

Peter J Boyce & Associates

Level 2, 41 Rawson St Epping NSW 2121

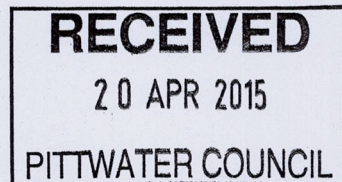
Planning NSW Accreditation BPB 0043

Ph: 9868 2855

Email: info@boycecorp.com.au

Fax: 9868 2655

Your ref DAN0105/14



15 April 2015

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

Dear Sir/Madam

Copy of Construction Certificate - 88 Cabbage Tree Road, Bayview

Please find enclosed copy of Construction Certificate issued for the above property under DAN0105/14.

A cheque for \$36.00 for registration of the Construction Certificate is attached herewith.

Yours faithfully

A handwritten signature in dark ink, appearing to read "Peter Boyce".

Peter Boyce

\$36 REC: 376935 20/4/15

Peter J Boyce & Associates

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

Dear Sir/Madam

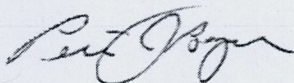
Submission of Construction Certificate - 88 Cabbage Tree Road, Bayview

Please find enclosed:

1. Letter & cheque for registration of CC
2. Completed Application Form
3. Construction Certificate
4. Long Service Levy Corp receipts etc as required by DA conditions
5. Statement from Applicant that the CC plans are generally in accordance with the DA.
6. Notice of Commencement
7. Structural Design Certificate
8. Sydney Water receipt for stamped plan
9. Home Warranty Insurance
10. Cert. of Design – Stormwater
11. Geotechnical Assessment
12. Email re DA Condition C7
13. Sediment Control Plan
14. Architectural plans
15. Landscape plan
16. Stormwater Management Plan
17. Structural Engineers plans
18. Specifications

Should any of the above documents not be received please advise me immediately.

Many thanks.



Peter Boyce

Peter J Boyce & Associates

Accredited Building Surveyors

Planning NSW Accreditation No: BPB0043
ABN: 92 616 124 481

t 9868 2855 | f 9868 2655
e info@boycecorp.com.au

PO Box 375, Strathfield NSW 2135
Level 2, 41 Rawson Street, Epping NSW 2121

Application for a construction certificate

RECEIVED 26 MAR 2015

Information for the Applicant

- This form may be used to apply for a construction certificate to carry out building work under your development consent from Council. To complete this form, please place a cross in the relevant boxes, fill out the white sections as appropriate and attach copies of all documents indicated in the form as being required to be provided. To minimise delays in receiving a decision about the Application, please ensure that all relevant information and documents are provided.
- Once completed, this Application form should be submitted to Peter J Boyce & Associates for determination.
- A construction certificate has no effect if it is issued after the building work or subdivision work to which it relates is physically commenced on the land to which the relevant development consent applies.

SECTION A. Details of the Applicant*

*An application for a construction certificate may only be made by a person who has the benefit of the development consent. An application may not be made by person who will carry out the building work or subdivision work unless that person owns the land on which the work is to be carried out.

i) Where the Applicant is a natural person or persons:

Applicant 1:

Mr ☐ Ms ☐ Mrs ☒ Dr ☐ Other _____

First name

Jan

Family name

Page

Applicant 2:

Mr ☒ Ms ☐ Mrs ☐ Dr ☐ Other _____

First name

Graeme

Family name

Page

ii) Where the Applicant is a corporate entity:

Company (if applicable)

ABN (if applicable)

Unit/Street no.

3/30

Street Name

Bonner Ave

Suburb or town

Manly

State

NSW

Postcode

2106

Daytime telephone

0438 114 933

Fax

Mobile

Email

janpage150@hotmail.com

SECTION B. Location and title details of the land where the building work or subdivision work is to be carried out

Unit/Street no. 88	Street Name Cabbage Tree Road		
Suburb or town Bayview		State NSW	Postcode 2104
Lot no. 8	Section		
DP / SP no. 19161	Volume/folio		

SECTION C. Description of the building work or subdivision work to be carried out

Briefly describe the development. For example, if a dwelling is proposed, include information such as the type of building (house, townhouse, villa etc), the number of floors, the number of bedrooms, the major building material (brick, brick veneer, timber clad etc).

Demolition, two storey new residential brick and concrete building with 1 bedroom,

Concrete pool with tiles

Brick and concrete storage structure separate to residence

Class(s) of building(s) under the Building Code of Australia

1A + 10A + 10B

SECTION D. Estimated cost of the development

\$

1,965,075

The contract price, or if there is no contract a genuine and accurate estimate, for all labour and material costs associated with all demolition and construction required for the development, including the cost of construction of any building and the preparation of a building for the purpose for which it is to be used (such as the costs of installing plant, fittings, fixtures and equipment). GST is also to be included.

SECTION E. Development consent

Date of development consent (if already granted)	24 June 2014
Development consent reference no.:	N0105/14
Name of consent authority:	Pittwater Council
Name of applicant for development consent:	Jan & Graeme Page/Peter Stutchbury Architecture

Provide:

A copy of the development consent, including:

- approved plans endorsed by the consent authority
- conditions of development consent
- other documents referenced by the development consent that are relevant to this Application.

SECTION F. Planning agreements

If the development or the land upon which the development is to be carried out is subject to a planning agreement as referred to in section 93F EP&A Act, provide a copy of the planning agreement.

SECTION G. Attachments relating to the proposed development

Applicants must provide the documents listed below that are relevant to the type of development that is proposed. Please place a cross in the appropriate box(s) to indicate the type of development involved. Please confirm with our office how many copies of each document are required prior to lodging this Application.

