are imposed upon owner-builder works/permits
b) You understand your obligations in respect to the sale of a property upon which owner-builder works were undertaken, including home warranty insurance
c) States the penalty which may be imposed for making a false declaration

Further, the declaration authorises the Office of Fair Trading to make enquiries and search records to establish and verify the information provided in the application.

1.4.6 Application Lodgement

The final section of the application provides details on where and how an application may be lodged, along with contact details and locations of Fair Trading Centres.

Application Lodgement:

1. **In person: at any Fair Trading Centre (FTC). The locations of our Fair Trading Centres are detailed on Page 3 of this form.**
2. **By Post: mail to any Fair Trading Centre (FTC). The locations of our Fair Trading Centres are detailed on Page 3 of this**

Telephone Enquiries: **Contact the Fair Trading Information Centre on 13 32 20**

Language Assistance: **Telephone:** 13 14 50 Ask for an interpreter in your language.
TTY: 02 9338 4943 Telephone service for the hearing impaired.

FOR OFFICE USE ONLY

Payment Received at:		Permit Number:	
Amount:		Receipt Number:	
Cashier:		Date:	/ /
Permit Approved/Refused:			

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FAIR TRADING CENTRE LOCATIONS

Albury FTC
490 David Street
ALBURY NSW 2640
Tel: 13 32 20
Fax: (02) 6041 2220

Armidale FTC
85 Faulkner Street
PO Box 641
ARMIDALE NSW 2350
Tel: (02) 13 32 20
Fax: (02) 6772 9954

Bathurst FTC
154 Russell St
PO Box 22
BATHURST NSW 2795
FREECALL: 1800 502 042
Fax: (02) 6333 1444

Blacktown FTC
Level 3, 22 Main Street
PO Box 1001
BLACKTOWN NSW 2148
Tel: 13 32 20
Fax: (02) 9621 5511

Broken Hill FTC
32 Sulphide Street
PO Box 786
BROKEN HILL NSW 2880
Tel: 13 32 20
Fax: (08) 8088 5100

Coffs Harbour FTC
22 Park Avenue
PO Box 1557
COFFS HARBOUR NSW 2450
Tel: 13 32 20
Fax: (02) 6653 0777

Dubbo FTC
50 Wingewarra Street
PO Box 584
DUBBO NSW 2830
Tel: 13 32 20
Fax: (02) 6884 2486

Gosford FTC
Level 2, Gateway Centre
237 Mann Street
PO Box 1019
GOSFORD NSW 2250
Tel: 13 32 20
Fax: (02) 4320 0601

Goulburn FTC
39 Goldsmith Street
GOULBURN NSW 2580
Tel: 13 32 20
Fax: (02) 4822 1969

Grafton FTC
50 Victoria Street
PO Box 362
GRAFTON NSW 2460
Tel: 13 32 20
Fax: (02) 6643 1405

Hurstville FTC
Level 3, 4-8 Woodville Street
HURSTVILLE NSW 2220
PO Box 151
HURSTVILLE BC NSW 1481
Tel: 13 32 20
Fax: (02) 4702 5300

Lismore FTC
Suite 5 Conway Court
17 Conway Street
Lismore NSW 2480
PO Box 83
LISMORE NSW 2480
Tel: 13 32 20
Fax: (02) 6627 6555

Liverpool FTC
Shop 1R, 33 Moore Street
LIVERPOOL NSW 2170
PO Box 609
LIVERPOOL BC NSW 1871
Tel: 13 32 20
Fax: (02) 4702 5300

Newcastle FTC
Level 5, 400 Hunter Street
PO Box 835
NEWCASTLE NSW 2300
Tel: 13 32 20
Fax: (02) 4925 7028

Orange FTC
184-186 Lords Place
PO Box 2285
ORANGE NSW 2800
Tel: 13 32 20
Fax: (02) 6361 8350

Parramatta FTC
Ground Floor, 1 Fitzwilliam St
PARRAMATTA NSW 2150
PO Box 972
PARRAMATTA NSW 2124
Tel: 133 220
Fax: (02) 4702 5300

Penrith FTC
518 High Street
PO Box 4004
PENRITH PLAZA NSW 2750
Tel: 13 32 20
Fax: (02) 4702 5300

Port Macquarie FTC
143 Horton Street
PO Box 1747
PORT MACQUARIE 2444
Tel: 13 32 20
Fax: (02) 6584 1225

Queanbeyan FTC
Shop T7 - CityLink Plaza
Morisset Street
QUEANBEYAN NSW 2620
Tel: 13 32 20
Fax: (02) 6298 4888

Sydney FTC
McKell Building
2-24 Rawson Place
SYDNEY NSW 2000
Tel: 13 32 20
Fax: (02) 4702 5300

Tamworth FTC
Suite 3-5, Kable Korner Complex
Cnr Kable Avenue & Darling St
PO Box 1033
TAMWORTH NSW 2340
Tel: 13 32 20
Fax: (02) 6761 9099

Tweed Heads FTC
43 Wharf Street
PO Box 822
TWEED HEADS NSW 2485
Tel: 13 32 20
Fax: (07) 5599 5035

Wagga Wagga FTC
8 Baylis Street
WAGGA WAGGA NSW 2650
Tel: 13 32 20
Fax: (02) 6921 7439

Wollongong FTC
Ground Floor, 63 Market Street
PO Box 5275
WOLLONGONG NSW 2520
Tel: 13 32 20
Fax: (02) 4229 3929

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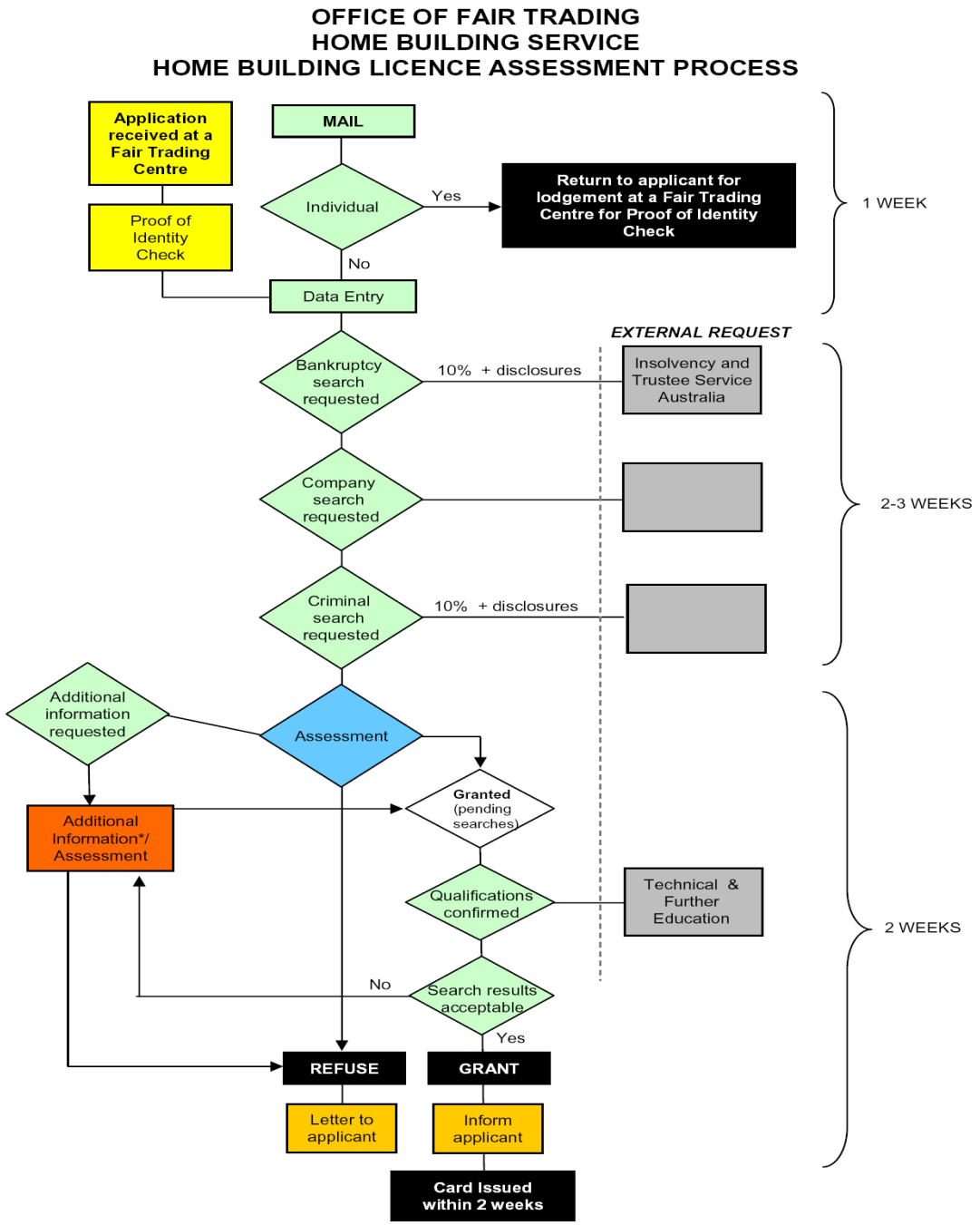
1.4.7 Customer Flow Chart

The Customer Flow Chart details the process that will be followed from submission of application to issuance of the permit or rejection of the application.

The refund and notification schedules are also included.



* Where additional information is required, processing time will be extended beyond 30 working-day Guarantee of Service.

1.4.8 Approval Process

What's a "Development Application"?

A Development Application (DA) is a formal request for permission to carry out proposed development.

Development is legally defined as:

- the erection, including alteration in whole or part, of a building;
- work in, on, over, or under land;
- the use of land or of a building;
- the subdivision of land; or
- the strata subdivision of a building.

Do I need to make a DA?

You need to make a development application if you propose to do any of the following: erect a new building or structure, including outbuildings, swimming pools, retaining walls, etc;

- add to, or alter, an existing building;
- demolish a building;
- demolish, or alter a building or place that is a heritage item or that is within a Heritage Conservation Area;
- change the use of an existing building or premises to another use;
- subdivide land or strata subdivide a building;
- display or erect an advertising sign;
- carry out earthworks, excavation or filling.

Some minor permissible development do not require development consent.

These forms of development are basically split into two categories:

- Exempt Development; and
- Complying Development.

Exempt Development

is minor or small-scale development that will have minimal environmental impact and therefore does not need a development consent.

Exempt development is identified in our Local Environmental Plan using a description of a development and a set of standards that the development must meet in order to be carried out as exempt.

Exempt development is the sort of development that previously would not have needed a building approval.

Complying Development

is also development that is so routine in nature that, providing it complies with the standards contained or listed in Local Environmental Plans, a Complying Development Certificate is all that is needed to carry out the proposal.

Complying Development Certificates have the same value as a Development Consent, but they certify that the development proposal complies with all the pre-set standards. Council or an Accredited Certifier can issue a Complying Development Certificate.

More detailed information is generally included on Council websites.

Sometimes it is not clear whether something requires a Development Application. It is always best to check with your Local Council or with your Private Certifier before proceeding.

To make a development application, you need to follow the five steps:

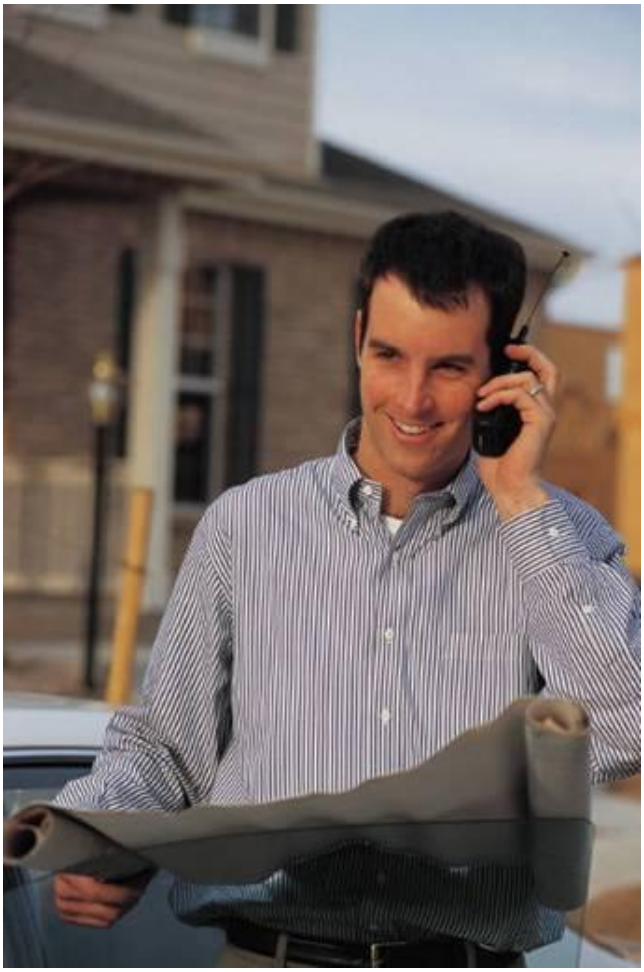
Approval of the building documents (plans, specifications etc) must be obtained through a private certifier or local government (council) before any building works are commenced. (this includes earthworks and excavation)

Approvals are required at various stages throughout the construction process, including completion.

A complete list of required certifications, inspections and approvals, are provided in section 5.9 of this manual.

It is the responsibility of the owner-builder to ensure that all works are performed and constructed in accordance with the approved documents.

If it becomes necessary to change, alter or amend the design, it is the responsibility of the owner-builder to consult with the certifier to determine whether the approved documents require amending prior to making any changes in the construction.



Whilst the information is correct at the time of publication, change is constant in this area and we advise anyone considering any form of development, familiarise themselves with the latest requirements.

One of the best websites we have come across that details the requirements and process to be followed in order to obtain a Development Application is the DA Guide 2008 on the Sutherland Shire Council website.

It can be accessed by going to the councils website at:

www.sutherland.nsw.gov.au

or by following the link provided below:

http://www.sutherland.nsw.gov.au/ssc/home.nsf/HeadingPagesDisplay/A-Z+Council+ServicesBuilding+And+Development?OpenDocument

Note: To access the link directly from this document, hold down the control key **CTRL,** move the mouse over the link and click on the link.

Most local councils include information about the approval process on their website and generally include downloadable application forms, fact sheets and guides.

The steps that are typically required in the application process are provided on the next page.

1. • Pre Application meeting with Council staff
2. • Development Application (DA) lodged with Council
3. • DA notification and/or advertisement
4. • Specialist/Government referrals or concurrence sought
5. • DA assessed by council staff
6. • Development Consent issued
7. • Construction Certificate (CC) application with detailed plans and specifications lodged with either council or a Private Certifier
8. • Plans and specifications indicate compliance that a building constructed in accordance with the plans will fully comply with the Building Code of Australia and the Development Consent
9. • Construction Certificate is issued plans and specifications endorsed, Long Service Levy paid
10. • Applicant nominates council or Private Certifier as the Principal Certifying Authority (PCA) to arrange inspections and Compliance Certificates during construction
11. • Applicant advises Council in writing, 2 days prior to commencement of work
12. • PCA (Principal Certifying Authority) inspects work and issues Compliance Certificates
13. • Final Compliance Certificate issued when all work is complete and DA conditions are met

1.5 DESIGN

The design process starts from the minute you first decide to build your new home.

Most people will start collecting their thoughts, ideas and concepts from that minute, clipping photos, articles and floor plans from magazines, journals and brochures, but how do you turn those thoughts into reality.

The best way we know is to sit down, collect your thoughts and then carefully prepare them into a logical and complete presentation that you can take to your selected designer.

Initially it will be important to consider big ticket items, gradually working your way through to the finer detail.

It really is like putting together a big jigsaw puzzle.

Consider the following:

- *What is your preferred or dream lifestyle?*

  Do you like to live outdoors and enjoy your garden, or do you prefer large indoor living areas and an open floor plan?

  Is your family at an age where you want privacy or do you need to be close and easily accessible to young children?

  Are there any specific access requirements for people with impairments?

  Is sound proofing necessary for media rooms or workspaces?

- *What is a realistic budget?*

  Setting a realistic budget will be based on many factors including disposable income, savings, borrowing capacity.

  When you decide on your budget, keep the figure in mind as you work through the design.

  Decide on a quality range of fittings and identify them as average, medium or high end to suit your budget.

  Once an estimate of the gross floor area of the dwelling is established and any special site consideration are identified, it is possible to determine a ball park figure based solely on indicative square meter rates for your area.

- *Have you chosen a site?*

  As simple as this may sound, some people miss the fact that for other than the most basic of designs, to a large extent, either, the site will determine the design or the design will determine the site.

  For example a contemporary split level home will be far more effective and efficient on a sloping site, and a raft or monolith slab will only truly sit well with a flat building block.

  Existing foliage, ground water and runoff, adjacent buildings will all have an influence on how you best achieve an efficient and functional design.

- *Does the site present any unique problems or design considerations?*

  Slope, easements, setbacks, tree preservation order and land shape will all directly impact on the design of your dwelling.

- *What are important design features of the house?*

  Three, four or five bedrooms, ensuites, walk in robes, pantries, built in cabinetry, 9 foot high ceilings, car accommodation, media rooms, smart wiring for multimedia, communications facilities, island benches, built in appliances are all considerations.

  Your list should include those items which are negotiable and those which are not.

  ie must have versus nice to have.

- *What is your preferred construction method?*

  - Brick Veneer (timber or steel frame)
  - Cavity Brick
  - Timber Frame Clad
  - Single Skin Masonry (blockwork)
  - Construction Boards, (blue board)
  - Pole House
  - Hebel or other lightweight composites

  All of the materials and construction methods listed have unique qualities which make them more or less desirable for a given construction, you decision will be based on, look, feel, functionality, cost, energy efficiency, durability and compliance issues.

- *Consider the quality of fittings, fitments and fixtures.*

  Are you building a high end product with the most expensive of fittings or will a more modest fitout satisfy your requirements.

  Remember the sky is the limit when it comes to specifying the final fit of your new home or renovation, but it all comes at a cost.

- *Are there any special legislative requirements of the location?*

Once you have considered all of the previous requirements, you should be ready to put your ideas into a format that you can take to a designer and firm up concept drawings.

You will most likely have developed two things:

1. *A preliminary sketch of the floor plan*

   - Shape your information into a basic line drawing showing proposed room sizes and locations and the general shape of the dwelling and it's location on the site.

     When you set this up, consider the value of investing a few dollars in a sketch pad with an established grid.

     1mm and 10mm increments will allow a sketch at 1:100 to be easily produced.

     Use a 300mm base reference in your design, 900, 1200, 1500, 1800, 2100, 2400, 2700 and 3000 all fit well with standard material cut lengths and relates well to floor tiles, villaboard, plasterboard, window and door sizes etc

     Consider high traffic areas, large furniture, cross flow ventilation and efficient use of available space (no unusable voids)

2. *A detailed checklist of design features*

   - Ideas from:

     - Kit Home Magazines
     - Building Journals
     - Trade Center Information
     - Friends homes
     - Previous homes (like and dislikes)
     - Project homes and display villages
     - The internet

   - Prepare information on your preferred:

     - Exterior look (the fascade)
     - External cladding
     - External colours
     - Internal building fabric and materials
     - Internal colours
     - Internal features, (bulkheads, cathedral ceilings)
     - Internal fixtures and fitments

- Consider regulations and planning schemes
    - Look at the covenants governing the site
    - Discuss the zoning and intended use with your certifier
    - Are there any easements or encumbrances

- Consider finding a consultant that can provide a three dimensional rendering of the inside and outside of the dwelling, a “walk through’ function such as is possible with “My Virtual House” will give you a good feel for the layout.

  Ask you Owner Building Solutions Consultant to give you some guidance in this area.

In addition to those items mentioned above, the following factors will all affect your design:

1.5.1 SITE

SITE CONSIDERATIONS:

When considering the site for your new home, or when undertaking a proposed extension to an existing dwelling, there are several important factors that will affect the design and cost of your project.

The following list is not exhaustive, but ensuring each is considered fully will go a long way in establishing an appropriate design and provide for accurately assessing the cost of the construction.

ENVIRONMENTAL FACTORS

Prevailing Breezes

Consider the effect of the prevailing wind on your new dwelling, it may be a gentle summer sea breeze you are trying to catch, or perhaps design a cosy nook to escape the southerly buster.

Careful consideration of the prevailing elements not just wind and sun directions, will go a long way in designing a home that is both comfortable and energy efficient.

Will it take full advantage of cooling breezes?

Will it be “too exposed” to the elements?

Have you taken into consideration the positioning of doors and windows to make the most out of the anticipated conditions?

Cross flow ventilation is a major factor in reducing cooling costs during the warmer months.

Will an elevated construction better serve your needs?

Orientation

Orientation to achieve the most efficient energy design is considered in detail in the energy efficiency topic of this kit, however at the design stage, you may be limited in options in respect to locating the house on the site.

Be aware of the impact of site placement on your design and the final functionality of your home.

Be aware of tree preservations or site setback limits that may impose restrictions on design or location of your propose dwelling.

Sloping Blocks

Some people overlook a sloping block because of the difficulties and added cost normally associated with building on these sites.

At times, a block may be purchased at a discounted rate when compared to other more accessible blocks in a similar area.

Often this saving together with careful design and planning can provide not only a cost effective solutions but also an opportunity to create a truly unique home with real character.

We certainly would not recommend this option to everyone, but for some, it may fit perfectly with the vision of your new home.

Having said that, be certain of additional construction costs and consider things like access to services.

A rising main to the sewer at the top of the street can run into several thousands of dollars as can the required preparation of building pads or the connection of services such as water and electricity.

Do your homework and seek professional advice before making any decisions or committing to a design.

Retaining walls and overland water flows can be overcome through efficient design, however the added cost may make the project financially prohibitive.

Wind Loading

Have you considered the effect of wind loading on your property and the associated construction costs?

The wind loading for a given site will determine a range of design criteria including:

- Wind Bracing
- Window glazing
- Fixing of roofing materials
- Tie downs

Basically, the higher the wind loading, the more rigorous the fixing, bracing and general structure will need to be.

