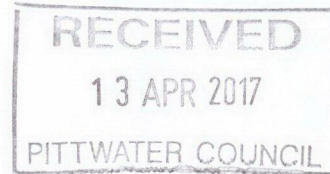


13 April 2017

Northern Beaches Council  
PO Box 882  
Mona Vale NSW 1660



Dear Sir or Madam:

Re: Lodgement of CDC2017-533  
Site Address: No. 28 Mona Street, Mona Vale NSW 2103

Please find attached all required documentation relied upon to issue Complying Development Certificate and Notice of Commencement for the above development:

- Part 4A Lodgement Fee \$36.00 payable to Council
- Home Owners Warranty Insurance Policy by Builder
- Sydney Water Building Plan Approval
- 1 full set of Complying Development Certificate Plans
- 1 Structural Engineer's Plans
- 1 Hydraulic Engineers Plan designed in accordance with Council's Stormwater Policy
- Arboricultural Impact Appraisal
- Security Bond & Section 94 contributions: (if applicable) (to be paid at Council Offices)
- Receipt for payment of the Long Service Levy
- PCA in receipt of 149(2&5) Planning Certificate
- 1 Basix Certificate
- 1 copy of Notification Map & Letter

Yours faithfully

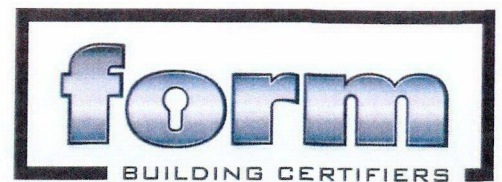


Craig Formosa  
Form Building Certifiers

PRVC \$36-00 Rec: 409484 13/04/17



POSTED  
13/4/17



## COMPLYING DEVELOPMENT CERTIFICATE # CDC2017-533 Approved 13/4/17

Issued in accordance with the provisions of the Environmental & Assessment Act 1979 under Sections 85, 85A & 87

Date Application Received	14 March 2017	Certificate Lapse Date	5 yrs after approval date
Council	Northern Beaches Council	Relevant Planning Instrument	SEPP E & C Dev. 2008
Certifying Authority	Craig Formosa - BPB0124	Accredited Certifier	Craig Formosa - BPB0124
Accreditation Body	Building Professionals Board	BCA in force	2016

### APPLICANT DETAILS

Name	GJ Gardner Homes Sydney North	Email	sydneynorth@gjgardner.com.au
Address	2/28-30 Orchard Rd, Brookvale NSW 2100	Ph No	9939 3339

### OWNER DETAILS

Name	Darren & Janine Cocks	Email	darren.cocks@nswbc.com.au
Address	21 Maralinga Avenue, Elanora Heights	Ph No	0407 678 645

### DEVELOPMENT DETAILS

Subject Land	28 Mona Street, Mona Vale NSW 2103	Lot No.	B	DP	404336
Description of Development	Construction of a new dwelling	Zone	R2		
Class of Building	1a, 10b	Value of Work	\$849,114.00		

### BUILDER DETAILS

Name	AMDE Construction Pty Ltd	Ph No	9939 3339
Address	2/28-30 Orchard Rd, Brookvale NSW 2100		
Email	sydneynorth@gjgardner.com.au	Lic No	224579C

### APPROVED PLANS & DOCUMENTS

Plans Prepared By	GJ Gardner Homes Sydney North		
Drawing Numbers	GJGN015-1E – GJGN015-14E	Dated	31.03.2017
Engineer Details Prepared By	Structerre Consulting Engineers	Structerre Consulting Engineers (stormwater)	
Drawing Numbers	S-000 – S-002, S-101 – S-111	C-000, C-401 – C-404	Dated 14.03.2017 06.04.2017
Basix Certificate No.	8004155	Dated	06.03.2017

This Certificate is approved subject to the prescribed conditions listed under Clauses: 133, 136A, 136D, 149 & 154B of the Environmental Planning and Assessment Act Regulations 2000.

This Certificate is approved subject to the attached conditions as contained in the SEPP Exempt and Complying Development 2008.

### CERTIFICATION

I, Craig Formosa, as the certifying authority am satisfied that:

- The requirements of the regulations referred to in S81A(5) have been complied with. That is, work completed in accordance with the documentation accompanying the application for this certificate (with such modifications verified by the certifying authority as may be shown on that documentation) will comply with the requirements of the Regulation as referred to in section 81A(5) of the Act; and
- Long Service Levy has been paid where required under s34 of the Building & Construction Industry Long Service Payments Act 1986.

Signed:

Date: 13/4/17



## Division 2A Conditions of complying development certificate

### 136A Compliance with Building Code of Australia and insurance requirements under the Home Building Act 1989 (cf clauses 78 and 78A of EP&A Regulation 1994)

- (1) A complying development certificate for development that involves any building work must be issued subject to the following conditions:
  - (a) that the work must be carried out in accordance with the requirements of the *Building Code of Australia*,
  - (b) in the case of residential building work for which the *Home Building Act 1989* requires there to be a contract of insurance in force in accordance with Part 6 of that Act, that such a contract of insurance must be entered into and be in force before any building work authorised to be carried out by the certificate commences.
- (1A) A complying development certificate for a temporary structure that is used as an entertainment venue must be issued subject to the condition that the temporary structure must comply with Part B1 and NSW Part H102 of Volume One of the *Building Code of Australia* (as in force on the date the application for the relevant complying development certificate is made).
- (2) This clause does not limit any other conditions to which a complying development certificate may be subject, as referred to in section 85A (6) (a) of the Act.
- (3) This clause does not apply:
  - (a) to the extent to which an exemption is in force under clause 187 or 188, subject to the terms of any condition or requirement referred to in clause 187 (6) or 188 (4), or
  - (b) to the erection of a temporary building, other than a temporary structure that is used as an entertainment venue.
- (4) In this clause, a reference to the *Building Code of Australia* is a reference to that Code as in force on the date the application for the relevant complying development certificate is made.

**Note.** There are no relevant provisions in the *Building Code of Australia* in respect of temporary structures that are not entertainment venues.

### 136AB Notice to neighbours

- (1) A complying development certificate for development on land that is not in a residential release area and that involves:
  - (a) a new building, or
  - (b) an addition to an existing building, or
  - (c) the demolition of a building,
 must be issued subject to a condition that the person having the benefit of the complying development certificate must give at least 7 days' notice in writing of the person's intention to commence the work authorised by the certificate to the occupier of each dwelling that is located on a lot that has a boundary within 20 metres of the boundary of the lot on which the work is to be carried out.
- (2) A complying development certificate for development on land that is in a residential release area and that involves:
  - (a) a new building, or
  - (b) an addition to an existing building, or
  - (c) the demolition of a building,
 must be issued subject to a condition that the person having the benefit of the complying development certificate must give at least 2 days' notice in writing of the person's intention to commence the work authorised by the certificate to the occupier of each dwelling that is located on a lot that has a boundary within 20 metres of the boundary of the lot on which the work is to be carried out.
- (3) In this clause:
 

**residential release area** means any land within:

  - (a) an urban release area identified within a local environmental plan that has been prepared under the *Standard Instrument (Local Environmental Plans) Order 2006* and made as provided by section 33A (2) of the Act, or
  - (b) a land release area identified under the *Eurobodalla Local Environmental Plan 2012*, or
  - (c) any land subject to *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*, or
  - (d) any area included in Parts 6, 26, 27, 28 and 29 of Schedule 3 to *State Environmental Planning Policy (Major Development) 2005*.

### 136B Erection of signs

- (1) A complying development certificate for development that involves any building work, subdivision work or demolition work must be issued subject to a condition that the requirements of subclauses (2) and (3) are complied with.
- (2) A sign must be erected in a prominent position on any site on which building work, subdivision work or demolition work is being carried out:



- (a) showing the name, address and telephone number of the principal certifying authority for the work, and
  - (b) showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and
  - (c) stating that unauthorised entry to the site is prohibited.
- (3) Any such sign is to be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work has been completed.
- (4) This clause does not apply in relation to building work, subdivision work or demolition work that is carried out inside an existing building, that does not affect the external walls of the building.
- (5) This clause does not apply in relation to Crown building work that is certified, in accordance with section 109R of the Act, to comply with the technical provisions of the State's building laws.
- (6) This clause applies to a complying development certificate issued before 1 July 2004 only if the building work, subdivision work or demolition work involved had not been commenced by that date.

**Note.** Principal certifying authorities and principal contractors must also ensure that signs required by this clause are erected and maintained (see clause 227A which currently imposes a maximum penalty of \$1,100).

#### **136C Notification of Home Building Act 1989 requirements**

- (1) A complying development certificate for development that involves any residential building work within the meaning of the *Home Building Act 1989* must be issued subject to a condition that the work is carried out in accordance with the requirements of this clause.
- (2) Residential building work within the meaning of the *Home Building Act 1989* must not be carried out unless the principal certifying authority for the development to which the work relates (not being the council) has given the council written notice of the following information:
- (a) in the case of work for which a principal contractor is required to be appointed:
    - (i) the name and licence number of the principal contractor, and
    - (ii) the name of the insurer by which the work is insured under Part 6 of that Act,
  - (b) in the case of work to be done by an owner-builder:
    - (i) the name of the owner-builder, and
    - (ii) if the owner-builder is required to hold an owner-builder permit under that Act, the number of the owner-builder permit.
- (3) If arrangements for doing the residential building work are changed while the work is in progress so that the information notified under subclause (2) becomes out of date, further work must not be carried out unless the principal certifying authority for the development to which the work relates (not being the council) has given the council written notice of the updated information.
- (4) This clause does not apply in relation to Crown building work that is certified, in accordance with section 109R of the Act, to comply with the technical provisions of the State's building laws.

#### **136D Fulfilment of BASIX commitments**

- (1) This clause applies to the following development:
- (a) BASIX affected development,
  - (b) any BASIX optional development in relation to which a person has made an application for a complying development certificate that has been accompanied by a BASIX certificate or BASIX certificates (despite there being no obligation under clause 4A of Schedule 1 for it to be so accompanied).
- (2) A complying development certificate for development to which this clause applies must be issued subject to a condition that the commitments listed in each relevant BASIX certificate for the development must be fulfilled.

#### **136E Development involving bonded asbestos material and friable asbestos material**

- (1) A complying development certificate for development that involves building work or demolition work must be issued subject to the following conditions:
- (a) work involving bonded asbestos removal work (of an area of more than 10 square metres) or friable asbestos removal work must be undertaken by a person who carries on a business of such removal work in accordance with a licence under clause 458 of the *Work Health and Safety Regulation 2011*,
  - (b) the person having the benefit of the complying development certificate must provide the principal certifying authority with a copy of a signed contract with such a person before any development pursuant to the complying development certificate commences,
  - (c) any such contract must indicate whether any bonded asbestos material or friable asbestos material will be removed, and if so, must specify the landfill site (that may lawfully receive asbestos) to which the bonded asbestos material or friable asbestos material is to be delivered,
  - (d) if the contract indicates that bonded asbestos material or friable asbestos material will be removed to a specified landfill site, the person having the benefit of the complying development certificate must give the principal certifying authority a copy of a receipt from the operator of the landfill site stating that all the asbestos material referred to in the contract has been received by the operator.



- (2) This clause applies only to a complying development certificate issued after the commencement of this clause.
- (3) In this clause, **bonded asbestos material**, **bonded asbestos removal work**, **friable asbestos material** and **friable asbestos removal work** have the same meanings as in clause 317 of the *Occupational Health and Safety Regulation 2001*.

**Note 1.** Under clause 317 removal work refers to work in which the bonded asbestos material or friable asbestos material is removed, repaired or disturbed.

**Note 2.** The effect of subclause (1) (a) is that the development will be a workplace to which the *Occupational Health and Safety Regulation 2001* applies while removal work involving bonded asbestos material or friable asbestos material is being undertaken.

**Note 3.** Information on the removal and disposal of asbestos to landfill sites licensed to accept this waste is available from the Department of Environment, Climate Change and Water.

**Note 4.** Demolition undertaken in relation to complying development under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* must be carried out in accordance with Australian Standard AS 2601—2001, *Demolition of structures*.

#### **136F, 136G (Repealed)**

#### **136H Condition relating to shoring and adequacy of adjoining property**

- (1) A complying development certificate for development must be issued subject to a condition that if the development involves an excavation that extends below the level of the base of the footings of a building, structure or work (including any structure or work within a road or rail corridor) on adjoining land, the person having the benefit of the certificate must at the person's own expense:
- (a) protect and support the building, structure or work from possible damage from the excavation, and
  - (b) where necessary, underpin the building, structure or work to prevent any such damage.
- (2) The condition referred to in subclause (1) does not apply if the person having the benefit of the complying development certificate owns the adjoining land or the owner of the adjoining land has given consent in writing to that condition not applying.

#### **136I Traffic generating development**

If an application for a complying development certificate is required to be accompanied by a certificate of Roads and Maritime Services as referred to in clause 4 (1) (k) of Schedule 1, the complying development certificate must be issued subject to a condition that any requirements specified in the certificate of Roads and Maritime Services must be complied with.

#### **136J Development on contaminated land**

- (1) If an application for a complying development certificate is required to be accompanied by a statement of a qualified person as referred to in clause 4 (1) (l) of Schedule 1, the complying development certificate must be issued subject to a condition that any requirements specified in the statement must be complied with.
- (2) Subclause (1) does not apply to complying development carried out under the complying development provisions of *State Environmental Planning Policy (Port Botany and Port Kembla) 2013* in the Lease Area within the meaning of clause 4 of that Policy.

#### **136K When complying development certificates must be subject to section 85A (9) condition**

- (1) This clause applies if a council's contributions plan provides for the payment of a monetary section 94 contribution or section 94A levy in relation to development for a particular purpose (whether or not it is classed as complying development under the contributions plan).
- (2) The certifying authority must issue the relevant complying development certificate authorising development for that purpose subject to a condition requiring payment of such contribution or levy, as required by section 85A (9) of the Act.
- (3) Subclause (2) applies despite any provision to the contrary in the council's contributions plan.

#### **136L Contributions and levies payable under section 85A (9) must be paid before work commences**

- (1) A complying development certificate issued subject to a condition required by section 85A (9) of the Act must be issued subject to a condition that the contribution or levy must be paid before any work authorised by the certificate commences.
- (2) Subclause (1) applies despite any provision to the contrary in the council's contributions plan.

#### **136M Condition relating to payment of security**

- (1) This clause applies to a complying development certificate authorising the carrying out of development if:
- (a) the development is demolition of a work or building, erection of a new building or an addition to an existing building and the estimated cost of the development (as specified in the application for the certificate) is



- \$25,000 or more, and
  - (b) the development is to be carried out on land adjacent to a public road, and
  - (c) at the time the application for the certificate is made, there is specified on the website of the council for the area in which the development is to be carried out an amount of security determined by the council that must be paid in relation to:
    - (i) development of the same type or description, or
    - (ii) development carried out in the same circumstances, or
    - (iii) development carried out on land of the same size or description.
- (2) A complying development certificate to which this clause applies must be issued subject to a condition that the amount of security referred to in subclause (1) is to be provided, in accordance with this clause, to the council before any building work or subdivision work authorised by the certificate commences.
- (3) The security may be provided, at the applicant's choice, by way of:
  - (a) deposit with the council, or
  - (b) a guarantee satisfactory to the council.
- (4) The funds realised from a security may be paid out to meet the cost of making good any damage caused to any property of the council as a consequence of doing anything (or not doing anything) authorised or required by the complying development certificate, including the cost of any inspection to determine whether damage has been caused.
- (5) Any balance of the funds realised from a security remaining after meeting the costs referred to in subclause (4) is to be refunded to, or at the direction of, the person who provided the security.

**136N Principal certifying authority to be satisfied that preconditions met before commencement of work**

- (1) This clause applies to building work or subdivision work that is the subject of a complying development certificate.
- (2) A principal certifying authority for building work or subdivision work to be carried out on a site, and over which the principal certifying authority has control, is required to be satisfied that any preconditions in relation to the work and required to be met before the work commences have been met before the work commences.

**Schedule 6 Conditions applying to complying development certificates under the General Housing Code and the Rural Housing Code**

(Clauses 3.37 and 3A.39)

- Note 1.** Complying development under the General Housing Code and the Rural Housing Code must comply with the requirements of the Act, the *Environmental Planning and Assessment Regulation 2000* and the conditions listed in this Schedule.
- Note 2.** Division 2A of Part 7 of the *Environmental Planning and Assessment Regulation 2000* specifies conditions to which certain complying development certificates are subject.
- Note 3.** In addition to the requirements specified for development under this Policy, adjoining owners' property rights, applicable common law and other legislative requirements for approvals, licences, permits and authorities still apply.
- Note 4.** If the development is in the proximity of infrastructure (including water, stormwater or sewer mains, electricity power lines and telecommunications facilities), the relevant infrastructure authority should be contacted before commencing the development.
- Note 5.** Under section 86A of the *Environmental Planning and Assessment Act 1979*, a complying development certificate lapses 5 years after the date endorsed on the certificate, unless the development has physically commenced on the land during that period.

**Part 1 Conditions applying before works commence**

**1 Protection of adjoining areas**

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

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

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

**2 Toilet facilities**

- (1) Toilet facilities must be available or provided at the work site before works begin and must be maintained until the works are completed at a ratio of one toilet plus one additional toilet for every 20 persons employed at the site.
- (2) Each toilet must:
  - (a) be a standard flushing toilet connected to a public sewer, or



- (b) have an on-site effluent disposal system approved under the *Local Government Act 1993*, or
- (c) be a temporary chemical closet approved under the *Local Government Act 1993*.

### 3 Garbage receptacle

- (1) A garbage receptacle must be provided at the work site before works begin and must be maintained until the works are completed.
- (2) The garbage receptacle must have a tight fitting lid and be suitable for the reception of food scraps and papers.

### 4 Adjoining wall dilapidation report

- (1) If a wall on a lot is to be built to a boundary and there is a wall (the **adjoining wall**) on the lot adjoining that boundary that is less than 0.9m from that boundary, the person having the benefit of the complying development certificate must obtain a dilapidation report on the adjoining wall.
- (2) If the person preparing the report is denied access to the adjoining lot for the purpose of inspecting the adjoining wall, the report may be prepared from an external inspection of the adjoining wall.

### 5 Run-off and erosion controls

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

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

### 6 Tree protection measures

- (1) This clause applies to each protected tree and any other tree that is to be retained on a lot.
- (2) The trunk of each of the following trees must be provided with a tree guard that is comprised of hardwood timber panels each having a minimum length of 2m, minimum width of 75mm and minimum thickness of 25mm and secured, but not permanently fixed or nailed, to the tree and spaced a maximum of 80mm apart:
  - (a) each tree that is within 6m of a dwelling house or any ancillary development that is to be constructed, and
  - (b) each protected tree that is within 10m of a dwelling house or any ancillary development that is to be constructed.
- (3) Each protected tree that is within 6m of a dwelling house, outbuilding or swimming pool must have a fence or barrier that is erected:
  - (a) around its tree protection zone as defined by section 3.2 of AS 4970—2009, *Protection of trees on development sites*, and
  - (b) in accordance with section 4 of that standard.
- (4) The person having the benefit of the complying development certificate must ensure that:
  - (a) the activities listed in section 4.2 of that standard do not occur within the tree protection zone of any tree on the lot or any tree on an adjoining lot, and
  - (b) any temporary access to, or location of scaffolding within the tree protection zone of a protected tree or any other tree to be retained on the lot during the construction, is undertaken using the protection measures specified in sections 4.5.3 and 4.5.6 of that standard.
- (5) The tree protection measures specified in this clause must:
  - (a) be in place before work commences on the lot, and
  - (b) be maintained in good condition during the construction period, and
  - (c) remain in place for the duration of the construction works.

**Note.** A separate permit or development consent may be required if the branches or roots of a protected tree on the lot or on an adjoining lot are required to be pruned or removed.

## Part 2 Conditions applying during the works

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

### 7 Hours for construction

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

### 8 Compliance with plans

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



certificate relates.

#### **9 Maintenance of site**

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

#### **10 Earthworks, retaining walls and structural support**

- (1) Any earthworks (including any structural support or other related structure for the purposes of the development):
  - (a) must not cause a danger to life or property or damage to any adjoining building or structure on the lot or to any building or structure on any adjoining lot, and
  - (b) must not redirect the flow of any surface or ground water or cause sediment to be transported onto an adjoining property, and
  - (c) that is fill brought to the site—must contain only virgin excavated natural material (VENM) as defined in Part 3 of Schedule 1 to the *Protection of the Environment Operations Act 1997*, and
  - (d) that is excavated soil to be removed from the site—must be disposed of in accordance with any requirements under the *Protection of the Environment Operations (Waste) Regulation 2005*.
- (2) Any excavation must be carried out in accordance with *Excavation Work: Code of Practice* (ISBN 978-0-642-785442), published in July 2012 by Safe Work Australia.

#### **11 Drainage connections**

- (1) If the work is the erection of, or an alteration or addition to, a dwelling house, the roof stormwater drainage system must be installed and connected to the drainage system before the roof is installed.
- (2) Any approval that is required for connection to the drainage system under the *Local Government Act 1993* must be held before the connection is carried out.

#### **12 Archaeology discovered during excavation**

If any object having interest due to its age or association with the past is uncovered during the course of the work:

- (a) all work must stop immediately in that area, and
- (b) the Office of Environment and Heritage must be advised of the discovery.

**Note.** Depending on the significance of the object uncovered, an archaeological assessment and excavation permit under the *Heritage Act 1997* may be required before further the work can continue.

#### **13 Aboriginal objects discovered during excavation**

If any Aboriginal object (including evidence of habitation or remains) is discovered during the course of the work:

- (a) all excavation or disturbance of the area must stop immediately in that area, and
- (b) the Office of Environment and Heritage must be advised of the discovery in accordance with section 89A of the *National Parks and Wildlife Act 1974*.

**Note.** If an Aboriginal object is discovered, an Aboriginal heritage impact permit may be required under the *National Parks and Wildlife Act 1974*.

### **Part 3 Conditions applying before the issue of an occupation certificate**

#### **14 Vehicular access**

If the work involves the construction of a vehicular access point, the access point must be completed before the occupation certificate for the work on the site is obtained.

#### **15 Utility services**

If the work requires alteration to, or the relocation of, utility services on, or adjacent to, the lot on which the work is carried out, the work is not complete until all such works are carried out.



## IMPORTANT ADVICE

Due to changes in planning laws, (Sect. S81A (2)C of the Act), **the critical stage inspections are mandatory and must** be inspected by the PCA or the final certificate (Occupation Certificate) may not be able to be issued (causing complications and delays when selling/refinancing etc). **The critical stage inspections are listed on the Notice of Commencement part of this document.**

It is the responsibility of the Applicant to arrange with the PCA a **final inspection** as soon as works are completed so that the Occupation Certificate can be issued within a reasonable time frame. Failure to do so may result in additional fees and/or refusal to issue an Occupation Certificate.

Also, **NO CHANGES** to the building, as detailed in the plans, can be made without notification to your PCA (**some changes will need council consent**). **Please take note of any changes made in red to your plans, the builder will have to be provided with a copy of the approved construction certificate plans so that compliance with the Building Code of Australia and Council's DA conditions is achieved first time.**

Unauthorised changes may lead to fines and orders being issued by Council's Compliance Officers and prevent an Occupation Certificate being issued.

To arrange the mandatory inspections please give 48 hours notice by contacting Form Building Certifiers by telephone.

Please do not hesitate to ring me if there are any enquiries in respect of these matters.

Kind regards

A handwritten signature in black ink, appearing to read "Craig Formosa".

**Craig Formosa**

Director

Form Building Certifiers



14 March 2017

To the Occupant:

**ADVICE OF APPLICATION FOR A COMPLYING DEVELOPMENT CERTIFICATE  
under clause 130AB of the Environmental Planning and Assessment Regulation 2000**

Dear Sir or Madam

On 14 March, 2017 Form Building Certifiers received an application for a Complying Development Certificate (CDC) for the following work:

Construction of a new dwelling at 28 Mona Street, Mona Vale NSW 2103

I am writing to advise you that I am in receipt of an application for a CDC and will determine the application in accordance with the provisions of the Environmental Planning and Assessment Act 1979 and it will be determined no sooner than 14 days from the date of this letter.

This 14 day determination period is an opportunity for you to discuss the proposed building works with the applicant. Although, should you make any representations to the **Applicant**, it is important to note they are under no obligation to make changes to the development. Similarly, as the Certifying Authority for the project the legislation does not require Form Building Certifiers to provide further assistance in this matter.

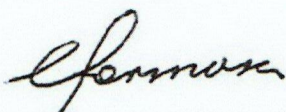
Complying developments mean a faster approval process for the applicant, whilst ensuring stringent planning and environmental requirements are met.

If you do wish to review and discuss the development plans, please contact the **Applicant**:

**Applicant's Name:** GJ Gardner Homes Sydney North  
**Applicant's Contact Telephone No:** 9939 3339  
**Local Government Area:** Northern Beaches Council

If the application is approved and issued, a copy of the approved CDC with the relevant plans and specifications will be available for inspection at the offices of the Council **after** the approval has been registered. This is a free of charge service by Council and available during normal office hours.

Yours faithfully

A handwritten signature in black ink, appearing to read "C Formosa", written in a cursive style.

Craig Formosa  
Accredited Certifier BPB0124  
Form Building Certifiers Pty Ltd



## **ADVICE TO NEIGHBOURS – WORKS COMMENCING**

This is to notify you that it is intended that work will soon commence on a development at a property near to you.

The work has been authorised by a complying development certificate issued under the Provisions of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

Particulars relating to the work and the complying development certificate are set out below.

### **1. Development Address**

28 Mona Street, Mona Vale NSW 2103

Formal Particulars of Title

Lot: B DP: 404336

### **2. Name of Applicant**

GJ Gardner Homes Sydney North

### **3. Description of Development**

Construction of a new dwelling

### **4. Council Area**

Northern Beaches Council

### **5. Details of Complying Development Certificate**

(a) Issued by\* Craig Formosa

(b) Accreditation Number\*\*BPB 0124

(c) Complying Development Certificate No: CDC2017-533

(d) Date of Certificate –13/04/17

### **6. Date on/after work is intended to commence – 19/04/17**

Note: a copy of the complying development certificate, including related plans and specifications, will be available for inspection at the Council's principal office, free of charge, during the Council's ordinary office hours approximately 10 days after the date of commencement above.

(Signed).....

Date.....

Owner's Signature



## CERTIFICATE OF DESIGN - CIVIL

THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC / CDC

Our Job ref : 39049

To relevant building surveyor :

Project : Lot B No. 28 Mona Street, Mona Vale. NSW

Project Description : Single Dwelling Development

Description of Component/s Certified : Stormwater drainage system

I did and/or supervised the preparation of the design and I certify that the components described above under the heading "Description of component/s certified" complies with AS/NZS 3500.3, "Australian Rainfall and Runoff" Volumes I and II and Councils stormwater drainage policy.

### Design Documents

Drawing Number : 39049

Sheet Numbers : C-000,-401,-402,-403,

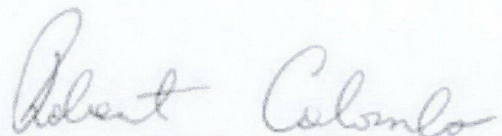
Prepared by : Structerre Consulting Engineers

Special Conditions :

Building Practitioner : Robert John Colombo

Category Class : C3, C4 & C15

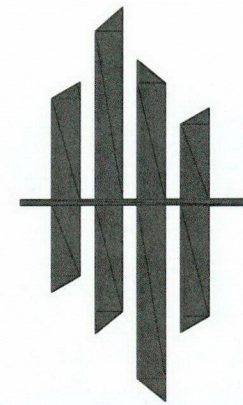
Postal Address : Structerre Consulting Engineers  
Unit 1 Second Floor  
42 Birnie Ave  
Lidcombe NSW 2141



Signature

Date : 6 Apr 17





**STRUCterre**  
consulting engineers

## G.J. GARDNER HOMES

### PROPOSED DEVELOPMENT AT

LOT B No.28 MONA STREET  
MONA VALE, NSW

#### INDEX TO SHEETS

SHEET	TITLE
C-000	COVER SHEET & DRAWING LIST
C-401	STORMWATER DRAINAGE PLAN
C-402	GENERAL NOTES, EROSION & SEDIMENT CONTROL DETAILS
C-403	NOTES, SECTIONS & DETAILS - 1
C-404	NOTES, SECTIONS & DETAILS - 2

THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC / CDC

I certify that work completed in accordance with  
these plans and specifications will comply with  
the regulations referred to in Section 81A(5) of  
the Environment Planning & Assessment Act 1979

This is the plan/spec referred to  
in Form Building Certifiers Certificate  
Certificate No. CDC2017-533  
Plan Nos. C-000, C-401 - C-404  
Craig Formosa BPB0124 DATE 13/4/17

OWNER: The owner is responsible for maintenance of building and site. Refer to the CSIRO 'Guide to Home Owners on Foundation Maintenance and Performance'.

REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP	TITLE	NAME	DATE	PROJECT	CLIENT	STRUTTERRE JOB No.	DRAWING REF. No.	REV
0	JZ	6/04/2017	ISSUED FOR CDC	MM	GA	DRAFTER	J. ZHU	6/04/2017	PROPOSED DEVELOPMENT AT LOT B No.28 MONA STREET MONA VALE, NSW <b>COVER SHEET &amp; DRAWING LIST</b>	G.J. GARDNER HOMES	39049	39049-C-000	0
						DESIGNER	M. MARINER	6/04/2017					
						ENG. CHECK	G. AMBLIN	6/04/2017					
						SCALE	N/A	SIZE A3					
						APPROVED BY:							
							GEOFF AMBLIN BSc(Eng) ACGL CEng CEnv MICE FCIWEM						



**STRUCterre**  
consulting engineers

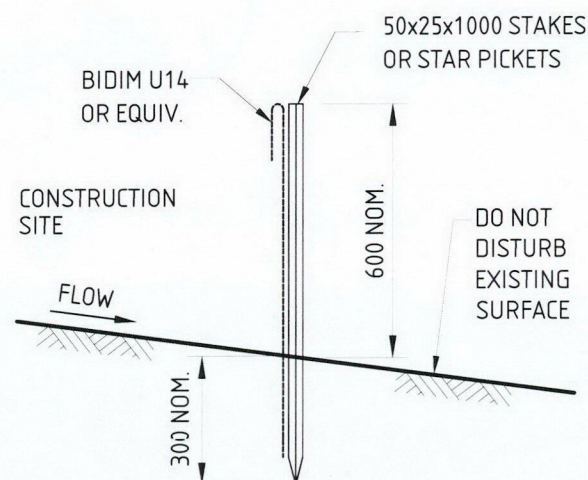
Structerre Pty. Ltd. (ACN: 055 912 733)  
SUITE 1, LEVEL 2, 42 BIRNIE AVENUE, LIDCOMBE NSW 2141  
TEL (02) 9646 5811 FAX (02) 9646 2311 EMAIL: sydney@structerre.com.au

CLIENT REFERENCE No.  
**GJGN015**





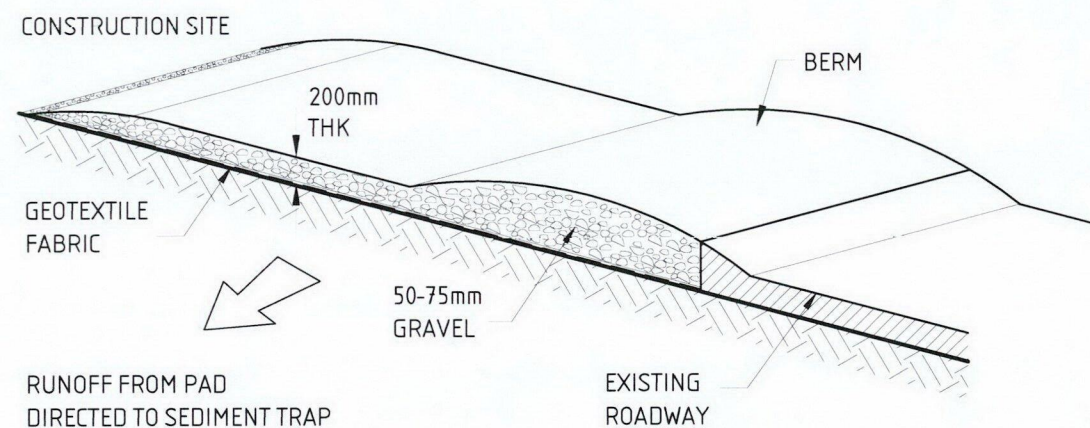




### SILT FENCE DETAIL

NOT TO SCALE

- STRING 16 GAUGE WIRE TIGHTLY BETWEEN STAKES
- LAP BIDIM OVER 50MM & STITCH WITH TIE WIRE LOOPED AT 100MM CENTRES
- REMOVE SILT AFTER EACH MAJOR STORM



### TEMPORARY CONSTRUCTION EXIT

NOT TO SCALE

## GENERAL NOTES

- G1. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER WORKING DRAWINGS AND SPECIFICATIONS AND SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF CONSTRUCTION. ALL DISCREPANCIES AND VARIATIONS SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- G2. ALL STRUCTURAL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL RELEVANT AND CURRENT CODES.
- G3. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF SITE WORK SHALL BE VERIFIED BEFORE CONSTRUCTION AND/OR FABRICATION IS COMMENCED.
- G4. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
- G5. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
- G6. ALL PIPES, ORIFICE PLATES, FLAP VALVES ETC SHALL BE IN ACCORDANCE WITH HYDRAULIC DRAWINGS.

## CONCRETE NOTES

- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF AS 3600 AND OTHER RELEVANT CODES.

## STORMWATER NOTES

- ST1. ALL DRAINAGE PIPES TO BE  $\varnothing 100$  SEWER GRADE uPVC AT 1% MIN. FALL, U.N.O.
- ST2. A CONTINUOUS SILT BARRIER FENCE IS TO BE PROVIDED ALONG LOWER BOUNDARIES FOR DURATION OF CONSTRUCTION - REFER DETAIL.
- ST3. HAYBALE BARRIERS TO BE PROVIDED AROUND INLET PITS FOR DURATION OF CONSTRUCTION - REFER DETAIL.
- ST4. DRAINAGE HAS BEEN DESIGNED IN ACCORDANCE WITH METHODS SET OUT IN 'AUSTRALIAN RAINFALL AND RUNOFF' (1987).
- ST5. ALL NECESSARY WORK INVOLVED IN THE CREATION OF EASEMENT/RIGHT OF CONNECTION TO ANY EXISTING SERVICES AND/OR COVENANTS/RESTRICTIONS TO USER SHALL BE THE RESPONSIBILITY OF THE OWNER/APPLICANT.

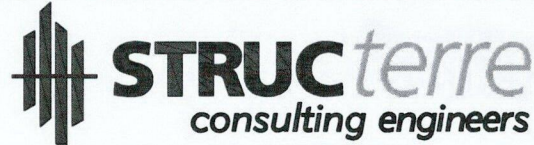
## EROSION CONTROL NOTES

- E1. EROSION CONTROL MEASURES TO BE IN PLACE PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION WORK.
- E2. REHABILITATION INCLUDES COMPLETION OF ALL CONSTRUCTION WORK AND LANDSCAPING, SEEDING OR TURFING OF ALL BATTERS AND FILL AREAS.
- E3. A PROGRAM OF PROGRESSIVE REHABILITATION SHOULD BE IMPLEMENTED TO MINIMISE EROSION.
- E4. TOP SOIL STOCKPILES TO BE SOWN IF LEFT UNDISTURBED FOR MORE THAN FOUR WEEKS.
- E5. THE NEAREST COUNCIL PIT SHALL BE PROTECTED WITH SAND BAG SEDIMENT TRAPS AND TRAFFIC BARRIERS ACCORDING TO AS 1742.3 - 1985.
- E6. ONLY ONE CONSTRUCTION ENTRY/EXIT SHALL BE USED DURING CONSTRUCTION.
- E7. DURING WET WEATHER MUD IS TO BE HOSED OFF ON THE RAMP PRIOR TO VEHICLES LEAVING THE SITE.
- E8. EXTRA HAY BALES TO BE STORED AT SITE FOR THE USE OF ANY OPEN TRENCHES, PITS ETC.
- E9. SEDIMENT TRAPS SHALL BE INSPECTED AFTER EACH STORM. CLEAN OR REPLACE IF NECESSARY.
- E10. BALE BARRIERS TO BE REMOVED FOLLOWING COMPLETION OF ALL CONSTRUCTION WORKS, PAVEMENT AND LANDSCAPING AREAS, WITH COUNCIL APPROVAL.

THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC / CDC

OWNER: The owner is responsible for maintenance of building and site. Refer to the CSIRO 'Guide to Home Owners on Foundation Maintenance and Performance'.

REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP	TITLE	NAME	DATE
0	JZ	6/04/2017	ISSUED FOR CDC	MM	GA	DRAFTER	J. ZHU	6/04/2017
						DESIGNER	M. MARINER	6/04/2017
						ENG. CHECK	G. AMBLIN	6/04/2017
						SCALE	N/A	SIZE A3
						APPROVED BY:		
						GEOFF AMBLIN BSc(Eng) ACGL CEng CEnv MICE FCIWEM		

PROJECT		PROPOSED DEVELOPMENT AT LOT B No.28 MONA STREET MONA VALE, NSW		 Structerre Pty. Ltd. (ACN: 055 912 733) SUITE 1, LEVEL 2, 42 BIRNIE AVENUE, LIDCOMBE NSW 2141 TEL (02) 9646 5811 FAX (02) 9646 2311 EMAIL: sydney@structerre.com.au		CLIENT REFERENCE No. GJGN015	
GENERAL NOTES, EROSION & SEDI. CONTROL DETAILS		CLIENT G.J. GARDNER HOMES		STRUCTERRE JOB No. 39049			DRAWING REF. No. 39049-C-402



N.T.S.

N.T.S.

NOT TO SCALE

N.T.S.

N.T.S.

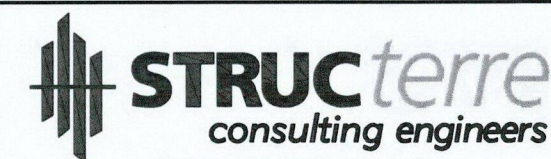
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						APPROVED BY:		
						GEOFF AMBLIN		
						BSc(Eng) ACgl CEng CEnv MICE FCIWEM		

PROPOSED DEVELOPMENT  
AT

LOT B No.28 MONA STREET  
MONA VALE, NSW

## NOTES, SECTIONS & DETAILS - 1

G.J. GARDNER HOMES



Structerre Pty. Ltd. (ACN: 055 912 733)

SUITE 1, LEVEL 2, 42 BIRNIE AVENUE, LIDCOMBE NSW 2141  
TEL (02) 9646 5811 FAX (02) 9646 2311 EMAIL: [sydney@structerre.com.au](mailto:sydney@structerre.com.au)

STRUCTERRE JOB No. 390

DRAWING REF. No.	39049-C-403
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CLIENT REFERENCE No.  
GJGN015

REV	0
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## 1

2

## 3

## 4

5

## 6

7

## 8

1

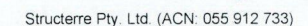
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1 year ARI Pre-Development Site Runoff to neighbour (l/s)	19.21
1 year ARI Post Development Site redirected to kerb (l/s)	8.24
1 year ARI Post Development Site Runoff to neighbour (l/s)	10.98 ;
	< 31 l/s (5yrARI Predeveloped) OK

COPYRIGHT STRUTTER WBA PTY LTD. THESE DRAWINGS ARE SOLE PROPERTY OF STRUTTER WBA PTY LTD. AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT WRITTEN OR FORMAL PERMISSION FROM STRUTTER WBA PTY LTD.

REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP	TITLE	NAME	DATE
0	JZ	6/04/2017	ISSUED FOR CDC	MM	GA	DRAFTER	J. ZHU	6/04/2017
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						SCALE	N/A	SIZE A3
						APPROVED BY:		
						GEOFF AMBLIN		
						BSc(Eng) ACGI CEng CEnv MICE FCIWEM		

CLIENT **G.J. GARDNER HOMES**



SUITE 1, LEVEL 2, 42 BIRNIE AVENUE, LIDCOMBE NSW 2141  
TEL (02) 9646 5811 FAX (02) 9646 2311 EMAIL: [sydney@structerre.com.au](mailto:sydney@structerre.com.au)

STRUCTERRE JOB No.	DRAWING REF. No.
39049	39049-C-404

REV  
0



# Tax Invoice

## Official Receipt

ABN: 57284295198 GST Branch No 005  
6/04/2017 Receipt No: 409302

To: MR DARREN COCKS  
21 MARALINGA AVE  
ELANORA HEAIGHTS NSW 2101

Applic	Reference	Amount
GL Receipt		
ESTR Eng Strt Levels		\$174.00
1 X 28 MONA ST		
CCGST-CCard +GST		\$1.74
1		
<b>Transaction Total:</b>		<b>\$175.74</b>
<b>Includes GST of:</b>		<b>\$0.00</b>

Amounts Tendered	
Cash	\$0.00
Cheque	\$0.00
Db/Cr Card	\$175.74
Money Order	\$0.00
Agency	\$0.00
Total	\$175.74
Rounding	\$0.00
Change	\$0.00
Nett	\$175.74

Printed 6/04/2017 2:45:51PM

THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC / CDC



# Levy Online Payment Receipt

Building and Construction



CDC  
28/30 ORCHARD RD  
BROOKVALE NSW 2100

THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC / CDC

## Application Details:

Applicant Name:	<b>CDC</b>
Levy Number:	<b>5158967</b>
Application Type:	<b>CDC</b>
Application Number:	<b>CDC2017-533</b>
Approving Authority:	<b>NORTHERN BEACHES COUNCIL-NORTH</b>

## Work Details:

Site Address:	<b>28 MONA ST MONA VALE NSW 2103</b>
Value of work:	<b>\$849,114</b>
Levy Due:	<b>\$2,971.00</b>

## Payment Details:

LSC Receipt Number:	<b>276899</b>
Payment Date:	<b>13/03/2017 2:26:17 PM</b>
Bank Payment Reference:	<b>982143676</b>
Levy Paid:	<b>\$2,971.00</b>
Credit card surcharge:	<b>\$11.88</b>
<b>Total Payment Received:</b>	<b>\$2,982.88</b>



THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC / CDC

## statement of cover

AMDE Construction Pty Ltd	SAVILL HICKS CORP. PTY LTD
U 2 28 Orchard Rd	
BROOKVALE NSW 2100	

Note: This document contains an extract of details kept on the HBCF Certificates Register. To confirm the authenticity of this document as proof of a valid contract of insurance, please visit the Certificates Register at [www.hbcf.nsw.gov.au](http://www.hbcf.nsw.gov.au). The Register will also list whether any claims have been made on this insurance cover and any other relevant information.

## CERTIFICATE IN RESPECT OF INSURANCE RESIDENTIAL BUILDING WORKS BY CONTRACTORS

A contract of insurance complying with sections 92 and 96 of the Home Building Act 1989 (the Act) has been issued by Insurance and Care NSW (icare) which provides services to the NSW Self Insurance Corporation in the management of the Home Building Compensation Fund (HBCF)

<b>In respect of</b>	New Single Dwelling Construction
<b>At</b>	
	28 Mona Street
	Mona Vale New South Wales 2103
<b>Site plan No</b>	NA
<b>Site plan type</b>	NA
<b>Homeowner</b>	Darren James Cocks and Janine Elizabeth Cocks
<b>Carried out by</b>	AMDE Construction Pty Ltd
<b>Builder job No</b>	230158
<b>Licence number</b>	224579C
<b>Contract sum</b>	\$849,114.00
<b>Contract date</b>	18/01/2017
<b>Premium paid</b>	\$6,114.90

Subject to the Act, the Home Building Regulation 2014 and the conditions of the insurance contract, cover will be provided to a beneficiary described in the contract and successors in title to the beneficiary. This Certificate is to be read in conjunction with the policy wording current as at the policy date and available at the Home Building Compensation Fund website at [www.hbcf.nsw.gov.au](http://www.hbcf.nsw.gov.au)

**Certificate No** HBCF17002002

**Issued on** 19/01/2017

**Issued by** QBE Insurance (Australia) Limited

Issued on behalf of NSW Self Insurance Corporation (ABN 97 369 689 650)



## Building plan assessment application

Application number: 208991

Property address: 28 Mona St, Mona Vale 2103

Lot details: Lot B, Deposited Plan 404336

13/03/2017

Dear Grant Schwarz

THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC / CDC

Your building plan assessment application has been

### APPROVED

This Approval is provided subject to the Conditions and Important Information issued to you by Sydney Water, which you are taken to have accepted by using the approval.

This Approval is based on the information you provided to us through Sydney Water Tap in.

If any of the information you have provided is incorrect or incomplete, Sydney Water may revoke this Approval.

This approval is valid until 13/03/2018 (one year).

### ANY QUESTIONS?

Email us

[swtapin@sydneywater.com.au](mailto:swtapin@sydneywater.com.au)

Call us

1300 082 746

### STRUCTURES

The structures and information you supplied are displayed below.

#### Structure(s) that will not impact Sydney Water infrastructure

Structure 1	New home	22.0 m x 18.0 m x 1.0 m
-------------	----------	-------------------------



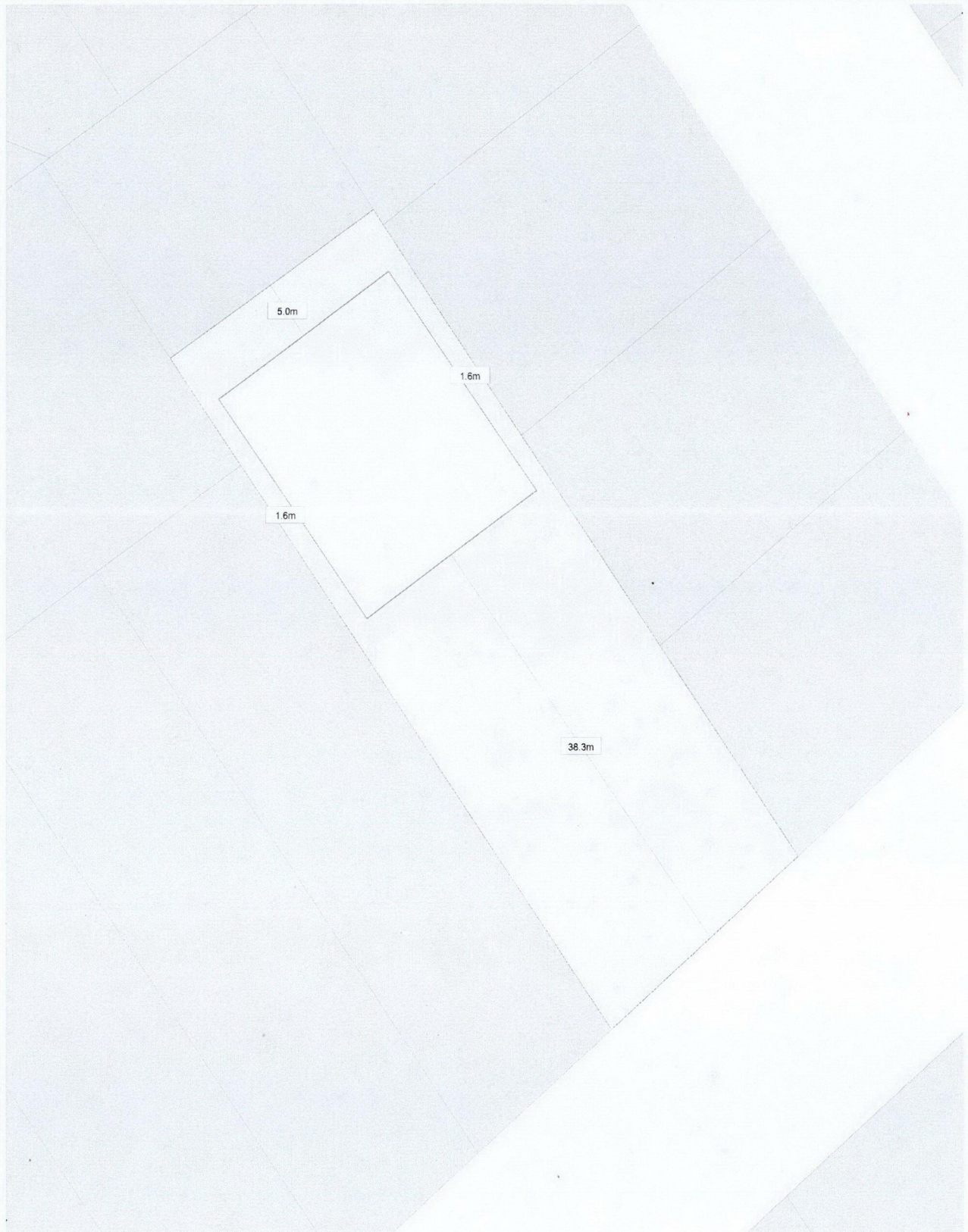
## Structure 1 of 1: New home

Application number: 208991

Property address: 28 Mona St, Mona Vale 2103

Lot details: Lot B, Deposited Plan 404336

**This structure will not impact Sydney Water infrastructure.**





## CONDITIONS AND IMPORTANT INFORMATION

### Conditions and Important Information

**Attention: You must read the information below.**

- 1 The approval of your building plan by Sydney Water (Approval) has been generated by an automated system based on the information you have provided to Sydney Water through the Sydney Water Tap in. Sydney Water does not make any representation or give any guarantee, warranty or undertaking (express or implied) as to the currency, accuracy, completeness, effectiveness or reliability of the Approval.
- 2 It is your responsibility to ensure that the information is correct and complete when submitting your building plan for approval through Sydney Water Tap in and, if any of the information is incorrect or incomplete, to resubmit information that is correct and complete. If any of the information that you have provided is incorrect or incomplete, this may result in the revocation of the Approval.
- 3 The Approval is provided on each of the following conditions which you are taken to have accepted by using the Approval. To the fullest extent permitted by law:
  - (a) all conditions and guarantees concerning the Approval (whether as to quality, outcome, fitness, care, skill or otherwise) expressed or implied by statute, common law, equity, trade, custom or usage or otherwise are expressly excluded and to the extent that those statutory guarantees cannot be excluded, the liability of Sydney Water to you is limited to either of the following as nominated by Sydney Water in its discretion, which you agree is your only remedy:
    - i. the supplying of the Approval again; or
    - ii. payment of the cost of having the Approval supplied again;
  - (b) in no event will Sydney Water be liable for, and you release Sydney Water from all Losses arising out of or in connection with you providing incorrect or incomplete information to Sydney Water in connection with the Approval:
    - i. whether arising under statute or in contract, tort or any other legal doctrine, including any negligent act, omission or default (including wilful default) by Sydney Water; and
    - ii. regardless of whether Sydney Water is or ought to have been aware of, or advised of, the possibility of such loss, costs or damages;
  - (c) you will indemnify, defend and hold harmless Sydney Water from and against all Losses of Sydney Water in respect of, or in connection with loss or damage to any property, personal injury (including death or illness of any person), arising out of or in connection with:
    - i. you providing incorrect or incomplete information to Sydney Water in connection with the Approval; or
    - ii. any third party claim against Sydney Water; and
  - (d) you assume all risks associated with the use of the Sydney Water Tap in and Sydney Water websites, including risk to your computer, software or data being damaged by any virus, and you release and discharge Sydney Water from all Losses which might arise in respect of your use of the websites.



- 4 Subject to condition numbered 3(c) in this document, your liability under condition numbered 3(c) in this document is reduced to the extent that the loss, liability, expense or damage:
- (a) is caused solely and directly by any negligent act or omission of Sydney Water; or
  - (b) could not reasonably be foreseen and was not reasonably within the contemplation of you and Sydney Water at the time of the loss, liability, expense or damage.
- 5 The position of the proposed building/building works in relation to Sydney Water's pipes and structures is satisfactory. You are responsible for, amongst other things:
- (a) protecting underground structures, including Sydney Water's pipelines, from damage and interference;
  - (b) maintaining minimum clearances between Sydney Water's structures and structures belonging to others;
  - (c) preventing loss or damage to any property, personal injury (including death or illness of any person) arising out of or in connection with you providing incorrect or incomplete information to Sydney Water in connection with the Approval;
  - (d) repairing or making good loss or damage to any property or the environment arising out of or in connection with you providing incorrect or incomplete information to Sydney Water in connection with the Approval;
  - (e) ensuring that connections to Sydney Water's sewer, watermain or stormwater are only be made following the issue of a permit to a licensed plumber/drainier;
  - (f) ensuring that all proposed fittings will drain to Sydney Water's sewer;
  - (g) ensuring that all plumbing and/or drainage Work is to be carried out in accordance with the NSW Code of Practice, AS 3500 and the Sydney Water Act 1994;
  - (h) ensuring that gullies, inspection shafts and boundary traps are not placed under any roof, balcony, verandah, floor or other cover unless otherwise approved by Sydney Water; and
  - (i) notifying Sydney Water immediately of any damage caused or threat of damage to Sydney Water's structures.
- 6 **"Sydney Water"** means Sydney Water Corporation and its employees, agents, representatives and contractors. References to "you" include references to your employees, agents, representatives, contractors, executors, administrators, successors, substitutes, assigns and anyone else using the Approval. References to "Losses" means all liabilities, losses, damages, expenses, compensations, fines, penalties, charges and costs (including legal costs on a full indemnity basis and whether incurred or awarded) of any kind or nature however they arise and whether they are present or future, fixed or unascertained, actual or contingent and including any loss of profits, loss of revenue or loss of opportunity. To the extent of any inconsistency, the conditions numbered 1 to 6 in this document will prevail over any other information provided or made available to you by Sydney Water.

**In an emergency, or to notify Sydney Water of damage or threats to its structures, call 13 20 92 (24 hours, 7 days).**



# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Single Dwelling

Certificate number: 800415S

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 Definitions" dated 18/09/2014 published by the Department. This document is available at [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

Secretary

Date of issue: Monday, 06 March 2017

To be valid, this certificate must be lodged within 3 months of the date of issue.



Planning &  
Environment

THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC / CDC

### Project summary

Project name	GJG - COCKS
Street address	28 Mona Street Mona Vale 2103
Local Government Area	Pittwater Council
Plan type and plan number	deposited 404336
Lot no.	B
Section no.	-
Project type	separate dwelling house
No. of bedrooms	5

### Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 47	Target 40

### Certificate Prepared by

Name / Company Name: CHAPMAN ENVIRONMENTAL SERVICES PTY LTD

ABN (if applicable): 58601921108



# Description of project

## Project address

Project name	GJG - COCKS
Street address	28 Mona Street Mona Vale 2103
Local Government Area	Pittwater Council
Plan type and plan number	Deposited Plan 404336
Lot no.	B
Section no.	-

## Project type

Project type	separate dwelling house
No. of bedrooms	5

## Site details

Site area (m <sup>2</sup> )	1388
Roof area (m <sup>2</sup> )	235
Conditioned floor area (m2)	282.3
Unconditioned floor area (m2)	17.7
Total area of garden and lawn (m2)	917

## Assessor details and thermal loads

Assessor number	20290
Certificate number	0001291384
Climate zone	56
Area adjusted cooling load (MJ/m <sup>2</sup> .year)	30
Area adjusted heating load (MJ/m <sup>2</sup> .year)	51

## Other

none	n/a
------	-----

## Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 47	Target 40



## Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Fixtures</b>				
The applicant must install showerheads with a minimum rating of 3 star (> 6 but <= 7.5 L/min) in all showers in the development.			✓	✓
The applicant must install a toilet flushing system with a minimum rating of 3 star in each toilet in the development.			✓	✓
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.			✓	
The applicant must install basin taps with a minimum rating of 3 star in each bathroom in the development.			✓	
<b>Alternative water</b>				
<b>Rainwater tank</b>				
The applicant must install a rainwater tank of at least 5000 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 rain runoff from at least 200 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).			✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> <li>• all toilets in the development</li> <li>• the cold water tap that supplies each clothes washer in the development</li> <li>• at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)</li> </ul>			✓ ✓ ✓	✓ ✓ ✓



Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Simulation Method</b>			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.			
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Floor and wall construction	Area
floor - concrete slab on ground	All or part of floor area square metres



Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Hot water</b>			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 5 stars.	✓	✓	✓
<b>Cooling system</b>			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
<b>Heating system</b>			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
<b>Ventilation</b>			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: no mechanical ventilation (ie. natural); Operation control: n/a		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
<b>Artificial lighting</b>			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 5 of the bedrooms / study;		✓	✓



Energy Commitments		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> <li>• at least 3 of the living / dining rooms;</li> <li>• the kitchen;</li> <li>• all bathrooms/toilets;</li> <li>• the laundry;</li> <li>• all hallways;</li> </ul>			✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
Natural lighting				
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.		✓	✓	✓
The applicant must install a window and/or skylight in 6 bathroom(s)/toilet(s) in the development for natural lighting.		✓	✓	✓
Other				
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.			✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.			✓	



## 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 and 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 (either interim or final) for the development may be issued.





## G.J. GARDNER HOMES NSW

### PROPOSED NEW DWELLING FOR G.J. GARDNER HOMES NSW

LOT B NO. 28 MONA STREET,  
MONA VALE. NSW

#### INDEX TO SHEETS

SHEET	TITLE
S-000	COVER SHEET & DRAWING LIST
S-001	GENERAL NOTES
S-002	STRUCTURAL NOTES
S-101	FOOTING & SLAB PLAN
S-102	FOOTING & SLAB DETAILS - SHEET 1
S-103	FOOTING & SLAB DETAILS - SHEET 2
S-104	FOOTING & SLAB DETAILS - SHEET 3
S-105	FOOTING & SLAB DETAILS - SHEET 4
S-106	FOOTING & SLAB DETAILS - SHEET 5
S-107	FOOTING & SLAB DETAILS - SHEET 6
S-108	SURFACE DRAINAGE DETAILS
S-109	PLUMBING CONNECTION DETAILS
S-110	STRUCTURAL STEEL MARKING PLAN
S-111	STRUCTURAL STEEL DETAILS

THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC / CDC

I certify that work completed in accordance with  
these plans and specifications will comply with  
the regulations referred to in Section 81A(5) of  
the Environment Planning & Assessment Act 1979

This is the plan/spec referred to  
in Form Building Certifiers Certificate  
Certificate No. CDC2017-533  
Plan Nos. S-000-S-002, S-101-S-111  
Craig Formosa BPB0124 DATE 13/4/17

#### IMPORTANT NOTE:

IT IS THE RESPONSIBILITY OF THE CLIENT IN CONSULTATION WITH THEIR BUILDER TO CHECK AND VERIFY  
THE BUILDABILITY OF THE DESIGN AS PRESENTED AND REFER ANY CONCERNS BACK TO THE ENGINEER  
PRIOR TO CONSTRUCTION. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT  
ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.

IT IS ASSUMED THAT THE USER OF THESE DETAILS HAS A LEVEL OF FAMILIARITY AND COMPETENCY TO  
UNDERSTAND AND EXECUTE THE WORKS.

AT ALL TIMES COMMON SENSE IS TO BE USED  
IF EVER IN DOUBT, ASK!

REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP	TITLE	NAME	DATE
0	TLT	14/03/17	ISSUED FOR CONSTRUCTION	AC	RC	DRAFTER	TLT	14/03/17
						DESIGNER	TLT	14/03/17
						ENG. CHECK	RC	14/03/17
						SCALE		SIZE A3
						APPROVED BY:		

PROJECT	PROPOSED NEW DWELLING FOR G.J. GARDNER HOMES NSW LOT B NO. 28 MONA STREET, MONA VALE. NSW
CLIENT	G.J. GARDNER HOMES NSW

	STRUCterre consulting engineers
Suite 1, Level 2, 42 Birnie Avenue, Lidcombe NSW 2141 TEL (02) 9646 5811 FAX (02) 9646 2311 EMAIL: sydney@struc terre.com.au	
STRUCterre JOB No. 38858	DRAWING REF. No. D38858-S-000
CLIENT REFERENCE No. GJGN015	REV 0



- G.1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT/ENGINEER FOR DECISION BEFORE PROCEEDING WITH THE WORK.
- G.2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
- G.3. SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE BUILDER.
- G.4. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
- G.5. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS OF THE AS CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING STATE AUTHORITY.
- G.6. THIS REPORT IS BASED ON INFORMATION SUPPLIED BY THE CLIENT. IF ANY ASPECT OF THE SITE PREPARATION OR PROPOSED CONSTRUCTION CHANGES FROM THAT ORIGINALLY ADVISED, THE ENGINEER MUST BE NOTIFIED SO THAT ANY NECESSARY AMENDMENTS CAN BE MADE.
- G.7. DEVELOPMENT APPLICATION DECISION NOTICE - FOR WORK REQUIRING BUILDING APPROVAL, THE DEVELOPMENT APPLICATION DECISION NOTICE, ISSUED BY THE COUNCIL OR BUILDING CERTIFIER MUST BE FORWARDED TO US PRIOR TO ARRANGING ANY INSPECTIONS WITH THIS OFFICE.

- S.C.1. THIS REPORT HAS BEEN BASED UPON INFORMATION PROVIDED TO OUR OFFICE AND/OR GATHERED BY OUR STAFF.
- S.C.2. THIS REPORT HAS BEEN PREPARED IN ACCORDANCE WITH AS 2870 AND RELEVANT STATE LEGISLATION.
- S.C.3. SHOULD SOIL CONDITIONS ENCOUNTERED ON SITE DIFFER SIGNIFICANTLY FROM THOSE INDICATED IN THE SOIL TEST NOTED ABOVE, THE ENGINEER MUST BE NOTIFIED BEFORE PROCEEDING AS THE SITE CLASSIFICATION MAY NEED REVISING AND MODIFICATIONS TO THE DESIGN MAY BE REQUIRED.
- S.C.4. THE SITE INVESTIGATION MAY BE RENDERED IRRELEVANT IF THE LOCATION OF PROPOSED STRUCTURES VARY FROM THAT SPECIFIED AT THE TIME OF THIS REPORT. THIS REPORT RELATES TO THE CONDITIONS EXISTING ON THE LAND AT THE TIME OF THE SITE INVESTIGATION. THIS REPORT IS BASED UPON THE PROPOSED CUT / FILL INFORMATION PROVIDED BY THE CLIENT. ANY UNADVISED EXTENSIVE CUTTING OR FILLING MAY RENDER THIS REPORT IRRELEVANT.
- S.C.5. WHILE A REASONABLE EFFORT IS MADE TO ASSESS THE SITE'S SUITABILITY FOR THE PROPOSED CONSTRUCTION, THIS REPORT DOES NOT TAKE INTO ACCOUNT SLOPE STABILITY. IF REQUIRED BY THE COUNCIL, A SUITABLY QUALIFIED PERSON SHOULD BE ENGAGED TO UNDERTAKE A SLOPE STABILITY ASSESSMENT.

M.1. WHERE TERMITE PROTECTION IS REQUIRED, INSTALL IN ACCORDANCE WITH AS3660. BUILDER SHALL CONFIRM WITH OWNER THE PREFERRED METHOD OF TERMITE MANAGEMENT. OWNER IS RESPONSIBLE FOR ONGOING INSPECTION OF STRUCTURAL TIMBER ELEMENTS AND ENSURING THAT TERMITE MANAGEMENT SYSTEMS ARE NOT BREACHED.

M.2. THE RECOMMENDED DISTANCE THAT A NEW TREE SHOULD BE LOCATED FROM A DWELLING WOULD BE EQUAL OR GREATER THAN 75% OF THE MATURE HEIGHT FOR CLASS M SITES, 100% OF THE MATURE HEIGHT FOR CLASS H1 & H2 SITES, 150% OF THE MATURE HEIGHT FOR CLASS E SITES.

D.2. DRAINAGE SHALL BE CONSTRUCTED TO AVOID WATER PONDING AGAINST OR NEAR THE FOOTING. THE GROUND IN THE IMMEDIATE VICINITY OF THE PERIMETER FOOTING, INCLUDING THE GROUND UPHILL FROM THE SLAB ON

PLUMBING TRENCHES SHALL BE SLOPED AWAY FROM THE HOUSE AND SHALL BE BACKFILLED WITH CLAY IN THE TOP 300mm WITHIN 1.5m OF THE HOUSE. THE CLAY USED FOR BACKFILLING SHALL BE COMPACTED. WHERE PIPES PASS UNDER THE FOOTING SYSTEM, THE TRENCH SHALL BE BACKFILLED WITH CLAY OR CONCRETE TO RESTRICT THE INGRESS OF WATER BENEATH THE FOOTING SYSTEM.

EXCAVATIONS NEAR THE EDGE OF THE FOOTING SYSTEM SHALL BE BACKFILLED IN SUCH A WAY AS TO PREVENT ACCESS OF WATER TO THE FOUNDATION. FOR EXAMPLE, EXCAVATIONS SHOULD BE BACKFILLED ABOVE OR ADJACENT THE FOOTING WITH MOIST CLAY, COMPACTED BY HAND-RODDING/TAMPING. POROUS MATERIAL SUCH AS SAND, GRAVEL OR BUILDING RUBBLE SHOULD NOT BE USED.

WATER RUN-OFF SHALL BE COLLECTED AND CHanneled AWAY FROM THE HOUSE DURING CONSTRUCTION.

PENETRATIONS OF THE EDGE BEAMS AND FOOTING BEAMS ARE TO BE AVOIDED, BUT WHERE NECESSARY SHALL BE SLEEVED TO ALLOW FOR MOVEMENT.

CONNECTION OF STORMWATER DRAINS AND WASTE DRAINS SHALL INCLUDE FLEXIBLE CONNECTIONS.

ADDITIONAL PLUMBING REQUIREMENTS ARE NEEDED FOR MODERATELY, HEAVILY & EXTREMELY REACTIVE SITES IN ACCORDANCE WITH CLAUSE 6.6 (F) FROM AS 2870.

PLUMBING & DRAINAGE UNDER THE SLAB SHOULD BE AVOIDED WHERE PRACTICAL (REFER AS/NZS 3500 CLAUSE 4.10)

ALL PIPEWORK INCLUDING STORMWATER FITTINGS & ADAPTERS SHOULD BE PROTECTED FROM MECHANICAL DAMAGE.

PROVISIONS SHOULD BE MADE FOR THE CONNECTION OF OVERFLOW OR WATER DISCHARGE FROM FIXTURES SUCH AS HOT WATER SYSTEMS & AIR CONDITIONERS TO A DRAIN AS REQUIRED BY THE RELEVANT LOCAL AUTHORITY.

P.1. THIS DESIGN IS BASED UPON THE NORMAL FOOTING PERFORMANCE CRITERIA PROVIDED IN TABLE 2.2 OF AS8270-2011 WITH DAMAGE CATEGORIES DETAILED IN APPENDIX C. IF THESE PERFORMANCE CRITERIA IS UNSUITABLE FOR THIS DWELLING PLEASE CONSULT THIS OFFICE FOR ADDITIONAL ENGINEERING ADVISE AND DESIGN SERVICES.

P.2. THE OWNER'S ATTENTION IS DRAWN TO APPENDIX B 'PERFORMANCE CRITERIA AND FOUNDATION MAINTENANCE' AND APPENDIX C 'CLASSIFICATION OF DAMAGE DUE TO FOUNDATION MOVEMENTS' OF AS 2870-2011.

P.3. WE ALSO DIRECT THE OWNER TO THE CSIRO PUBLICATION BTf 18 'FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE: A HOMEOWNER'S GUIDE'. COPIES OF THIS PUBLICATION ARE AVAILABLE FROM CSIRO PUBLISHING ON PH: 1300-788-000 OR AT <http://www.publish.csiro.au/nid/18/pid/3612.htm>. THIS REPORT MAY BE RENDERED INVALID IF THE PROPERTY IS NOT MAINTAINED AS RECOMMENDED IN THIS PUBLICATION.

P.4. THE LONG TERM PERFORMANCE OF DWELLING FOOTINGS IS DEPENDANT ON FACTORS SUCH AS SITE DRAINAGE, VEGETATION AND WATERING OF AREAS ADJACENT TO THE DWELLING.

P.5. WATERING OF LAWNS AND GARDENS SHOULD BE CONSISTENT. OVER WATERING CAN DAMAGE FOOTINGS. EQUALLY FOOTINGS MAY BE DAMAGED BY PROLONGED PERIODS OF NEGLECT AFTER YEARS OF CAREFUL WATERING. LEAKING TAPS AND PIPES AND BLOCKED DRAINS SHOULD BE REPAIRED PROMPTLY. PROLONGED NEGLECT CAN LEAD TO DAMAGED FOOTINGS.

SUMMARY OF AS2870-2011 - TABLE 2.2 - Classification of normal site footing performance for brick veneer & full masonry construction		
SITE CLASS	EXPECTED DAMAGE CATEGORIES	DAMAGE CATEGORIES (C1 & C2 OF APPENDIX C)
A & S	CATEGORY 0 & 1	WALL CRACKS < 1mm SLAB CRACKS < 1mm LEVEL CHANGES < 8mm OVER 3m
M	OFTEN CATEGORY 1 & RARELY 2	OFTEN WALL CRACKS < 1 mm. & RARELY 1 < 5mm SLAB CRACKS 1 < 2mm LEVEL CHANGES 10 < 15mm OVER 3m
H1/H2	OFTEN CATEGORY 1 & 2 RARELY CATEGORY 3	OFTEN WALL CRACKS < 5 mm & RARELY 5 < 15mm SLAB CRACKS 2 < 4mm LEVEL CHANGES OF 15 < 25mm OVER 3m
E	OFTEN CATEGORY 3 OR MORE	OFTEN WALLS CRACKS 15 < 25mm SLAB CRACKS 2 < 4mm OR MORE LEVEL CHANGES > 25mm OVER 3m

- A.1. THIS DESIGN ASSUMES THAT MASONRY ARTICULATION JOINTS WILL BE INSTALLED UNLESS NOTED OTHERWISE ON FOOTING & SLAB PLAN. ANY MASONRY ARTICULATION JOINTS SHALL BE POSITIONED IN ACCORDANCE WITH TECHNICAL NOTE 61 PRODUCED BY CEMENT CONCRETE & AGGREGATES AUSTRALIA AND AS 3700 SECTION 12.16.4. REFER TO TABLE BELOW FOR MAXIMUM SPACING AND MASONRY ARTICULATION PLAN (IF PROVIDED) FOR SPECIFIC LOCATIONS AND DETAILS FOR RENOVATIONS OR EXTENSIONS TO EXISTING STRUCTURES.
- A.2. MASONRY ARTICULATION JOINTS SHALL BE POSITIONED WHERE EVER NEW BRICKWORK MEETS OLD BRICKWORK.
- A.3. WHERE MASONRY ARTICULATION IS SHOWN BESIDE OPENINGS WITH BRICKWORK ABOVE THE OPENING, CARE SHOULD BE TAKEN TO PROVIDE A SLIP JOINT AROUND THE END OF THE LINTEL.
- A.4. WHERE MASONRY ARTICULATION IS SHOWN BESIDE OPENINGS, THE JOINT IS TO CONTINUE BETWEEN THE WINDOW/DOOR FRAME AND THE BRICKWORK TO THE FULL HEIGHT OF THE WALL. AT THESE LOCATIONS, THE FRAMES ARE TO BE FIXED WITH FASTENERS THAT WILL ALLOW MOVEMENT OF THE JOINT.

MAXIMUM SPACING OR ARTICULATION JOINTS TO AS 4773 (UNREINFORCED MASONRY) U.N.O			
SITE CLASS	CONSTRUCTION & SURFACE FINISH	JOINT SPACING (m) FOR WALL HEIGHT	
		≤ 4m HIGH	4m TO 8.5m
A & S	NOT REQUIRED	-	-
M, M-D	EXTERNAL FACE FINISH	6.0	4.2
	EXTERNAL RENDERED/PAINTED	5.5	3.9
	INTERNAL FACE FINISH	6.0	4.2
	INTERNAL RENDERED/PAINTED	5.5	3.9
H1, H2, H1-D, H2-D	EXTERNAL FACE FINISH	5.0-5.5	3.5-3.9
	EXTERNAL RENDERED/PAINTED	4.5-5.5	3.2-3.5
	INTERNAL FACE FINISH	5.0-5.5	3.5-3.9
	INTERNAL RENDERED/PAINTED	4.5-5.0	3.2-3.5
P, E, E-D	REFER NOTE 4 / LOCATIONS	-	-

NOTES:

1. AS DEFINED IN AS 2870

2. USE MAXIMUM SPACING FOR EXPANSION OR CONTRACTION JOINTS

3. FOR H-D SITES USE THE SHORTER SPACING

4. FOR LOCATION OF JOINTS ON CLASS E, E-D & P SITES, REFER TO ENGINEER FOR ADVICE

F.1. FOOTINGS SHALL BE PLACED CENTRALLY UNDER WALLS AND COLUMNS UNLESS OTHERWISE NOTED.

F.2. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS 2870 & NATIONAL CONSTRUCTION CODE (N.C.C.)

F.3. THE FOOTING DETAILS SHOWN ARE FOR THE SITE CLASSIFICATION STIPULATED. WHILST EVERY CARE HAS BEEN TAKEN TO VERIFY THAT THE INFORMATION SHOWN IS CORRECT, STRUTERRE CONSULTING ENGINEERS TAKE NO RESPONSIBILITY FOR VARIATIONS WHICH MAY OCCUR DUE TO VARIATIONS IN SITE CONDITIONS.

F.4. FILL USED IN THE CONSTRUCTION OF A SLAB EXCEPT WHERE THE SLAB IS SUSPENDED SHALL CONSIST OF A CONTROLLED FILL OR ROLLED FILL IN ACCORDANCE WITH AS 2870:

F.4.1. ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 600mm COMPACTED IN LAYERS NOT MORE THAN 300mm FOR SAND MATERIAL OR 400mm COMPACTED IN LAYERS NOT MORE THAN 150mm FOR OTHER MATERIAL.

F.4.2. CONTROLLED FILL CONSISTS OF WELL GRADED SAND FILL UP TO 800mm DEEP, WELL COMPACTED IN NOT MORE THAN 300mm LAYERS BY VIBRATING PLATE OR VIBRATING ROLLER. NO SAND FILL UP TO 400mm DEEP, WELL COMPACTED IN NOT MORE THAN 150mm LAYERS BY A MECHANICAL ROLLER. CLAY FILL SHOULD BE MOIST DURING COMPACTION. THE DEPTHS OF FILL GIVEN ABOVE ARE DEPTHS MEASURED AFTER COMPACTION. FOR COMPACTED DEPTHS GREATER THAN THAT GIVEN ABOVE THE FILL SHALL BE SUBJECT TO CONTROL AND TESTING. IF TEST FAILS THEN PIERS ARE REQUIRED. CONTACT THIS OFFICE PRIOR TO FURTHER CONSTRUCTION.

F.5. TOP SOIL CONTAINING GRASS ROOTS OR OTHER ORGANIC MATERIAL SHALL BE REMOVED FROM THE AREA ON WHICH THE SLAB IS TO REST.

6. IF ANY FOOTING IS LOCATED SUCH THAT A LINE DRAWN AT 45 DEGREES (FOR CLAY AND 30 DEGREES FOR SAND) FROM ITS BASE INTERSECTS A PRIVATE SERVICE TRENCH, THEN PIERS ARE REQUIRED. SEE FOOTING & SLAB DETAILS FOR EXAMPLE.

7. FOOTING & SLAB PIERS ARE REQUIRED WHERE UNCONTROLLED FILL UNDER THE EDGE BEAM/SLAB IS PRESENT.

8. WHERE PIERS ARE USED TO SUPPORT A SLAB ON UNCONTROLLED FILL, PLUMBING AND DRAINAGE PIPES FOUNDED WITHIN SUCH FILL SHALL BE HUNG FROM THE SLAB MESH WITH NON-CORROSIVE STRAPS.

9. FOR SATISFACTORY RESULTS, CONCRETE MUST BE CURED FOR AT LEAST 7 DAYS. CURING MAY BE ACHIEVED BY KEEPING THE CONCRETE MOIST, BY APPLYING A CURING COMPOUND, OR BY COVERING THE CONCRETE WITH A MOISTURE BARRIER. WHERE A CURING COMPOUND IS USED, IT MUST COMPLY WITH AS3799 & BE APPLIED TO THE MANUFACTURERS SPECIFICATIONS. MANY BUILDERS FIND THAT THE MOST SATISFACTORY WAY TO CURE A SLAB IS TO COVER IT WITH SHEETS OF POLYETHYLENE AS SOON AS POSSIBLE AFTER FINISHING. IF A SLAB IS MOIST WHEN COVERED AND THE POLYETHYLENE IS HELD SECURELY ONTO THE CONCRETE, THIS SYSTEM PROVIDES SATISFACTORY CURING OF THE CONCRETE.

- M.1. REINFORCED CONCRETE (R.C) BLOCKWORK TO CONFORM TO AS 3700 MASONRY STRUCTURES. BLOCKWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF AS3700. UNCONFINED CHARACTERISTIC COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNIT,  $f'_{uc} = 15 \text{ MPa}$
- M.2. MORTAR TYPE = M3
- M.3. DESIGN CHARACTERISTIC COMPRESSIVE STRENGTH OF GROUT,  $f'_{cg} = 20 \text{ MPa}$ .
- M.4. YIELD STRENGTH OF REINFORCEMENT -  $f_{sy} = 500 \text{ MPa}$
- M.5. CLEANOUT ALL CORES AFTER EACH DAYS LAYING. JOINTS TO BE TOOLED. CONTROL JOINTS TO BE PROVIDED AT 6.0 TO 8.0m CENTRES AND AS PER BLOCKWALL PLANS WHERE APPLICABLE.

REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP	TITLE	NAME	DATE
0	TLT	14/03/17	ISSUED FOR CONSTRUCTION	AC	RC	DRAFTER	TLT	14/03/17
						DESIGNER	TLT	14/03/17
						ENG. CHECK	RC	14/03/17
						SCALE		SIZE A3
						APPROVED BY:  ROBERT COLOMBO FIEAust CPEng, NER, BPB, RBP, RPEQ, FAPI		

PROPOSED NEW DWELLING FOR  
G.J. GARDNER HOMES NSW  
LOT B NO. 28 MONA STREET,  
MONA VALE. NSW

## GENERAL NOTES

G.J. GARDNER HOMES NSW



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STRUCTERRE JOB No.	DRAWING REF. No.
38858	D38858-S-001

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REFERENCE. No.  
GJGN015



CONCRETE WORK:

- C.1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 & AS 2870. U.N.O
- C.2. CONCRETE QUALITY FOR CEMENT TYPE A & EXPOSURE CLASSIFICATION A1 SHALL BE AS TABULATED AND SHALL BE VERIFIED BY TESTS (REFER TABLE BELOW). U.N.O, SEE SLAB PLAN FOR A2, B & C CATEGORIES.

ELEMENT	SLUMP	AGG	CONCRETE GRADE	COVER U.N.O (mm)
SLABS ON GROUND	100mm	20mm	N20	20 TOP
				30 BTM. & SIDES
				40 TOP (EXT.)
FOOTINGS	100mm	20mm	N20	50 TYPICAL
SUSPENDED SLAB	80mm	20mm	N32	30 TOP & SIDES
				20 BTM.
BEAMS	80mm	20mm	N32	45 TYPICAL
STAIRS	80mm	20mm	N32	45 TOP
				35 BTM.
WALLS	80mm	20mm	N32	30 SIDES (INT.)
				40 SIDES (EXT.)
COLUMNS	80mm	20mm	N32	40 TYPICAL

- C.3. SAMPLE AND TEST IN ACCORDANCE WITH AS 3600.
- C.4. ALL CONCRETE CONSTRUCTION TO BE COMPACTED WITH A MECHANICAL VIBRATOR.
- C.5. THOROUGHLY SCABBLE CONCRETE ON WHICH NEW CONCRETE IS TO BE POURED.
- C.6. ALL CONCRETE SHALL BE PLACED AND CURED IN ACCORDANCE WITH AS3600. WHERE CURING COMPOUNDS ARE USED, IT MUST COMPLY WITH AS3799 & BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS & AS FOLLOWS:
- C.6.1. ONTO SLAB WITHIN 2HRS OF FINISHING OPERATION.
- C.6.2. ONTO WALLS AND COLUMNS IMMEDIATELY AFTER REMOVAL OF FORMWORK.
- C.7. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C.8. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER.
- C.9. BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.
- C.10. HORIZONTAL FORMWORK SHALL BE STRIPPED WHEN APPROVED BY THE ENGINEER.
- C.11. U.N.O NO ALLOWANCE HAS BEEN MADE FOR STACKED MATERIALS OR MACHINERY ON THE CONCRETE STRUCTURE.
- C.12. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- C.13. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY, IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- C.14. SPLICES IN REINFORCEMENT MADE IN POSITIONS OTHER THAN SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.
- C.15. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
- C.16. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.