1. Does the Application relate ONLY to a FIRE LINK CONVERSION? ☐ Yes ☒ No

If Yes-provide:

A document that describes the design and construction and mode of operation of the new fire alarm communication link.

2. Does the development involve SUBDIVISION WORK? ☐ Yes ☒ No

If Yes-provide:

Appropriate subdivision work plans and specifications, which include copies of:

- (a) details of the existing and proposed subdivision pattern (including the number of lots and the location of roads)
- (b) details as to which public authorities have been consulted with as to the provision of utility services to the land concerned
- (c) detailed engineering plans as to the following matters:
 - (i) earthworks
 - (ii) roadworks
 - (iii) road pavement
 - (iv) road furnishings
 - (v) stormwater drainage
 - (vi) water supply works
 - (vii) sewerage works
 - (viii) landscaping works
 - (ix) erosion control works
- (d) copies of any compliance certificates to be relied on.

3. BUILDINGS

3.1 Does the development involve building work (including in relation to a dwelling house or building or structure ancillary to a dwelling house)? ☒ Yes ☐ No

If Yes-provide:

(1) A detailed description of the development, indicating:

- (a) for each proposed new building:
 - (i) the number of storeys (including underground storeys) in the building
 - (ii) the gross floor area of the building (in square metres)
 - (iii) the gross site area of the land on which the building is to be erected (in square metres)
- (b) for each proposed new residential building:
 - (i) the number of existing dwellings on the land on which the new building is to be erected
 - (ii) the number of those existing dwellings that are to be demolished in connection with the erection of the new building
 - (iii) the number of dwellings to be included in the new building
 - (iv) whether the new building is to be attached to any existing building
 - (v) whether the new building is to be attached to any other new building
 - (vi) whether the land contains a dual occupancy
 - (vii) the materials to be used in the construction of the new building by completing the table in

SECTION M

(2) Appropriate building work plans and specifications, which include copies of:

- (a) detailed plans, drawn to a suitable scale and consisting of a block plan and a general plan, that show:

- (i) a plan of each floor section
- (ii) a plan of each elevation of the building
- (iii) the levels of the lowest floor and of any yard or unbuilt on area belonging to that floor and the levels of the adjacent ground
- (iv) the height, design, construction and provision for fire safety and fire resistance (if any)
- (b) specifications for the development:
 - (i) that describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply, and
 - (ii) that state whether the materials to be used are new or second-hand and (in the case of second-hand materials) give particulars of the materials to be used
- (c) a statement as to how the performance requirements of the *Building Code of Australia* are to be complied with (if an alternative solution, to meet the performance requirements, is to be used)
- (d) a description of any accredited building product or system sought to be relied on for the purposes of section 79C(4) of the *Environmental Planning and Assessment Act 1979* (EP&A Act)*
- (e) copies of any compliance certificate to be relied on
- (f) if the development involves building work to alter, expand or rebuild an existing building, a scaled plan of the existing building
- (g) if a BASIX certificate has been obtained for the development, such other matters as the BASIX certificate requires to be included in the plans and specifications.

* S.79C(4) EP&A Act provides that a consent authority must not refuse to grant consent to development on the ground that any building product or system relating to the development does not comply with a requirement of the *Building Code of Australia* if the building product or system is accredited in respect of that requirement in accordance with the EP&A regulation 2000.

3.2 Does the development involve building work (other than work in relation to a dwelling-house or a building or structure that is ancillary to a dwelling-house or work that relates only to fire link conversion) ? ☐ Yes ☒ No

If Yes-provide:

- (a) A list of any existing fire safety measures provided in relation to the land or any existing building on the land.
- (b) A list of the proposed fire safety measures to be provided in relation to the land and any building on the land as a consequence of the building work.

3.3 Does the development involve an alternative solution under the *Building Code of Australia* ("BCA") in respect of a fire safety requirement? ☐ Yes ☒ No

If Yes-provide:

Either or both of the following from a "**fire safety engineer**" (a private accredited certifier holding Category C10 accreditation):

- (a) A compliance certificate (as referred to in s.109C(1)(a)(v) EP&A Act) that certifies that the alternative solution complies with the relevant performance requirements of the BCA.
- (b) A written report that includes a statement that the alternative solution complies with the relevant requirements of the BCA.

Note: The above requirement only applies to building work in respect of:

- (a) a class 9a building that is proposed to have a total floor area of 2000 square metres or more
- (b) any building (other than a class 9a building) that is proposed to have:
 - (i) a fire compartment with a total floor area of more than 2000 square metres or
 - (ii) a total floor area of more than 6000 square metres

that involves an alternative solution under the BCA in respect of the requirements set out in EP1.4, EP2.1, EP2.2, DP4 and DP5 in Volume 1 of the BCA.

3.4 Does the Application relate to a residential flat development for which the development application was required under Clause 50(1A) of the EP&A Regulation to be accompanied by a design verification from a qualified designer? ☐ Yes ☒ No

If Yes-provide:

A statement from a qualified designer which verifies that the plans and specifications achieve or improve the design quality of the development for which development consent was granted, having regard to the design quality principles set out in Part 2 of *State Environmental Planning Policy No. 65: Design Quality of Residential Flat Development* (SEPP 65)

Note: If the development application was also required to be accompanied by a BASIX certificate with respect to any building, the statement need not verify the design quality principles set out in SEPP 65 to the extent to which they aim to

- reduce consumption of mains-supplied potable water, or reduce emissions of greenhouse gases, in the building or in the use of the land that it is built on, or
- improve the thermal performance of the building.

