



Anthony Protas Consulting Pty Ltd
BUILDING REGULATIONS CONSULTANTS

29 October 2014

Our Ref: 144077

The General Manager
Pittwater Council
PO Box 882
Mona Vale NSW 1660



Dear Sir,

**Re: 3 Pindari Place Bayview
Complying Development Certificate**

Pursuant to the requirements of the Environmental Planning and Assessment Act please find attached a copy of our Complying Development Certificate, plans and specifications to which the Complying Development Certificate has been issued and other relevant documents.

Should you have any questions, please do not hesitate to contact the undersigned.

Yours faithfully

A handwritten signature in black ink, appearing to be "AP" with a flourish.

Anthony Protas
Anthony Protas Consulting Pty Ltd

336 Rec: 369816 4/11/14

CONSTRUCTION CERTIFICATES • OCCUPATION CERTIFICATES • COMPLIANCE CERTIFICATES • BUILDING AUDITS • DESIGN ASSESSMENT • REGULATIONS ADVICE

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COPY

Anthony Protas Consulting Pty Ltd
BUILDING REGULATIONS CONSULTANTS

Complying development certificate – 3 Pindari Place, Bayview - Proposed demolition of the existing dwelling house

1. Details of the applicant

Mr Ms Mrs Dr Other

First name Family name

Flat/street no. Street name

Suburb or town State Postcode

Daytime telephone Fax Mobile

Email

2. Decision of the certifying authority

The certificate is issued:

- without any conditions
 subject to the conditions listed in **Attachment A**
 to erect a temporary building.
- The issue of this certificate has been endorsed on the plans, specifications or other documents that were lodged with the application.

Plan no.s approved

Architectural plan No. SK-100, issue B, dated 18/09/2014, prepared by Micheal Fountain Architects P/l. Residential Building Specification (NSW), prepared by the Master Builders Association

Date of this decision Complying development certificate no.

The decision was made under the following planning instrument

SEPP (Exempt & Complying Development Codes) 2008/Demolition Code

3. Information attached to this decision

- A fire safety schedule
 The conditions of the certificate as listed in **Attachment A**

4. Certification

Anthony Protas

certifies that:

- the proposed development is complying development
- the proposed development will comply with all development standards that apply to the development, and with the requirements of the Environmental Planning and Assessment Regulation 2000 concerning the issue of this certificate, if it is carried out as set out in this certificate
- the proposed development will be a class **N/A** building under the Building Code of Australia when it is completed.

Date of this certificate

29 October 2014

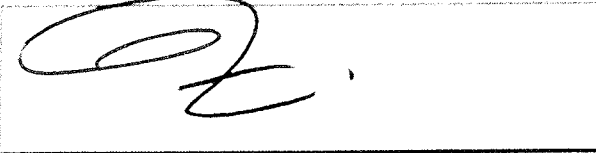
Date this certificate will expire

29 October 2019

5. Signature

For this certificate to be valid, it must be signed by the certifying authority.

Signature



Name

Anthony Protas

Flat/Street no.

Locked Bag 1001

Street name

Suburb or town

Wareemba

State

NSW

Postcode

2046

Telephone

9715 5333

Fax

9715 5333

If the certifying authority is an accredited certifier:

Accreditation body of the certifier

Building Professionals Board

Accreditation no. of the certifier

BPB0332

Attachment A Conditions of the certificate

This certificate is subject to the following conditions identified in the following SEPP, REP, LEP or DCP:

A Section 94 or 94A Development Contribution and damage deposit may be payable on the development. You are required to contact Council and pay any applicable levy prior to commencement of work.

The person having the benefit of the complying development certificate must give at least 7 working days' notice in writing of the intention to commence the works to the owner of each dwelling situated within 20m of the boundary of the lot on which the works are to be carried out.

see attached additional conditions

COPY

Rec'd 16/9/14

Anthony Protas Consulting Pty Ltd
BUILDING REGULATIONS CONSULTANTS

Application for complying development certificate

1. Details of the applicant

Mr Ms Mrs Dr Other

First name Family name

Flat/street no. Street name

Suburb or town State Postcode

Daytime telephone Fax Mobile

Email

2. Identify the land

Flat/street no. Street name

Suburb or town Postcode

Lot no. Section

DP/MPS no. Volume/folio

You can find the lot no., section, DP/MPS no. and volume/folio details on a map of the land or on the title documents for the land. If you need additional room, please attach a schedule and/or a map with these details.

3. Estimated cost of the development

\$ including GST

4. Describe the development

What type of work do you propose to carry out?

- Building work
 Subdivision work

Describe the work

DEMOLITION OF EXISTING HOUSE

For building work, what is the class of the building under the Building Code of Australia?

CLASS 1a

This can be found on the development consent

5. Information to be attached to the application

You need to provide material with your application that is relevant to the type of work you propose to do. Please indicate the material you have attached by placing a cross in the appropriate boxes

1. If you are going to carry out building work:

- a copy of any compliance certificates on which you rely
 detailed plans of the building (4 copies)

The plans must be drawn to a suitable scale and consist of a general plan and a block plan. The general plan of the building is to:

- show a plan of each floor section
- show each elevation of the building
- show the level of the lowest floor, the level of any yard or unbuilt area on that floor and the level of the ground
- indicate the fire safety and fire resistance measures (if any), and their height, design and construction

Where you propose to alter, add to or rebuild a building that is already on the land, or modify plans that have already been approved, please mark the general plan (by colour or otherwise) to show the change you propose to make.

- detailed specifications of the building (4 copies)

The specifications are to:

- describe the construction (including the standards that will be met), the materials which will be used to construct the building and the methods of drainage, sewerage and water supply
- state whether the materials proposed to be used are new or second hand and give details of any second-hand materials to be used.

Where you propose to modify specifications that have already been approved, please mark the approved specifications (by colour or otherwise) to show the modification.

- a plan of the existing building, drawn to scale, where the application involves building work to alter, enlarge or extend that building

This plan will assist the certifying authority to assess whether the work will reduce the fire protection capacity of the building.

5. continued

- where you propose to meet the performance requirements of the Building Code of Australia (BCA) by using an alternative solution to the deemed-to-satisfy provisions of the BCA:
- a list of the performance requirements you will meet by using the alternative solution
 - the details of the assessment methods you will use to meet those performance requirements
 - a copy of any compliance certificates on which you rely
- evidence of any accredited component, process or design on which you seek to rely
Components, processes or designs that relate to the erection or demolition of a building are accredited under the Environmental Planning and Assessment Regulation 2000.
- details of the fire safety measures, unless you are building a single dwelling or a non-habitable building or structure (such as a private garage, carport, shed, fence, antenna, wall or swimming pool). These details are to include:
- a list of any fire safety measures you propose to include in the building or on the land
 - if you propose to alter, add to or rebuild a building that is already on the land, a list of the fire safety measures that are currently used in the building or on the land
- The lists must describe the extent, capability and the basis of design of each measure.*
- the attached schedule, completed for the development
The information in the schedule will be used by the Australian Bureau of Statistics to report each quarter on the building activity that occurs in the economy. Building statistics allow governments and businesses to accurately identify main areas of population growth and demand for products and services.

You may also need to pay a long service levy under section 34 of the *Building and Construction Industry Long Service Payments Act 1986* (or where such a levy is payable by instalments, the first instalment of the levy) before the certifying authority can issue a certificate to you.

2. If you are going to carry out work to do a subdivision (eg building roads or a stormwater drainage system):
- the details of the existing and proposed subdivision pattern (including the number of lots and the location of roads)
 - the details of the consultation you have carried out with the public authorities who provide or will increase the services you will need (like water, road, electricity, sewerage)
 - the existing ground levels and the proposed ground levels when the subdivision is completed
 - copies of any compliance certificates on which you rely
 - detailed engineering plans (4 copies). The detailed plans might include the following:
 - earthworks
 - roadworks
 - road pavement
 - road furnishings
 - stormwater drainage
 - water supply works
 - sewerage works
 - landscaping works
 - erosion control works

Where you propose to modify plans that have already been approved, please mark the approved plans (by colour or otherwise) to show the modification.

5. continued

- 3 If you are going to change the use of a building or the classification of a building under the Building Code of Australia and you are doing building work (unless the building will now be used as a single dwelling or a non-habitable building or structure (such as a private garage, carport, shed, fence, antenna, wall or swimming pool)):
- a list of any fire safety measures you propose to include in the building or on the land
 - if you propose to alter, add to or rebuild a building that is already on the land, a list of the fire safety measures that are currently used in the building or on the land
 - details as to how the building will comply with the Category One fire safety provisions of the Building Code of Australia

The lists of fire safety measures must describe the extent, capability and the basis of design of each measure.

6. Signatures

The owner(s) of the land must sign this application.

As the owner(s) of the above property, I/we consent to this application:

Signature




Name

ROBERT McCLELLAND

Date

12.09.2014

Signature



Name

VIRGINIA McCLELLAND

Date

12.09.2014

The applicant, or the applicant's agent, must sign the application.

Signature



Name, if you are not the applicant

MICHEAL FOUNTAIN

Date

15.09.2014

In what capacity are you signing if you are not the applicant?

APPLICANT

7. Privacy policy

The information you provide in this application will enable your application to be assessed by the certifying authority. If the information is not provided, your application may not be accepted. Please contact the council if the information you have provided in your application is incorrect or changes.