- C.17. ALL REINFORCING BARS SHALL COMPLY WITH AS 4671. ALL FABRIC SHALL COMPLY WITH AS 4671 AND SHALL BE SUPPLIED IN FLAT SHEETS.
- C.18. REINFORCEMENT SYMBOLS:  
N - DENOTES GRADE D500 HIGH STRENGTH DEFORMED BARS TO AS 4671.  
R - DENOTES GRADE R250 HOT ROLLED PLAIN BARS TO AS 4671.  
SL - DENOTES HARD-DRAWN WIRE SQUARE REINFORCING FABRIC TO AS 4671.  
RL - DENOTES HARD-DRAWN WIRE RECTANGULAR REINFORCING FABRIC TO AS 4671.  
L - DENOTES HARD-DRAWN WIRE TRENCH MESH TO AS 4671.  
THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES.
- C.19. FABRIC/MESH REINFORCEMENT TO BE LAPPED ONE MESH PLUS 30mm. LAPS IN POSITIONS OF MAXIMUM MOMENT ARE NOT PERMITTED.
- C.20. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON INSULATED STEEL, PLASTIC OR CONCRETE CHAIRS GENERALLY AT NOT GREATER THAN 800 CENTRES BOTH WAYS. RODS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
- C.21. ALL TENSILE REINFORCEMENT TO BE LAPPED AS SHOWN IN TAB F BELOW:

REINFORCEMENT BAR	N12	N16	N20	N24
LAP LENGTH	400	600	700	800

STRUCTURAL STEELWORK NOTES:

- S.1. DESIGN CONFORMS TO THE FOLLOWING STANDARDS:  
AS 4100 - STEEL STRUCTURES.  
AS/NZS 4600 - COLD-FORMED STEEL STRUCTURES.  
FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF AS 4100.
- S.2. ALL STEELWORK SHALL BE TEMPORARILY BUT SECURELY BRACED UNTIL ALL FINAL BRACING, CLADDING AND STABILISING BRICK OR BLOCKWORK HAVE BEEN COMPLETED, TO MAINTAIN THE STRUCTURE IN A SAFE AND STABLE CONDITION DURING CONSTRUCTION.
- S.3. BASE PLATES SHALL BE GROUTED BEFORE THE MEMBER IS SUBSTANTIALLY LOADED. GROUT SHALL HAVE A MINIMUM STRENGTH  $f_c$  OF 25 MPa AND SHALL BE DRY PACK MORTAR RAMMED IN, OR AN APPROVED NON-SHRINK GROUT.
- S.4. U.N.O. ALL MATERIAL SHALL BE:  
GRADE 250 HOT-ROLLED PLATES COMPLYING WITH AS/NZS 3678.  
GRADE 300 UB, UC, PFC, EA, UA, FLATS & ROUNDS COMPLYING WITH AS/NZS 3679.1.  
GRADE 300 WB, WC COMPLYING WITH AS/NZS 3679.2.  
GRADE C350 CHS COMPLYING WITH AS 1163.  
GRADE C450 RHS, SHS COMPLYING WITH AS 1163.
- S.5. WELDING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF AS/NZS 1554.1. WELDING CONSUMABLES SHALL BE GRADE E48XX OR W50X U.N.O. ALL WELDS SHALL BE 6mm CFW SP CATEGORY U.N.O. ALL BUTT WELDS SHALL BE SP CATEGORY U.N.O. INSPECTION IS REQUIRED IN ACCORDANCE WITH AS/NZS 1554.1. ALL GP / SP WELDS SHALL BE 100% VISUALLY SCANNED. SP FILLET WELDS SHALL HAVE 10% VISUAL EXAMINATION U.N.O. SP BUTT WELDS SHALL HAVE 50% VISUAL EXAMINATION U.N.O. ALL GP WELDS SHALL HAVE 10% VISUAL EXAMINATION.
- S.6. BOLTS SHALL BE M16 DIAMETER U.N.O. BOLT CATEGORY IS TO BE 8.8/S COMPLYING WITH AS 4100, AS/NZS 1252 & AS/NZS 4291.1. U.N.O. PROVIDE DESIGN ENGINEER WITH EVIDENCE OF COMPLIANCE WITH THESE CODES.  
HOLDING DOWN BOLTS SHALL BE CATEGORY 4.6/S U.N.O. THREADS MAY BE INCLUDED IN THE SHEAR PLANES U.N.O. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANISED. BOLTS DENOTED 4.6/S ARE COMMERCIAL BOLTS OF STRENGTH GRADE 4.6 TO AS 1111 SNUG TIGHT.
- BOLTS DENOTED 8.8/S, 8.8/TB AND 8.8/TF ARE HIGH STRENGTH STRUCTURAL BOLTS OF STRENGTH GRADE 8.8 TO AS/NZS 1252 & AS/NZS 4291.1.  
8.8/S DENOTES BOLTS SNUG TIGHT.  
8.8/TB DENOTES BOLTS FULLY TENSIONED IN BEARING, TO AS 4100.  
8.8/TF DENOTES BOLTS FULLY TENSIONED IN FRICTION, TO AS 4100 - MATING SURFACES MUST NOT BE PAINTED.
- S.7. ALL DETAILS, GAUGE LINES ETC. (WHERE NOT SPECIFICALLY SHOWN) ARE TO BE IN ACCORDANCE WITH AISC PUBLICATIONS "DESIGN CAPACITY TABLES FOR STRUCTURAL STEEL" AND "STANDARDISED STRUCTURAL CONNECTIONS". PLATES ARE TO BE 10mm THICK, CUT FROM STANDARD FLAT BARS U.N.O. ENDS OF HOLLOW SECTIONS SHALL BE SEALED WITH NOMINAL THICKNESS PLATES AND CONTINUOUSLY WELDED TO SEAL ENDS, UNO.
- S.8. THE STEEL FABRICATOR SHALL PROVIDE THE ENGINEER WITH 1 COPY OF WORKSHOP DRAWINGS FOR INSPECTION AT LEAST 7 DAYS BEFORE FABRICATION IS STARTED. STEELWORK IS NOT TO BE FABRICATED UNTIL WORKSHOP DRAWINGS ARE APPROVED.
- S.9. ALL DIMENSIONS ARE MILLIMETRES U.N.O.
- S.10. CORROSION PROTECTION
- S.10.1. INTERNAL STEELWORK (ENCLOSED)
- S.10.1.1. THE STEELWORK SHALL BE CLEANED TO AS 1627 CLASS 1 AND GIVEN ONE COAT OF ALKYD PRIMER TO GIVE A DRY FILM THICKNESS OF 50 MICRONS BEFORE DISPATCH TO SITE, UNLESS THE STEEL IS TO BE ENCASED IN CONCRETE OR IS DETAILED OTHERWISE. APPLY ONE FINISH COAT OF ALL WEATHER GLOSS ACRYLIC PAINT.
- S.10.2. EXTERNAL STEELWORK (UNENCLOSED)
- S.10.2.1. ALL STRUCTURAL STEELWORK WHICH IS EXPOSED OR IN CONTACT WITH EXPOSED BRICKWORK, AND ALL LINTELS, SHALL BE HOT DIP GALVANISED AFTER FABRICATION. STEELWORK GALVANISED AFTER FABRICATION SHALL COMPLY WITH AS/NZS 4680.
- S.10.2.2. AS AN ALTERNATIVE TO GALVANISING, ALL STRUCTURAL STEELWORK WHICH IS EXPOSED SHALL BE CLEANED TO AS 1627 CLASS 2 1/2 PREPARATION AND GIVEN A COAT OF INORGANIC ZINC SILICATE TO GIVE A DRY FILM THICKNESS OF 75 MICRONS BEFORE DISPATCH TO THE SITE, UNLESS THE STEEL IS TO BE ENCASED IN CONCRETE OR IS DETAILED OTHERWISE.
- S.10.2.3. REPAIR OF GALVANISED COATING AFTER WELDING PREPARATION - REMOVE ALL WELDING SCALE, SLAG & SHARP EDGES. POWER TOOL CLEAN TO AS 1627.2, CLASS 3, USING ABRASIVE WHEEL ON A POLISHER AT 3500RPM. DEGREASE & REMOVE ALL SURFACE CONTAMINANTS TO AS 1627.1.
- S.10.2.4. 'SEVERE' CORROSION ENVIRONMENT - APPLY 2 COATS OF 2-PACK EPOXY ZINC TO AS 3750.9, TO TOTAL 150um DFT, FOLLOWED BY 2 PACK EPOXY ENAMEL TO TOTAL 150um DFT.
- S.10.2.5. 'MODERATE' CORROSION ENVIRONMENT - APPLY A TOTAL OF 125um DFT OF DULUX METALSHIELD COLD GALV. PRIMER OR EQUIV IN 2 COATS, USING BRUSH OR SPRAY CAN.
- S.11. UNLESS NOTED OTHERWISE, PROTECTIVE COATINGS FOR STEELWORK SHALL BE AS TABULATED BELOW AND IN ACCORDANCE WITH VOL. 2 PART 3.4.4 OF THE NCC.

ENVIRONMENT (EXPOSURE CLASS AS PER AS 2312)	STRUCTURAL MEMBERS (NOT BUILT INTO MASONRY/CONCRETE)		LINTELS (BUILT INTO MASONRY OR CONCRETE)
	INTERNAL	EXTERNAL	
VERY LOW	R0	-	-
LOW	R0	R1	R2
MEDIUM	R0	R2	R3
HIGH	R1	R3	R4
VERY HIGH	R1	R4	R5
PROTECTIVE COATING SPECIFICATION TO AS 2699.3			

TIMBER NOTES:

- T.1. MANUFACTURED TIMBER ELEMENTS (e.g. LVL) EXPOSED TO WEATHERING SHALL BE L.O.S.P. TREATED TO H3 LEVEL. WHERE EXPOSED TO DIRECT SUN, FURTHER PROTECTION WITH A GOOD QUALITY PAINT SYSTEM IS REQUIRED.
- T.2. ALL WORK IN STRUCTURAL TIMBER TO BE IN ACCORDANCE WITH THE CURRENT EDITION OF AS 1684, SAA TIMBER FRAMING CODE AS 1720, SAA TIMBER ENGINEERING CODE AS 1320 - GLUED LAMINATED STRUCTURAL TIMBER
- T.3. BOLTS: ALL NUTS & BOLTS TO BE PROVIDED WITH WASHERS. ALL BOLTS TO BE TIGHTENED FINALLY BEFORE HANDOVER. BOLT HOLES TO BE 2mm OVERSIZE IN UNSEASONED TIMBER.
- T.4. UNLESS DETAILED OTHERWISE TIMBER MEMBERS TO BE FIXED WITH NOMINAL NAILING AS SPECIFIED IN AS 1684
- T.5. SIZES AND DETAILS NOT SHOWN SHALL COMPLY WITH AS 1684. ALL OPENINGS TO BE FULLY FLASHED WITH STD GALVANISED SHEET STEEL FLASHING.
- T.6. ALL BOLTS TO HAVE MILD STEEL GALVANISED WASHERS:  
BOLTS UP TO 12mm DIA - 50x50x3 WASHERS  
BOLTS UP TO 20mm DIA - 65x65x5 WASHERS

ROOF TRUSS NOTES:

- RT.1. THE BASIS OF DESIGN SHALL BE SAA LOADING CODE AS 1170.1; AS 1170.2 & SAA TIMBER STRUCTURE CODE AS 1720.1.
- RT.2. DESIGN THE ROOF TRUSSES AS PER THE WIND CLASSIFICATION AS SPECIFIED.
- RT.3. IN ADDITION TO THE NOMINATED PERMANENT BRACING, PROVIDE ANY ADDITIONAL PERMANENT BRACING REQUIRED FOR STRUCTURAL SUFFICIENCY OF THE TRUSS SYSTEM.
- RT.4. PROVIDE ANY TEMPORARY BRACING REQUIRED TO MAINTAIN THE STABILITY OF THE TRUSSES AT ALL STAGES OF ERECTION.
- RT.5. MAKE ALLOWANCES FOR SIZE AND LOCATION OF MECHANICAL SERVICES/AIRCONDITIONING DUCTWORK IF APPLICABLE.
- RT.6. SPAN TRUSSES ONLY BETWEEN THE NOMINATED SUPPORTS AND HOLDING DOWN POSITIONS INDICATED.
- RT.7. PROVIDE CERTIFICATION FROM A STRUCTURAL ENGINEER, AS DEFINED IN THE QUEENSLAND BUILDING BY-LAWS, THAT THE ROOF TRUSSES ARE STRUCTURALLY SUFFICIENT.

CLAY MASONRY NOTES:

- CM.1. DESIGN CONFORMS TO AS 3700 - MASONRY STRUCTURES. CONSTRUCT IN ACCORDANCE WITH THE PROVISIONS OF AS 3700.  
STRENGTH,  $f_{uc}$  = 12 MPa  
SALT RESISTANCE GRADE = MEDIUM
- CM.2. MORTAR TYPE = M3  
NOMINAL THICKNESS = 10mm
- CM.3. CORE-FILLING GROUT TO BRICK PIERS = 20 MPa.
- CM.4. WALL TIES TYPE = MEDIUM DUTY  
DURABILITY CLASSIFICATION = R3  
FIXING = MIN. EMBEDMENT IN MORTAR 50mm. FACE FIXED VENEER TIES TO BE SCREW FIXED.
- CM.5. JOINTS TO BE TOOLED. CONTROL JOINTS TO BE PROVIDED AS PER FOUNDATION DESIGN ENGINEERING REPORT.

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						SCALE		SIZE A3
						APPROVED BY:		
						ROBERT COLOMBO		
						FIEAust CPEng, NER, BPB, RBP, RPEQ, FAPI		

PROJECT		PROPOSED NEW DWELLING FOR G.J. GARDNER HOMES NSW LOT B NO. 28 MONA STREET, MONA VALE. NSW	
CLIENT		G.J. GARDNER HOMES NSW	
STRUCTURAL NOTES			

 Structerre Pty. Ltd. (ACN: 055 912 733) SUITE 1, LEVEL 2, 42 BIRNIE AVENUE, LIDCOMBE NSW 2141 TEL (02) 9646 5811 FAX (02) 9646 2311 EMAIL: sydney@structerre.com.au		STRUTTERRE JOB No. 38858	DRAWING REF. No. D38858-S-002	REV 0
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SLAB DESIGN SUMMARY (U.N.O)		
'bh' BOX HEIGHT (mm)		225 & 150
BOX SIZE (mm)		1090 x 1090
'st' SLAB THICKNESS (mm)		85
'od' OVERALL DEPTH (mm)		310 & 235
'bw' BEAM WIDTH (mm)		270
'rw' RIB WIDTH (mm)		100
SLAB REINF'T		SL82
100mm RIB REINF'T		1-N12 BTM
270mm BEAM REINF'T		3-N12 BTM or 3-L11TM BTM
REINF'T FOR BEAMS WIDER THAN 300mm		
WIDTH (mm)	TOP	BOTTOM
301 - 370	1-N12	3-N12
371 - 480	2-N12	4-N12
481 - 600	3-N12	5-N12

PIER DESIGN SUMMARY (U.N.O)		
MEMBER		PIER SPACING (mm)
EDGE BEAMS		2400
INTERNAL & STEP BEAMS		2400 x 2400 GRID
INTERNAL RIBS		2400 x 2400 GRID
FOUNDATIONS	PIER Ø (mm)	SOCKET DEPTH (mm)
STIFF CLAY	450	500
SHALE	400	200
ROCK	300	100

FOOTING DESIGN SUMMARY		
FOOTING TYPE	DEPTH (df)	REINFORCEMENT
TYPE A	450mm	3-L11TM TOP & BTM WITH R6 TIES @ 900 CTS
TYPE B	450mm	4-L11TM TOP & BTM WITH R6 TIES @ 900CTS
PAD P1	600mm	NONE (MASS CONCRETE)

GEOTECHNICAL INFORMATION		
SOIL CLASSIFICATION:	P	(DESIGN S)
SOIL TEST REFERENCE:	38858	
DATE:	08/02/17	
FOUNDING MATERIAL:	EXTREMELY WEATHERED ROCK	
SAFE BEARING CAPACITIES (SWL)		
SLAB & FOOTINGS	400 kPa	
PIERS	Ø450 WITH A 500 SOCKET INTO EXTREMELY WEATHERED ROCK WITH A MIN. CAPACITY OF 400kPa	

EXPOSURE CLASSIFICATION	
STRUCTURAL STEEL	MEDIUM



DENOTES 2000mm LONG 3-N12 or 3-L11TM CRACK CONTROL BARS, TIED TO UNDERSIDE OF SLAB TOP MESH.



DENOTES AREA OF LOCAL CONCRETE THICKENING

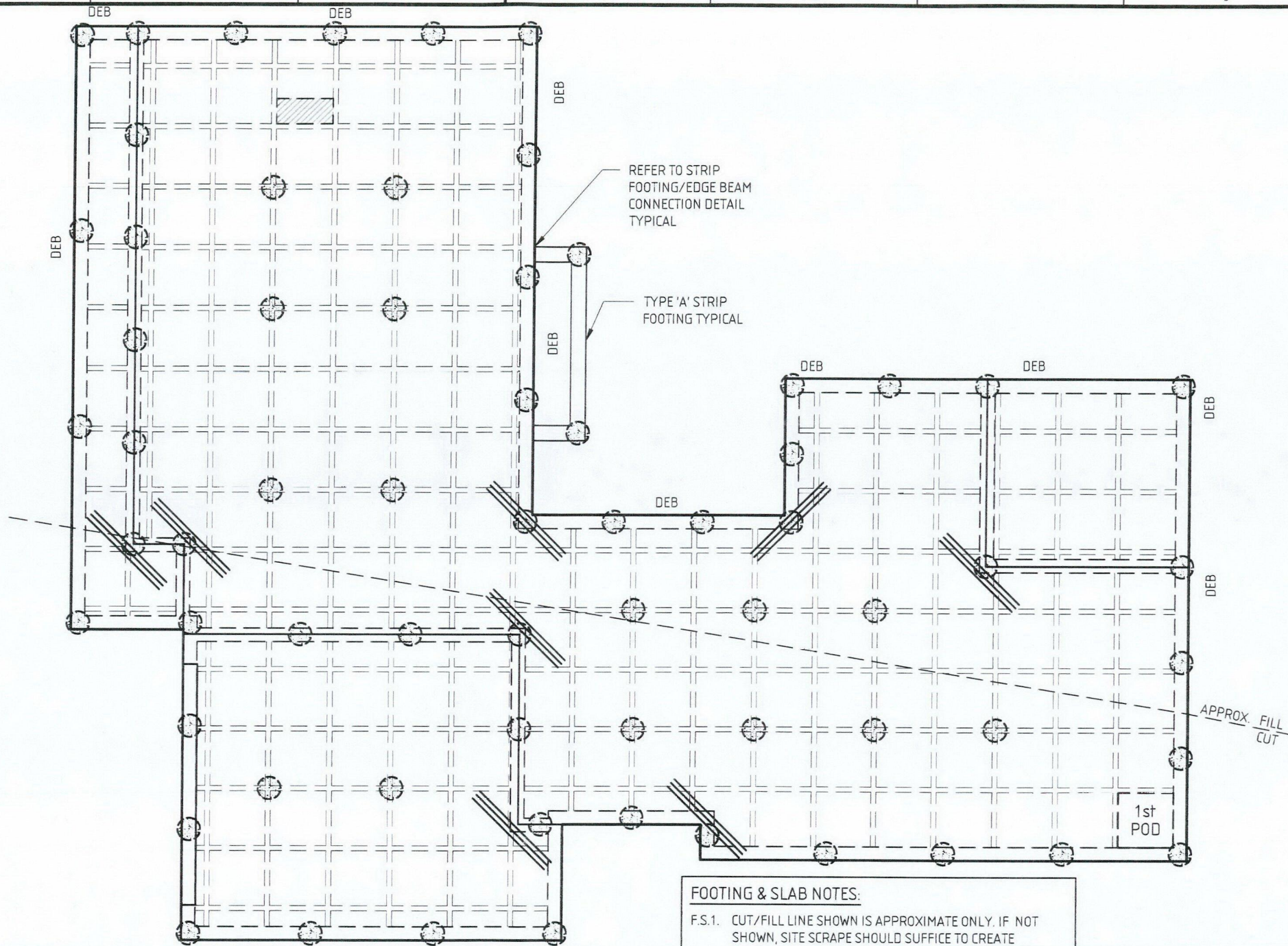


CONCRETE BORED PIERS. REFER PIER DETAILS FOR FOUNDING REQUIREMENTS

## FOOTING & SLAB PLAN

SCALE 1:100

- CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS = 20MPa
- 50mm CHAIRING SHOULD BE USED FOR MESH
- 4 BAR CHAIRS PER FULL WAFFLE POD
- LAP MESH IN ACCORDANCE WITH DETAIL ON DRG S-102
- TOP COVER TO BE FROM TOP OF REINFORCEMENT
- DO NOT SCALE OFF ENGINEERING DRAWINGS. IF IN DOUBT, ASK



### FOOTING & SLAB NOTES:

- F.S.1. CUT/FILL LINE SHOWN IS APPROXIMATE ONLY. IF NOT SHOWN, SITE SCRAPE SHOULD SUFFICE TO CREATE BUILDING PLATFORM. IF IN DOUBT PLEASE CONSULT ENGINEER FOR FURTHER ADVICE.
- F.S.2. BUILDER TO CONFIRM SERVICES DO NOT AFFECT STRUCTURE BEFORE COMMENCING WORK ON-SITE. CONTACT THIS OFFICE IF OTHERWISE.
- F.S.3. SCREW PIERS WITH A MIN. SWL OF 60 kN MAY BE USED AS AN ALTERNATIVE TO BORED PIERS AND AT 2400 CTS. ALL SCREW PIERS MUST BE FOUNDED BELOW 1.25 x Hs TO COMPLY WITH CLAUSE G.6.3 OF AS2870-2011.
- F.S.4. TERMINATE TO DAMP PROOFING MATERIAL AT FINISHED GROUND OR PAVING LEVEL.
- F.S.5. 150 PODS MAY BE USED IN GARAGE, PORCH AND ALFRESCO AREAS.

### TREE INFLUENCE NOTE:

IN ORDER TO MAINTAIN 'NORMAL' MOISTURE CONDITIONS FOR THE LONG TERM SUSTAINABILITY OF THE DWELLING, WE SUGGEST THAT ANY TREES/ROOT SYSTEMS BE REMOVED FROM THE SITE IF THEY ARE WITHIN THE ZONE OF INFLUENCE OR IN CLOSE PROXIMITY TO PROPOSED DWELLING, BACKFILL AND COMPACT ROOT SYSTEM AREAS TO COMPLY WITH NOTE F4, DWG S-001 DURING THE REMOVAL PROCESS. IF THIS CANNOT BE ACHIEVED CONTACT THIS OFFICE PRIOR TO COMMENCING WORK ONSITE AS FURTHER ENGINEERING MAY BE REQUIRED. THIS MAY INCLUDE BUT IS NOT LIMITED TO ADDITIONAL PIERING AND/OR ISOLATION TRENCHES TO ACT AS ROOT BARRIERS.

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STRUTERRE JOB No.		DRAWING REF. No.	REV
38858		D38858-S-101	0

**STRUCterre**  
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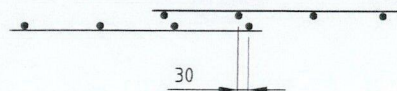


<u>SLAB DESIGN SUMMARY (U.N.O)</u>		
'bh' BOX HEIGHT (mm)		225 & 150
BOX SIZE (mm)		1090 x 1090
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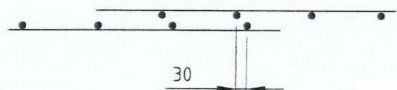
### MESH LAPS

1. MESH IS TO BE LAPPED AS SHOWN BELOW:

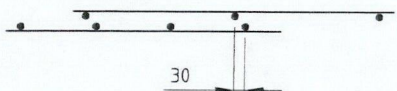
a) OVERLAP OF SIDE OF SHEETS



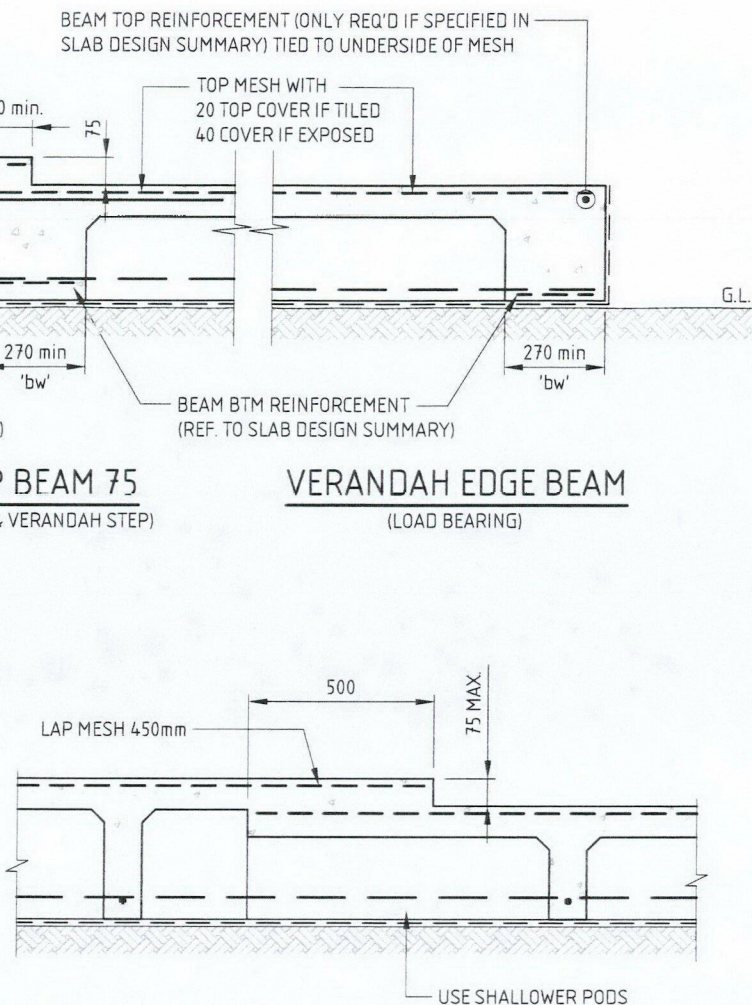
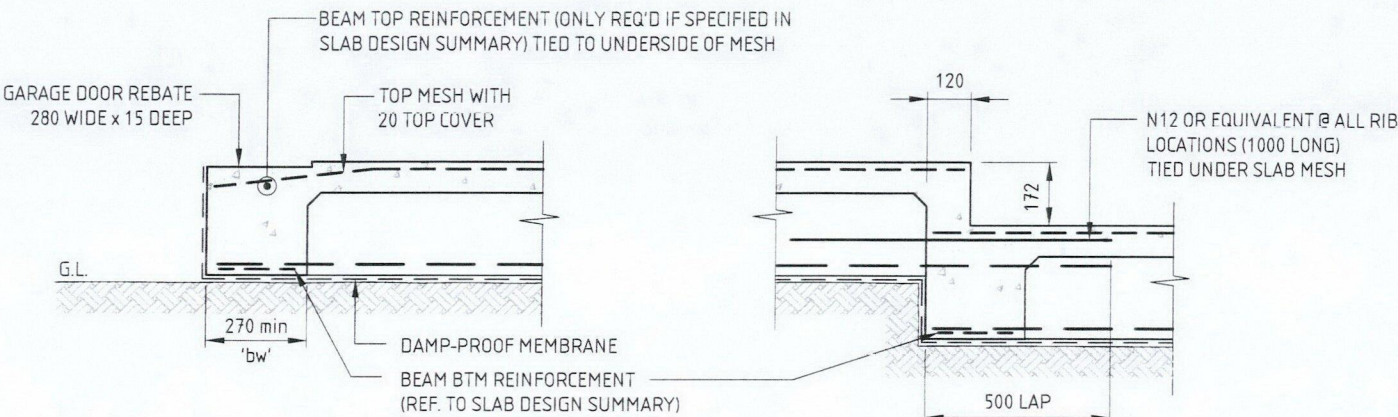
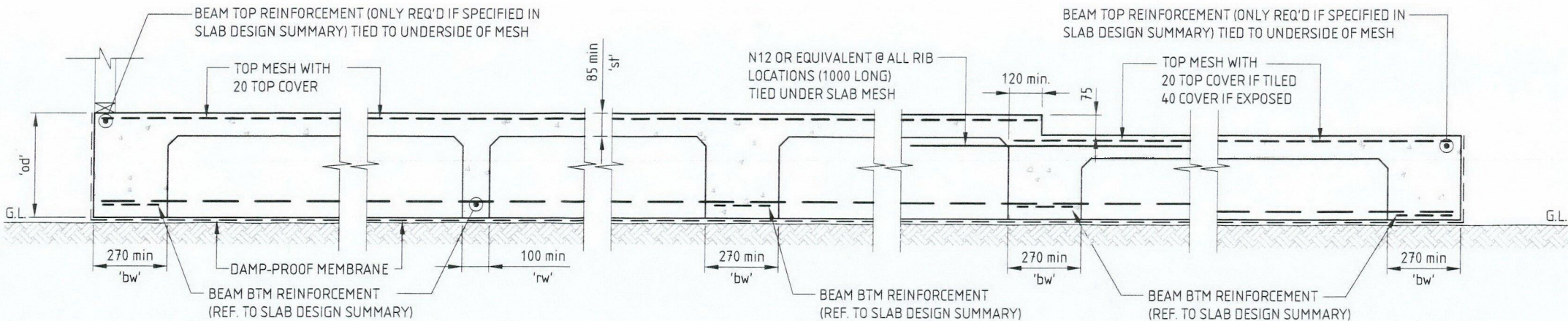
b) OVERLAP OF ENDS OF SHEETS



c) OVERLAP SIDE AND END OF SHEETS



d) NOT ACCEPTABLE



### WET AREA SET DOWN

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NOTE - FOR ALL REINFORCEMENT, POD SIZE AND LOCATION REFER TO FOOTING & SLAB PLAN

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						ROBERT COLOMBO		
						FIEAust CPeng, NER, BPB, RBP, RPEQ, FAPI		

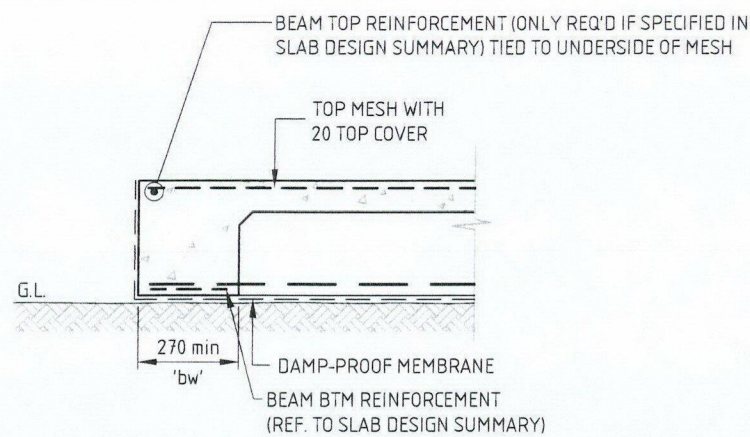
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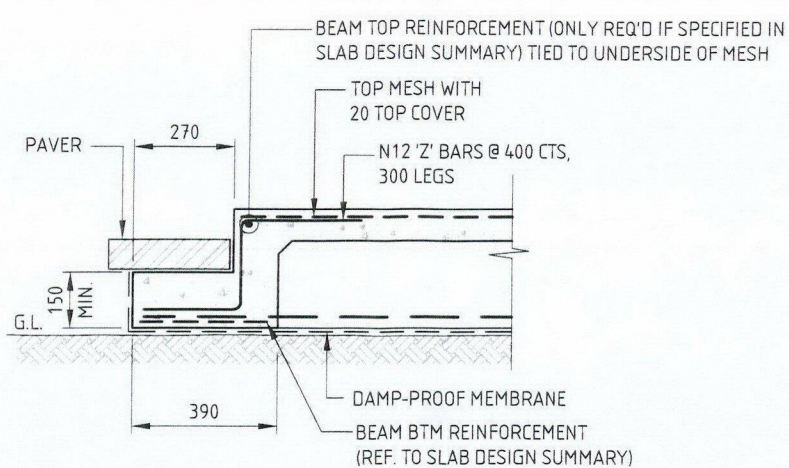
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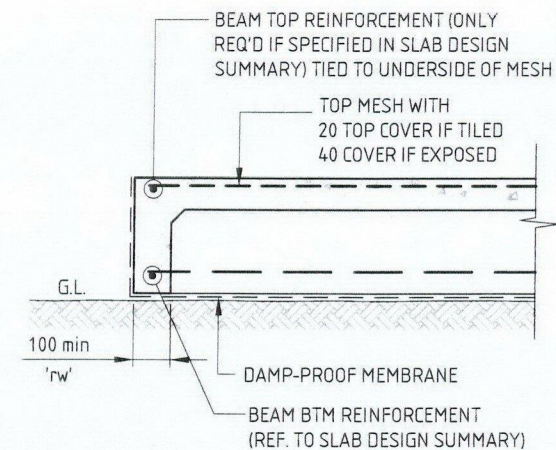




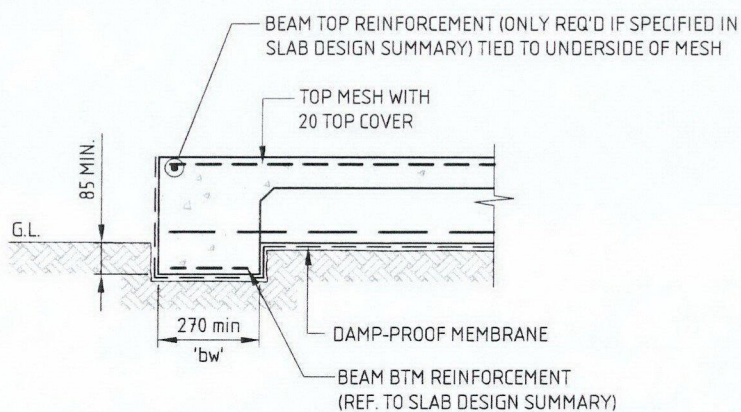
**GARAGE EDGE BEAM  
WITH 225 PODS & GREATER**



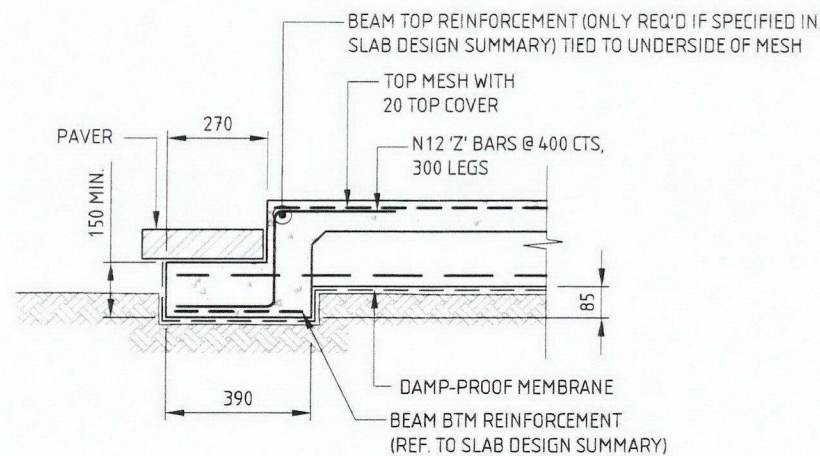
**GARAGE ENTRY EDGE BEAM DETAIL  
FOR PAVERS WITH 225 PODS AND GREATER**



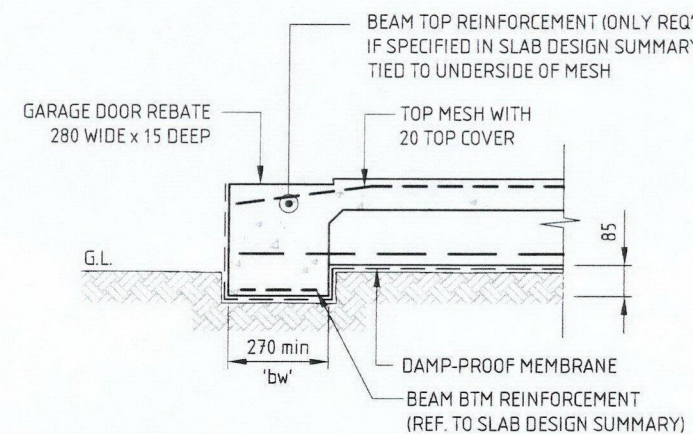
**VERANDAH EDGE BEAM  
(NON LOAD BEARING ONLY)**



**GARAGE EDGE BEAM  
WITH 150 PODS**  
(85mm TRENCH NOT APPLICABLE IF  
GARAGE PERIMETER IS FULLY PIERED)



**GARAGE ENTRY EDGE BEAM DETAIL  
FOR PAVERS WITH 150 PODS**  
(85mm TRENCH NOT APPLICABLE IF GARAGE  
PERIMETER IS FULLY PIERED)



**GARAGE ENTRY EDGE  
BEAM WITH 150 PODS**  
(85mm TRENCH NOT APPLICABLE IF GARAGE  
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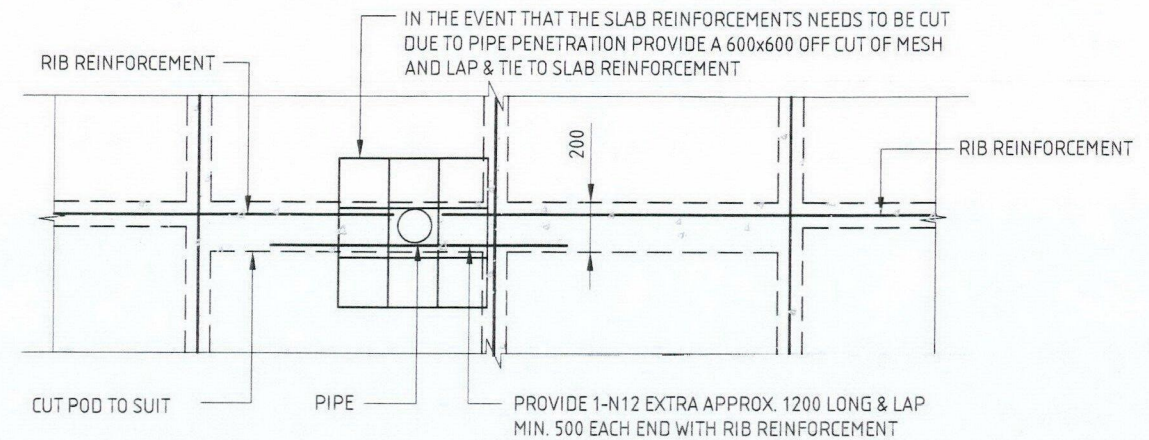
PROJECT	PROPOSED NEW DWELLING FOR G.J. GARDNER HOMES NSW LOT B NO. 28 MONA STREET, MONA VALE, NSW
CLIENT	G.J. GARDNER HOMES NSW
FOOTING & SLAB DETAILS - SHEET 2	