3.5 Has the Fire Commissioner granted an exemption under clause 188 EP&A Regulation from compliance with any specified Category 3 fire safety provision?

☐ Yes ☒ No

If Yes-provide:

A copy of the exemption together with any conditions imposed.

3.6 Is any long service payment levy payable under s.34 of the Building and Construction Industry Long Service Payments Act 1986? ☒ Yes ☐ No

If Yes-provide:

A copy of a receipt for any long service payment levy that has been made (or, where such a levy is payable by instalments, a receipt for the first instalment of the levy).

Where a council is the certifying authority, the levy may be made to the council when this Application is lodged.

3.7 Does the Application involve a BASIX affected development, or a BASIX optional development for which a BASIX certificate has been obtained? ☒ Yes ☐ No

If Yes-provide:

The BASIX certificate(s) for the development (being either the BASIX certificate issued when the development consent was granted or some other BASIX certificate(s) that have been issued no earlier than three months before the date of the Application being made), and such other documents as the BASIX certificate(s) for the development requires to accompany the Application.

BASIX (the Building and Sustainability Index) ensures homes are built to be more energy and water efficient. BASIX uses an online program to assess a building's design and compares it against energy and water reduction targets. The design must meet these targets before a BASIX certificate can be printed. Any changes made to a building's design after a BASIX certificate has been issued requires another BASIX assessment and new BASIX certificate. "BASIX affected buildings" contain one or more dwellings (but do not include hotels or motels).

A BASIX certificate **MUST** be obtained for every "BASIX affected development", which are any of the following (other than development that is "BASIX excluded development"):

- (a) development that involves the erection (but not the relocation) of a BASIX affected building
- (b) development that involves a change of building use by which a building becomes a BASIX affected building
- (c) development that involves the alteration, enlargement or extension of a BASIX affected building, where the estimated construction cost of the development is \$50,000 or more
- (d) development for the purpose of a swimming pool or spa, or combination of swimming pools and spas, that services or service only one dwelling and that has a capacity, or combined capacity, of 40,000 litres or more.

"BASIX excluded development" is

- (a) development for the purpose of a garage, storeroom, car port, gazebo, verandah or awning
- (b) alterations, enlargements or extensions to a building listed on the State Heritage Register under the Heritage Act 1977
- (c) alterations, enlargements or extensions that result in a space that cannot be fully enclosed (for example, a veranda that is open or enclosed by screens, mesh or other materials that permit the free and uncontrolled flow of air), other than a space can be fully enclosed but for a vent needed for the safe operation of a gas appliance
- (d) alterations, enlargements or extensions that the Director-General has declared, by order published in the Gazette, to be BASIX excluded development.

A BASIX Certificate **MAY** be obtained for certain developments by an Applicant even though there is no obligation to do so. This is called "BASIX optional development". "BASIX optional development" means any of the following development that is not BASIX excluded development:

- (a) development that involves the alteration, enlargement or extension of a BASIX affected building, where the estimate of the construction cost of the development is less than \$50,000
- (b) development for the purpose of a swimming pool or spa, or combination of swimming pools and spas, that services or service only one dwelling and that has a capacity, or combined capacity, of less than 40,000 litres.

If the proposed development involves the alteration, enlargement or extension of a BASIX affected building that contains more than one dwelling, a separate BASIX certificate is required for each dwelling concerned.

Further information about BASIX and to obtain a BASIX Certificate, go to <http://www.basix.nsw.gov.au>.

SECTION H. List of documents

Prepare and attach a list of all of the documents to be provided under SECTIONS E, F and G above and as may otherwise be advised as required.

SECTION I. Authority to enter and inspect land

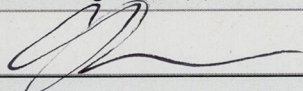
A certifying authority must not issue a construction certificate for development on a site which affects an existing building unless the certifying authority, or an accredited certifier, council or consent authority on behalf of the certifying authority, has carried out an inspection of the site of the development.

If the Applicant is the owner of the land, by signing this Application authority is given to the certifying authority, or an accredited certifier, council or consent authority, to enter the subject property at any reasonable time for the purpose of carrying out an inspection in connection with the assessment of this Application. The Applicant undertakes to take all necessary steps make access available to the property to enable the inspection to be carried out.

If the Applicant is not the owner of the land, the owner(s) must sign the following statement.

As the owner(s) of the above property, I/we consent to the certifying authority, or an accredited certifier, council or consent authority, to enter the subject property at any reasonable time for the purpose of carrying out an inspection in connection with the assessment of this Application. I/we undertake to take all necessary steps make access available to the property to enable the inspection to be carried out.

Owners Signature(s)



Name(s)

GRAEME PAGE

Date

13/3/15

SECTION J. Delivery of the Application

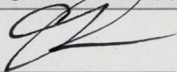
Applications for construction certificates must be delivered by hand, by post or transmitted electronically to this office at:

- Level 2, 41 Rawson Street, Epping NSW 2121; or
- PO Box 375, Strathfield NSW 2135; or
- info@boycecorp.com.au

Applications MAY NOT be sent by facsimile transmission.

SECTION K. Signature of Applicant(s)

Signature of Applicant(s)



Name(s)

GRAEME PAGE

Date

13/3/15

SECTION L. Date of Receipt of Application

To be completed by the certifying authority **immediately** after receiving this Application.

This Application was received on

22/3/15

(insert date).

SECTION M. Development statistics

Place a cross in each appropriate box.