This adds dollars to the overall cost of the project and must be considered.

Wind loading is determined considering a number of factors including location of the site (largely based on latitude), proximity to the coastline, with more local effects such as density of dwellings, trees or structures surrounding the property and the slope, style (gable, hip, flat, skillion etc) orientation to the prevailing winds and material used.

It is the responsibility of the designer to calculate the loads and base the structural components of the design on these values.

The certifier will inspect these components for compliance at various stages throughout the construction.

1.5.2 ENERGY RATING

Energy efficiency is becoming increasingly important in the design of any new dwelling.

Introduced by the NSW Government, BASIX, the Building Sustainability Index, ensures homes are designed to use less potable water and be responsible for fewer greenhouse gas emissions by setting energy and water reduction targets for house and units.

BASIX is one of the most robust sustainable planning measures in Australia, delivering equitable and effective water and greenhouse gas reductions across NSW.

BASIX is an online program that is free and accessible to anyone.

The user (usually the building designer) enters data relating to the house or unit design - such as location, size, building materials etc - into the BASIX tool. BASIX analyses this data and determines how it scores against the Energy and Water targets.

The design must pass specific targets (which vary according to location and building type) before the user can print the BASIX Certificate.

A BASIX assessment can only be completed on-line at www.basix.nsw.gov.au

Online, you can find a checklist which itemises every question that BASIX will ask during the assessment process.

Not every item on this list may apply to you – it will depend on your choices for the house design and fixtures.

BASIX recommends you read through the Checklist to ensure you have all the information you need at hand, before you start the BASIX assessment.

The BASIX tool has Help Notes available on every page, providing detailed information and diagrams to help explain the questions.

BASIX provides a Project Report at the end of the assessment to allow you to review your selections before you finalise your Certificate.

Once you have printed a BASIX Certificate and submitted it to Council with your plans, you are legally obliged to build the home according to the BASIX commitments.

These commitments must also be marked on the house plans.

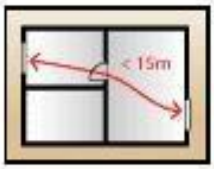
This information has been extracted directly from the BASIX website, you should go to the site and familiarise yourself with the requirements.

You should do this before you go to your Private Certifier or to council so that you are able to correctly answer the questions and provide the relevant details of your proposed construction.

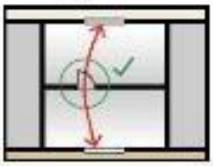
Following is a sample of what a BASIX page looks like and the type of information that you will be required to provide.

Cross ventilation

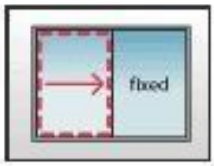
BASIX rewards cross ventilation due to its potential to maintain comfortable conditions and reduce the likelihood of air conditioning use in the dwelling. The following 3 conditions must be met:



1. Breeze path length must be <15m



2. There is a maximum of 1 doorway or opening <2m² between these openings



3. Ventilation openings must be >1m²

Nominate up to 4 breeze paths	○ Within main living area ○ Within bedroom 1, 2 or 3 (not ensuite) ○ Main living area to other living area ○ Bedroom 1,2 or 3 to other living area ○ Main living to other space (not separate bathroom) ○ Bedroom 1, 2 or 3 to other living area (not separate bathroom).
Ventilation opening locations	○ Opposite external wall ○ Adjacent external wall ○ External wall and operable skylight >1m²..

OPTION 3: THERMAL COMFORT-SIMULATION OPTION

Enter the following details, based on the Certificate:	
Accredited assessor number:	
Certificate number:	
Does the Assessor Certificate state that the dwelling has the required shading to qualify for a cross ventilation bonus?	○ Yes ○ No
Thermal loads	
Suspended floor concession:	○ No concession claimed ○ Site slope >10% below floor ○ Required due to flood prone area

Other areas you should consider to make your house as 'green' as possible include:

- Using the 'star rating' system when selecting PC Items such as dishwashers, dryers and washing machines
- Consider the benefit of installing rainwater tanks, (some councils insist on this for new dwellings)
- Using grey water for watering gardens and lawns
- Sound design principles including architectural shade such as sails, eaves and porticos

In short, the best way to achieve an energy efficient design, is to work with the environment, not against it.

1.5.3 BUSHFIRE MANAGEMENT PLANS

The state governments have declared specific areas as being 'bushfire prone' if you are building in one of these areas, you will need to ensure your design is consistent with any requirements of the Bush Fire Management Plan.

Rural Fire Brigades and local councils will publish information and fact sheets to assist you and your designer or certifier in ensuring your proposed construction complies with all regulations.

1.5.4 COVENANTS

When you mention covenants, most people think of new estates and the restrictions imposed on design and materials for a proposed new dwelling.

In fact, a covenant may exist on any construction, new or renovation and could affect the financial viability of your proposed works.

A heritage order is in effect a covenant as it imposes restrictions on the type of construction employed, the materials used, the overall design, concept and finished look of the project.

Some covenants will be limited to external fascades and visible structures while others may include land area to building ratios (minimum and maximum), fences, driveways, street crossings, water tanks etc.

Make certain you are fully conversant with all the factors that affect your site before completing or settling on a design.

1.6 DESIGN CONSULTANTS

The decision to use an Architect over a Building Designer will be determined by two primary considerations:

- Do you have a basic design concept and idea about how you want the dwelling to look and feel (form and function)
- Secondly, what level of administrative involvement you wish to have in the project

Typically, an Architect can provide services well above the level of the Designer, including site administration and organisation.

A Designer will cost you around 1.5% of the total contract value, whereas an Architect will probably be in the amount of 7.5% of the total contract value.

A considerable difference, but this should be reflected in the level of service provided.

Architects tend to be more artistry focused, where designers are technically focused and more concerned about the functionality of the design rather than the aesthetics.

Obviously there are exceptions to the rule in both cases and it is up to you to determine what it is you want, and just what each of the providers can offer.

1.7 HOME WARRANTY INSURANCE

Each licensed contractor (builder, tradesperson or project manager) who contracts directly with an owner-builder to undertake residential building work must provide home warranty insurance from one of the approved insurance providers when the total contract sum exceeds $12,000 (including material supplied by the contractor).

The certificate of insurance should be provided to the owner-builder before taking any money on the contract and before starting any work.

For more information, refer to the Home warranty insurance page on the Fair Trading website.

1.8 SELLING AN OWNER BUILT HOME

Should an owner-builder decide to sell their home within 6 years after completion of the work, the owner-builder will need to take out home warranty insurance where the market value of the whole project (including labour and materials) was valued at over $12,000.

For home warranty insurance purposes, owner-builder work is taken to have been completed on the date of the final inspection by the principal certifying authority or (if there is no such final inspection), 6 months after the issue of the owner-builder permit for the work.

The contract for sale must:

include a note that an owner-builder permit was issued in relation to the work carried out have the home warranty insurance certificate attached.

If home warranty insurance is not arranged, the purchaser can void the sale contract before settlement. The home warranty insurance scheme provides protection to a subsequent purchaser (successor in title) of a property where the purchaser is unable to have any defective owner-builder work (not apparent at the time of purchase) rectified because of the death, disappearance or insolvency of the owner-builder.

Between 1 May 1997 and 28 February 2007, the minimum cover that had to be provided under a contract of insurance was $200,000. From 1 March 2007, the minimum cover has been increased to $300,000.

The approved insurers and their brokers that provide home warranty insurance to owner-builders are listed under the Approved insurers page on the Fair Trading website.

Warning

As an owner-builder you are guaranteeing the work you undertake. A person who is a successor in title to an owner-builder is entitled to the benefit of statutory warranties set out in the *Home Building Act 1989* (and implied into a building contract) as if the owner-builder were required to hold a contractor licence as a builder and had done the work under a contract with the successor in title.

If you should decide to sell within the 6-year period, make sure you contact the insurers well in advance of marketing your property to check their requirements for insurance.

Other insurances are covered in detail later in the manual, but you need to consider:.

The following are some of the other insurances that owner-builders might need to take when doing home building work.

Workers compensation insurance

Owner-builders should take out a workers compensation insurance policy and ensure that they are fully covered in respect of persons they engage to carry out work. Any contractors engaged by an owner-builder may be deemed to be a worker of that owner-builder.

For more information about workers compensation insurance, contact WorkCover www.workcover.nsw.gov.au or call 13 10 50.

Contract works insurance

This insurance should be obtained by builders and trade contractors. It is for your protection and covers loss or damage to materials and work. if the builder or trade contractor does not have this type of insurance, you may risk inconvenience, time delays and disputes if materials are damaged or stolen.

Public liability insurance

If you intend to be an owner-builder or to contract out any type of building work (for which you remain responsible for coordinating), it is strongly recommended that you take out a public liability insurance policy.

This covers you if a family member or member of the public is injured as a result of the building work. You could be liable because you own the property.

1.9 False or misleading information with your application

Prosecution may occur if you make a false statement or omit information in an application for an owner-builder permit. Prosecution can occur under the *Crimes Act 1900:*

- section 307A (false or misleading applications)
- section 307B (false or misleading information).

1.10 Dispute Handling

Fair Trading offers a range of services that can help you avoid or resolve disputes with your contractors.

Refer to the Resolving building disputes page on the Fair Trading website for more information or call 13 32 20.

1.11 Sources of Information

For more information about becoming an owner-builder, contact Fair Trading on 13 32 20 or visit our website. Other sources of information include:

- your local council or government agencies such as the Department of Planning and the Building Professionals Board
- building centres, material suppliers, professional builders
- useful books and magazines at your local bookshop or library
- websites dedicated to owner-building
- approved owner-builder courses.

2 BUDGET ESTIMATING

2.1 ESTABLISHINGA BUDGET

How would you start in establishing a budget?

Well, first you need to decide how much you want to spend and how much you can afford to spend.

This may determine the size and type of dwelling you can construct, but to a large extent, the location of your land will be a major consideration.

Whilst it is not always an absolute, a good rule of thumb is that the cost of the dwelling should equal the land value.

That is if you purchase a block for $180,000.00 then a build cost of $180,000.00, would put you in a price range which would neither under nor over capitalise your property.

Do not let this be the only deciding factor, look at what properties are selling for in the area and consider the type, size and quality of the homes.

Given the above, it is easy to determine how much you should spend.

What is more difficult is the process to determine how much your vision is going to cost to build.

While we could go into many different ways of working out an estimate, there is a relatively simple rule to check your figures.

All constructions can be related back to a square meter construction cost.

This will vary given a range of variables including:

- Where the project is located
- The quality of the fittings
- The availability of tradesperson in the area at the time
- The complexity of the construction

Let's look at how each of the above affects the cost of construction.

Location

Several location related issues arise when you consider the cost of construction.

Access to the site is a factor and the associated transport costs or the difficulty in getting materials and or equipment onto site.

By way of example, consider the increase in cost of getting equipment onto an extremely steep site or one that is located many miles from services or suppliers.

To a lesser extent, homes built in prestige areas may command a higher square meter rate due to a perceived ability to pay, not fair, but a fact of life.

Quality of Fittings

This is obvious, but the higher the quality of the fittings, fitments and fixtures you specify, the greater the cost of the dwelling.

All items you specify can vary in price from the basic to the extraordinary.

A set of taps for over your bath can range from $80.00 to $1200.00 and more, or a cooktop and range in the kitchen can vary from as little as $400.00 to as much as $20,000.00 plus.

Paint is another area that people often overlook as a major contributor the overall cost of the project.

An average quality paint system will cost around $45.00 per square meter to over $180.00 per square meter to supply and apply the finishes.

In most cases this is not a huge issue, but you do need to be aware that the range of materials available is enormous, and anything can be achieved at a price.

However, you do not need to spend anywhere like the top end figures we have quoted to realise a high quality job.

Perhaps even more so, owner builders considering a very high end finish, can realise enormous savings through good management and sound tendering and astute purchasing.

Big savings can be made at all budget levels.

Availability of Tradespersons

Many times this will be out of your control, but if you can hold off and not build during 'building booms' you will find more reasonable prices during quieter times.

Interest rates tend to even themselves over the period of an average loan, but those who astutely lock in to a fixed rate can save real money over the life of the loan.

This is often aligned to the building cycle and you need to watch closely what is going on and the projected movements in building activity.

When a tradesperson has plenty of work, it is common to *'high ball'* quotations, that is, submit an unrealistically high tender.

In most cases, the tradesperson does not really want the work, and will only undertake the project if they realise a premium.

Complexity of the Construction

It is easy to estimate the labour and material costs for simple constructions.

Traditional building methods have well established associated labour rates, and any tradesperson worth their salt will be more than competent to provide you with an offer during the tender process.

More complex structures and non conventional building methods will generally be more expensive, partly due to the increased labour content and partly due to the possibility of the unknowns.

Unique and innovative design features can certainly add value and appeal to your new home, but can lead to increased costs and in extreme cases, limit your market at the time of resale.

Producing an Initial Budget

Once you have decided on the design and the quality of the construction, you are ready to produce a preliminary budget.

This can be achieved quite simple through a simple square meter formula multiplied by a rate established considering all the factors previously discussed in this section.

This can be fine tuned, but we do recommend engaging an experienced builder or quantity surveyor to develop a realistic estimate based on the square meter rate, knowledge of the current labour market and trade availability.

As a guide, once an accurate budget estimate is established, an estimate of the value of each trade, service and supply can be determined using the average weighting of each structural component against the total estimate.

For example, as a rule, the value of the plumbing on a domestic construction project is in the order of 8% of the total value of the works, therefore for a project with an estimated build value of $220,000.00, you could expect plumbing quotations to be around $17,600.00.

The above example is only an approximation, it will vary dependant on extraordinary items.

A full breakdown on the values of specific trades against total contract value is provided below, it is a guide only and can vary significantly due to any number of factors including:

- Availability of trade contractors at any given time
- Specific design features of the proposed dwelling
- Material availability
- Site considerations
- Covenants

They are a good starting or reference point.

This table is best used as a benchmark to determine then justify larges departures from the amounts listed below.

We are unable to cover all the methods of construction in one table, this information is based on a ‘typical’ brick veneer, single storey slab on ground cottage with ducted airconditioning.

It assumes traditional design and building methods/concepts are used in the construction, similar to what you would get in an off the shelf project home.

Scaffolding is not considered and should always be treated as a cost outside the scope of developing a budget in this way.

To establish your initial budget estimate, use a square meter rate to ball park expected construction costs.

That is, a 250 square meter home budgeted at $1150.00 per square meter should come in at around $287,500.00

Percentage Breakdown of Construction Costs Typical Brick Veneer Cottage Single Storey, Slab on Ground, Ducted Air Conditioning, No Scaffolding Employing Traditional Design Concepts and Building Methods		
Trade or Service	**Percentage of Contract Value**	**Associated Cost Against a $330,000.00 Project**
Preliminaries	**5%**	**$16,500**
Excavator	**3%**	**$9,900**
Concretor	**6%**	**$19,800**
Plumber and Drainer	**6%**	**$19,800**
Electrician	**3%**	**$9,900**
Carpenter (Labour)	**4%**	**$13,200**
Wall Frames – Trusses - Joinery	**18%**	**$59,400**
Roofer	**4%**	**$13,200**
Insulation	**1%**	**$3,300**
Bricklayer	**7%**	**$23,100**
Windows – Doors	**7%**	**$23,100**
Internal Linings	**4%**	**$13,200**
Renderer	**2%**	**$6,600**
Waterproofing	**1%**	**$3,300**
Floor and Wall Tiling	**2%**	**$6,600**
Painter	**4%**	**$13,200**
Air Conditioning	**5%**	**$16,500**
Prime Cost Items	**12%**	**$39,600**
Floor Coverings	**3%**	**$9,900**
Driveway	**2%**	**$6,600**
Landscaping	**1%**	**$3,300**

****Note:**

These figures are a rough indicator only and are most useful in identifying large variations in contractors quotations.

For example, if the plumbing prices came in at 25% of the total budget estimate, you would need to look at what had been specified or the scope of works against what the tenders had included. There may be an error in the specifications/scope of works, or there may be factors affecting the price which you had not considered.

Each project will be different but this is a good place to start.

2.2 PLAN READING

Plans, working drawings and associated specifications form the basis of your construction and govern the way in which the project will be scheduled and indeed managed.

They provide the information needed by each of the trades and suppliers to ensure what is offered in their quotations, matches what you expect and what the authorities have approved.

Approved plans are a legal document, and the accompanying specifications will be integral to any contract you have entered into with suppliers and contractors.

In general, your plans will as a minimum, include the following information:

- The location of the building on the site
- The location and size of the spaces in the building
- The materials to be used
- Fittings, fixtures and finishes
- Bracing Details (wind loading)
- Window and Door Schedules
- Foundation and Footing details
- Locations of services (gas, water, drainage, electrical etc)

2.2.1 Conventions

Drawings are produced in line with standard conventions, a “common language” if you like that is readily understood by everyone in the building trades.

These conventions include things like line thickness, linetypes, cross hatching, scales, views, orientations, title blocks, projections, acronyms and abbreviations, all designed to clearly state the intent of the design.

These conventions are typically consistent on a worldwide basis and language barriers aside, you should be able to travel to Canada, the U.S. or the U.K., pick up a set of drawings and understand the content.

2.2.2 Projections

Whilst in most cases, a typical domestic dwelling will use a simple 2D presentation to convey the information.

They will generally include:

- Plan View
- Elevations
- Sections

AutoCad and other computer based drawing programs have made it possible to produce relatively inexpensive renderings from working drawings, based on a schedule of finishes.

This allows the owner or the builder to get a better feel for the finished product.

In the past this was only achieved through expensive and time consuming artist's impressions.

2.2.3 Views and Construction Drawings

Plans that would form a set of drawings for a domestic dwelling would include:

- **Site Plan**
    - The site plan is a vertical plan view of the building site.
    - It will generally show the physical dimensions of the site and the location of proposed or existing structures.
    - Additionally the site plan will allow identification of the Real Property Description (RPD), area of the allotment, access roads, service and utility locations or connection points, contour lines and other significant physical or geographic features.

Often, site plans will also include information on finished floor levels of major structures related to the site or drawing datum.

Existing trees to be saved, existing trees to be removed and significant proposed planting may also be included.

The site plan can be developed to determine the required amounts of cut and or fill allowing accurate estimations of excavations or imported fill.

Site plans are normally drawn at a scale of 1:200 .

- **Foundation Plans**

  Often these are prepared by the geotechnical engineer and are based on the findings of soil samples and bearing tests.

  Based on these reports and the design of the dwelling, the foundation and footing plans can be prepared.

  The foundation plan will normally be drawn at a scale of 1:100 and will include the following information:

  - Depth, width and location of all strip footings
  - Size and location of piers, beams and thickening
  - Location and type of foundation walls if required
  - Thickness and strength of the concrete slab
  - Size and type of reinforcement materials including ligatures, fabric mesh
  - Set downs for shower, bathrooms and other wet areas

- **Elevations**

Typically a set of drawings for a domestic dwelling will include at least four elevations.

Traditionally these would have been described as Northern, Southern, Eastern and Western Elevation.

Recent times have seen a departure from this convention with the elevation more likely to be described as 1, 2, 3 and 4 with a symbol or “rose” to provide orientation.

Normally elevations will be drawn at a scale of 1:100

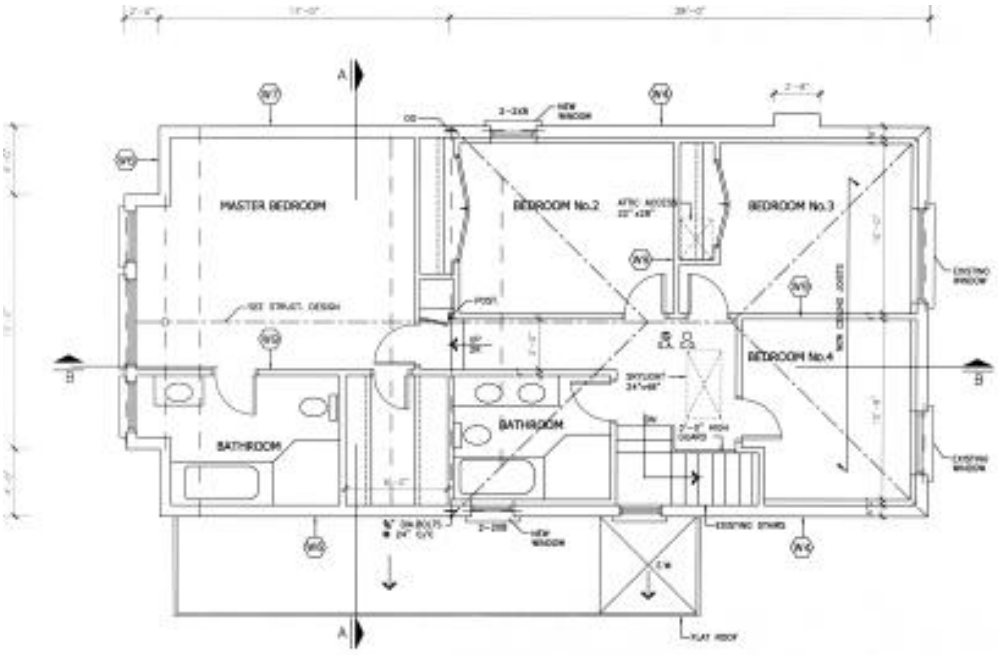
Information shown on an elevation will include:

- Windows and doors to external walls
- External cladding
- Roof slope, pitch and design features
- Eaves overhang

- **Plan View**

The floor plan is the heart of the working drawings, it displays the overall shape and size of not only the dwellings external walls, but also the layout, design, orientation, access and size of individual rooms.

A visit to site will generally see contractors referring primarily to the plan view for the location and dimensions of the project.



Additionally the plan will normally include:

- Dimensions
- Wall types and thicknesses
- Position of openings, doors, windows etc
- Roof outline and style

Floor plans are normally drawn at a scale of 1:100 and on ‘specified drawings’ may include, the bracing plan, window and door schedules, schedule of finishes, notes and remarks plus a legend to assist in interpreting the drawings.