Schedule to application for a complying development certificate

Please complete this schedule. The information will be sent to the Australian Bureau of Statistics.

All new buildings

Please complete the following:

- Number of storeys (including underground floors)
- Gross floor area of new building (m²)
- Gross site area (m²)

NA.
NA.

Residential buildings only

Please complete the following details on residential structures:

- Number of dwellings to be constructed
- Number of pre-existing dwellings on site
- Number of dwellings to be demolished
- Will the new dwelling(s) be attached to other new buildings?
- Will the new building(s) be attached to existing buildings?
- Does the site contain a dual occupancy?
(NB dual occupancy = two dwellings on the same site)

NA
1
1
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Materials – residential buildings ^{NA}

Please indicate the materials to be used in the construction of the new building(s):

Walls	Code	Roof	Code	Floor	Code	Frame	Code
Brick (double)	<input type="checkbox"/> 11	Tiles	<input type="checkbox"/> 10	Concrete or slate	<input type="checkbox"/> 20	Timber	<input type="checkbox"/> 40
Brick (veneer)	<input type="checkbox"/> 12	Concrete or slate	<input type="checkbox"/> 20	Timber	<input type="checkbox"/> 40	Steel	<input type="checkbox"/> 60
Concrete or stone	<input type="checkbox"/> 20	Fibre cement	<input type="checkbox"/> 30	Other	<input type="checkbox"/> 80	Aluminium	<input type="checkbox"/> 70
Fibre cement	<input type="checkbox"/> 30	Steel	<input type="checkbox"/> 60	Not specified	<input type="checkbox"/> 90	Other	<input type="checkbox"/> 80
Timber	<input type="checkbox"/> 40	Aluminium	<input type="checkbox"/> 70			Not specified	<input type="checkbox"/> 90
Curtain glass	<input type="checkbox"/> 50	Other	<input type="checkbox"/> 80				
Steel	<input type="checkbox"/> 60	Not specified	<input type="checkbox"/> 90				
Aluminium	<input type="checkbox"/> 70						
Other	<input type="checkbox"/> 80						
Not specified	<input type="checkbox"/> 90						



Whole title | Parent Act | Historical versions | Historical notes | Search title
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 Result titles | Result hits

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

Current version for 22 February 2014 to date (accessed 19 May 2014 at 17:03)
 Schedule 9

<< page >>

Schedule 9 Conditions applying to complying development certificates under the Demolition Code

(Clause 7.3)

Note 1. Complying development under the Demolition Code must comply with the requirements of the Act, the Environmental Planning and Assessment Regulation 2000 and the conditions listed in this Schedule.

Note 2. Division 2A of Part 7 of the Environmental Planning and Assessment Regulation 2000 specifies conditions to which certain complying development certificates are subject.

Note 3. In addition to the requirements specified for development to be complying development under this Policy, adjoining owners' property rights, applicable common law and other legislative requirements for approvals, licences, permits and authorities still apply.

Note 4. If the development is in the proximity of infrastructure (including water, stormwater or sewer mains, electricity power lines and telecommunications facilities), the relevant infrastructure authority should be contacted before commencing the development.

Note 5. Under section 86A of the Environmental Planning and Assessment Act 1979 a complying development certificate lapses 5 years after the date endorsed on the certificate, unless the development has physically commenced on the land during that period.

Part 1 Conditions applying before works commence

1 Protection of adjoining areas

A temporary hoarding or temporary construction site fence must be erected between the work site and adjoining lands before the works begin, and must be kept in place until after the completion of works, if the works:

- (a) could cause a danger, obstruction or inconvenience to pedestrian or vehicular traffic, or
- (b) could cause damage to adjoining lands by falling objects, or
- (c) involve the enclosure of a public place or part of a public place.

Note. Clauses 2.67 and 2.68 of this Policy specify which scaffolding, hoardings and temporary construction site fences are exempt development and state the applicable standards for that development.

2 Toilet facilities

- (1) Toilet facilities must be available or provided at the work site before works begin, and must be maintained until the works are completed, at a ratio of one toilet plus one additional toilet for every 20 persons employed at the site.
- (2) Each toilet must:
 - (a) be a standard flushing toilet connected to a public sewer, or
 - (b) have an on-site effluent disposal system approved under the Local Government Act 1993, or
 - (c) be a temporary chemical closet approved under the Local Government Act 1993.

3 Waste management

- (1) A waste management plan for the work must be submitted to the principal certifying authority at least 2 days before work commences on the site.
- (2) The waste management plan must:
 - (a) identify all waste (including excavation, demolition and construction waste material) that will be generated by the work on the site, and
 - (b) identify the quantity of waste material, in tonnes and cubic metres, to be:
 - (i) reused on-site, and
 - (ii) recycled on-site and off-site, and
 - (iii) disposed of off-site, and
 - (c) if waste material is to be reused or recycled on-site—specify how the waste material will be reused or recycled on-site, and
 - (d) if waste material is to be disposed of or recycled off-site—specify the contractor who will be transporting the material and the waste facility or recycling outlet to which the material will be taken.
- (3) A garbage receptacle must be provided at the work site before works begin and must be maintained until the works are completed.
- (4) The garbage receptacle must have a tight fitting lid and be suitable for the reception of food scraps and papers.

4 Adjoining wall dilapidation report

- (1) If a building to be demolished is within 900mm of a boundary, and there is a wall (the *adjoining wall*) on the lot adjoining that boundary that is less than 900mm from that boundary, the person having the benefit of the complying development certificate must obtain a dilapidation report on the adjoining wall.
- (2) If the person preparing the report is denied access to the adjoining lot for the purpose of inspecting the adjoining wall, the report may be prepared from an external inspection of the adjoining wall.

5 Run-off and erosion controls

Run-off and erosion controls must be implemented to prevent soil erosion, water pollution or the discharge of loose sediment on the surrounding land by:

- (a) diverting uncontaminated run-off around cleared or disturbed areas, and
- (b) erecting a silt fence and providing any other necessary sediment control measures that will prevent debris escaping into drainage systems, waterways or adjoining properties, and
- (c) preventing the tracking of sediment by vehicles onto roads, and
- (d) stockpiling top soil, excavated materials, construction and landscaping supplies and debris within the lot.

Part 2 Conditions applying during the works

Note. The Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Noise Control) Regulation 2008 contain provisions relating to noise.

6 Hours for demolition

Demolition may only be carried out between 7.00 am and 5.00 pm on Monday to Saturday and no demolition is to be carried out at any time on a Sunday or a public holiday.

7 Compliance with plans

Works must be carried out in accordance with the plans and specifications to which the complying development certificate relates.

8 Demolition

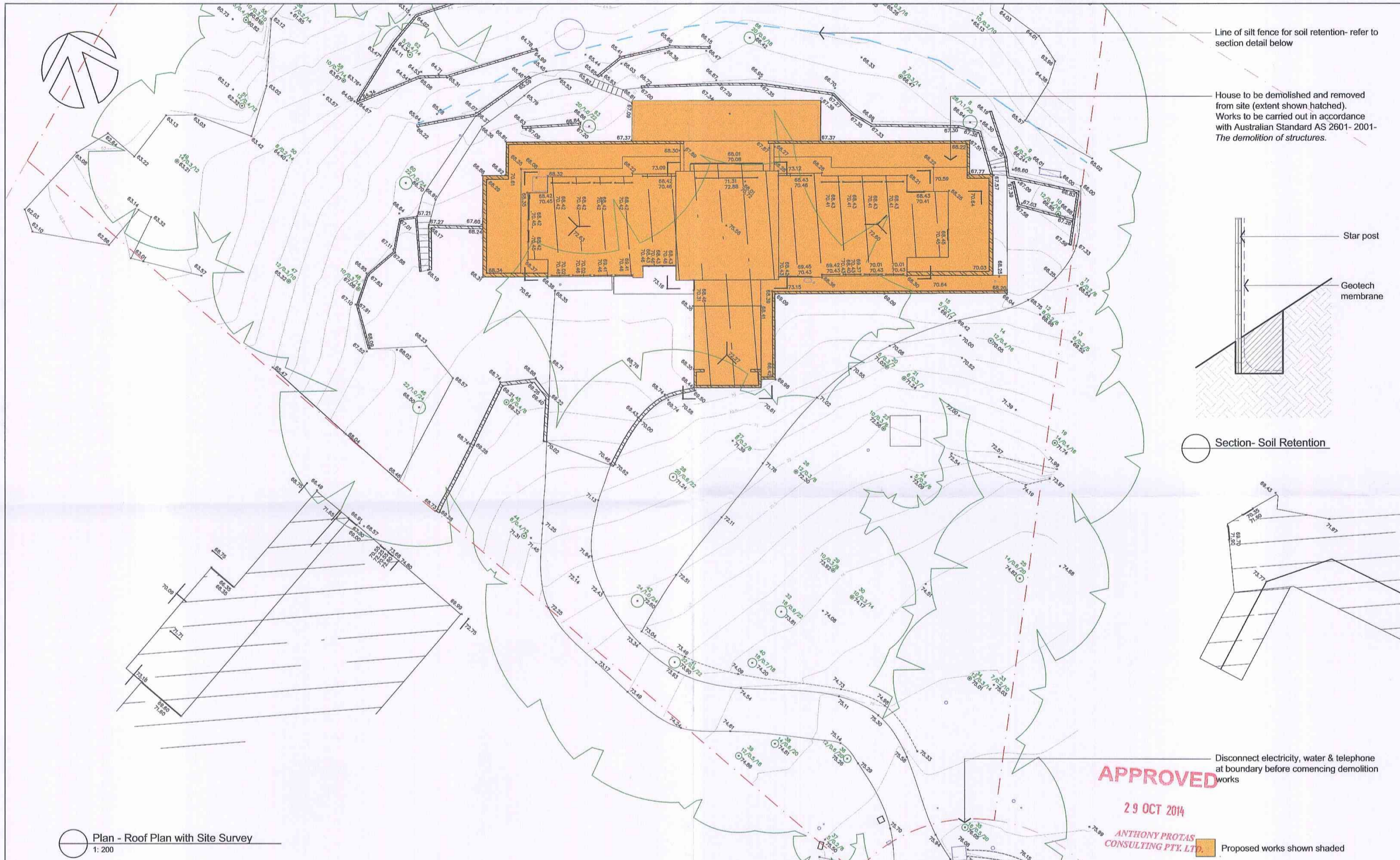
Any demolition must be carried out in accordance with AS 2601—2001, *The demolition of structures*.



