



19 July 2010

Pittwater Council
PO Box 882
Mona Vale NSW 1660

Dear Sir/Madam,

**Re: Development Application No. N0060/10
Our Construction Certificate No. 139/2010
Premises: 4 Ingleside Road, Ingleside**

Please find attached a copy of the following:-

- Construction Certificate, stamped approved plans and relevant documentation.
- Notice to Commence Building Work.
- Appointment of a Principal Certifying Authority.

In accordance with the regulations we have enclosed a cheque for the sum of \$30.00 for the submission of the Part 4A certificate.

Should you have any further enquiries please do not hesitate to contact us and we will be pleased to assist you.

**NB: Please forward receipt for the above \$30.00 fee to CERTGROUP Building
Certifiers,
PO Box 870 Narrabeen NSW 2101**

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Mark Wysman'.

Mark Wysman
CERTGROUP Building Certifiers

R# 282807
19-07-10
mp

CERTGROUP Building Certifiers ■ tel 9944 8222 ■ fax 99446330
info@certgroup.com.au ■ www.certgroup.com.au ■ PO Box 870 Narrabeen NSW 2101 ■ abn 47 121 229 166

Construction Certificates ■ Complying Development Certificates ■ Building Code & Planning Consultants

CONSTRUCTION CERTIFICATE DETERMINATION

Issued under the Environmental Planning and Assessment Act 1979
Section 109C (1) (b), 81A (2) and 81A (4)

CONSTRUCTION CERTIFICATE NO: 139/2010

DETERMINATION

Decision: **Approved**
Date of Decision: 19 July 2010

SUBJECT LAND

Address: 4 Ingleside Road, Ingleside
Lot No, DP: Lot 2, DP 1137577

DESCRIPTION OF DEVELOPMENT

Alterations & additions to the existing dwelling including a new swimming pool & front fence.

APPLICANT

Name: Alastair Duncan
Address: P.O Box 243, Forestville
Contact Number: (tel) tel 0407 955 113

OWNER

Name: Karen Williams & George Tsivis
Address: 4 Ingleside Road, Ingleside
Contact Number: (tel) tel:0413 438 074

PLANS AND SPECIFICATIONS

The development is to be carried out in compliance with the following plans and documentation listed below and endorsed with "CERTGROUP Building Certifiers" stamp.

DRAWING NUMBER

DATE

Architectural Plan No's: 57909.01 Issue B, 57909.02 Issue B, prepared by HSA Architects:

3 July 2010

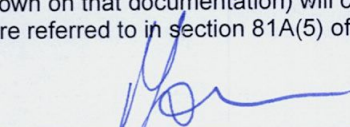
ATTACHMENTS

Specification – 4 Ingleside Road, Ingleside	June 2010
Structural Plan No: No 20510 -2 (alterations & additions) prepared by prepared by T.J Taylor Consultants P/L:	July 2010
Structural Plan No P01 Rev B (swimming pool) prepared by Peninsula Consulting engineers	15 June 2010
Stormwater Plan No 20510-1 Rev A prepared by T.J Taylor Consultants P/L	July 2010
Stormwater design certificate prepared by T.J Taylor Consultants P/L	14 July 2010
Basix certificate	21 June 2010
Bushfire report ref 255 prepared by Planning for bushfire protection P/L	30 November 2009
Long Service Levy Receipt	12 July 2010
Sydney Water Quick Check Stamp	25 June 2010
Construction Certificate Application Form	12 July 2010

CERTIFICATE

I certify that work completed in accordance with documentation accompanying the application for this certificate (with such modifications as verified by the undersigned as may be shown on that documentation) will comply with the requirements of the Environmental Planning and Assessment Regulation, as are referred to in section 81A(5) of the Environmental Planning and Assessment Act, 1979"

SIGNATURE



DATE OF ENDORSEMENT

19 July 2010

CERTIFICATE NO

139/2010

CERTIFYING AUTHORITY

Name of Certifying Authority
Name of Accredited Certifier
Registration No
Contact No
Address

CERTGROUP BUILDING CERTIFIERS
Mark Wysman
BPB 0449 – NSW Building Professionals Board
PH (02) 9944 8222, FAX (02) 9944 6330
PO BOX 870 NARRABEEN NSW 2101

DEVELOPMENT CONSENT

Council
Development Consent No
Date of Determination

Pittwater
N0060/10
21 April 2010

BUILDING CODE OF AUSTRALIA CLASSIFICATION

1a & 10b



RECORD OF SITE INSPECTION

Issued under clauses 143B & 143C EPAR 2000

☒ SITE INSPECTION

☒ MEMORANDUM

Project: Alterations and additions, swimming pool & front fence

DA No: N0060/10

Address: 4 Ingleside Road, Ingleside

Date: 12 July 2010

Type of Inspection: Prior to issue of Construction Certificate

Result of Inspection

* The current fire safety measures in the existing building the subject of the inspection are satisfactory.

☐ Yes ☐ No ☒ N/a

Details: _____

* Whether or not the plans and specifications accompanying the application for the construction certificate adequately and accurately depict the condition of the existing building the subject of the inspection are satisfactory.

☒ Yes ☐ No ☐ N/a

Details: _____

* Whether or not any building work authorised by the relevant development consent has commenced on the site.

☐ Yes ☒ No ☐ N/a

Mark Wysman
Accredited Certifier:

NSW BPB 0449

SPECIFICATION OF BUILDING WORKS

**ALTERATIONS AND ADDITIONS
To Existing Residence**

**AT
4 INGLESIDE ROAD
INGLESIDE**

Hugh Slatyer & Associates
Architects

PO BOX 404 , CAMMAERAY NSW 2062
(02) 9410 3411

CONSTRUCTION CERTIFICATE

June 2010

**CERTGROUP BUILDING CERTIFIERS
APPROVED CONSTRUCTION CERTIFICATE
PLAN / DOCUMENTATION**

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SECTION 01-PRELIMINARIES

1.01 GENERALLY

01 Discrepancies

Any item shown on the drawings but not specified or otherwise listed in the Contract documents, or visa-versa shall be carried out without additional charge to the Proprietor.

Minor items not expressly mentioned in the Contract Documents but necessary for the satisfactory completion and performance of the work under the contract shall be supplied and executed by the Builder without adjustment to the Contract Sum.

1.02 CONTRACT

01 Builder to Inform Himself

The Builder shall be deemed to have examined carefully and to have acquired detailed knowledge of the contract documents and any other information made available to him in writing by the Proprietor for the purposes of tendering.

Failure by the Builder to do any of the things he is deemed to have done under this clause shall not relieve him of his liability to perform and complete the Contract in accordance with its terms and conditions.

02 Visit the Site

The Builder is required to inspect the site, determine the conditions above and below the surface of the site, note levels, services and local conditions and include for necessary work implied but not specifically shown on the drawings or specification.

1.03 SUB-CONTRACTING

The Builder shall not sub-contract any part of the works until he has submitted in writing the name of the proposed sub-contractors or supplier and has obtained the written approval of the Proprietor, which approval shall not be unreasonably withheld.

1.04 ADMINISTRATION

01 Working Hours and Noise

Comply with Council restrictions on working hours.

02 Daywork Records

Where, in accordance with the Contract, work is carried out on a day-work basis the Builder shall submit records of such work to the Proprietor for approval. Work for which records have not been thus submitted, checked and approved shall not be chargeable.

Daywork claims shall consist of accurate and neatly presented records of hours worked showing dates when work has been worked, and where materials or services are paid for by the Builder, copies of invoices for those materials or services.

03 Progress Claims

Within two weeks of signing the contract, the contractor shall submit to the Proprietor a schedule of anticipated future progress claims. This schedule shall be brought up to date as the works progress and any amended schedule shall be issued with the progress claims.

Progress claims by the Builder shall be submitted at not less than monthly intervals unless otherwise agreed between the Builder and Proprietor.

The Builder shall submit to the Proprietor before the first progress claim for payment, a schedule of the values of each trade comprising the contract amount. This schedule shall form the basis for each progress claim.

Each progress claim shall be submitted as a percentage complete against each trade or sub-contract and shall include a separate claim for each nominated sub-contract, where applicable.

04 Rise and Fall Adjustments

The Contract Sum shall not be subject to rise and fall provisions.

05 Variations of Contract Works

All variations to the Contract Works shall be approved by the Proprietor prior to the variation to the works being commenced, unless variation to the works is approved on a daywork basis. Any variation not so approved shall not be allowed in progress payments.

1.05 SITE

01 Use of the Site

The Builder shall not use the site or permit the site to be used for any purpose other than the performance of the works.

02 Protection of Persons and Property

The Builder shall provide, erect and maintain all barricades, guards and fencing necessary for the protection of the works and for the safety of the public, neighbouring properties and their occupants.

The Builder shall avoid interference with or damage to property on or adjacent to the site and shall provide temporary protection as required.

03 Care of the Works

The Builder shall be solely liable for the care of the works, construction plant and all materials brought on to the site for the purpose of carrying out the work or on behalf of the Builder or any of his sub-contractors. This shall include the secure installation of satisfactory barriers and tarpaulins, or equivalent, to protect existing interior surfaces.

The Builder shall at his own cost make good any loss or damage to the works, construction plant or materials, when such making good is necessary for the satisfactory completion of the works.

04 Existing Services

Existing services (such as piping or cables) if encountered or damaged during the execution of the works shall be dealt with as follows;

- * if encountered: repair, divert, relocate as required.
- * If to be abandoned: cut and seal, or disconnect.

In either case to the satisfaction of the Authorities concerned.

05 Temporary Services

Provide all necessary services for the execution of the work under the contract. Install meters, valves and switchboards with the requirements of the relevant authorities. Pay all charges in connection with the installation and use of such services. Make such services to sub-contractors.

On completion, disconnect temporary services and clear away all traces.

06 Storage of Materials

The Contractor is to ensure that all materials deposited on the site, sheds or other structures used in connection with the work are placed in location which will not impede the provision of services and the existing footpath and roadway.

All costs arising from rectification of breaches of this clause shall be borne by the Builder.

07 Sign Board

The Builder shall provide a sign board at the boundary of the site indicating the following;

Name, address and builders licence of the builder

08 Council Performance Deposits

The builder shall be responsible for any costs incurred by the Proprietor in respect of Council performance deposits relating to the works.

In the event that the Proprietor is debited by the Council for failure by the Builder to meet the requirements of the Council in respect of these deposits, the contract sum will be debited by the amount incurred by the Proprietor.

1.06 COMPLETION

01 Generally

Keep the works clean and tidy as it proceeds and regularly remove from the site all rubbish and surplus material.

Within seven (7) days from the date of practical completion, remove all construction plant and equipment and temporary buildings.

02 Practical Completion

Without prejudice to the meaning of the term 'Practical Completion' which may be stated or implied in the conditions of contract, the following requirements are given as an indication of the degree of completion. The requirements are not intended to be exhaustive and practical completion will not necessarily be certified upon compliance with them.

- a) The building is watertight and weather-proof and the installation of windows and doors is complete.
- b) All internal linings and floor finishes are complete.
- c) All electrical and hydraulic services are complete.
- d) All painting work is complete.
- e) Roof plumbing is complete.
- f) The requirements of services supply authorities have been complied with.
- g) The requirements of Council's building approval, as they relate specifically to the Builders performance, have been met.

1.07 MATERIALS AND WORKMANSHIP

01 Australian Standards

Unless otherwise specified, materials and workmanship where applicable shall be in accordance with the relevant standards of the Standards Association of Australia.

02 Proprietary Items

A proprietary item shall be anything specified by trade or brand name or by naming the manufacturer, supplier or installer. The specification of a proprietary item shall be deemed to indicate the required type, quality, appearance, composition and the like.

An item in all respects similar to and equalling the standard of the proprietary item may be substituted for it, subject to the approval of the Owner.

No claim shall arise from any refusal of the Owner to approve a substitution. Unless otherwise specified no substitution shall increase the Contract Sum. If the substituted item costs less than the proprietary item, the difference may be deducted from the Contract Sum.

03 Protection of Materials

Provide adequate storage for all materials within the site.

04 Dimensions and Levels

It shall be the Builders responsibility to verify all dimensions on the site and to set out the works to the correct levels.

05 Termite Protection

The builder shall be responsible for providing termite barriers necessary to prevent the ingress of subterranean termites via newly constructed areas, as outlined and detailed in AS 3660.1- 1995 'Protection of Buildings from Subterranean Termites' Such work to be carried out by subcontractors recommended by the manufacturer.

SECTION 02 - DEMOLITION and EXCAVATION

2.01 EXTENT OF WORK

Carry out all demolition indicated on the drawings, including but not limited to;

- a) Demolition of existing walls, flooring, roof framing and roofing indicated on the drawings or required to carry out the work.
- b) Bulk excavation necessary to achieve the floor levels indicated.

If any Aboriginal Engravings or Relics are unearthed all work is to cease immediately and the Metropolitan Local Aboriginal Land Council (MLALC) and Department of Environment & Climate Change (DECC) are to be notified.

2.02 WORK BY OTHERS

Co-ordinate with a licensed plumber and electrician to disconnect or divert existing services.

2.03 COINS AND ANTIQUITIES

Any coins or other items of historic value or interest shall remain the property of the Proprietor and shall be turned over to them intact.

2.04 TREES AND SHRUBS

Protect all trees and shrubs adjacent to the works throughout the course of the work, unless noted otherwise.

2.05 DISPOSAL OF MATERIALS

With the exception of items falling within the meaning of clauses 2.03, demolished materials shall become the property of the Builder and shall be immediately removed from the site unless otherwise specified or directed by the Proprietor.

2.06 SHORING, and BRACING

Provide any necessary shoring, needling and strutting during the progress of the demolition works, this relates in particular to existing brick walls.

2.07 SITE PREPARATION

01 Setting Out

All dimensions shall be verified with dimensions of existing walls.

02 Inspection

Pursuant to Preliminaries the contractor is deemed to have inspected the site and in particular the extent and nature of the material to be excavated.

2.08 WEATHER PROTECTION

Provide all tarpaulins and covers necessary to protect existing internal finishes during the work, where these finishes are to be retained . Ensure these covers are secured against high winds during the period of the works.

2.11 MAKING GOOD

Make good all disturbed work, and all damage that may occur as the result of these works, or failure to provide adequate or effective weather protection, to walls and floors, which are to be incorporated or retained in the works or, to the entire satisfaction of the Proprietor.

SECTION 03 - CONCRETE WORK

3.01 GENERALLY

Read in conjunction with structural engineers notes and details, which shall take preference in the case of any conflict or discrepancy.

All concrete work shall conform to the requirements of the S.A.A. code for concrete in building AS 1480 as amended and AS 3600. A copy of this code shall be made available on the site by the builder and it shall be binding on any matters not set out hereunder. Concrete shall also conform in all respects of quality, materials and workmanship, etc. with the requirements of all other relevant codes of the Standards Association of Australia.

Any requirements for concrete particularized under other sections of this specification shall be as specified under this section unless otherwise noted.

3.02 STANDARDS

Comply with current relevant Australian Standards.

3.02 SUPERVISION OF CONCRETE WORK

The concrete work shall be carried out only under the direct supervision of a capable foreman experienced in reinforced concrete construction.

3.03 INSPECTION OF CONCRETE WORK

At least two (2) working days notice shall be given to the Project Manager of the intention to pour any concrete.

All formwork, reinforcement, cores, etc. shall be in place before an inspection will be made. No concrete shall be poured until this inspection by the Project Manager has been completed and the work approved.

Notify the Structural engineer prior to pouring of concrete.

3.04 MATERIALS

Water:

Clean, potable, free from oil, salt, acid, alkali or other deleterious substances.

Sand:

To AS.1465. Clean, sharp and free from salt, clay, vegetable or other impurities.

Cement:

To AS.1315. Type A Portland cement, unless otherwise noted on Title Pages.

Aggregate:

To AS.1465. Clean, hard, tough and durable crushed stone and/or gravel, free from elongated pieces, dust, clay or other deleterious matter.

Reinforcement:

Plain round bars (R) or hot-rolled deformed bars (S) shall conform to the requirements of AS.1302.

Hard drawn steel wire for Reinforced Concrete shall conform to AS.1303, as amended.