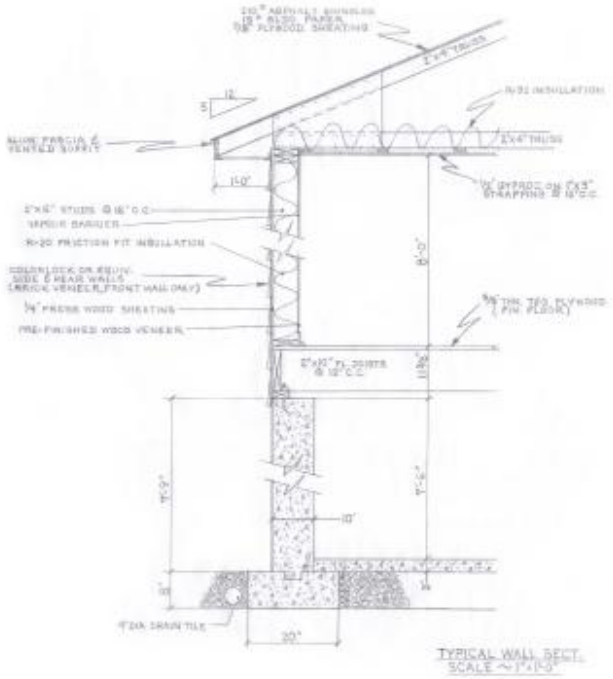
- **Sections**

This view is developed as though the proposed structure was sliced from the roof peak to the base of the footings.

It allows a graphical display of the structure and building methods to be used during the construction.

Sectional Elevations are generally drawn at a scale of 1:100 and will show:

- Height of floor above ground level
- Ceiling heights
- Joinery lines or heights
- Depth of footings
- Roof framing type (eg trusses)



Sectional Details are provided to show specific construction details and will be drawn at much larger scales like 1:50, 1:20, 1:10. More intricate and detailed works may require a drawing at full size or 1:1.

- **Bracing Plan**

A bracing plan is normally drawn at a scale of 1:100, it may be as simple as a single line drawing which locates and defines the bracing type, fixing and distribution throughout the structure.

Ply bracing, solid wall, timber features, hardboard and metal bracing are all detailed and the associated computations are included to demonstrate compliance of the design with consideration to wind loading, roof style, and geographic or physical development affecting the site.

The calculations are developed for two directions and are based on spacing, fixing and rigidity of the bracing type.

This drawing will if required include tie down details often developed as a schedule indicating the method of fixing or tying structural framing members to each other, from the roof sheeting to the footings.

- Roof sheets to roof battens
- Roof battens to rafters
- Rafters to top plates
- Top plates to studs
- Studs to bottom plates
- Bottom plates to slab and footing system
- **Electrical and Plumbing Layouts**

Services are often detailed in separate plan views indicating location, type and size of services, pipe work, cabling, outlets and connections.

When you are determining your preliminary sketches and designs, you should indicate at least the location of power outlets, coaxial cables, telephone points and exterior taps.

Using this as the basis of their design, the engineer, draftsperson or architect can establish service sizing and any other requirements or considerations.

2.2.4 Identifying Drawings

Whilst it is a feature little seen on drawings these days, the inclusion of a cover page with a drawing index is invaluable in quickly referencing and accessing information on site.

In the absence of an index system, you will need to check the title block on each drawing to establish what information is located on the sheet.

The Title Block may include:

- Client details
- Project details
- Project location
- Consultant details
- Drawn by
- Checked by
- Issue or revision code
- Scale
- Date
- Drawing number
- Associated drawings

Generally they are located on the bottom right hand corner of the plan and may be oriented vertically or horizontally.

TYPICAL TITLE BLOCK

Associated Drawings: OBS2-HYD OBS3-HYDA **Revision Number:** OBS1-HYD/3 **Amendments:** Include bidet to ensuite in master level one	**CLIENT** Desmond and Molly Jones					
	PROJECT Proposed Single Story Dwelling					
	LOCATION 57 Penny Lane, Marketplace, Queensland, 4208					
	HYDRAULIC CONSULTANT Rick Heaton, A.H.S.C.A					
	Drawn **R.B.H**	**Checked** **KSA**	**Scale** **1:100**	**Project No:** **OBS – 1/06**	**Drawing No:** **OBS1-HYD/3**	**Date:** **110106**

In this case, the clients are Desmond and Molly Jones, who are having built a single storey domestic dwelling at 57 Penny Lane, Marketplace, Queensland.

The drawing is related to the hydraulic design for the property and is associated with two other drawings, OBS2-HYD and OBS3-HYD.

The drawing is the third revision and has been amended to include a bidet in the ensuite to the master bedroom.

It is extremely important to ensure all contractors and consultants are in receipt of the latest versions of any drawings that will affect their contracted works and that they are aware of any variations which have occurred as a result of these changes.

It is the responsibility of the Owner Builder to ensure any variations to the contract are agreed to, signed by all affected parties and maintained in the project record keeping system.

A well administered project will include the use of a document transmittal system and register to ensure all contractors have received and understood the latest documentation including amendment to working or construction drawings.

2.2.5 Scale

Scale allows the designer to maintain each component included in the drawing to appear in their appropriate proportion and location.

As previously stated, the scale will be determined by the level of information that is required to be displayed to the reader, ensuring clarity of the instructions or information.

The scale is determined by:

- Type of information to be communicated
- Complexity of the item, fitment, fixture or structure being drawn
- Size of the drawing sheet used
- A balance of time and cost of the drawing production

Because buildings and properties are large, scale drawings need to be used.

To accurately interpret information on plans, it is helpful to be able to read a scale rule.

A scale rule is the same as an ordinary rule in that it will have interval marks at 1mm apart.

A longer line is included at 5mm intervals and an even longer and more prominent line at the 10mm interval.

The 10mm mark is called the “graduation number or index”, this number indicates the “scaled up value rather than the true length.

We recommend using a Kent64M scale rule, this includes all the normal scales that would exist on a set of house plans.

Make certain when using the rule that the scale indicated matches the scale shown on the drawing (usually in the Title Block).

2.2.6 Dimensioning

A dimension provides exact details on the physical size of an object on a drawing and is most commonly shown in millimeters (mm).

As a rule and by convention, dimensions will be an overall length of the projection at provided the furthest from the drawing, working in as running dimensions to the smallest dimension on that projection being located closest to the drawing.

Dimensions can be either naturally centered, 'forced' or outside the associated dimension line, but in all cases must be easily identifiable with the related structure or building component.

2.2.7 Notes, Lettering, Abbreviations and Symbols

As we trend more and more to fully specified drawings which replace the written specification, the notes, schedules, tables and explanations provided on the drawing take on an increasing importance.

Notes provide clearer detail on items that are difficult to draw, abbreviations and symbols save time and space on the drawing, but should be accompanied by an explanatory legend.

Standard abbreviations and symbology must be used and these are detailed in Australian Standard 1100.301.

2.2.8 Window and Door Conventions

The following important rules are necessary when describing or ordering windows from a drawing:

- **Size**

  When describing a window, it is convention to specify the height first and then the width.

  An 1800 x 2400 window is therefore 1800mm high and 2400 mm wide.

  This is commonly written as 1824

- **Configuration**

  The configuration of windows (sliding or fixed panes) is nominated by the letters X and O.

  An X drawn on a window indicates the associated pane is sliding or opening.

  An O indicates the pane is fixed.

  So a window described as 1218XOX is a 1200 high by 1800 wide window with the two outside panels opening and the center panel fixed.

- **Orientation**

  Windows on a drawing are considered as viewed from outside the building looking toward the window.

  A window described as 1221OX, is a 1200 high by 2100 wide window with two panes.

  In this example, when viewed from external, the left hand pane would be fixed and the right hand pane opening.

- **Numbering**

  It is standard convention to start numbering from the main entry door and work clockwise around the property with a W designation indicating a window and D indicating a door.

  The lower floors are completed first working up to the higher levels.

  So, W1 – 2409O would represent the first window immediately to the left of the main entry door (when viewed from external) and of a size 2400 high and 900 wide with a single fixed pane.

  (Most likely a side light or feature glazed panel at the main entrance)

2.2.9 Datums and Special Marks

Drawings will include important symbols or marks which establish reference criteria for correctly interpreting the drawing and the information contained on it.

For example a datum mark, ⊗ RL100:00, provides the reference from which all floor levels, depths, and heights are measured or referenced.

A North symbol is generally included to further enhance orientation.

Cross hatching and line type or fill have distinct meanings which allow a trained reader to accurately interpret soil types, wall structures, materials used etc.

Use the legend or get hold of the Australian Standard to help you better understand the meanings of symbols and special marks.

2.3 MEASURING QUANTITIES

To establish a budget you will need to know how to undertake basic measuring, calculations and quantity calculations as they are relevant to the construction industry.

This section has been developed to assist you in understanding methods, terminology and processes used in estimating quantities.

This section presents several components from the Nationally Accredited Unit of Competency BCG1004A – Carry out Measurements and Calculations.

We will consider five main topics:

- Metric Measurement
- Tapes and Rules
- Calculations
    - Linear – length, width, thickness
    - Perimeter
    - Area
    - Volume
- Quantities
- Costing

2.3.1 Units

Millimeters and meters are the basic units of measurement used in the building industry.

Lengths are described in millimeters.

The only exception to this is where dimensions on a plan of 1:200 or greater may be given as meters to two (2) decimal places.

When recording measurements and dimensions in millimeters, the following conventions are used:

- If more than four (4) digits are required, the measurement is recorded in groups of three working from right to left leaving a distinct space after each group of digits.

11 000 45 768 56 890 12 300

- When there are four digits or less, no space is used.

4350 3400 125 88

Generally in the building industry, there is no requirement to identify measurements by use of the words millimeter or meter or their respective abbreviations mm or m.

Therefore 7653 would represent seven thousand six hundred and fifty three millimeters.

If a measurement is given with a decimal place and no further identification is taken to represent meters.

So, 4.6 would represent four meters 600 millimeters.

When the decimal point is used to indicate the thickness of materials such as sheet metal, then the mm abbreviation must be used.

For example:

0.55mm would be used to define a sheet of Colourbond Roofing and a sheet of Villaboard may be shown with a thickness of 4.5mm.

2.3.2 Tapes and Rules

Tapes, folding rules, and straight edges or staffs used in measurement taking are in general marked in accordance with the following table, index lines at 10mm intervals and 1 meter intervals are normally included.

Millimeters	Centimeters	Decimeters	Meters
1/1000th of a meter	**1/100th of a meter**	**1/10th of a meter**	
1mm	**10mm**	**100mm**	**1000mm**

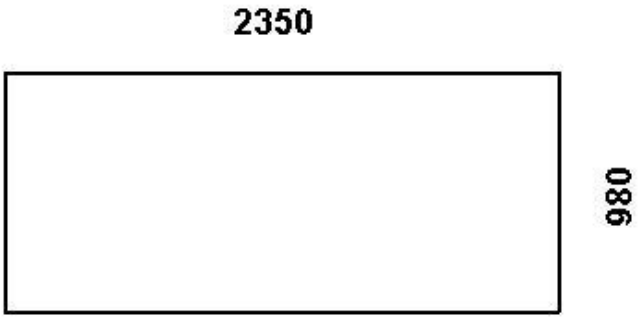
2.3.3 Calculations

Let's now consider perimeter, area and volume and the way we estimate these values from drawings.

2.3.3.1 PERIMETER

The perimeter is the total length of the sides or outer boundary of a shape or a plane figure.

It is the total length of all sides.



In the example above, the calculations required to determine the perimeter would be:

2350 + 980 + 2350 + 980 = 6660mm

Perimeters are the units of measurements that would be used for anything to be ordered in lineal meters, items such as:

- Gutters
- Fascia Boards
- Skirting
- Architraves
- Cornice

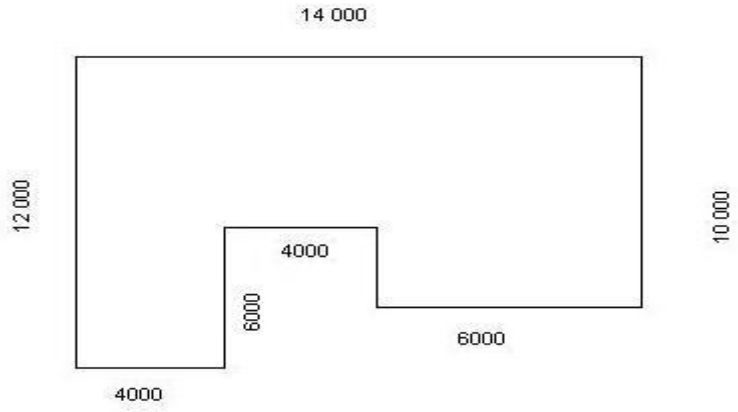
2.3.3.2AREA

Area is the amount of ground covered by a building, it is measured in square meters and for rectangles this is found by multiplying the length by the breadth of the structure.

The answer is normally express in square meters (m²).

Where the area of more complex shaped buildings or structures need to be calculated, we need to break the shape down into a combination of rectangles, triangles and in some instances semicircles or circles.

In the example below, three separate rectangles can be identified, we need to calculate the area of each one individually then add the areas to determine the total floor area.



- Rectangle one equals 12.0 meters multiplied by 4.0 meters

- Rectangle two equals 6.0 meters multiplied by 4.0 meters
- Rectangle three equals 6.0 meters multiplied by 10 meters

Mathematically this would be expressed by:

12.0m X 4.0m = 48m²

6.0m X 4.0m = 24m²

6.0m X 10m = 60m²

Adding these together gives the total square meter area.

48 + 24 + 60 = 132 m²

Square areas are used to determine things like:

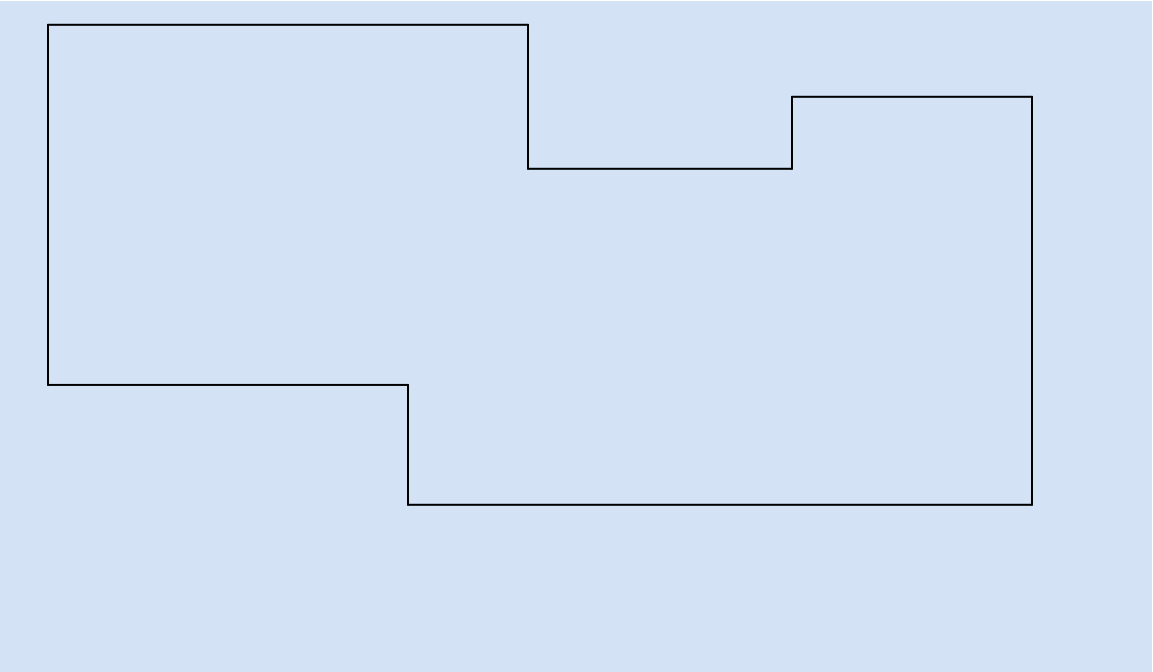
- Paint quantities
- Floor and Wall Tiles
- Plasterboard

2.3.3.3 Calculating Floor Areas

This is covered in more detail in the estimating section of the manual it is important to understand that when measuring areas, particularly off a plan, even the most complex shapes can be broken down into easily measures sections.

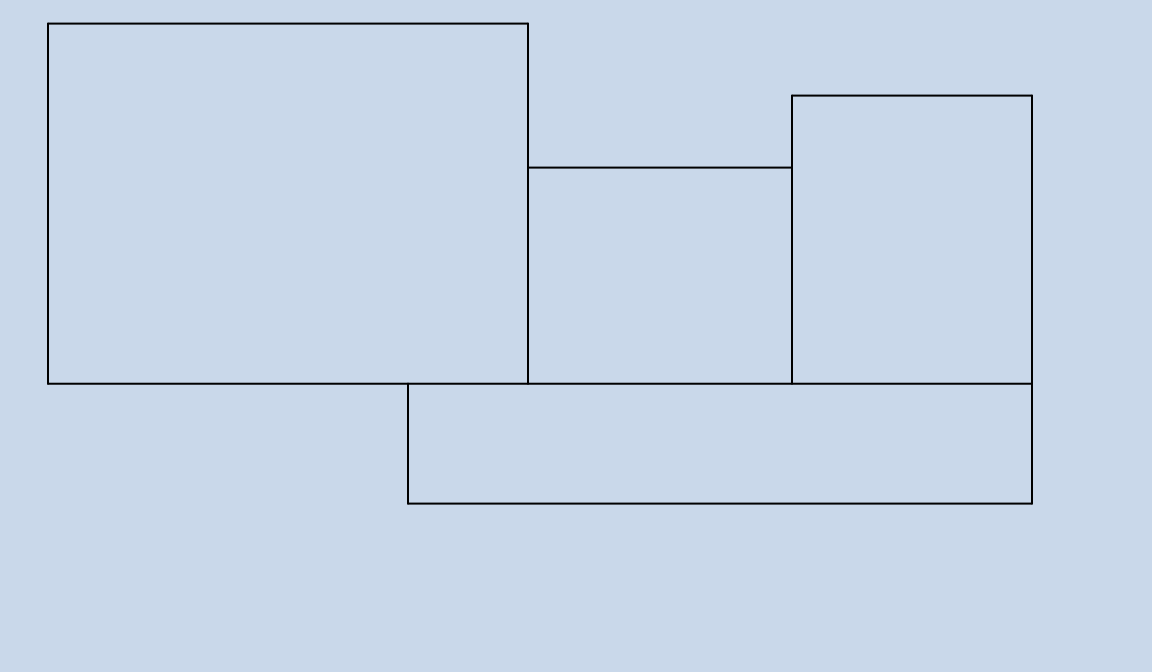
The house outline below may look complex or difficult to measure, but break it down into smaller sections then add the areas of each section to get a total floor area.

See the next page for how to ‘split up’ a complex shape into manageable parts for calculating floor areas.



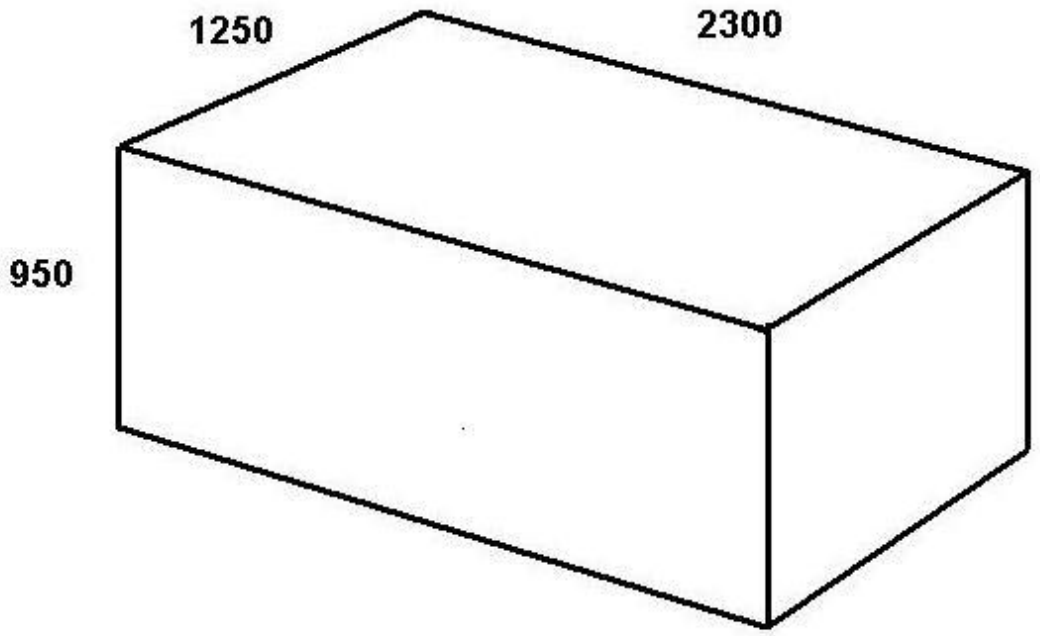
This becomes;

This …….



2.3.3.4VOLUME

Volume is measured in m^3 (cubic meters)



It is calculated by multiplying the length by the breadth by the height.