Walls	Code	Roof	Code	Floor	Code	Frame	Code
☒ Brick (double)	11	☐ Tiles	10	☒ Concrete/slate	20	☐ Timber	40
☐ Brick (veneer)	12	☒ Concrete/slate	20	☐ Timber	40	☐ Steel	60
☐ Concrete/stone	20	☐ Fibre cement	30	☐ Other	80	☐ Aluminium	70
☐ Fibre cement	30	☐ Steel	60	☐ Not specified	90	☒ Other	80
☐ Timber	40	☐ Aluminium	70			☐ Not specified	90
☐ Curtain glass	50	☐ Other	80				
☐ Steel	60	☐ Not specified	90				
☐ Aluminium cladding	70						
☐ Timber/ weatherboard	40						
☐ Other	80						
☐ Not specified	90						

Gross site area (m ²)	2042	Number of dwellings to be demolished	1
Gross floor area of existing building (m ²)		Number of dwellings to be constructed	1
Gross floor area of new building work (m ²)	190	Will the new building be attached to an existing building	no
Number of pre-existing dwellings on the site	1	Does the site contain a dual occupancy	no
How many storeys will the building have	2		
What are the current uses of the building	Residential dwelling		
What will be the new building uses (if changed)			

TO WHOM IT MAY CONCERN

RE: 88 CABBAGE TREE RD..... (property address)

I hereby certify that the Architectural Plans submitted with the Construction Certificate application are generally in accordance with the Development Approved N0105/14 (DA number) plans approved by PITTWATER COUNCIL (council name).

E. Task
.....
Signature

Name: EMMA TASK WARD (PETER STUTCHBURY ARCHITECTURE)

Address: 5/364 BAKKENJOEY RD, NEWPORT

Contact Number: (02) 9979 5030

Peter J Boyce & Associates

BPB Accredited Certifier No: BPB0043
Level 2, 41 Rawson Street Epping NSW 2121
Email: info@boycecorp.com.au

Ph: 9868 2855

Fax: 9868 2655

Construction Certificate Certificate No. BP15149

SECTION A. The Application

1. Details of the applicant

Mr ☐ Ms ☐ Mrs ☐ Dr ☐

Other:

First name

Jan

Family name

Page

Unit/Street no.

3/30

Street name

Bonner Avenue

Suburb or town

Manly

State

NSW

Postcode

2106

2. Details of the property

Unit/Street no.

88

Street name

Cabbage Tree Road

Suburb or town

Bayview

Postcode

2104

Lot no.

Lot 8

Section

DP / SP no.

DP 19161

Volume/folio

2. Description of the proposed development

Demolition of existing dwelling and construction of a new single dwelling, pool and storage structure.

4. Development consent

Date of development consent

24 June 2014

Development consent
reference no.

DAN0105/14

Name of Council

Pittwater Council

5. Date of the application for construction certificate

13 March 2015

Peter J Boyce & Associates

Level 2, 41 Rawson St Epping NSW 2121

Planning NSW Accreditation BPB 0043

Email: info@boycecorp.com.au

Ph: 9868 2855

Fax: 9868 2655

SECTION B. Certifying authority

Name

Peter Boyce

Accreditation no.

BPB0043

Address

PO Box 375

Strathfield NSW 2135

SECTION C. Class of building

Class of the proposed building under the Building Code of Australia.

Note: If parts of the building will have different classes, include all classes.

1a, 10a, 10b

SECTION E. Attachments (Tick as appropriate)



Fire safety schedule



Fire link conversion schedule



Conditions schedule

SECTION F. Date

Date of this certificate

15 APR 2015

Certificate No.

BP15149

SECTION G. Certification (Description of Works & Approved Plans)

I certify that work completed in accordance with the documentation accompanying the application for this certificate (with such modifications, if any, verified by me may be shown on that documentation) will comply with the requirements of the *Environmental Planning & Assessment Regulation 2000* as are referred to in s.81A(5) of the *Environmental Planning & Assessment Act 1979*.

The plans listed below accompanied the application for this certificate.

Note: The certificate is to be endorsed upon all relevant plans and specifications. Include the name of the certifying authority, the certificate No. and the date of the certificate

Description of Works: Demolition of existing dwelling and construction of a new single dwelling, pool and storage structure.

Plans

Reece Mona Vale: Sydney Water Building Plan approval.

Van der Meer Consulting: Structural Certificate of Design, Drawing nos S01-01, S01-02, S01-03, S02-01, S02-05, S03-01 & S03-02, S04-01 & S04-02, S05-01, S05-02, S06-01, S06-02, S10-01, S10-02, S10-03, S10-04, S10-05, S10-06, S10-07.

JCL Development Solutions: Stormwater Certificate of Design, Plan nos 1 to 6.

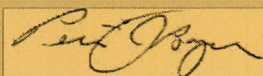
Douglas Partners: Form No 2 Part A and B.

Peter Stutchbury Architecture: Drawing nos CC 050, DA 051, CC 100, CC 210, CC 220, CC 230, CC 240, CC 310, CC 320, CC 330, CC 340, CC 440, CC 460, Specifications.

Sprout: DA01H to DA04H.

Applicant: Sediment Control Plan.