Welded wire fabric (F) and trench wire mesh (TM) shall conform to the requirements of AS.1304.

3.05 READY MIXED CONCRETE

Ready mixed concrete must be used for all structural concrete.

The builder must provide adequate means for handling and placing ready mixed concrete. concrete shall be completely discharged, placed and compacted in its final position in the forms within 1.1/2 hours of the introduction of the cement to either the water, the aggregate or the mixer.

3.06 STRENGTH OF CONCRETE

Refer Engineers drawings.

3.07 REINFORCEMENT

Reinforcement, before being placed, shall be thoroughly cleaned of mill rust scale, and of coatings, which will destroy or reduce the bond. Reinforcement appreciably reduced in section shall be rejected. Where there is delay in placing concrete, reinforcement shall be reinspected and cleaned if necessary.

Reinforcement shall be accurately positioned and secured against displacement by using steel wire of not less than 1.62mm gauge, or suitable clips at intersections. Skilled persons shall be employed to place reinforcement and they shall be present at pourings for adjustments.

Bottom reinforcement in slabs, beams and footings shall be supported on approved steel chairs of height required to provide the cover specified hereunder. Top reinforcement shall be similarly supported at correct height on approved steel chairs of sufficient strength to withstand the weight of workmen without buckling or bowing. Spacing of chairs is to be sufficient to carry construction loads without displacement. Extra supports and additional care shall be provided for the support of light gauge reinforcements or for the support of reinforcement in general when slab is cast against the ground.

3.08 CURING

Exposed surfaces of the concrete shall be kept constantly in a damp condition for at least the first seven (7) days after placing by covering with building paper lapped at least 100mm.

3.09 CONCRETE SURFACES

Generally

All concrete surfaces shall be true and fair and free from excessive depressions or projections.

All concrete shall be subject to inspection and approval after the stripping of formwork and before any finishing or patching work has been commenced.

Should any detectable defect indicate inadequate compaction or other unsatisfactory work, the whole of the concrete work shall be removed between such limits as the Project Manager may decide and replaced with acceptable concrete work, or such other remedial work as may be directed or approved.

Floor Finishes

Unless otherwise indicated on the drawings or directed, the surface of concrete slabs shall be finished as steel trowel.

SECTION 04 - BRICKWORK

4.01 GENERAL

01 Scope of Work

Supply all materials, labour and equipment necessary to complete the works, in accordance with this section, and generally as follows;

- Infill and make good brickwork for new openings and existing openings to be closed off, where indicated on the drawings.
- New brick walls indicated on the drawings.

MATERIALS: Supply bricks, mortars, and accessories, such as wall ties, lintels, plate straps, ant caps, damp proof courses, flashings, trays, vents and the like.

WORKMANSHIP: Perform the necessary operations, including scaffolding, laying, jointing, forming chases, providing weepholes, building in accessories, frames, services and the like, cleaning down on completion.

02 Standards

SAA Masonry Code shall apply in respect to all materials, components and construction.

4.02 BRICKS

01 Generally:

Bricks shall be approved dry pressed clay bricks, unless otherwise approved, and shall be metric standard bricks, hard sound, well burnt, of even size and shape with true.

02 Bricks

Brickwork to be rendered shall be commons.

4.03 MORTAR

01 Generally

Generally mortar to brickwork exposed to view shall be to colour to match existing brick walls.

Mortar shall be in accordance with AS 1640 and as follows;

Type A:

Walls to dampcourse level, dwarf walls brick on edge walling, Brick steps, brick capping, piers, sills and other wet walling

Mortar shall consist of one (1) part Portland cement, one-tenth (1/10) part hydrated lime or lime putty and three (3) parts sand (1:1/10:3) mixed with water

Type B:

Walls not indicated above shall be laid in Type B mortar.

Mortar shall comply with AS 1640 Appendix A. Mortar shall be 'compo mortar' consisting of one (1) part Portland cement, one (1) part hydrated lime or lime putty or lime putty and six (6) parts sand (1:1:6) mixed with clean water and used within one hour of mixing.

Cement used for mortar to face brick walls shall be off-white.

Machine mix mortar in small batches and use immediately. Re-tempering of mortar will not be permitted.

02 MORTAR MATERIALS

Sand: From an approved source, selected for colour and grading

Pre-mixed mortar: Use only if approved.

Water: Clean and drinkable.

Admixture: Mortar admixtures, approved by the Architect may be used strictly in accordance with the printed recommendations of the manufacture.

4.04 WORKMANSHIP

01 Generally

Construct whole of brickwork to the several forms and dimensions shown or specified, and keep to true level course lines with plumb corners and reveals.

No part of brickwork to be carried up more than scaffold height above the rest and properly racked back.

Knock off salient angles as directed, do all chasing, fair and rough cutting build in or bed all plates, sills and ironwork as required or directed.

Form all openings as shown or directed.

Protect all face brickwork from damage and ensure that all excess cement from concrete or cement mortar is not allowed to stain any face work.

02 Brick Rod

Match existing

03 Bond

Lay in stretcher bond

04 Jointing

Make joints such that bed joints and perpends are filled solid with mortar. Lay frogs up.

Where brick work is concealed and not to be finished with render or plaster, cut joints flush. Where walls are to be rendered, rake joints 5mm maximum.

Face brick walls are to be finished to match existing brick walls.

4.05 STRUCTURAL ELEMENTS

01 Wall Ties

Bond brick skins together with approved non-ferrous ties spaced max.900mm apart in every fourth course-breaking bond.

02 Steel Lintels

Refer Metalwork or engineers drawings. The latter shall take precedence.

4.06 ENVELOPE ELEMENTS

01 Cavity Walls

Where indicated on the drawings, build walls of two skins of brickwork of the overall dimensions shown on the drawings and with a minimum 50mm wide cavity between skins.

Each pair of skins shall be tied together with wall ties as previously specified.

02 Walls Generally

Window Sills: Sills shall match existing.

4.07 COMPLETION

Wait upon and make good after this and other trades. Replace defective bricks, point up faulty joints, putlog holes and chasings. Point up all storm moulds of frames to render waterproof.

SECTION 05 - METALWORK AND STRUCTURAL STEELWORK

5.01 EXTENT OF WORK

Provide all metalwork and structural steelwork items indicated on the drawings and as summarized below, including all fabrication, fixings, surface treatment, delivery to site, hoisting and erection.

- a) Lintels and arch bars.
- b) Steel beams where indicated on the engineer's plans.

Note: shower screens, refer to "Glazing"

The Builder shall verify all dimensions by taking on-site measurements.

5.02 MATERIALS AND WORKMANSHIP

Materials and workmanship shall comply with the relevant Australian standards.

Use skilled tradesmen, competent in the relevant field of all work. All fabrication and assembly shall be carried out in the shop unless otherwise specified or permitted. Match colour of sheet metals and extrusions in colour finished work. Use metals suitable to the process of finish specified and to prevent galvanic corrosion between dissimilar metals.

5.03 SURFACE TREATMENT

01 Mild steel

Unless otherwise specified or indicated on the drawings, all mild steelwork which is not to be exposed to weather shall be cleaned in accordance with AS 1627 (class 2.5) and primed with one coat (1) of good quality red oxide zinc chromate primer (ROZC).

Elsewhere, external steelwork shall be chemically de-scaled in accordance with AS 1627 (class 3) and hot dipped galvanised in accordance with AS 1650. Any damaged to the galvanised surface shall be repaired with an approved zinc primer.

02 Aluminium

All aluminium windows and doors shall be fabricated from sections prefinished with an exterior grade polyester powder coating equal to Dulux 'Powdercote', to selected colour and applied by an approved applicator.

All powder coating shall be to a minimum dry film thickness appropriate to the level of exposure to salt air, to a semi-gloss surface finish. Any damage to the surface finish shall be rectified to the satisfaction of the

Proprietor and if any repair is rejected by the Proprietor, the damaged element shall be replaced at no cost to the Proprietor.

5.04 ALUMINIUM DOORS AND WINDOWS

01 Aluminium Doors and Windows Generally

Doors and windows shall be carried out by a firms or firms approved by the Proprietor. Windows and doors shall be glazed in accordance with the 'Glazing' section of this specification.

Unless otherwise specified, this specification and drawings describe performance requirements and not particular proprietary sections and accessories.

02 Dimensions and Tolerances

Dimensions of openings and spaces into which window and door units are to be installed, shall be determined on site by the Builder prior to the commencement of fabrication.

The following linear tolerances shall apply to the height and width of window and door frames and sashes.

for dimensions 2 metres and less+/- 2 mm

for dimensions greater than 2 metres .+/- 4 mm

The difference between the two diagonal dimensions shall not exceed 6 mm.

03 Performance

Aluminium windows and sliding glass doors shall comply with AS 2047 and AS 2048 for the appropriate sash type as shown on the drawings.

All new window units shall be designed for wind loads to the terrain category appropriate to the location , aspect and exposure of the site.

04 Fabrication and Assembly

Set out frames and sashes accurately and assemble square and true. Provide all necessary accessories and fixings for completion of the work.

Make joints by concealed mechanical connections sealed where necessary with a watertight filler. No corner fixings shall be visible on exposed faces.

Cutouts, recesses, morticing or milling required for hardware shall be accurately made and reinforced by backing plates where necessary for strength or fixing. All moving parts shall operate freely and smoothly without binding or sticking, at correct tensions or pressures.

05 Erection and Fixing

Frames hall be plumb, square and level and their alignment and installed generally in accordance with AS 2048.

06 Flashings and Weather Bars

Flashings and weather bars shall be compatible with other materials in the installation, and coated with a non-staining compound where necessary.

07 Door Assemblies

Door assemblies shall consist of suitable extruded aluminium alloy door and door frame sections fabricated into complete assemblies including all necessary hardware and fixing lugs for attachment to the building structure.

The assembly shall be weatherproof with self draining sill sections.

Glass thicknesses shall conform to the relevant parts of AS 1288.

08 Aluminium Window Sections

Unless otherwise indicated on the drawings, all new windows shall be double hung sashes.

The window assemblies shall consist of suitable extruded aluminium alloy frame and sash sections fabricated into complete assemblies, including all necessary hardware, fixing lugs, flashings and glazing.

Fixed glazed panels shall be glazed by assembling the members around the glass using dry gasket techniques. Glass thickness shall conform to the relevant parts of AS 1288 and Ordinance 70. Ordinance 70 shall take precedence.

The entire assembly shall be weatherproof.

5.06 LINTELS

Supply and install lintels for new openings. All lintels shall have a minimum of 100mm bearing at each end and shall be wrapped with expanded metal or chicken wire where walls are to be rendered.

CLASSIFICATION	TYPE OF LINTEL	LINTEL SIZE FOR MAX. OPENING WIDTHS (mm)			
		900	1200	1500	1800
1. External brick skin of single storey dwellings or upper storey of two storey dwellings	-Galv. MS bar	90X8	-	-	-
	-Galv. MS angle	-	76x102x6.5	76x102x6.5	76x102x6.5
	-Galintel or ingal	100X100X6	100x100x6	100x100x6	100x100x6
	-PGH Prestressed	80X120	80x120	80x120	80x120
2. External brick skin of lower storey of two dwellings or gable end walls	-Galv. MS bar	90X8	-	-	-
	-Galv. MS angle	-	76x102x6.5	76x102x6.5	76x102x6.5
	-Galintel or ingal	100X100X6	100x100x6	100x100x6	100x100x6
	-PGH Prestressed	80X120	80x120	80x120	80x120
3. All internal skins and single brick wall in full brick	-Galv. MS angle	76X102X6.5	76x102x6.5	102x102x6.5	102x102x6.5
	-Galintel or ingal	100X100X6	100x100x6	150x100x6	150x100x6
	-PGH Prestressed	80X120	80x120	80x120	100x200
		2100	2400	2700	3000
1. External brick skin of single storey dwellings or upper storey of two storey dwellings	-Galv. MS bar	-	-	-	-
	-Galv. MS angle	-	-	-	-
	-Galintel or ingal	-	-	-	-
	-PGH Prestressed	80X120	80x120	80x120	100x200
2. External brick skin of lower storey of two dwellings or gable end walls	-Galv. MS bar	-	-	-	-
	-Galv. MS angle	-	-	-	-
	-Galintel or ingal	-	-	-	-
	-PGH Prestressed	80X120	100x120	100x120	100x120

3.	All internall skins	-Galv. MS angle	152x102x10	152x102x10	152x102x10	-
	and single brick wall	-Galintel or ingal	150x100x6	-	-	-
	in full brick	-PGH Prestressed	100x200	100x200	100x200	-

5.07 STEEL BEAMS

Supply and install steel beams as detailed on the engineers drawings.

SECTION 06- CARPENTRY WORK

6.01 EXTENT OF WORK

Provide all labour and materials necessary for the completion of the work indicated on the drawings and as summarized below;

- a) Timber, wall and floor framing, roof framing where indicated
- b) Eaves fascia and lining.
- c) Soffit linings

6.02 STANDARDS

Materials and workmanship shall comply, where applicable, to the relevant standards of the Standards Association of Australia. Materials and workmanship may be rejected if they do not comply with the relevant standards.

The following standards shall apply in particular;

- SAA Timber Framing Code
- SAA Timber Engineering Code

6.03 STORAGE AND HANDLING

No timber or timber products shall be stored, transported or handled in such a manner as would damage or be detrimental to their satisfactory performance when installed and fabricated into the building.

Observe the precautions given in appendix C of AS 1684 and in particular the need to preserve the moisture content of unseasoned hardwood framing material, by block stacking and covering the ends of timber.

6.04 TIMBER

01 Generally

Timber shall be straight, sound, free from significant defects including white ants, borer, sap pockets, shakes, loose knots, warp, twist, splits, decay, pith, fractures or bruises.

Unseasoned hardwood framing shall be medium shrinkage or better (less than 8%) as defined in AS 1684.

02 Species and Grades

Stress grades for timber elements shall be generally as indicated on the drawings. If no stress grade is indicated, it shall be the grade normally used in the type of framing for which the timber is intended, but shall not be less than F5 for softwood or F8 for hardwood framing.

Unless otherwise noted on the drawings, timber species shall be as follows;

- | | |
|---------------------------|--------------------------------------|
| Floor framing | First Floor- refer engineers details |
| | Ground floor- hardwood |
| Wall framing | Sawn Oregon |
| External posts and beams: | CCA treated Pine |
| Roof framing: | Sawn Oregon |

03 Tolerances

Unless otherwise specified, the actual cross - sectional dimensions of timbers may vary from the dimensions stated on the drawings by the tolerances (if any) provided in the relevant Australian Standards and as follows;

Framing timbers:	AS 1684 tolerances govern.
Gauged timbers:	Tolerance +2mm -0

6.05 WORKMANSHIP

All carpentry work shall be of best trade practice, using competent tradesmen and with all incidental work to produce the finished product. Arris all edges of visible work. Provide all necessary blocks, trimming joists and fastenings.

Each member shall not be spaced at centres exceeding those specified or indicated on the drawings or if not so specified, as nominated in AS1684.

All timber exposed to view shall be dressed. Each dressed timber surface shall be finished smooth, even and free from machine marks, using machine and hand sanding. All external dressed timber shall be primed. End grain shall be primed prior to fixing in place.

6.06 FASTENINGS

All nails and nailing shall conform to the recommendations of section 6, AS 1684. Timber shall be drilled for fastenings where appropriate and where necessary to prevent splitting.

Nail length shall not be less than 2.5 times the thickness of the member the nail is being used to secure. all nails in visible work shall be punched.

All nailing and bolts to framing exposed to weather, shall be galvanised unless otherwise noted or specified.

6.07 STUD WALL FRAMING

Fabricate stud wall frames where indicated on the drawings. All wall framing shall be minimum stress grade F5 and of the following sizes.

Studs:	100x50mm
Top and bottom plates:	100x50 mm.
Studs to openings:	AS 1684 unless otherwise indicated.

Studs shall be at 450 mm centres maximum. Fix noggings at 1200 centres.. Install bracing to each frame as recommended by AS1684.

6.08 ROOF FRAMING

The roof framing shall generally consist of traditional roof framing in accordance with AS 1684 and as indicated on the engineers drawings. The latter shall take precedence.