So in the example above, .**95m X 1.25m X 2.3m = 2.73125m³**

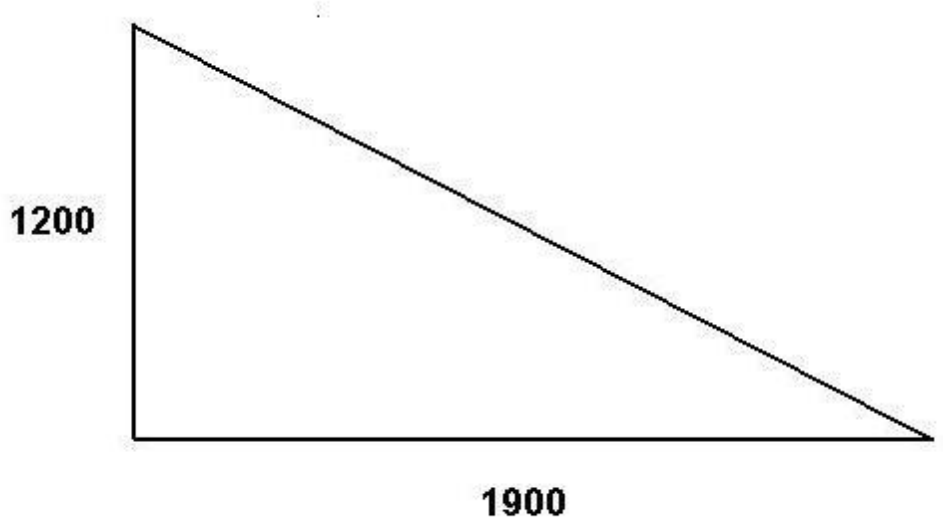
We would round this down to 2.73 meters or up to 2.8 meters if we wanted to allow for waste and over runs.

If this were a tank or storage container, then we could express the volume in terms of litre capacity.

I cubic meter can hold 1000 litres of fluid so if the shape above was a tank, it would have a capacity of 2731.25 litres.

2.3.3.5AREA of a TRIANGLE

The area of a right angled triangle can be found by multiplying the two right angle sides (base and altitude) and then dividing by 2.



Therefore, for the triangle above, the area would be 1.2 meters multiplied by 1.9 meters divided by two.

(1.2 X 1.9)/2 = 1.14m²

2.3.3.6MEASURING CIRCLES and SEMICIRCLES

The measurement of circles is sometimes required to determine the volume of round tank, concrete required in columns or piers and even in fancy paving or pathwork.

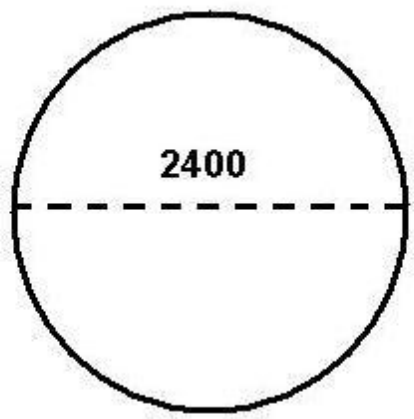
The first thing we need to consider is the use of the mathematical constant pi **(π)**

Pi is equal to 22 divided by 7 or rounded to 3.1416.

To determine a the area of a circle we use the formula $(\pi)r^2$

Where r is the radius or half the diameter of the circle

To determine the circumference of a circle we use the formula $2\pi r$
Pi multiplied by two times the radius of the circle.



For the circle above, calculate the area and the circumference:

AREA = Pi (3.1416) multiplied by the square of the radius $(1.2)^2$

= 3.14.16 X 1.44

= 4.53 m²

PERIMETER = 2 multiplied by 3.1416 multiplied by 1.2

= 2 X 3.1416 X 1.2

= 7.54 meters

Here are some handy quantities and costings you should know –

When ordering building materials or standard components you should think in 300mm increments. To explain what is meant by this –

Standard windows are 600mm – 900mm – 1200mm – 1500mm – 1800mm. This applies to height and width.

Ordering windows outside these parameters will cost a lot more money.

Timber comes in lengths of 900mm – 1200mm – 1500mm – 1800mm – 2400mm and 2700mm up to 5.4 meters.

Timbers in section can vary, i.e. 90 x 35mm – 70 x 35mm – 100 x 50mm. You will need to read the sectional sizes from your plan.

When cutting timber on site it is a good idea to spray the cut end/s with a termite resistant spray and also to paint the end with a primer to resist rot and splitting.

How many decking boards will you need if the deck is 10 metres long and 5 metres wide?

If the boards are each 80mm x 19mm in section, that's 10M or 10,000mm divided by 80.

Let's do the exercise! Using your calculator, that equals 125 boards @ 5.1M.

You will notice that I did not allow for shrinkage.

However, if you wish to deduct say 2 @ 5.1M, that's up to you.

Bricks:

Bricks are normally purchased per 1,000.

A standard face brick or common brick measures 110 x 75 x 230 which constitutes around 52 bricks per M^2.

Calculate that your wall in square meters;

Say - 2.5M high and 15M in length.

Therefore

15 x 2.5 = 37.5M^2 x 52 bricks per M^2 = 1,950 bricks.

You may have a sliding door in the wall which measures 2100 x 2400.

You can deduct this from your brick total.

Let's do it!

2.1 x 2.4 = 5.04

Deduct this from our total wall M^2	$37.5M^2$	(as above)
Say, minus	**$5.00M^2$**	
	$32.5M^2$	

So, $32.5M^2$ X 52 bricks per M^2 = 1,690 bricks or say 1,700 bricks to construct that one wall.

Tip:

Calculate your total number of bricks for all walls. Allow for some wastage, say 5%.

When you establish your total, 'phone the brick company and check their pallet quantity loading and order the correct number of pallets.

Remember – bricks and finishes can vary from company to company, for example Quick Brick or Ezy Brick might be double the size of a standard brick.
Therefore you would only need 26 bricks per M^2. Don't forget to allow for wastage.

Concrete blocks (200 Series, i.e. 200 x 200 x 400):

It takes 12.5 blocks per M^2 and costs around $3.00 per block.

Cost for laying is approximately the same, i.e. $3.00 per block.

When a bricklayer gives you a price it could be calculated either per 1,000 laid or it might be a price per brick or block.

Ensure you listen closely to, and/or read carefully, his/her quotation.

Normally the sand and cement for the mortar is included in the labour price – however check this.

Don't forget that extras may occur – eg. sill bricks to doors and windows, cut bricks to bay windows, raked joints, ironed joints, flush joints, coloured mortar, scaffolding, lintels, frame ties, corbels, face finishes.

These can all add to the basic costs – check with your bricklayer.

Establish just what is and what is not included in his/her quotation.

Concrete:

If you are not an experienced concreter and you don't have the tools/equipment, don't even think of doing your own concrete.

Small garden shed slabs, pathways, pool pump plinths are fine for you to tackle (maybe), but remember – what looks easy is often not.

As well as the importance of the correct preparation, skill in placing and timing is critical when pouring a house slab.

My advice would be "**simply, don't do it!!"**

Normally concrete has a consistency of 4:2:1 ratio, i.e.

4 parts stone
2 parts sand
1 part cement

It must not be dropped higher than 1M or the constituents of the mix will separate and lose its strength which is generally 20 to 25mpa.

It normally has what is called an 80mm slump, which is the viscosity of the pour.

Do not add water or it will lose its strength, and if random tested by the testing laboratory of C.S.R.I.O. (rare but not unheard of) you would be told to pull the slab out and do it all again. And that could break the bank.

Concrete calculation –

Slab – M^3 = Lx B x H = M^3

20x12 x .100 = 24M^3

Footing – M^3 = L x B x H = M^3

2 x 20 + 2 x 12 = 54 linear metres (perimeter of building)

Now, take depth and width of footings, say 400mm x 500mm x linear metre.

Eg. Cubic metres 54 linear metres x .4 x .5 = 10.8M^3

It is better to order a little more than not have enough, particularly in an afternoon pour.

Your preparation and sand leveling is critical.

Don't forget your under slab drainage, pest barrier treatments and membrane.

ORGANISE YOUR STEEL INSPECTION BEFORE YOU POUR.

Roofing:

Like so many things, it looks simple but there are obvious correct procedures and practices.

For estimating purposes in an uncomplicated roof design, eg. a flat, skillion or gable roof you need to establish the correct length, i.e. measure from the ridge or apex, down the length of rafters and allow 40mm – 50mm into the guttering.

If you know the length (as above) it is simple to find out how many sheets you require. Simply divide the length of the roof frame, gable to gable, and divide it by 762mm. This is the effective cover per sheet of standard Custom Orb.

So, if the roof length measures 22M, that's 22,000mm divided by 762 which equals 28.87 sheets – say 29 sheets x whatever your previous length of rafter and gutter overhang was.

How many screws or fixings will you need?

Allow around 12 fixings per M^2 (slight over-kill).

Let's look at an example gable roof –

22M long x 5.1M measured along length of rafter

22M = 29 sheets @ 5.140 x 2 (2 sides)

= 58 @ 5.140

Colorbond "Dune" – plus fixings

Calculation **22 x 2 x 5.140 = 226.16M^2**

Allow 12 fixings per M^2

226 x 12 = 2714 fixing

Don't forget to allow for your insulation blanket – 50mm Anticon at around $6.00 per metre, laid.

Listed below are supplementary weatherings that you may need to complete your roofing –

Ridge capping	Valleys
Gutter	Fascia
Apron flashing	Barge capping
Down pipes	Outlets
Brackets	

The units of measurements used for these will be lineal meters with the exception of outlets and brackets which would be 'each'.

2.4 WINDOW and DOOR SCHEDULE

The Window and Door Schedule is provided to allow for easy reference during estimating and tendering phases, it can also form the basis of an acceptance document on delivery.

It is a simple form, laid out to allow easy data entry direct from the plans and specifications.

In an earlier section, we discussed the conventions for nominating door and windows in respect to:

- Location
- Size
- Configuration

Make certain these conventions are followed and that the doors and windows quoted on and ultimately delivered, are as per you expectations and the information on the plans and specifications.

Special windows configurations may require additional explanatory notes, take care and discuss your needs with prospective suppliers.

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OB Window Schedule

Owner: _____ Phone: _____ Fax: _____

Supplier: _____ Phone: _____ Fax: _____

Contact: _____ Site: _____

Please supply your quotation for supply of the following items

Window/ Door No.	Size		Code	Location	Finish	Glass	Screens	Reveal Size	Reveal Material	Type Construction Frame size	Cost
	H	L									

2.5 ESTIMATING SHEETS

Estimating or collection sheets are used to gather information on the components involved in the building process.

They are identified by trade or service and are formatted to provide the organised collection and entry of data.

In their simplest form they are static with calculation being completed manually.

Automated spreadsheets collection sheets have been developed and form part of some of the sophisticated estimating software packages that are available and in use by some professional quantity surveyors.

These automated systems recognise building product and or element codes, drawing amounts and prices from associated databases and completing the calculations automatically.

As simple or sophisticated as the system may be they all follow the following basic layout as detailed below.

A tutorial is provided and accessible from the project management files you have downloaded..

OB Building Estimation Sheet

Client: Joe Bloggs
Heading: Excavator - Concreter 1

Item	Description	Unit	Qty	Rate	Cost
	Excavator				
1	Allow to excavate as necessary to prepare for new footings in position as detailed. Remove excess spoil from site at main building				3500
2	Allow to excavate for footings to front boundary fence, carport, retaining wall				1750
3	Allow removal of spoil from site				650
	Concreter				

2.6 PC ITEMS

PC Items are those fixtures which connect directly to a service such as water or electricity and include:

- Dishwasher
- Laundry Tubs
- Range Hoods
- Kitchen Sink
- Vanity Basins
- Toilet Suites
- Hot Water Service
- Cooktops
- Wall Oven

In some cases it may be advisable to include appliances like, microwave ovens and refrigerators.

Sending a complete list to your supplier may means real savings in buying a 'house lot'.

Another consideration is the opportunity to install appliances and PC's built by one manufacturer, rather than mix and match.

Whilst shopping around on individual items may save you some money, walking into a kitchen that is fitted with a common manufacturer of all appliances can certainly give the impression of a quality job.

Use the checklist provided to ensure you allow for all PC's as required, and identify any special design impacts that your chosen fixtures may cause such as water at the refrigerator or additional spacing between overhead cupboards at the cooktop to accommodate the extra large range hood you have specified.

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Prime Cost Items – Checklist

Item	QTY	Description	Rate	Cost
Toilet suite				
Double flap seat				
Vanity basin				
Wall hung basin				
Shower compartment				
Shower screens				
Bath				
Kitchen sink				
Wash tub				
Spa unit				
Bar sink				
Kitchen cupboards				
Laundry cupboards				

3.0 PROFESSIONAL SERVICES

3.1 ENGAGING CONSULTANTS

Engaging consultants can be a daunting task.

How do you know who to choose?

In this section we will identify the professional services typically used during the construction of a domestic dwelling, and provide a few tips on how to select the right one and the best way to secure their services at a realistic price.

Consultants you will most likely need to use during the construction of your dwelling will include:

- Architects/Building Designer
- Geotechnical Engineer
- Mechanical/Structural Engineer
- Hydraulic Engineer
- Building Certifier
- Surveyor

We will consider the roles of each of these professionals, later in this manual.

Selecting a suitable provider of these services will normally be as the result of some research on the part of the owner builder.

These professionals may be found from -

- Trade Journals
- Yellow Pages/Internet Advertising
- Personal referrals
- Relevant Professional Association

or any one of a number of sources.

What is important, is that you satisfy yourself that their experience and expertise is both recent and relevant to the type of project for which they are being engaged.

Equally as important is their work ethic. It is imperative that you establish a contractor's work ethic, in particular should you choose to engage them on an hourly rate.

Note: Owner Building Solutions Australia would never advise employing any professional or trade contractor on an hourly basis.

Ask to see evidence of their work – ask to speak to previous clients or for personal referees.

Ensure also, that they carry the appropriate insurances, including professional indemnity.

As you would do for any trade service you are considering, try to always get three quotations or schedules of fees and make sure you understand exactly what services they are offering and the level of support that will be available throughout the project.

Read each offer carefully and make certain you are comparing apples with apples.

It will often be necessary to schedule one or more meetings with your chosen consultants, to ensure they fully understand and consider the specific aspects of your project.

The proforma Invitation to Offer Professional Services is included in the design and planning folder of the file structure:

3.2 ARCHITECTS / DESIGNERS

Once the site contours are completed and you have settled on a rough draft for the dwelling, it will be necessary to engage the services of a licensed building designer or an architect to complete preliminary design drawings.

These drawings will provide the basis for engineering drawings to be completed and in most cases, should require little alteration for use as working drawings for council submission and/or private certification and should ensure an accurate presentation of the project for use in the tendering process.

Architect fees will vary considerably, and you will potentially cost yourself a lot of money if you do not choose wisely.

As for all consultants, identify an architect or designer who know has a proven record in the type of construction you are proposing to build.

Check their current works in progress and satisfy yourself that they understand your requirements and that generally, their works normally include projects of similar size and budget to your own.

Don't pay for a Rolls Royce or a Bentley, when a Commodore or Falcon will do the job just fine.

On your fist visit to the designer, be prepared, provide photos of homes similar in style to what you are trying to achieve, build up a portfolio of ideas, designs and sketches of the following:

- External facades, looks, colours and finishes
- Internal finishes and colours
- Selected or preferred PC Items, fixture, fittings and fitments
- Sketches or photos of any special features or areas you wish to incorporate into the design
- Your Budget

As for all things, the better prepared you are and the more clearly you can transfer your ideas and thoughts, the easier it will be to produce a finished concept, layout and design.

The approved plans for the construction of a house, constitute a legal document, they are integral to the contracts drawn up between yourself and the trades or suppliers, they must be accurate, and provide sufficient detail to allow for estimating and construction purposes.

Note:

In general, unless you agree in writing, the copyright of the completed design will belong to the designer.

3.3 BUILDING CERTIFIERS

In recent times, builders – including owner builders – are more frequently engaging the services of private certifiers for the approval of building plans and the submission of building applications.

The use of these certifiers streamlines the process and generally allows for a faster turn around time when it comes to approving plans.

Whichever way you elect to go, you will need to complete the appropriate building application forms (available from your certifier) and provide your certifier with the specified number of copies of a complete set of plans, including all of the drawings prepared by the professionals as listed above.

3.4 SURVEYORS

The surveyor is an extremely important provider of information which will allow you to best design a home that suits your needs and the constraints of the block.

The surveyor will provide services including:

- Boundary identification and marking
- Location of easements
- Determination of contours
- Site and dwelling set out

A mistake in accurately establishing boundaries, or setting out the construction, could prove extremely expensive, a good surveyor is worth their weight in gold.

Following is an extract from a typical specification for a domestic dwelling in respect to survey works:

The Surveyor shall properly set out all work to the Owner's approval and check the dimensions shown on drawings against such setting out.

The Owner shall be responsible for the accuracy of all levels.

Sub and separate Contractors must obtain all levels from the Owner.

The Owner shall co-ordinate the comprehensive setting out of the works generally in an accurate manner and within tolerances where specified.

Any discrepancy between the dimensions shown on the drawings and existing physical features shall be immediately brought to the Owner's attention and no further work carried out until the Owner's instructions are received.

3.5 STRUCTURAL ENGINEERS

In most domestic dwellings, the use of a structural engineer will be minimal. Having said that, private certifiers tend to rely on the engineer's design input in any area that is not covered by the standard building span tables.

For example, it is likely the building designer will be acceptable to the certifier for the determination of wind loadings and tie downs, design of bracing walls and structural beams over standard windows and door heads.

However, the carriage of trusses over a large opening such as a double garage door or similar may require the design to be certified by an engineer.

Where a dwelling is designed and is to be constructed utilising structural glass, suspended concrete floors, cantilevered sections etc., the design expertise of the structural engineer becomes increasingly important.

It will be important to work closely with your nominated building designer to ensure the use of a structural engineer is achieved effectively.

3.6 GEOTECHNICAL ENGINEER

You will need to engage a Geotechnical Engineer to determine the type of soil which will form the founding material for your structure.

This is achieved by drilling several bore holes under the area of the site where the proposed structure is to be erected, giving a representative sample of the subsoil qualities and the bearing capability of the ground.

In addition, the waste water management consultant may require soil testing to determine the absorption capability of the ground where effluent discharge is required.

The removed 'core samples' are examined and the site is classified based on the results of the examination.

Using this information, and based on the preliminary design drawings, the footing system for the dwelling can now be designed.

Just as the site contours can affect the cost of the ground works, so too can the site classification of the founding material.

Several new techniques and footing systems, including screw piles, are more commonly being used in domestic construction on problem sites, so you need to ensure that the engineer considers all possibilities to achieve the most appropriate and cost effective design for your project.

3.7 HYDRAULIC ENGINEER

As domestic dwellings become more complex and incorporate high tech fittings and fixtures, the use of mechanical engineers and hydraulic engineers is becoming more the norm.

Whilst their roles are varied, basically a mechanical engineer would be engaged to design high end air conditioning systems and the hydraulic engineer (consultant) would be used to design for complex roof drainage, high pressure areas, grey water usage, retention tanks, reticulation systems, irrigation, circulatory systems, water features etc.

3.8 CONSULTANT REGISTER

To maintain consistency in information, we suggest you include all consultant details in the Project Participant Register.

Keep a hard copy of these details in the front of your Project Diary as quick reference for contractor, consultant and supplier details.

If you are used to using a palm pilot, personal digital assistant or electronic organiser, you may wish to transfer abbreviated contact details into one of these devices.

The completed register must include contact information, license or registration numbers as applicable and insurance details.

4.0TENDERING

4.1 TENDER PROCESS

The tendering process is where you can really make or save money.

Many trades people and suppliers are reluctant to work for owner builders for a variety of reasons.

This is overcome by establishing a professional relationship and demonstrating your capacity to manage the project.

Being prepared, well informed and demonstrating a thorough understanding of your project will not only get good contractors on side, but also send a warning that you are not an easy mark.

The tendering process is where the true discipline and astute purchasing can make all the difference between a project that struggles to meet budgets and one that allows you the freedom to select better fittings, fixtures or fitments and still meet the financial targets you have set.

Managing this part of your project certainly requires commitment, but these basic rules are simple to follow and ensure success in achieving your budget estimates.

- Select the suppliers and contractor you wish to provide offers and quotations, based on recommendations, referrals or interviews which establish bona fides and an ability to complete the works to the required standard and specification.

- Select and minimum of three contractors or suppliers to quote on your works.

- Schedule sufficient time for the tendering process to ensure a minimum of three offers can be obtained for each supply of trade contract.

- Understand your specifications and schedule of finishes, and examine each offer or quotation carefully to ensure:

    - Each offer or quotation complies and meets the requirements of the specification

    - Satisfy yourself you are comparing apples with apples

The tendering process if conducted properly will involve photocopying multiple sets of plans and specifications for the individual contracts.

This could involve up to 50 sets of drawings distributed to your selected or nominated contractors.

Typically this would involve:

- Identifying the trades and or materials/PC Items that are required
- Select a minimum of three suppliers and or contractors
- Prepare tender documents including:
    - Invitation to Tender
    - Working Drawings
    - Specifications
    - Schedules of Finishes

If you think this will be easy, it is not!

Typically you will need to chase and chase and chase relentlessly, contractors and suppliers to provide their offers.

As difficult as this may seem, it is the heart of making your project work.

If you can truly get this right, the rest is relatively easy.

You will need to hound and press and chase all your contractors to get all three quotes.

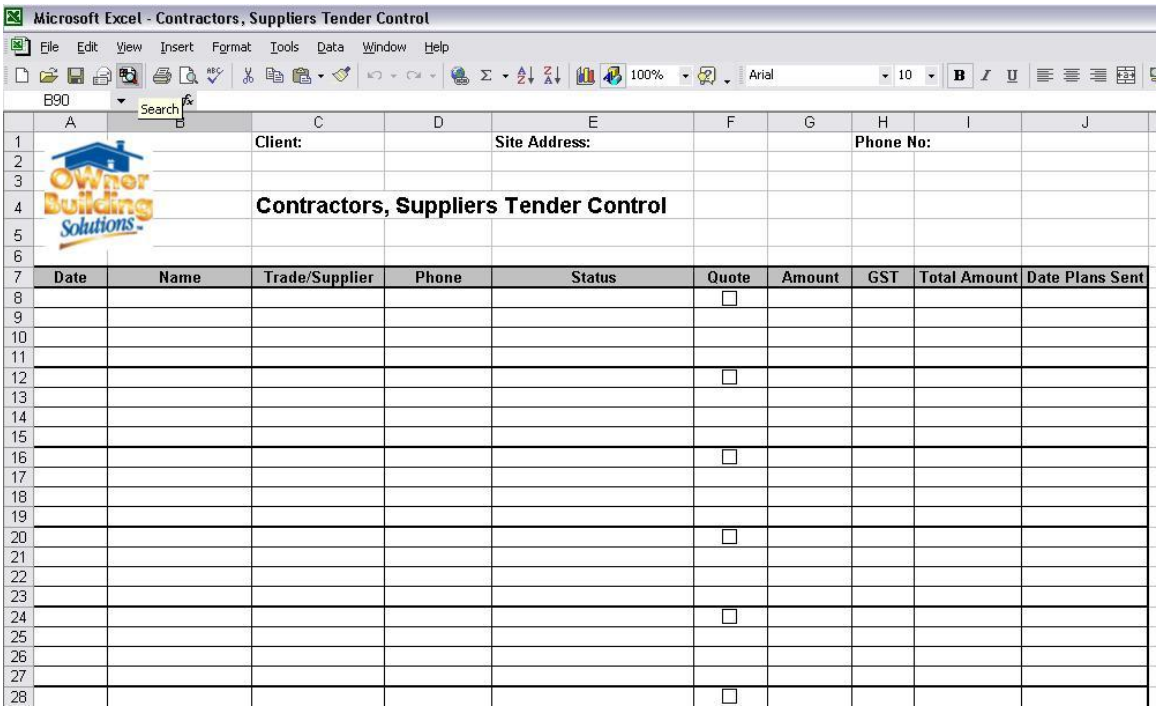
If you end up with only two, select an alternative and chase them.