9 Maintenance of site

- (1) All materials and equipment must be stored wholly within the work site unless an approval to store them elsewhere is held.
- (2) Waste materials (including excavation, demolition and construction waste materials) must be managed on the site and then disposed of at a waste management facility.
- (3) Copies of receipts stating the following must be given to the principal certifying authority:
 - (a) the place to which waste materials were transported,
 - (b) the name of the contractor transporting the materials,
 - (c) the quantity of materials transported off-site and recycled or disposed of.
- (4) Any run-off and erosion control measures required must be maintained within their operating capacity until the completion of the works to prevent debris escaping from the site into drainage systems, waterways, adjoining properties and roads.
- (5) During construction:
 - (a) all vehicles entering or leaving the site must have their loads covered, and
 - (b) all vehicles, before leaving the site, must be cleaned of dirt, sand and other materials, to avoid tracking these materials onto public roads.

(6) At the completion of the works, the work site must be left clear of waste and debris.

Top of page



 MICHAEL FOUNTAIN ARCHITECTS PTY. LTD. 2/5 WARABANG WAY BELMOROS NSW 2088 TEL (02) 9456 2010 FAX (02) 94562757	NOTES: - REFER TO DRAWING J-034 FOR FINISHES SCHEDULE - ALLOW TO INSTALL ALL FITTINGS/EQUIPMENT (INCLUDING THOSE SUPPLIED BY CLIENT) AND CO-ORDINATE WITH TRADES REQUIRED eg. ELECTRICIAN, PLUMBER etc - REFER TO MANUFACTURERS' SPECIFICATIONS TO CONFIRM ALL DIMENSIONS AND INSTALLATION REQUIREMENTS OF ALL FITTINGS/EQUIPMENT PRIOR TO CONSTRUCTION - ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCING WORK - FIGURED DIMENSIONS ARE TO BE USED IN PREFERENCE TO SCALE READINGS	ISSUE A B	REV 1 2	AMENDMENTS ISSUED FOR COMPLYING DEVELOPMENT ISSUED FOR COMPLYING DEVELOPMENT	DATE 15.09.2014 18.09.2014	ISSUE 1 2	REV 1 2	AMENDMENTS 	DATE 	CLIENT Robert & Virginia McClelland	DRAWING SITE PLAN- DEMOLITION	 MICHAEL FOUNTAIN ARCHITECTS PTY. LTD. 2/5 WARABANG WAY BELMOROS NSW 2088 TEL (02) 9456 2010 FAX (02) 94562757
		PROJECT 3 Pindari Place, Bayview NSW 2104	DRAWN RJC	CHECKED 	APPROVED 	SCALE 1:200 @ A2	DATE Sept 2014	CAD FILE No 	PROJECTS 	DRAWING NO 1105	ISSUE SK- 100	

Residential Building Specification

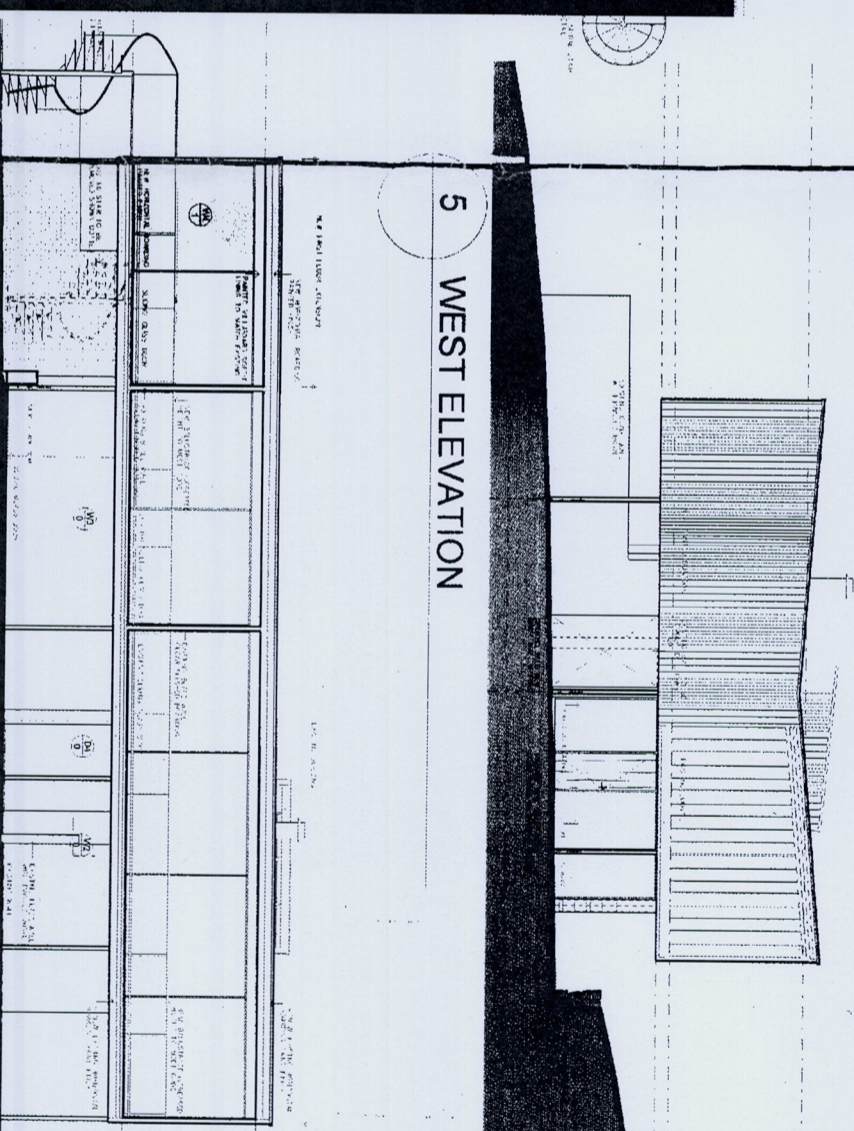
New South Wales

APPROVED

29 OCT 2014

**ANTHONY PROTAS
CONSULTING PTY. LTD.**

5 WEST ELEVATION



Standard NSW
Housing Specification
of construction
requirements, including
a Schedule of fittings,
fixtures and finishes.

Master Builders Association of NSW ABN 96 560 042 906

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Forest Lodge NSW 2037

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Broadway NSW 2007

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www.mbansw.com.au



**Master
Builders
Association**
New South Wales

Residential Building Specification

New South Wales

This Specification is to be read in conjunction with the Schedule annexed to this Specification. The Schedule provides for allowances, colour selections, fittings and finishes. All items noted in the Schedule shall be included whether referenced or not by the Specification.

The Schedule provided with this Specification may be substituted by the Builder's own detailed Schedule for allowances, colour selections, fittings and finishes.

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	Inside Back Cover

Owner: **ROBERT & VIRGINIA McLELLAND**

Site Address: **3 PINDARI PLACE**

BAVIEW, NSW, 2104

Builder:

Licence Number:

ABN:

This is the Specification referred to in our

Contract:

Date:

Use of this Specification does not automatically imply that the builder is a member of the Master Builders Association of New South Wales. MBA members can verify their membership by producing a current membership card.

Owner 1: _____

Owner 2: _____

Witness: _____

Builder: _____

Witness: _____

COUNCIL STAMP HERE

RESIDENTIAL BUILDING SPECIFICATION

NEW SOUTH WALES

1 Preliminaries

1.01 - Scope

This Specification has been prepared for use with Class 1a and 10 buildings as determined by Part 1.3 Classification, Volume Two of the Building Code of Australia.

The work shall be performed in accordance with:

- The approved plans, including the NSW Building Sustainability Index (BASIX) commitments in accordance with the BASIX Certificate;
- any conditions of Development Consent or Complying Development Certificate;
- conditions of the Contract of which this Specification forms part;
- the Building Code of Australia, Volume Two and the documents (e.g. Australian Standards) adopted by reference in the Building Code of Australia; and
- where such work and material is not appropriately detailed by the items above, it shall be performed or installed with regard to manufacturers' guidelines and acceptable common building practices.