6.09 EAVES DETAIL

New eaves shall match the existing eaves.

SECTION 07 - JOINERY WORK

7.01 EXTENT OF WORK

Provide all labour and materials necessary to complete the work indicated on the drawings and as summarized below;

- a) New internal and external doors where indicated
- c) Skirtings and architraves
- d) Timber stair

7.02 INTERNAL AND EXTERNAL DOORS

01 Generally

An amount is allowed in the 'Schedule of Monetary Sums' for the supply only of new internal doors. Supply and install new internal doors, complete with door furniture and hardware, as indicated on the drawings.

02 Internal Doors

Supply and install new internal doors to new door openings indicated.

- All internal doors shall match existing doors

7.05 DOOR HARDWARE AND FURNITURE

An amount is allowed in the 'Schedule of Monetary Sums' for the supply only of door furniture and hardware items for new doors.

The Builder shall allow for delivery to site and fitting to each door, including supplying all hinges. Hinges shall be 100 mm butt. Door furniture shall be mounted at the same height as existing doors, unless otherwise instructed.

7.06 SKIRTINGS, ARCHITRAVES AND TRIMS

For the purposes of tender allow to supply and fix skirtings to the perimeter of all new walls, which are not to be tiled.

To match existing profiles.

7.07 TIMBER STAIRS

Supply and install new timber stairs where indicated. Refer to Metalwork for handrails and balustrades.

SECTION 08 - ROOFING AND ROOF PLUMBING

8.01 EXTENT OF WORK

Provide all labour, materials and plant necessary for the completion of the work indicated on the drawings and as summarized below;

- a) Colorbond Custom Orb roofing
- b) Supply and fixing of new eaves gutters and downpipes.
- c) Insulation (refer Plasterwork)

8.02 WORKMANSHIP

01 Generally

Carry out the necessary operations for the satisfactory performance of the roof, including at junctions, trimming around penetrations, flashing and the like.

Protect the roofing materials and roofing system from damage throughout the work under contract and leave them clean and undamaged on completion. Ensure the rainwater systems are free of foreign matter and leave them unobstructed on completion.

02 Standards

Comply with the relevant standards of the Standards Association of Australia.

8.03 COLORBOND ROOFING

Roofing shall be corrugated colorbond steel equal to Custom Orb, 760mm cover. Lay roofing in single lengths with fixing and lapping recommended by the manufacturer having regard to the location and exposure of the building. Lay roofing over 50mm thick fibreglass blanket insulation.

Colour: selected standard colour

Flashings

Colorbond . Do not use lead flashing.

8.04 GUTTERS AND DOWNPIPES

Supply and fix new eaves gutters and downpipes to new and existing eaves.

Gutter profile: Equal to Stratco 'Smoothline' gutter
 Material: Colorbond stainless steel
 Colour: selected standard colour

Downpipes: 100 diameter colorbond to selected standard colour

SECTION 09 - PLASTERWORK

9.01 EXTENT OF WORK

Provide all labour, materials and scaffolding necessary to complete the work indicated on the drawings and as summarized below;

- a) Plasterboard ceiling linings and cornices
- b) Fibre cement wall linings
- c) Plasterboard wall linings.
- d) Insulation
- e) Cement render

9.02 STANDARDS

The materials and workmanship shall comply with the relevant standards of the Standards Association of Australia.

9.03 PLASTERBOARD LININGS

01 Ceilings Generally

Install new plasterboard ceiling linings to the following existing areas:

Ground Floor:	all ceilings with exception of Bed 2 and En-suite
Lower Ground Floor:	Family Room and Bathroom, make good or replace adjacent to new stair. Bedrooms 4 and 5

Plasterboard shall be 10mm thick for rafters or joists at 450mm centres and 13mm thick for 600 centres, recessed edge to AS 2588, fixed in accordance with the manufacturers recommendations. Joints shall be taped, set and sanded to a smooth finish.

03 Walls

Line new internal stud walls with 10mm thick plasterboard, recessed edge to AS 2588, fixed in accordance with the manufacturers recommendations.

9.04 FIBRE CEMENT LININGS

Supply and fix fibre cement linings Ground Floor bathroom and Laundry walls including over existing rendered brick walls. Linings shall be fibre cement, 6 mm thick, equal to Hardies 'Villaboard II'.

Fix sheets horizontally directly to wall studs. Fixing methods and spacings shall be to the manufacturers current recommendations. Joints and fixings shall be finished flush with gypsum based jointing cement, as recommended by the manufacturers.

9.05 CEILING PERIMETER

Match existing, to be confirmed by the owner.

9.06 CEMENT RENDER

01 Generally

Cement render shall be composed of 4 parts sand to 1 part cement, with lime putty or plasticiser added to improve workability, with the approval of the Project Manager. Cement render shall be composed of 1 part cement to 1 part lime putty to 6 parts sand.

Finish surfaces true, hard and even, free from trowel and float marks and other blemishes

Apply one coat of cement render 15 mm minimum thickness to external brick walls where indicated.

9.07 INSULATION

Refer to Basix Commitments schedule on the drawings.

SECTION 10 - GLAZING

10.01 EXTENT OF WORK

- a) Window and door glazing
- b) Glazed balustrades

10.02 STANDARDS AND CODES

All materials and workmanship shall conform to relevant Australian standards.

10.03 GLASS AND GLAZING

Types and thickness of glass for external application shall be designed in conformity with relevant standards.

Glass shall be installed using methods such that building movement resulting from wind or thermal effects are not transferred to the glass.

On completion of glazing work, replace any damaged glass, clean the glass by non-damaging methods, and leave the whole of the work in good condition.

10.04 GLAZED BALUSTRADES

Supply and install toughened glass balustrades where indicated. All fixings shall be grade 316 stainless steel.

SECTION 11 - PAINTING WORK

11.01 EXTENT OF WORK

Provide all labour, materials scaffolding, drop sheets, ladders and planks necessary to complete the works as follows;

- a) All new walls and ceilings
- b) All new internal and external woodwork
- c) New and existing cement render

11.02 MATERIALS AND WORKMANSHIP

01 Generally

All painting work shall be carried out by experienced tradesmen. The Proprietor may require that the Builder furnish references from the painting sub-contractor to ascertain their experience and suitability for the work.

Materials and workmanship shall comply with the relevant standards of the Standards association of Australia, where not in conflict with this specification. The following standards shall apply in particular;

AS 2311	The painting of Buildings
AS 1580	Methods for test for paints, varnishes and related materials

Containers shall not be opened until required for use. Thoroughly stir paint and keep at a uniform consistency during application. Any thinning of primers or undercoats shall be to the manufacturers specification.

No painting shall be executed during unsuitable weather, and all areas shall be adequately protected with drop sheets or other approved means.

02 Materials

General : Where manufacturer makes more than one grade of any material specified, use the highest grade of each type, whether or not the material is mentioned by trade name in these Specifications.

Paints and finishes used for the project may be manufactured by one or more of the following manufacturers :

Taubmans
Dulux
Wattyl

03 Colours

Colours shall be to future selection and shall be made from the manufacturers standard colours. No colour matching shall be on done site unless otherwise authorized

11.03 PREPARATION OF NEW UNPAINTED SURFACES

01 Masonry and Rendered Surfaces

Thoroughly clean surfaces of all dirt, dust, slurry marks or other excrescencies. Remove efflorescence by brushing and wiping with a damp rag and ensure that all powder is removed before painting. Wash off oil or grease film with sugar-soap or detergent solution that is non injurious to the surface of shop primers, and rinse off completely with plain water.

02 Timber

Clean down, knot, sandpaper, stop and fill surfaces for painting. Scrape clean resin and gum pockets, prime and fill holes and depressions with putty. Sandpaper surfaces to receive clear finishes to a fine finish. Timber surfaces must be thoroughly clean and free of sap, grease, oil and dust before painting. Stopping, filling and puttying of surfaces shall be carried out after primer is applied wherever an opaque surface finish is specified. Prime all end grain, tongues and grooves and lap joints before fixing timber into position.

03 Plaster and Plasterboard Surfaces

Sandpaper smooth, remove all surface contaminants, dust off and apply specified coatings. Plaster surfaces must be thoroughly dry before painting.

04 Ferrous Metal

Surfaces are to be thoroughly dry and cleaned free of dust, grease and dirt. Remove all rust and mill scale by grit or sandblasting, pickling or flame cleaning with scraper and wire brush. Dust off surface, then apply specified coatings without delay.

Where metalwork is shop primed, ensure that priming is suitable to receive the subsequent coats specified.

05 Non Ferrous Metal

Remove grease, dust and dirt from the surface and apply appropriate metal etch primer to key the surface before applying any further coatings. Where metalwork is shop primed, ensure that priming is suitable to receive the subsequent coats specified.

06 Anti Corrosive Treatment

When shop priming or other anti-corrosive films on metalwork are damaged due to welding or by other causes, thoroughly hand clean the area free of weld spatter, rust and other foreign matter.

Paint the affected areas with two coats of stable zinc rich paint containing a minimum of 92% zinc dust in the dry film, applied by brush or spray to minimum finished film thickness of 0.07 mm.

07 Structural Steel

Shop priming of structural steelwork shall be carried out by the fabricator and field priming by the erector of structural steelwork.

Field priming shall include touching up shop priming where damaged during erection or by field welding and the like and priming of black bolts, heads and nuts, to leave surfaces in a sound condition to receive finishing coats of paint. Similarly touch up galvanised and similar finishes. Apply etch primers on site in preparation for field finishing coats.

08 Galvanised Steel

Prepare structural steel which is specified to be galvanised and subsequently painted as follows:

The galvanised steel shall be weathered for a minimum period of 6 months and after this period, shall be cleaned by washing with an approved solvent and/or detergent and, after drying, primed with zinc-chromate before over-coating to approval.

The surface shall be cleaned with a suitable solvent and/or detergent and when dry shall be treated with an approved etch primer prior to priming with zinc-chromate and overcoating to approval.

The surface shall be primed with a calcium plumbate paint and over-coated to approval.

Prime with an epoxy based zinc rich paint conforming to the requirements of the Government Paint Committee, having a dry film weight of not less than 80% zinc. Such zinc rich paints shall be recommended by the manufacturer as being suitable for coating untreated or unweathered galvanised steel surfaces.

11.04 PREPARATION OF PREVIOUSLY PAINTED SURFACES01 Generally

Remove completely existing paintwork which exhibits heavy chalking, cracking, wrinkling, inadequate coating thickness, flaking or blistering. Paintwork in reasonable condition shall be cleaned down and sanded lightly to provide a key for good adhesion of succeeding coats.

Clean out all cracks, holes, indentations and damaged surfaces thoroughly, dust, and fill with an appropriate filler.

Soap powders shall not be used for cleaning. Acceptable agents are household detergent at the rate of 5-10 ml per litre of water or trisodium phosphate at the rate of 30 gm per litre of water. Surfaces shall be thoroughly rinsed after cleaning and dried.

Remove corroded fastenings and replace with fastenings which are corrosion resistant.

Paint strippers may be used only where approved.

SECTION 12 - HYDRAULIC SERVICES

12.01 EXTENT OF WORK

Provide all labour, materials, equipment and services necessary for the complete installation, testing and operation of hydraulic works, as indicated on the drawings and as summarized below;

- c) Supply and installation of new sanitary fixtures and taps.
- d) Stormwater drainage to connect to existing stormwater drainage and new stormwater harvesting storage.

12.02 GENERALLY

All drainage , plumbing and water services shall comply with the regulations relevant supply authority, and shall be executed by a licensed plumber to the directions of the authorities inspectors.

Make good damage to pavements, paths and any existing services disturbed during the works.

12.03 OBVIOUS WORK

Any item which is obviously necessary or inferred within the type or quality of the contract, but omitted from the drawings and specification shall be included without charge to the Proprietor.

The Builder shall notify the Proprietor at the time of tendering of any omission encountered.

12.04 MATERIALS

All materials shall be new and the best of their respective kind, conforming to the current specifications of the Standards Association of Australia.

Sewerage and stormwater drains shall be unplasticised PVC (UPVC) to AS 1260, unless otherwise specified.

12.05 FEES, PERMITS AND TESTING

Make all applications to the Authorities, pay all fees and obtain all permits necessary to execute the works.

Make all tests as shall be required or ordered by the Authorities having jurisdiction, using methods prescribed by them.

The Builder shall pay for and make good all damage and materials resulting from the tests.

Provide copies to the Proprietor of all certificates issued by the Authorities.

12.06 STORMWATER DRAINAGE

Lay new stormwater drainage to connect downpipes indicated on the drawings, complete with all necessary cleaning openings. Stormwater drainage lines shall be in UPVC . Sumps shall be prefabricated fibre cement or concrete.

12.07 TAPS AND SPOUTS

The Proprietor will source and pay for the supply and delivery only of tapware. The Builder shall allow to install them in the locations indicated.

12.08 GAS SERVICE

Provide new gas service and connect gas service to the pool gas heating system. In addition extend gas to Kitchen and pace heating bayonets where directed by the owner.

Arrange for testing and ensure all points are working order prior to handing over the completed works.

12.13 HOSE COCKS

Connect existing and new hose cocks to new stormwater tanks.

SECTION 13 - ELECTRICAL AND MECHANICAL SERVICES

13.01 EXTENT OF WORK

Supply all labour and materials, including all necessary fabrication, for the completion of electrical services shown on the drawings and summarized below;

- a) New light and power outlets and indicated on the drawings.
- b) Extend power for pool equipment.

13.02 WORKMANSHIP

All work shall be carried out by a licensed electrician and shall conform to SAA Wiring Rules, AS 3000.

Carry out all re-wiring necessary to wiring to existing light fittings and switches which will be concealed within the floor of the new first floor addition and inaccessible.

13.03 TESTS

The electrical installation shall be tested and passed by the supply authority. Any defects shall be made good by the Builder. All labour and material required for testing shall be provided by the Builder.

13.04 NOTICES AND FEES

The Builder shall pay all fees, give all notices and obtain all permits.

13.05 INSTALLATION

a) Lighting and power outlet locations

The lighting outlets and power outlets shall be installed in the positions agreed with the Owners prior to roughing in.

Wiring shall be concealed in stud walls, cavities or roof space and run in TPS cable. TPS cable alone shall not be used in any exposed location or where embedded in rendered masonry.

b) Consumer Mains

The builder shall provide new consumer mains as necessary to meet the requirements of the new electrical layout and air-conditioning.

13.06 LIGHT FITTINGS

Supplied by the Owners, installed by the Builder.

13.07 GENERAL PURPOSE OUTLETS AND SWITCHES

All GPO's shall be new, flush mounted, with removable face plates, and of 10 amps minimum rating. Allow to test existing power outlets and to replace face plates with new face plates.

13.08 SMOKE DETECTORS

Supply and install 'hardwired' smoke detectors to current regulations.

13.10 WIRING FOR TELEPHONES

Co-ordinate with supply authority and install telephone cables to new locations indicated on the drawings.

13.11 T.V AERIAL

Retain existing TV aerial and relocate to suit new works where applicable.

13.12 EARTH LEAKAGE SWITCH

Supply and install an earth leakage switch to main board, to current requirements of regulating authorities. Test existing circuits and repair if necessary.



T J TAYLOR CONSULTANTS PTY LIMITED

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Consulting Civil and Structural Engineers



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Telephone 99827092 Fax: 99825898 Email: taylor_consultants@tpg.com.au

14 July 2010

Our Ref: DK:DMS:dp 20510

General Manager
Pittwater Council
1 Park Street
MONA VALE NSW 2103

Dear Sir,

Re: Stormwater Drainage Details – 4 Ingleside Road, Ingleside

With reference to the development application for the above property, please find enclosed four copies of the site Stormwater Management Plan No. 20510-1A for your perusal.

The plan shows the entire existing roof area & driveway areas of the site draining to a series of rainwater storage tanks located beneath the rear deck of the existing dwelling. Overflows from the rainwater storage tank are discharged to a horizontal dispersion grate. The grate discharges runoff as uniform sheet flows across the rear boundary.