Do not settle for less than three relevant and realistic quotations.

Be aware, when things are good in the building industry, many contractors will provide “high ball” quotations that indicate they will only take on the project at a premium.

The following proforma are provided by Owner Building Solutions Australia to assist you in the tendering process.

Following is a sample of each and a brief explanation on their use.



The Tender Control Schedule shown above is accessible from the downloadable file, we recommend that you print a copy of this form and use it to manage the tender distribution process.

It differs from the Tendering Schedule provided in that one is used for distribution document control and the other is used to gather the receipted offers from various suppliers, contractors and consultants.

Use the Tender Control System to record your efforts in chasing contractors for their prices, and note their comments and as quick access to contact details.

Use the Tender Schedule to collect and compare received offers.

4.2 PLANS and SPECIFICATIONS

Plans and specifications are the normal means by which we transmit information to those completing our works.

The more detailed and inclusive the plans and specifications, the easier it is for the contractors to understand the finishes and structural components of the project.

We have already discussed how to read and interpret plans in a previous section.

Plans need to be detailed and accurate as appropriate and include required information in respect to specifications.

Some project drawings are supported with a detailed written specification that identifies all finishes, standards, codes and systems to be employed in the construction of the dwelling.

The full text sample specification is provided and accessible from the resources download page on the website.

4.3 TENDERING SCHEDULE

The Tendering Schedule is used for the collection and comparison of received offers.

The Contractor details are included and acceptance of tender is noted.

The final column allows for the entry of received quotation amount against the budget estimate.

The completion of this information gives a good understanding of the budget position of the project prior to commencement.

An area of large discrepancy in this column may need a reassessment of the quotations and possibly a review of your expectations in respect to fittings, fitments, fixtures for the particular trade.

A tutorial demonstrating the use of the Tendering Schedule is available from the resources download page on the website.

A1 Client Name:

	A	B	C	D	E	F	G
1	Client Name:						
2	Address:						
3							
4	Phone:						
5	Fax:						
6	Mobile:						
7					TENDERING SCHEDULE		
8	Trade/Profession	Budget	Tender 1	Cost	Tender 2	Cost	Tender 3
9	or Statutory Authority						
10	Architect						
11	Surveyor						
12	Geotechnical Engineer						
13	Geotechnical						
14	Council/Private Certifier						
15	House Raising						
16	Building Services Authority						
17	Insurance						
18	Site Amenities						
19	Signage						
20	Owner Builders Course						
21	OBS Planning Program						
22	Excavator						

4.4 LETTERS of ACCEPTANCE

The following format is a suggested formal advice to contractors of their successful offer.

It is likely you will have been in negotiation via phone or facsimile prior to the issuance of this correspondence, but it is important in terms of record keeping and the completed acceptance should be retained in the associated trade contractors file.

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Quotation Acceptance Form

Acceptance of Quotation

TO:	

TYPE OF WORKS		
Principal Contractor	**Owner Builder Permit Number**	
Name of Owner/s:		
Address:		
Site Address:		

4.5 UNSUCCESSFULL TENDERS

Do not neglect to send notification to all unsuccessful tenderers.

It takes considerable time to develop and submit an offer.

Show that you appreciate their efforts, and if you feel so inclined, detail your reasons for selecting another bid.

You never know, this may just stand you in good stead if you are let down for whatever reason by the chosen contractor.

The notification need only be brief, but must identify project details and any drawing or specifications that were provided during the tender.

5.0 CONTRACT ADMINISTRATION

5.1 OVERVIEW

The administration of the contract will ultimately determine the level of success you achieve in the construction of your project.

Careful planning and following the directions provided in this manual and the Owner Building Solutions Project Management System will go a long way to realizing great savings and satisfaction.

You need to be above all, disciplined in the organisation and administration of your project.

The forms and instructions included in this next section, provide simple, well constructed tools to establish accurate records for your project.

The file structure suggested and included on the disk is a system that has worked for us in the past, and can be used on a project of any size or monetary value.

It provides easy access and recall of all records and project information.

The old adage ***"information is power",*** was never more true than when running a construction project.

Each of the forms included in the system is described in this manual.

You can refer back to the instructions for use at any time if you need to reacquaint yourself with the principles and use of the form.

An important responsibility as the owner builder, is the guarantee of payments to contractors and suppliers.

The Building and Construction Industry Payments Act 2004 has been established to help protect payment outcomes for all parties operating in the building and construction industry.

The guiding principle behind the Act is:

"To improve the contractual and payment outcomes within the building and construction industry.

The Act establishes a statutory based system of rapid adjudication for the quick resolution of the payment dispute.

Significantly, decisions by an adjudicator are enforceable as a judgment debt if a contracting party fails to pay monies to a contracted party as determined by the adjudicator."

Owner Builders fall under the provisions of the Act and should be aware that:

- If a contractor or supplier is experiencing payment problems with an owner builder, they may lodge an adjudication application with an Authorised Nominating Authority

- The Authorised Nominating Authority will appoint an independent adjudicator with relevant expertise and register to hear such disputes

- An adjudicator must make a decision on the dispute within 10 business days from either receiving the respondent's (owner builders) adjudication response or the expiry of the specified time frame for receiving an adjudication response. The adjudicator has the power to call for further submissions, hold a conference and view the relevant construction site.

- An adjudicator must provide to both parties reasons for making a decision including the adjudicated amount and the payment date. If the payment of the adjudicated amount is not made, the claimant can request an adjudication certificate, which can then be lodged in a court of competent jurisdiction as a judgment debt.

The important benefits of the adjudication process are that it allows for a prompt interim decision on disputed payments, encourages communication between the parties about disputed matters and provides parties with a much faster and cheaper alternative to resolve the dispute without entering the court system.

Following are screen shots of the forms included on the disk relevant to Site Administration.

The associated text provides a brief outline of the function and use of the form or letter.

5.2 SITE INSTRUCTIONS

As we always try to impress upon our students, all instructions given to trade contractors or suppliers must be in writing, agreed to and signed by both parties.

Ensuring this is done, will reduce the possibility of dispute and miscommunication.

The instructions should be numbered, clearly identify the instructions, signed by both parties and recorded in the site diary, a register of site instructions or simply placed in the appropriate trade contractors file.

Where the site instruction constitutes a variation to the contract, the appropriate variation documentation should be included and similarly recorded.

Abacus training

Site Instructions

Site Instructions No.	
Date:	
From:	
Title:	
Site Address:	
	P/C
To:	**Trade/Profession:**
	Date Issued:
Please be advised:	

5.3 SITE DIARY

Two distinct schools of thought exist in this area..

Not in respect of the importance of maintaining an accurate site diary (this is a given) but we do have differing opinions of the best format.

Both methods require the owner builder to establish a consistent record of day to day activities on the site.

One is based on a computer form which is completed and retained either in an electronic or hard copy format (preferably both), the other is the use of a Collins or similar A4 sized bound diary which displays one page to a day.

Which ever format you use, make certain you record the following information as a minimum:

- Brief outline of the days activities (point form is adequate)
- Any site problems occurrences or disputes
- The issue of site instructions or variations
- Any delays including:
    - Weather
    - Materials
    - No show of tradespersons or contractors
- Record of all phone calls and any correspondence sent or received
- Any other significant site activity

Remember, a well constructed and maintained diary will be considered a legal document in the event of dispute.

Keeping a well organised, complete and accurate site diary is a great start in ensuring your project runs smoothly, on time and on budget.

5.4 PROGRESS CLAIMS

Timing of progress claims will normally be detailed in the contract and agreed to prior to signing or engaging any contractor or supplier.

The progress payments will generally be identified as a percentage of works competed or a stage of construction such as:

- Slab poured
- Frame stood

- Roof on
- Lock Up

You should use the information collated from all contracts, together with your construction schedule and determine a rough cash flow for the project.

This will assist you in transferring funds at appropriate times or organising loan draw downs in time to meet cash demands.

Before making a payment, you need to consider:

- Is the claim for payment consistent with the works competed and the agreed terms of the contract?
- Is the work completed to a satisfactory standard?
- Is there a certification or inspection required for the completed works?
- Is there any retention amount allowed for or specified in the contract?

The following screen shot illustrates a portion of the Progress Claim Proforma included in the Project Management System, it has been produced to include all information as required by industry standards.

Abacus training **Progress Claims Payment**

HIA MEMBER

TAX INVOICE

Date:	Stage completed:
Owner:	
Address:	Building Contractor:
	ABN:
ABN (if applicable):	
Site Address:	

CLAIM		**($)**
Stage Claim		
Variation/adjustment No.1		
Variation/adjustment No.2		
Variation/adjustment No.3		
Variation/adjustment No.4		
Sub Total		
TOTAL CLAIM		

GST in this claim is $ ……

In accordance with the contract this claim is due to be paid by: ……

OWNER'S C

Retentions if applicable should:

- Not be of an amount that exceeds 10% of any one progress claim
- Once practical completion is achieved, the total retention should not exceed 2.5% of the total contract value
- Retention amounts should be held for a maximum of 6 months as a defects liability protection.

To make certain your records are complete and easily followed:

- Do not pay by cash
- Pay by cheque or money order only
- Only pay upon receipt of a Tax Invoice which includes an ABN if applicable

5.5 VARIATIONS

The following extract is of the Variation Document included in the Project Management Disk.

The Variation Document must:

- Be numbered and recorded against the relevant trade contract
- Indicate who requested the variation to the contract
- Identify the Owner Builder and the Site details
- Detail the Extent of Works covered by the variation
- Include changes to the contract price including a breakdown of the costs involved
- If more than one variation is included on the document, each item shall be initialed
- The variation document must be signed by the contracted parties (the owner builder and the contractor or supplier)

Abacus training **Variation Document** MEMBER

No:	Requested by owner / building contractor (*delete one*)
Owner:	
Address:	Building Contractor:
	ABN:
Site Address:	
DETAILS OF VARIATIONS	

No.	Details of work	Unit price	Price (credit or debit)	When payable	Initial by owner

OWNER'S CO

5.6 CASH BOOK

The cash book and your site diary are arguably the most important records you will keep in respect of the project.

The cash book is divided up into several columns, each identifying the details of all transactions and disbursements made during the construction of the project.

The following extract shows the layout of the .xls spreadsheet solution provided in the Project Management System.

It has been “dumbed down” to allow manual entry and calculations.

A more sophisticated solutions includes the required formulae to make the spreadsheet “automatic”

A video screen presentation detailing the use of the cashbook can be found in the following file on the disk:

Cashbook.wmv

	A	B	C	D	E	F	G	H	I
1									
2									
3					Abacus training		CASHBOOKS		
4									
5	Cash Payments						Month:		Year:
6									
7	Date	Particulars	Cheque No.	Amount	Fees	Professional Services	Wages	Phone Postage	Sub-Contract
8									
9									
10									
11									
12									
13									
14									
15									
16									
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23									
24									
25									
26									
27									
28									
29									
30									

Our cash book solution includes a petty cash book on the same sheet, this helps retain all financial record in a common location.

Additionally you must retain:

- Cheque Butts
- Sales Invoices
- Petty Cash Dockets and Receipts
- Bank Statements
- Progress Claims
- Progress Payment Details

5.7 TRADE CONTRACTS

Trade contracts are required under the Home Building Building Act and the details to be provided therein are specified by legislation.

The Department of Fair Trading has plain English contracts to cover most types of work available free of charge as a download from their site.

Following is an extract from the Department of Fair Trading website which details the information which must be included in a contract.

You will note that one of the items included requires you as the owner-builder to have signed to acknowledge you have read and understood the Consumer Building Guide.

A link to this downloadable and printable document is provided below.

Contracts for owner-builders

As an owner-builder, you will probably be entering into several contracts with different licensed tradespeople.

All tradespeople must hold a licence from the Office of Fair Trading for the type of work they are to do (whether they are contracting directly with the owner or have subcontracted through the principal builder).

Note: It is an offence under the *Home Building Act* to knowingly contract with an unlicensed tradesperson.

Go to our online Home building licence check and look up the contractor's details or call the

Office of Fair Trading on 13 32 20 and our customer service officers will help you.

It is the obligation of the licensed builder or trade contractor to provide a written contract for residential building work where:

i) the contract price exceeds $1,000

ii) if the cost of the labour and materials supplied by the contractor exceeds $1,000.

A written contract is required between the licensed builder/tradesperson and you, the owner-builder for building, renovation, addition or maintenance to any home (including garage and swimming pool).

What information must be included in a contract?

By law, the written contract you sign must contain:

- **the date that it was signed by both you and your contractor**
- **your name and the exact name on your contractor's licence card and the licence number**
- **a sufficient description of the work to be carried out**
- **any plans and specifications attached**
- **relevant warranties required by the *Home Building Act 1989***
- **the contract price, which must be clearly displayed on the front page and a warning if the contract price is not known or subject to change, together with an explanation of the effect of this provision**
- **a check list of 12 items**
- **a caution about signing the contract if you cannot answer yes to all items in the check list**
- **a note about your entitlement to a copy of the signed contract**
- **a note about home warranty insurance**
- **an acknowledgment by you that you have read and understood the *Consumer building guide* and that you have completed the check list it contains and answered yes to all items on it**

- **a clause that states that all plans and specifications for the work to be done under the contract (including any variations to those plans and specifications) are taken to form part of the contract**
- **a clause that states that any agreement to vary the contract must be signed by you and your contractor**
- **a clause that states that work, or kit home components, will comply with the Building Code of Australia, to the extent required under the *Environmental Planning and Assessment Act 1979* including any instrument made under that *ACT* and all other relevant codes, standards and specifications that the work is required to comply with under any law and the conditions of any relevant development consent or complying development certificate**
- **a clause that states that the contract may limit the liability of the contractor to comply with the clause referred to immediately above if the failure relates solely to a design or specification prepared by or on behalf of you, the owner, or a design or specification required by you if the contractor has advised you in writing that it contravenes the clause referred to immediately above.**

If the contract price or the market cost of the labour and materials is more than $12,000 your

contract is subject to a cooling-off period of 5 clear business days within which you may cancel the contract.

The Office of Fair Trading recommends its plain English home building contracts. There are two contracts to cover all types of residential building work and these are free to view and print in PDF format:

- **Home building contract for work over $25,000 and all residential swimming pools (size: 720k)**
  Suitable for new homes, major alterations and additions and any new swimming pool installation which are likely to cost more than $25,000.
- **Home building contract for work under $25,000 (size: 345k)**
  Suitable for maintenance and alterations up to $25,000.

Related information:

- Home building licence check
- Consumer building guide in PDF format (size: 84k)
- Home Building Act 1989

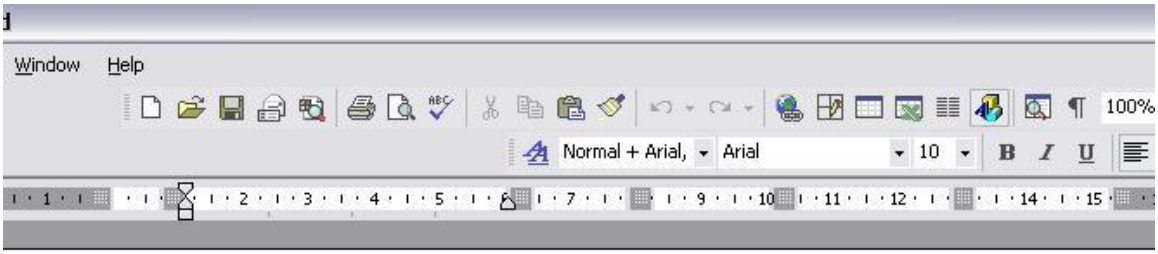
The contract when executed, must be signed and dated by all parties to the agreement.

5.8 PRELIMINARIES CHECKLIST

Preliminaries form an important part of the project, not only from an organisational aspect, but also as a monetary consideration.

The provided Preliminaries Checklist, provide a detailed form for ensuring that all the general considerations for a typical domestic construction project are completed and documented.

It will provide quick access to the amount spent on the preliminary stage of the construction and fiscal information to be included in your project budget.



PRELIMINARIES CHECKLIST					
No.	TASK PARTICULARS	DATE	PAYMENT	COMPLETION	COMMENTS
1	Select land				
2	Establish Project Bank Account				
3	Purchase land – complete searches				
4	Payment for conveyancing				
5	Obtain land title certificates				
6	Complete Owner Builders Course				
7	Prepare detailed budget for project				
8	Obtain finance approvals if applicable				
9	Design or select house plan and layout				

5.9 CERTIFICATIONS CHECKLIST

It is important to keep all copies of any certifications that are issued in respect your construction.

These should be retained in the relevant trade contract file for future reference.

It is a good idea to establish a Certification Checklist as a quick reference of the inspections completed or certifications received.

Ideally this would be retained in the Project Master File (Hard Copy) or in the front of the Project Diary.

A proforma is included and accessible from the resources download page on the website.

5.10 FILE STRUCTURE

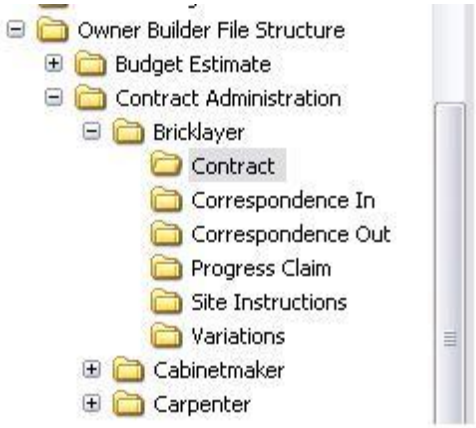
We have included a basic file structure that can be copied and pasted onto your computer and will form the basis of your electronic retention of financial and administrative records for your project.

The file structure is accessible from the resources download page on the website, and we have included a tutorial viewable in windows media player on the use and structure of the filing system.

Whilst it is generic, it is appropriate for most domestic construction projects.

Special or unique projects may need some modification to the system.

If you have any problems or questions, enter our web based forum and ask the questions of other Owner Builders or of the Owner Building Australia staff.



5.11 REGISTERS

Registers are an important source of project information, particularly in respect to the contact information of various suppliers, contractors and consultants.

In addition to details on the contracted service providers, several other registers may need to be produced and retained separately to allow easy access to specific information including site safety induction etc.

These are handled and discussed in the relevant sections of this manual.

For each of the Project Participants below, the appropriate details as indicated should be included in the register.

The Screen Shot Tutorial access from the resources download page on the website provides further instruction on entering data into this register.

5.11.1 SUPPLIERS

- Contact Details
- Insurance Details
- Tender Receipt
- Other Documentation
    - Safety Induction
    - Work Methods Statements
    - Comments

5.11.2 CONTRACTORS

- Contact Details
- Insurance Details
- Tender Receipt
- Other Documentation
    - Safety Induction
    - Work Methods Statements
    - Comments

5.11.3 CONSULTANTS

- Contact Details
- Insurance Details
- Tender Receipt
- Other Documentation
    - Safety Induction
    - Work Methods Statements
    - Comments

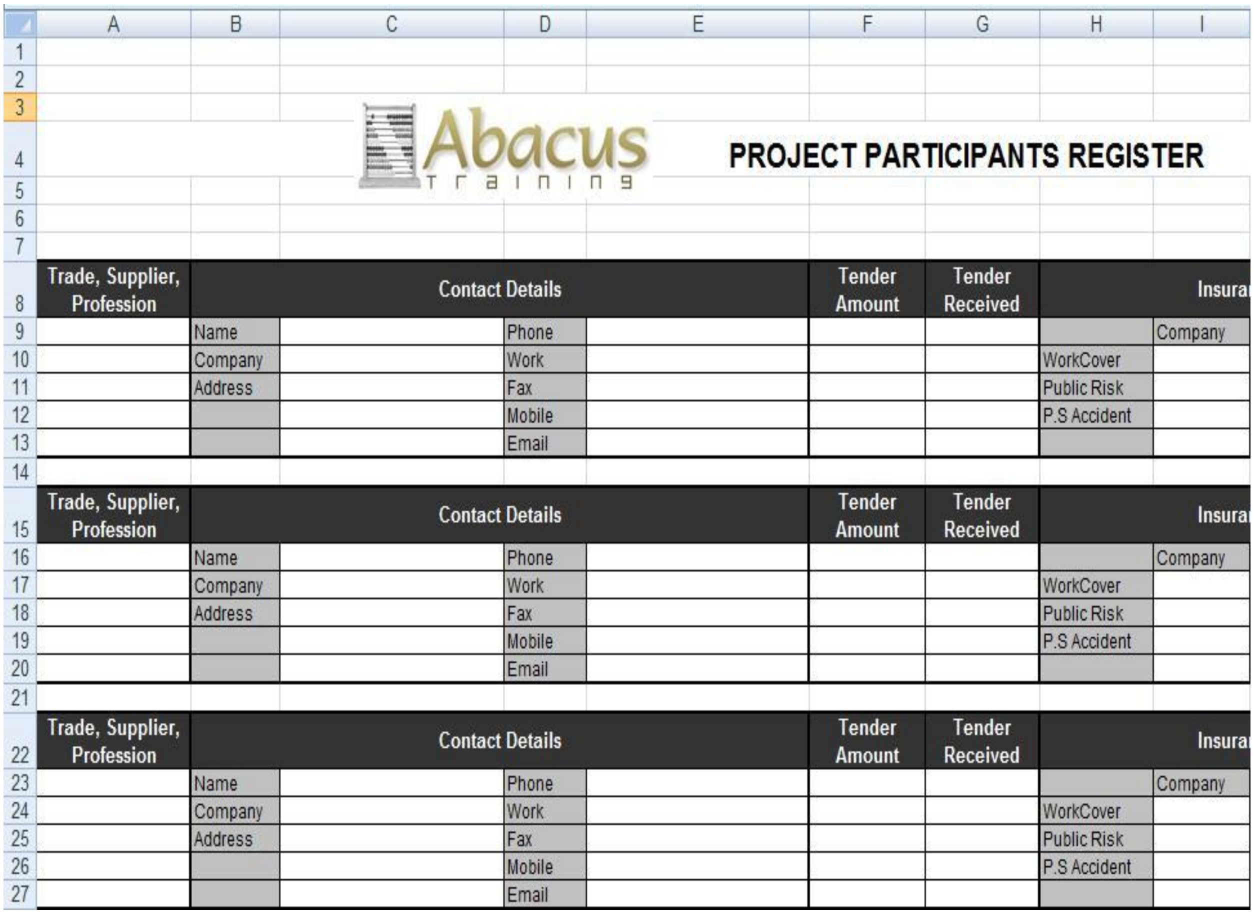
5.12 PROJECT PARTICIPANT REGISTER

This important register provides you with a means of documenting and maintaining contact and professional details about all tradepersons, consultants and suppliers who are engaged on your project.