SECTION H. Signature*



* Must only be signed by the certifying authority

Peter J Boyce & Associates

Accredited Building Surveyors

Planning NSW Accreditation No: BPB0043
ABN: 92 616 124 481

t 9868 2855 | f 9868 2655
e info@boycecorp.com.au

PO Box 375, Strathfield NSW 2135
Level 2, 41 Rawson Street, Epping NSW 2121

Notice to council of appointment of Principal Certifying Authority ("PCA")

NOTICE TO (insert council details and address)

Name

Pittwater Council

Address

PO Box 882

Mona Vale, NSW 1660

SECTION A. Development details

Address

88 Cabbage Tree Rd

Bayview, NSW 2104

Description of the building work or subdivision work

New dwelling, pool, and storage structure

SECTION B. Details of development consent ("DC") / complying development certificate ("CDC")

Council / Certifying Authority

Pittwater Council

Date of DC / CDC

24 June 2014

DC / CDC number/identifier

N0105/14

SECTION C. Details of person appointing the PCA

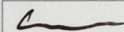
Name

Jan & Graeme Page

Address

3/30 Bonner Ave

Signature



Manly, NSW 2095

Phone

0438 114 993

Fax

Email

janpage150@hotmail.com

SECTION D. PCA details

Name

Peter Boyce

Accreditation No.

BPB0043

Address

PO Box 375, Strathfield NSW 2135

Business phone

9868 2855

Fax

9868 2655

Email

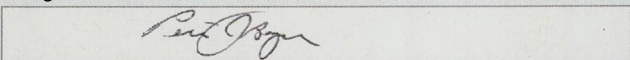
info@boycecorp.com.au

SECTION E. Consent to appointment

I **Peter Boyce**

consent to being appointed as the PCA for the development.

Signature of PCA



Date

14 / 4 / 15

Levy Online Payment Receipt

Building and Construction

JAN & GRAEME PAGE
U 3 30 BONNER AVE
MANLY NSW 2095

Application Details:

Applicant Name:	JAN & GRAEME PAGE
Levy Number:	5089163
Application Type:	CC
Application Number:	N0105/14
Approving Authority:	PITTWATER COUNCIL

Work Details:

Site Address:	88 CABBAGE TREE ROAD BAYVIEW NSW 2104
Value of work:	\$1,965,075
Levy Due:	\$6,877.00

Payment Details:

LSC Receipt Number:	194627
Payment Date:	18/03/2015 10:27:24 AM
Bank Payment Reference:	793570141
Levy Paid:	\$6,877.00
Credit card surcharge:	\$27.51
Total Payment Received:	\$6,904.51

Our Ref: SY140004
Enquiries to: Richard Matheson



4 June 2012

Peter Stutchbury Architects
5/364 Barrenjoey Road
NEWPORT NSW 2106

Attention: Emma Trask

**RE: DA NO: NO105/15 FOR 88 CABBAGE TREE ROAD BAYVIEW NSW 2104
STRUCTURAL CERTIFICATE – DESIGN**

This is to confirm that our company has carried out structural design for the above project, as documented on the following drawings prepared by us:

We certify that the structural design, as documented on the above drawings, is in accordance with accepted engineering practice and is in accordance with the relevant provisions of the following:

- The Building Code of Australia (Volume One)
- Relevant Australian Standards
- as referenced in Specification A1.3 of the BCA
- Relevant Conditions of Development Consent

I am a Professional Engineer with appropriate experience and competence in this field.

Yours faithfully
van der Meer Consulting

A handwritten signature in black ink, appearing to read 'R Matheson', written over a horizontal line.

RICHARD MATHESON
Director

NSW
Level 3, 39 Chandos Street
St Leonards NSW 2065
P 02 9436 0433 / F 02 9436 1370
ABN 56 158 266 301

VIC
Level 6, 379 Collins Street
Melbourne VIC 3000
P 03 8614 5555 / F 03 8614 5599
ABN 48 158 266 329



Application Lodgement Summary

Sydney
WATER

Reference Number 9067375

Date Requested: Tue March 24 2015

Agent Reece Mona Vale, 10 Taronga Pl Mona Vale
Applicant peter stutchbury, 364 barrenjoey Newport 2106
Property/Asset 88 Cabbage Tree Rd, Bayview 2104 (Gj Page Jl Page) PNum: 3405136
150 mm DICL Sewer Main - (4823534) (WasteWater)
Product Building Plan Approval Application

Charge	Product Cost	GST	Total
Building Plan Approval Application	\$17.50	\$0.00	\$17.50

Property Special Conditions for Plumbers

Boundary Trap Required	Not available
Watercharged/Tidal area	Not available
Partial Drainage area	Not available
Aggressive Soil area	Not available
Cast Iron Pipe area	Not available
Sewer Surcharge area	Not available
Minimum Gully Height area	Not available
Sewer Available	Not available
Connection Type	Not available

You must contact Sydney Water to clarify the property special conditions where the property special conditions are not shown (yes or no), are shown as "unset", "unknown" or "not available" or if the proposed development is being built over more than one existing property.

Please note that boundary traps must be fitted for all commercial and industrial properties and you must ensure that all plumbing/drainage and building works are carried out in accordance with the relevant codes and standards.

A water meter is required to be fitted to the property during construction. You will need to ensure that your licensed plumber carries out this work in accordance to the relevant codes and standards.

Statement of Cover



QBE Insurance (Australia) Ltd
Level 5, 2 Park Street
SYDNEY NSW 2000
Phone: 1300 790 723
Fax: 02 8275 9330
ABN: 78 003 191 035
AFS License No: 239545



Policy Number BN0029590BWI-14

GRAEME & JAN PAGE
88 CABBAGETREE ROAD
BAYVIEW 2104

Name of Intermediary
INSURANCE ADVISERNET AUSTRALIA
P O BOX 633
NORTH SYDNEY NSW 2059

Account Number
BN0004139
Date Issued
13/03/2015

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. The Certificates Register will also notify you if any claims have been made on this insurance cover and any other relevant information.