Note also that as the net additional impervious area for the proposed development is less than 50m², the on-site detention of stormwater is not a requirement of the proposed development of the site.

This is to certify that the Stormwater Management Plan layout as shown on Plan No. 20510-1A by T J Taylor Consultants Pty Ltd, has been designed in accordance with section 3.1.2, 'Drainage', of the Building Code of Australia Housing Provision and AS/NZS 3500.3.2 – Stormwater Drainage & Pittwater Council's 21 DCP, in particular section B5.8

Should you require any further information please contact the undersigned.

Yours faithfully,

T J TAYLOR CONSULTANTS PTY LTD

D M SCHAEFER
BE (Civil) MIEAust

C10/20510L02

CERTGROUP BUILDING CERTIFIERS
APPROVED CONSTRUCTION CERTIFICATE
PLAN / DOCUMENTATION

Directors: D J Squire BE (Civil) MIEAust CPEng D M Schaefer BE (Civil) MIEAust

BASIX Certificate

Building Sustainability Index www.basix.nsw.gov.au

Alterations and Additions

Certificate number: A87237

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Alterations and Additions Definitions" dated 29/9/2006 published by Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General
Date of issue: Monday, 21, June 2010



Description of project

Project address	
Project name	5502e - HSA - Ingleside - June 2010 Revision
Street address	4 Ingleside Road Ingleside 2101
Local Government Area	Pittwater Council
Plan type and number	Deposited Plan 1137577
Lot number	2
Section number	0
Project type	
Dwelling type	Separate dwelling house
Type of alteration and addition	My renovation work is valued at \$50,000 or more, and includes a pool (and/or spa).

CERTGROUP BUILDING CERTIFIERS
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PLAN / DOCUMENTATION

Pool and Spa	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Rainwater tank			
The applicant must install a rainwater tank of at least 2876 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rainwater runoff from at least 240 square metres of roof area.		✓	✓
The applicant must connect the rainwater tank to a tap located within 10 metres of the edge of the pool and outdoor spa.		✓	✓
Outdoor swimming pool			
The swimming pool must be outdoors.	✓	✓	✓
The swimming pool must not have a capacity greater than 45.18 kilolitres.	✓	✓	✓
The swimming pool must have a pool cover.		✓	✓
The applicant must install a pool pump timer for the swimming pool.		✓	✓
The applicant must install the following heating system for the swimming pool that is part of this development: gas.		✓	✓
Outdoor spa			
The spa must not have a capacity greater than 5.7 kilolitres.	✓	✓	✓
The spa must have a spa cover.		✓	✓
The applicant must install a spa pump timer.		✓	✓
The applicant must install the following heating system for the outdoor spa that is part of this development: gas.		✓	✓

Fixtures and systems	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Lighting			
The applicant must ensure a minimum of 40% of new or altered light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Fixtures			
The applicant must ensure new or altered showerheads have a flow rate no greater than 9 litres per minute or a 3 star water rating.		✓	✓
The applicant must ensure new or altered toilets have a flow rate no greater than 4 litres per average flush or a minimum 3 star water rating.		✓	✓
The applicant must ensure new or altered taps have a flow rate no greater than 9 litres per minute or minimum 3 star water rating.		✓	

Construction	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
--------------	------------------	------------------------------	-----------------

Insulation requirements

The applicant must construct the new or altered construction (floor(s), walls, and ceilings/roofs) in accordance with the specifications listed in the table below, except that a) additional insulation is not required where the area of new construction is less than 2m2, b) insulation specified is not required for parts of altered construction where insulation already exists.

Construction	Additional insulation required (R-value)	Other specifications			
concrete slab on ground floor.	nil				
external wall: cavity brick	nil				
internal wall shared with garage: single skin masonry (R0.18)	nil				
flat ceiling, pitched roof	ceiling: R1.45 (up), roof: foil backed blanket (55 mm)	medium (solar absorptance 0.475 - 0.70)			

Glazing requirements				Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors						
The applicant must install the windows, glazed doors and shading devices, in accordance with the specifications listed in the table below. Relevant overshadowing specifications must be satisfied for each window and glazed door. The following requirements must also be satisfied in relation to each window and glazed door: Each window or glazed door with standard aluminium or timber frames and single clear or toned glass may either match the description, or, have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below. Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. For projections described in millimetres, the leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 mm above the head of the window or glazed door and no more than 2400 mm above the sill. For projections described as a ratio, the ratio of the projection from the wall to the height above the window or glazed door sill must be at least that shown in the table below. Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35. Pergolas with fixed battens must have battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm. Overshadowing buildings or vegetation must be of the height and distance from the centre and the base of the window and glazed door, as specified in the 'overshadowing' column in the table below.				✓	✓	✓
Windows and glazed doors glazing requirements						
Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing Height (m) Distance (m)	Shading device	Frame and glass type	
Gym 1	NE	0.91	8	5	projection/height above sill ratio ≥0.23	standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)
Gym 2	NE	1.72	8	5	eave/verandah/pergola/balcony ≥450 mm	standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)
Gym 3	NE	0.91	8	5	projection/height above sill ratio ≥0.23	standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)

Glazing requirements						Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Window / door no.	Orientation	Area of glass inc. frame (m ²)	Overshadowing Height (m)	Distance (m)	Shading device			
Stairs	SW	0.61	0	0	projection/height above sill ratio >=0.43			
Frame and glass type								
standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)								

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a "✓" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a "✓" in the "Show on CC/CDC plans & specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a "✓" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate for the development may be issued.

This Report has been prepared and submitted by R Coffey, FPA Australia, Certified Practitioner
Practitioner Certification No-PBD-PA-09328

Planning For Bushfire Protection Pty Ltd



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Reference: 255
30th November 2009

Bushfire Risk Assessment

In relation to
Proposed Development at
No 4 Ingleside Road, Ingleside

CERTGROUP BUILDING CERTIFIERS
APPROVED CONSTRUCTION CERTIFICATE
PLAN / DOCUMENTATION

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Introduction

The purpose of this report is to determine the category of bushfire attack and subsequent construction standard for the proposed development of alterations and additions at No 4 Ingleside Road, Ingleside.

The site is identified as 'bush fire prone land' for the purposes of Section 146 of the *Environmental Planning and Assessment Act 1979* and the legislative requirements for building on bushfire prone lands are applicable.

The proposed development is an infill development as defined within Chapter 4.3.5 of *Planning for Bushfire Protection 2006* and this report has been prepared in accordance with the requirements of section 79BA of the *Environment Planning and Assessment Act*.

This assessment includes an analysis of the hazard, threat and subsequent risk to the development proposal and provides recommendations that satisfy the Objectives and Performance requirements of the Building Code of Australia, *Planning for Bushfire Protection 2006 [PBP]* and Australian Standard AS3959, 1999.

The site was inspected: 30th November 2009

1) Location

No 4 Ingleside Road, Ingleside

UBD Map 137, Reference M6

Lot 2, DP 1137577

LGA - Pittwater



2) Development Proposal and Building Classifications

The proposal is for alterations and additions to an existing class 1A dwelling. The additions include increased living area on the existing dwelling, an inground pool, decking and landscaping.

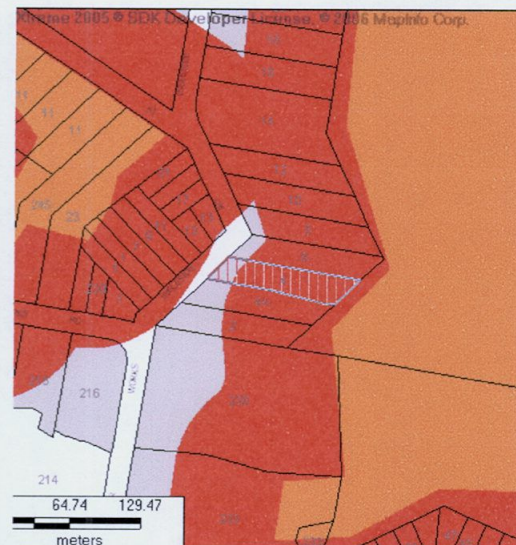
PBP is not applicable for the development of the proposed swimming pool, however; the location of fuel free areas, such as swimming pools, within the APZ of a site are a desirable feature and should be encouraged.

3) Description of the Subject

Property

The development site is a residential lot facing west onto Ingleside Road.

The following sections 4-8 describe in detail the vegetation, slope, access and egress, availability of water supplies and environmental considerations for the site. The adjacent image is the bushfire prone land map for the area.



4) Classification of the Vegetation on and surrounding the Site

The site is developed and maintained and there is no threat from bushfire attack on the site.

Properties north, south and west of the subject site are developed and maintained and there is no threat of bushfire attack from these directions for more than 100m.

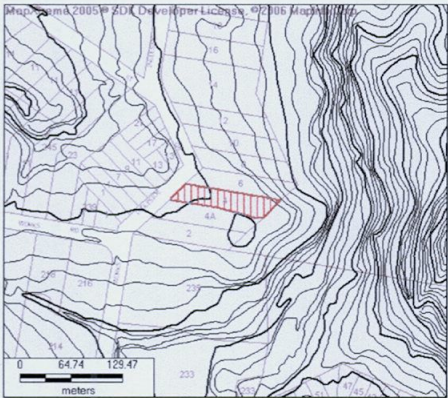


Adjoining the eastern boundary is an area of bushland that is considered a threat from bushfire attack to the site. With reference to PBP and the bushfire prone land map for the area the classification of vegetation for this hazard is forest.

5) Assessment of Effective Slope

Effective slope away from the development site:

- North: No hazard for >100m
- South: No hazard for >100m
- East: No hazard for >100m
- West: No Hazard for >100m



6) Access and Egress

The site has direct access to Ingleside Road, which is a public road, and access and egress for emergency vehicles and evacuation is in opposite directions and appears adequate.

7) Adequacy of water supply

The area has reticulated water supply and hydrants are spaced at regular distances along Ingleside Road, however, the nearest street hydrant is greater than 90m from the most distant point of the dwelling. The proposed inground swimming pool is considered an appropriate supplementary water supply for protection from bushfire attack.

8) Environmental Considerations

The scope of this assessment has not been to provide an environmental assessment; however, the subject site has been developed for many years and it appears that the proposed development will have no adverse environmental effect.

9) Bushfire Risk Assessment

Table 1; Reference PBP Table A3.3 / Web-based Bushfire Attack Assessor Version 2.0
Determination of Category of Bushfire Attack for the site and subsequent required building standards

Direction	Distance of APZ	Vegetation Classification	Assessment of Effective Slope	Anticipated Radiant heat	Bushfire Attack Level (BAL)
North	>140m	Developed sites	<5 degrees downslope	n/a	-
South	>140m	Developed sites	5-10 degrees downslope	n/a	-
East	17m	Forest	12 degrees downslope	76.03kw/m2	Flame Zone
West	>140m	Developed sites	<5 degrees upslope	n/a	-
Summary: Based upon the relevant provisions of PBP the category of bushfire attack is for the site is 'Flame zone' which is considered beyond the scope of AS 3959-1999. To determine construction standards to allow development to proceed, alternate solutions must be introduced which satisfy the performance requirements Part 2.3.4 of the BCA Volume 2. The anticipated radiant heat attack on the proposed development is calculated applying the Web-based Bushfire Attack Assessor Version 2.0 [Refer to section 14 of this report for a full analysis]					

10) Assessment of the extent to which the construction conforms or deviates from Chapter 4 of ‘Planning for Bushfire Protection 2006’

The proposed alterations and additions conform to the requirements of PBP for bushfire protection measures for infill development in relation to:

<u>Performance Criteria</u>	<u>Meets Performance Criteria?</u>	<u>Comment</u>
Asset Protection Zones	Yes	Asset protection zones are provided partially on site and by adjoining development and public roads.
Defendable Space	Yes	Defendable Space is provided on all sides of the building
Siting and design	Yes	The siting of the building has been previously determined in accordance with local council requirements and the proposed additions and alterations will not involve a re-siting of the building [no advantage could be gained by recommending a re siting of the building].
Landscaping	Yes	The landscaping on the site complies with the principles of Appendix 5 of PBP.
Construction Standards	Yes	Construction standards have been recommended in accordance with the requirements of PBP and have been determined applying the Web Based Attack Assessor Version 2. Variations to the construction standard for those elevations of the building that do not directly face the hazard will be recommended in this assessment.
Access and Egress	Yes	The access and egress requirements have been designed to provide safe and effective evacuation from the subject site and appear to be adequate for fire brigade personnel and fire fighting equipment.
Water Supplies	Yes	Refer section 7 of this assessment
Emergency and Evacuation Planning	Yes	An emergency evacuation plan has not been recommended.

11) Recommendations

The following recommendations are made for the bushfire protection measures for the proposed residential development of alterations and additions at No 4 Ingleside Road, Ingleside and are based upon the relevant provisions of the NSW Rural Fire Service guideline entitled *Planning for Bushfire Protection 2006*.

Radiant heat calculations to assist in the determination of the category of bushfire attack, and subsequent construction standard for the development, have been calculated applying the NSW Rural Fire Service Web-based Bushfire Attack Assessor Version 2.0.

- 1) The proposed development shall be constructed to a minimum standard of Level 3 AS3959, 1999 with the exception that, the eastern elevation has been determined as subject to possible flame attack and special consideration shall be given to mitigating the effects of radiant heat attack from this direction, including:
 - There shall be no external timber used on the north, south and east elevations.
 - There shall be no external exposed timber used in the construction of the proposed deck adjacent to the pool shown on the plans as on the eastern section of the site.
 - The pool fencing shall be constructed of non combustible material
 - All new window glazing on the eastern elevation shall:
 - be fire rated glass capable of withstanding 76kW/m² radiant heat attack for 3 minutes, or
 - 5mm toughened glass completely shielded by metal shutters, or
 - have a minimum FRL of -/30/-
- 2) Where the Australian Standard requires fire-retardant-treated timber, [western part of the site only] the list of timbers referred to in section 17 of this report must be used. [For additional information see 'Development Control Note 001 Use of Fire-Retardant-Treated Timber' available from and issued by The NSW Rural Fire Service]
- 3) All new fencing and gates shall be constructed in accordance with the NSW Rural Fire Service guideline: Fast Fact – *Fences or Gates in Bushfire Prone Areas*. [Refer Section 16 of this report]

- 4) In recognition that reticulated water supply exists but the nearest hydrant is >90m from the nearest hydrant, the proposed inground swimming pool is considered an appropriate supplementary water supply for protection from bushfire attack.
- 5) A minimum of 3kW (5hp) petrol or diesel powered pump shall be provided for first aid fire fighting.
- 6) The entire site where not built on shall be established and maintained as an Inner Protection Area in accordance with the requirements of Planning for Bushfire Protection. [Refer Section 15 of this report] *Note: Although the Asset Protection Zone requirements are listed as a recommendation, the site has been landscaped and is maintained to a standard that complies with the requirements of 'Planning for Bushfire Protection 2006' for Inner Protection Area Requirements.*

12) Summary

This report consists of a bushfire risk assessment for the proposed residential development of alterations and additions at No 4 Ingleside Road, Ingleside.

The report concludes that the proposed development is on designated bushfire prone land and the legislative requirements for development in bushfire prone areas are applicable.

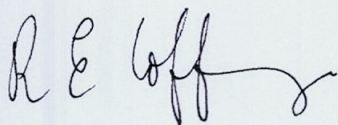
The proposed additions will be constructed to the minimum standards required in accordance with the guidelines of *Planning for Bushfire Protection 2006*.

This report has considered all of the elements of bushfire attack and provided the proposed development is constructed in accordance with the recommendations included in section 11 of this report, it is my considered opinion that the development satisfies the Objectives and Performance requirements of the *Building Code of Australia, Planning for Bushfire Protection 2006 and Australian Standard AS3959, 1999*.

Notwithstanding the precautions adopted, it should always be remembered that bushfires burn under a wide range of conditions and an element of risk, no matter how small always remains, and although the standard is designed to improve the performance of such buildings, there can be no guarantee, because of the variable nature of bushfires, that any one building will withstand bushfire attack on every occasion.