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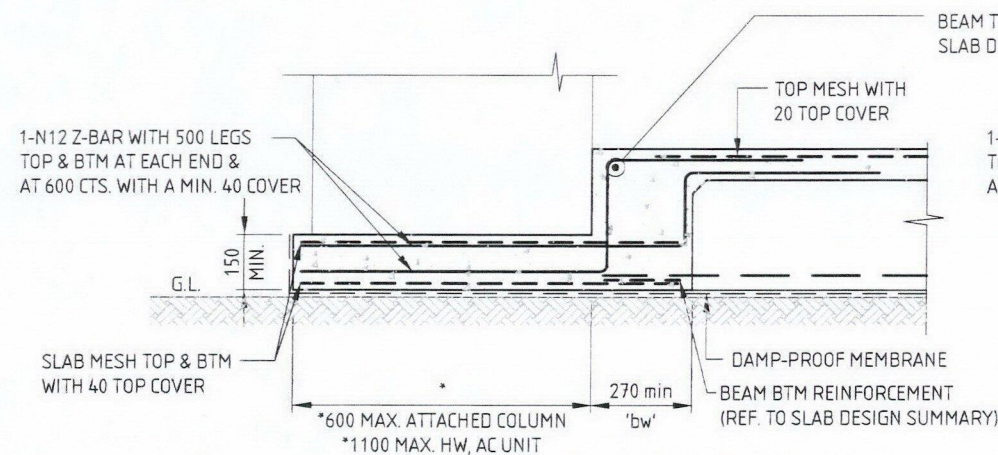
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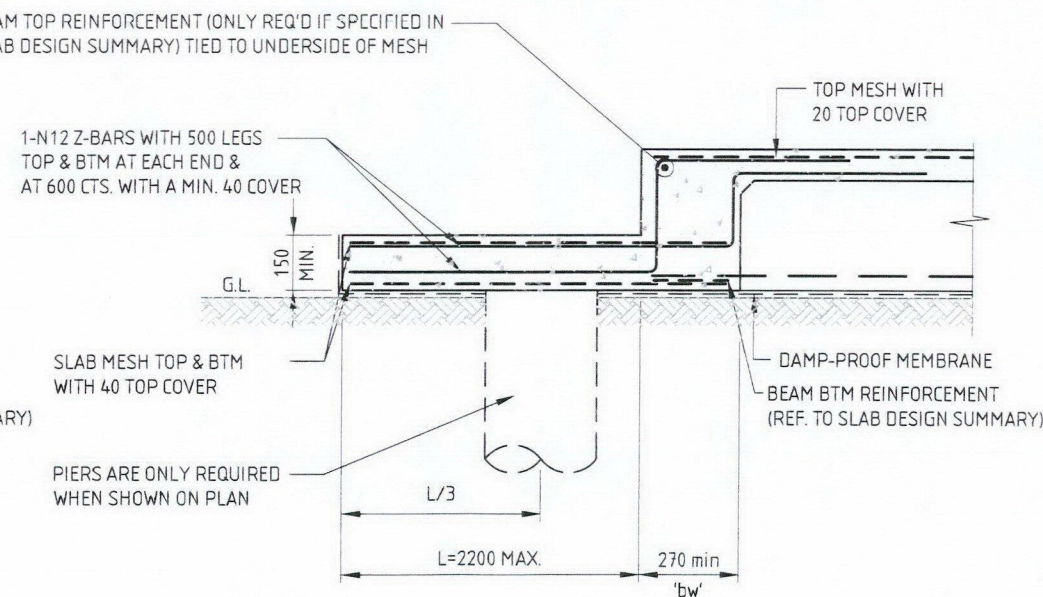




**SLAB PIPE PENETRATION DETAIL (PLAN VIEW)**  
N.T.S.



**ATTACHED COLUMN, HW, AC UNIT & GAS BOTTLE SLAB DETAIL**  
(NOTE- WHERE ATTACHED SLAB COINCIDES WITH DEEP EDGE BEAM REFER TO TABLE ON SHEET S-105 FOR EXTRA REINFORCEMENT)



**ATTACHED RW UNIT SLAB DETAIL**  
(NOTE- WHERE ATTACHED SLAB COINCIDES WITH DEEP EDGE BEAM REFER TO TABLE ON SHEET S-105 FOR EXTRA REINFORCEMENT)

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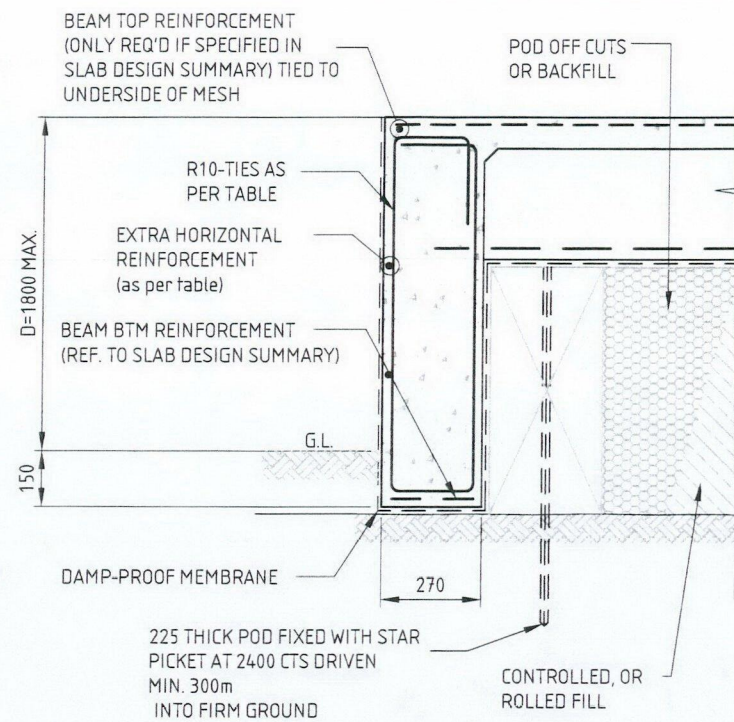
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						APPROVED BY:		
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CLIENT	G.J. GARDNER HOMES NSW
	FOOTING & SLAB DETAILS - SHEET 3

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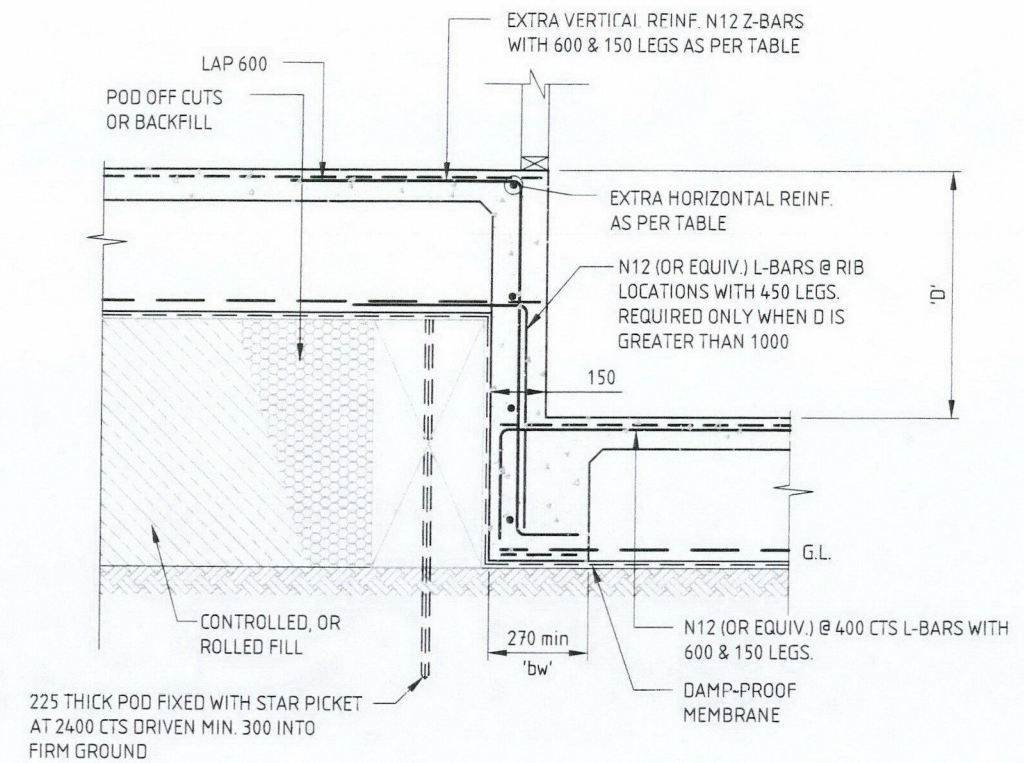
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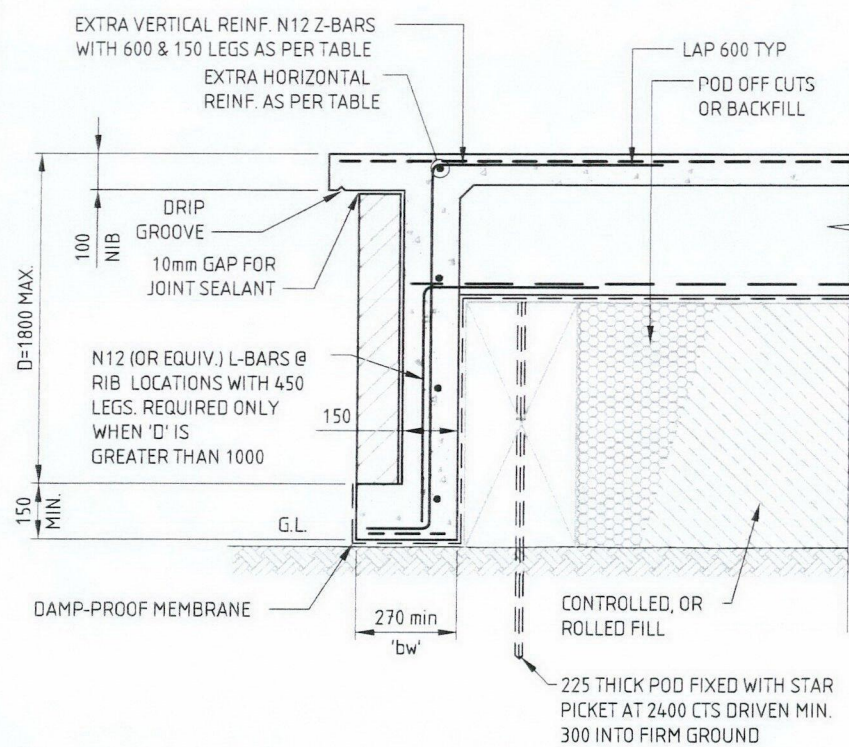


**DEEP EDGE BEAM (1800 MAX.)**

EXTRA REINFORCEMENT TO DEEP EDGE & DEEP STEP BEAM		
DEPTH 'D'	EXTRA VERTICAL REINFORCEMENT	EXTRA HORIZONTAL REINFORCEMENT
<400mm	-	-
401mm - 900mm	R10-TIES OR N12 'Z' BARS @ 400 CTS	N12 @ 400 CTS
901mm - 1200mm	R10-TIES OR N12 'Z' BARS @ 300 CTS	N12 @ 400 CTS
1201mm - 1800mm	R10-TIES OR N12 'Z' BARS @ 200 CTS	N12 @ 300 CTS



**DEEP STEP BEAM (1800 MAX.)**



**DEEP PATIO EDGE BEAM (1800 MAX.)**

NOTE - FOR ALL REINFORCEMENT, POD SIZE AND LOCATION REFER TO FOOTING & SLAB PLAN

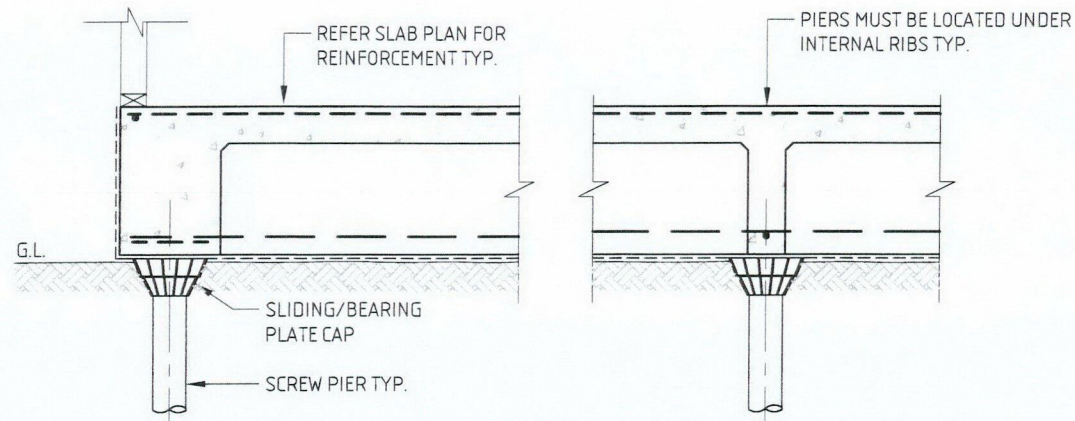
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						FIEAust, CPEng, NER, BPB, RBP, RPEQ, FAPI		

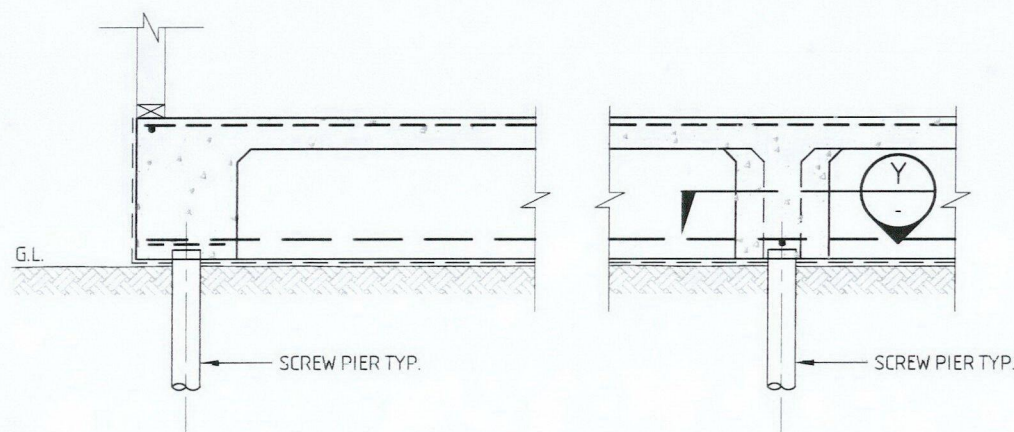
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CLIENT		G.J. GARDNER HOMES NSW	
FOOTING & SLAB DETAILS - SHEET 4			

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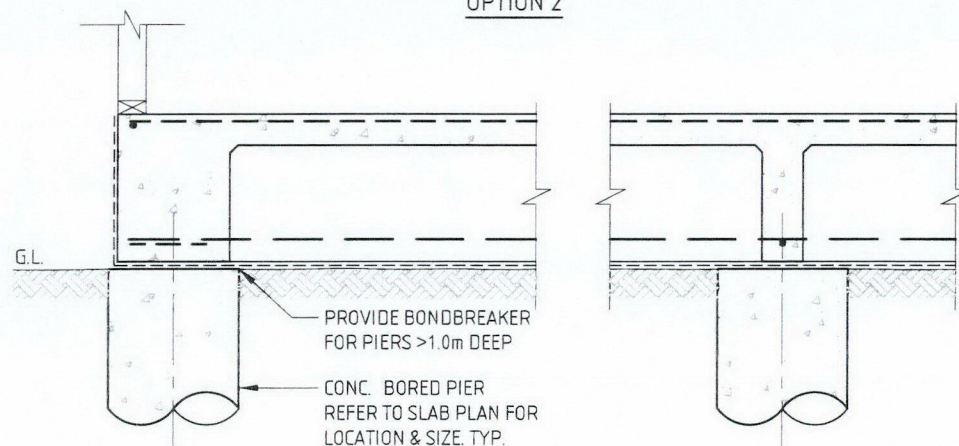




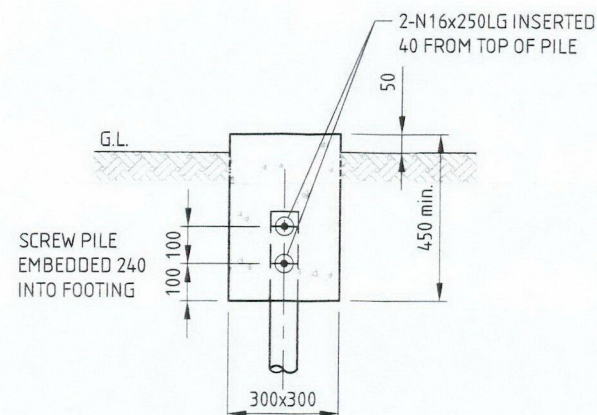
TYPICAL SLAB/SCREW PIER CONNECTION DETAIL  
OPTION 1



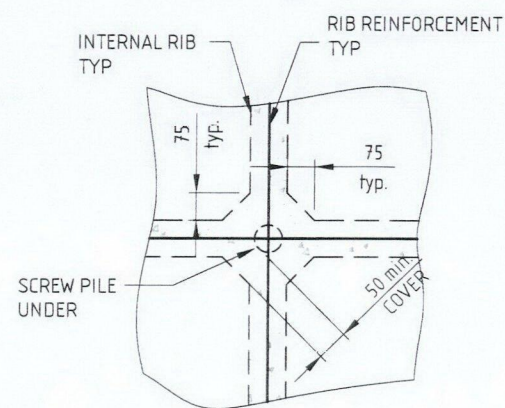
TYPICAL SLAB/PILE CONNECTION DETAIL  
OPTION 2



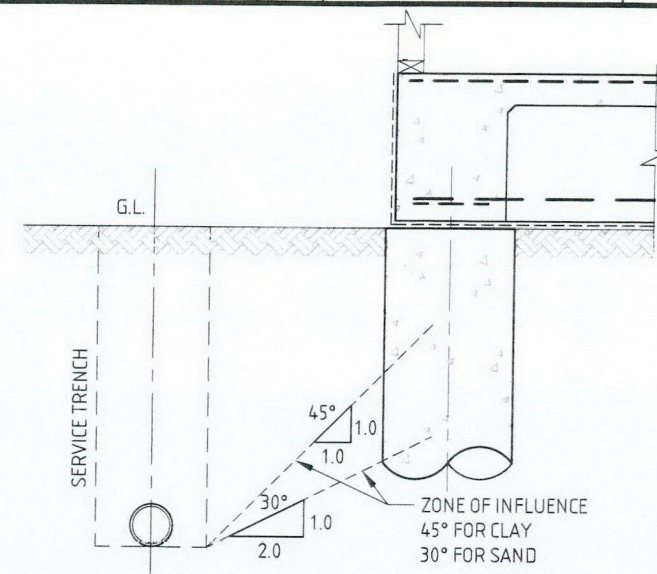
TYPICAL SLAB/BORED PIER CONNECTION DETAIL



ISOLATED SCREW PILE PAD



SECTION Y-Y  
SCALE 1:20  
LOCAL THICKENING AT  
INTERNAL PILE LOCATIONS



PRIVATE SERVICE TRENCH DETAIL

# PRIVATE SERVICE TRENCH NOTES

- ST.1. PLUMBING AND DRAINAGE TRENCHES SHALL BE LOCATED OUTSIDE THE INFLUENCE OF THE FOOTINGS. THE HORIZONTAL DISTANCE TO ANY TRENCH EXCAVATION MUST BE GREATER THAN THE TRENCH DEPTH IN ACCORDANCE WITH CLAUSE 6.3 FROM AS 2870-2011. THIS HORIZONTAL CLEARANCE TO BE INCREASED MORE THAN TWICE THE TRENCH DEPTH FOR SAND SITES. FOOTING PIERS WILL BE NECESSARY UNDER ALL EDGE BEAMS IF THESE CONDITIONS ARE NOT MET.
- ST.2. TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH CLAUSE 5.5 OF AS/NZS 3500.2-2003 OR CLAUSE 7.2.13 OF AS/NZS 3500.3-2003. SAND BEDDING AND SURROUND SHALL BE BLOCKED WITH A CLAY PLUG WHEREVER TRENCHES PASS UNDER THE EDGE OF ANY SLAB.

NOTE - FOR ALL REINFORCEMENT, POD SIZE AND LOCATION REFER TO FOOTING & SLAB PLAN

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						ROBERT COLOMBO		
						FIEAust CPEng, NER, BPD, RBP, RPEQ, FAPI		

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CLIENT	G.J. GARDNER HOMES NSW

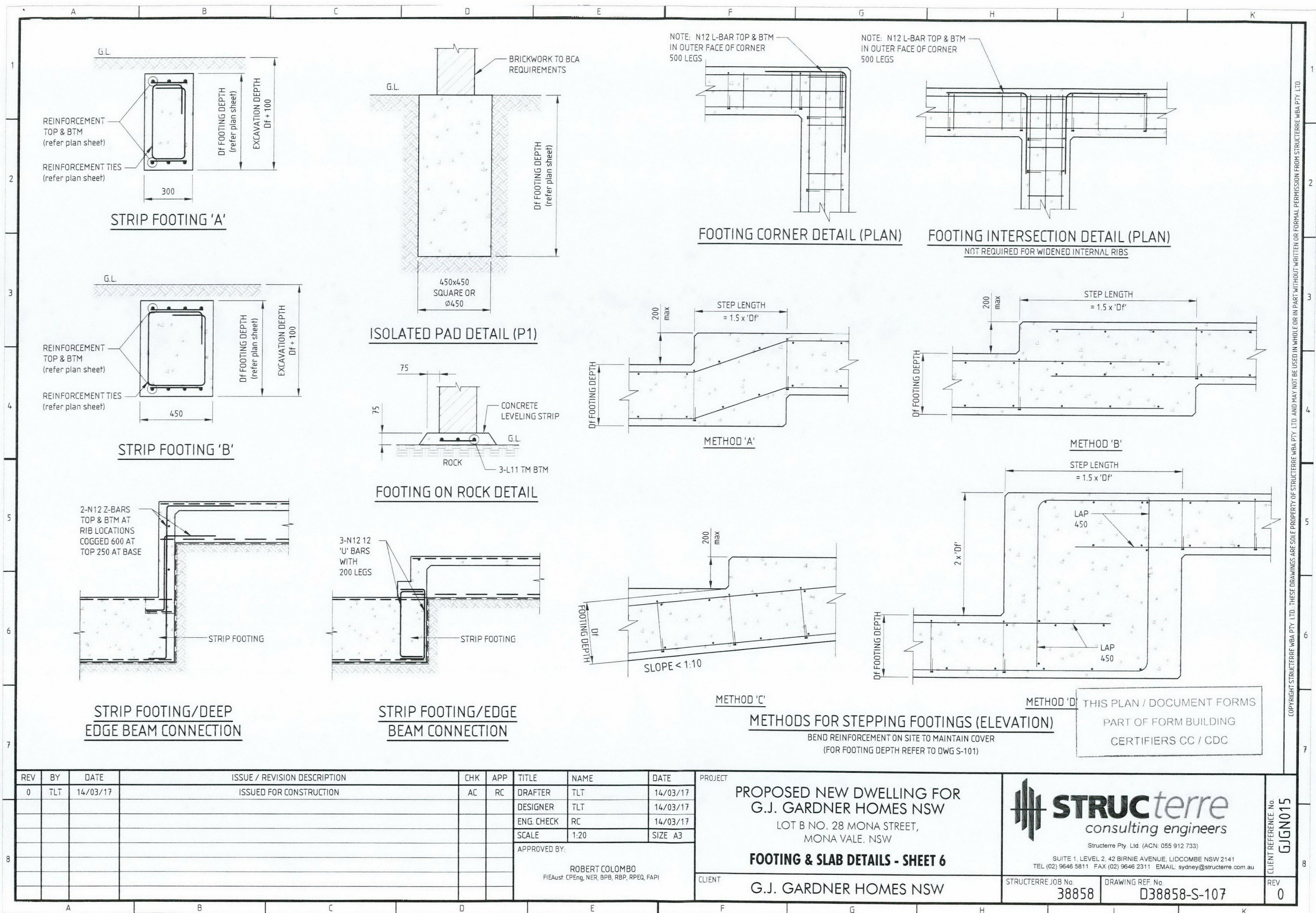
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PROJECT  
**PROPOSED NEW DWELLING FOR G.J. GARDNER HOMES NSW**  
LOT B NO. 28 MONA STREET,  
MONA VALE. NSW

CLIENT  
**G.J. GARDNER HOMES NSW**



**STRUCterre**  
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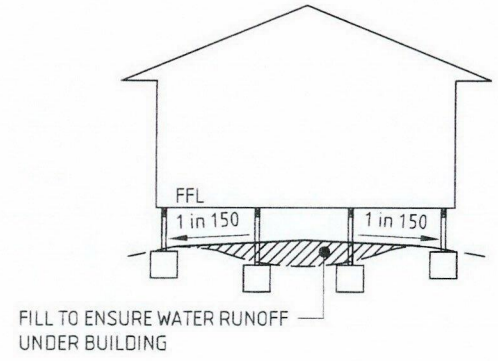
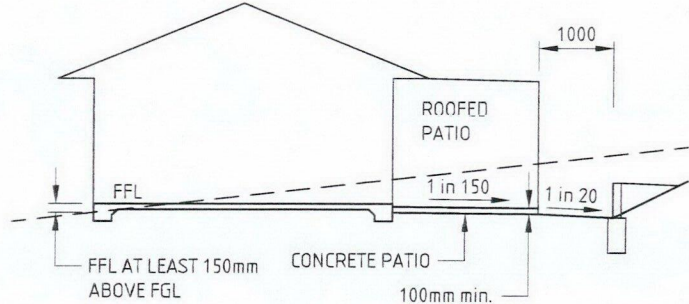
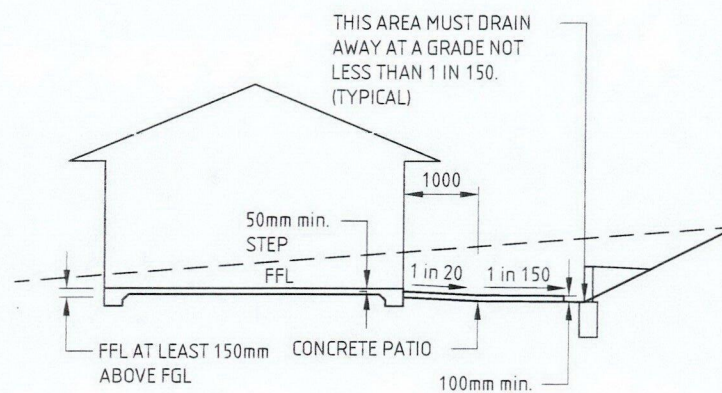
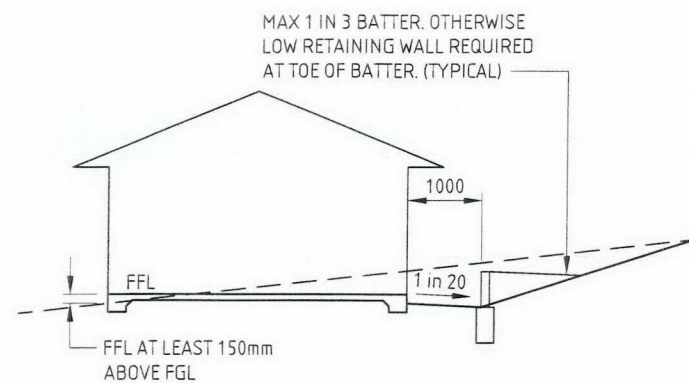
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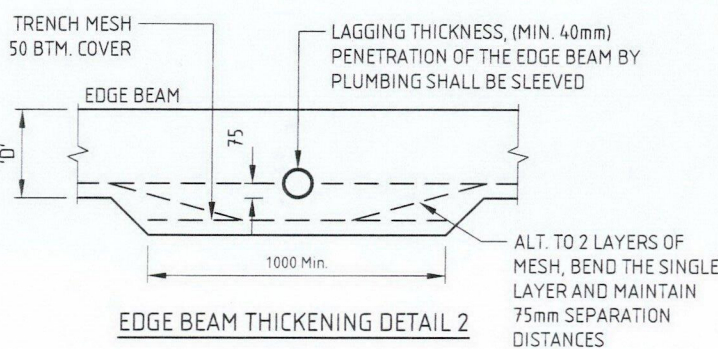
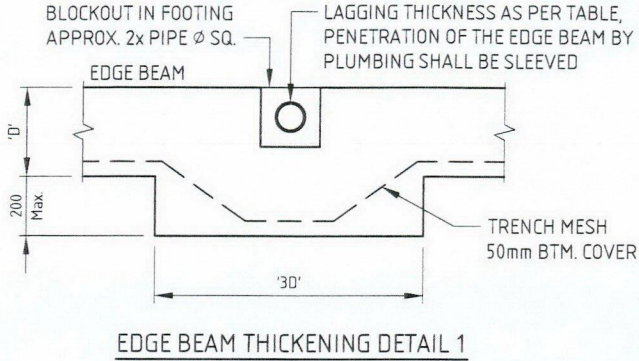
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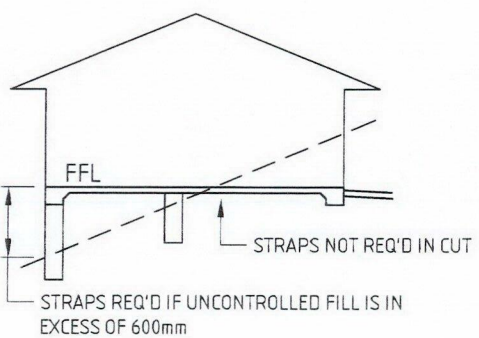


**TYP. SURFACE DRAINAGE DETAILS**

FFL - FINISHED FLOOR LEVEL  
FGL - FINISHED GROUND LEVEL

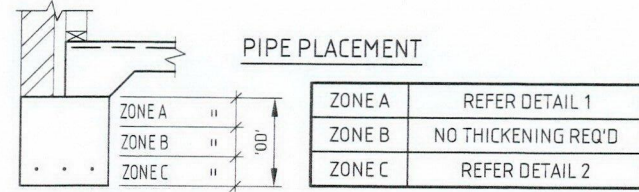


**PLUMBING PIPE PENETRATION DETAILS**



**PLUMBING & DRAINAGE STRAPS**

FFL - FINISHED FLOOR LEVEL



MINIMUM REQUIREMENTS FOR LAGGING THICKNESS	
SITE CLASS	MINIMUM LAGGING THICKNESS (mm)
"M"	20
"H1"	20
"H2"	40
"E"	40
"P"	40

MINIMUM REQUIREMENTS FOR EXPANSION & ALLOWABLE ROTATION IN FITTINGS		
SITE CLASS	MINIMUM REQUIRED EXPANSION JOINT CAPACITY	ALLOWABLE ROTATION
"H1" & "H2"	80mm	15°
"E"	150mm	15°
"P/H1 OR H2"	80mm	15°
"P/E"	150mm	15°

**SURFACE DRAINAGE NOTES:**

- S.D.1. CLAUSE 3.1.2.3 OF VOLUME 2 OF THE NATIONAL CONSTRUCTION CODE (NCC) REQUIRES THAT THE FINISHED HEIGHT OF ANY SLAB BE A MINIMUM OF 150mm, GENERALLY, ABOVE THE FINISHED GROUND LEVEL AFTER LANDSCAPING, AND THAT THE EXTERNAL SURFACE DRAINS AWAY WITH A MINIMUM OF 50mm FALL OVER THE FIRST METRE. IT SHOULD ALSO BE NOTED THAT CLAUSE 4.6.6.6 OF AS/NZS 3500.2-2003 REQUIRES THAT THE TOP OF THE OVERFLOW RELIEF GULLY BE A MINIMUM OF 150mm BELOW THE LOWEST GRATE IN THE SLAB AND 75mm ABOVE THE FINISHED GROUND LEVEL.
- S.D.2. FINISHED GROUND AND FLOOR LEVELS SHALL BE AS SHOWN IN THE TYPICAL SURFACE DRAINAGE DETAILS ON THIS PAGE AND THE FOLLOWING REQUIREMENTS:
- S.D.2.1. DURING CONSTRUCTION, SURFACE WATER SHALL BE DIVERTED AWAY FROM FOOTINGS TO A LAWFUL POINT OF DISCHARGE.
- S.D.2.2. THE FINISHED SURFACE OF ANY GROUND, INCLUDING PATHWAYS AND DRIVEWAYS, SHALL BE GRADED AWAY FROM ANY FOOTING, SLAB OR BASEMENT RETAINING WALL A MINIMUM OF 50mm OVER THE FIRST METRE.
- S.D.2.3. THE GROUND SHALL THEN BE GRADED AROUND THE BUILDING SUCH THAT SURFACE WATER WILL DRAIN AWAY FROM THE BUILDING TO A LAWFUL POINT OF DISCHARGE.
- S.D.2.4. THE GROUND SHALL ALSO BE SHAPED SUCH THAT NO PONDING OF SURFACE WATER CAN OCCUR.
- S.D.2.5. WHERE DRAINAGE PITS ARE INSTALLED TO DRAIN SURFACE WATER AWAY, GRATED INLET PITS SHALL BE INSTALLED WITH PIPES DRAINING TO A LAWFUL POINT OF DISCHARGE. PITS AND PIPES SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS/NZS 3500.3-2003. DRAINAGE PITS MAY NEED TO BE INSTALLED TO ALLOW SURFACE WATER TO DRAIN AWAY IN AREAS WHERE THE DISTANCE FROM A FOOTING TO A BOUNDARY OR ADJACENT STRUCTURE, EG FENCE, IS LESS THAN 1.0m.
- S.D.2.6. THE FINISHED FLOOR LEVEL OF ANY GARAGE OR CARPORT SHALL ALSO BE SET SUCH THAT DRIVEWAY SLOPES COMPLY WITH AS/NZS 2890.1-2004. REFER TO THE TYPICAL DRIVEWAY DETAILS ON THIS PAGE.
- S.D.3. RETAINING WALLS SHALL BE INSTALLED AT THE BASE OF CUT AND FILL BATTERS WHERE BATTER SLOPES EXCEED 1:3. RETAINING WALLS ARE ALSO REQUIRED WHERE CUTTING BELOW THE BASE OF AN EXISTING RETAINING WALL AND WHERE AN ADDITIONAL SURCHARGE IS PLACED ABOVE AN EXISTING RETAINING WALL.

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						ROBERT COLOMBO		
						PIEAust. CPEng, NER, BPB, RBP, RPEQ, FAPI		

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CLIENT	G.J. GARDNER HOMES NSW

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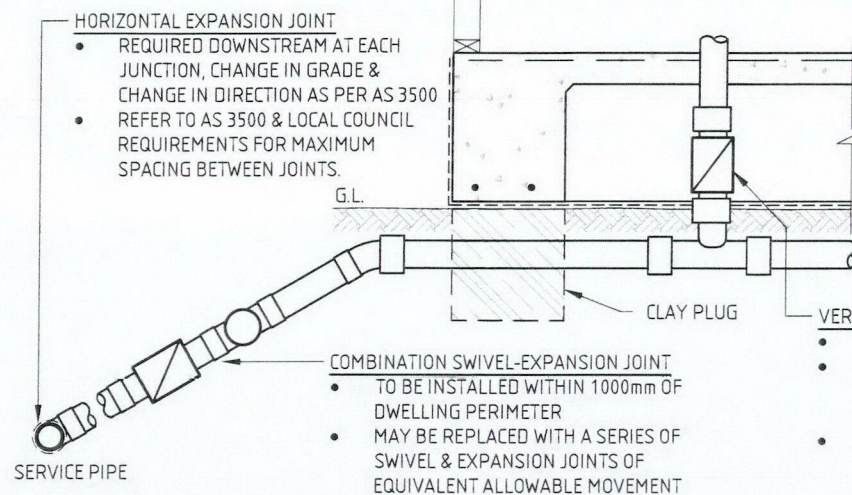
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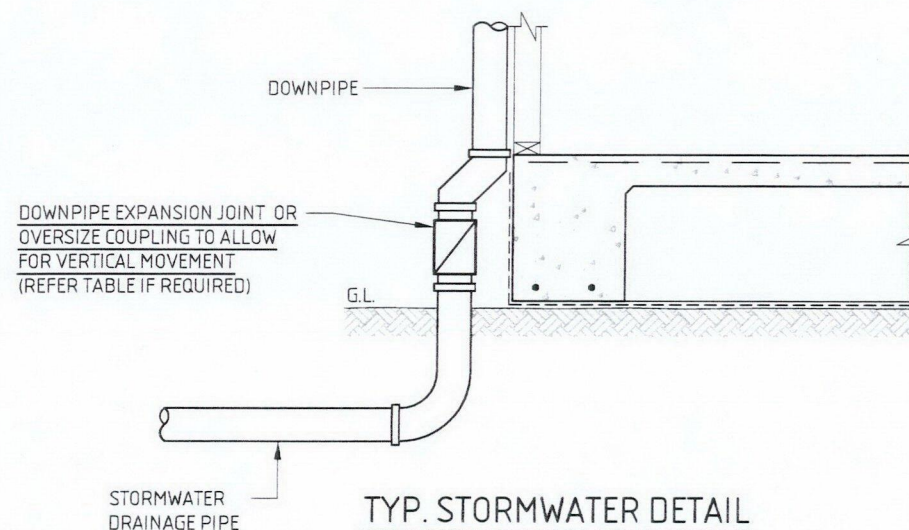
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TYP. UNDER SLAB EDGE DETAIL  
(ELEVATION VIEW)



TYP. STORMWATER DETAIL

IMPORTANT NOTE:

THESE RECOMMENDATIONS ARE A GUIDE ONLY.  
FINAL PLUMBING REQUIREMENTS TO BE  
DETERMINED BY LOCAL PLUMBING AUTHORITY  
IN CONJUNCTION WITH AS/NZS 3500

PLUMBING CONNECTION NOTES:

- P.1. THE FOLLOWING NOTES & DETAILS PROVIDED ARE A GUIDE ONLY FOR ARTICULATION FOR SANITARY PLUMBING, DRAINAGE & SHOULD BE READ IN CONJUNCTION WITH AS/NZS 3500, AS 2870 & ANY OTHER RELEVANT STANDARD & OTHER REQUIREMENTS OF THE NCC.
- P.2. ALL SEWER & STORMWATER TO BE CONSTRUCTED IN ACCORDANCE WITH AS/NZS 3500 & THE REQUIREMENTS OF AS 2870 SECTION 5: CLAUSE 5.6 & SECTION 6: CLAUSE 6.6: FOR SLAB OR STRIP FOOTINGS ON HIGHLY AND EXTREMELY REACTIVE SITES, THE FOLLOWING REQUIREMENTS APPLY: DRAINS ATTACHED TO OR EMERGING FROM UNDERNEATH THE BUILDING SHALL INCORPORATE FLEXIBLE JOINTS IMMEDIATELY OUTSIDE THE FOOTING AND COMMENCING WITHIN 1m OF THE BUILDING PERIMETER TO ACCOMMODATE A TOTAL RANGE OF DIFFERENTIAL MOVEMENT IN ANY DIRECTION EQUAL TO THE ESTIMATED CHARACTERISTIC SURFACE MOVEMENT OF THE SITE (Ys). IN THE ABSENCE OF SPECIFIC DESIGN REQUIREMENTS, THE FITTINGS OR OTHER DEVICES THAT ARE PROVIDED TO ALLOW FOR THE MOVEMENT SHALL BE SET AT THE MID POSITION OF THEIR RANGE OF POSSIBLE MOVEMENT AT THE TIME OF INSTALLATION, SO AS TO ALLOW FOR MOVEMENT EQUAL TO 0.5YS IN ANY DIRECTION FROM THE INITIAL SETTING. THIS REQUIREMENT APPLIES TO ALL STORMWATER AND SANITARY PLUMBING DRAINS AND DISCHARGE PIPES.
- P.3. PLUMBING & DRAINAGE UNDER THE SLAB SHOULD BE AVOIDED WHERE PRACTICAL (REFER AS/NZS 3500 CLAUSE 4.10)
- P.4. GRADES IN PIPEWORK ON 'M', 'H', 'E' & 'P' SITES SHOULD HAVE A MINIMUM GRADE OF 1:30 WITHIN 1.5 METRES OF THE BUILDING & 1:60 ELSEWHERE. GRADES IN FLEXIBLE FITTINGS TO BE SET AT THE MINIMUM GRADE.
- P.5. ALL EXPANSION & ARTICULATION JOINTS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL JOINTS TO BE SET MID POINT SO AS TO ALLOW FOR MAXIMUM MOVEMENT IN EITHER DIRECTION.
- P.6. STORMPLASTICS (SA) PTY LTD "SWIVEL JOINTS" SHOULD NOT BE USED AS A BEND TO ACHIEVE CORRECT FALLS. THE JOINTS SHOULD BE SET IN A STRAIGHT LINE OF THE DRAIN TO ALLOW MAXIMUM (+) OR (-) MOVEMENT. A MINIMUM 15° BEND TO BE INSTALLED BEFORE SWIVEL JOINTS TO ACHIEVE MINIMUM GRADES FROM THE FACE OF THE FOOTINGS.
- P.7. DETAIL & SUPPORT OF TRAPS AT THE O.R.G. TO BE CONSIDERED ON SITE, TO ALLOW FOR POTENTIAL MOVEMENTS INCLUDING ISOLATION AND ARTICULATION ASSOCIATED WITH PATHS & PAVEMENTS. THE O.R.G. SHOULD BE CAST IN CONCRETE MONOLITHICALLY WITH THE FOOTING SYSTEM ON CLASS 'H' & 'E' SITES.
- P.8. STORMWATER SYSTEMS THAT COLLECT ROOFWATER & SURFACE WATER ARE

REQUIRED TO BE DESIGNED & CONSTRUCTED IN ACCORDANCE WITH AS/NZS 3500 PART 5.