1.02 - Definitions

Owner/s - shall also mean Proprietor/s; Principals, the person having the benefit of development consent or a complying development certificate.

Builder/s - shall also mean contractor/s.

BCA - refers to the published edition of Volume 2 of the Building Code of Australia, Class 1 and Class 10 Buildings, applicable at the date of the granting of Development Consent.

Principal Certifying Authority - shall also mean the Consent Authority; Accredited Council Certifier; Accredited Private Certifier/s.

Completion - shall mean Practical Completion.

Proprietary - shall mean an item, product, material or colour identifiable by naming the manufacturer, supplier, trade name, brand name, and reference and/or catalogue number. Contract - shall mean the Conditions of Building Contract, pursuant to Section 7 of the Home Building Act 1989.

Dimensions - figure dimensions take preference over scale.

1.03 - Statutory Requirements, Approvals, Fees and Inspections

All building and associated work shall comply with the relevant Acts & Regulations of Parliament and statutory requirements.

1.04 - Appointment of Principal Certifying Authority

In accordance with Section 109E subsections (a) (b) (c), the Environmental Planning and Assessment Act 1979, the Owner/s is required to appoint the Principal Certifying Authority. The Owner/s is responsible for providing the Builder a list of mandatory critical stage inspections as

required by Clause 162A of the Environmental Planning and Assessment Regulation 2000.

1.05 - Materials

Materials shall be new, unless otherwise identified in the Schedule.

1.06 - Items Supplied by Owner

Items to be supplied by the Owner/s shall be identified in the Addendum. Where it is agreed that additional items are to be supplied by the Owner/s during construction, such agreement and a description of the items shall be set out in writing to the Builder.

It is the responsibility of the Owner/s to arrange payment, for delivery and protection against damage and theft of such items. All items, unless otherwise indicated in writing by the Owner/s shall be new and fit for their intended purpose.

If items are not available when required, the Owner/s shall be obliged to make an alternative selection.

1.07 - Site Access

The Builder has statutory responsibilities in relation to Occupational Health and Safety. In order to assist the Builder in maintaining a safe work site, the Owner/s agree to comply with any directions and instructions of the Builder's concerning site access and movement on and around the site.

1.08 - Site Sign

Before work commences, the Builder shall provide a signboard displaying the lot number, the Builder's name, address and licence number.

The Principal Certifying Authority (PCA) is required to have a sign erected and maintained on the site for the duration of the project which provides their name and contact telephone number. The sign should also state that **Unauthorised Entry to the Site is prohibited.**

Information relating to the builder and the PCA can be incorporated on a single sign.

1.09 - Site Fencing and Scaffolding

Unless otherwise stated, the Builder shall provide site fencing to secure the site and scaffolding necessary to undertake the building work, including work undertaken by trade contractors engaged by the Builder.

1.10 - Site Services & Amenities

Temporary Toilet Accommodation - shall be provided on site until the completion of the works.

Water Supply: - Unless otherwise specified and where no reticulated water supply is available to the site prior to the commencement of construction, the Owner/s shall supply temporary water supply for use and as required at the direction of the Builder.

Power: - unless otherwise specified, 240 volt power is to be supplied to the site for construction and associated purposes. In the event power is not available and/or

additional poles, service risers, underground wiring etc is required by the Electricity Authority, this additional cost, plus *Builder's* margin shall be a cost to the *Owner/s*.

1.11 - On Completion

The *Builder* upon completion will remove all surplus materials and construction debris from the site. The work shall be cleaned throughout.

1.12 - Geotechnical Investigation

An engineer qualified to investigate the soil conditions and classify the site in the area of the proposed building may be engaged by either the *Builder* or the *Owner/s*. Where possible, the engineer will certify that the site will support the proposed footings, slab and building design.

Costs of such consultation will be payable by the *Owner/s* as an additional cost not allowed for/ or included in the contract sum, unless otherwise specified.

1.13 - Site Identification & Setting Out

The *Builder* is to visit the site and note the existing levels, site conditions and facilities. The *Builder* shall advise the *Owner/s* of any variation found at the site from the documentation or information provided.

The land shall be block and peg surveyed and a survey certificate provided before work commences. The cost of this survey shall be included in the price unless otherwise specified. Any additional survey shall be subject to the allowance in the P. C. Schedule.

2 Excavations, Foundations and Footings

2.01 - Protection of Services

Contact Dial-Before-You-Dig NSW/ACT to identify the location of underground assets (pipe work, service lines and network installations), www.1100.com.au or phone 1100.

2.02 - Environmental

2.02.1 - Soil Erosion and Sediment Control

Measures shall be taken to manage the effects of stormwater run-off to avoid erosion, sedimentation, contamination of the site, surrounding areas and drainage systems. Apply all site management requirements which are a Condition of Consent.

2.02.2 - Tree Protection

Protect any trees identified for retention on the drawings or as a condition of consent. Mark all trees and shrubs to be retained with visible tape or other means. Where necessary, provide physical barriers to protect marked trees and shrubs. Limit excavation within the drip line. The *Owner/s* shall advise the *Builder* of any vegetation protection orders related to the site.

2.03 - Site Preparation (BCA 3.2.2)

Rubbish, top soil and any vegetation within 1 metre of proposed building/s shall be cleared and removed.

2.04 - Excavation

2.04.1 - Scope

Excavate and backfill as required for all work shown on the drawings. The excavation and placement of fill shall be undertaken in accordance with BCA 3.2.2

Footings
Excavate trenches to Engineer's design or the approved footing design.

3 Concrete

3.01 - Termite Risk Management (BCA 3.1.3)

Termite barriers shall be installed in accordance with BCA 3.1.3

Prior to the commencement of the works, the site shall be inspected for evidence of termite activity. Where termite nests are found on the site, treatment of the nests shall be carried out by a competent and qualified contractor.

It is recommended that the Owner/s is provided with a copy of Master Builders Home Owners Guide for Termite Management.

3.02 - Vapour Barrier (BCA 3.2.2)

Vapour barrier installed under slab-on-ground construction shall be in accordance with the NSW Variation BCA 3.2.2.6.

The vapour barrier shall be 0.2mm nominal thickness polyethylene film of high impact resistance and branded continuously: "AS 2870 Concrete underlay, 0.2mm High impact resistance".

3.03 - Formwork

Quality formwork shall be used to provide shape, line, true positioning and dimension to carry all imposed loads. Brace sufficiently to prevent bowing or buckling while concrete is being poured and cured.

Where the slab edge is to be exposed for termite management, the exposed edge shall be off-the-form, smooth and without honeycomb.

3.04 - Reinforcement (BCA 3.2.3)

Steel reinforcement shall comply with BCA 3.2.3.2 and the Engineers details.

Bar chairs shall be placed to give the following clear cover:

- 40mm to unprotected ground;
- 30mm to a membrane in contact with the ground;
- 20mm to an internal surface;
- 40mm to an external surface.

3.05 - Premixed Concrete (BCA 3.2.3)

Premixed concrete shall be supplied to comply with AS1379.

Unless otherwise specified, concrete shall have default strength at 28 days of not less than 20MPa (Grade N20) and have a nominal aggregate size of 20mm.

Unless otherwise specified, a default slump of 100mm will apply to residential slabs and footings.

3.06 - Placement

Trenches and footings shall be dewatered and cleaned of loose and softened material prior to concrete placement.

3.07 - Curing

Concrete shall be cured by covering with plastic sheeting, the application of a suitable curing compound, by keeping continually damp, or in accordance with AS3600.

Where adhesives to the slab surface in conjunction with floor coverings are to be used strict care should be exercised in the use and compatibility of curing compounds.

3.08 - Footings and Slab on Ground

Concrete slabs and footings shall not be poured without the approval of the Engineer and the *Principal Certifying Policy*.

3.09 - Pier and Beam Footings

Where nominated, pier and beam footings shall be constructed to the Engineers design and shall not be poured without the approval of the Engineer and the *Principal Certifying Authority*.

3.10 - Screw in Foundations

Screw in foundations and *proprietary* brand flooring systems based on composite design with pre-cast beams and in situ concrete shall be installed in accordance with the manufacturers recommendations and/or consulting the Engineer.

3.11 - Concrete Paths

Concrete paths shall be shown on the drawings and unless otherwise specified, shall be at least 75mm thick and if unreinforced laid in sections not more than 1800mm in length. If reinforced, the maximum length of each section shall not exceed 3000mm.

Unless otherwise specified in the Addendum, a wood float or other non-slip finish shall be provided.

Provide falls away from the building of 1:50 for 900mm. Slope concrete up and around overflow relief gullies and set inspection openings etc. flush with the surface. Ensure weep-holes to adjacent structure are not obstructed.

3.12 - Tolerances for Concrete Floors

Shrinkage cracking can be expected in concrete floors. Concrete floors can also be damaged by foundation movement caused by localised drying and wetting. The *Builder* is not responsible for foundation movements caused by the *Owner/s* failure to maintain drainage systems and the overwatering and misuse of watering systems to gardens located adjacent to slabs and footings. *Reference: CSIRO Publication BTF18, Guide to Home Owners on Foundation and Footing Performance.*

Classification of Damage to Concrete Floors

Description of typical damage	Approx. crack width in floor	Change in offset from 3m straight edge placed over defect	Crack category
Healing cracks. Insignificant movement of slab from level	< 0.3mm	< 8mm	0
Fine cracks. Slab reasonably level.	< 1.0mm	< 10mm	1
Distinct cracks. Noticeable curve in slab or change in level.	< 2.0mm	< 15mm	2
Wide Cracks. Obvious curvature or change in level.	2mm to 4mm	15mm to 25mm	3
Gap in slab. Disturbing curvature or change in level.	4mm to 10mm	>25mm	4

For further reference and Notes to Table: AS 2870, Appendix C.