This Report has been prepared and submitted by R Coffey, FPA Australia, Certified Practitioner
Practitioner Certification No-PBD-PA-09328

This Report is a Bush Fire Hazard Assessment that provides the required information to assist Local Council and the Rural Fire Service in determining compliance in accordance with Planning for Bushfire Protection and AS 3959, 1999. The Local Council is the Final Consenting Authority.



Ron Coffey – Bushfire Safety Engineer
Grad I Fire E [Institute of Fire Engineers - 1973]
Grad Cert Fire Safety Eng [UWS - 2003]
Grad Dip Building in Bushfire Prone Areas [UWS – 2005]
Ass Prof Cert in Expert Evidence in the Land & Environment Court [UTS – 2005]
Corporate Member - Institute of Fire Engineers
Member - Fire Protection Association Australia



Planning for Bushfire Protection Pty Ltd
Fire Protection Association of Australia
BPAD-A Certified Practitioner/Certified Business
Certification No BPD-PA09328
02 99137907 0408220443

13) References

Australian Building Codes Board [2005]

Building Code of Australia
Volumes 1&2
Canprint

Australian Building Codes Board [2001]

Fire Safety Engineering Guidelines
Edition 2001
ABCB Canberra

D. Drysdale D. [1998]

Introduction to Fire Dynamics 2nd Edition
John Wiley & Sons Ltd

NSW Government Environmental Planning and Assessment Act [1979]

Part 79BA – Consultation and development Consent – Certain Bushfire Prone Land
NSW Government Printer

Planning NSW [2006]

Planning for Bushfire Protection 2006

A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners

This document provides the necessary planning considerations when developing areas for residential use in residential, rural residential, rural and urban areas when development sites are in close proximity to areas likely to be affected by bushfire events and replaces Planning for Bushfire Protection 2001.

[This document is essential reading: Download a copy from the RFS website or purchase a copy through the NSW Government Online Shop or phone 9228 6333](#)

Ramsay C & Rudolph L [2003]

Landscape and Building Design for Bushfire Prone Areas
CSIRO Publishing

Standards Australia [1999]

Australian Standards 3959
Australian Building Code Board
Second Edition 1999, amended 2001

[AS3959 – 1999 Construction of Buildings in Bushfire Prone Areas is available from SAI Global Limited Unit 10-16 South St Rydalmere – Phone 131242 or online from Standards Australia](#)

To view an abridged version of AS3959, 1999

- *go to NSW RFS Website*
- *Access Publications*
- *Access Building in Bushfire Prone Areas*
- *Click on Planning for Bushfire Protection*
- *Scroll down to the final document – Australian Standard AS3959, 1999 Summary Table*
- *Access Attachment for an abridged version*

Note: this abridged version is not complete and the standard needs to be referred to for full construction details.

14) Web-based Bushfire Attack Assessor Version 2.0



BUSHFIRE ATTACK ASSESSMENT REPORT

For Site Located At: **4 Ingleside Road Ingleside**
Created By: **Web-based Bushfire Attack Assessor Version 2.0**

1. User's Inputs

Local Government Area: **Pittwater**
In Alpine Areas: **No**
Vegetation: **Forests**
Effective Slope (degree): **12** (downslope)
Separation Distance (m): **17**

2. Program's Settings

Flame Width (m) : **100**
Flame Angle (degree): **12** (determined by the built-in algorithm)
Flame Temperature (K) : **1090**
Flame Emissivity: **0.95**
Surface Available Fuel Load (t/ha): **20**
Overall Fuel Load (t/ha): **25**
Fire Danger Index: **100** (Fire Weather Area: Greater Sydney Region)
Relative Humidity (%): **25**
Ambient Temperature (K): **308**
Heat of Combustion (kJ/kg): **18600**
Elevation of Receiver (m): **0.41** (determined by the built-in algorithm)

3. Program Outputs

Category of Attack: **Flame Zone** (potential flame contact)
Level of Construction Required: **Outside Scope of AS3959-1999**
Rate of Fire Spread (km/h): **5.49** (Noble et al., 1980)
Fire Intensity (kW/m): **70951**
Transmissivity: **1** (Fuss and Hammins, 2002)
Flame Length (m): **38.7** (RFS PBP, 2001)
Radiant Heat Flux (kW/m²): **76.03**

Assessment Date: **30/11/2009**

Assessed By: **R Coffey**

15) Inner Protection Area [IPA]

Asset Protection Zone [APZ] requirements

[i] Location:

The Inner Protection Area in this instance is the entire site where not built on.

[ii] Purpose:

The Inner Protection Area ensures that the presence of fuels, which could become involved in a fire, are minimised close to a development. Therefore the impact of direct flame contact and radiant heat on the development is minimised.

[iii] Depth:

The depth of the IPA is dependent upon the slope of the land. The greater the slope, the greater the intensity of any approaching fire and hence the depth required for the IPA.

[iv] Fuel Loadings:

It is more practical to determine the specifications of the IPA in terms of performance than in terms of a minimum fuel loading.

The performance of the Inner Protection Area must be such that:

- there is minimal fine fuel at the ground level which could be set alight by a bushfire; and
- any vegetation in the Inner Protection Area does not provide a path for transfer of fire to the development – that is, the fuels are discontinuous.

The presence of a few shrubs or trees in the Inner Protection Area is acceptable provided that they:

- do not touch or overhang the building;
- are well spread out and do not form a continuous canopy;
- are not species that retain dead material or deposit excessive quantities of ground fuel in a short period or in a danger period; and
- are located far enough away from the house so that they will not ignite the house by direct flame contact or radiant heat emission.

Wood piles, wooden sheds, combustible material storage areas, large areas/quantities of garden mulch, stacked flammable building materials etc should not be permitted in the Inner Protection Area.

16) Fences and Gates

Level 1 and 2 houses (as per AS3959)

1. Where a timber fence does not connect to a dwelling and has a minimum of 1 metre separation from the dwelling then a fence may be constructed from hardwood, or non-combustible material.
2. Where a fence connects directly to or has less than 1 metre separation from a dwelling it should be constructed from non-combustible materials only.
3. In all cases where timber fences are proposed, care should be taken in the selection, location and maintenance of landscaping adjoining the fence. Unmanaged landscaping could promote fire activity due to ember, radiant heat and direct flame contact and then further impact timber fencing.

The above is based on the premise that construction for level 1 & 2 dwellings is sufficiently removed from the main fire front and won't be subjected to direct flame contact or extreme levels of radiant heat that may cause ignition of combustible materials. However, dwellings could still be exposed to significant levels of ember attack and relatively high levels of radiated heat that may cause fences to ignite.

Level 3 or Flame Zone

Dwellings assessed as requiring level 3 construction or located within the flame zone shall have fencing constructed from non-combustible materials e.g. Sheet metal or masonry. This is due to the increased likelihood of direct flame contact causing ignition of combustible materials which may provide a fire path to the dwelling.

17) Acceptable Fire Retardant Timber Species

Level 1 AS3959, 1999	Level 2 AS3959	Level 3 AS3959, 1999
<i><u>This list only applies where AS3959 requires Fire Retardant Treated Timber</u></i>	<i><u>All external exposed timber must be Fire Retardant Treated Timber</u></i>	<i><u>All external exposed timber must be Fire Retardant Treated Timber</u></i>
Black-butt Turpentine Silver Top Ash Spotted Gum Red Iron Bark Balau [Selangan] Tallow-wood Kwila Red River Gum Forest Red Gum Yellow Stringbark	Black-butt Turpentine Silver Top Ash Spotted Gum Red Iron Bark Balau [Selangan] Tallow-wood Kwila Red River Gum Forest Red Gum Yellow Stringbark	Black-butt Turpentine Silver Top Ash Spotted Gum Red Iron Bark Kwila Red River Gum

The lists of timbers above meet the requirements of AS3959, 1999 for the levels of construction indicated and are therefore suitable for use for certain levels of construction as specified in AS3959, 1999

For additional information see ‘Development Control Note 001 Use of Fire-Retardant-Treated Timber’ available from and issued by The NSW Rural Fire Service.

APPLICATION FORM

Made under the Environmental Planning and Assessment Act 1979, Sections 81A(2), 84A, 85A, & 109C,
Environmental Planning and Assessment Regulation 2000, clauses 126, 139.

To complete this form, please place a tick (✓) in the boxes and complete sections as appropriate.
No Faxed applications please.

APPLICATION SOUGHT

- ☒ Construction Certificate
☒ Principal Certifying Authority
☐ Complying Development Certificate
- ☐ NSW Housing Code
(SEPP Exempt & Complying
Development Code)
☐ Council existing Exempt & Complying
Development Policy

Office Use Only

CC: 159/2010
CDC:
Job: WIN 15A-10
Date Receipt:
12/7/10

SUBJECT LAND

Address 4 INGLESIDE RD INGLESIDE
Lot No 2 DP 1137577 SP _____ Vol/Fol, Etc _____

DETAILS OF THE APPLICANT

Name / Company ALASTAIR DUNCAN Contact Person ALASTAIR
Mailing Address P.O. Box 243 FORESTVILLE
Postcode 2087 State NSW
E-mail adpsa@y7mail.com Tel _____ Mobile 0407955113
Applicant Signature [Signature] Date 5-7-2010

CONSENT OF OWNER(S)

I/ We as the owner/s of the above property authorise for Mark Wysman to provide Construction or Complying
Development Certification and to act as the Principal Certifying Authority for the subject building works,
including site inspections and to lodge the Notice of Commencement/Appointment of the Principal Certifying
Authority with the relevant Council.

Name / Company Kate Williams George Town Contact Person _____
Owner's Address 4 Ingleside Rd,
Ingleside, Sydney Postcode 2101 State NSW
Mailing Address _____

Postcode _____ State _____
E-mail kwilliams@comen.com.au Tel _____ Mobile 0438 438074
0418 265927
Owner/s Signature/s [Signature] Date 7/7/10
[Signature] Date 7/7/10

DESCRIPTION OF WORK

Type of work proposed:

☐ New Building ☒ Additions / Alterations

Class of Building under Building Code of Australia 1a - 106.

Description of the work NEW POOL, DOUBLE GARAGE, GYM
& STORE ROOM. NEW FRONT FENCE

Construction Cost of Works \$ 250,000

DETAILS OF THE RELEVANT CONSENTS

Consent No. N0060/10 Date issued: 21-4-10

Construction Certificate No. _____ Date issued: _____

Complying Development Certificate No. 139/2010. Date issued: 19.7.10

STATISTICAL RETURN FOR AUSTRALIAN BUREAU OF STATISTICS

What is the site area of land?

In square metres 2929

Gross floor area of existing building? NIL if building does not exist.

In square metres 620m²

What is the existing building or site used for at present?

Main Uses Res. Retail

Other Uses 1

Does the site contain dual occupancy?

☐ Yes ☒ No

Gross floor area of proposed building?

In square metres 46m²

What will the proposed building be used for?

Main Uses Res. Retail

Other Uses .

HOW MANY DWELLINGS:-

Are pre-existing at this property? 1 Are proposed to be demolished? 0

Are proposed to be constructed? 0 Are attached to an existing building? 0

Are attached to a new building? 0 How many storeys will the building consist of? 1

WHAT ARE THE MAIN BUILDING MATERIALS (PLEASE TICK APPROPRIATE BOXES)

WALLS

- ☒ Full Brick
☐ Brick Veneer
☐ Concrete or Stone
☐ Steel
☐ Fibrous Cement
☐ Timber/weatherboard
☐ Cladding- aluminium
☐ Other

ROOF

- ☐ Aluminium
☐ Concrete of Slate
☐ Tile
☐ Fibrous Cement
☒ Steel
☐ Other

FLOOR

- ☒ Concrete or slate
☐ Timber
☐ Other
☐ Unknown

FRAME

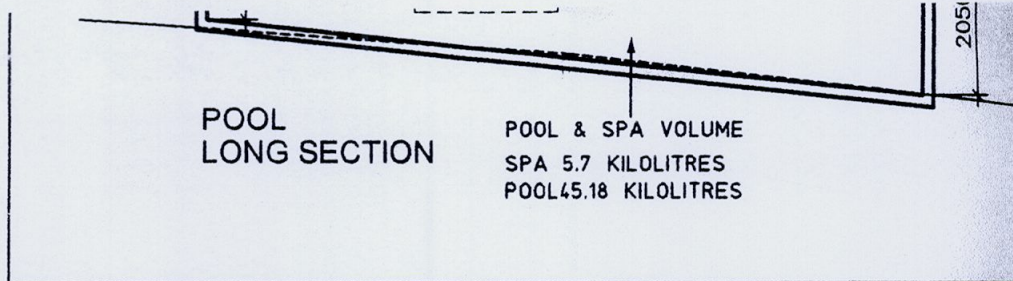
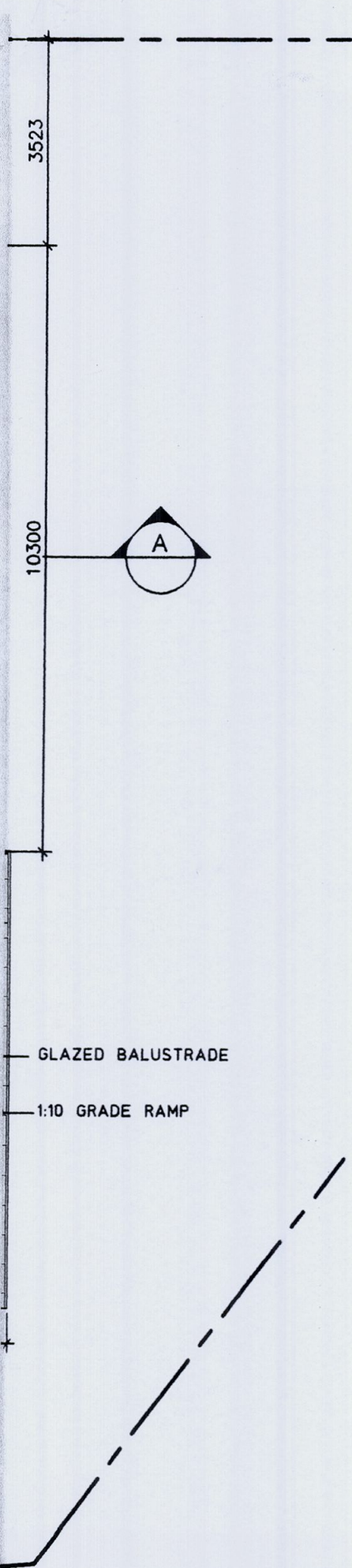
- ☒ Timber
☐ Steel
☐ Aluminium
☐ Other

PRIVATE POLICY & TERMS

All information provided by the owner / applicant on this form will be taken to be accurate & correct. CERTGROUP Building Certifiers does not accept any responsibility for any intentional or unintentional error or omission made by the owner / applicant on this form. The information you provide in this notice is required under the Environmental Planning and Assessment Act 1979 if you erect a building. The information will be held by the consent authority and by the council (if the council is not the consent authority). Please contact CERTGROUP Building Certifiers if the information you have provided in this notice is incorrect or changes.