- P.9. THE USE OF CORRUGATED FLEXIBLE PVC PIPE PRODUCTS SHOULD BE AVOIDED ON CLASS H & E SITES AS THEY ARE NOT ABLE TO EXPAND LONGITUDINALLY TO ACCOMMODATE POTENTIAL VERTICAL & LATERAL MOVEMENTS AT THE SLAB OR FOOTING EDGE UNLESS SPECIFICALLY DETAILED BY THE MANUFACTURER.
- P.10. SEPTIC TANKS & ASSOCIATED SOAKAGE AREAS SHOULD BE LOCATED TO MINIMISE SOIL MOISTURE INCREASES WITHIN THE FOUNDATION.
- P.11. ALL PIPEWORK INCLUDING STORMWATER FITTINGS & ADAPTERS SHOULD BE PROTECTED FROM MECHANICAL DAMAGE.
- P.12. TERMITE PROTECTION NOT SHOWN ON THESE DRAWINGS AS THERE ARE VARIOUS OPTIONS. REFER TO THE BUILDING DESIGNER.
- P.13. ALL DETAILS ARE INDICATIVE ONLY. DESIGN OF PATHS FOOTINGS ETC. & LOCATION OF PENETRATIONS TO BE SPECIFIED BY AN ENGINEER.
- P.14. PROVISIONS SHOULD BE MADE FOR THE CONNECTION OF OVERFLOW OR WATER DISCHARGE FROM FIXTURES SUCH AS HOT WATER SYSTEMS & AIR CONDITIONERS TO A DRAIN AS REQUIRED BY THE RELEVANT LOCAL AUTHORITY.
- P.15. EXPANDABLE JOINT & SWIVEL SPECIFICATIONS:
- P.15.1. TO BE MANUFACTURED AND COMPLY WITH AS 1280 AND AS 1415.
- P.15.2. TO BE INSTALLED AS PER MANUFACTURES SPECIFICATIONS AND INSPECTED BY THE LOCAL AUTHORITY.
- P.15.3. SEWER PIPES FOUNDED WITHIN THE FILLED SECTION OF THE BUILDING PAD UNDER THE SLAB ARE TO BE HUNG FROM SLAB REINFORCEMENT WITH METAL STRAPS.
- P.15.4. TO ENSURE CORRECT PLUMBING CONNECTIONS ARE INSTALLED IT IS ESSENTIAL THAT A COPY OF THIS REPORT AND ANY RELEVANT ADDITIONS (WHERE APPLICABLE) ARE SUPPLIED TO THE PLUMBER PRIOR TO THEIR PREPARATION.
- P.15.5. IT IS ALSO ADVISABLE THAT SLAB DOCUMENTATION IS AVAILABLE ON-SITE FOR REFERENCE BY THE PLUMBERS AND NOMINATED INSPECTORS.

MINIMUM PLUMBING RECOMMENDATIONS

COMPONENT	SITE/DESIGN CLASSIFICATION								
	A & S	M	H1	H2	E	P*	M-D	H-D	E-D
HORIZONTAL PENETRATION LAGGING (mm)	x	20	20	40	40	40	40	40	40
JOINT EXPANSION SIZE (mm)	x	x	100	100	150	150	100	150	150-220
VERTICAL EXPANSION JOINTS (UNDER SLAB)	x	x	x	x	✓	✓	x	x	✓
SWIVEL JOINTS	x	x	✓	✓	✓	✓	✓	✓	✓
DOWNPIPE EXPANSION JOINTS	x	x	✓	✓	✓	✓	✓	✓	✓
GULLY PITS FOR HOSE COCKS & AC UNITS	x	x	✓	✓	✓	✓	✓	✓	✓

\* 'P' CLASSIFICATION PLUMBING REQUIREMENTS ARE SPECIFIC TO UNCONTROLLED FILL ONLY

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						SCALE	1:20	SIZE A3
						APPROVED BY:		
						ROBERT COLOMBO		
						FIEAust CPEng, NER, BPB, RBP, RPEQ, FAPI		

PROJECT

PROPOSED NEW DWELLING FOR  
G.J. GARDNER HOMES NSW  
LOT B NO. 28 MONA STREET,  
MONA VALE, NSW

PLUMBING CONNECTION DETAILS

CLIENT

G.J. GARDNER HOMES NSW

**STRUCterre**  
consulting engineers

Structerre Pty. Ltd. (ACN: 055 912 733)

SUITE 1, LEVEL 2, 42 BIRNIE AVENUE, LIDCOMBE NSW 2141  
TEL (02) 9646 5811 FAX (02) 9646 2311 EMAIL: sydney@structerre.com.au

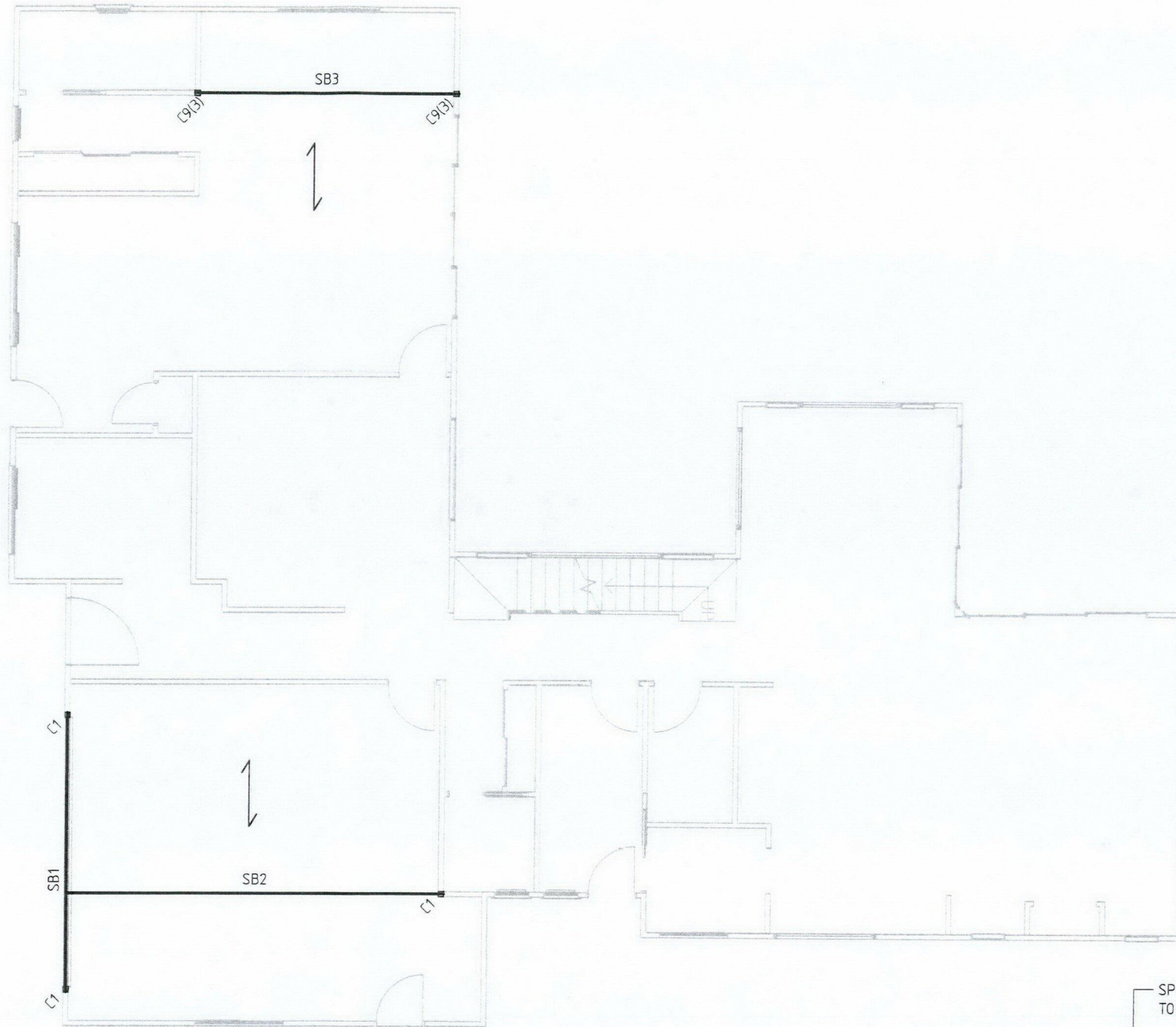
STRUCterre JOB No.  
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DRAWING REF. No.  
D38858-S-109

CLIENT REFERENCE No.  
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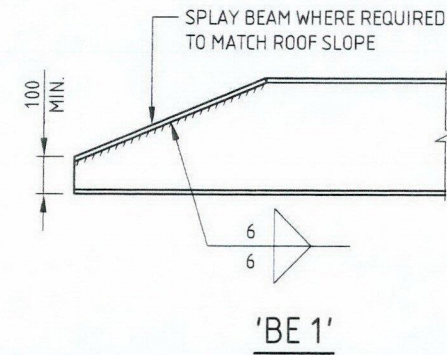
EXPOSURE CLASSIFICATION	
STRUCTURAL STEEL	MEDIUM



LEGEND	
	DENOTES FLOOR JOIST DIRECTION

MEMBER SCHEDULE		
MARK	MEMBER	COMMENTS
STEEL BEAMS		
SB1	380PFC	REFER TO DETAIL 'B6' L1/SB1 CONNECTION REFER TO DETAIL 'B2B' OR 'B4B'
SB2	250UC73	
SB3	250PFC	REFER TO DETAIL 'B6'
POSTS		
C1	75x75x3 EZI POST OR EQUIVALENT	COLUMN BASE & COLUMN JOINT 1 - EZI POST
C9(3)	3 TIMBER STUDS 90x45 MIN. GRADE F14	REFER TO DETAILS 'BSS3' & 'BSS4'

NB: SPLAY BEAM WHERE REQUIRED AS PER DETAIL 'BE1'.



THIS PLAN / DOCUMENT FORMS  
PART OF FORM BUILDING  
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0	TLT	14/03/17	ISSUED FOR CONSTRUCTION	AC	RC	DRAFTER	TLT	14/03/17
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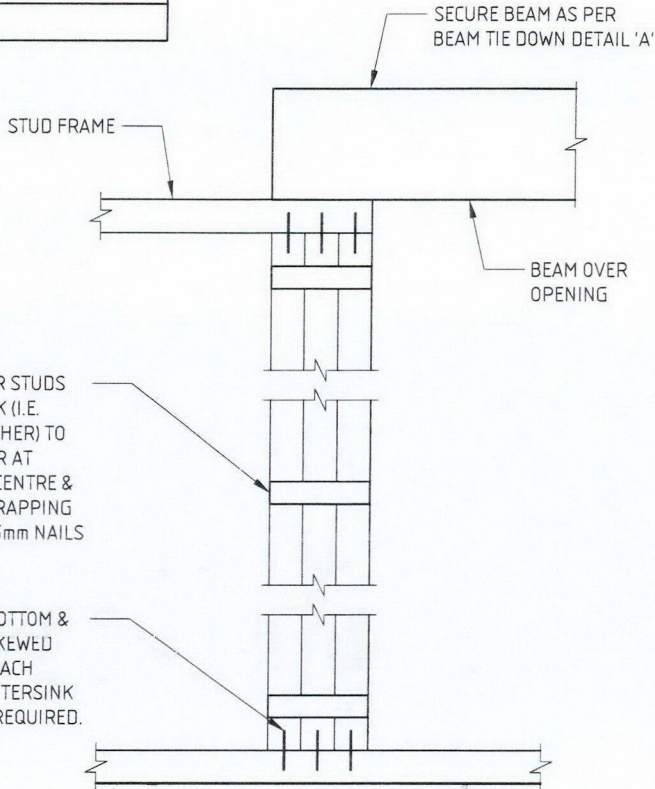
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	LOT B NO. 28 MONA STREET, MONA VALE. NSW		
	STRUCTURAL STEEL MARKING PLAN		
	G.J. GARDNER HOMES NSW		
CLIENT	G.J. GARDNER HOMES NSW		

	<b>STRUC</b> <i>terre</i> consulting engineers	
	Structerre Pty. Ltd. (ACN 055 912 733)	
	SUITE 1, LEVEL 2, 42 BIRNIE AVENUE, LIDCOMBE NSW 2141	
	TEL (02) 9646 5811 FAX (02) 9646 2311 EMAIL: <a href="mailto:sydney@structerre.com.au">sydney@structerre.com.au</a>	
STRUCTERRE JOB No.		DRAWING REF. No.
38858		D38858-S-110

CLIENT REFERENCE No.	GJGN015
REV	0



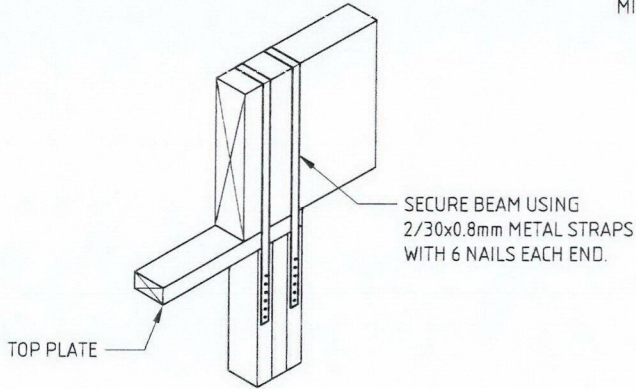
EXPOSURE CLASSIFICATION	
STRUCTURAL STEEL	MEDIUM



ALL CLUSTERS OF TIMBER STUDS SUPPORTING STEELWORK (I.E. STUD ADJACENT EACH OTHER) TO BE CONNECTED TOGETHER AT THREE LOCATIONS: TOP, CENTRE & BOTTOM. WITH METAL STRAPPING (30x0.8mm) USE MIN. 2x75mm NAILS PER CONNECTION.

ATTACH EACH STUD TO BOTTOM & TOP PLATES WITH TWO SKEWED 75mm LONG 12 GAUGE COACH SCREWS PER STUD, COUNTERSINK COACH SCREW HEADS IF REQUIRED.

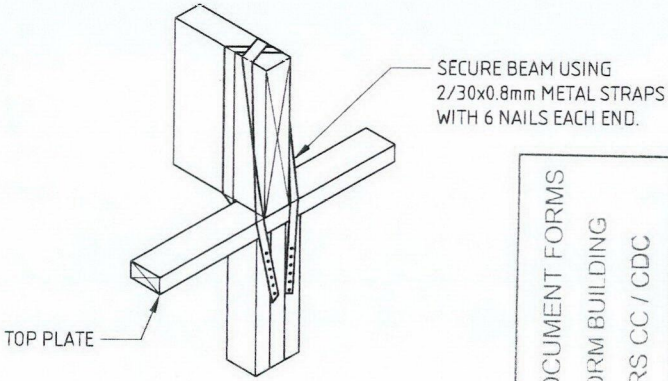
**'BSS3'**



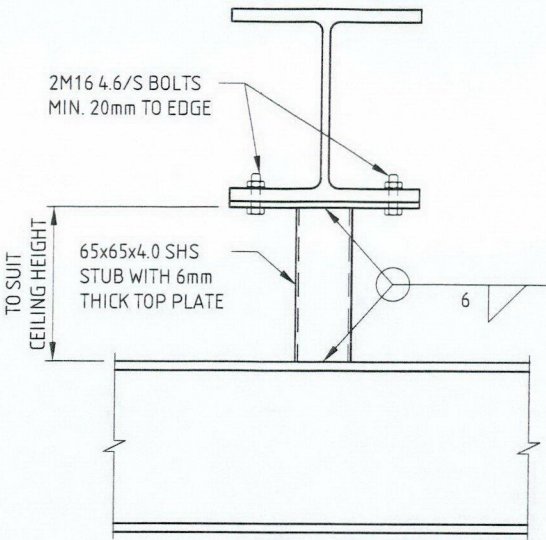
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ATTACH EACH STUD TO BOTTOM & TOP PLATES WITH TWO SKEWED 75mm LONG 12 GAUGE COACH SCREWS PER STUD, COUNTERSINK COACH SCREW HEADS IF REQUIRED.

**'BSS4'**



**BEAM TIE DOWN DETAIL 'B'**

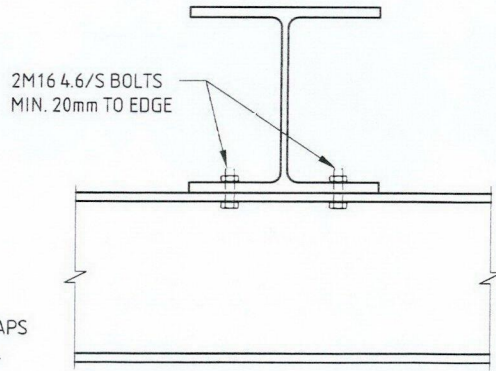


**'B4B'**

FIX TIMBER/BAM TO PFC TOP FLANGE WITH BUILDDEX® PART-THREADED TYPE 17 14g - 10x50 SCREWS @1200 CTS

PRE - DRILL Ø6.5 HOLES @1200 CTS (PRIOR TO PLACEMENT OF TIMBER PLATE - DO NOT PRE-DRILL TIMBER)

**'B6'**



PROPOSED NEW DWELLING FOR  
G.J. GARDNER HOMES NSW  
LOT B NO. 28 MONA STREET,  
MONA VALE. NSW

**STRUCTURAL STEEL DETAILS**

G.J. GARDNER HOMES NSW

**STRUCterre**  
consulting engineers

SUITE 1, LEVEL 2, 42 BIRNIE AVENUE, LIDCOMBE NSW 2141  
TEL (02) 9646 5811 FAX (02) 9646 2311 EMAIL: sydney@struc terre.com.au

STRUCterre JOB No. 38858  
DRAWING REF. No. D38858-S-111

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CERTIFIERS CC / CDC

CLIENT REFERENCE No.  
**GJGN015**

REV  
**0**



# RETAINING WALLS & PAVERS

*style and function*





RETAINING WALLS & PAVERS / NEW SOUTH WALES





# BEAUTIFUL PRODUCTS

*with enduring style*

Our range of coloured, standard and premium masonry have set a new standard in quality and style for the versatile concrete block.

By adding oxides and coloured sands to our mix of raw materials, we produce blocks with contemporary colours, textures and appeal. Ideal for a range of projects from a modern beach residence to impressive commercial projects Austral Masonry has an array of products to suit your style.

Austral Masonry blends fine sand, cement, aggregate and quality colouring agents to produce unique coloured blocks. Having long been the workhorse of the construction industry, our products are frequently specified in cutting-edge residential and commercial designs due to their strength and versatility.

Part of the Brickworks Building Products Group, one of Australia's largest and most innovative building product manufacturers, Austral Masonry is part of a group of manufacturers which includes other industry leading brands such as Austral Bricks, Bristle Roofing, Austral Precast and Auswest Timber.



# CONTENTS

*style and function*

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03	<i>Austral Masonry Landscaping Products</i>
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## RETAINING WALL RANGES

06	<i>Bribie</i>
08	<i>Arrinastone</i>
10	<i>Valleystone</i>
12	<i>Sydneystone</i>
14	<i>Hastings</i>
16	<i>Vintagestone</i>
18	<i>Keystone</i>
20	<i>How to Build Retaining Walls</i>

## PAVER RANGES

22	<i>Camino 50</i>
24	<i>Broadway 150, 300 &amp; 400</i>
26	<i>How to Lay Pavers</i>
28	<i>Paver Information</i>
29	<i>Maintenance of Pavers</i>
30	<i>Retaining Wall Information</i>
32	<i>Retaining Wall Cross Sections</i>
34	<i>We are Brickworks</i>
36	<i>Contact Information</i>

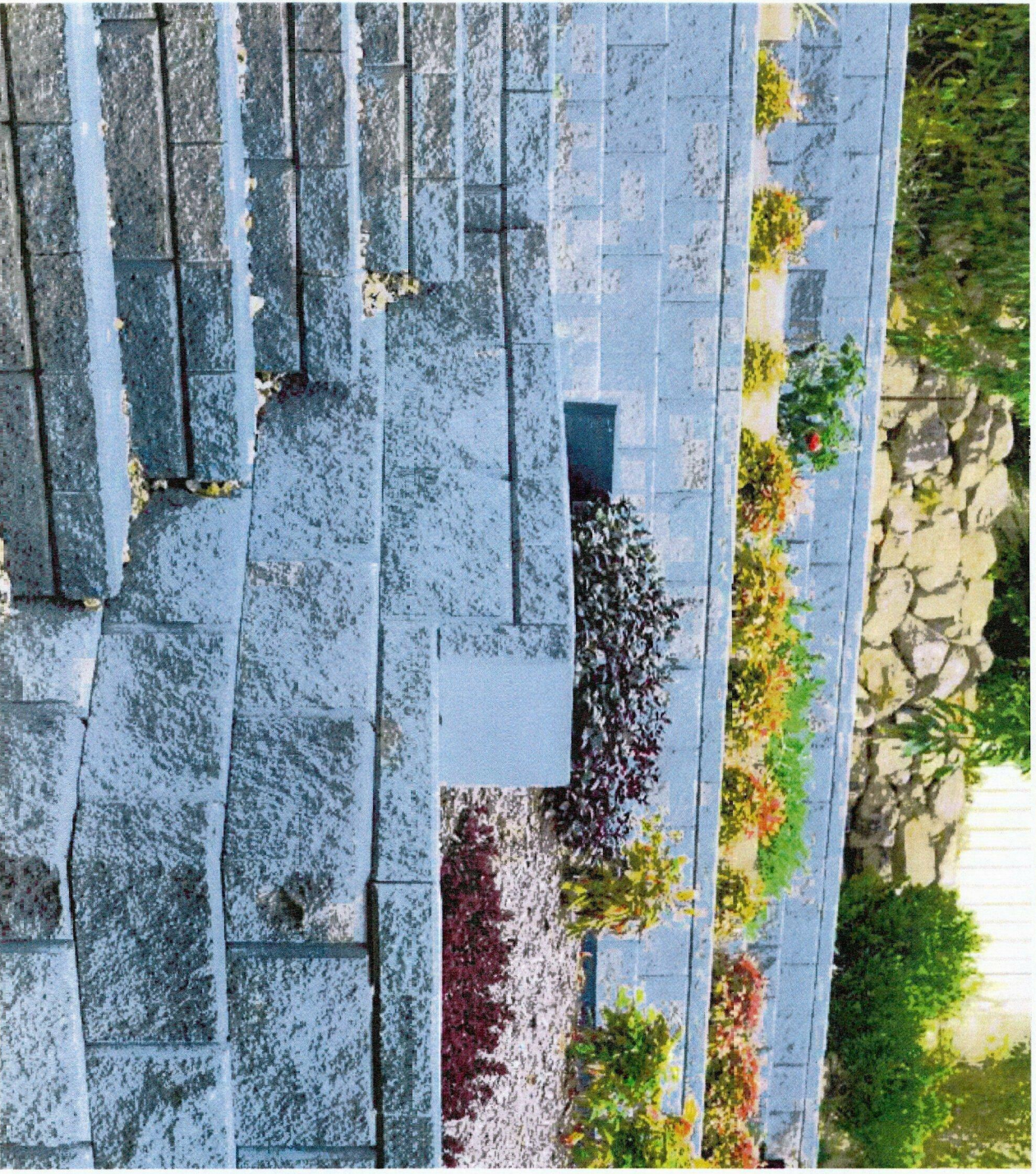
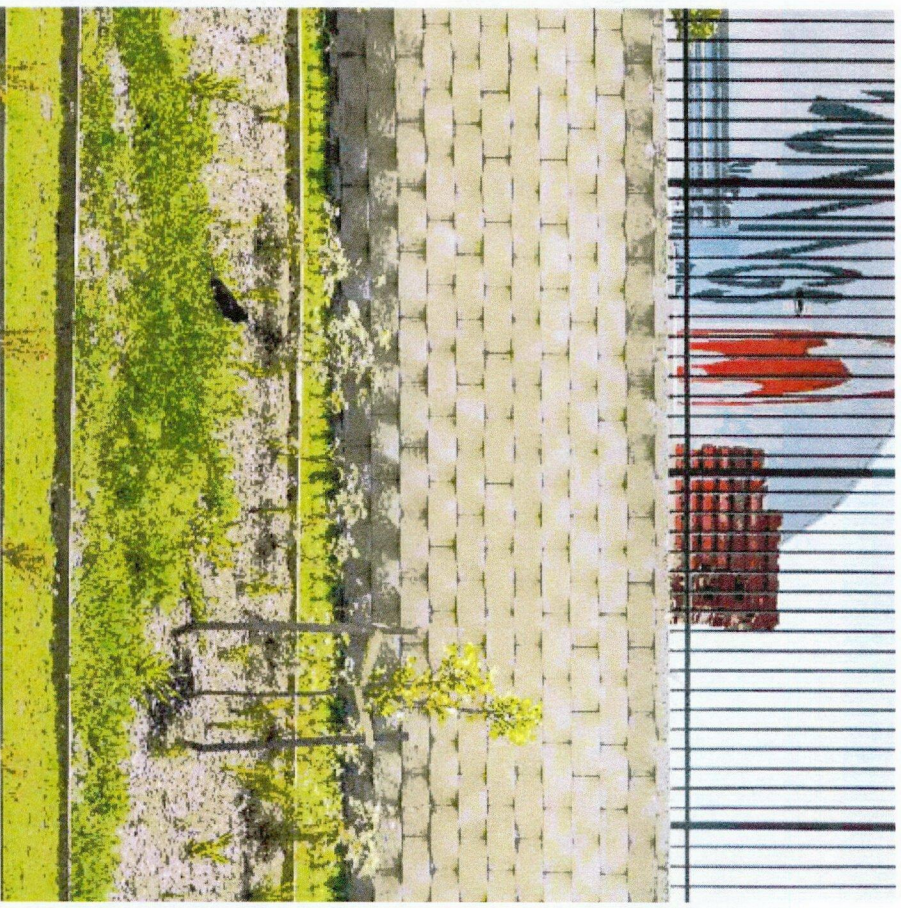
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Cover Image: Broadway Almond and Arrinastone  
Hawkesbury Yellow

Top right: Keystone Almond  
Bottom: Hastings Charcoal



—  
*Inspired by  
design*  
—





# BRIBIE

*simple yet distinctive*

These light weight blocks are the ideal solution to add style to your landscaping project with the greatest of ease. The simple design of this unit has been created to offer flexibility in applications from long winding garden beds to those that feature curved corners.

## Applications

**Maximum wall height: 360 mm**

**Straight walls**

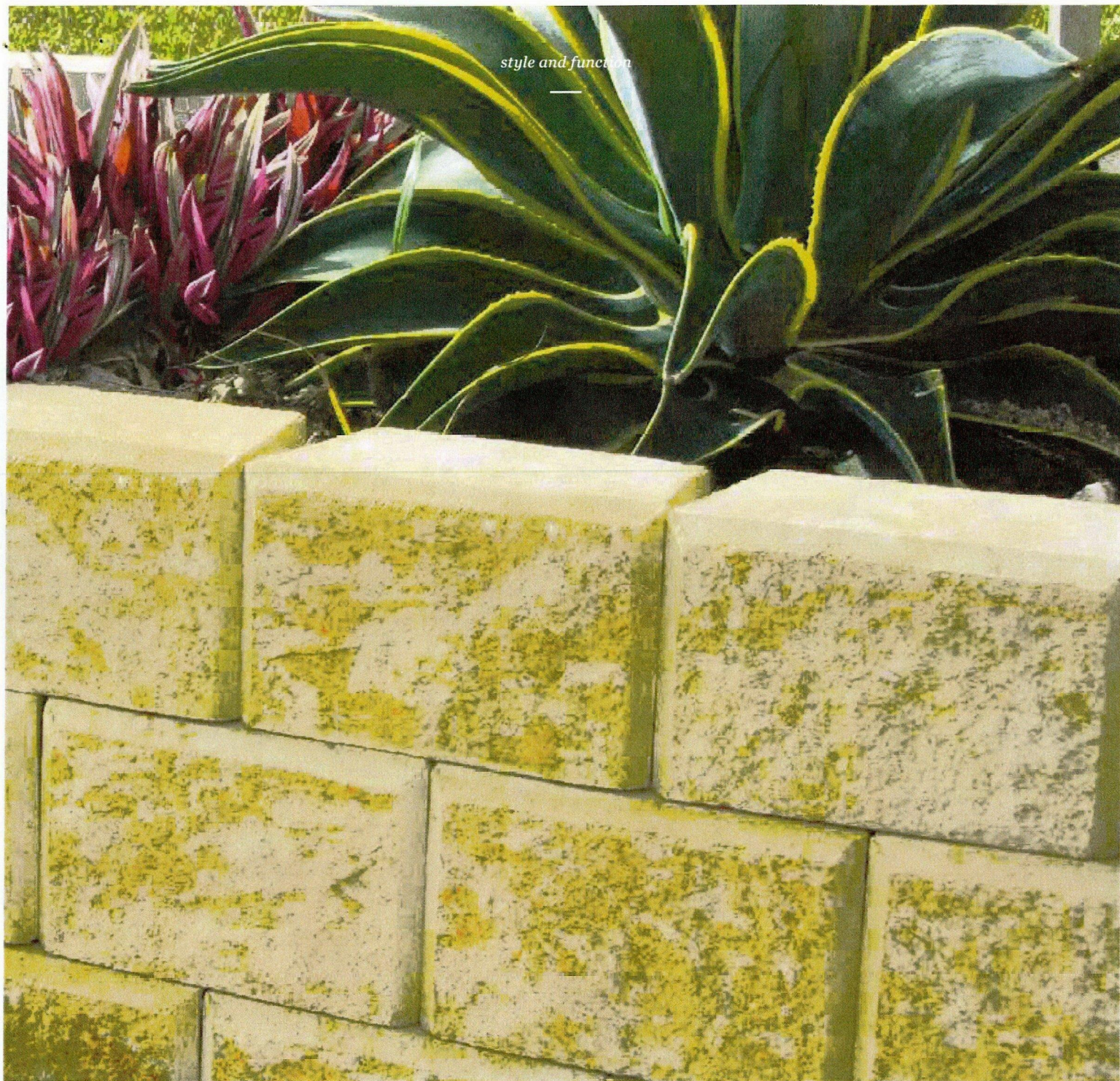
**Curved walls**

**Minimum circle: 18 blocks**

**Minimum radius to inside: 450 mm**



style and function



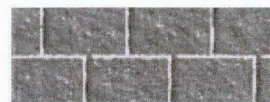
Limestone



Sydney Blend



Oak



Charcoal



**Standard Unit**

Size: 190 L x 100 W x 120 H mm

Weight (each): 4.5 kg

Blocks per lineal metre: 5.25



# ARRINASTONE

*elegant style*

These light weight blocks provide an easy way to create a practical outdoor space to your garden. The clean sharp lines provide a contemporary finish that will be the envy of the street.

## APPLICATIONS

Maximum wall height: 600mm

Straight walls

Corners

Steps





Paperbark



Nougat



Hawkesbury Yellow



Charcoal



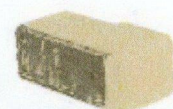
*Standard Unit*

Size: 300L x 200W x 150H mm  
Weight (each): 12.8kg  
Face Area: 22.2 units per m<sup>2</sup>



*Right Corner*

Size: 350L x 200W x 150H mm  
Weight (each): 13kg



*Left Corner*

Size: 350L x 200W x 150H mm  
Weight (each): 13kg





From creatively designed paths and courtyards, to naturally textured garden retaining walls, the Valleystone system offers a versatile design, enabling curves to be built with ease, as well as stairs and straight walls.

#### **APPLICATIONS**

**Maximum wall height: 800mm**

**Steps**

**Straight walls**

**Curved walls**

**Minimum circle.**

**22 Blocks based on 1m radius**

**12 blocks based on 570mm radius**

**Minimum Radius.**

**Top course: 570mm**

**Bottom course: 1000mm**

**Corners**

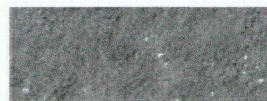




Nougat



Hawkesbury Yellow



Charcoal



*Angled Unit*

Size: 295L x 203W x 125H mm  
Weight (each): 13kg  
Face Area: 27.1 units per m<sup>2</sup>



*Straight Sided Unit*

Size: 295L x 203W x 125H mm  
Weight (each): 14.9kg  
Face Area: 27.1 units per m<sup>2</sup>



# SYDNEYSTONE

*Contemporary and stylish*

The Sydneystone blocks are available in two colours and our standard split face finish with chamfered edges at the top and both sides. Whether your building a straight or curved wall, Sydneystone offers a great solution for a clean and contemporary vertically stacked retaining wall.

## **Applications**

**Maximum wall height: 1000mm  
(3 m when engineered)**

**Straight walls**

**Curved walls**

**Corners**

**Steps**

**Min radius: Approx 1,200 mm**

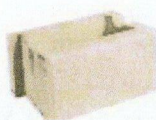




Nougat



Charcoal



**Standard Unit**

Size: 390 L x 245 W x 198 H mm  
Weight (each): 21 kg  
Face area: 13 units per m<sup>2</sup>



**Corner Block**

Size: 140 L x 340 W x 198 H mm  
Weight (each): 20 kg  
Available in right and left



**Capping Unit**

Size: 390 L x 245 W x 90 H mm  
Weight (each): 16 kg  
2.56 per lineal metre



# HASTINGS

*rich, natural colours*

In hues of Charcoal, Alpine, Sepia and Beach, Hastings is available in a colour to suit your next landscaping project. Each product contains natural tones to create a realistic and appealing finish to each block. Structurally sound and perfect for the 'do it yourself' weekend warrior, the Hastings Retaining Wall Blocks require no mortar, and are virtually maintenance free.

## APPLICATIONS

**Maximum wall height: 1000mm  
3m when engineered. (Please refer to  
Technical Manual)**

**Straight walls**

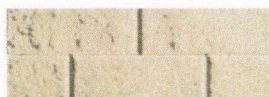
**Curved walls**

**Corners**

**Steps**

**Min Radius: Approx 1200mm**





Sepia



Beach



Alpine



Charcoal



**Wall Block**

Size: 390L x 245W x 200H mm  
Weight (each): 21.5kg  
Blocks per m<sup>2</sup>: 1 m<sup>2</sup> wall  
= 13 blocks m<sup>2</sup>



**Corner Block**

Size: 340L x 140W x 200H mm  
Weight (each): 20kg  
Available in left or right  
(Right-hand corner block shown)



**Half Cap**

Size: 195L x 245W x 90H mm  
Weight (each): 9kg  
Half Caps per lineal metre: 5.13



# VINTAGESTONE

*The stylish, robust retaining wall system*

Vintagestone offers the structural robustness of an interlocking pin system, with elegance and durability. Vintagestone offers a solution for walls up to 12 metres when suitably designed by an engineer.

## **Applications**

**Maximum wall height: 1,200 mm  
(12 m when engineered)**

**Straight walls**

**Curved walls**

**Corners**

**Steps**





Hawkesbury Yellow

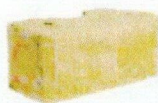


**Standard Unit**

Size: 455 L x 315 W x 200 H mm

Weight (each): 41 kg

Face area: 11 units per m<sup>2</sup>



**Corner Unit 90°**

Size: 440 L x 210 W x 200 H mm

Weight (each): 41 kg



**Capping Unit**

Size: 455 L x 310 W x 100 H mm

Weight (each): 20 kg

2.2 per lineal metre



# KEYSTONE

*Engineered perfection*

The Keystone retaining wall system is robust and strong, and available in standard and flushface finishes. This product is ideal for both straight and curved walls and features a patented interlocking pin connecting system that is best suited for engineered walls up to 15m in height.

## Applications

**Maximum wall height: 1,200 mm  
(15 m when engineered)**

**Straight walls**

**Curved walls**

**Corners**

**Steps**



style and function



Natural



Almond



Charcoal



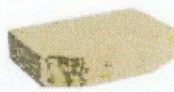
**Standard Unit**

Size: 455 L x 315 W x 200 H mm  
Weight (each): 38 kg  
Face area: 11 units per m<sup>2</sup>



**Flushface Unit**

Size: 455 L x 315 W x 200 H mm  
Weight (each): 41 kg  
Face area: 11 units per m<sup>2</sup>



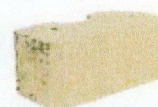
**Capping Unit**

Size: 455 L x 310 W x 100 H mm  
Weight (each): 20 kg  
2.2 per lineal metre



**Flushface Straight Side Cap**

Size: 455 L x 310 W x 100 H mm  
Weight (each): 20 kg  
2.2 per lineal metre



**Corner Unit 90°**

Size: 440 L x 210 W x 200 H mm  
Weight (each): 41 kg



# HOW TO

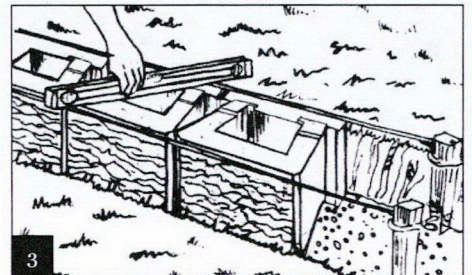
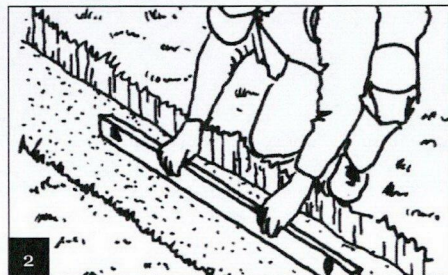
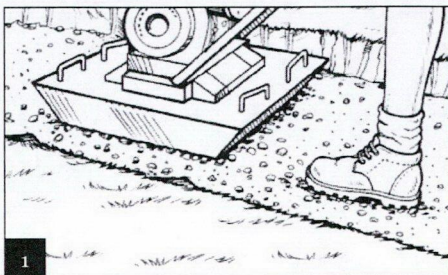
## *build retaining walls*

Austral Masonry retaining wall blocks are an ideal choice for retaining walls in gardens, other residential applications and commercial projects. The interlocking and dry stacked nature of these, makes them easy to install for the “Do It Yourself” landscaper. No matter what the project, the result is always an attractive and low maintenance retaining wall. The flexibility of the system provides tremendous scope, from edging to terraces, straight walls to curves.

**Note:** Please consult with regulating council for local design requirements prior to the commencement of any retaining wall. Councils may request walls over 0.5m in height and / or where a surcharge exists (e.g. driveway, house, fence or other structure) be designed and certified by a suitably qualified consulting engineer.

### *Your Checklist*

<input type="checkbox"/>	String line	<input type="checkbox"/>	Agriculture Drain Pipe
<input type="checkbox"/>	Tape measure	<input type="checkbox"/>	Pegs or stakes
<input type="checkbox"/>	Walling units	<input type="checkbox"/>	Broom
<input type="checkbox"/>	Compaction Tool	<input type="checkbox"/>	Gloves & eye protection
<input type="checkbox"/>	Shovel	<input type="checkbox"/>	Mitre saw (to cut blocks if required)
<input type="checkbox"/>	Spirit level	<input type="checkbox"/>	10-20mm Crushed stone
<input type="checkbox"/>	Wheel barrow	<input type="checkbox"/>	Crushed rock (for base)





**Step 1: Permits**

Check with your local council to ensure all local Building Codes are complied with.

**Step 2: Foundation**

The foundation material shall be compacted by several passes of a mechanical plate vibrator. Where there are significant variations of foundation material or compaction, soft spots, or where there is ponding of ground water, the material shall be removed, replaced and compacted in layers not exceeding 150mm. Trenches shall be dewatered and cleaned prior to construction, such that no softened or loosened material remains.

**Step 3: Bearing Pad**

The facing shall be built on a bearing pad, not less than 150mm thick and 300 to 600mm wide, consisting of one of the following options:

- Compacted road base
- Compacted crushed rock, well-graded and of low plasticity (without clay content), compacted by a plate vibrator;
- Cement-stabilized crushed rock, with an additional 5% by mass of cement thoroughly mixed, moistened and compacted by a plate vibrator; or
- Lean-mix concrete with a compressive strength of not less than 15 MPa.