4 Retaining Walls

Retaining walls shall be constructed as identified by the approved plans.

Retaining walls shall be constructed of a material or *proprietary* system identified in the Schedule. *Proprietary* retaining wall systems shall be constructed to the manufacturer's requirements.

The location of retaining walls to boundaries shall be confirmed prior to construction.

5 Drainage and Waste Water/Sewage Treatment

5.01 - General (BCA Part 3.1.2)

All drainage work shall be carried out by a licensed drainer. Stormwater drainage shall be carried out in accordance with the BCA.

5.02 - Onsite waste water treatment systems

Wastewater onsite treatment systems shall be installed in accordance with the manufacturers' requirements and the requirements of the *Local Authority*.

Following commissioning of the onsite wastewater treatment system the *Owner/s* will be responsible for the maintenance requirements of the wastewater system provided.

6 Bricklaying/Masonry (BCA Part 3.3)

6.01 - Masonry Units

Masonry units are to be as selected and as identified in the Schedule. Masonry units produced from clay, concrete and calcium silicate shall comply with AS/NZS 4455.

Masonry units exposed to salt attack shall comply with the durability requirements of AS 3700.

Autoclaved Aerated Concrete (AAC) blocks shall be selected and installed to the manufacturer's specification.

6.02 - Workmanship

Masonry construction shall comply with AS 4773.1 and BCA Part 3.3. Set out masonry as shown on the drawings, build to gauge to suit masonry units, maintain chosen bond with full mortar joints to a nominal 10mm.

Mortar joints shall be finished to the type nominated in the Schedule. Where the Schedule nominates raked joints, the rake must not extend into reveals and sills beyond the line of the storm moulds.

The cleaning of masonry should take place as work progresses and upon completion in a manner so that the work is not damaged. Pressure cleaning and acid wash should not be carried out without the prior approval of the *Builder*.

Where masonry is to be pressure cleaned, the following restrictions shall apply:

- a) Maximum pressure shall be 7000 kpa;
- b) Use a wide fan spray nozzle of 150 to 200;
- c) Nozzle shall be no closer to the work than 300mm.

6.03 - Mortar

Mortar mixes shall comply with AS 3700 and may be mixed in volume according to BCA Part 3.3.

Mortar shall consist of a mixture of cement, sand and water, with the addition of lime and admixtures. Where water thickener is used, it shall be cellulose-based product, suited for its application according to the manufacturer's and supplier's directions.

Mortar for reinforced masonry shall be of mortar class either M3 or M4.

6.04 - Cavities and Weepholes

In brick veneer construction, the minimum cavity width shall be 25mm, measured clear of any conduit, insulation or services placed within the cavity. In cavity masonry walls, the minimum cavity width shall be 35mm, measured clear of any conduit, insulation or services placed within the cavity.

Remove mortar droppings from wall ties and cavity flashings progressively during construction and upon completion of the work.

Weepholes shall be created by open perpend, free of mortar and other materials, at centres not exceeding 1200mm centres and in accordance to BCA Part 3.3.

6.05 - Wall Ties

Wall ties are to comply with BCA Part 3.3 and shall be manufactured in accordance with AS/NZS 2699 and installed to AS 4773.1.

Wall ties shall suit the exposure conditions of the site. Ties shall be spaced at a maximum of 600mm apart in both directions and at 300mm around openings and edges of brickwork, at bearer level where a timber floor is provided and control joints.

Wall ties are to be built in as work progresses, and to a minimum of 50mm into the mortar joint, with the other end secured to the frame with approved galvanised fixings. (Note: - Clouts are not acceptable for fixing brick ties). Ties shall be installed in a manner that prevents moisture travelling along their length to the inner leaf.

6.06 - Lintels

Brick work over openings may be supported by steel lintel, reinforced masonry lintel or reinforced concrete member complying with AS 3600.

Where steel lintel are used over openings, they shall be hot dip galvanised mild steel angles or flat bars, complying with AS 4100, AS/NZS 4600.

For lintels with a clear span of 1m or more, each end of the lintel is to have a minimum bearing length of 150mm. For shorter spans the minimum end bearing is to be 100mm. Not less than three (3) courses of brick must be used above steel lintels and brickwork shall not overhang the lintel by more than 25mm. Prop lintels until mortar has reached its design strength. Props should be no more than 1.2 metres apart. The long leg of angle lintels must be vertical.

6.07 - Damp Proof Courses (DPC) and Flashings

Flashings and damp proof membrane shall be manufactured to AS/NZS 2904 and comply with Part 3.3.4 BCA and built in as work proceeds. Flashings shall be a flexible material compatible with the adjacent materials to prevent electrolytic action.

Install damp-proof courses in all masonry walls between 150mm and 250mm from finished ground level and to the full width of the wall. Step damp proof course on sloping ground to maintain the height above ground level.

At timber floors, install not higher than the bottom of the floor bearers. Damp course material shall be run in long lengths, lapping a minimum of 150mm at joints and to the full width of courses at all intersections. Flashing extending the full width of the masonry course may also be used as a DPC.

6.07.1 - Cavity Flashing

In brick veneer construction the flashing shall extend the full width of the brick wall, across the cavity and turned up not less than 150mm and fixed to the frame. For slab-on-ground, provide approved flashing one course below main floor turned up cavity and fixed to frame. Flashing to extend to external face of outer leaf and be visible.

In masonry cavity construction, the flashing shall extend the full width of the external masonry wall, across the cavity and turned up not less than 150mm and built a minimum of 30mm into the inner masonry wall.

6.07.1 - Head and Sill Flashing, Stepped Flashings and Flashings at Roof/Wall Junctions.

Sill and Head Flashings shall be installed in accordance with figure 3.3.4.5 of Part 3.3.4 BCA.

Stepped flashings shall be installed in accordance with figure 3.3.4.6 of Part 3.3.4 BCA.

Flashings at roof and wall junctions shall be installed in accordance with figure 3.3.4.6 Part 3.3.4 BCA.

6.08 - Access & Sub-Floor Ventilation

Sub-floor ventilation shall provided in accordance with Part 3.4.1 BCA.

Provide cross ventilation to the space between the ground and the underside of the timber floor by installing brick or proprietary brand vents to external walls enclosing the space.

The air-flow through the vents must be unobstructed and where external walls are of cavity brick construction, internal openings shall be provided adjacent to the vent. Openings will also be provided to internal sub-floor walls to ensure cross-ventilation.

Provide access to sub-floor area where identified on the plans or as instructed. Opening is/are to be approximately 600mm wide unless otherwise specified.

6.09 - Clearances

In masonry veneer construction generally leave the following clearances between window frames and brick sills and the roof structure and masonry veneer:

- 5mm at sills of lower or single storey windows;
 - 8mm at roof overhangs of single storey buildings;
 - 10mm at sills to two storey buildings;
 - 12mm at roof overhangs of two storey buildings.
- Clearances should be increased to accommodate expected timber shrinkage e.g. unseasoned hardwood.

6.10 - Tolerances in masonry construction

Masonry work is not considered defective if it is within the following tolerances:

Item	Structural Tolerances	Non-structural Tolerance
Horizontal position of any masonry element specified or shown in plan at its base or at each storey	+ 15mm	+ 15mm
Relative displacement between load bearing walls in adjacent storeys intended to be in vertical alignment	+ 10mm	+ 10mm
Maximum deviation from plumb within a storey from a vertical line through the base of the member.	The lesser of + 10mm per 3m of height or 0.05 times the thickness of the leaf	+ 10mm
Maximum deviation from plumb in the total height of the building (from the base)	+ 25mm	+ 25mm
Maximum or horizontal or vertical deviation of a surface from a plane surface (D _w) in any 2m length	+ 5mm	+ 3mm
Deviation (step) of any exposed brick surface from any adjacent exposed brick surface. The bow provision above also applies.	Not applicable	2mm
Deviation of bed joint from horizontal or from the level specified or shown in elevation.	+ 10mm in any 10 m length, + 15mm in total	+ 10mm in any 10 m length, + 15mm in total
Deviation from specified thickness of bed joint	+ 3mm	+ 3mm
Minimum perpend thickness	5mm	5mm
Deviations from specified thickness of perpend.	+ 10mm max.	+ 5mm average
Maximum difference in perpend thickness in any wall.	No limit	8mm
Deviation from specified width of cavity.	+ 15mm	+ 15mm

For further reference: Table 11.1 AS 3700

Efflorescence is a crystalline deposit of salts that forms on or near the surface of concrete, masonry and cementitious products. All masonry materials can be susceptible to efflorescence and often occurs during or after construction. Efflorescence is particularly affected by temperature, humidity and wind and is a common occurrence in winter. Primary efflorescence will decrease over the passage of time and is not considered a defect.

7 Carpentry (BCA Part 3.4)

7.01 - Timber Generally.

Refer to the Schedule for Species, Grade & Durability to be used.