CERTGROUP Building Certifiers ■ tel 9944 8222 ■ fax 99446330
info@certgroup.com.au ■ www.certgroup.com.au ■ PO Box 870 Narrabeen NSW 2101 ■ abn 47 121 229 166

Construction Certificates ■ Complying Development Certificates ■ Building Code & Planning Consultants



SYDNEY WATER APPROVED

1. Position of structure in relation to Sydney Water's assets is satisfactory.
2. Connections to Sydney Water sewer/water services may only be made following the issue of a permit to a licenced plumber/drainier.
3. It is the owner's responsibility to ensure that all proposed fittings will drain to Sydney Water's sewer.
4. Any Plumbing and/or Drainage Work to be carried out in accordance with the Sydney Water Act 1994, AS 3500 and the NSW Code of practice.
5. Gullies, Inspection Shafts and Boundary Traps shall not be placed under any Roof, Balcony, Verandah, Floor or other cover unless otherwise approved by Sydney Water.
6. Property No. 542 7760

Reece, Brookvale,
Quick Check Agent on behalf of
SYDNEY WATER

Per. Reece 25.6.10

APPROVED

NOTE: 1
CONJUNCTION

CERTGROUP BUILDING CERTIFIERS
APPROVED CONSTRUCTION CERTIFICATE
PLAN / DOCUMENTATION

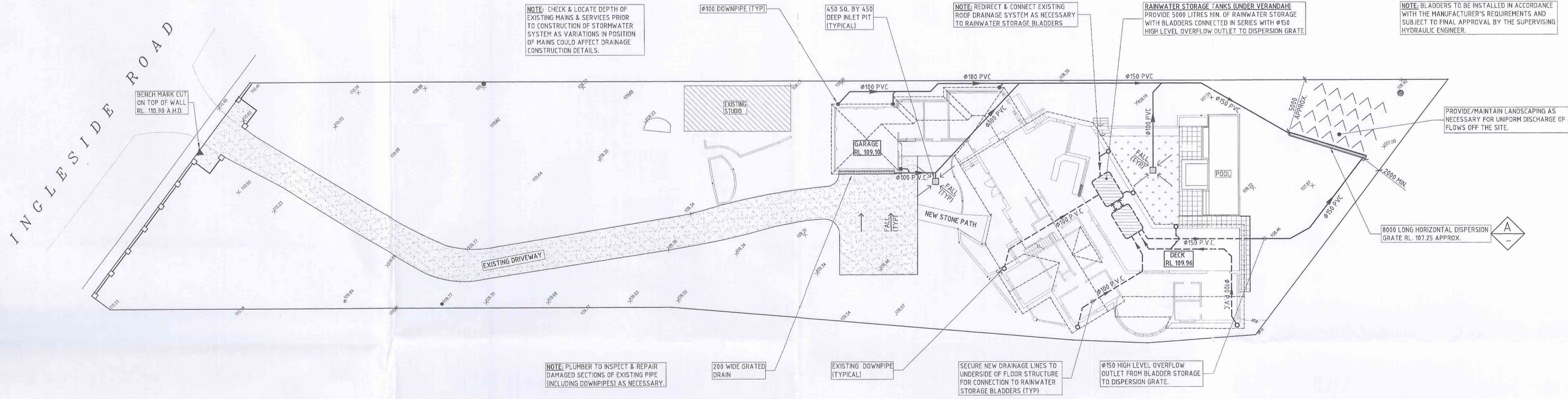
Levy Online Payment Receipt

LONG SERVICE
BUILDING & CONSTRUCTION

Thank you for using our Levy Online payment system. Your payment for this building application has been processed.

Applicant Name:	ALASTAIR DUNCAN
Levy Application Reference:	5006751
Application Type:	DA
Application No.:	N0060/10
Local Government Area/Government Authority:	PITTWATER COUNCIL
Site Address:	4 INGLESIDE ROAD
	INGLESIDE
	NSW
	2101
Value Of Work:	\$250,000
Levy Due:	\$875
Levy Payment:	\$875
Online Payment Ref.:	594405594
Payment Date:	12/07/2010 9:17:33 AM

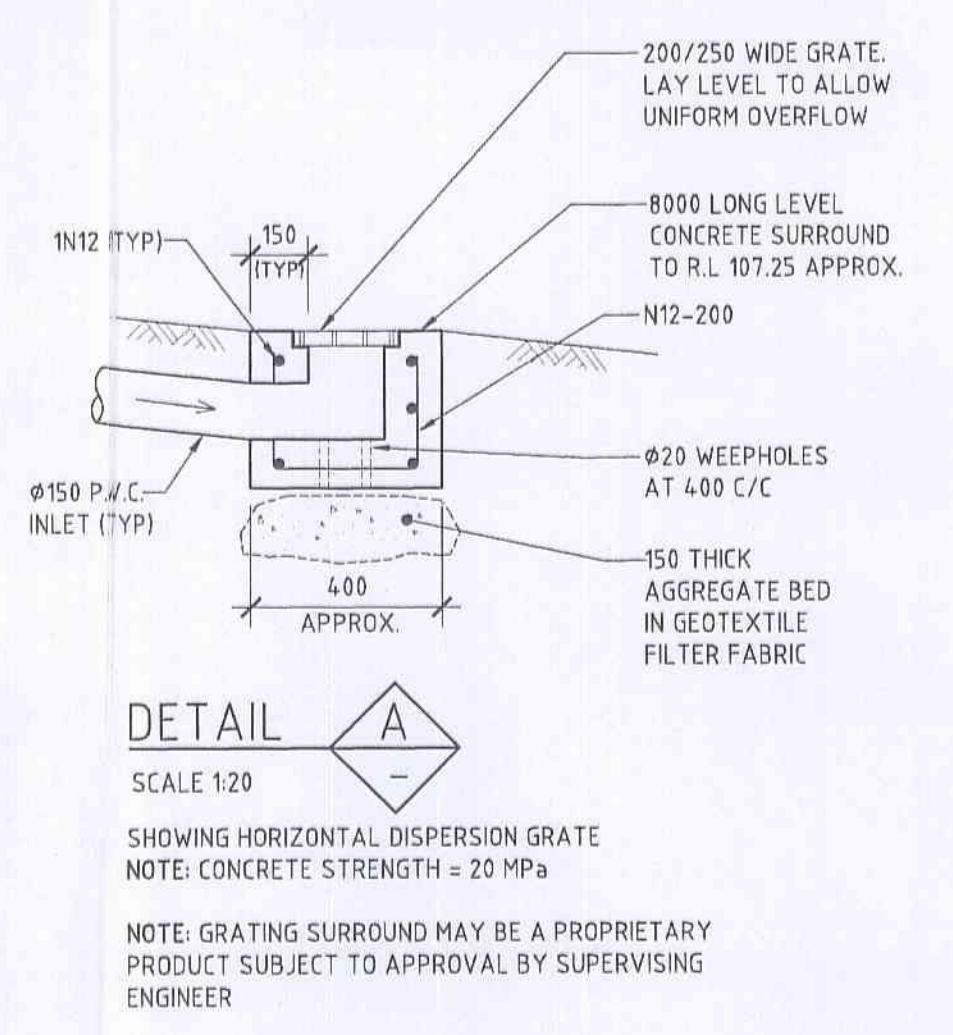
CERTGROUP BUILDING CERTIFIERS
APPROVED CONSTRUCTION CERTIFICATE
PLAN / DOCUMENTATION



SITE DRAINAGE PLAN
SCALE 1:200

- DRAINAGE NOTES**
1. DASHES EXISTING GROUND LEVEL.
 2. FALL STORMWATER PIPES AT 1% MIN UNLESS OTHERWISE NOTED.
 3. SUB-SOL DRAINAGE TO BE CONNECTED TO THE STORMWATER SYSTEM AS NECESSARY.
 4. SURFACE GRATES 450 SQ. UNLESS OTHERWISE NOTED.
 5. ALL STORMWATER PIPES TO HAVE SOLVENT CEMENT WATERTIGHT JOINTS.
 6. CHECK & LOCATE DEPTH OF EXISTING MAINS & SERVICES PRIOR TO CONSTRUCTION OF STORMWATER SYSTEM AS VARIATIONS IN POSITION OF MAINS COULD AFFECT DRAINAGE CONSTRUCTION DETAILS.
 7. INSPECTIONS MUST BE UNDERTAKEN BY THIS OFFICE (BY PRIOR ARRANGEMENT WITH ENGINEER) DURING CONSTRUCTION TO ENABLE FULL CERTIFICATION UPON COMPLETION OF WORKS.
 8. ALL CONSTRUCTION OF COUNCIL DRAINAGE WORKS TO COMPLY WITH COUNCIL STANDARD.
 9. REMOVE REDUNDANT DRAINAGE PITS AND SEAL PIPES.
 10. PIT DECKING TO BE HALF THE OUTGOING PIPE DIAMETER. CONCRETE FOR BENCHING TO BE 20 MPa MASS CONCRETE.
 11. APPROVED PRE-CAST PITS MAY BE USED.
 12. CONNECTIONS TO DRAINAGE PITS SHALL BE MADE IN A TRADESMAN LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENDURE A SMOOTH FINISH.
 13. ALL PIPES TO BE LAID ON COMPACTED FINE CRUSHED ROCK OR SAND BEDDING 75mm THICK & PIPES BACKFILLED WITH COMPACTED SAND TO 300mm ABOVE TOP OF PIPE.
 14. RAINWATER STORAGE REQUIRES SIGNIFICANT MAINTENANCE DUE TO POTENTIAL HIGH POLLUTANT LOAD. FILTERS AND POLLUTANT TRAPS SHOULD BE CHECKED AFTER LARGE STORM EVENTS AND CLEANED EVERY 6 MONTHS.
 15. FIRST FLUSH DEVICES TO BE PROVIDED TO EACH DOWNPIPE OR IF PREFERRED A SINGLE DEVICE TO BE PROVIDED ON THE UPSTREAM SIDE OF STORAGE TANK FOR EACH PIPED INLET TO RAINWATER STORAGE. A SINGLE FIRST FLUSH DEVICE MAY BE PROVIDED IN LIEU OF EACH DOWNPIPE.
 16. UNDERPIN EXISTING BUILDINGS AND STRUCTURES AS NECESSARY TO FUTURE DETAIL. PRIOR TO CONSTRUCTION OF PROPOSED DRAINAGE LINE. TRENCH SHORING TO BE PROVIDED AS NECESSARY DURING CONSTRUCTION OF DRAINAGE LINE.
 17. PIPE ROUTES SHOWN ARE INDICATIVE ONLY AND SHOULD BE AS NECESSARY ACCORDING TO SITE CONDITIONS, TREE POSITIONS ETC. CONFIRM SIGNIFICANT CHANGES IN PIPES SYSTEM DETAILS WITH SUPERVISING ENGINEER PRIOR TO COMMENCEMENT OF DRAINAGE CONSTRUCTION WORKS.
 18. PLUMBING AND DRAINAGE WORKS TO COMPLY WITH AS-3500, THE NATIONAL DRAINAGE & PLUMBING CODE.

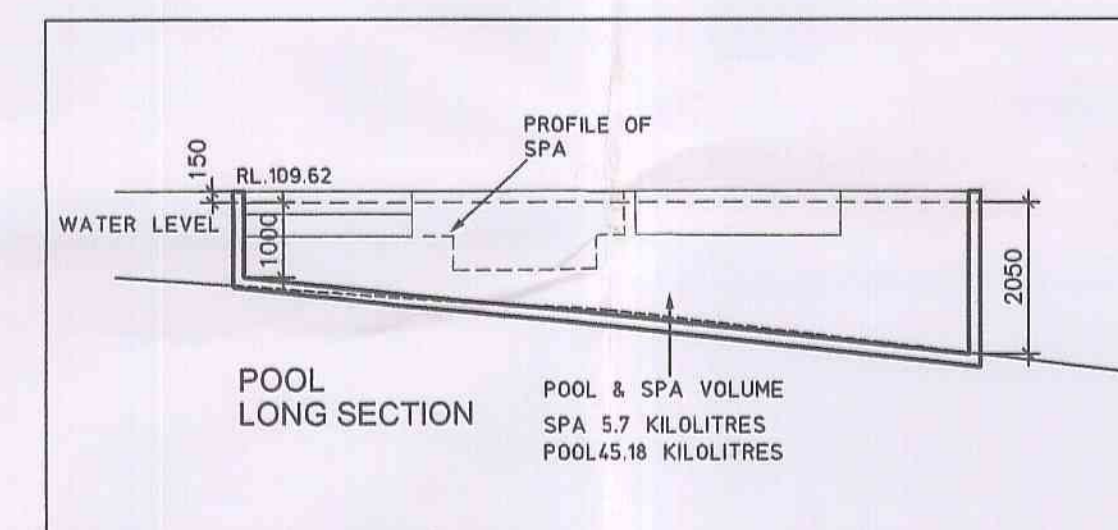
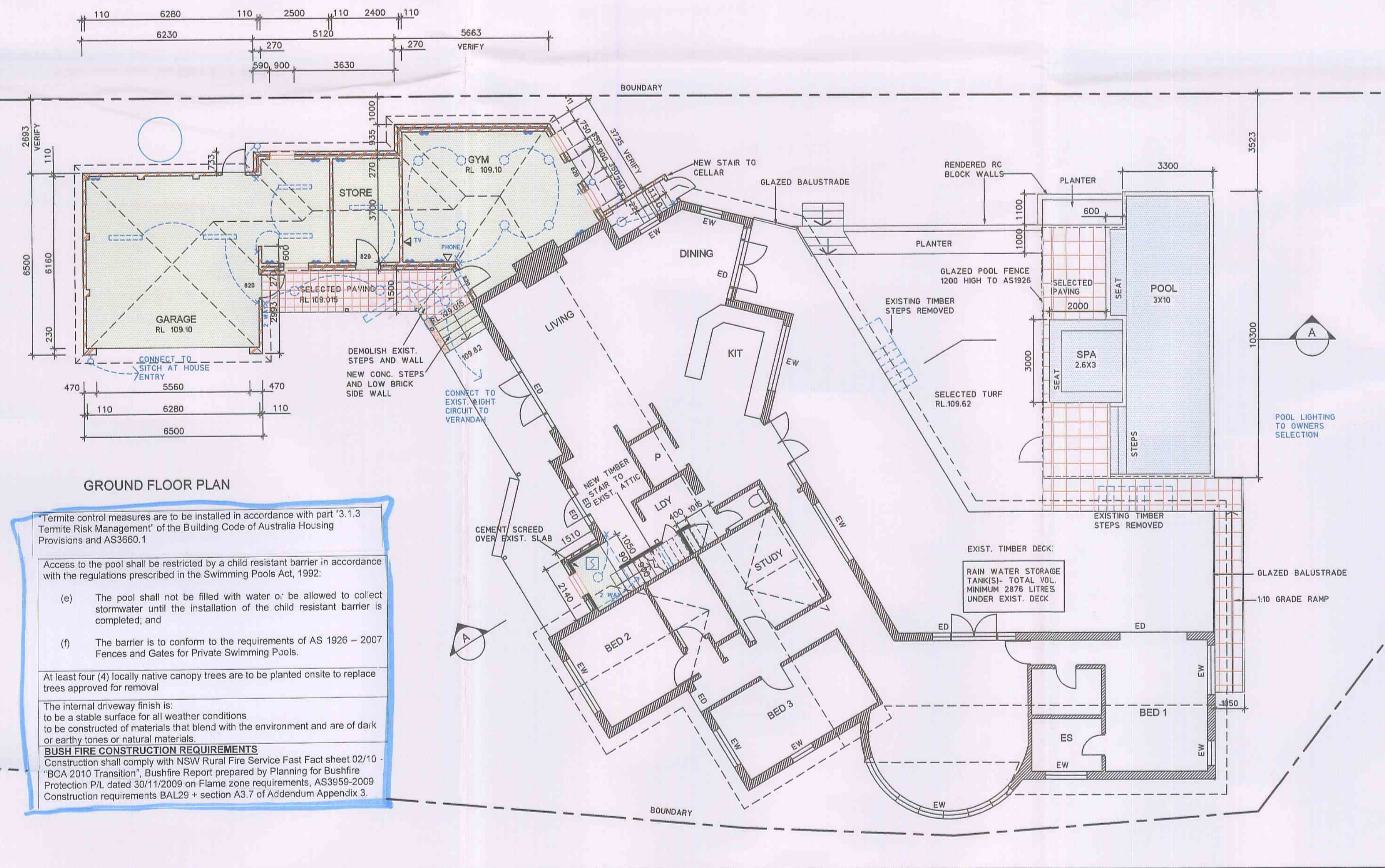
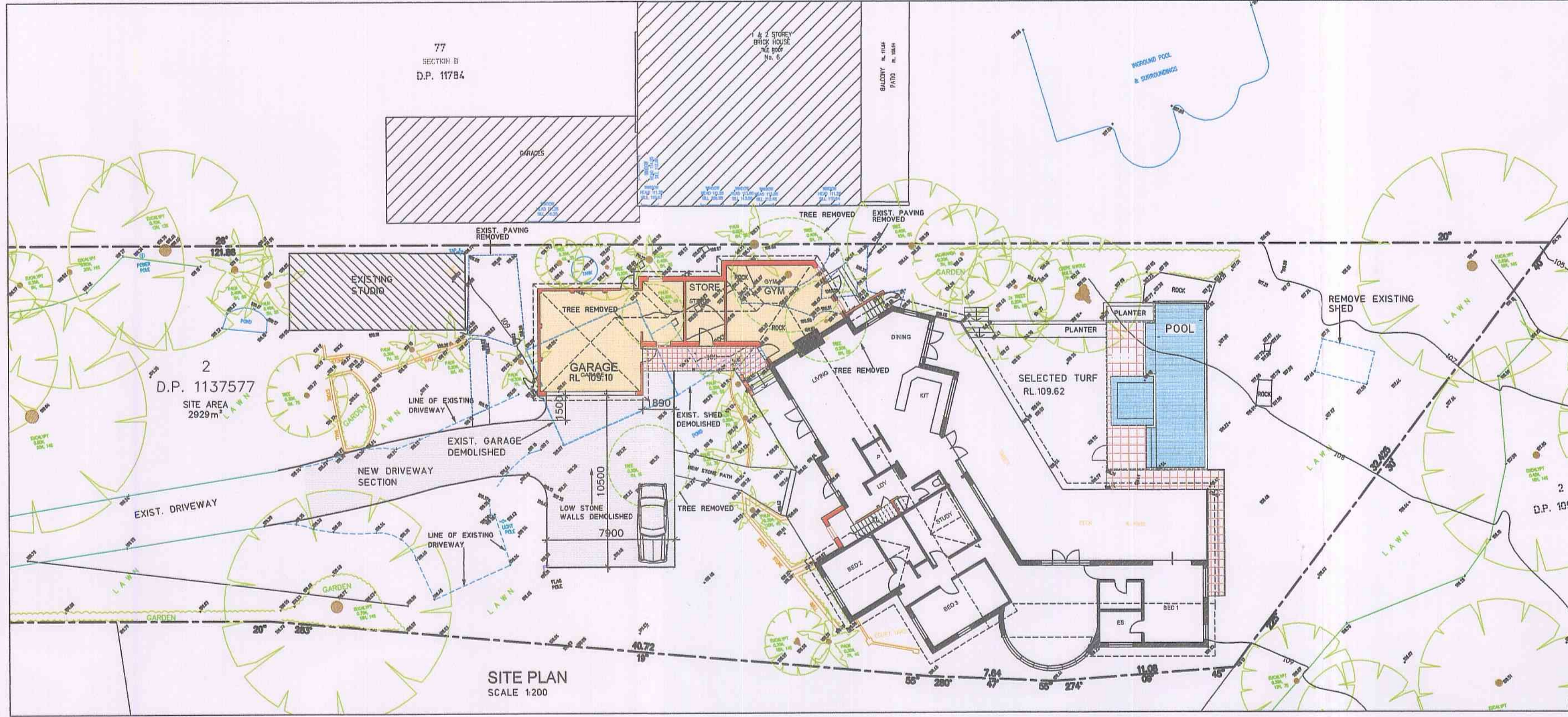
- RAINWATER RE-USE NOTES AND SPECIFICATIONS**
1. ROOF WATER ONLY TO BE DRAINED TO THE RAINWATER STORAGE TANKS.
 2. THE RAINWATER STORAGE TANKS NEEDS TO BE CONNECTED FOR RE-USE AS REQUIRED BY THE OWNER.
 3. RAINWATER STORAGE TANKS TO BE CONFIGURED IN ACCORDANCE WITH SYDNEY WATER SPECIFICATIONS GUIDELINES FOR RAINWATER TANKS ON RESIDENTIAL PROPERTIES.
 4. PROVIDE MAINS 'TOP-UP' SUPPLY TO RAINWATER STORAGE TANKS. MAINS 'TOP-UP' ZONE TO BE BASED ON THE DAILY NON-POTABLE USAGE THAT MAY BE EXPECTED FROM THE TANK.
 5. PROVIDE A MECHANICAL PUMPING ARRANGEMENT IN SOUND-PROOF HOUSING TO PUMP SUPPLIERS SPECIFICATION TO SUIT INTENDED USAGE OF RAINWATER STORAGE. PUMPING ARRANGEMENTS MUST COMPLY WITH EPA GUIDELINES.
 6. INLETS TO RAINWATER TANKS MUST BE SCREENED TO PREVENT THE ENTRY OF FOREIGN MATTER, ANIMALS OR INSECTS.
 7. A SIGN MUST BE AFFIXED TO THE RAINWATER TANKS CLEARLY STATING THAT THE WATER IN THE TANK IS RAINWATER AND IS NOT TO BE USED FOR HUMAN CONSUMPTION.
 8. RAINWATER TANKS TO BE PLACED ON A STRUCTURALLY ADEQUATE BASE IN ACCORDANCE WITH THE MANUFACTURER'S OR STRUCTURAL ENGINEER'S DETAILS.
 9. THE TANKS MUST NOT BE INSTALLED OVER ANY MAINTENANCE STRUCTURE OR FITTINGS USED BY A PUBLIC AUTHORITY.
 10. RAINWATER TANKS AND ASSOCIATED PLUMBINGWORKS TO BE INSTALLED AND CONFIGURED BY A LICENSED PLUMBER. PUMP TO BE INSTALLED BY A LICENSED ELECTRICIAN.