It should be you primary reference point for day to day contact with those persons contracted to provide you goods or services.

If you are working from hard copy files, it should be readily available at the front of your project diary or if possible hung on a wall in a prominent easily accessible location.

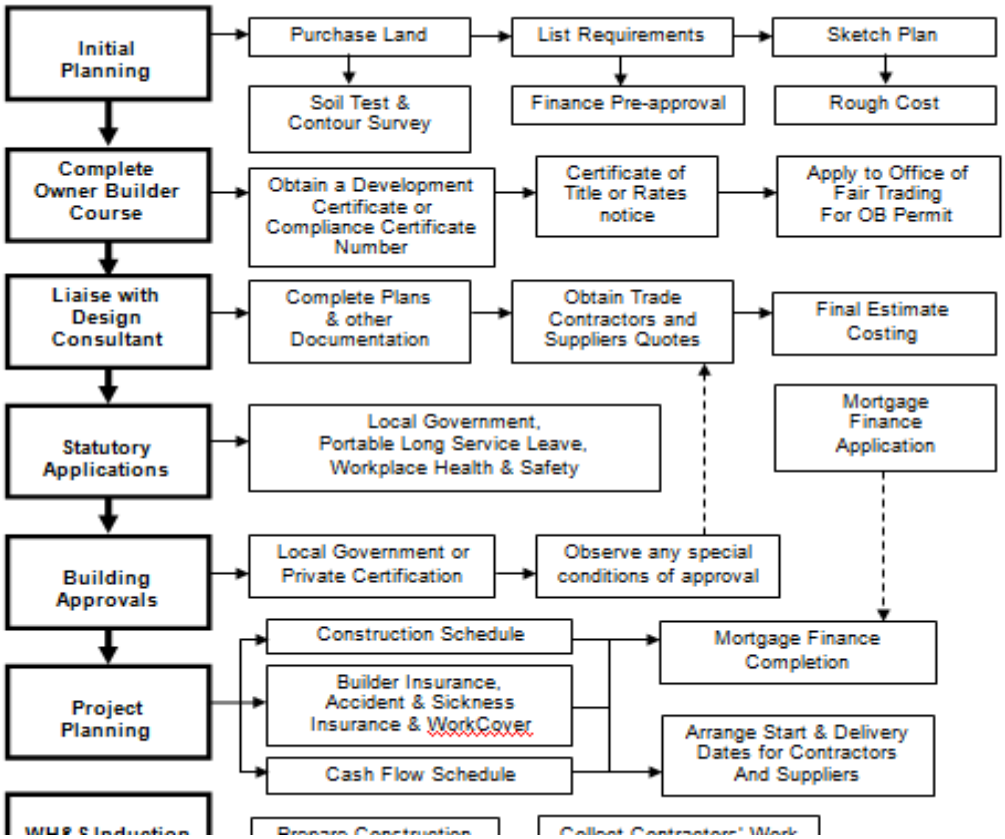
Of course, like all project documents it must be amended and kept up to date.



	A	B	C	D	E	F	G	H	I
1									
2									
3									
4					PROJECT PARTICIPANTS REGISTER				
5									
6									
7									
8	Trade, Supplier, Profession	Contact Details				Tender Amount	Tender Received	Insura	
9		Name		Phone					Company
10		Company		Work				WorkCover	
11		Address		Fax				Public Risk	
12				Mobile				P.S Accident	
13				Email					
14									
15	Trade, Supplier, Profession	Contact Details				Tender Amount	Tender Received	Insura	
16		Name		Phone					Company
17		Company		Work				WorkCover	
18		Address		Fax				Public Risk	
19				Mobile				P.S Accident	
20				Email					
21									
22	Trade, Supplier, Profession	Contact Details				Tender Amount	Tender Received	Insura	
23		Name		Phone					Company
24		Company		Work				WorkCover	
25		Address		Fax				Public Risk	
26				Mobile				P.S Accident	
27				Email					

6.0 SCHEDULING

6.1 SEQUENCE of EVENTS



Most conventional building structures follow a similar sequence of events.

Differences occur in the type of construction, such as cavity brick, brick veneer, timber or steel frame with cladding.

Of course, unconventional types of construction such as straw, earth etc. face considerable differences.

In effect, if you adhere to our sample building schedule as contained herein, you will understand what comes next.

Notwithstanding, following is a chronological list for ease of reference –

1. Arrange services
2. Arrange contractors
3. Order materials
4. Clear and prepare site

5. Set out – surveyor
6. Temporary power
7. Water supply
8. Excavate for footings/stumps
9. Drainage under slab
10. Steel in footings/stumps
11. Inspection – steel/foundations
12. Concrete – pour footings
13. Brickwork – base course
14. Concrete – form and prepare
15. Membrane and steel/slab
16. Inspection
17. Pest Barriers
18. Concrete – pour slab
19. Carpenter – bearers/joists (if applicable)
20. Carpenter – floor sheeting (if applicable)
21. Pest barriers
22. Carpenter – wall frames
23. Carpenter – trusses/tie downs
24. Carpenter – Windows
25. Frame inspection
26. Plumber – roof, gutters/valleys
27. Plumber – hot and cold water rough in
28. Electrical – pre wire
29. Other services
30. Carpenter – frame wrap
31. Bricklayer – walls
32. Soffit linings
33. External drainage
34. Drainage inspection
35. Internal linings
36. Carpenter – joinery
37. Painter – first coat seal
38. Carpenter – fix out/ kitchen
39. Painter
40. Water proofing
41. Floor and wall tiler
42. Plumber – fix out
43. Electrician – fix out including (light fittings if available)
44. External pest barriers
45. Clean up – prepare site
46. Final inspection

Following on from the construction schedule which details the order of the project and the trades and services to be used, it is helpful for the Owner-Builder to have a basic knowledge of the function of each contractor employed on their site.

Note:

Remember, not any two projects will be the same, nor will environmental or other factors be always constant throughout two similar projects.

The following is provided as a guide and refers to a simple, typical construction using established building principles and systems.

Each project will be different and it will be your ability to recognise and adapt to these variations that will affect the outcome of your works.

The list of all construction techniques employed throughout the building and construction industry are wide ranging and varied and it would be impossible to cover all of them in the scope of this course.

In earlier sections we looked at the roles and duties or services provided by professionals such as architects, engineers and surveyors, we will now look at a basic job description of each of the trades.

We will amplify some of the trades in the sequence for clarity and to assist in developing a realistic construction schedule.

- **Arrange Services**

  Arrange the temporary power supply and temporary water connections with the electrician and plumber respectively.

  Organise and hire site toilet facilities and construction fencing as required.

  This is a good time to talk to council about installation of the footpath or kerb crossings as necessary.

- **Arrange Sub Contractors**

  At this time you should have completed your tendering process and the successful contractors would be in receipt of Quotation Acceptances and have signed the appropriate contracts with you.

  Remember, during the tendering process you should have received and considered at least three quotations for each trade or service.

  Your nominated contractor list should include:

- Excavator
- Electrician
- Plumber and Drainer
- Gasfitter
- Concretor
- Carpenter
- Bricklayer
- Waterproofer
- Plasterer (internal linings)
- Roofer
- Floor and Wall Tiler
- Floor Sander
- Painter
- Landscaper

Not all projects will require all the trades listed above and as you can see from our previously completed construction schedule, some projects may require the services of more specialised contractors.

The above list however is fairly representative of a standard contractor list used in the construction of a domestic dwelling.

As we discussed earlier, these tradespeople and suppliers will not be sitting around waiting for your call, so coordinate carefully with all your contractors and suppliers to give your project every chance of being completed on time and on budget.

Allow contingencies for wet weather and other unforeseen circumstances and build some flexibility into the program if at all possible.

Remember when things don't go exactly as planned, it is time to take stock, sit back re evaluate and reschedule as required.

- **Materials**

Working from you schedule, coordinate with the suppliers to make certain that PC's are in stock, hardware and other site consumables are delivered at the right time to minimise delays.

Some of the materials and hardware you will need to consider for delivery or availability on site are:

- Sand, Gravel and Fill
- Bricks
- General Hardware
- Concrete
- Timber
- Roofing
- Windows and Doors
- Tilt and or Roller Shutters and Doors
- Internal Linings
- Kitchen
- Wall Finishes
- Light Fittings
- All PC items

Obviously it is important to the flow and continuity of the works to have hardware, PC's etc and materials on site when the tradespersons require them.

Having all the materials on site too early though can cause some problems.

- Where do you store them so they are safe from theft and not in the way of people working on your site?
- Are they causing trip points or hazards to people engaged on the site?
- What effect will it have on the cash flow of the project to pre buy everything and have them sit on site awaiting installation?

Some contractors may wish to provide a supply and fit contract. This is normal and quite acceptable. However Make sure you are not paying too much for the ease of having everything supplied or included.

- **Clear and Establish Site**

Using the information provided during the site survey and the established levels, coordinate and instruct the excavator to prepare the site for construction works to commence.

Consider what machinery you will need to carry out the excavations and how they will access the site.

- **Site Set Out**

  This function is most often performed by the builder themselves, so as the Owner-Builder it may be necessary to engage the services of the surveyor to assist in this set out.

  Getting this important step right first time will save you money and prevent possible litigation or the withholding of approvals if the structure is not sited as per the approved plans.

- **Under Floor Services**

  Particularly for slab on ground construction, it is important to coordinate the services which are to be installed under slab.

  These may include:

  - Water reticulation (hot and cold water)
  - Electrical services
  - Sub floor heating elements
  - Vacuum systems
  - Drainage – Sewer and Stormwater

Ensure all sub floor installations are adequately supported or founded, be certain that all necessary inspections are completed and certificates issued as required.

Lagging as necessary is to be installed at this point for both insulation requirements and for all slab penetrations.

- **Footings**

The soil or geotechnical engineer will have in consultation with the structural engineer and reference to the completed drawings designed the footing system for the dwelling.

Concrete footings and slab design need to be in accordance with AS 2870 and an inspection of the reinforcing steel and trenches will be required before the pour.

Where footings are to be excavated, this is normally done by a backhoe.

Depending on soil type and subsoil stratas, specialist equipment such as rock breakers etc may need to be used.

Plan these works carefully and consider the most effective and economical system to suit the ground conditions.

Where trenches, pits, bore or pile holes are dug, ensure they are not left open for any longer than is necessary.

Not only do they present a risk to visitors to the site but also pose a health risk if allowed to fill with water and let sit stagnate.

Water intrusion and edge subsidence or damage will also generally make the footings bigger than they need be, this can result in the use of additional concrete not really required and increases the cost substantially.

The steel fixer or concrete contractor will fix the reinforcing steel as per the approved design.

- **Brick Base and Foundation or Retaining Walls**

As required, the bricklayer can now set out and lay the foundation or sub floor walls, any piers or retaining walls.

Concrete footings should be allowed to cure for a minimum of seven days to reach optimum strength.

Remember that a minimum clearance of 230mm is required from the lowest sub floor member to finished ground level for all suspended floor structures.

- **Termite Treatment**

These days many methods of termite treatment are available and it is important that you investigate all the possibilities to determine the most suitable protection for your dwelling.

Termite protection is covered under AS 3660.1

Check with your local authority and make sure you are fully informed of their requirements in respect to termite treatment and use only reputable, qualified and appropriately licensed companies to carry out these works.

Primarily there are two types of termite barriers in use today:

1) Physical, such as termimesh, ant caps, granite guards etc

2) Chemical, including perimeter protection and replenishable reticulating chemical system which are proving extremely popular with new home builders.

Make sure you are familiar with the maintenance required to ensure the continue integrity of whichever system of protection you install.

A “termite brochure” is available from your local Fair Trading Centre and can be provided upon request.

- **Formwork or Boxing**

Before the slab can be poured, it is usual to have to form up or box unsupported areas or edges of the slab.

In most cases these works are completed by the concretor.

Make sure the concreter is aware of and allows for any setdowns in the slab including, changes of level, shower compartments, weatherproofing at garage entry etc.

- **Concrete Slab**

Fabric reinforcing mesh can now be installed, usually over a waterproof membrane or vapour barrier, (builder plastic).

Joints in the membrane will be lapped and taped (min. 200mm) and the mesh stood on chairs to achieve the required top and bottom covers.

Where necessary, control, expansion or articulation joints will be installed as per the design and the slab will be poured and finished as specified.

These works are all generally completed by the concreter.

Any penetrations through the slab must be sealed and or lagged.

After the slab is pour, coordinate and consult with the concreter on the stripping of formwork or boxing and seek advice on the best method to cure the slab.

Allowing the slab to dry to quickly will result in cracking to the surface and at worst, affect the structural strength achieved.

- **Floor Framing**

If a timber floor system is used, the carpenter will set out the bearers on the piers and foundation walls.

The joist are then laid and the timber floor membrane is affixed to the sub floor members.

The floor membrane could be either planked, boards, sheet or a combination of these systems.

The carpenter must ensure that all joints are fast and that the bearers fit tight to the piers.

Any problems not noticed and rectified at this point will result in annoying noises and squeaks and possible failure or subsidence of the flooring system.

- **Wall Frame**

Your carpenter will now generally stand the wall frames and associated bracing and tie downs as required by the design.

It is most common for prefabricated wall frames to be utilised and this requires accurate drawings and specifications to ensure they go together with a minimum of fuss.

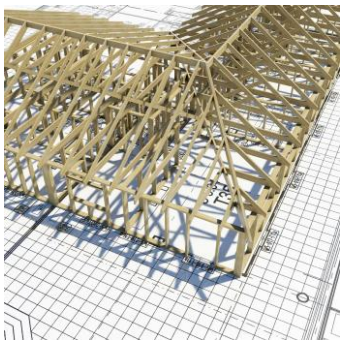
Wall frames are to be constructed, installed, braced and tied down in accordance with AS 1684.

This allows for general construction types as used on most residential dwellings, any unique, extraordinary or structurally demanding design will require design and certification from a structural engineer.

Noggings and fixing points for fixtures such as cisterns and tapsets should now be installed in accordance with the approved plans.

- **Roof Trusses**

Depending on the design, most standard construction for domestic dwellings these days utilise pre fabricated, gang nailed roof trusses to support the tiles or sheet metal roof covering.



The carpenter generally erects these after the wall framing and bracing are in place.

They are installed in accordance with the suppliers details and will include the use of triple grips, speed brace etc to ensure adequate bracing and hold down.

- **Windows and External Door Frames.**

At this point it is normal for the carpenter to go through and fit out the all external opening in respect the door jambs, windows complete with reveals etc.

Flashings should be secured and check form correct installation at this point.

It is advisable to go through and check that all doors and windows are plumb and true.

- **Roof Drainage, Guttering and Fascia.**

Roof drainage including valleys, box gutters and flashings should now be fixed by the roof plumber.

In most cases now the roof plumbing is carried out by a separate contractor and the used of preformed extruded gutters and fascias are commonplace.

It is important to ensure all gutters are provided with adequate fall, downpipes are appropriately spaced and that in long straight runs the required expansion joints are incorporated into the design.

- **Roofer**

The roofer can now affix the tiles or roof sheet as specified.

Sarking should be used as it greatly enhances the waterproofing of the roofing system, assists in insulation and helps to prevent dust entering the finished dwelling.

Fixing systems for both tiles and roof sheets will depend on the category of the site and the associated design wind loading.

- **Plumber**

The plumber can now complete the rough in, that is install the hot and cold water piping throughout the house.

It is important that pipes are adequately supported and fixed with pipe saddles or clips to minimise the event of 'waterhammer'

Where pipes pass through stud walls they should be insulated with an appropriate sarking and if possible made fast with a silicon sealant or in the case of steel framed construction a rubber grommet.

Saddles and clips should be of a non ferrous type to prevent a reaction which may lead to rapid corrosion of the installation.

If gas is to be installed, then any in wall pipework should be completed at this time.

Remember that all pipework requires pressure testing and inspection prior to be concealed by the wall linings.

If the plumber is completing the drainage, then external and or underground works including sewer and stormwater pipework should now be completed.

- **Electrician**

As for the plumber above, the electrician can now complete the rough in of the wiring.

This may include lighting, power distribution, TV Coaxial points, prewire of the telephone, intercom systems and home entertainment.

The meter box and fuse board can now generally be fitted.

- **External Cladding**

The bricklayer can now complete the face brickwork to the external walls and in the case of sheeted surfaces or plank clad walls, the carpenter can fix the external cladding.

Ensure that previously fix flashings are pulled through or finished correctly to provide the waterproofing adequately.

The carpenter can fit the soffit linings at this point.

- **Wet Area Flashing**

A specialist waterproofer should be engaged to install the flashings and membranes to all wet areas as required.

Make certain that all works are carried out in accordance with the manufacturers specifications and recommendations for application and that a certificate verifying the systems rating is issued by the contractor along with the required warranty details.

Having been a involved with building inspections and defect report writing on residential building for many years, we can state that the failure of the waterproofing systems particularly in the shower area would be the most common defect found.

Notwithstanding the above, the systems now used are far superior to previous applications, and a well installed membrane will these days provide a substantial life.

Be aware of the different types of application used for sheet floors as opposed to concrete slabs and ensure the correct system is used.

- **Wall Insulation**

Wall insulation such as batts etc can now be fitted.

- **Internal Linings**

Once all the in wall or ‘hidden’ services are completed, tested and inspected as required, the walls can be lined.

Ensure all wet areas are inspected and certified as required and that the wall and floor tiler has completed the required flashings if any.

Check wall cavities for cleanliness and that vermin protection and wall ties are free of any excess mortar.

The wall sheet, cornices and mouldings should now be fixed in accordance with the manufacturers recommendations.

- **Joinery and Fix Out**

Internal door jambs, skirting, moulds trim and other joinery can now be completed by the carpenter.

- **Floor and Wall Tiling**

Your tiler can now come and lay floor and wall tiles to al areas as required.
Grouting should be left for at least 24 hours after the tiles are laid and large areas of tiled flooring should include the use of a control or expansion joint to minimise the possibility of movement cracking.

The most common place for this cracking to occur is at internal or re-entrant corners.

Make certain all sheet flooring which will have a tile finish is correctly secured and sealed to avoid problems with movement.

- **Painter**

Utilising the paint system as specified and selected, the painting contractor can now apply sealers, primers, undercoats and or finish coats as required.

Paint quality can vary considerably and the cheapest alternative may not always provide the durability or standard of finish expected.

It is advisable to discuss your specific needs and expectation with a colour consultant at the suppliers or with your selected contractor.

Painting contractors should go through and make good any ‘popped’ or exposed nails, imperfections in mitred joints etc prior to commencing the application of the product.

If any imperfections are noted which are unacceptable or not within the capability of the painter to rectify, the responsible tradesperson should be recalled.

- **Plumbing and Electrical Fitout**

The plumber and the electrician can now return and complete the fit out of fixtures, fittings and PC items, this may include:

  - Range Hood
  - Range
  - Hotplates
  - Wall Oven
  - Light Fittings
  - Toilet Suites
  - Basins
  - Taps
  - Laundry Tub
  - Kitchen Sink

- **Ancillary Services**

Now is the time to consider the following:

1. Telephone, final connection of service
2. Ceiling insulation, install as required
3. Landscaping, this may include plantings, pathways, vehicular drives. water features etc.