All timber used shall be of the durability and stress grade specified and/or comply with the provisions of AS 1720 and AS 1684. All structural timber used will be of a durability class appropriate to the expected service life and exposure conditions. All structural timber used will be stamped or otherwise identified in respect of stress grade. Sizes of timber for constructional purposes to be the nominal size

mentioned with allowable tolerances as provided by the relevant supplement of AS 1684. Scarlings to be in long lengths, accurately cut and fitted and securely fixed.

7.02 - Engineered Timber Products

Fabricated glue-laminated timber beams are to conform to AS 1328. Fabricated I-beams, laminated veneer lumber beams are to be designed in accordance with AS 1720.1

7.03 - Handling and Storage

Timber and timber products delivered to the site shall be stored at least 150mm off the ground, stored level, evenly supported, well ventilated and protected from the rain and sun. Pre-fabricated trusses should be handled in a vertical position to avoid distortion and overstressing of the timber and connecting plates. Where pre-fabricated roof trusses are required to be handled horizontally, provide intermediate support. Do not site repair damaged trusses and report them to the truss fabricator immediately to avoid delays in rectification.

7.04 - Corrosion Protection

All connectors, fixing plates, brackets and general fixings and related components shall suit exposure level and be compatible to avoid galvanic or electro-chemical action.

7.05 - Floor Framing

All floors not specified to be concrete are to be framed at the level shown. Floor structure sizes and spacing are to be in accordance with AS 1684 or otherwise specified by a Practising Structural Engineer. Bearers, joists and plates shall be laid true and level.

7.05.1 - Bearers and Joists

Span and spacing of bearers & joists is to conform to AS1684 series of Standards in conjunction with supporting supplements relevant to the applicable wind classification and stress grade.

7.05.2 - Blocking

Where the depth of floor joists is equal to or exceeds 4 times their width, herringbone strutting or solid blocking must be provided between the outer pairs of joists and between intermediate pairs of joists at not more than 1.8 m centres, or continuous trimming joists can be provided to the ends of joists above external bearers or wall plates. Trimmers or solid blocking may be 25mm less in depth than the joists and solid blocking shall be a minimum thickness of 25mm.

7.05.3 - Joists Under Walls

Provide double joists under all external walls running parallel with the floor joists under the wall. Where a joist is not provided directly under an internal tie-down or bracing wall provide noggling or bridging between adjacent joists at all required fixing points.

7.6 - Flooring

7.06.1 - Strip flooring

Note: The Schedule to identify species, grade, cover with and finish

Flooring is to be clear finished and shall not be laid until the building is weather tight. Check supplier certificate for species, grade size and moisture content prior to laying. Where machine nailing is to be used, ensure boards are in contact with the joist as this type of nailing cannot be relied upon to pull board down to joist.

All fitted floors require a 12mm expansion gap between the floor boards and any internal or external wall structures.

7.06.2 - Plywood Structural Flooring

Structural plywood must be manufactured in accordance with AS/NZS 2269 and sheets stamped with the manufacturer's name or trademark.

Sheets shall be installed in accordance with AS 1684. Plywood face grain must run at right angles to the joists and shall be continuous over at least two spans. Where possible, panel ends shall be staggered.

7.06.3 - Particleboard Flooring

Particleboard flooring shall be laid and fixed in accordance with AS 1860.2

Sheets shall span not less than two floor joist spacings. Square edges and ends of sheets shall be butted over joists and trimmers

7.07 - Wall Framing

Wall frame, sizes and spacing shall be in accordance with AS 1684 or as specified by a Practising Engineer.

7.08 - Wall Sarking

Provide wall sarking as noted on the drawings and/or noted in the Schedule.

Provide vapour permeable sarking under cladding material that does not provide a permanent weather proof seal (such as unpainted fibre cement, sawn weatherboards).

Fix sarking on the outside of the studs from the bottom plate (lapped over flashing if any) up to at least the level of the underside of the fascia. Allow a gap at the top plate for wall ventilation.

Timber Stairs

Timber stairs are to be designed and constructed to rise, going and balustrade dimensions and comply with Part 3.9 BCA.

7.10 - Roof Trusses

Roof trusses shall be fabricated in accordance with designs prepared by a practising structural engineer and AS 1720.1.

7.11 - Roof Bracing

Provide roof bracing in accordance with truss manufacturer's detail and Section 8 of AS 1684.

7.12 - Access to Roof Space

Where the space between the roof and ceiling exceed 900mm in height, trim as required between roof trusses for a manhole, line the opening and provide a suitable cover.

7.13 - Verandah Posts

Verandah posts unless otherwise specified shall be a minimum of 100mm x 100mm or as required by AS 1684, checked at the top plate and secured to the floor structure. Where fixed to concrete the base of the verandah posts shall be supported by galvanised shoes, stirrups or similar supports.

7.14 - Eaves Soffit

Where overhang is less than 600mm support linings on 45mm x 32mm soffit bearers at not more than 450mm centres. Where overhang is between 600mm and not more than 1500mm support soffit linings on 70mm x 35mm soffit bearers at not more than 450mm centres.

7.15 - Cross Ventilation

Ventilate the roof space at the ridge, gable and/or eaves to effectively cross ventilate the whole of the roof space.

7.17.1 - Tolerances

7.17.1 - Timber Shrinkage

Timber shrinkage shall be no more than 3% for seasoned timber and no more than 10% for unseasoned timber.

7.17.2 - Vertical and Horizontal Deviation of Frames and Posts

Wall frames and posts (timber/steel) must not deviate from plumb by more than 4mm within any 2m of height, measured from the underside of the bottom plate and the base of the post.

Frames shall not deviate from the horizontal plane by more than 4mm within any 2m length of wall.

7.17.3 - Floors

Timber is a natural product that responds to changes in weather conditions. The overall movement and rate of movement varies depending upon the timber species, joint cutting pattern, or individual boards. Gaps between individual tongue and groove boards can be expected as they floor accommodates seasonal changes.

Exposure to sunlight, cooling and heating appliances is likely to cause localised shrinkage of timber that cannot be allowed for at the time of construction.

Excess floor gaps occurring due to exposure to sunlight, heating and cooling appliances and the like, gaps up to 2mm between adjacent boards that extend for more than 1m is acceptable and not considered a defect.

Timber sarking flooring to be supplied to a seasoned moisture content of 10-15%.

Some timbers or treatments have the potential to board board edges together at the tongue and groove joint. With seasonal moisture changes in the floor, this joining or gluing effect may produce a pattern across the floor, where there are four or five boards followed by a large gap. In some instances the bonded joints are so efficient straight to a board may split. It is therefore recommended that linings and finish systems are used to reduce the risk of splitting.

7.16 - Hot Water Storage Tank Support
Where solar water heaters incorporating a roof storage tank are installed, ensure additional loading has been incorporated into the roof design.

8 Steel Framing (Part 3.4.2 BCA)

8.01 - General

Steel framing will comply with Part 3.4.2 of the BCA. Steel framing shall be designed and constructed to either:

- AS 4100 – Steel Structures
- AS/NZS 4600 – Cold-formed steel structures
- NASH – Residential and low-rise steel framing – Part 1 Design criteria.

The frame is to be assembled with fixings as per the design, or in accordance with the manufacturer's recommendations.

Corrosion Protection

The steel frame must be protected from corrosion in accordance with 3.4.2.2 BCA.

Hole cutting or cutting of members should be done in a way which does not leave swarf. Compatible materials and fixings to be used to avoid galvanic or electro-chemical action. Direct contact with GCA treated timber is to be avoided. For slab on ground, use damp-proof course under wall frame bottom plates, to prevent corrosion

The frame is to be permanently earthed.

Channels should be clean of any swarf and mortar droppings.

Electrical wiring, water pipes and other services passing through the frame are to be isolated from it by rubber grommets or other suitable material.

9 Roofing (Tiles and Metal) (Part 3.5.1 BCA)

9.01 - General

All roof cladding shall comply with BCA Part 3.5.1 and one or more of the following BCA referenced documents relevant to the work:

- AS 2049 – Roof tiles
- AS 2050 – Installation of roof tiles
- AS 1562.1 – Design and installation of sheet roof and wall cladding – Metal
- AS/NZS 4256 Pts 1, 2, 3 and 5; and AS/NZS 1562.3 Plastic sheet roofing.

Ensure appropriate fall prevention requirements are installed prior to the commencement of roofing work.

9.02 - Roof Tiles

Provide roof tiles as shown on the drawings. Roof tiles shall be of a colour, profile and material noted in the Schedule.

Roof tiles shall be fixed in accordance with the BCA and referenced Standard and the nominated design wind speed for the project.

Leave 10 tiles at site for future use

9.03 - Metal Roofing

Provide metal roofing as shown on the drawings. Metal roofing shall be of a profile and colour as provided in the Schedule. Metal roofing and accessories shall be installed to the manufacturer's recommendations.

Metal roofing must be corrosion resistant in accordance with Table 3.5.1.1a of the BCA. Where different metals are used they must be compatible in accordance with Table 3.5.1.2 of the BCA.

Use only sealants recommended by the manufacturer of the sheet material to be joined.

9.04 - Battens

Roof battens may be of timber or steel.

Timber battens shall be sized and installed in accordance with AS 1684.2 and AS 1684.3. Where battens are joined in a run, they shall be butt jointed at the centre of the truss or rafter.