CERTGROUP BUILDING CERTIFIERS
APPROVED CONSTRUCTION CERTIFICATE
PLAN / DOCUMENTATION

WARNING
PLEASE NOTE: A comprehensive check of the Structural Design has not been carried out. The stamping of this STRUCTURAL PLAN by CERTGROUP BUILDING CERTIFIERS does not relieve the Structural Engineers responsibility to certify the structural adequacy of this development including any variations that may occur during construction.

	DATE	REVISION	BY	CHK	T. J. TAYLOR CONSULTANTS PTY LIMITED <i>Consulting Civil and Structural Engineers</i> A.C.N. 100 360 054 22 Fisher Road, Dee Why, NSW 2099 Telephone: 9982 7092 Fax: 9982 5898 STORMWATER MANAGEMENT PLAN 4 INGLESIDE ROAD, INGLESIDE				 The Institution of Professional Engineers Australia	
A	JULY 10	ABSORPTION TRENCH DELETED	DK	DMS						



CERTGROUP BUILDING CERTIFIERS
CONSTRUCTION CERTIFICATE No. 1391200
Consent No. 1391200 Date: 21/10/10
Plans or documentation associated with the issue of the Construction Certificate
Mark Wyman Accreditation No. 13PB0448

WARNING
PLEASE NOTE: The stamping of this plan by CERTGROUP BUILDING CERTIFIERS does not relieve the Applicant's responsibility to obtain approval from Sydney Water or other Authority or utilities prior to commencement of any works.
DIAL BEFORE YOU DIG 1100

CERTGROUP BUILDING CERTIFIERS
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PLAN / DOCUMENTATION

- ELECTRICAL LEGEND**
- DOUBLE GPO
 - SINGLE GPO
 - PHONE outlet
 - TV OUTLET
 - WALL LIGHT (height above FL)
 - CEILING LIGHT
 - LIGHT SWITCH
 - SMOKE ALARM TO BCA AND AUSTRALIAN STANDARDS REQUIREMENTS LOCATIONS ON PLAN INDICATIVE ONLY

THIS DRAWING IS COPYRIGHT OF THE ARCHITECTS
DO NOT USED SCALED DIMENSIONS

SITE AREA	2929 SQ.M
EXISTING DWELLING & OUTBUILDINGS (INCL. PAVING)	620.1 SQ.M
EXISTING DRIVEWAY	259.8 SQ.M
TOTAL EXIST. SITE COVER	879.9 SQ.M
PROPOSED DWELLING & OUTBUILDINGS (INCL. PAVING)	566.9 SQ.M
PROPOSED REALIGNED DRIVEWAY	301.8 SQ.M
TOTAL NEW SITE COVER	868.7 SQ.M

LEGEND
EW DENOTES EXISTING WINDOW
ED DENOTES EXISTING DOOR

SUMMARY OF BASIC COMMITMENTS - ALTERATIONS AND ADDITIONS
This is a summary of the BASIC Commitments as detailed in the BASIC Certificate. Refer to the CURRENT BASIC Certificate for complete details. For definitions refer to basic.nsw.gov.au

FIXTURES AND SYSTEMS
Type 1 N/A
Hot Water System (if applicable)
Type 1 N/A
Lighting
A minimum of 40% of new or altered light fixtures must be fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.
Fixtures
All new or altered water fixtures (bath, shower, toilet, or tap) must have a minimum 3 Star water rating.
CONSTRUCTION
Insulation to be installed to all new or altered floors, walls, ceilings and roofs as described below. The recommended values are standard construction practice and will exceed or be equal to minimum BASIX requirements.

Floors	Concrete	Added R Value	Other Specifications
Walls	Cavity Brick	none	
Ceilings	Adjacent to roof space	R2.5	
Roofs	Metal	Foil + R1.0	Medium colour

Glazing to all new or altered windows or glazed doors to be as described OR, no greater than the U and SHGC values listed. All values are as calculated in accordance with NRC conditions.

Frames	Glazing	U Value	SHGC Value
Aluminium	Single clear	7.83	0.75

Shading details (eaves, sunshades, awnings, blinds etc) are those as drawn on the plans and elevations.

POOL AND SPA
Rainwater Tank Volume (min) L: 2876 Harvested Pool Area (min) m²: 240
Rainwater tank to be connected to a tap located with 10 m of the Pool
Pool Capacity: 45.18 KL Spa Capacity: 5.7 KL
Pool & Spa cover and timer: Yes Pool heating system: Gas

CERTGROUP BUILDING CERTIFIERS
CONSTRUCTION CERTIFICATE
PO Box 404, Cammeray NSW 2062
email: arctcd@gmail.com.au
T: (02) 9410 3411
F: (02) 9475 4299
M: 0414 256 939

WARNING
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DIAL BEFORE YOU DIG 1100

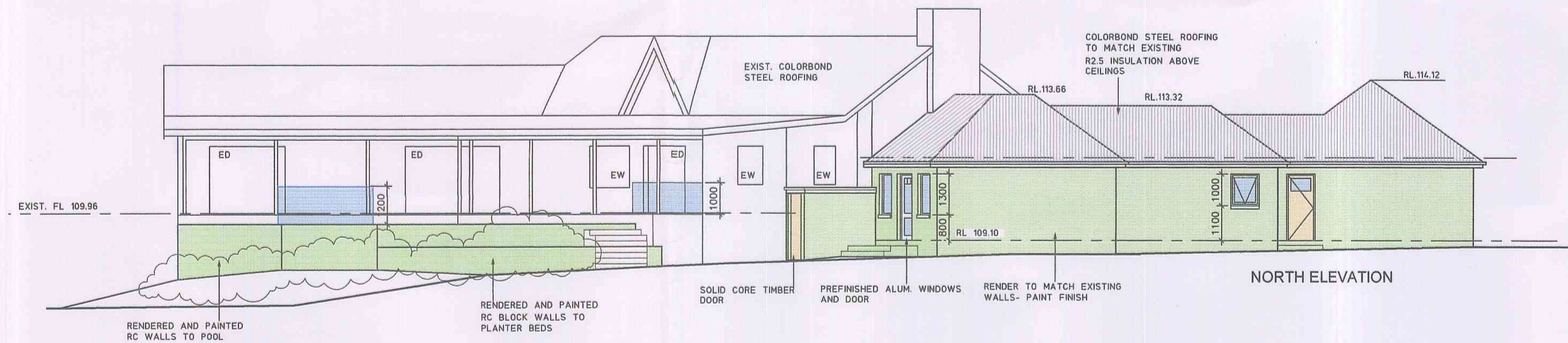
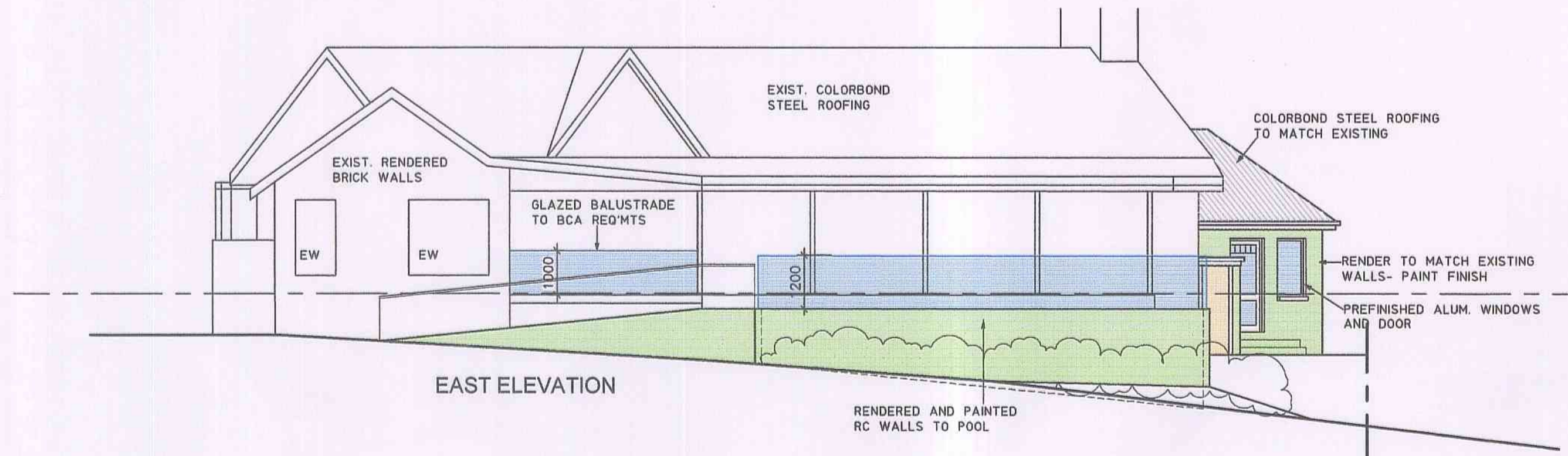
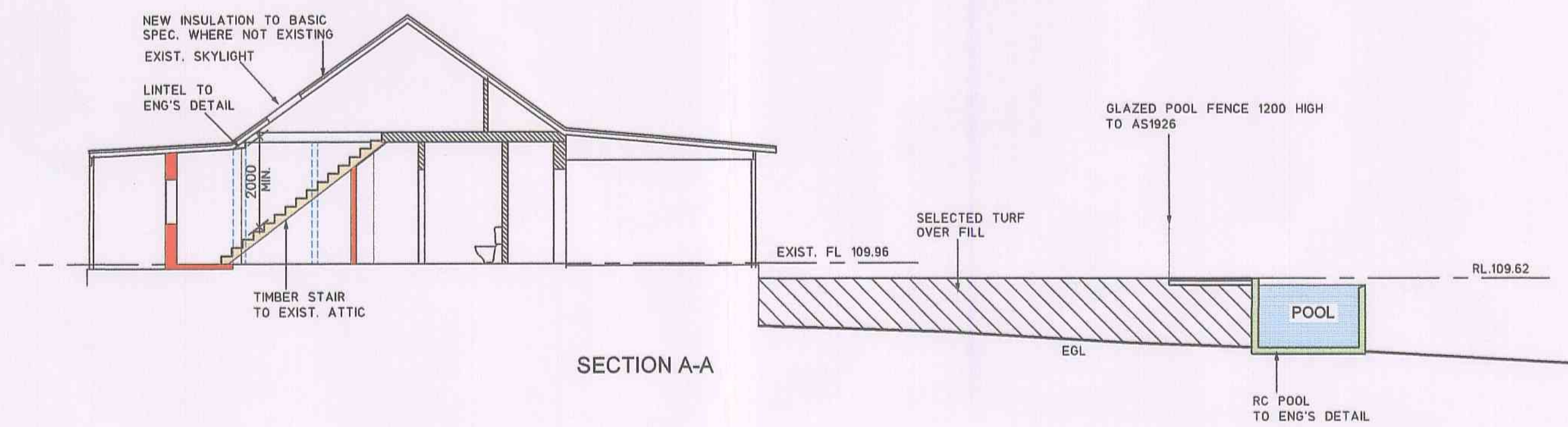
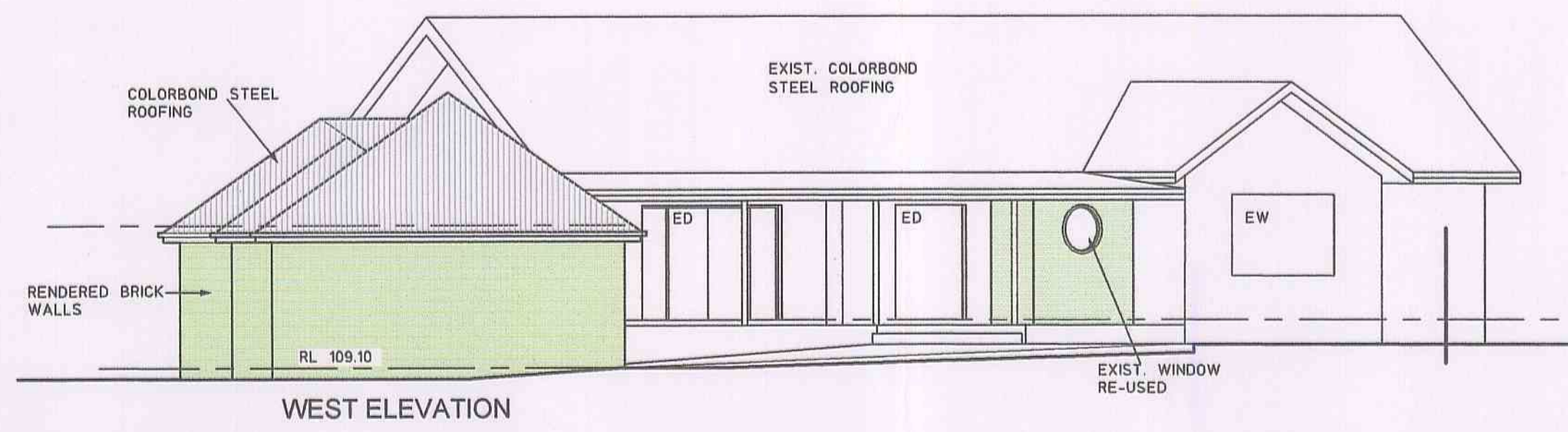
CERTGROUP BUILDING CERTIFIERS
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ELECTRICAL LEGEND
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PHONE outlet
TV OUTLET
WALL LIGHT (height above FL)
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LIGHT SWITCH
SMOKE ALARM TO BCA AND AUSTRALIAN STANDARDS REQUIREMENTS LOCATIONS ON PLAN INDICATIVE ONLY