**Step 4: First Course**

Spread 25mm of crusher dust with an additional 5% by mass of cement over the compacted base. The first course is now bedded into the crusher dust. The use of a level and string line is recommended to ensure the first course is laid correctly. Ensure each block is also well filled with free-draining material (eg. crushed rock aggregate / blue metal). For walls up to 1 metre high, make sure at least 100mm of the first-course blocks are buried below the finished ground level. Allow 200mm for walls over 1 metre high and up to 3 metres high. These walls will need to be engineered.

**Step 5: Drainage and Back Fill**

Place 100mm diameter agricultural pipe with geotextile sock behind the wall, with a 1 in 100 fall. Backfill behind the courses of blocks to a width of 300mm using 10-20mm free draining material (eg. crushed rock aggregate / blue metal). Ensure each block is also well filled with free-draining material.

Backfill behind the drainage layer with selected backfill material in a maximum of 200mm layers. Compaction rate of 95% must be achieved (use only hand operated plate compactors within 1 metre from the back of the wall). Do not use expansive clays to backfill. Be careful not to mechanically compact too close to the wall.

**Step 6: Laying Additional Courses**

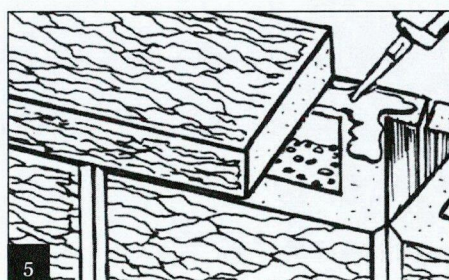
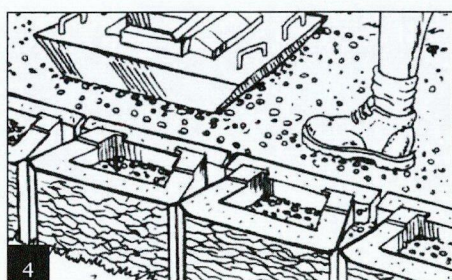
Clean any debris from the top of the wall to ensure the next block sits perfectly. Ensure each block is filled with free draining material, and place next course on top. Place the drainage material behind the blocks to 300mm. Stack units, placing drainage aggregate and compact backfill for each block layer until the wall is complete.

**Step 7: Capping Units**

Once backfilling and cleaning is completed as per Step 5 and Step 6 fix the purpose made Capping Blocks with cement based flexible adhesive.

**Step 8: Maximum Wall Height**

This information should be viewed as a guide only. The particular circumstances of retaining wall projects vary significantly in ways that often dictate the use of particular materials and techniques to address challenges presented by those circumstances. Austral Masonry recommends you to ensure that you obtain appropriate professional advice tailored to your circumstances before commencing retaining wall projects.



**Note:** Please consult with regulating council for local design requirements prior to the construction of any retaining wall. Councils in general require that retaining walls be designed and certified by a suitably qualified engineer where the wall is over 0.5m in height and/or where there is a surcharge loading, such as a driveway, house or other structure near the wall.



# CAMINO 50

*small format paver*

The Camino 50 offers a small format paver ideal for driveways, paths and pool surrounds. These versatile pavers offer easy installation with a contemporary finish.

## APPLICATIONS

**Pools**  
**Paths**  
**Patios**  
**Courtyards**  
**Driveways**



style and function



Sandune



Almond



Nutmeg



Charcoal



*Camino 50*  
Size: 230L x 115W x 50H mm  
Units per m<sup>2</sup>: 37.8



# BROADWAY 150, 300 & 400

*style with impact*

For contemporary style with impact, the Broadway range of pavers offers sharp modern lines and colours, ideal for courtyards, paths and other outdoor spaces.

## APPLICATIONS

**Pools**  
**Paths**  
**Patios**  
**Courtyards**



style and function



Sandune



Almond



Nutmeg



Charcoal



**Broadway 150\***  
Size: 300L x 150W x 60H mm  
Units per m<sup>2</sup>: 22.2  
*\*Broadway 150 only available in  
Almond and Charcoal*



**Broadway 300**  
Size: 300L x 300W x 50H mm  
Units per m<sup>2</sup>: 11.11



**Broadway 400**  
Size: 400L x 400W x 45H mm  
Units per m<sup>2</sup>: 6.25



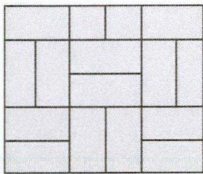
# HOW TO

## *lay pavers*

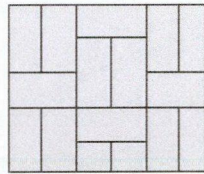
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### *Paver Patterns*

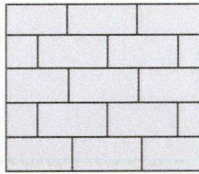
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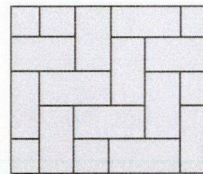
Basket



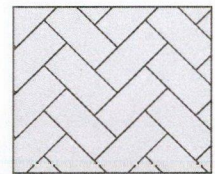
Weave Variation



Running Bond



Herringbone 90°



Herringbone 45°

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### *Materials Required*

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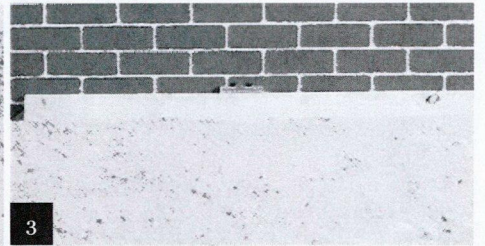
- Pavers
- Gravel Roadbase (1m<sup>3</sup> covers 10m<sup>2</sup> at a compacted depth of 100mm)
- Bedding Sand (1m<sup>3</sup> will cover 30m<sup>2</sup> at a depth of 30mm)
- String lines, tape measure and pegs
- Spirit level
- Two Screed Rails – two flat steel bars (Approx. 3m x 50mm x 2mm)
- 2-3m long concreter's screed
- Broom, rake and shovel
- Plate vibrator compactor
- Edge restraints (concrete, cement or timber)
- Cutting Equipment – Paver Splitter/ Masonry Brick Saw



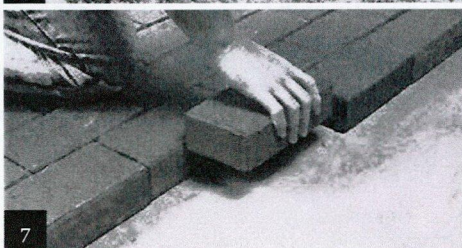
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2



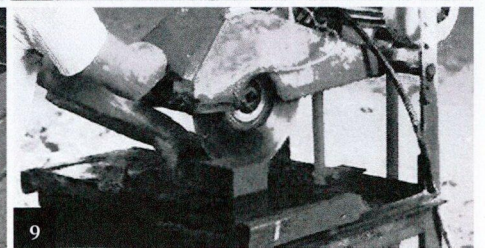
3



7



8



9



**1. Excavating**

Remove all vegetation, rubble and surplus soil from the selected area. A metal headed rake is ideal for excavation. This will give you a formation on which to work. The sub base goes over the sub grade. If using sub base for domestic driveways, minimum 100mm of limestone or roadbase is recommended. For patio and pedestrian areas, cemented stabilised sand may be used. See Figure 1.

**2. Compacting**

Compact the sub base with a hand held / mechanical compactor to a maximum deviation of 10mm from true level. Though hand-held compactors will be adequate for small jobs, mechanical compactors should be hired for driveways and larger areas. After compaction, cover the sub base with 20 to 50mm of well graded coarse bedding sand. Ensure that the sand is relatively dry. With 3% clay the bedding sand provides a barrier and protects the pavers from harmful salt attacks. Concreting sand is suitable for this purpose. See Figure 2.

**3. Levelling**

Place the screeding board along the base of a wall or straight vertical structure. This will give you a level for the bottom of the paving bricks. This level is called the benchmark. See Figure 3.

**4. Screeding**

Lay the screeding board at right angles to the benchmark to create a level for the screeding irons. For drainage purposes, always allow for a slight fall-away from the edge of the wall. This should be about 25mm over a distance of three metres. (Use your spirit level to measure fall-away. Bubble should reach outer line.) Repeat the above process at one screeding board length along the benchmark. These two indentations will be your height marks. See Figure 4.

**5. Screeding continued**

Continue to push the screeding board into the sand along the full length of the area to be paved, maintaining the level of the first height marks. Starting at the benchmark, place the screeding board on the screeding iron and drag it back and forth until the sand between the screeding irons is smooth and level. Move the screeding irons along the height marks, and continue to level the sand with the screeding board. See Figure 5.

**6. Screeding continued**

Further Screeding Repeat steps (3) and (5) to level the next section of sand. Allow one of the height marks to slightly overlap the area you have already levelled. When the entire area is level, you are ready to use your pavers. Look for any hollows or bumps in the levelled sand. This stage may be your last chance to smooth

them out. See Figure 6.

**7. Selecting Patterns**

Austral Masonry pavers are available in a wide range of colours and shapes. See page 16. However, for vehicular traffic, only herringbone patterns should be used.

**8. Gauging**

Determine the average length and width of pavers by measuring the cumulative dimensions of 20 pavers and dividing by 20. The laying gauge is then determined for the pattern selected by using the average dimensions determined together with a nominal joint width of 2.3mm. Before laying pavers, a grid of string lines not more than 1 metre apart should be set up covering the area to be paved. No contact should exist with adjacent pavers. See Figure 8.

**9. Trimming**

After whole pavers have been laid, the pavers are cut for use at the edges, corner, curves and obstructions if any. This can be effectively achieved when safely using a diamond blade brick saw or a masonry saw. See Figure 9.

**10. Edge Restraint**

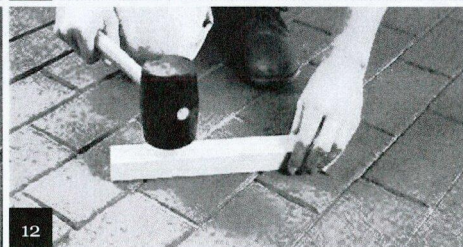
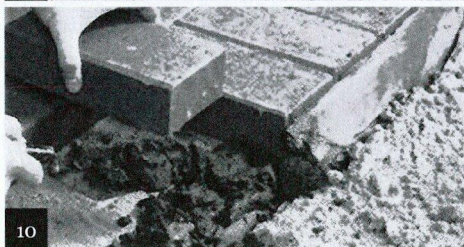
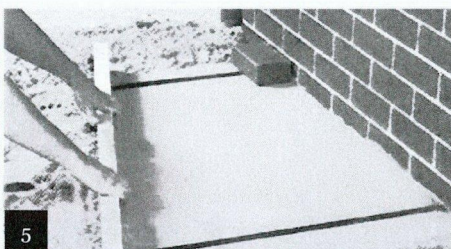
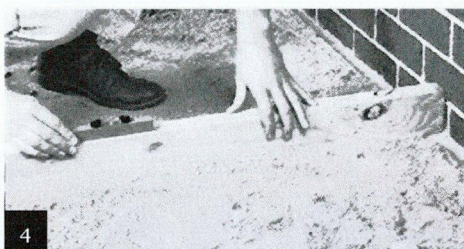
The most effective way to keep edge pavers in position is to set them in cement. Take up the last row of pavers and drag away 20cm of sand to a depth of 6cm (10cm for driveways). Level out the cement mortar and place the pavers in position by lightly tapping them. Do not use the paved area for at least 24 hours after the cement is laid. A driveway should not be used for 48 hours. See Figure 10.

**11. Jointing Sand**

Concrete pavers are designed to function with sand completely filling the vertical joints. This is essential for effective lock-up and shear transfer. Spread dry sand over the paved area and brush it into the vertical joints with a stiff bristled broom. Please clean the area of excess sand before final compaction. See Figure 11.

**12. Final Compaction**





Use the rubber mallet and the flat length of timber provided to compact small areas. However for larger area and driveways, it is advisable to use a plate compactor and protect the pavement with a layer of excess jointing sand (approx 5 to 10mm) and plyboard to prevent it from coming in direct contact with the paving. Top up the joints with jointing sand after compaction. See Figure 12.





# PAVER

## information

Product	Range	Description	Size	Coverage	Colours	Applications
	Camino 50	Standard Unit	230L x 115W x 50H	37.8 Units per m <sup>2</sup>	Sandune, Almond, Nutmeg, Charcoal	Pools Pedestrian* Driveways
	Broadway 150	Standard Unit	300L x 150W x 60H	22.2 Units per m <sup>2</sup>	Sandune, Almond, Nutmeg, Charcoal	Pools Pedestrian*
	Broadway 300	Standard Unit	300L x 300W x 50H	11.11 Units per m <sup>2</sup>	Sandune, Almond, Nutmeg, Charcoal	Pools Pedestrian*
	Broadway 400	Standard Unit	400L x 400W x 45H	6.25 Units per m <sup>2</sup>	Sandune, Almond, Nutmeg, Charcoal	Pools Pedestrian*

Pedestrian\* indicates these pavers are suitable for applications that are not in wet areas.



# MAINTENANCE

## *of pavers*

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Maintaining your paved area will guarantee that it holds its good looks and natural appeal forever, ensuring added resale value to your home.

All paved areas, over time, are subject to spillages and a build up of dirt and grime. By following certain guidelines and cleaning procedures, maintaining the good look of your pavers need not be a problem.

### *Efflorescence*

Efflorescence is a powdery deposit of salts (usually white or yellow) and is often found on the surface of concrete pavers after a period of rain. Efflorescence appears due to external sources from surrounding materials.

For example, salty soils or fertilisers draw up through the pavers by the drying effect.

Prior to laying your pavers, make sure a clean bed of sand is the foundation of the paving – this will form a barrier to salts migrating to the pavers from below. Efflorescence can be removed by using either a dry brushing technique or wiping with a damp cloth making sure the salts are carried away from the pavers.

### *Organic Growths – Fungus, Mould and Moss*

Porous masonry may provide an environment for organic growth when it is continuously moist, especially in light but shady conditions and when there are plenty of nutrients available.

Clean off the growth as much as possible with a dry bristle brush. Organic growths should be treated with liquid chlorine, or common household chemicals such as Exitmould and White King or a proprietary weed killer.

The solution should be left for several days and then brushed off with hot water and detergent.

Repeat as necessary.



# RETAINING WALL

## *information*

Product	Range	Description	Max Wall Height	Size	Weight	Coverage	Applications
	Arrinastone	Standard Unit	600mm	300L x 200W x 150H	12.8kg	22.2 Blocks per m <sup>2</sup>	Straight Walls, Corners, Steps
	Arrinastone	Right Corner	-	350L x 200W x 150H	13kg	N/A	Straight Walls, Corners
	Arrinastone	Left Corner	-	350L x 200W x 150H	13kg	N/A	Corners
	Hastings	Standard Unit	1000mm*	390L x 245W x 200H	21.5	13 Blocks per m <sup>2</sup>	Curved Walls, Straight Walls, Corners, Steps
	Hastings	Corner Block	-	340L x 140W x 200H	20kg	N/A	Corners
	Hastings	Half Cap	-	195L x 245W x 90H	9kg	5.13 per lineal metre	Curved Walls, Straight Walls, Corners
	Valleystone	Angled Unit	800mm*	295L x 203W x 125H	13kg	27.1 Blocks per m <sup>2</sup>	Curved Walls, Straight Walls, Corners
	Valleystone	Straight Sided Unit	-	295L x 203W x 125H	14.9kg	27.1 Blocks per m <sup>2</sup>	Curved Walls, Straight Walls, Corners
	Sydneystone	Wall Block	1000mm*	390L x 245W x 198H	21kg	13 Blocks per m <sup>2</sup>	Curved Walls, Straight Walls, Corners, Steps
	Sydneystone	Corner Block	-	340L x 140W x 198H	20kg	N/A	Curved Walls, Straight Walls, Corners, Steps
	Sydneystone	Capping Block	-	390L x 245W x 90H	16kg	2.56 Blocks per lineal metre	Curved Walls, Straight Walls, Corners, Steps










Maximum wall heights in good soils (gravels, sandy gravels, crushed sandstone).

\* Hastings and Sydneystone can be built up to 3m when designed by a suitably qualified engineer and combined with soil reinforcement or No Fines concrete.

\*\*Vintagestone and Keystone can be built up to 12m high when designed by a suitably qualified engineer and combined with soil reinforcement.

Please contact your Austral Masonry representative for more information.



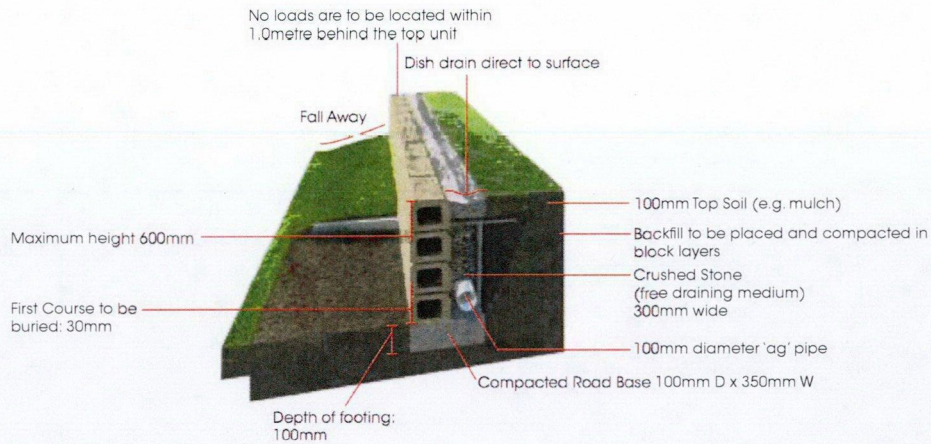
Product	Range	Description	Max Wall Height	Size	Weight	Coverage	Applications
	Vintagestone	Standard Unit	1200mm**	455L x 315W x 200H	41kg	11 Blocks per m <sup>2</sup>	Straight Walls, Corners, Steps
	Vintagestone	Corner Unit 90°	-	440L x 210W x 200H	41kg	N/A	Straight Walls, Corners
	Vintagestone	Capping Unit	-	455L x 310W x 100H	20kg	2.2 per lineal metre	Corners
	Keystone	Standard Unit	1200mm**	455L x 315W x 200H	38kg	11 Blocks per m <sup>2</sup>	Curved Walls, Straight Walls, Corners, Steps
	Keystone	Flushface Unit	-	455L x 315W x 200H	41kg	11 Blocks per m <sup>2</sup>	Corners
	Keystone	Capping Unit	-	455L x 310W x 100H	20kg	2.2 per lineal metre	Curved Walls, Straight Walls, Corners
	Keystone	Flushface Straight Side Cap	-	455L x 310W x 100H	20kg	2.2 per lineal metre	Curved Walls, Straight Walls, Corners
	Keystone	Corner Unit 90°	-	440L x 210W x 200H	41kg	N/A	Curved Walls, Straight Walls, Corners
	Bribe	Standard Unit	360mm*	190 L x 100 W x 120 H	4.5kg	5.25 per lineal metre	Curved Walls, Straight Walls, Corners, Steps



# RETAINING WALL

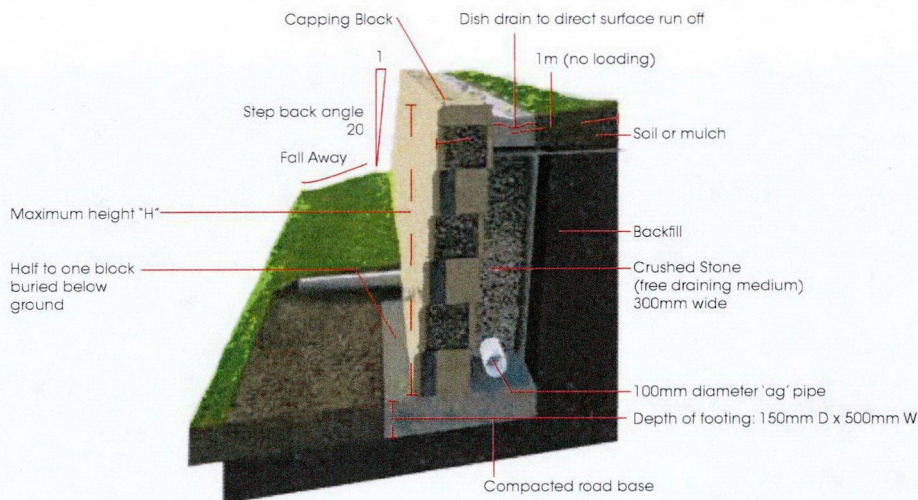
## *cross sections*

### *Arrinastone*



Please Note: Backfill should be no higher than the top of the retaining wall.

### *Hastings/Sydneystone*



\* Hastings and Sydneystone can be built up to 3m when designed by a suitably qualified engineer and combined with soil reinforcement or no fines concrete. Contact your local Austral Masonry representative for more information.



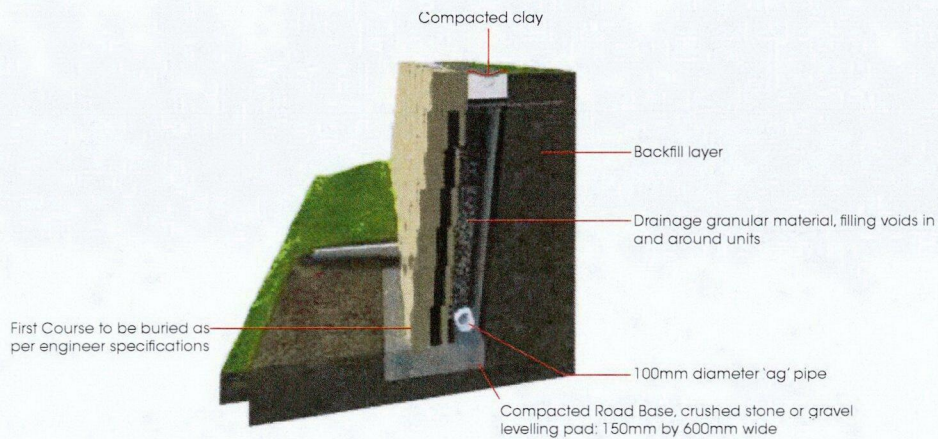
# RETAINING WALL

## *cross sections*

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### *Valleystone*

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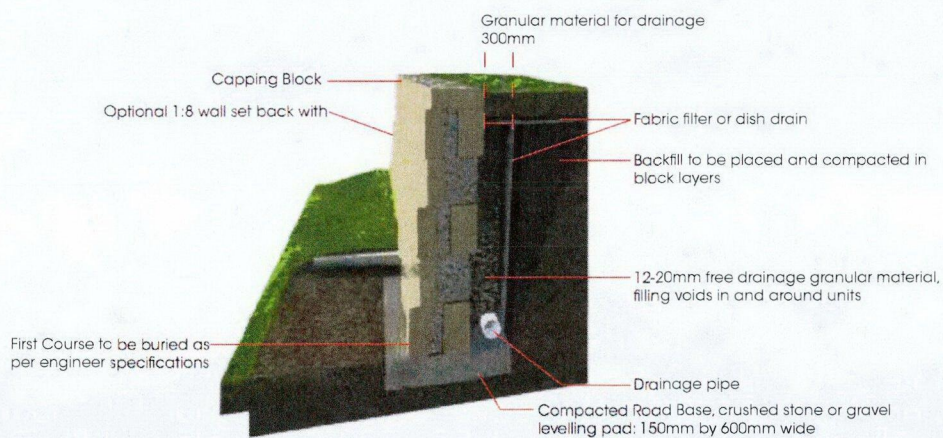


Please Note: Backfill should be no higher than the top of the retaining wall.

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### *Keystone/Vintagestone*

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\* Keystone can be built up to 15m when designed by a suitably qualified engineer and combined with soil reinforcement or no fines concrete. Contact your local Austral Masonry representative for more information.







# WE ARE

## *Brickworks*

Brickworks Building Products is one of Australia's largest and most diverse building material manufacturers. Under the Brickworks Building Products umbrella are some of Australia's best known building materials brands. Our products include bricks, pavers, masonry blocks, retaining wall systems, precast concrete panels, concrete and terracotta roof tiles, timber products and specialised façade systems.

With a broad product portfolio and manufacturing and sales facilities across Australia, Brickworks Building Products is uniquely placed to service the demands of the building industry.

With over 1200 staff across Australia and New Zealand, we pride ourselves on our commitment to product, service excellence and our leadership position.

### **BRICKWORKS**

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STYLE AND FUNCTION

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**1. Stock colours.** Colours other than stock colours are made to order. Contact your nearest Austral Masonry office for your area's stock colours. A surcharge applies to orders less than the set minimum quantity. **2. Colour and texture variation.** The supply of raw materials can vary over time. In addition, variation can occur between product types and production batches. **3.** We reserve the right to change the details in this publication without notice. **4.** For a full set of Terms & Conditions of Sale please contact your nearest Austral Masonry sales office. **5. Important Notice.** Please consult with your local council for design regulations prior to the construction of your wall. Councils in general require those walls over 0.5m in height and/or where there is loading such as a car or house near the wall be designed and certified by a suitably qualified engineer. **6. Max wall heights disclaimer.** The gravity wall heights are maximum heights calculated in accordance with CMAA RWo3 Appendix D guidelines and a qualified engineer should confirm the suitability of the product for each application. As such, due consideration must be given to but not limited to: Cohesion. Dry backfill, no ingress of any water into the soil behind the retaining wall. All retaining walls are designed for zero surcharge unless noted otherwise. These walls are intended for structure Classification A walls only as defined in AS4678 Earth Retaining Structures as being where failure would result in minimal damage and/or loss of access. The product images shown in this brochure give a general indication of product colour for your preliminary selection. Austral Masonry recommends all customers see actual product samples at a selection centre prior to making final selections.



# Hastings Range Retaining Walls

Technical Information



**masonry.**  
style and  
function



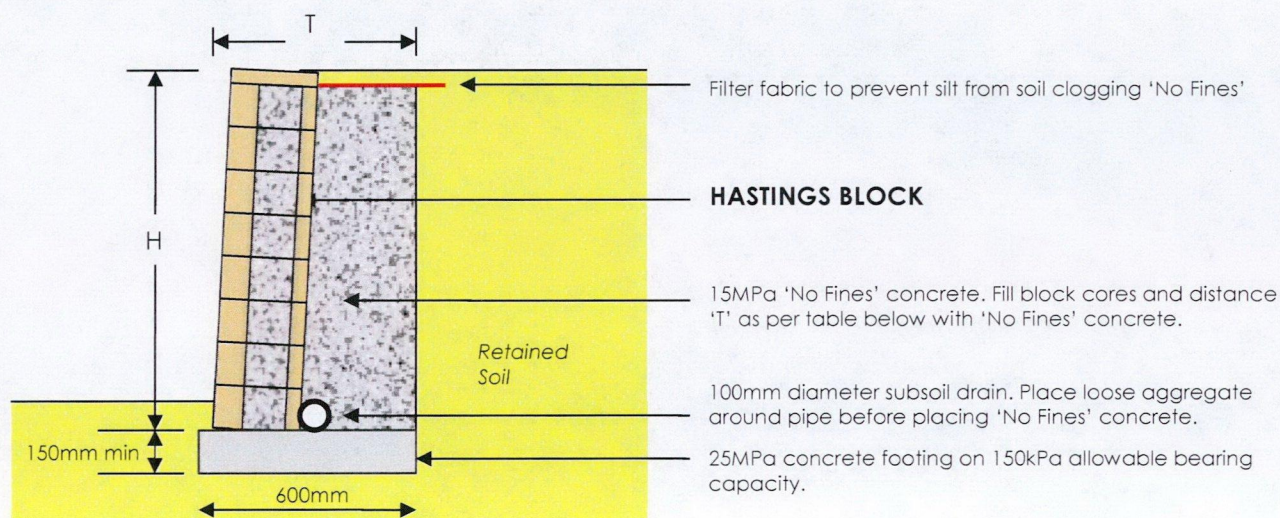
## HASTINGS RETAINING WALL SYSTEM NO FINES CONCRETE

'No Fines' concrete is ideal for cut sites and boundaries, where the use of soil reinforcement and excavation of the backfill is impractical. The use of 'No Fines' adds mass to the HASTINGS retaining wall system allowing for the overall height to be increased from a standard gravity wall without the need for geogrid reinforcement.

### 'No Fines' concrete specifications:

- 15MPa concrete with a 6:1 ratio (Gravel: Cement).
- Density range: 1800kg/m<sup>3</sup> to 2100kg/m<sup>3</sup>.
- Void ratio of the mix is expected to be between 20% to 30% and should be free draining.

**NOTE:** Please consult with appropriate council for design and construction regulations. Councils in general require walls to be designed and certified by a suitably qualified engineer where the wall is over 500mm in height or a load such as a road, building or hydrostatic pressure is present.



Wall Height H (mm)	Retained Soil CLAY $\phi = 26^\circ$ (POOR) T (mm)	Retained Soil SAND $\phi = 30^\circ$ (AVERAGE) T (mm)	Retained Soil GRAVEL $\phi = 34^\circ$ (GOOD) T (mm)
900	500	500	500
1200	750	650	600
1600	1100	900	800
2000	1300	1000	1000
2400	1400	1200	1100
2800	1900	1500	1400

All information in this document should be checked with your installation professional and local council guidelines prior to installation commencing as local site requirements, weather conditions, etc may result in the installation method identified in this document requiring adjustment to suit your project.



## HASTINGS RETAINING WALL SYSTEM NO FINES CONCRETE CONSTRUCTION GUIDELINES

### Design Considerations

- The 'No Fines' concrete maximum wall heights table is based on a 5kPa surcharge load acting on top of the wall as per AS4678: 2002. This table is supplied as a guide only.
- For higher walls the use of geogrid soil reinforcement is recommended. Contact Austral Masonry for further details.
- This product has zero slump exerting similar pressures on the soil and formwork, as loosely poured aggregate.
- The vertical height of any pour of 'No Fines' concrete is to be limited to 3 blocks high (approx. 600mm). The concrete must be allowed to harden before pouring the next lift.
- Global stability should be checked by a suitably qualified engineer.
- The design assumes no ground water to be present. For site conditions where ground water exists, the wall must be re-designed by a suitably qualified engineer.

### Construction Steps

#### STEP 1: EXCAVATION & LEVELLING PAD

Excavate a trench 600mm wide by a minimum of 250mm deep (150mm depth of concrete footing + 100mm minimum block embedment). Place 25MPa non-reinforced concrete to form the footing.

#### STEP 2: FIRST COURSE

Place blocks onto levelling pad and align with string line at the rear of units. Ensure blocks are level side to side and front to back tapping gently with rubber mallet to make the necessary adjustments. It is critical the first course be level.

#### STEP 3: 'NO FINES' CONCRETE BACKFILL

Fill block cores and backfill to the specified depth with 'No Fines' concrete. The vertical height of pour must not exceed 600mm. Alternatively the wall may be propped. Ensure the face of the wall is not stained with the concrete, as once set will be difficult to remove. The back wings of the blocks need to be removed to ensure the No Fines concrete and blocks monolithic mass.

#### STEP 4: ADDITIONAL COURSES

Brush any excess 'No Fines' concrete material from the top of the blocks (before it is allowed to harden). Place the next course of blocks and repeat steps 2 and 3 until the required wall height is reached.

#### STEP 5: CAPPING THE WALL

Secure capping units with a cement based flexible adhesive to finish the wall.



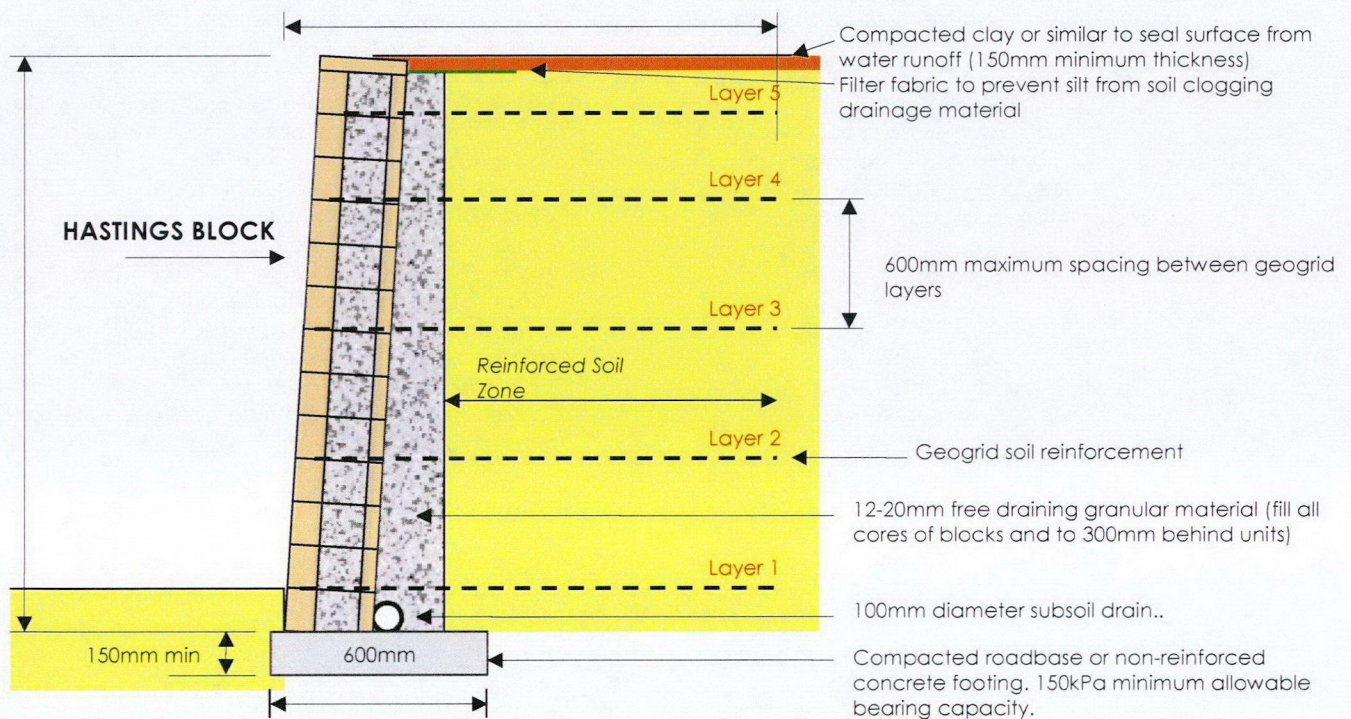
## HASTINGS RETAINING WALL SYSTEM SOIL REINFORCED WALLS: GEOGRID TABLE

Austral Masonry's HASTINGS segmental block retaining wall system utilizes its shape and weight in order to resist the lateral earth pressures. In combination with geogrid soil reinforcement, these walls can be built to substantial heights, without costly structural reinforced concrete footings.

### Geogrid Requirements:

The length, location and grade strength of geogrid is dependent on the wall height, loading on top of the structure, and soil properties. The table below is in accordance with AS4678: 2002 – Earth Retaining Structures.

**NOTE:** Please consult with appropriate council for design and construction regulations. Councils in general require walls to be designed and certified by a suitably qualified engineer where the wall is over 500mm in height or a load such as a road, building or hydrostatic pressure is present. The suitability of the information contained in the table must be referred to a qualified consulting engineer. These tables are provided as a guide only.



All information in this document should be checked with your installation professional and local council guidelines prior to installation commencing as local site requirements, weather conditions, etc may result in the installation method identified in this document requiring adjustment to suit your project.



# HASTINGS RETAINING WALL SYSTEM GEOGRID TABLE – GUIDE ONLY

Surcharge	Wall Height (m)	Geogrid Layers	Geogrid Placement above Levelling Pad							Geogrid Length L (mm)		
			Number of Geogrid layers							Soil Type (φ )		
			1	2	3	4	5	6	7	25	30	35
5kPa Driveway Surcharge	1	2	0.2	0.6						1.7	1.7	1.7
	1.2	2	0.4	0.8						1.7	1.7	1.7
	1.4	2	0.4	0.8	1.2					2	1.7	1.7
	1.6	3	0.4	0.8	1.2					2.2	1.7	1.7
	1.8	3	0.4	0.8	1.4					2.2	1.7	1.7
	2	4	0.4	0.8	1.4	1.8				2.3	2	2
	2.2	4	0.4	0.8	1.2	1.6	2.0			2.5	2	2
	2.4	4	0.2	0.6	1	1.4	1.8			2.6	2.1	2
	2.6	5	0.2	0.6	1	1.4	1.8	2.4		2.8	2.2	2.2
	2.8	5	0.2	0.6	1	1.4	1.8	2.4		2.9	2.5	2.4
	3	6	0.2	0.6	1	1.4	1.8	2.4	2.8	3.1	2.8	2.6

## Soil Types

- **Poor (φ = 25°):** Soils with friction angle  $\geq 25^\circ$ , may include sandy clays, gravelly clays and sand. Expansive clays and organic soil MUST not be used within the soil reinforced zone.
- **Average (φ = 30°):** Soils with friction angle  $\geq 30^\circ$ , may include gravelly sands and well graded sands.
- **Good (φ = 35°):** Soils with friction angle  $\geq 35^\circ$ , may include gravels, sandy gravels, weathered sandstone and crushed sandstone.

## Design Considerations

- Maximum wall heights table is based on a 5kPa surcharge load acting on top of the wall as per AS4678: 2002. This table is supplied as a guide only and must be referred to a qualified professional engineer. If imposed surcharge loads above 5kPa are applied, these designs are not appropriate.
- Based on a minimum Bearing Capacity of 200kPa
- Designs assume no hydrostatic loading.
- The minimum embedment of wall below ground level is assumed to be the greater of H/20 or 100mm.
- Designs are based on Geogrid strength of 55kN/m<sup>2</sup>

All information in this document should be checked with your installation professional and local council guidelines prior to installation commencing as local site requirements, weather conditions, etc may result in the installation method identified in this document requiring adjustment to suit your project.



## **Construction Steps**

### **Step 1: Excavation and Foundations**

Excavate in accordance with the specific design requirements. Bench out site to allow for full length of geogrid as per design. Excavate levelling pad trench 600mm wide by a minimum 250mm deep. This allows for a 150mm deep levelling pad + 100mm minimum block embedment.

### **Step 2: Levelling Pad**

The footing shall be 600mm wide x 150mm deep, of compacted roadbase or un-reinforced concrete.

### **Step 3: First Course**

The first course is to be laid on the levelling pad and aligned using a string line along the back of the units. Ensure units are levelled side to side and front to back. It is critical that the first course is accurate and level in order to ensure acceptable horizontal and vertical tolerances. Sand or mortar can be used as a levelling aid on the first course.

### **Step 4: Drainage Materials**

Place a 100mm agricultural drainage pipe for subsoil drainage behind the first course of blocks, with a minimum fall to the drainage outlet of 1:100. Fill all the voids within the blocks and extend 300mm behind the blocks with 12-20mm clean granular material, to the top of the first course.

### **Step 5: Placement of Geogrid**

The geogrid must be placed between the blocks as specified on the drawings. Geogrids shall be cut to the required length. Place the next course of blocks on top of the geogrid. Gently pull taut to remove any slack in the geogrid. Secure the back end of the geogrid before repeating Step 3 and proceeding with Step 6.

### **Step 6: Backfill and Compaction**

Place approved backfill material over the geogrids. Backfill shall be spread in a maximum of 200mm lifts, starting at the front of the wall (behind the drainage zone) to back of the soil reinforced zone. Compaction equipment must not make contact with the geogrids. Hand held plate compactors to be used within 1.5m from the front of the wall. Heavier compaction equipment may be used 1.5m away from the front of the wall face. Compaction to be 98% of Standard Maximum Dry Density. Surface drainage during and after construction of the wall shall be provided to minimise water infiltration in the compacted soil reinforced zone.

### **Step 7: Subsequent Courses**

Repeat steps 4 through to 6. Ensure compaction lifts are kept at 200mm. Blocks need to be levelled after compacting each lift.