Metal battens shall be corrosion resistant and fixed to the manufacturer's recommendations. Metal battens are to be joined over trusses with a minimum lap of 40mm. Advice should be obtained from the manufacturer on the use of metal battens in high corrosive areas.

9.05 - Sarking

Reflective foil sarking shall comply with AS 4200.1 and be installed in accordance with AS 4200.2

Sarking shall be provided for all roofs where the design wind classification is greater than N3. The requirement for sarking will be influenced by roof pitch, length of rafter and bushfire prone areas.

For tiled roofs at a slope below 20°, provide sarking and anti-ponding board at the eaves.

Where a gutter discharges onto a tile roof through a spreader, irrespective of the roof slope, sark the roof from the point of discharge over a width of 1800mm down to the gutter. Where one section of roof fully discharges onto a lower section, fully sark the lower section.

Fix sarking over rafters/trusses to ensure the discharge of water without ponding into the eaves gutter. Secure sarking at the top edge of the fascia and dress down 25mm into the gutter.

Extend sarking over the bead of valley gutters and turn up neatly along valley. Keep folded joints clear of valleys.

Where tiles abut a wall, turn the sarking neatly up behind flashing a minimum of 50mm.

9.06 - Roof Flashings

Flashings shall be installed in accordance with part 3.5.1.3 of the BCA.

Lead flashings must not be used with aluminium or zinc/alume roofing or rainwater plumbing, or anywhere where water supply is by rainwater storage.

9.07 - Gutters and Downpipes Part 3.5.2 BCA

Gutters and downpipes shall be designed and installed in accordance with Part 3.5.2 of the BCA.

Where high front gutters are installed, attention is required to prevent overflow back into the roof or building.

The homeowner is advised that gutters will require periodic cleaning to maintain their efficiency

10 Internal Linings

10.01 - Walls

Walls shall be fixed in accordance with the manufacturer's recommendations. Provide recessed edge gypsum plasterboards of 10mm thickness to all internal walls, except as required for wet areas, or other type of panelling as indicated in the Schedule and plans.

10.02 - Wet area linings

Wet area linings shall be of water resistant material for full wall height in accordance with BCA Part 3.8.1.

10.03 - Ceiling linings

Ceiling linings shall be 13mm gypsum plasterboard or 10mm high-density plasterboard

The junction of walls and ceilings shall be set as required. Fix suitable cornice as identified in the Schedule, neatly mitred and set at all angles.

Provide back-blocking where three (3) or more consecutive recess joints are present in ceilings.

10.04 - Tolerances

Industry standards have established six (6) levels of acceptable finish for gypsum plasterboard. Unless otherwise specified in the Schedule, a Level 4 finish shall apply to all gypsum plasterboard surfaces.

Level 4 finish

Typical finish for domestic construction. It is used where smooth textured finishes and satin/flat/low sheen paints are used and illuminated by non-critical lighting. Gloss and semi-gloss paint finishes are generally not suitable over a Level 4 finish.

Tape to be embedded in joint compound and two separate coats of jointing compound to be applied and finished over joints angles and fasteners.

In critical lighting conditions, surface imperfections may still be apparent in a Level 4 finish.

Critical lighting is defined as natural or artificial light projected across a surface at a low incidence angle. Non-critical lighting occurs when the light that strikes the surface is diffused and not parallel to that surface.

Level 5 finish

A Level 5 finish is for use in areas of severe or critical lighting and gloss or semi-gloss is used or where critical lighting conditions occur on flat or low sheen paints.

Level 5 finish is identical to Level 4 finish except for the addition of a skim coat, or finish coat, trowelled or sprayed with airless equipment over the entire surface to achieve a smooth finish.

11 Waterproofing

11.01 - General

From the drawings, identify the areas to be waterproofed. Waterproofing to internal wet areas and balconies over habitable areas shall be in accordance with BCA Part 3.8.1.

Improved waterproofing outcomes can be achieved by installing waterproofing to internal wet areas by following the Master Builders Association of NSW Guide to Internal Wet Area Waterproofing.

Improved waterproofing outcomes can be achieved by installing waterproofing to external balconies by following the Master Builders Association of NSW Guide to External Waterproofing, Balcony Decks.

11.02 - Waterproofing System Selection

The waterproofing system should be selected according to the project requirements and the manufacturers' specification, taking account of product suitability, and compatibility with surface materials

11.03 - Compatibility of Materials

The waterproofer is to ensure component to component compatibility.

11.04 - Flood Testing

On completion and after the membrane has fully cured, floor waste outlets should be sealed and the area flooded with water to test for water leaks.

The height of the water should be 5mm below the overflow levels of the waterstops

11.05 - Protection

Membrane area shall be protected by barriers or signage until the membrane is fully cured.

12 Joinery

12.01 - Generally

All fixing out timber to be seasoned and free from defects which might affect appearance or durability. All timbers are to be D.A.R. accurately cut and securely fixed. Mouldings and trimmings are to be properly mitred or scribed. All surfaces must be free of machine marks and ready for painting. External joinery to be inherently durable and primed prior to fixing.

12.02 - Door Frames

Door frames shall be solid rebated frames, packed plumb and true and fixed securely to door opening studs or masonry. Metal door frames shall be installed to manufacturer's recommendations.

12.03 - Doors

External doors are to be solid core or framed and glazed and not less than 2040 x 820 x 40mm thick. Front and rear external doors shall be hung with three 88mm (min) butt hinges of suitable finish and durability. Where external doors are sheeted with plywood, only waterproof plywood which is to be used. Top and bottom door edges are to be painted or similarly sealed prior to hanging.

Internal doors shall be not less than 35mm thick fitted with suitable furniture and be installed with a clearance of the floor of 30mm unless otherwise specified. Double doors and sliding doors to be installed where shown on the drawings. Doors shall swing in the direction shown on the drawings.

12.04 - Windows

Aluminium and timber windows shall be manufactured and installed in accordance with AS 2047. Windows are to be supplied with Performance Label attached confirming compliance with AS 2047.

Windows shall be protected from mortar droppings.

Window flashings - Refer to 6.7 "Damp Proof Courses (DPC) and Flashings".

12.05 - Glazing

All glazing shall comply with Part 3.6 BCA and AS 1288. Glazing shall meet the BASIX commitments where identified on the drawings or in the drawing block.

12.06 - Storm Moulds

Provide storm moulds to external doors and windows and other openings.

12.07 - Architraves

Provide architraves to all window, door and other openings where necessary and of a type, finish and size as identified in the Schedule.

12.08 - Skirtings

Provide skirtings where required of a type, finish and size as identified in the Schedule.

Note: where skirtings are to be fixed over tiled floors, the skirting shall not be fixed down hard on the tile so as to restrict the movement joint.

12.09 - Kitchen Cupboards

Provide kitchen cupboards as included on the drawings and/or included in the Schedule.

Kitchen cupboards and bench tops shall be fabricated from water resistant materials.

12.10 - Linen/Storage Cupboards

If shown, to be constructed as detailed on the drawings.

12.11 - Tolerances

12.11.1 - Joints in Internal Fixings

All joints at mitre joints, butt joints and junctions of architraves, skirtings and mouldings shall be filled and sanded flush. Gaps whether filled or otherwise shall not exceed 1mm. After the first 12 months following handover and within the statutory warranty period, gaps exceeding 2mm are not acceptable.

12.11.2 - Bench tops

12.11.2.1 - Laminate

Scratches that cannot be seen from a normal viewing position that is at a distance of 600mm, viewed in non-critical light are considered acceptable. Notable scratches or chips should be reported on walk-through or within 10 days after occupation. Non-critical light means the light that strikes the surface is diffused and is not glancing or parallel to the surface.

12.11.2.2 - Natural Stone or Manufactured Stone

In natural stone, variations in colour, veining pattern and minor blemishes are acceptable, if within the samples selected. In slabs with obvious veining, the slabs shall be installed with the vein trend running in the same direction unless otherwise specified. Natural stone products supplied with a sealer coating will require resealing periodically.

Natural stone products should not be subjected to excessive weight, stress and extreme temperatures. Small areas at the front and rear of sinks, cook tops and the like should not be subjected to excessive weight or stress.

Scratches that cannot be seen from a normal viewing position that is at a distance of 600mm, viewed in non-critical light are considered acceptable. Notable scratches or chips should be reported on walk-through or within 10 days after occupation. Non-critical light means the light that strikes the surface is diffused and is not glancing or parallel to the surface.

13 Plumbing

National Construction Code Volume 3 –
Plumbing Code of Australia (PCA)

13.01 - General

All plumbing work is to be in accordance with the PCA and comply with the requirements of the Plumbing and Drainage Regulator or Local Authority.

All plumbing and drainage works must be carried out by a licensed plumber and drainer.

Ensure all inspections are carried out and certificates issued, including a Certificate of Compliance upon final inspection.

13.02 - Water Service

Unless otherwise specified, copper tubing shall be used for all internal plumbing work.

Where Polyethylene or similar approved piping products are specified, pipes and fittings are to be used and installed to the manufacturers' recommendations.

Taps and tap sets are to be selected by the owner and a P.C. amount is allowed for in the P.C. Schedule. Water saving devices shall achieve the BASIX commitments outlined in the BASIX Certificate.

13.03 - Hot Water Service

An approved water heater is to be installed in accordance with the manufacturers' instructions and located to ensure ease of maintenance.