PROJECT
ALTERATIONS AND ADDITIONS
TO EXISTING RESIDENCE
4 INGLESIDE RD., INGLESIDE

DRAWING
PLANS

SCALE	DATE	APPROVED	ISSUE
1:100 1:200	JAN 10		B



LEGEND
EW DENOTES EXISTING WINDOW
ED DENOTES EXISTING DOOR

B 3.7.10 CONSTRUCTION CERTIFICATE
A 5.2.10 DEVELOPMENT APPLICATION

ISSUE DATE ISSUE / AMENDMENT

HSA
architects

Artist Pty. Ltd. trading as HSA Stalder & Associates
ABN 75 001 573 650
PO Box 404, Cammeray NSW 2062
email : arted@ozemail.com.au
T: (02) 9410 3411
F: (02) 9475 4299
M: 0414 256 939

PROJECT
ALTERATIONS AND ADDITIONS
TO EXISTING RESIDENCE
4 INGLESIDE RD., INGLESIDE

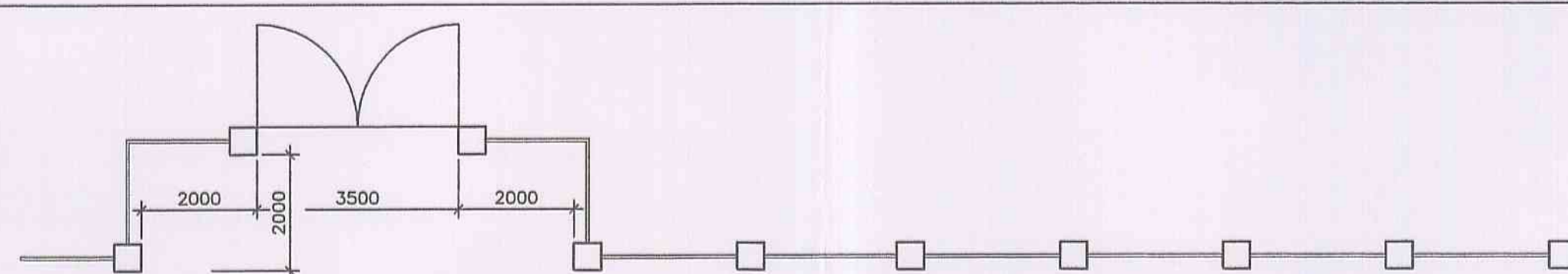
DRAWING
SECTIONS AND ELEVATIONS

CERTGROUP BUILDING CERTIFIERS
APPROVED CONSTRUCTION CERTIFICATE
PLAN / DOCUMENTATION

57909.02

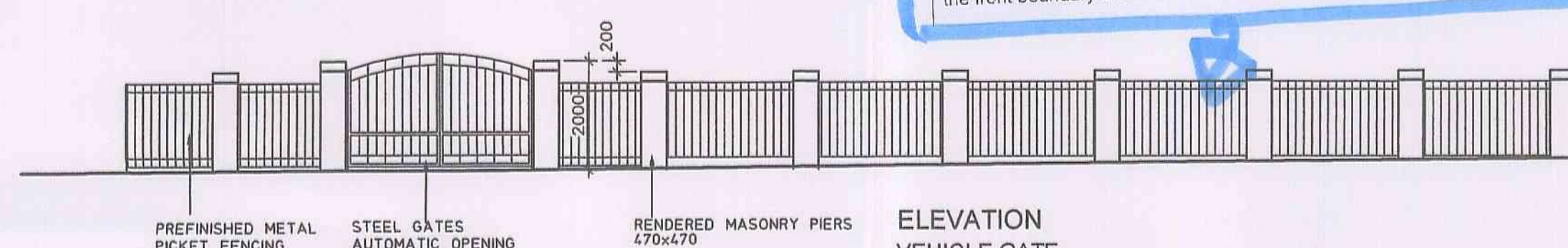
ISSUE
B

SCALE 1:100 DATE JAN 10 APPROVED



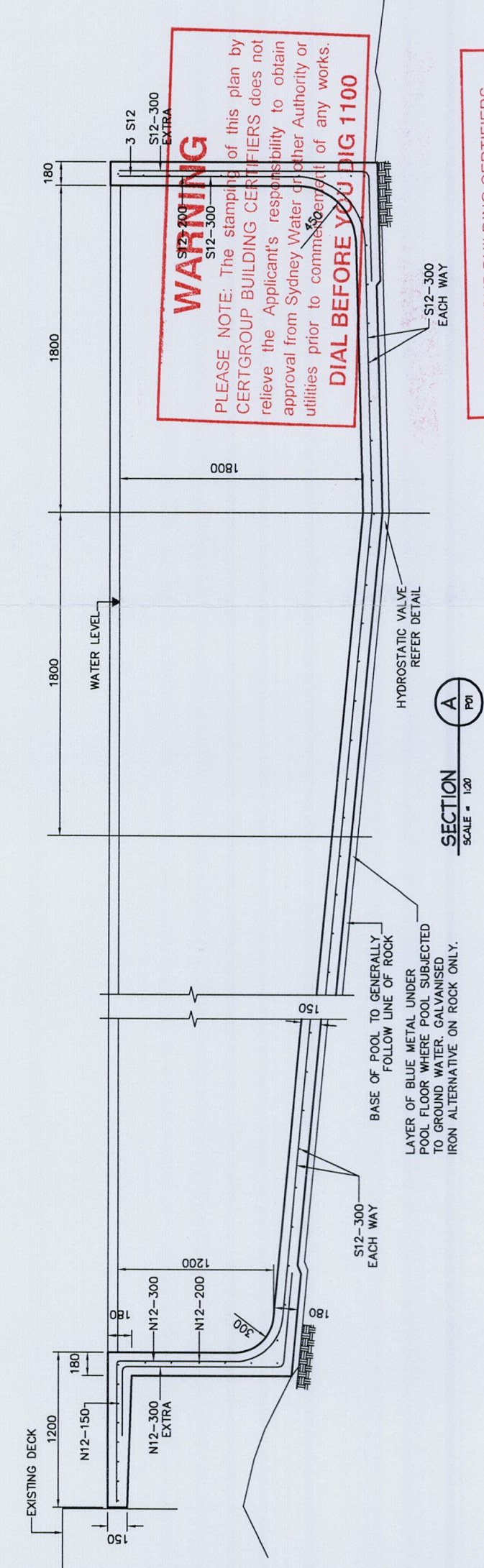
PLAN
VEHICLE GATE
AND FRONT FENCE

The front fence is to be setback 1m from the front boundary and screen planting to the minimum mature height of 1.8m is to be provided in between the front boundary and the front fence.



ELEVATION
VEHICLE GATE
AND FRONT FENCE

NOTE: PROVIDE ACCESS HOLES
FOR NATIVE WILDLIFE AT BASE
OF FENCE - 150X100MM AT 6M
CENTRES



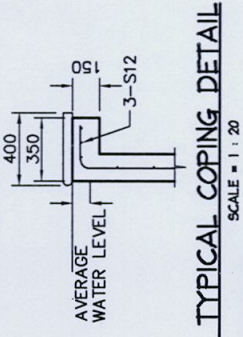
WARNING

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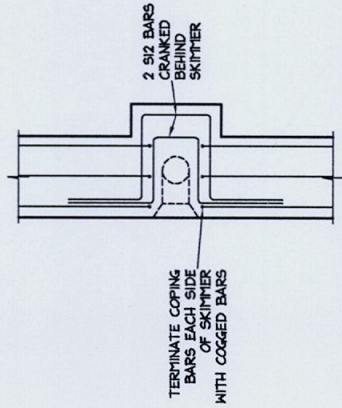
ASSUMED FOUNDATION CLASSIFICATION FOR DESIGN PURPOSES - 'A'

ASSUMED BEARING STRATA FOR DESIGN PURPOSES - ROCK, 600 kPa

FOUNDING MATERIAL TO BE CONFIRMED BY BUILDER.



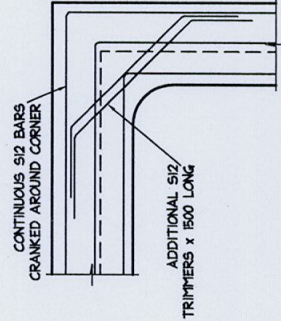
SECTION AT SKIMMER
SCALE = 1:20



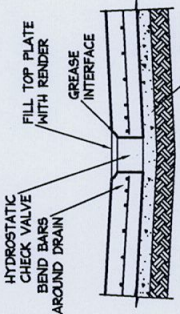
PLAN ON SKIMMER
SCALE = 1:20

- CONCRETE PIERS (WHERE REQUIRED):
- PIERS TO BE 400mm DIAMETER
 - FOUNDED IN NATURAL GROUND
 - FOR DEPTH LESS THAN 1200mm UNREINFORCED
 - FOR DEPTH GREATER THAN 1200mm AND LESS THAN 3000mm REINFORCED WITH 4 S12 AT 400
 - FOR DEPTH GREATER THAN 3000mm REFER TO ENGINEER

TYPE 'FP1' FOOTING PIER SECTION
SCALE = 1:20



CORNER DETAIL
SCALE = 1:20



HYDROSTATIC VALVE DETAIL
SCALE = 1:20

POOL NOTES:

GENERAL NOTES:

G1 - Pool design and construction to be in accordance with AS 2783 (1994) and all other relevant Australian Standards.

G2 - Site plan dimensions are to the water face UNO & do not include finishes. Do not scale from the drawings. The overall dimensions shall be checked on site.

G3 - The foundation material must be uniform, stable, natural ground with a minimum 150 mm extra depth below the finished ground level. If existing fill or other material is encountered, the Geotechnical Engineer is to inspect all excavations to determine their suitability.

G4 - Walkways have been designed for a distributed load of 2 kPa. No additional loads are permitted without prior approval from the Engineer. The walkways have not been designed to support masonry walls unless noted otherwise.

G5 - Excavation is not permitted within 2 m of an existing structure without the prior approval of the Engineer unless shoring &/or underpinning details have been provided.

G6 - The excavation base is to be lined with a 75 mm blue metal drainage layer with vertical membrane over. If base of excavation is entirely on sand, hardcore shall be used over sand. The hydrostatic valve shall be installed at the base of the pool with blue metal all round. Refer to typical details.

CONCRETE NOTES:

C1 - All workmanship and materials shall be carried out in accordance with AS 3600 & AS 2783. Concrete design strength (F_{cd}) at 28 days to be: 32 MPa.

C2 - Max. aggregate size is to be 10 mm. Max. slump 80 mm. Cement type A.

C3 - Concrete placed in contact with the (excavation) ground to have 65mm minimum cover to reinforcement. Concrete placed in contact with the water face to have 65mm minimum cover to reinforcement. Concrete placed in contact with the air to have 50mm minimum cover to reinforcement. Plumbing pipe work to be located behind reinforcement and to have minimum 65 mm cover.

C4 - Mild steel rods detailed S12 are 12mm diameter 2005 Grade deformed bars. Provide 50mm minimum lap to all S12 bars. Stagger laps minimum 75 mm.

C5 - Plastic non-reinforcing mesh is to be used at a maximum of 1000 mm centres to support all reinforcement. Plastic tipped wire chairs are to be used in all out of ground walls & copings.

C6 - After concreting, the pool is to be cured for a minimum of 7 days by thoroughly wetting all concrete surfaces a minimum of twice each day. Ten days curing required in summer.

C7 - Earthing of reinforcement is required to meet AS3000.

C8 - Piers - If pool floor is partially founded on solid rock, provide 400mm ϕ concrete piers at 1500mm maximum centres to remainder of pool floor. All piers to be founded on rock. Piers up to 1.0m deep to be mass concrete. Piers between 1.0m and 2.0m deep, provide 6 S12 bars with R6 ties at 300mm centres. Any piers over 2.0m deep require Engineers detail for any internal piers under pool floor providing S12 piers (1500mm long) at 300mm centres each way directly over piers to pool floor.

OWNER NOTES:

N1 - The position of skimmers, lights, return lines, etc. on this drawing is indicative only and the final positions are to be determined in situ.

N2 - Safety fencing to meet SAA Standards is required prior to filling pool.

N3 - The pool is not designed for diving. Provide safety signage to SAA Standards.

N4 - Notify Engineer if pool is to be emptied after completion of pool.

N5 - Underwater pool lights require full immersion during use.

N6 - Work noted By Others is not included in the works.

Premier Pools

THE POOL PROFESSIONALS

DOCUMENT CERTIFICATION

I, Bruce Lewis, am a qualified Structural & Civil Engineer with the following qualifications:

BE(Civil), CPENG, MIEAust, NPFR

I hereby state that this drawing is in compliance with the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

Date: 11-06-10

Bruce Lewis (Principal - Peninsula Consulting Engineers.)

15-06-2010 B MODIFY SECTION A BASE

11-06-2010 A FOR CONSTRUCTION

9-06-2010 P DRAFT

Date: Rev: Amendment

Project: **PROPOSED NEW POOL**
at: 4 INGLESIDE ROAD,
INGLESIDE

For: **MR & MRS WILLIAMS**

Drawing Title: **POOL STRUCTURAL**
PLAN & DETAILS

Job No: **10-0604**

Drawing No: **P01**

Rev: **B**

The copyright of this drawing remains with Peninsula Consulting Engineers.

Peninsula Consulting Engineers

PO Box 84, NSW, 2100
Ph: (043) 263 119 Fax: (02) 9892 4722
E: info@peninsulaconsulting.com.au
A.B.N. 60 493 390 399

Any inconsistencies between the Pool structural engineer's details and the approved Architectural plans in regards to levels, structures, layout and setbacks the approved Architectural plans take precedents.