### **Step 8: Capping of wall**

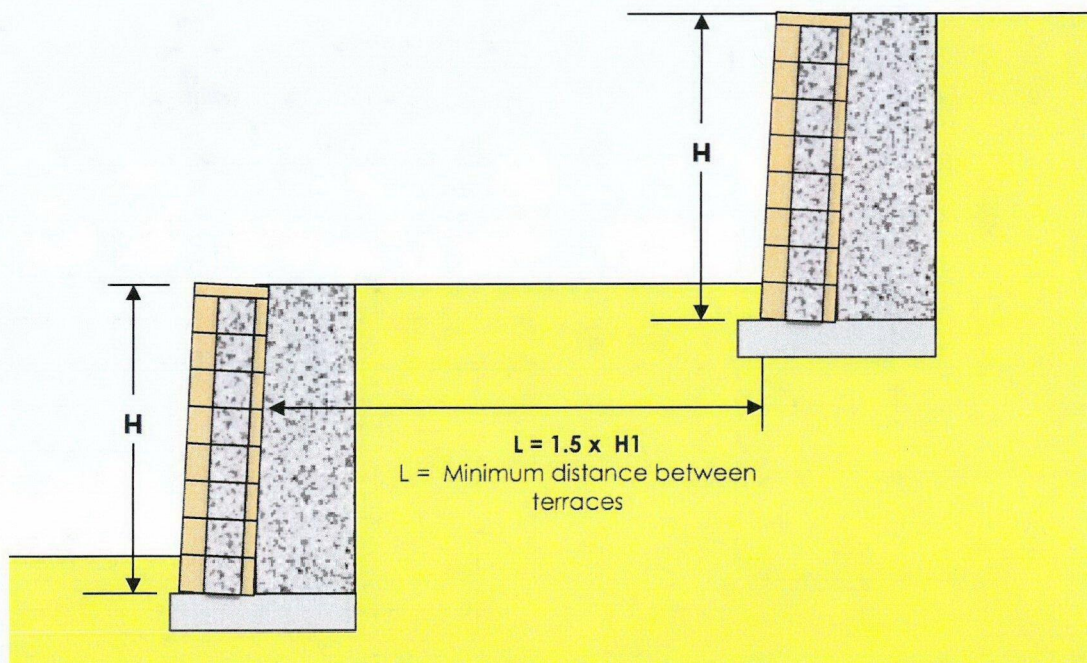
Install capping units and fix with concrete adhesive.

All information in this document should be checked with your installation professional and local council guidelines prior to installation commencing as local site requirements, weather conditions, etc may result in the installation method identified in this document requiring adjustment to suit your project.



#### HASTINGS RETAINING WALL SYSTEM TYPICAL TERRACED WALL APPLICATION DETAILS

- Walls may be terraced for a number of reasons. To increase the aesthetic appeal of the retaining wall, to level off a sloping site, and in some instances to reduce the single wall heights to levels where they can behave as gravity walls, thus reducing the need to use geogrid or 'no fines' concrete. In the latter instances, it is important to remember that the upper terrace wall can put pressure on the lower terrace when the walls are built close together.
- As a general rule, for the terraces to act as individual retaining walls, the minimum distance between the wall terraces must be at least 1.5 times the height of the lower wall. Note, this rule does not address global stability issues where walls are built on steep sites or in poor soils. A Global stability analysis should be undertaken by a suitably qualified engineer where such conditions may exist.
- Where insufficient room exists on site to space the terraces at  $1.5 \times H_1$ , the bottom terrace must be designed to accommodate the loading from the top terrace. The design analysis may model the structure as a single wall (i.e.  $H_1 + H_2$ ) to allow for the additional load from the upper terrace wall on the lower terrace.

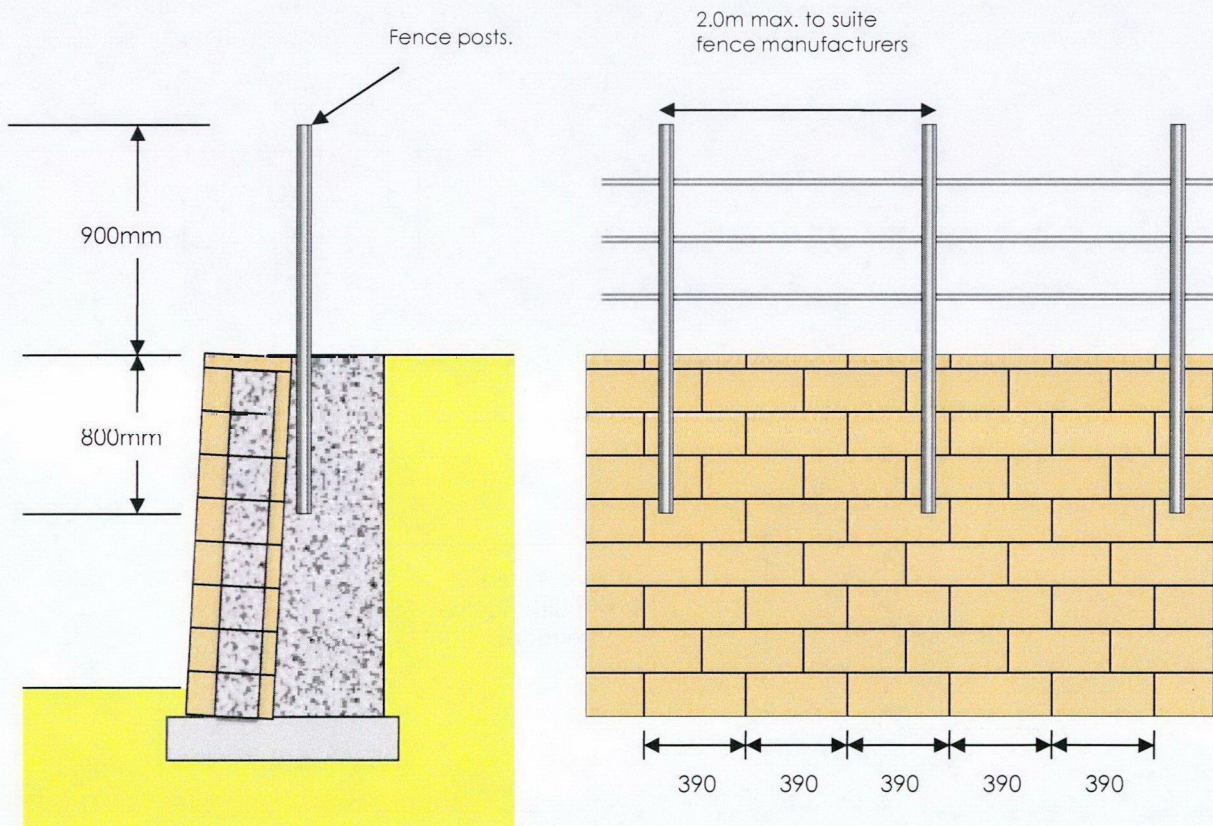


All information in this document should be checked with your installation professional and local council guidelines prior to installation commencing as local site requirements, weather conditions, etc may result in the installation method identified in this document requiring adjustment to suit your project.



#### HASTINGS RETAINING WALL SYSTEM FENCING DETAILS

- When incorporating fences into the HASTINGS Retaining wall system, the fence posts are to be placed behind the wall as shown.
- Fence posts should be embedded a minimum of 800mm from top of cap, and post encased with concrete. All other cores to be filled with gravel for drainage, or 'no fines' concrete as required. This embedment depth is for open fences only, where no wind loading is imposed on the wall and no impact loading is applied.
- Walls must be suitably designed to accommodate additional wind loading imposed on other types of closed fences; for example, increasing the embedment for the posts.



All information in this document should be checked with your installation professional and local council guidelines prior to installation commencing as local site requirements, weather conditions, etc may result in the installation method identified in this document requiring adjustment to suit your project.



### WARNING

The stamping of this plan by Form Building Certifiers Pty Ltd does not relieve the Applicant, Structural Engineer or other professional of their responsibility to ensure these stamped plans are not only consistent with the Construction/Complying Development documents (including any overmarked plan adjustments) but also the Council issued Development Consent plans & Conditions

# G.J. Gardner.HOMES

**PROJECT:** NEW DWELLING  
**ADDRESS:** 28 Mona St  
Mona Vale NSW 2103  
**LOT:** B  
**DP:** 404336

This is the plan/spec. referred to  
in Form Building Certifiers Certificate  
Certificate No. 2017 - 533  
Plan Nos. 1-14  
Craig Formosa BPB0124 DATED 13/4/17

I certify that work completed in accordance with  
these plans and specifications will comply with the  
regulations referred to in Section 81A(5) of the  
Environment Planning and Assessment Act 1979

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Owner(s) signature

Builders signature

Date

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No.	AMENDMENTS	DATE
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C	REVISED DRAWINGS; ADDED RETAINING WALL; ALTERED DRIVEWAY TO 3.5M WIDE	16/02/2017
D	CDC SET	06/03/2017
E	ADDED WATER TANK; ADJUSTED DRIVEWAY & TURNING CIRCLE; ADJUSTED PITCH OF LOWER ROOF.	31/03/2017

## G.J. Gardner.HOMES

#### SYDNEY NORTH

Unit 2, 28 - 30 Orchard Rd,  
Brookvale  
Sydney, NSW, 2100  
Phone 9939 3339 Fax 9939 4442  
www.gjgardner.com.au

Project  
DOUBLE STOREY DWELLING

Project address  
28 Mona St  
MONA VALE, 2103  
Lot B DP 404336

Client  
DARREN & JANINE COCKS

Stage  
CDC

Drawing title  
COVER SHEET

Date 31/03/2017 Drawn KJR - TF

Size A3 Scale 1 : 1

Job No GJGN015

True North Drawing No Rev

**GJGN015-1 E**

28 Mona St,  
Mona Vale NSW



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consent.



CLAD RES.  
METAL ROOF

2 STOREY  
REND. RES.  
METAL ROOF

2 STOREY  
BRICK/CLAD RES.  
TILE ROOF  
NO. 90

MONA STREET

ALFRESCO

ALF.

ALFRESCO

PALING

FENCE

TIMBER  
SHED

LOT B

METAL  
SHED

PAVING

PORCH

ALFRESCO

CLAD RES.  
METAL ROOF  
NO. 28

PORCH

66.49

BRICK WALL

REND. RES.  
TILE ROOF

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PART OF FORM BUILDING  
CERTIFIERS CC/CDC

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DARREN & JANINE COCKS

Stage  
CDC

Drawing title  
SURVEY

Date 31/03/2017 Drawn KJR - TF

Size A3 Scale 1 : 200

Job No GJGN015

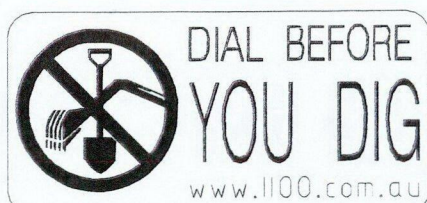
True North Drawing No Rev

GJGN015-2 E

## SURVEY PLAN

SYMBOLS & ABBREVIATIONS:

GP	GULLY PIT	-E-	OVERHEAD ELEC LINE
HYD	HYDRANT	-S-	SEWER LINE
SIP	SURFACE INLET PIT	GM	GAS METER
SIC	SEWER INSPECTION COVER	LP	LIGHT POLE
SMH	SEWER MANHOLE	EC	ELECTRICITY CONDUIT
W/M	WATER METER	ECT	ELEC & TELE CONDUIT
EL	ELECTRICITY BOX	TC	TELECOM CONDUIT
TP	TELECOM PIT	WC	WATER CONDUIT
VC	VEHICLE CROSSING	INV	INVERT
SV	STOP VALVE	KO	KERB OUTLET
SWMH	STORMWATER MANHOLE	TK	TOP of KERB



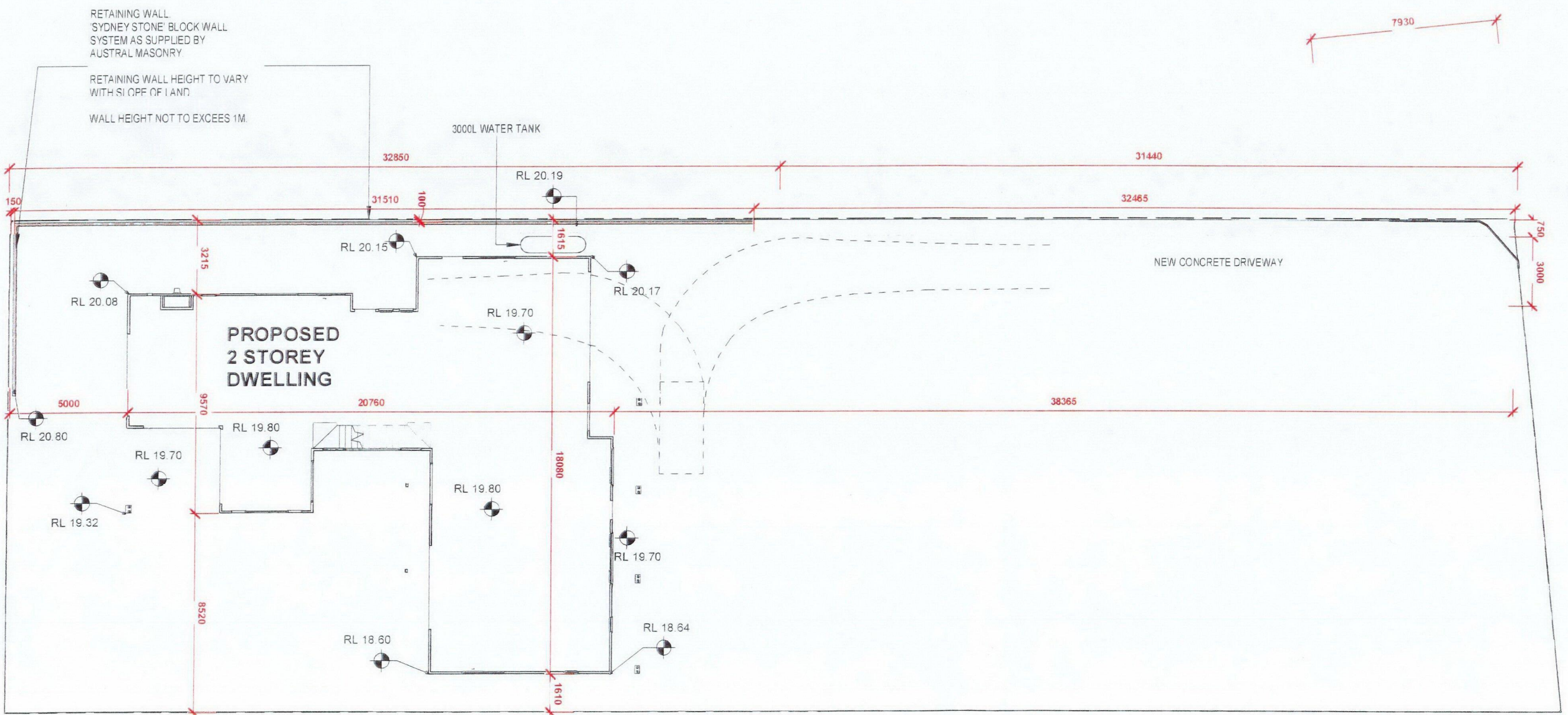
APPROXIMATE POSITION OF  
SEWER MAIN. REFER TO  
SEWER DIAGRAM FOR DETAILS

0 1m 3m 5m 10m

SCALE BAR 1:200

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Project  
DOUBLE STOREY DWELLING  
Project address  
28 Mona St  
MONA VALE, 2103  
Lot B DP 404336

Client  
DARREN & JANINE COCKS  
Stage  
CDC

Drawing title  
SITE PLAN

Date 31/03/2017 Drawn KJR - TF  
Size A3 Scale 1 : 200

Job No GJGN015

True North Drawing No Rev  
 GJGN015-3 E

0 1m 3m 5m 10m  
SCALE BAR 1:200

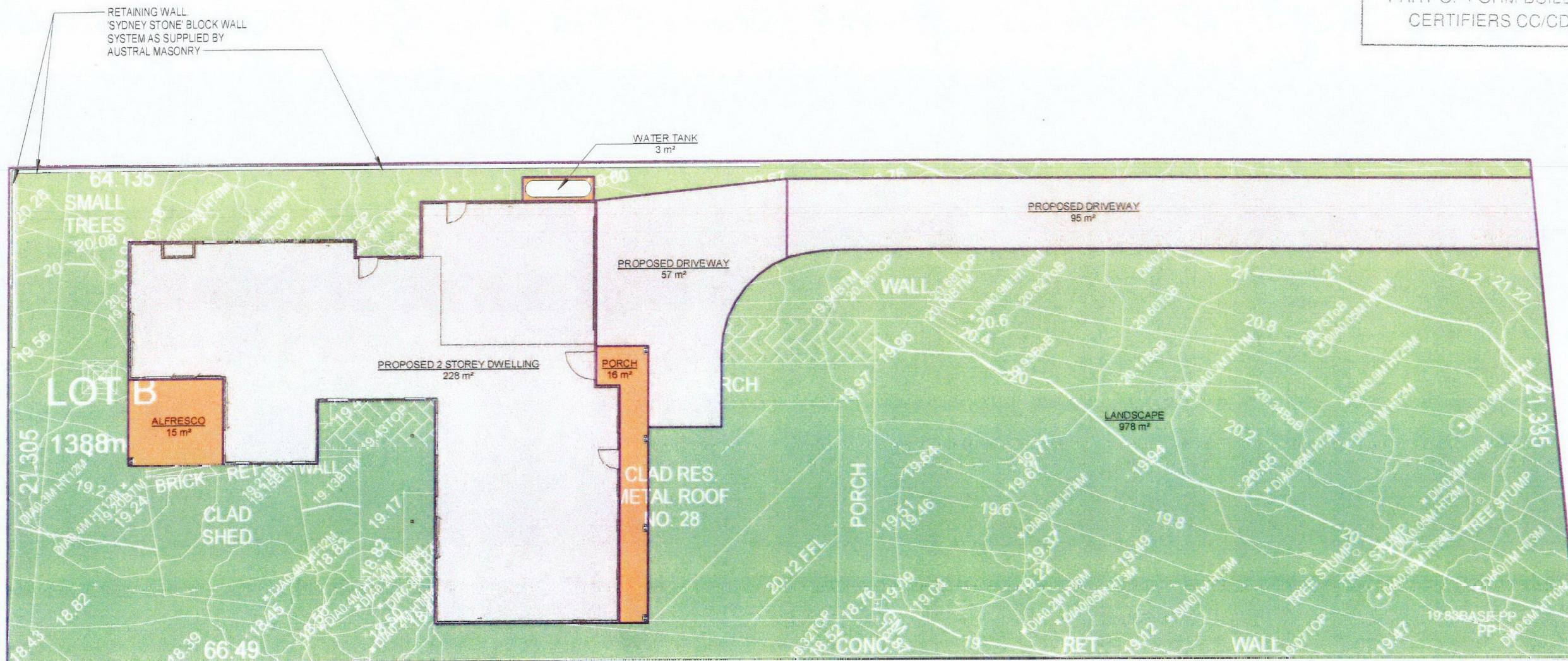
**1** **SITE PLAN**  
1:200

**NOTE:**  
**FRONT SETBACK IS TO BE AT LEAST:**  
 $(7.930m + 13.055m)/2 = 10.493m$   
**REAR SETBACK TO BE AT LEAST:**  
**5m**  
**SIDE SETBACK IS TO BE AT LEAST:**  
 $(7.275m - 4.500m)/4 + 0.9m = 1.594m$

UF LIVING	130 m²
UF BALCONY	4 m²
PORCH	16 m²
GF LIVING	186 m²
GARAGE	42 m²
ALFRESCO	15 m²
TOTAL AREA	393 m²

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DARREN & JANINE COCKS

Stage  
CDC

Drawing title  
LANDSCAPE PLAN

Date 31/03/2017 Drawn KJR - TF

Size A3 Scale 1 : 200

Job No GJGN015

True North Drawing No Rev

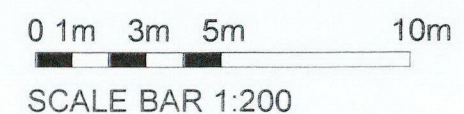


**GJGN015-4 E**

LANDSCAPE PLAN

- OPEN LANDSCAPE AREA
- PROPOSED IMPERVIOUS AREA
- OTHER AREAS (PORCH & ALFRESCO)

LANDSCAPE AREAS		
Name	Areas	Ratio
OPEN LANDSCAPE AREA	978 m <sup>2</sup>	70%
OTHER AREAS (PORCH & ALFRESCO)	34 m <sup>2</sup>	2%
PROPOSED IMPERVIOUS AREA	380 m <sup>2</sup>	27%
Grand total	1391 m <sup>2</sup>	



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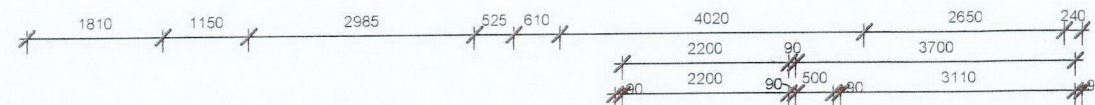




GJGN015-7

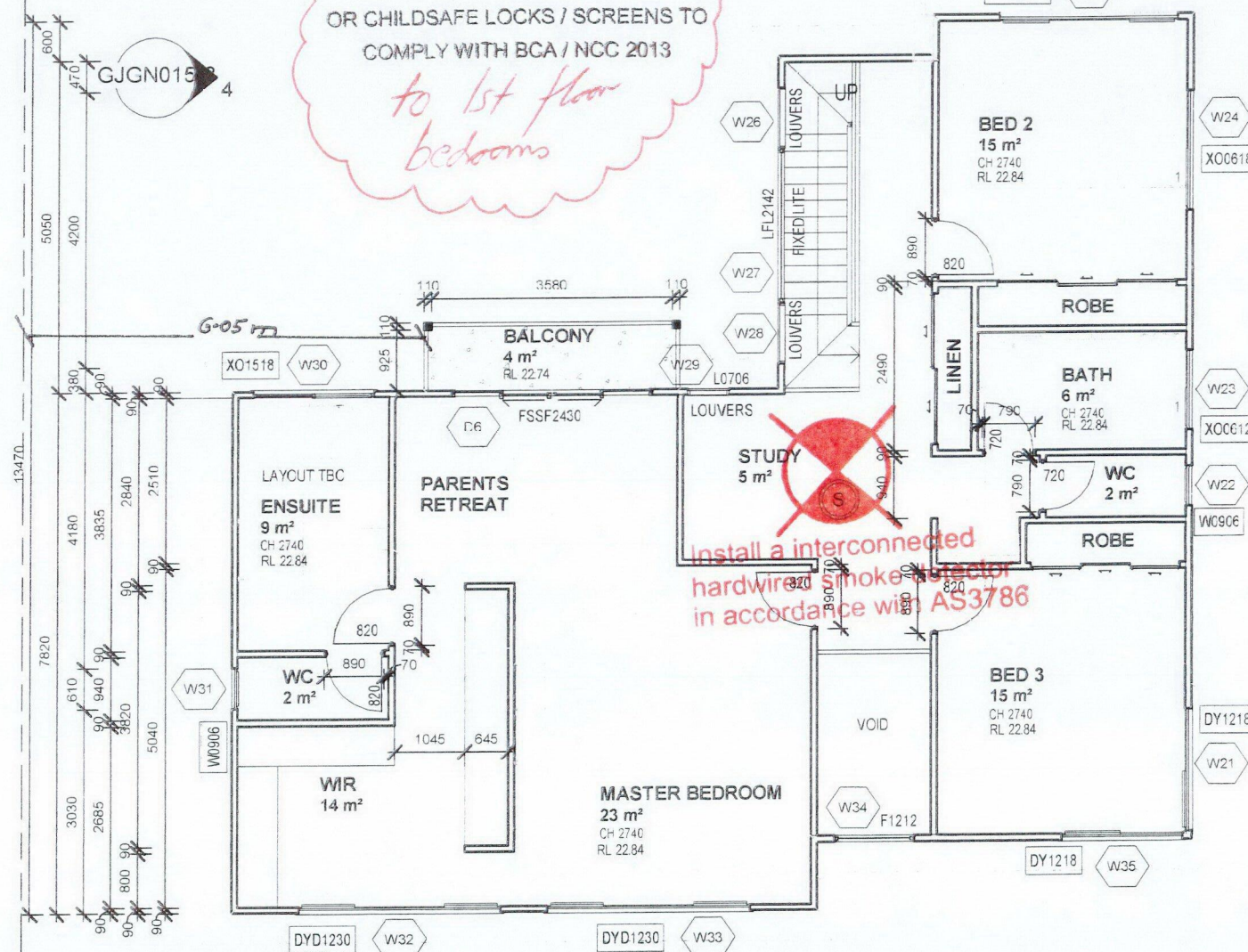
2

ROOF TO LEVEL BELOW

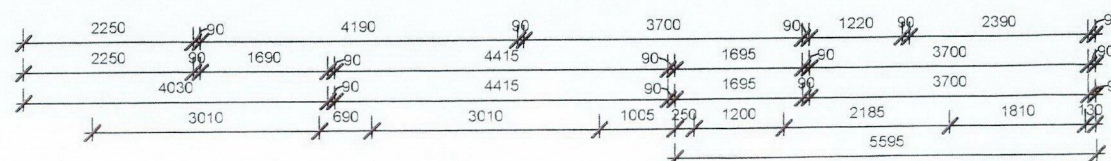


PROVIDE 1.7M SILL HEIGHT  
OR CHILDSAFE LOCKS / SCREENS TO  
COMPLY WITH BCA / NCC 2013

*to 1st floor  
bedrooms*



ROOF TO LEVEL BELOW



THIS PLAN/DOCUMENT FOR  
PART OF FORM BUILDING  
CERTIFIERS CC/CDC

3 UGN015-8

ROOF TO LEVEL BELOW

GJGN015-7

1

FIRST FLOOR PLAN

1 : 100

0 1m 2m 3m 4m 5m 10m

SCALE BAR 1:100

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## WINDOW SCHEDULE

Mark	Height	Width
W1	1460	1570
W2	1200	2170
W3	1200	610
W4	1200	610
W5	600	1810
W6	1327	1810
W7	2160	920
W8	2160	2360
W9	2160	920
W10	2100	1800
W11	2160	610
W12	2160	1780
W13	2160	610
W14	1300	259
W15	1300	610
W16	600	1810
W17	600	1210
W18	1200	610
W19	1200	610
W20	600	1570
W21	1200	1810
W22	860	610
W23	600	1210
W24	600	1810
W25	860	2650
W26	2160	920
W27	2160	2360
W28	2160	920
W29	910	610
W30	1460	1810
W31	860	610
W32	1200	3010
W33	1200	3010
W34	1200	1200
W35	1200	1810

## DOOR SCHEDULE

Mark	Height	Width
D1	2340	1200
D2	2400	3584
D3	2400	3238
D4	2400	3238
D5	2400	3588
D6	2400	2984

UF LIVING	130 m²
UF BALCONY	4 m²
PORCH	16 m²
GF LIVING	186 m²
GARAGE	42 m²
ALFRESCO	15 m²
TOTAL AREA	393 m²

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Project  
DOUBLE STOREY DWELLING

Project address  
28 Mona St  
MONA VALE, 2103  
Lot B DP 404336

Client  
DARREN & JANINE COCKS

Stage  
CDC

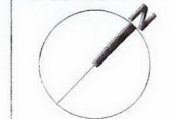
Drawing title  
FIRST FLOOR PLAN

Date 31/03/2017 Drawn KJR - TF

Size A3 Scale 1 : 100

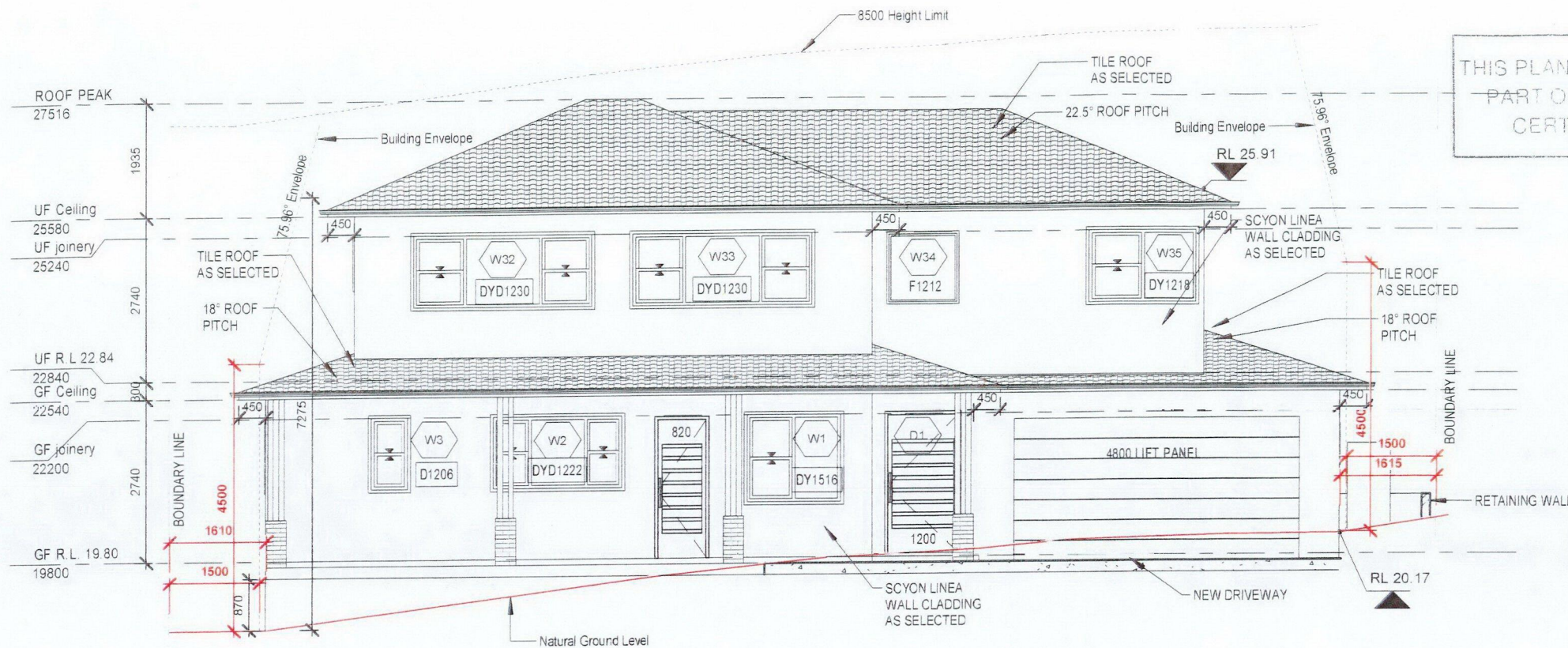
Job No GJGN015

True North Drawing No Rev



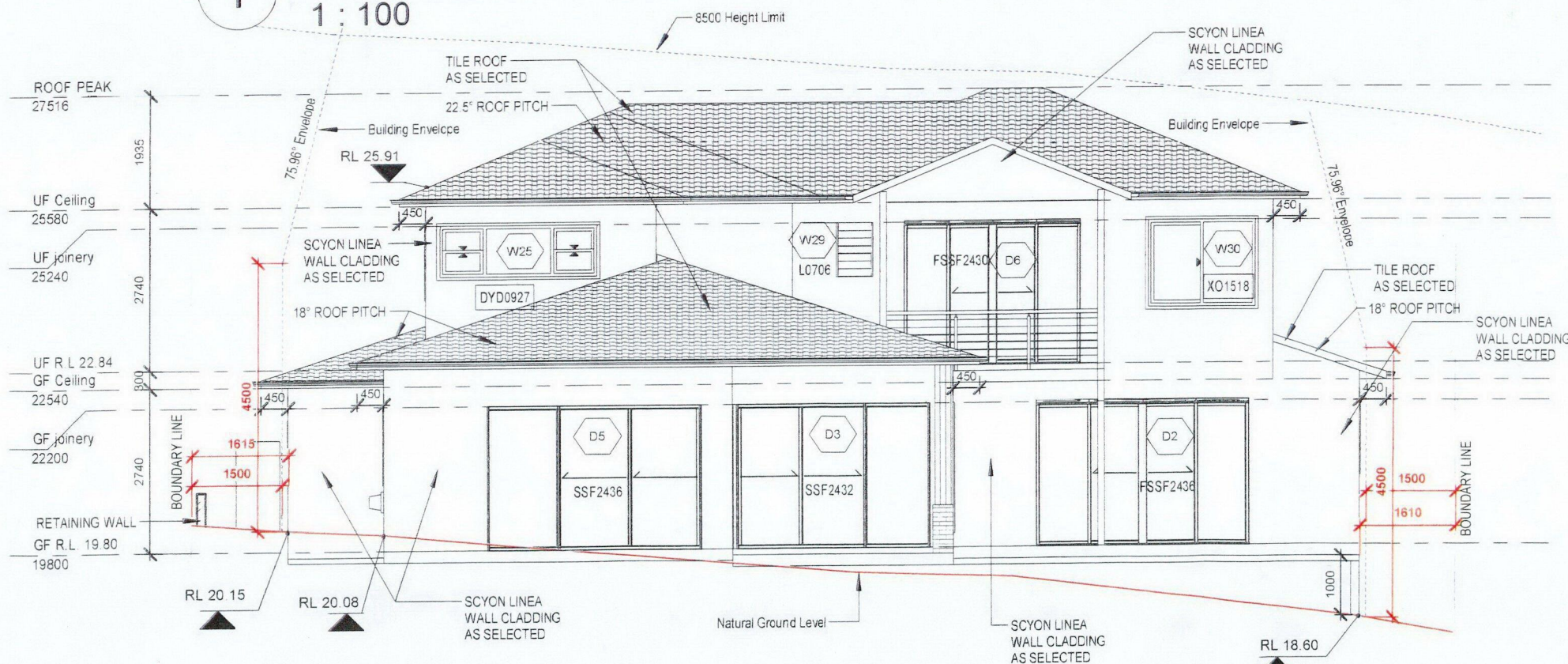
**GJGN015-6 E**





1 FRONT ELEVATION (SOUTH)

1 : 100



2 REAR ELEVATION (NORTH)

1 : 100

0 1m 2m 3m 4m 5m 10m

SCALE BAR 1:100

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Mark	Height	Width
W1	1460	1570
W2	1200	2170
W3	1200	610
W4	1200	610
W5	600	1810
W6	1327	1810
W7	2160	920
W8	2160	2360
W9	2160	920
W10	2100	1800
W11	2160	610
W12	2160	1780
W13	2160	610
W14	1300	259
W15	1300	610
W16	600	1810
W17	600	1210
W18	1200	610
W19	1200	610
W20	600	1570
W21	1200	1810
W22	860	610
W23	600	1210
W24	600	1810
W25	860	2650
W26	2160	920
W27	2160	2360
W28	2160	920
W29	910	610
W30	1460	1810
W31	860	610
W32	1200	3010
W33	1200	3010
W34	1200	1200
W35	1200	1810

### DOOR SCHEDULE

Mark	Height	Width
D1	2340	1200
D2	2400	3584
D3	2400	3238
D4	2400	3238
D5	2400	3588
D6	2400	2984

UF LIVING	130 m <sup>2</sup>
UF BALCONY	4 m <sup>2</sup>
PORCH	16 m <sup>2</sup>
GF LIVING	186 m <sup>2</sup>
GARAGE	42 m <sup>2</sup>
ALFRESCO	15 m <sup>2</sup>
TOTAL AREA	393 m <sup>2</sup>

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DARREN & JANINE COCKS

Stage

CDC

Drawing title

ELEVATIONS

Date 31/03/2017 Drawn KJR - TF

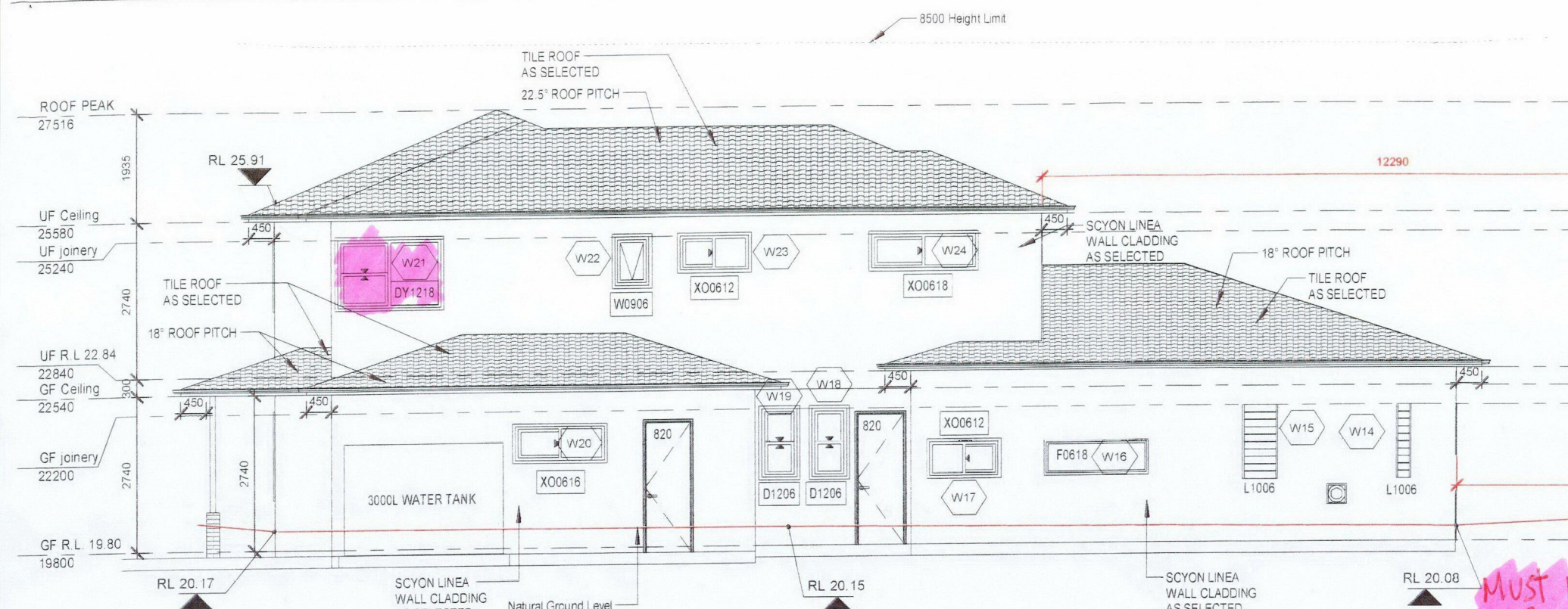
Size A3 Scale 1 : 100

Job No GJGN015

True North Drawing No Rev

**GJGN015-7 E**





**EAST ELEVATION**  
3  
1 : 100

WINDOW SCHEDULE		
Mark	Height	Width
W1	1460	1570
W2	1200	2170
W3	1200	610
W4	1200	610
W5	600	1810
W6	1327	1810
W7	2160	920
W8	2160	2360
W9	2160	920
W10	2100	1800
W11	2160	610
W12	2160	1780
W13	2160	610
W14	1300	259
W15	1300	610
W16	600	1810
W17	600	1210
W18	1200	610
W19	1200	610
W20	600	1570
W21	1200	1810
W22	860	610
W23	600	1210
W24	600	1810
W25	860	2650
W26	2160	920
W27	2160	2360
W28	2160	920
W29	910	610
W30	1460	1810
W31	860	610
W32	1200	3010
W33	1200	3010
W34	1200	1200
W35	1200	1810

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DOOR SCHEDULE		
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D3	2400	3238
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ALFRESCO	15 m²
TOTAL AREA	393 m²

**G.J. Gardner HOMES**  
**SYDNEY NORTH**  
Unit 2, 28 - 30 Orchard Rd,  
Brookvale  
Sydney, NSW, 2100  
Phone 9939 3339 Fax 9939 4442  
www.gjgardner.com.au

Project  
DOUBLE STOREY DWELLING  
Project address  
28 Mona St  
MONA VALE, 2103  
Lot B DP 404336  
Client  
DARREN & JANINE COCKS  
Stage  
CDC