- **Finish Up and Site Clean**

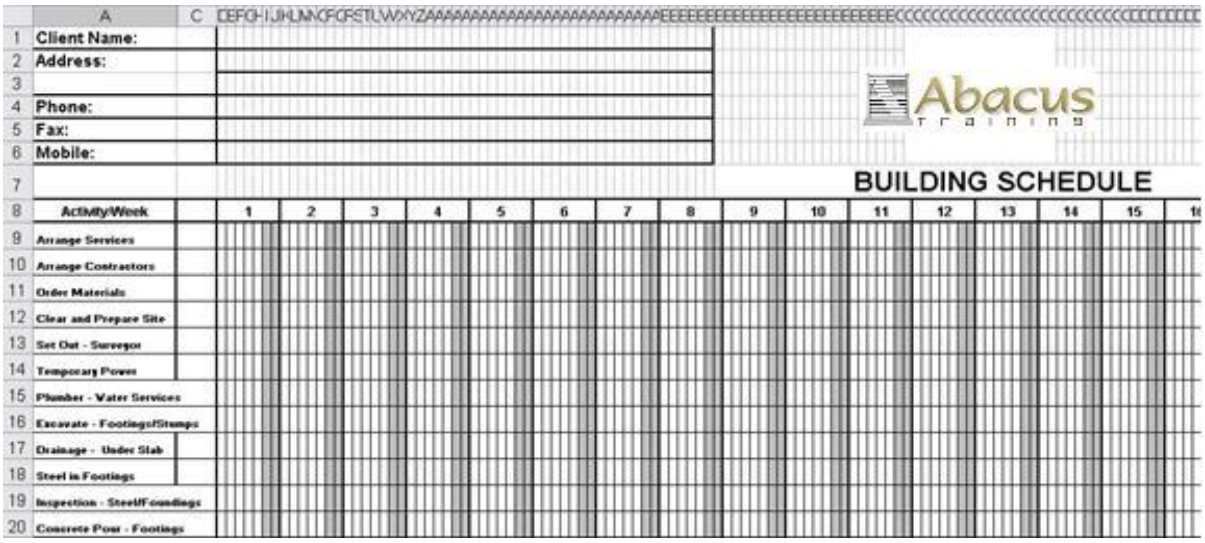
Before moving in complete the installation of fly screens, shower screens, security doors, garage openers, gates, fences etc and ensure the site is clean and free of all debris from the construction process.

The above list whilst not exhaustive gives a general guide to the sequencing of works on a ‘standard’ domestic dwelling using traditional building systems and or methods.

Special design features or difficult sites may require the use of trades other than those detailed above such as structural steel and or sail shades etc.

6.2 CONSTRUCTION SCHEDULE

We have provided a building schedule spread sheet, the use of which should become clear once studied and considered in respect to your project.



	A	C	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Client Name:																
2	Address:																
3																	
4	Phone:																
5	Fax:																
6	Mobile:																
7																	
8	Activity/Week																
9	Arrange Services																
10	Arrange Contractors																
11	Order Materials																
12	Clear and Prepare Site																
13	Set Out - Surveyor																
14	Temporary Power																
15	Plumber - Water Services																
16	Excavate - Footings/Stumps																
17	Drainage - Under Slab																
18	Steel in Footings																
19	Inspection - Steel/Foundings																
20	Concrete Pour - Footings																

Referring to the sample will help.

In our schedule you will see a 26 week programme.

Each week is divided into seven days, with the last two days shaded in. This, of course, indicates Saturday and Sunday.

We would suggest that you don't schedule any works on those days. However, this is up to you and what you have planned.

Try to give yourself some free time, for example, if you pour concrete on Thursday don't restart 'till Monday. It gives you some flexibility.

Don't dig your trenches on a Friday and leave them open all weekend. Reschedule to keep continuity and save yourself from a multitude of hassles.

Be aware of the possibility of collapsing trenches – children or others falling it – rain or flooding filling them.

When ordering windows, organize your delivery exactly when you need them to guard against theft, damage, water penetration, vandals, etc.

With inspections, plan them with a minimum of 48 hours notice. Most authorities will carry these out the next day, but ensure you check.

The plumber will need notice for installation of the bath and/or spa when the roof goes on. Check with both the plumber and electrician as to what their needs are.

Theft is rife in the building game. You can never be sure that your goods and materials will be safe. Once you start getting your prime cost items installed, you may want to think about sleeping on the job until lock-up stage.

Liaise with all your contractors as to when they will want to be on site. For example, the painter might well want one or two days between the carpentry/ joinery and the carpenter fix out in order to avoid masking of your finished items, kitchen benches, hot plates, etc.

The water proofing contractor and floor and wall tiler (if not the same contractor) might need some contact with each other.

Don't run off and hire a power pole – the electrician might not want or need it.

If you are having a swimming pool, does it need to be excavated first?

Tips

Before commencing the building schedule try to estimate how long each trade will take to complete the works indicated on the schedule.

Check with your contractors before producing the schedule, that the times are realistic.

Blank out public holidays, RDO's etc and complete you schedule.

We have provided a tutorial for the use of the Construction Schedule, it is accessible from the resources download page on the website and is viewable in Windows Media Player.

6.3 SITE COORDINATION

Organisation

On site coordination requires you to be disciplined and organised.

Using the file structure and the proforma provided in this manual will go a long way to helping you achieve this.

We have provided the structure, only you can provide the discipline.

With the schedule set, you will need to monitor and review the progress of the site on a daily basis if possible.

Keep a good record, a site diary is the best solution here, but it must be maintained religiously and accurately.

Did you know that during a conflict or dispute mediation or resolution process, a well maintained and detailed site diary is considered a legal document.

In addition, we strongly recommend scheduling site coordination meetings programmed on an as required basis.

These meetings become increasingly important when delays occur and it is necessary to reschedule.

In many instances, on smaller projects, this can be achieved through telephone calls, faxes or emails.

Just be certain you record all correspondence and agreements or undertakings for future reference.

It is your responsibility to ensure all Trade Contractors, service providers and suppliers fully understand where and when they will be required.

Telephone calls, reminding contractors or suppliers of their commitment, is essential in ensuring the project stays on track.

Where a delay is known to occur, give the contractor as much notice as possible to allow them to reschedule.

Supervision

If you are undertaking the supervision of the works yourself, the details included in the sample specifications and the section, “Known Problem Areas” will be of use when inspecting works for progress or final payment.

Refer to your contract and any variations to confirm works are completed and use the certifications or inspection checklist as required.

General Coordination

As the Owner Builder you are responsible for the site and all the works conducted therein, this may include but is not limited to:

- Setting out the project
- Providing storage facilities and temporary services
- Paying Trade Contractors
- Satisfying compliance inspections (plumbing, footings, bracing, final
- Ordering and arranging delivery of materials and plant
- Maintaining site cleanliness and safety
- Managing delays and disputes

6.4 DELAYS RECORD

The delays you encounter on your site need to be recorded.

The main reason for this is the required modification of the Construction Schedule.

Additionally, the recording of delays may be useful in identifying specific trends with suppliers or contractors and may be used as supporting materials during dispute resolution.

We recommend entering the data into the site diary.

7.0 INSURANCE

Insurance is a necessary evil on all projects, and one of those areas we never want to have to deal with.

But things do go wrong, accidents happen and not everybody is as honest as you would like.

You, your site, the people working on or visiting the site, the materials and the construction itself should be insured.

All the money you can save by being an organised owner builder will be lost quicker than a heartbeat if inappropriate or inadequate insurance policies are held.

Following is a list of the insurances you need to consider before embarking on your project.

In addition to holding your own insurances, you need to ensure each and every trade contractor you use is correctly covered and has in place all necessary insurances to cover them, their workers and their work.

At the end of this section we have included an insurance register which can be used to record and update all insurance details for the project.

Owner Building Solutions Australia advises that:

All policies and all insurance companies are different in respect to what is covered and to what extent.

It remains your responsibility to ensure you read and fully understand the Product Disclosure Statement (PDS) for any policy you are considering, to satisfy yourself that you are getting what you expect.

The information provided below is an extract from the Department of Fair Trading website which outlines insurance requirements for building projects including owner builders.

Familiarise yourself with the requirements, particularly in respect to Home Warranty Insurance.

If you have any questions, you should contact one of the approved providers of Home Warranty Insurance directly.

Insurance

For your own protection, check the builder or tradesperson has the necessary insurance and that the certificates are current:

- Home warranty insurance
- Contract works insurance
- Professional indemnity insurance
- Public liability insurance
- Workers compensation or WorkCover insurance
- Kit homes and insurance
- Other insurance issues for home owners

Home warranty insurance

The Home Warranty Insurance Scheme was established under the Home Building Act 1989 and began on 1 May 1997 in NSW. Since then, the scheme has undergone some changes:
1 May 1997 – Home warranty insurance cover for breach of statutory warranty to be provided by private insurance companies. All builders and tradespeople required by law to give home warranty insurance certificate to home owners for work over $5,000.

1 April 2002 – The threshold of insurance has been increased from $5,000 to $12,000.

1 July 2002 – Further changes introduced, including the reduction of the required insurance cover from seven to six years for structural work. These changes are summarised below.

Frequently asked questions - Home Warranty Insurance

HIH Rescue Package

Changes from 1 July 2002

Home warranty insurance after July 2002 allows a claim to be made where the contractor has become insolvent, disappeared or died. A home owner is covered for the loss caused by:
structural defects for a period of six years after completion of the work
non-structural defects for two years from the date of completion of the work
incomplete work for a period of 12 months after failure to start or cessation of work.
Important. Home warranty insurance must be provided before:

- taking any money on the contract, including a deposit
- commencing the work
- supplying the kit home.

If the residential building work is valued at less than $12,000, there is no legal requirement for the builder or tradesperson to provide home warranty insurance certificate. Contractors who

carry out residential building work and/or the supply of kit homes must still hold an appropriate licence with Fair Trading where the labour and materials involved are valued at over $1,000. Persons who contract to carry out specialist work (ie. electrical wiring, plumbing, gas-fitting, air-conditioning and refrigeration) require a licence regardless of the value of the work.

Approved insurers

Home warranty insurance can only be purchased from insurance companies approved by the Minister for Commerce. There is a list of companies approved to sell home warranty insurance on the Approved insurers page.

Caution. Be wary of any builder or tradesperson who says they do not need insurance. Always check with the Office of Fair Trading before you sign the contract.
It is recommended that you check the validity of the insurance certificate by contacting the insurance company shown on the certificate.
The certificate should be an original issued by the insurer and should have the name of the contractor, homeowner, property address and total sum.

High-rise buildings

From 31 December 2003, buildings of more than three storeys that contain two or more separate dwellings (high-rise) no longer require home warranty insurance.
If things go wrong
If something goes wrong:
and the builder or tradesperson won't fix the problem or finish the job, Fair Trading may be able to help. For more information on the dispute resolution process, go to the Resolving building disputes page
you may also apply to the Consumer, Trader and Tenancy Tribunal for a hearing.

Home Warranty Insurance Scheme Board

The Home Warranty Insurance Scheme Board oversees the operation of the home warranty insurance scheme.

Exchange of insurance information

The Commissioner for Fair Trading and the Australian Prudential Regulation Authority (APRA) has entered into an exchange of insurance information arrangement. Go to the Insurance requirements and procedures page to view or download the memorandum of understanding that covers this arrangement.

Contract works insurance

This insurance should be obtained by the builder or tradesperson. It is for your protection and covers the loss or damage to materials and work.

If the builder or tradesperson does not have this type of insurance, you may risk:

- inconvenience
- time delays
- disputes if materials are damaged or stolen.

Professional indemnity insurance

Covers against claims for professional advice, design, contract administration and project management.

Public liability insurance

This covers the builder or tradesperson if anyone is injured as a result of the building work. If the builder or tradesperson does not have this type of insurance, you could be liable because you own the property.

Workers compensation or WorkCover insurance

Make sure all employees are covered by their employer for workers compensation. This insurance covers employees who are injured on the building site.
If employers are not insured, you could be liable to pay the costs of any claim. In some circumstances, under the Workers Compensation Act 1987, these people can be regarded as your employees.

Important. A builder or tradesperson who does not operate under a trade or company name cannot usually take out insurance to cover themselves, It is advisable to take out your own minimum premium insurance just in case.

For more information about workers' compensation insurance or names of companies who provide this type of insurance, contact WorkCover NSW on 13 10 50.

Kit homes and insurance

Home warranty insurance is necessary when the job is valued at over $12,000 for:

- developers
- speculative builders (also known as 'spec builders')
- suppliers and builders of kit homes.

Important. If you buy a new or recently renovated home from one of these people, make sure a certificate of home warranty insurance is attached to the contract of sale.

Other insurance issues for home owners

If you're renovating or extending an existing home:
notify your home insurance provider in writing before construction begins
find out if your home and contents insurance policy will cover damage or theft to your home during the period of construction. Sometimes, if you don't inform your insurance company before the work begins, you may not be covered at all.
Your lender (if borrowing money to fund the project) will want to see a current certificate of insurance to make sure you are protected and if the value of your home has increased as a result of renovations, you may wish to increase the value of your home/building insurance policy.

Important. Always check with your home insurer or insurance broker before you sign a contract.

7.1 BUILDERS ALL RISK INSURANCE

Sometimes known as Construction Insurance.

This policy covers the works on the site and the material securely stored on site from theft, fire, storm, wilful damage etc.

It can also be extended to cover items in transit and other defined events as specified in the policy.

As with all insurance, be certain you understand the specific inclusion and more importantly exclusions.

Also what if any excess is included and how it affects the premium paid.

Note: Long Service Leave

Owner Builders are required to pay long service leave at a rate of 0.2%, however, a rebate of 50% is available. Contact Long Service Leave Department on 1800 426 684 or www.lsdc.nsw.gov.au

7.2 PUBLIC LIABILITY INSURANCE

While it remains your responsibility to make the site as safe as is possible and to put in place certain risk management strategies, accident still do happen.

It may be a visitor to the site, a friend, a relative or even a member of the general public who falls, trips or in some way injures themselves on the construction site.

Should they seek to claim damages, you will need to be insured to cover any associated costs.

Quite often, a lower premium can be achieved through insuring for Construction (All Risk) and Public Liability with the one insurer.

7.3 WORKERS COMPENSATION INSURANCE

WorkCover, or workers compensation insurance is to provide for loss of income due to accident or injuries received during the conduct of works on or associated with the a workplace.

It remains a legal obligation for anyone who employ staff on a full or part time basis to provide adequate workcover insurance.

As the Owner-Builder and therefore the Principal Contractor, it is your responsibility to:

- Provide Workers Compensation for people employed on your site, or
- Ensure all trades people and contractor carry their own policies and that these policies are current and appropriate.

For more information on this matter, phone WorkCover on 13 10 50 or visit the following website:

www.workcover.nsw.gov.au

You should contact workcover prior to engaging contractors to ensure you have an understanding of your liability in respect workers compensation should anyone you have engaged fail to meet their workcover obligations.

WORKERS COMPENSATION INFORMATION

ATTENTION ALL OWNER-BUILDERS

In New South wales, workers compensation arrangements apply to owner-builders, as they do to any other person who engages workers or contractors. Contractors engaged by an owner-builder may be deemed to be workers. **All owner-builders who engage contractors or workers should obtain a standard workers compensation policy to ensure that they are fully covered.**

For many owner-builders this will only need to be the minimum premium policy, which costs $175 **(inclusive of GST)**

Some owner-builders may find that their premium rate is higher than this if they employ workers or engage contractors who may be "deemed workers". Deemed workers are individuals who do not employ other workers; who do not sub-let all or part of their work; and whose work is not part of a business or trade regularly carried out by that person in his/her own name or under a business or firm name.

Licensed tradespeople such as plumbers and electricians are not normally considered to be deemed workers of the owner-builder and are usually required to carry their own workers compensation insurance (if applicable). However an individual who agrees to do some labouring for the owner-builder is an example of the type of person likely to be a deemed worker. The owner-builder's workers compensation policy would cover this person if they were injured during the job. If a licensed tradesperson or their employee turned out to be a deemed worker the policy would cover them also. (Workers Compensation Act 1987 Section 20)

A workers compensation policy can be obtained from one of the following insurers:

Allianz Australia Workers' Compensation (NSW) Ltd
CGU Workers Compensation (NSW) Ltd
Employers' Mutual Indemnity (Workers Compensation) Ltd
GIO Workers Compensation (NSW) Ltd
QBE Workers Compensation (NSW) Ltd
Vero Workers Compensation (NSW) Ltd

Owner-builders should also be aware of their obligations under the Occupational Health and Safety Act to provide a safe place of work for workers and visitors to their workplace.

If you have further queries on workers compensation or occupational health and safety you can contact WorkCover's Information Centre on 13 10 50.

Maximum penalty for failure to obtain and maintain a workers compensation policy in respect of all workers: $55,000 or imprisonment for 6 months, or both.
(Workers Compensation Act 1987, Section 155).

WorkCover NSW **Information Centre 13 10 50**

7.4 WARRANTIES

Many of the PC Items you purchase will come with a manufacturer's warranty.

There are several ways to retain copies of these for claims that may result from failures etc.

We recommend keeping them in a separate file either, scanned and retained electronically or in the original hard copy format.

Whichever way you decide upon, make certain you can readily access tehm as required and that all necessary information or supporting documentation is retained including:

- Receipt of purchase
- Store Invoice
- Copies of any completed warranty forms
- Details and proof of extended warranty purchased

Insurance is a necessary evil on all projects, and one of those areas we never want to have to deal with.

But things do go wrong, accidents happen and not everybody is as honest as you would like.

You, your site, the people working on or visiting the site, the materials and the construction itself should be insured.

All the money you can save by being an organised owner builder will be lost quicker than a heartbeat if inappropriate or inadequate insurance policies are held.

Following is a list of the insurances you need to consider before embarking on your project.

In addition to holding your own insurances, you need to ensure each and every trade contractor you use is correctly covered and has in place all necessary insurances to cover them, their workers and their work.

At the end of this section we have included an insurance register which can be used to record and update all insurance details for the project.

Owner Building Solutions Australia advises that:

All policies and all insurance companies are different in respect ot what is covered and to what extent.

It remains your responsibility to ensure you read and fully understand the Product Disclosure Statement (PDS) for any policy you are considering, to satisfy yourself that you are getting what you expect.

7.5 HOUSEHOLDERS INSURANCE

General Household Insurance may cover some of the works conducted on site, but be careful, again check PDS and ask questions.

Contact Workcover and discuss a Household Workers' insurance policy.

This will cover your cleaner, your nanny or your gardener if they injure themselves in the course of providing paid services to you at your residence.

The area of workers engaged on your project is a little 'grey', and we would suggest you contact WorkCover and take out the policy that is best suited to your specific requirements.

WorkCover can be contacted on 1300 362 128 or www.workcoverqld.com.au

7.6 REGISTER OF INSURANCES

It is advisable to keep a register of all insurances you hold current in respect the owner-builder works you are undertaking.

The following table is an extract from the Design Brief Checklist which should as a minimum; include the policy details as indicated.

Keep it in the master file for the project to allow easy access to the information.

PROJECT INSURANCES		
TYPE	**PROVIDER**	**POLICY NUMBER**

Remember, it is advisable to include the insurance details of each contractor on the relevant signed contract.

This information should include:

- Insurer details
- Policy Number
- Type of Cover
- Expiry date
- Name of the Insured.

8.0 WORKPLACE HEALTH and SAFETY

Each year, hundreds of thousands of incidents, accidents and illnesses occur in Australian workplaces.

Many of the injury claims were made by workers aged 16 years or less.

The burden this places on workers, businesses and the community at large is enormous.

Direct financial costs arising from workers compensation, hospitalization, rehabilitation, lost production and staff retraining is estimated to cost the Australian community several billion each year.

For workers, the human cost of injury can be equally devastating.

Pain, discomfort and rehabilitation are often accompanied by other psychological stressors.

These typically include emotional stress, strained relationships, uncertainty and disruption to study.

Workplace injuries also affect or intrude into a persons social and recreation pursuits.

Family members are affected in similar ways.

Medical rehabilitation and social welfare payments are other costs absorbed by the community.

Overall workplace injury and illness undermines Australia's economic performance and reduces our living standards.

Adapted from:

Department of Employment and Training Workplace Health and Safety Training Resource Kit

Introduction and Responsibilities

This section helps you to understand your responsibilities in the area of Occupational Health and Safety , particularly as they relate to owner-builders undertaking and managing their projects.

Whilst it remains true that no two workplaces or work sites are the same and that each circumstance has it's own identifiable and inherent risks and hazards, the process and the methodology behind achieving a safe work environment remains constant across construction workplaces.

It is your responsibility as an owner-builder and therefore the person responsible for the worksite to:

- Recognise workplace hazards and risks
- Recognise appropriate control measures or strategies
- Contribute to establishing better controls
- Complete relevant workplace documentation in respect to OHS issues.

Workplace health and safety is a generic or general term which relates to the health and safety of persons performing work.

It further relates to the protection of the public from danger which could be present as a result of that work and the protection of the public and persons engaged in work activities as a result of plant, equipment, materials and other related sources.

Any workplace in Australia is governed by either Federal/Commonwealth or State legislation.

Legislation varies from state to state, but all are based on the National Standards developed by the National Occupational Health and Safety Commission (NOHSC), now commonly known as ***Worksafe Australia.***

Each state or territory has it's own specific department which enforces these laws.

History of Workplace Safety

Workplace Health and Safety Legislation has existed in varying forms for many years.

Originally our legislation was based on the English Factories Acts 1844 – 1894.

Australia inherited this style of occupational health and safety as a result of our influence and position as a member of the Commonwealth.

Today, Australia has adopted the Robens Model as the basis of it's workplace health and safety legislation.

The emphasis is on proactive prevention, rather than reactive compensation.

The National Occupational Health and Safety Commission,
(***WorkSafe Australia)*** has a "watch dog" role in seeing that all states and territories administer effective high quality Occupational Health and Safety practices, standards and legislation.

The commission is made up of Employer Associations, Union Representatives and State Government Representatives.

The group makes recommendations to the State Workplace Health and Safety Council, who will support the relevant Minister in the legislation of the Act.

Workplace Occupational Health and Safety Acts

All states and territories have their own independent but conforming legislation in place.

Broadly, these Acts are administered in the following manner, with only minimal variation being evident from authority to authority.

Workplace Health and Safety Council

The Minister takes advice from this council, consisting of Employer Organisations, Government Representatives, Unions and subject matter experts.

They meet to establish new laws, cades and practices for the various industries they represent.

A large function of the Workplace Health and Safety Council is to promote education in all areas of Health and Safety.

Administration of the Act

The legislation is administered by the Minister of the appropriate department responsible for OHS in each state or territory.

Workplace Health and Safety Industry Committees

The Minister establishes Industry Workplace Occupational Health and Safety Committees of independent expertise such as Building, Manufacturing or Aviation.

These committees advise the Workplace/Occupational Health and Safety Council on recommendations on changes and policy matters

Workplace Health and Safety Inspectors

These inspectors are employed by the Department and offer expertise in safety matters.