The selection of hot water service shall comply with the BASIX commitments provided for water heating in the BASIX Certificate.

Where a solar system is specified, the solar collectors shall be positioned as identified on the drawings. Where storage tanks are located to the roof, the roof design will account for point loading.

13.04 - Stormwater Drainage

Guttering shall be designed and installed in accordance with Part 3.5 BCA and AS 3500.

Locate downpipes as shown on the drawings. The number, size and location of downpipes shall be in accordance with AS 3500.

Stormwater pipes are to be a minimum of 90mm in diameter of UPVC material, and where not feeding rainwater tanks, shall drain to the street gutter or alternative retention device constructed to approval of the Regulator or Local Authority.

13.05 - Sanitary Plumbing and Drainage

Sanitary plumbing and drainage shall be undertaken in accordance with the PCA and the requirements of the Regulator or Local Authority.

Sanitary plumbing and drainage work shall be undertaken by an appropriately licensed person.

13.06 - Rainwater Tank

Rainwater tank shall be of a size to meet the BASIX commitment as identified on the BASIX Certificate. The rainwater tank shall be located as shown on the drawings.

Rainwater tank to be used for toilets and washing machines shall be connected by a licensed plumber. All tank outlets and pipes carrying rainwater must be appropriately labelled.

13.07 - Gas

All gas-fitting work is to be installed and connected in accordance with the supply authorities' requirements.

Gas plumbing shall be provided as detailed on the plans and to all fixtures requiring gas service from the point of supply.

Test all pipe work before concealment and securely fix pipe work to prevent movement.

In-ground gas lines shall be identified with plastic warning tape 300mm above and for the full length of the line while backfilling.

14 Electrical

14.01 - General

All electrical work shall be undertaken by a licensed electrician and in accordance with AS/NZS 3000.

A *Certificate of Compliance Electrical Work* shall be provided at the completion of the electrical work.

Confirm the position of the meter box. Single-phase power is to be provided unless otherwise noted in the Schedule.

Install all lights, power outlets and electrical fixtures nominated in the Schedule.

14.02 - Smoke Alarms

Smoke alarms shall be installed in accordance with Part 3.7.2 BCA and comply with AS 3786.

Photo-electric smoke alarms should be the preferred type for installation in the path of travel between sleeping areas and exits.

14.03 - Solar PV

Installation must be compliant with AS/NZS5003 and AS3000.

PV modules shall be compliant with IEC/EN61730 and either IEC/EN61215 or IEC/EN61646.

Grid connect inverters shall be compliant with AS 4777

Solar panels are to be installed by either the licensed builder or licensed electrician. All electrical wiring and connections of the solar PV system must be undertaken by an appropriately licensed electrician.

Meters are to be installed by an Authorised Service Provider.

Where the location of PV modules is not shown on the plan, it will be the responsibility of the accredited installer to undertake an onsite assessment and identify the precise location for the modules. The assessment is to identify any overshadowing or other influences which may affect the operation of the installation.

A *Certificate of Compliance* for electrical installation work is to be issued upon completion and commissioning of the work.

15 Wall and Floor Tiling

15.01 - General

Provide wall and floor tiles as shown on the drawings and/or included in the Schedule.

15.02 - Surface Preparation

All tiling substrates shall be dry and free of dust, debris and deposits.

Very smooth trowel finishes on slabs, with slabs inadequately cured, releasing agent and curing compounds can lead to tile adhesion problems. Care should be taken where there is paint overspray on floors adjacent to walls.

The preparation of smooth trowel floors and floors which are contaminated should be undertaken in consultation with the builder, tiler and adhesive supplier and/or manufacturer.

Adhesive manufacturers' recommendations on surface preparation should be followed.

15.03 - Compatibility

Ensure tile adhesives are compatible with the waterproofing membranes used. Waterproofing membranes to be properly cured prior to tile laying.

Tile adhesives, primers and related products must be compatible. The use of mixed brand products is not recommended.

Selections of tile adhesives in wet areas are to be made in consultation with the builder, floor tiler and adhesive supplier and/or manufacturer.

15.04 - Movement Joints

Movement joints are to be provided in accordance with AS3958, 1 to:

- Separate the tiled elements from fixed elements such as walls and columns;
- Over movement joints in the substrate; and
- In large tiled areas, immediate movement joints at evenly spaced locations at approximately 4.5 metres.

15.05 - Falls in Wet Areas

Grade floor tiles to floor wastes and elsewhere as required.

The recommended ratio of fall within a shower is between 1:60 and 1:80.

The recommended ratio of fall in other wet areas is between 1:80 and 1:100.

15.06 - Tolerances

15.6.1 - Australian Standard AS 3958.1 "Guide to the installation of ceramic tiles"

The installation of ceramic tiles is covered by Australian Standard AS 3958.1. This Standard is not referenced by the BCA and this Specification places no obligation that work and materials must comply with the Standard.

15.6.2 - Floor and wall tiles supplied by the owner

Faults and imperfections in tiles are the responsibility of the owner. Installer is to discard any cracked or fitted tiles. The installer is responsible for defects related to poor workmanship.

Installer is responsible for the selection of adhesives and grouts and is not obliged to accept materials supplied by the owner.

16 Painting

16.01 - General

All paint and related products such as primers, sealers and fillers shall be compatible, suitable for purpose and used in accordance with the manufacturer's recommendations and the manufacturer's safety data sheets.

16.02 - Colour Selection.

Unless specified elsewhere, colours are to be selected by the owner and shown in the Schedule.

16.03 - Preparation

All surfaces shall be prepared to the manufacturer's product recommendations. Final preparation shall be the responsibility of the painter/applicator.

16.04 - Spraying

Spray application to plasterboard is to be "backrolled" If floor surfaces are to be tiled, ensure floor surface is protected from overspray.

16.05 - Completion

The contractor shall remove empty paint tins and associated waste from site and is to ensure the clean-up of equipment does not contaminate the site.

Where removed for painting, all fittings, door furniture, switch plates and the like to be refixed or re-installed. Paint splashes, runs and drips are preferably to be removed during the course of the work or removed and repaired upon completion.

16.06 - Tolerances

16.06.1 - Quality Inspections

Paint finish inspections shall be undertaken in a well-ventilated area. Inspections shall be undertaken in a well-ventilated area. Inspections shall occur at a clearance from the painted surface of 1.5 to 2 metres.

SCHEDULE

This Schedule shall be read in conjunction with the Housing Specification New South Wales.

PRIME COST ALLOWANCES, PROVISIONAL SUMS and CONTINGENCY SUMS.

Provisional Sum (PS) is an item which includes supply and installation.

Prime Cost (PC) sum is used for the supply only of a specified item, excluding any associated labour.

Contingency (C) sum is an allowance for the supply of labour and materials related to unforeseen or undefined item which is necessary to progress or complete the works.

PROVISIONAL SUMS

1. Home Warranty Insurance	\$	18. Waste Water Treatment System	\$
2. Identification Survey	\$	19. Water Tanks	\$
3. Removal of Trees	\$	20. Water Pumps	\$
4. Site Access	\$	21. Wall Sarking	\$
5. Demolition	\$	22. Roof Sarking	\$
6. Temporary Water Supply	\$	23. Wall Insulation	\$
7. Temporary Power Supply	\$	24. Roof Insulation	\$
8. Sediment Control	\$	25. Room Heater/Fireplace	\$
9. Site Works/Platform Preparation	\$	26. Flyscreens to Windows and Doors	\$
10. Removal of Spoil/Soil	\$	27. Garage Doors	\$
11. Additional Stiffening to Slab and Footing	\$	28. Sliding Robe Doors	\$
12. Piering to Footings	\$	29. Kitchen and Vanity Cabinets	\$
13. Sewer Line	\$	30. Polished Timber Floor	\$
14. Stormwater	\$	31. External Applied Coatings	\$
15. Electrical Connection	\$	32. Light Fittings	\$
16. Gas Connection	\$	33. External Painting	\$
17. Scaffolding	\$	34. Internal Painting	\$
		35. Driveway Crossover	\$
		36. Concrete Driveway	\$
		37. Concrete Paths	\$
		38. Solar Array	\$

PRIME COSTS

1. Bricks (on site) per thousand	\$
2. Handrails and Balustrades	\$
3. Front Entry Door	\$
4. Security Doors	\$
5. External Door Furniture	\$
6. Internal Door Furniture	\$
7. Internal Doors	\$
8. Shower Screens	\$
9. Mirrors	\$
10. Wall Tiles _____ \$ per m2	\$
11. Floor Tiles _____ \$ per m2	\$
12. Hot Water System	\$
13. Kitchen Sink	\$
14. Laundry Tub	\$
15. Bath	\$
16. Shower Base	\$
17. Vanity Base	\$
18. W.C. Suite	\$
19. Spa Bath	\$
20. Tapware	\$

CONTINGENCY SUMS

21. Bathroom Accessories	\$
22. _____ towel rails	\$
23. Exhaust Fan/s	\$
24. Ceiling Fan/s	\$
25. Wall Oven	\$
26. Cook Top	\$
27. Rangehood	\$
28. Dishwasher	\$
29. Microwave Oven	\$
30. Washing Machine	\$
31. Concrete Pump Hire	\$
32. Crane Hire	\$
33. Asbestos Removal	\$