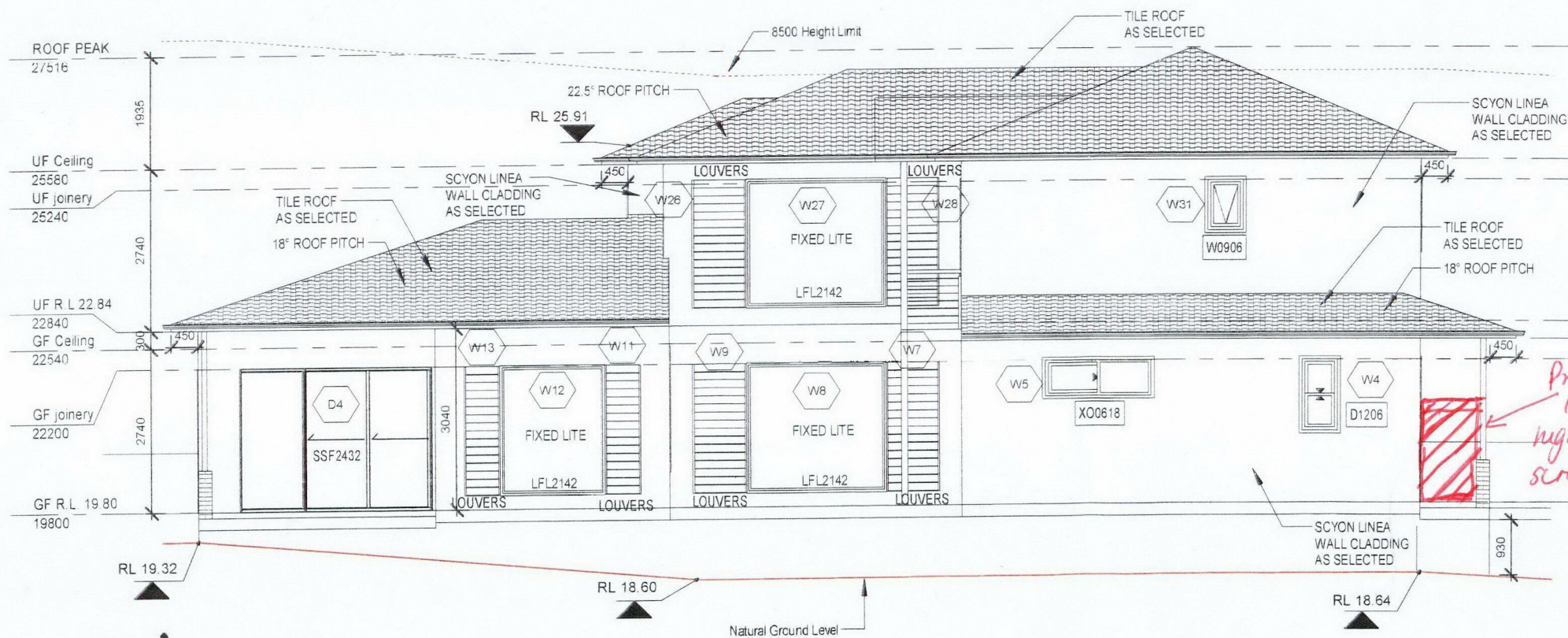
Drawing title  
ELEVATIONS

Date	31/03/2017	Drawn	KJR - TF
Size	A3	Scale	1 : 100

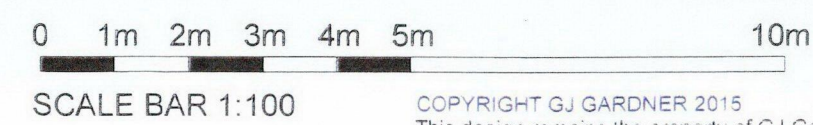
Job No GJGN015

True North	Drawing No	Rev
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**GJGN015-8 E**



**West ELEVATION**  
4  
1 : 100



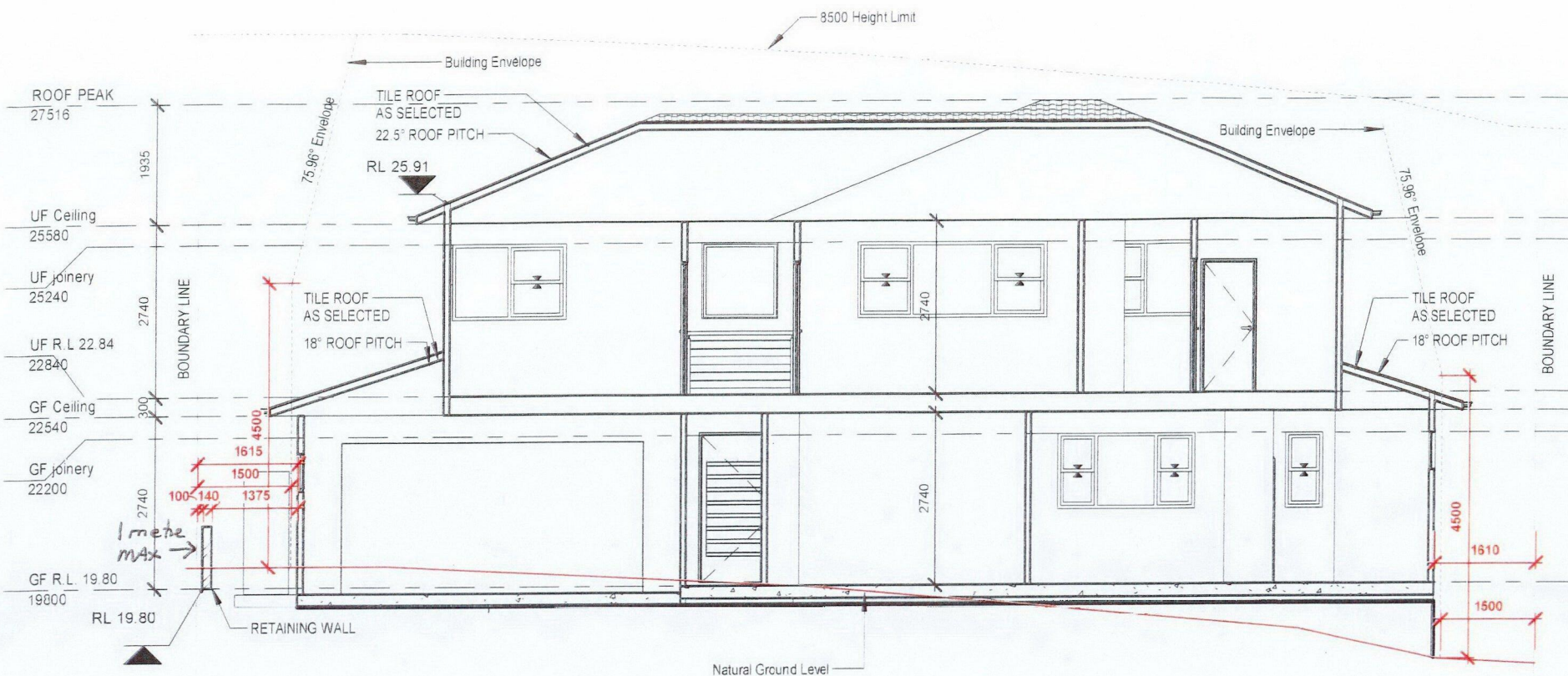
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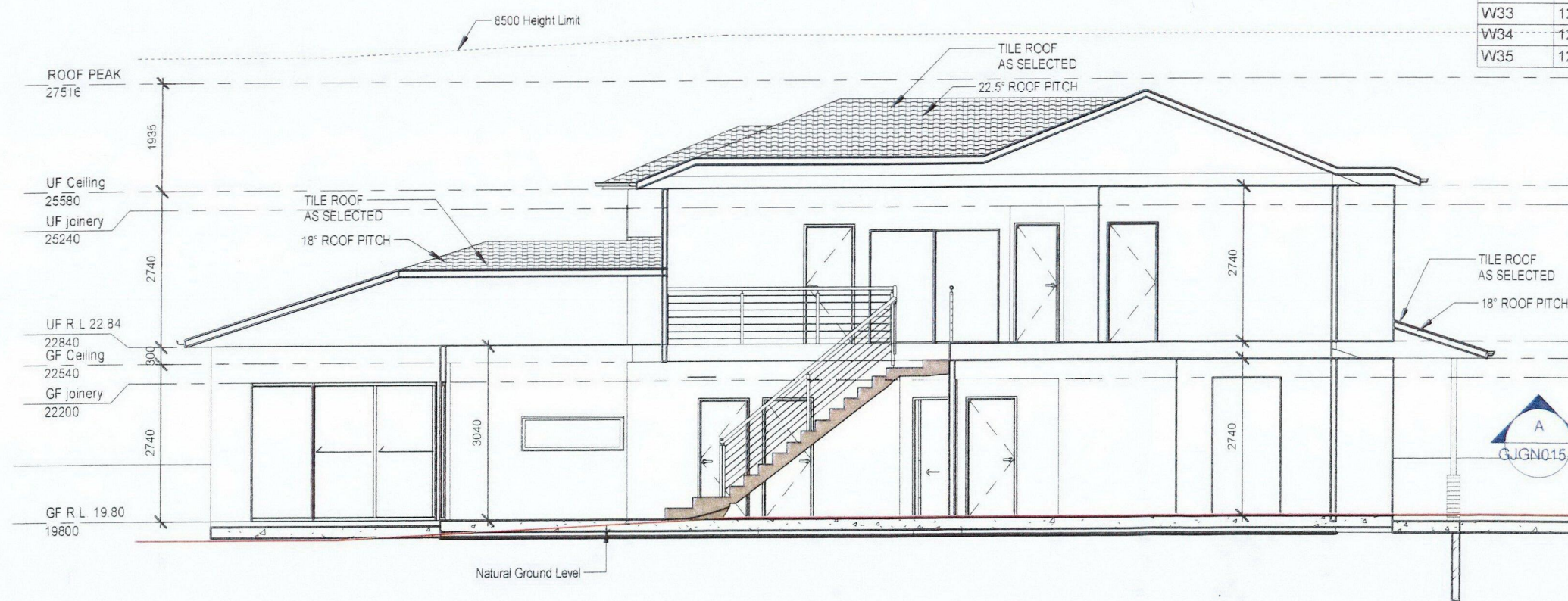
EA21

EA21

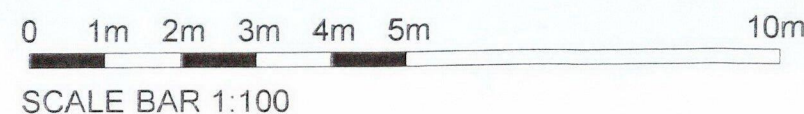




**A** SECTION A-A  
1 : 100



**B** SECTION B-B  
1 : 100



**1** KEY PLAN  
1 : 500

### WINDOW SCHEDULE

Mark	Height	Width
W1	1460	1570
W2	1200	2170
W3	1200	610
W4	1200	610
W5	600	1810
W6	1327	1810
W7	2160	920
W8	2160	2360
W9	2160	920
W10	2100	1800
W11	2160	610
W12	2160	1780
W13	2160	610
W14	1300	259
W15	1300	610
W16	600	1810
W17	600	1210
W18	1200	610
W19	1200	610
W20	600	1570
W21	1200	1810
W22	860	610
W23	600	1210
W24	600	1810
W25	860	2650
W26	2160	920
W27	2160	2360
W28	2160	920
W29	910	610
W30	1460	1810
W31	860	610
W32	1200	3010
W33	1200	3010
W34	1200	1200
W35	1200	1810

### DOOR SCHEDULE

Mark	Height	Width
D1	2340	1200
D2	2400	3584
D3	2400	3238
D4	2400	3238
D5	2400	3588
D6	2400	2984

UF LIVING	130 m <sup>2</sup>
UF BALCONY	4 m <sup>2</sup>
PORCH	16 m <sup>2</sup>
GF LIVING	186 m <sup>2</sup>
GARAGE	42 m <sup>2</sup>
ALFRESCO	15 m <sup>2</sup>
TOTAL AREA	393 m <sup>2</sup>

General notes  
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FINAL SIGNED COPY ations  
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Owner(s) signature

Builders signature

Date

### DRAWING REVISION SCHEDULE

No	AMENDMENTS	DATE
A	FIRST ISSUE CLIENT SIGN	31/01/2017
B	REVISED DRAWINGS AS PER CLIENT'S MARK-UP.	08/02/2017
C	REVISED DRAWINGS, ADDED RETAINING WALL, ALTERED DRIVEWAY TO 3.5M WIDE	16/02/2017
D	CDC SET	06/03/2017
E	ADDED WATER TANK, ADJUSTED DRIVEWAY & TURNING CIRCLE, ADJUSTED PITCH OF LOWER ROOF.	31/03/2017

**G.J. Gardner** HOMES

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www.gjgardner.com.au

Project  
DOUBLE STOREY DWELLING

Project address

28 Mona St  
MONA VALE, 2103  
Lot B DP 404336

Client  
DARREN & JANINE COCKS

Stage  
CDC

Drawing title  
SECTIONS

Date 31/03/2017 Drawn KJR - TF

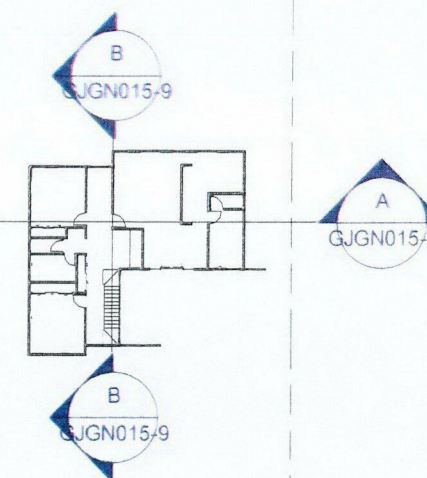
Size A3 Scale As indicated

Job No GJGN015

True North Drawing No Rev

**GJGN015-9 E**

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CERTIFIERS CC/CDC



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DP 22421

DP 22421

CLAD RES.  
METAL ROOF

2 STOREY  
REND. RES.  
METAL ROOF

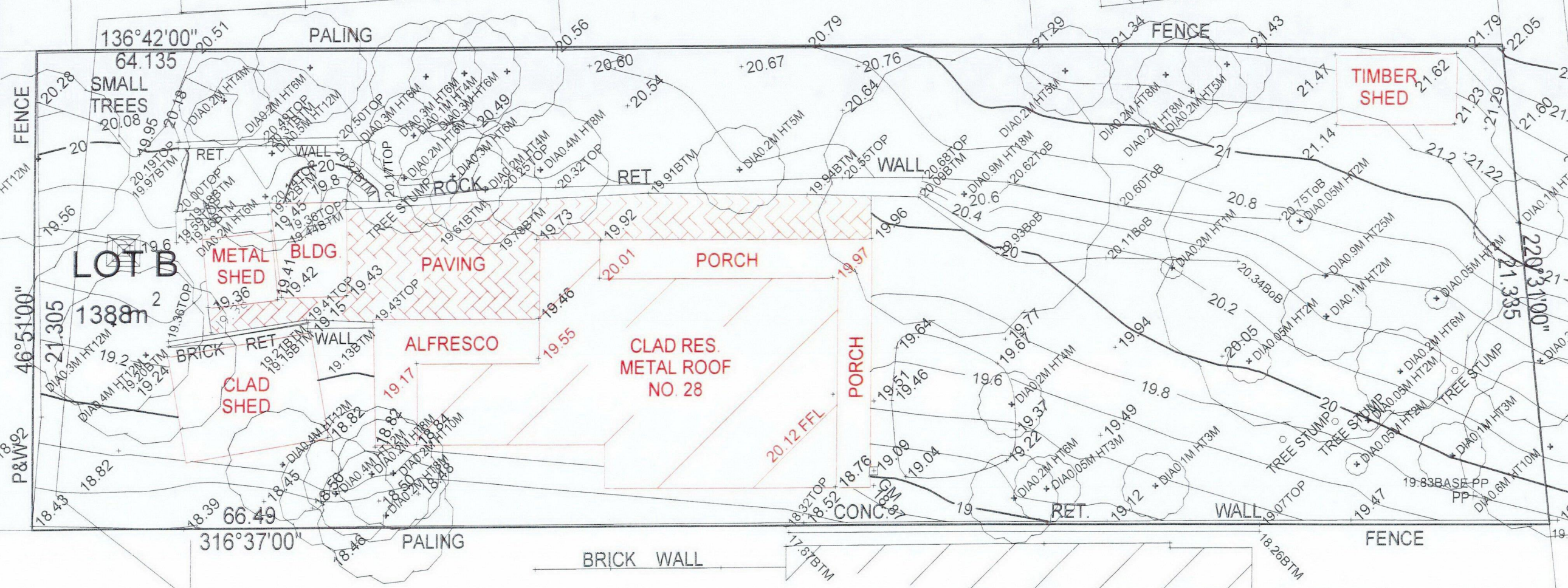
2 STOREY  
BRICK/CLAD RES.  
TILE ROOF  
NO. 90

ALFRESCO

ALFRESCO

ALF.

MONA STREET



# DEMOLITION PLAN

0 1m 3m 5m 10m

SCALE BAR 1:200

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**DEMOLITION WORKS ARE  
SHOWN IN RED**

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aware these plans form part of our  
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Owner(s) signature

Builders signature

Date

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C	REVISED DRAWINGS, ADDED RETAINING WALL, ALTERED DRIVEWAY TO 3.5M WIDE	16/02/2017
D	CDC SET	06/03/2017
E	ADDED WATER TANK, ADJUSTED DRIVEWAY & TURNING CIRCLE, ADJUSTED PITCH OF LOWER ROOF.	31/03/2017

**G.J. Gardner HOMES**

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www.gjgardner.com.au

Project  
DOUBLE STOREY DWELLING

Project address  
28 Mona St  
MONA VALE, 2103  
Lot B DP 404336

Client  
DARREN & JANINE COCKS

Stage  
CDC

Drawing title  
DEMOLITION PLAN

Date 31/03/2017 Drawn KJR - TF

Size A3 Scale 1 : 200

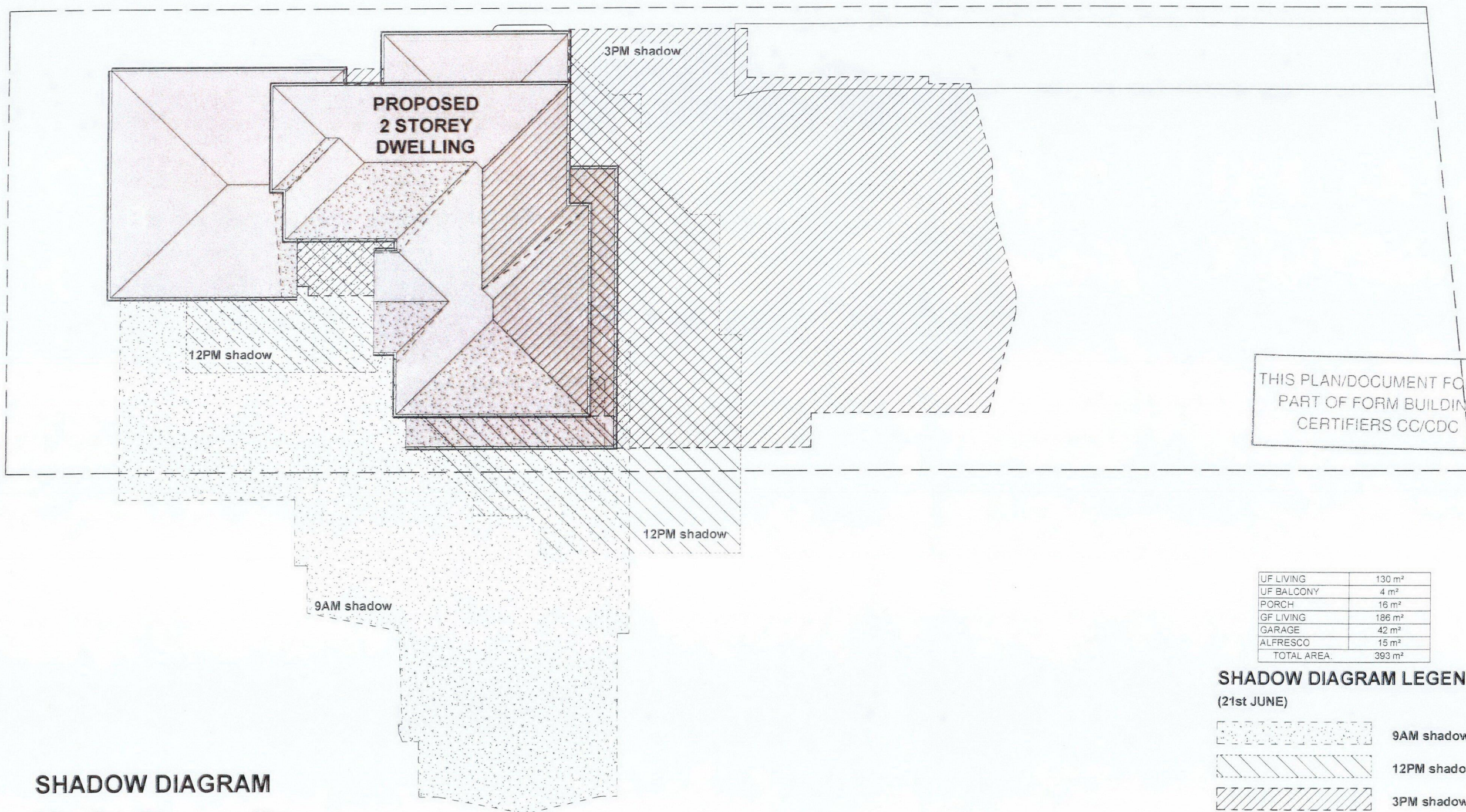
Job No GJGN015

True North Drawing No Rev



**GJGN015-10E**





## SHADOW DIAGRAM

0 1m 3m 5m 10m

SCALE BAR 1:200

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CERTIFIERS CC/CDC

UF LIVING	130 m <sup>2</sup>
UF BALCONY	4 m <sup>2</sup>
PORCH	16 m <sup>2</sup>
GF LIVING	186 m <sup>2</sup>
GARAGE	42 m <sup>2</sup>
ALFRESCO	15 m <sup>2</sup>
TOTAL AREA	393 m <sup>2</sup>

### SHADOW DIAGRAM LEGEND: (21st JUNE)

	9AM shadow
	12PM shadow
	3PM shadow

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Builders signature

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**G.J. Gardner** **HOMES**

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Project  
DOUBLE STOREY DWELLING

Project address  
28 Mona St  
MONA VALE, 2103  
Lot B DP 404336

Client  
DARREN & JANINE COCKS

Stage  
CDC

Drawing title  
SHADOW DIAGRAM

Date 31/03/2017 Drawn KJR - TF

Size A3 Scale 1 : 200

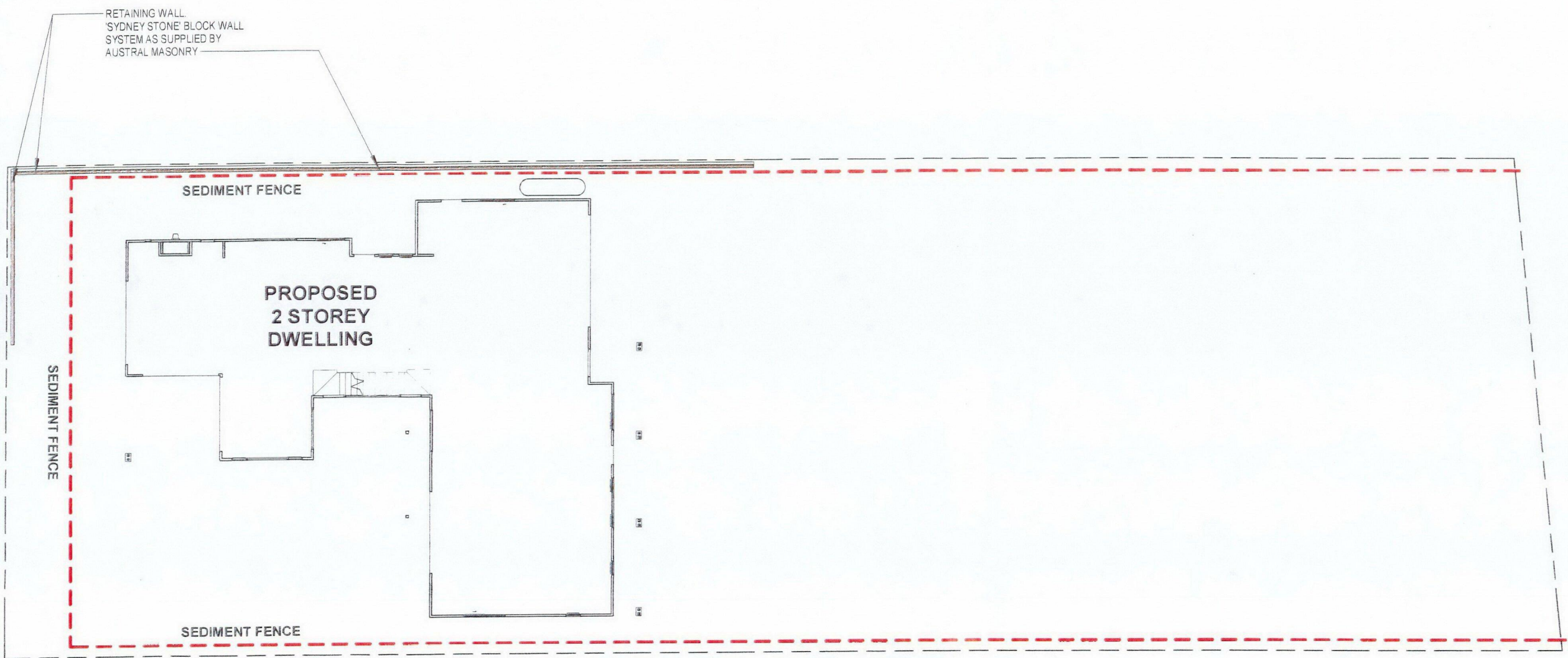
Job No GJGN015

True North Drawing No Rev



**GJGN015-11 E**





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Owner(s) signature  
  
Builders signature  
  
Date

DRAWING REVISION SCHEDULE		
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**G.J. Gardner****HOMES**

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Phone 9939 3339 Fax 9939 4442  
www.gjgardner.com.au

Project  
DOUBLE STOREY DWELLING  
Project address  
28 Mona St  
MONA VALE, 2103  
Lot B DP 404336  
Client  
DARREN & JANINE COCKS  
Stage  
CDC

Drawing title  
EROSION&SEDIMENT

Date	31/03/2017	Drawn	KJR - TF
Size	A3	Scale	1 : 200

Job No GJGN015

True North

Drawing No  
**GJGN015-12E**  
Rev

THIS PLAN/DOCUMENT FORMS  
PART OF FORM BUILDING  
CERTIFIERS CC/CDC

**SEDIMENT CONTROL NOTES:**

- ALL EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL & TOP SOIL SHALL BE IMPLEMENTED TO THE STANDARDS OF THE SOIL CONSERVATION OF NSW.
- ALL THE DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
- SEDIMENT TRAPS SHALL BE CONSTRUCTED AROUND ALL INLET PITS, CONSISTING OF 300mm WIDE x 300mm DEEP TRENCH.
- ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A 60% FULL OF SOIL MATERIALS, INCLUDING THE MAINTENANCE PERIOD.
- TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED TO STRIPPED AND STOCKPILED.
- SOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AREA AREAS WHERE WATER MAY CONCENTRATE.
- STOCKPILE TOPSOIL SEPARATELY FROM SUBSOIL.
- STRIPPING OF GRASS AND VEGETATION ETC. FROM SITE SHALL BE KEPT TO A MINIMUM.
- FILTER SHALL BE CONSTRUCTED BY STRECTCHING A FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT BETWEEN POST AT 3m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.
- ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.

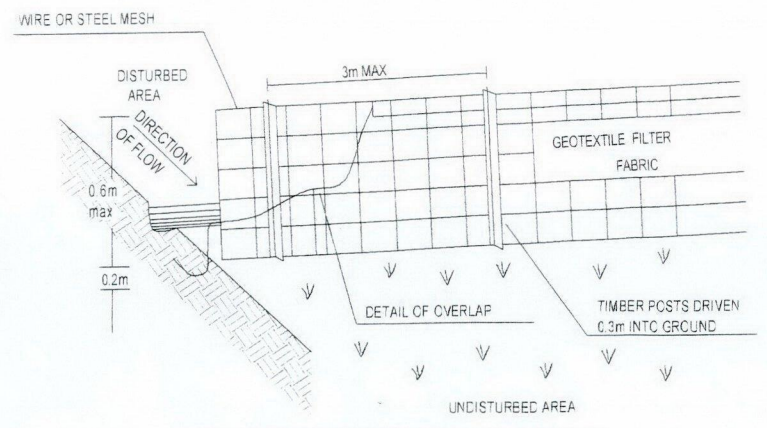
ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE AND ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE.

**BOUNDARY NOTES:**

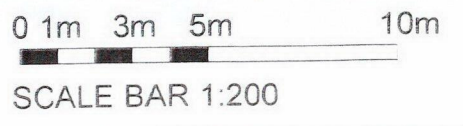
- BOUNDARY INFORMATION SUPPLIED BY OWNER
- CONFIRM ALL BOUNDARY INFORMATION PRIOR TO COMMENCEMENT OF WORK.

**SETOUT NOTES:**

- BOUNDARY DIMENSIONS AND LOCATION OF DWELLING TO BE CONFIRMED AND SETOUT BY SURVEYOR PRIOR TO COMMENCEMENT OF WORK.
- BUILDER TO BE PRESENT TO CONFIRM PREFERENCE TO LOCATION.

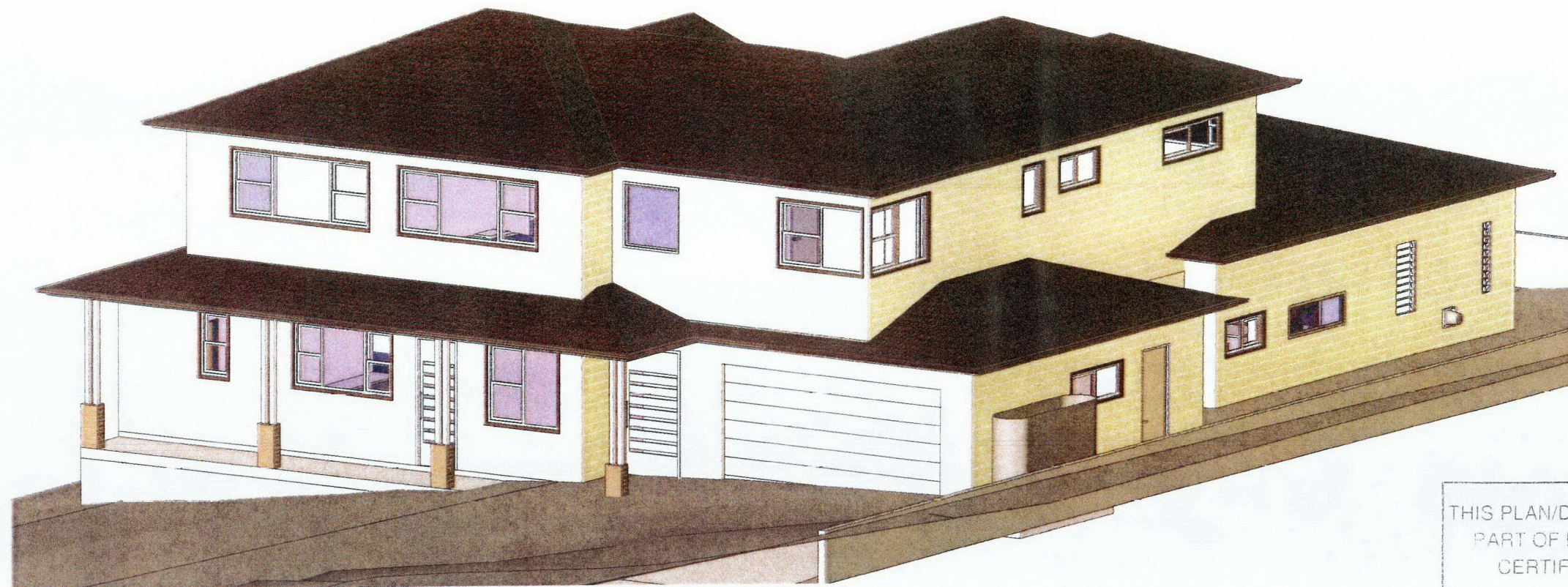


**SEDIMENT FENCE DETAILS**



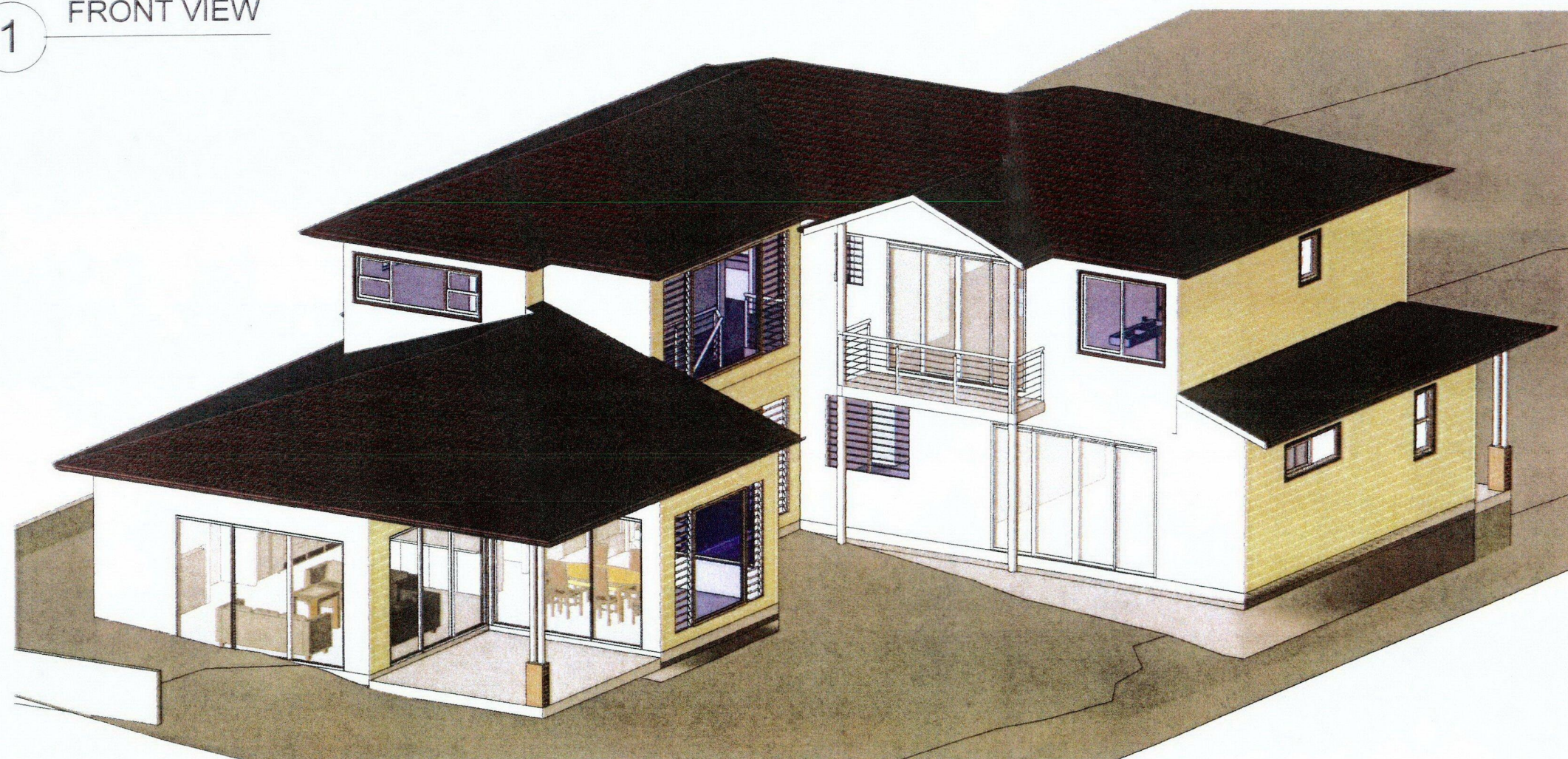
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CERTIFIERS CC/CDC

1 FRONT VIEW



2 REAR VIEW

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Owner(s) signature

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Project  
DOUBLE STOREY DWELLING

Project address  
28 Mona St  
MONA VALE, 2103  
Lot B DP 404336

Client  
DARREN & JANINE COCKS

Stage  
CDC

Drawing title  
3D VIEWS

Date 31/03/2017 Drawn KJR - TF

Size A3 Scale

Job No GJGN015

True North Drawing No Rev

**GJGN015-13E**

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# BASIX Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Fixtures</b>			
The applicant must install showerheads with a minimum rating of 3 star ( $\geq 6$ but $\leq 7.5$ L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 3 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 3 star in each bathroom in the development.		✓	
<b>Alternative water</b>			
<b>Rainwater tank</b>			
The applicant must install a rainwater tank of at least 5000 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 rain runoff from at least 200 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to:			
• all toilets in the development		✓	✓
• the cold water tap that supplies each clothes washer in the development		✓	✓
• at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)		✓	✓
<b>Thermal Comfort Commitments</b>	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Simulation Method</b>			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.			
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Floor and wall construction	Area
floor - concrete slab on ground	All or part of floor area square metres

## Project summary

Project name	GJG - COCKS
Street address	28 Mona Street Mona Vale 2103
Local Government Area	Pittwater Council
Plan type and plan number	deposited 404336
Lot no.	6
Section no.	-
Project type	separate dwelling house
No. of bedrooms	5

## Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 47	Target 40

THIS PLAN/DOCUMENT FORMS PART OF FORM BUILDING

## Energy Commitments

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Hot water</b>			
The applicant must install the following hot water system in the development, or a system with a higher energy rating, gas instantaneous with a performance of 5 stars.		✓	✓
<b>Cooling system</b>			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area, 1 phase air conditioning. Energy rating: EER 2.5 - 3.0		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom, 1 phase air conditioning. Energy rating: EER 2.5 - 3.0		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
<b>Heating system</b>			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area, 1 phase air conditioning. Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom, 1 phase air conditioning. Energy rating: EER 3.0 - 3.5		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
<b>Ventilation</b>			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: no mechanical ventilation (ie natural). Operation: control fan.		✓	✓
Kitchen: individual fan, ducted to terrace or roof. Operation: control manual switch on/off.		✓	✓
Laundry: natural ventilation only, or no laundry. Operation: control fan.		✓	✓
<b>Artificial lighting</b>			
The applicant must ensure that the primary type of artificial lighting is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and show the wattage of each lighting fixture on the plans. The lighting for these rooms must only be capable of accepting fluorescent or LED lighting.			
• at least 1 of the bedrooms, dining rooms.		✓	✓
• the kitchen.		✓	✓
• all bathrooms/toilets.		✓	✓
• the laundry.		✓	✓
• all hallways.		✓	✓

## Energy Commitments

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
• at least 1 of the living, dining rooms.		✓	✓
• the kitchen.		✓	✓
• all bathrooms/toilets.		✓	✓
• the laundry.		✓	✓
• all hallways.		✓	✓
<b>Natural lighting</b>			
The applicant must install a window, under daylight in the kitchen of the dwelling for natural lighting.	✓	✓	✓
The applicant must install a window and/or skylight in 1 bathroom/toilet in the development for natural lighting.	✓	✓	✓
<b>Other</b>			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

## 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 of a development application is to be lodged for the proposed development.

Commitments identified with a ✓ in the "Show on CC/CDC plans and 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 (either interim or final) for the development may be issued.

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Wind rating: refer to framing  
FINAL SIGNED COPY  
I / We accept that these plans are the final working drawings. They supercede any preliminary plan and  
I / We have checked that all alterations and additions are shown. I / We are aware these plans form part of our contract between GJ Gardner Homes (Sydney North).

Owner(s) signature

Builder's signature

Date

## DRAWING REVISION SCHEDULE

No.	AMENDMENTS	DATE
A	FIRST ISSUE CLIENT SIGN	31/01/2017
B	REVISED DRAWINGS AS PER CLIENT'S MARK-UP	08/02/2017
C	REVISED DRAWINGS, ADDED RETAINING WALL, ALTERED DRIVEWAY TO 3.5M WIDE	16/02/2017
D	CDC SET	06/03/2017
E	ADDED WATER TANK, ADJUSTED DRIVEWAY & TURNING CIRCLE, ADJUSTED PITCH OF LOWER ROOF.	31/03/2017

**G.J. Gardner** HOMES

## SYDNEY NORTH

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Project  
DOUBLE STOREY DWELLING

Project address  
28 Mona St  
MONA VALE, 2103  
Lot B DP 404336

Client  
DARREN & JANINE COCKS

Stage  
CDC

Drawing title  
BASIX COMMITMENT

Date 31/03/2017 Drawn KJR - TF

Size Designer Scale

Job No GJGN015

True North Drawing No Rev

**GJGN015-14 E**

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