Certificate in Respect of Insurance

Residential Building Work by Contractors

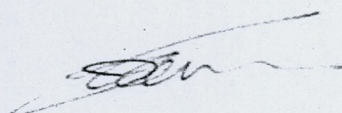
A contract of insurance complying with sections 92 and 96 of the Home Building Act 1989 (the Act) has been issued by QBE Insurance (Australia) Limited as agent for and on behalf of the NSW Self Insurance Corporation (SICorp) (ABN 97 369 689 650) who is responsible for management of the Home Building Compensation Fund.

In Respect of	NEW SINGLE DWELLING CONSTRUCTION CONTRACT
At	88 CABBAGETREE ROAD BAYVIEW NSW 2104
Carried Out By	CAPITAL CONSTRUCTIONS & REFURB
Builder ABN	21 003 682 924
Declared Contract Price	\$1,630,278.00
Contract Date	01/02/2015
Builder Licence Number	U24018C
Homeowner / Beneficiary	GRAEME & JAN PAGE

Subject to the Act and the Home Building Regulation 2004 and the conditions of the insurance contract, cover will be provided to the Beneficiary named in the building contract and to the successors in title to the Beneficiary.

This Certificate is to be read in conjunction with the policy wording current as at the time of issue and available at the Home Building Compensation Fund website at www.hbcf.nsw.gov.au

Signed for and on behalf of NSW Self Insurance Corporation (SICorp) (ABN 97 369 689 650)


Jason Bourne
National Manager - Builders Warranty

Issued on the 13/03/2015

CERTIFICATE OF DESIGN COMPLIANCE STORMWATER MANAGEMENT SYSTEMS

Project: Residential Dwelling
Premises: 8 Cabbage Tree Road, Bayview
Project No: 2013-P45
Development Application No: 105/14

Notes:

System design compliance controls:

- Pittwater Council Stormwater Management Guidelines
- AS 3500.3 – 2003 – *Stormwater Drainage*
- Plumbing Code of Australia
- *Australian Rainfall and Runoff Volumes 1 and 2*
- DA No. 105/14 consent conditions no. 15,16,17 and 18.

Part 1 – Project Description

- Primary flow of pit and pipe system extended to collect drainage from new downpipes, O.S.D and Water Tank Overflows with final disposal to controlled O.S.D Tank.

Part 2 – Declaration

Date of design completion	30/10/14
Designer	James. P. Olive
Employed by	JC L Development Solutions
Business telephone	(02) 4474 2401

Design is shown on the following documents

Plan set: 2013-P45 H01 to H06.

I **James P. Olive (HYD-P562)** hereby certify that I have completed the design of hydraulic services in accordance with the requirements of relevant controls and standards as noted.

Signature of Designer noted above



Mr Graeme and Mrs Jan Page
C/- Peter Stutchbury Architecture
5/364 Barrenjoey Road
Newport NSW 2107

Project 73665.01
25 March 2015
DEM:pc

Attention Ms Emma Trask

Dear Emma

**Geotechnical Assessment for
Proposed New Residence
88 Cabbage Tree Road, Bayview**

Following a geotechnical review of the structural design drawings and stormwater management plans by Douglas Partners Pty Ltd (DP), please find attached our completed Form 2B in accordance with Pittwater Council's Geotechnical Risk Management Policy.

DP has also been asked by Peter Stutchbury Architecture to clarify the comments within our Report 73665 (dated 25 October 2013) Section 5.5 Site Drainage regarding regrading of the existing driveway.

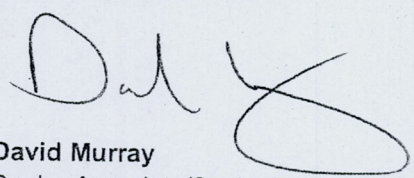
DP anticipates that regrading may only be necessary for short sections of the driveway, in order to reduce the potential for concentrated stormwater flow towards the proposed new residence or towards areas of the slope which are susceptible to erosion. This may principally involve the construction of table drain or swale along upslope side of the driveway with stormwater piped under the driveway at one or more locations and then appropriately dispersed on the slope below.

Specific details of site drainage measures along the driveway are not provided on the stormwater management plans. Rather, it is expected that further geotechnical advice regarding the extent of these measures will be provided by DP during the construction phase of the project.

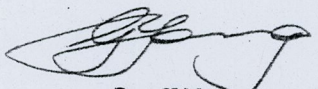
We trust that these comments are sufficient for your present requirements. If further assistance is required, please do not hesitate to contact the undersigned.

Yours faithfully

Douglas Partners Pty Ltd


David Murray
Senior Associate/Senior Engineering Geologist

Reviewed by


Geoff Young
Principal

Attachments: Pittwater Council Form 2B



PITTWATER COUNCIL

GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER FORM NO. 2 – PART A – To be submitted with detailed design for Construction Certificate

Development Application for <u>Mr Graeme and Mrs Jan Page</u> Name of Applicant
Address of site <u>88 Cabage Tree Road, Bayview</u>

PART A: Declaration made by Structural or Civil Engineer in relation to the incorporation of the Geotechnical issues into the project design

I, MARK DAVIES on behalf of van der Meer
(insert name) (trading or company name)

on this the 24 / 3 / 15
(date)

certify that I am a Structural or Civil Engineer as defined by the Geotechnical Risk Management Policy for Pittwater - 2009. I am authorised by the above organisation/company to issue this document and to certify that the organisation/company has a current professional indemnity policy of at least \$2million. I also certify that I have prepared the below listed structural documents in accordance with the recommendations given in the Geotechnical Report for the above development and that

Please mark appropriate box

- ☒ the structural design meets the recommendations as set out in the Geotechnical Report or any revision thereto.
☐ the structural design has considered the requirements set out in the Geotechnical Report for Excavation and Landfill both for the excavation/construction phase and the final installation in accordance with Clause 3.2 (b)(iv) of the Geotechnical Risk Management Policy.