Inspectors have wide ranging powers to inspect workplaces and assist Workplace Occupational Health and Safety Representatives and Employers to improve safety standards.

Their duties include the investigation and reporting of workplace accidents, incidents and near misses.

These inspectors are employed by the Department and offer expertise in safety matters.

Inspectors have wide ranging powers to inspect workplaces and assist Workplace Occupational Health and Safety Representatives and Employers to improve safety standards.

Their duties include the investigation and reporting of workplace accidents, incidents and near misses.

Australian Standards

These standards are critical to Occupational Health and Safety as they guarantee safe manufacturing of products and machinery.

They also specify the minimum safe work procedures and practices when undertaking defined work tasks.

Like the regulations, they further identify methods of complying with the legislation.

Codes of Practice

More general information on what are considered and accepted safe work practices within an industry, profession or in high risk cases, specific tasks.

They are not law, however will be considered as evidence in a Court, inquiry or investigation as evidence as what constitutes an acceptable industry practice.

Obligations of Employers, Employees and Others

Each of us has a responsibility in the workplace to keep safe.

Keep safe ourselves, keep safe workmates and keep safe the general public or anyone who comes into or is affected by the workplace.

Employers have identified responsibilities in the areas of:

- The work environment must ensure the health and safety of the employees and visitors
- Plant and machinery are adequately maintained and the employed systems of work are as far as is reasonably practicable, safe and without risk to the health and safety of any person.
- Work duties will not affect the health and safety of others

Employees have identified and defined responsibilities and the law imposes obligations on employees to:

- Comply to the instructions given for workplace health and safety
- use appropriately all personal protective equipment
- not interfere with or misuse anything provided for workplace health and safety
- not place at risk any person at the workplace
- not willfully injure themselves

The responsibilities of others include:

- Must not willfully or recklessly interfere with anything provided in the interest of health and safety
- Adhere to safety directions given by the workplace principal or their representatives for the workplace concerned

The above represents our moral and lawful obligation or our Duty of Care to health and safety.

The authority handling workplace safety for New South Wales is WorkCover.

Their website address is www.workcover.nsw.gov.au

The site includes a great deal of information relevant to responsibilities of persons in the workplace and should be reviewed by all owner builders prior to commencing works.

This will help you ensure your site remains compliant and more importantly safe for all those affected by the works undertaken.

The site also includes some very useful resources to help you manage site safety.

We recommend you download and use the Housing Industry Site Safety Pack.

This document will guide you through the process of managing safety on most building projects and can be adapted to suit a small domestic construction site.

We have included our resource for managing safety, which in some areas duplicate the information provided in the pack.

Whichever one you decide to use, it is important to understand your requirements as an owner-builder, to manage safety on your site and to comply with the relevant laws, act and codes of practice.

8.1 SITE SAFETY INDUCTION

It is the responsibility of the Owner Builder to ensure all persons working on, delivering to or visiting the site, have been appropriately inducted onto the site and are aware of the hazards, controls and emergency procedures relating the site.

It is a requirement that all people attending any construction site, have completed a General Site Safety Induction Course - provided by a Registered Training Organisation, or accredited provider, and are in possession of their “Green Card”

We have allowed for a register of all site entrants, to be recorded on the Work Place Plan Proforma.

Ensure all hazards specific or peculiar to your site a well known to all who enter the site for whatever purpose.

8.2 WORKPLACE PLANS

Construction Workplace Planning

The following Construction Workplace Plan is adapted from the sample proforma available on the workplace health and safety website.

It is provided as the basis upon which a suitable Workplace Construction Plan may be produced which identifies the hazards, risks and controls specific to your project.

It is intended to assist the Owner Builder to interpret the requirements of the WH & S Regulation 1997 as amended and is supplied as a reference tool.

The format and guidelines follow the sample provided on the Workplace Health and Safety Website and is typical of a plan suitable for use in respect a domestic dwelling constructed in accordance with accepted and standard building practice.

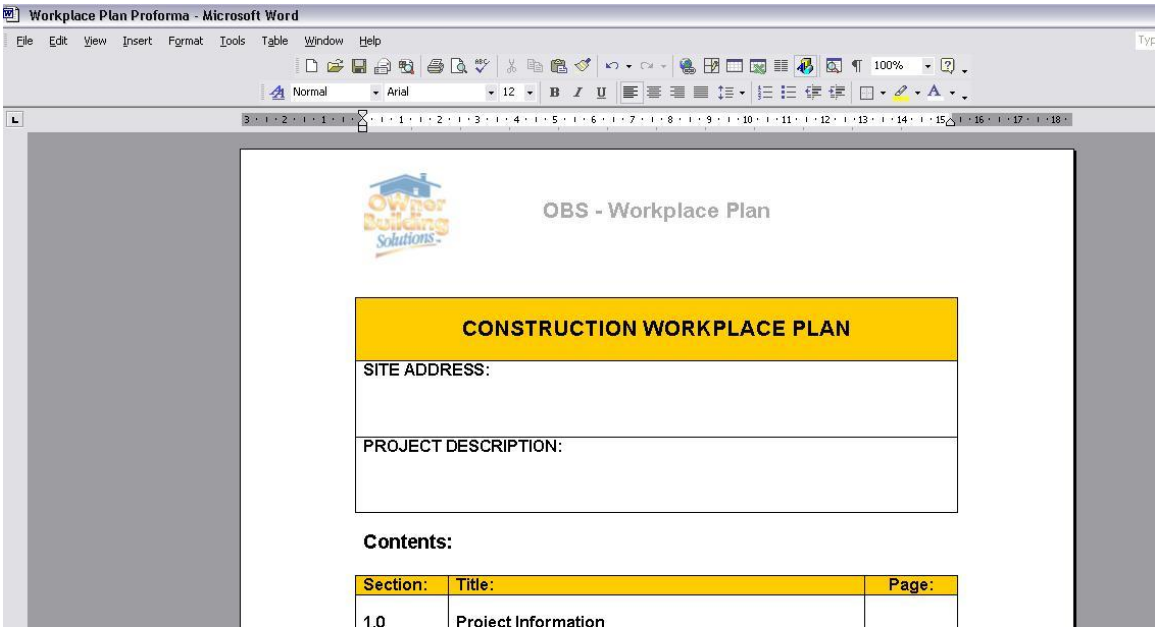
NOTE:

It is important that you understand that every site is different and that as the Owner Builder you are responsible for identifying hazards, controlling risks and monitoring the ongoing effectiveness of the strategies employed.

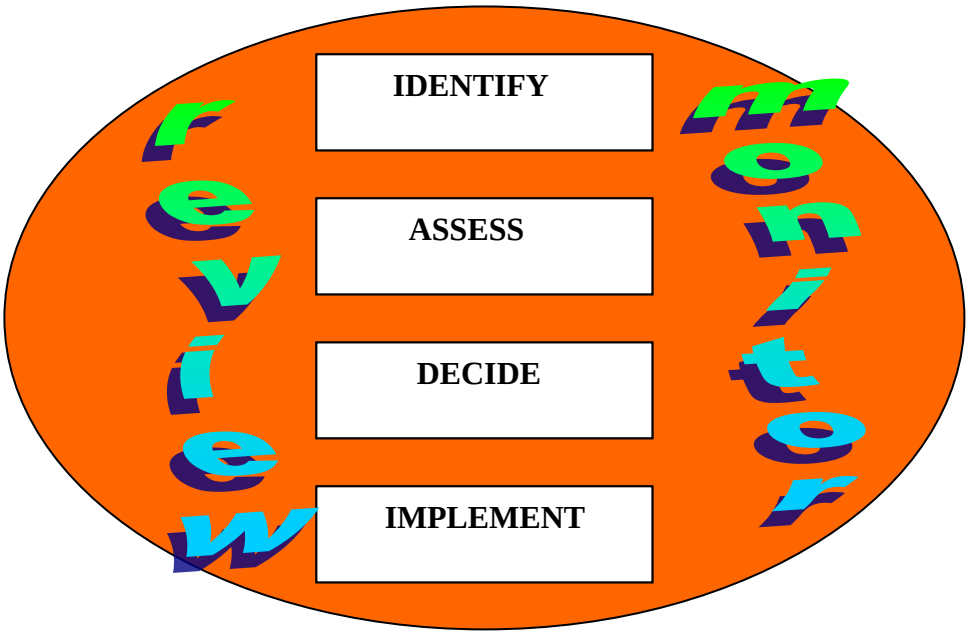
No two projects are the same and the best way to maintain a safe site is continual reassessment.

Use this profoma to develop your specific workplace plan and as necessary consult the WH & S website for further information:

www.workcover.nsw.gov.au



Remember the process for safe work practices.



Definition of a Construction Workplace Plan:

"workplace construction plan" is a plan which identifies a specific construction site and states:

a) the hazards to health or safety that the person responsible for producing the plan has identified as generic or specific to the related construction workplace.
b) the assessment of the risks that may result from the identified hazards.
c) the control measures being used or proposed to be used to prevent or minimize the level of risk.
d) the process by which all measures implemented shall be monitored and reviewed for effectiveness.
e) the method of reporting additional hazards as they are identified.

The plan shall also include:

a) a description of the works
b) the name and address of the principal contractor, responsible person or the owner builder.

c) the date the plan was produced and of any subsequent amendments.

The plan will be written in such a way as to be easily understood by all persons who are affected by the plan and have cause to be familiar with its contents.

Work Method Statements

Work Method Statements are required for all works which involve high risk activities such as working in confined spaces, working at heights, removal of asbestos, working in trenches greater than 1.5 meters deep etc.

These must be produced by the individual contractors who are engaged to perform the works and shall be submitted to the principal contractor.

As the owner builder (principal contractor), you must retain a copy in the project file for the duration of the project.

Further information is available from the WH & S website, the OBS on line forum or the course 32015QLD General Site Safety Induction (Construction Industry).

A Work Method Statement Proforma is included in this section of the Project management System.

Risk Control

Risk control is the process of eliminating or reducing the risk factors.

Control measures must be chosen and implemented to eliminate or reduce the risks as far as possible.

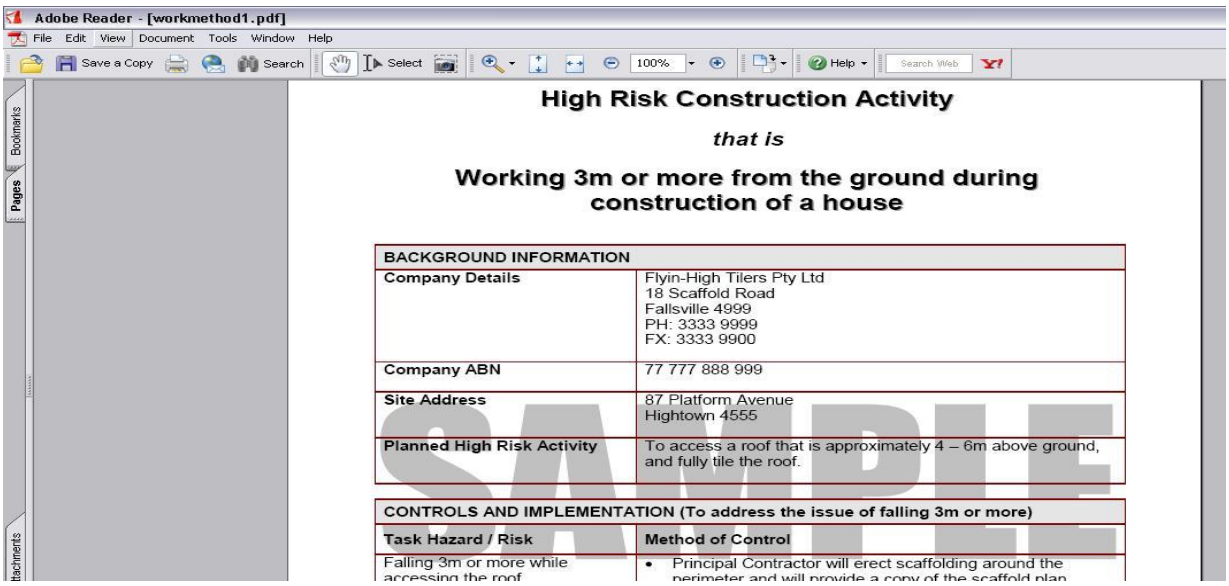
In deciding on the most appropriate measure to be used practicality and availability of the control measure must be considered.

The following control measures are listed in order from most to least effective or desirable:

1) Eliminate the hazard
2) Substitute, modify or isolate the risk
3) Engineer a control
4) Administer a control
5) Use Personal Protective Equipment

8.3 WORKMETHOD STATEMENTS

As the owner builder, you will be responsible for ensuring that workmethod statements are provided by all contractors undertaking high risk activities.
A definition of high risk activities is provided in the Owner Building Solutions Australia Workplace Health and Safety course text.



High Risk Construction Activity

that is

Working 3m or more from the ground during construction of a house

BACKGROUND INFORMATION	
Company Details	Flyin-High Tilers Pty Ltd 18 Scaffold Road Fallsville 4999 PH: 3333 9999 FX: 3333 9900
Company ABN	77 777 888 999
Site Address	87 Platform Avenue Hightown 4555
Planned High Risk Activity	To access a roof that is approximately 4 – 6m above ground, and fully tile the roof.

CONTROLS AND IMPLEMENTATION (To address the issue of falling 3m or more)	
Task Hazard / Risk	**Method of Control**
Falling 3m or more while accessing the roof	• Principal Contractor will erect scaffolding around the perimeter and will provide a copy of the scaffold plan

A Work Method Statement is required for all high risk activities and should clearly identify the works to be carried out and the controls implemented to mitigate or remove the risk.

Details will include:

1. Company or Contractor Details
2. ABN if applicable
3. Site Address
4. Planned or proposed High Risk Activity
5. Task Hazard or Risk
6. Method of Control
7. Provisions for monitoring control measures

A sample Work Method Statement is included in .pdf format, accessible from the resources download page on the website.

8.4 EMERGENCY RESPONSE

You must identify and have readily accessible contact information for emergency services and or response appropriate to you construction site.

This is allowed for in the workplace plan proforma and is provided as a guide for you to establish an Emergency Response Guide, specific to your site.

As a minimum you will need to identify and have accessible the following information:

- Emergency Contact Numbers
    - Hospital
    - Fire
    - Ambulance
    - Police
    - Doctor
    - Gas
    - Electricity
    - Water
- Emergency Muster Points
- Location of First Aid Kits
- Details of On Site First Aiders

8.5 CLEAN SITE PRINCIPLE

We cannot stress how important it is to maintain a clean and safe site.

A clean site is required by OHS laws and you can be heavily fined if you are found to be in breach of accepted practice.

A clean and well organized site is more efficient, increases productivity and minimises the risk of injury to workers or visitors to the site.

Owner Building Solutions Australia recommends the following steps be followed to establish and maintain a clean site:

- Set aside and area for the collection and storage of all waste materials, ideally fenced off or somehow quarantined from the rest of the site in an area which is out of the way and will not impede traffic or progress of the site.

- Identify the allocated area to all contractors and reinforce regularly, their obligations and responsibilities in respect to maintaining the site appropriately. (A well written contract or specification will establish these principles)

- Be disciplined and establish a set and regular routine for site inspection and cleaning.

- Have where possible, trade contractors remove from site their own waste materials.

- Maintain the collection area and remove waste materials from site on a regular basis so as not to overload the onsite waste area.

- Use appropriate guards, shields, barricades, hoardings, retention devices and signage to prevent injury to all site attendees.

8.6 SIGNAGE

Any person carrying out building works under an Owner Builders Permit must display a sign in a prominent position on the building site.

The sign must provide details of the permit holders name and the owner builders permit number.

The sign must have a minimum surface area of 0.5m².

Failure to erect and display a complying sign could result in prosecution under the provisions pf the Act and a fine of up to $1500.00.

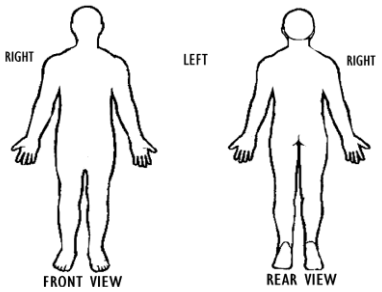
Additionally, the Owner Builder must ensure that the appropriate danger, warning and advisory signs are displayed throughout the construction.

A sample of the signs which may be required are indicated in the picture below.

8.7 INCIDENT REPORTING

Details

Details of incident (eg property, plant or environmental damage)			
Date of incident		Time of incident	am pm
Nature of incident			
Location of incident			
Description of incident			
Details of damage to equipment or property			
Name of person who received the report		Telephone	
Reported to authorities?	☐ Yes Provide details (when and whom): ☐ No		
Details of injury (eg to a worker or visitor) and treatment			
Date of incident		Time of incident	am pm
Name of injured person		Date of birth	
Address		Telephone	
Occupation		Employer	
Activity in which the person was engaged at the time of injury			
Exact site location where injury occurred			
Nature of injury – eg fracture, burn, sprain, foreign body in eye			

Body location of injury (indicate location of injury on the diagram)			
Treatment given on site		Name of treating person	
Referral for further treatment?	☐ Yes Name of doctor or hospital: ☐ No	Medical certificate received?	☐ Yes Attach copies ☐ No
Injury management required?	☐ Yes Notify return to work coordinator ☐ No	Name of return to work coordinator	
Reported to authorities	☐ Yes Provide details (when and whom): ☐ No		

Witness to incident (each witness may need to provide an account of what happened)			
Witness name		Witness contact	
Witness name		Witness contact	

Investigation

Cause of incident or injury

Preventative actions (include what needs to be done, who will do it and when it will be done)

Completed by			
Name		Position	
Signature		Date	

8.8 RISK MANAGEMENT CODE of PRACTISE

The Risk Management Code of Practise is a cross industry standard which identifies and establishes sound management and principles for identifying and assessing risk.

Whilst it is a Queensland document, the principle contained within the text are applicable across all states and territories.

A full text copy of the standard is accessible from the resources download page on the website and is intended a reference material and further reading only.

9.0 HANDY HINTS

9.1 KNOWN PROBLEM AREAS

For each of the various trades and services you need to identify problems as they are occurring.

It is important to inspect works prior to making progress or final payments.

Following are several trade specific areas that should be considered and inspected prior to remittance of any monies.

- Plumber

  Check saddles and fixings are adequate, failure to do so could result in considerable water hammer.

  Check lagging on hot water pipes

  Check location of all fixtures and tapware is as per the plans and specifications

  Sight the final inspection certificates and certifications as applicable

- Electrician

  Ensure correct height and location of all power outlets

  Check all required certifications, approvals and inspections are complete

- Plasterer

  Check correct fixing, particularly on bracing walls

  Check joints are not in line with noggings

  Check sanding and finishing is complete to a satisfactory standard

- Tiler

  Check grouting is not completed for at least 24 hours after tile fixing

Check grout is true and consistent

Check trims and covers or edges are correctly fixed

- Carpenter

  Check frame is tied and anchored correctly

  Check bracing is installed as per the plans and specifications

  Check for all required inspections and certifications

  Check where possible fastenings and fixings are adequate

9.2 DELIVERY and STORAGE

Delivery and storage of materials on site will largely be the Owner Builders responsibility.

Two primary considerations:

- Neatness, organisation and access to stored materials which is directly related to the safe and efficient operation of the site.

  Try to allocate an area on the site which is readily accessible for both the delivery and use of the materials.

  Make certain the materials do not protrude into work or pedestrian areas and try to minimise ‘double handling’ of stored items.

- Weather protection of the stored materials.

  It is important to ensure all materials are stored, stacked and or racked in a manner which will prevent damage or deterioration from exposure to the elements.

  Wood products in particular require special attention when considering storage for future use, moisture content in timbers makes for considerable warping, twisting, shrinkage and distortion which can make the section unusable.

Consider the use of a site shed which is lockable if you intend to retain any valuable equipment, plant or materials on site.

Theft is considerable on building sites, and only well thought out security and storage procedures will minimise your exposure.

9.3 MATERIAL DEFECTS

Check carefully all materials delivered to your site for damage and ensure the order is correctly filled.

You will be required to sign for receipt of the goods, this constitutes your acceptance of the order as complete, undamaged and correct.

It is too late after the event to complain about the quality or contents of a delivery.

Photographing damage at the time of delivery is often helpful in supporting a claim for damaged goods or defect materials.

9.4 CONFLICT RESOLUTION

As the Owner Builder you will no doubt at some stage be involved in a minor or major dispute which will need your negotiating and communicating skills to resolve.

The best cure of course is prevention.

This can usually be achieved through demonstration of a sound understanding of the terms and conditions of your contract.

In short make certain from the start that your expectations are identified, documented and clearly understood by the associated trade contractor, supplier or consultant.

Sometimes, unfortunately, even with all the best intentions you will end up in dispute or conflict with one or more contractors.

Our best advice in this situation is to call a meeting with the parties involved, work through the issues in a calm, rational and professional manner.

Try to not let emotions play a part in the discussions.

Generally, most issues can be resolved in this way and will result in an acceptable outcome for all concerned.

If agreement or accord cannot be reached, you will need to have the matter settled by a third party.

You could agree to an independent consultant or subject matter expert to assist or you may choose to have the matter dealt with by a building tribunal or the Department of Fair Trading.

You do have access to have the matter heard by the Consumer Tribunal, visit the Department of Fair Trading website to get more information, the process and applicable fees.

9.5 SCREEN SHOT TUTORIALS

We have provided several interactive training videos for the use of specific proforma and spreadsheets included from the resources download page on the website.

The tutorials cover:

- Estimating Sheets (Section 2.5)
- Tendering Schedule (Section 4.3)
- Variations (Section 5.5)
- Cash Book (Section 5.6)
- File Structure (Section 5.10)
- Participant Register (Section 5.12)
- Construction Schedule (Section 6.2)

Each of the above has reference text included in the appropriate section of this manual as indicated in brackets next to the items above.

The Screen Shot Tutorials are accessed from the resources download page on the website and are in a movie format which is viewable in windows media player.

The tutorials show the actions required on the computer to access, view, enter date, print, save and store the various forms.