Geotechnical Report Details:

Report Title: <u>Geotechnical Assessment for Proposed New Residence</u>
Report Date: <u>25 October 2013</u>
Author: <u>Richard Lloyd</u>
Author's Company/Organisation: <u>Douglas Partners</u>

Structural Documents list:

<u>Refer attached transmittal</u>

I am also aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified.

Signature [Signature]
Name MARK DAVIES
Chartered Professional Status C.P. ENG., NPER
Membership No. 48944
Company van der Meer Consulting



PITTWATER COUNCIL

GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER FORM NO. 2 – PART B – To be submitted with detailed design for Construction Certificate

PART B Declaration made by Geotechnical Engineer or Engineering Geologist and/or Coastal Engineer (where applicable) in relation to the incorporation of the Geotechnical issues into the project design

I, Geoff Young on behalf of Douglas Partners Pty Ltd
(insert name) (trading or company name)

on this the 25/3/15
(date)

certify that I am a Geotechnical Engineer or Engineering Geologist and/or Coastal Engineer as defined by the Geotechnical Risk Management Policy for Pittwater - 2009 and I am authorised by the above organisation/company to issue this document and to certify that the organisation/company has a current professional indemnity policy of at least \$2million. I also certify that I have reviewed the design plans and structural design plans for the Construction Certificate Stage and that I am satisfied that:

Please mark appropriate box

- ☒ the structural design meets the recommendations as set out in the Geotechnical Report or any revision thereto.
☐ the structural design has considered the requirements set out in the Geotechnical Report for Excavation and Landfill both for the excavation/construction phase and the final installation in accordance with Clause 3.2 (b)(iv) of the Geotechnical Risk Management Policy.

Geotechnical Report Details:

Report Title: Geotechnical Assessment - New Residence, Project 73665
Report Date: 25 October 2013
Author: Richard Lloyd of Douglas Partners

Documentation which relates to or is relied upon in report preparation:

- Van der Meer Consulting - refer to attached transmittal
- SCL Development Solutions - Site Stormwater Management Plans 2013 - P45/H01 to H06 (all Issue 1 dated 23/3/15)

I am also aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified.

Signature Geoff Young

Name Geoff Young

Chartered Professional Status BE, MEng, FIEAust, CEng, NPER

Membership No. 98650

Company Douglas Partners Pty Ltd.



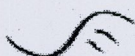
Michael Hall

From: Emma Trask Ward [emma@peterstutchbury.com.au]
Sent: Monday, 13 April 2015 2:09 PM
To: Michael Hall
Subject: Re: Design Certificate

Categories: Done

No works within road reserve, that is correct.

Emma Trask



Peter Stutchbury Architecture
5 | 364 barrenjoey road newport nsw australia 2106 • t + 61 02 9979 5030 • f + 61 02 9979 5367 • w www.peterstutchbury.com.au •
e emma@peterstutchbury.com.au

On 13 Apr 2015, at 2:01 pm, Michael Hall <MichaelHall@boycecorp.com.au> wrote:

Hi Emma,

In regards to DA Condition C7 I'm assuming that there will be no works within the road reserve.

Correct?

Michael.

From: Emma Trask Ward [mailto:emma@peterstutchbury.com.au]
Sent: Monday, 13 April 2015 11:29 AM
To: Michael Hall
Subject: Re: Design Certificate

Thank you! No need to return my call. :)

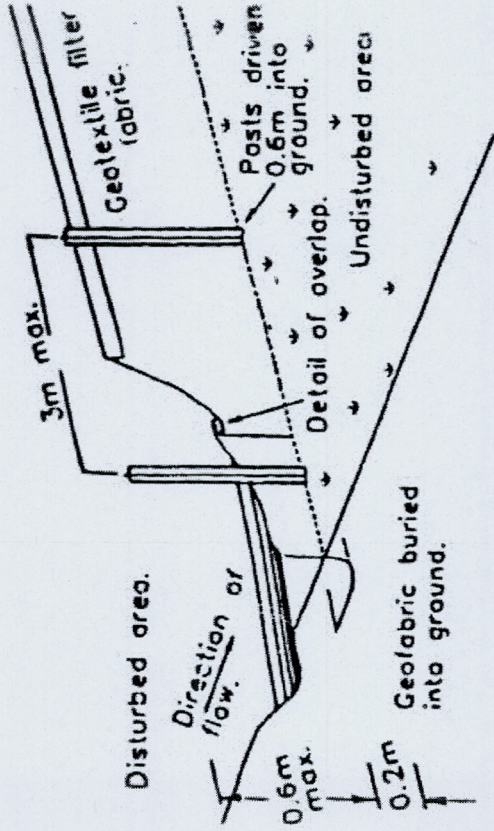
Kindest Regards,

Emma Trask

N/A — DA CONDITION C7

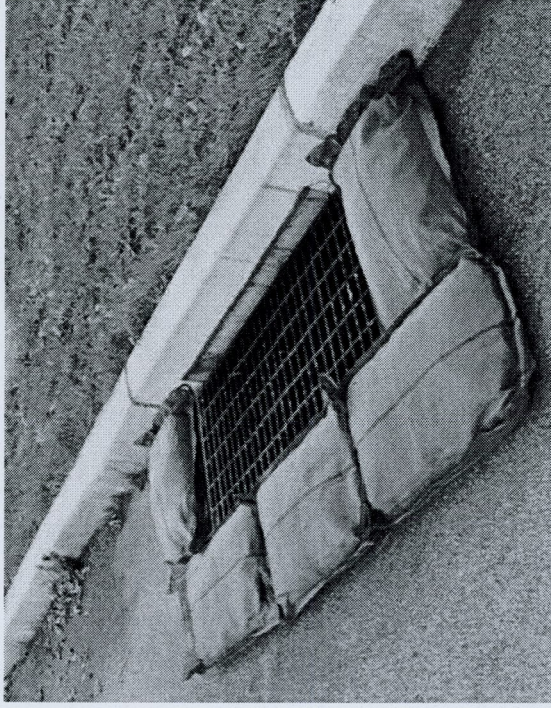
MEMO

<image001.jpg>



Sediment Fence

(The use of sandbags can be used as an alternative)



Sediment control at council's stormwater system where required
Peter J Boyce & Associates
 Ph: 0412 928 500

This PLAN/DOCUMENT forms part
 of the approval granted under

Construction Cert No. **225149**
 And all work must be carried out in
 accordance with the Building Code of
 Australia 2007 and subsequent amendments

Accredited Building Surveyor BSB No. 0043

SEDIMENT CONTROL PLAN

Provide at low laying areas of the site to prevent sediment and soil leaving the site or from washing into council's stormwater system where required.

Project: 88 Cabbage Tree Road Bayview

DRAWING LIST

- PLANS
- CC 050 LOCATION PLAN
- CC 051 BASIX CERTIFICATE
- CC 100 SITE & DEMOLITION PLAN
- CC 210 LEVEL 1 PLAN
- CC 220 LEVEL 2 PLAN
- CC 230 ROOF PLAN
- CC 240 STORAGE & PARKING PLAN

ELEVATIONS

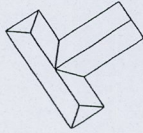
- CC 310 NORTH ELEVATION
- CC 320 SOUTH ELEVATION
- CC 330 WEST ELEVATION
- CC 340 EAST ELEVATION

SECTIONS

- CC 440 SECTION 1
- CC 460 SECTION 2

NOTES:

1. The recommendation of the risk assessment required to manage the hazards as identified in Geotechnical Report prepared by Douglas Partners dated 25 October 2013 are to be incorporated into the construction as required by DA Condition B3.
2. Water, electricity and gas to comply with DA Condition 5.
3. New construction is to comply with DA Condition 6 and AS 3959 Construction of buildings in bush fire prone areas.
4. The swimming pool surrounds must be constructed of non-flammable materials (DA Condition B7.
5. The internal driveway finish is to comply with DA Condition 21.
6. Two off-street parking spaces are to be provided in accordance with DA Condition 22.
7. The pool fence is to comply with AS 1926 and the Swimming Pools Act.
8. The pool concourse, walkway or deck is to be a minimum 900mm clear of the boundary.
9. All work is to comply with the Building Code of Australia.
10. All work is to be carried out in accordance with the DA approval issued by council.



closest neighbour on western side, 65m from proposed development

PLOT DATE 24 Mar, 2015
FILE NAME CT plans CC.vw
DRAWING ISSUE
1 CC Submission 24.03.15

NOTES

site area - 20,426m²

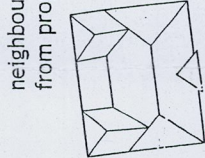
395m

site boundary

393m

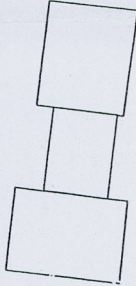
creek line runs through property

existing drainage easement



neighbour on eastern side, 102m from proposed development

right of way



neighbour on eastern side, 75m from proposed development

driveway access to 88 & 90 cabbage tree road

cabbage tree road
52m

*south of driveway and north of creek not surveyed, tree locations are approximate.

Peter J Boyce & Associates

Ph: 0412 928 500

This PLAN/DRAWING forms part of the approval granted under Construction Cert No. **BS1919** And all work must be carried out in accordance with the Building Code of Australia 2007 and subsequent amendments

Accredited Building Surveyor BSA No. 0043

Project

Cabbage Tree House

Proprietor

Jan & Graeme Page

Project Address

Lot 8
DP 19161
88 Cabbage Tree Road
Bayview, NSW 2104

Architect

PETER STUTCHBURY
ARCHITECTURE

5 / 364 Barrenjoey Road
Newport NSW 2107
p. 9979 5030
f. 9979 5367
e. admin@peterstutchbury.com.au

0 10 20 50m

Scale 1:1000@ A3

Drawing Name

LOCATION PLAN

Issue

1

Drawing Number

CC 050

Do not scale from drawings. Verify all dimensions and levels on site. Peter Stutchbury Architecture is the owner of the copyright subsisting in these drawings, plans and specifications. They must not be used, reproduced or copied in whole or part nor may the information, ideas and concepts therein contained be disclosed to any person without the prior written consent of Peter Stutchbury Architecture.

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 CCDDC plans & specs	Costlier check
Landscape			
The applicant must plant indigenous or low water use species of vegetation throughout 323 square metres of the site.	✓	✓	✓
Fixtures			
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 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 5 star in the kitchen in the development.		✓	✓
The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development.		✓	✓
Alternative water			
Rainwater tank			
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 140 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 configure the rainwater tank so that overflow is diverted to a stormwater tank.		✓	✓
The applicant must connect the rainwater tank to:			
- all toilets 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) - a tap that is located within 10 metres of the swimming pool in the development		✓	✓

Water Commitments	Show on DA plans	Show on CCDC plans & specs	Certifier check
Stormwater tank			
The applicant must install a stormwater tank with a capacity of at least 5000 litres on the site. This stormwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the stormwater tank to collect overflow from the rainwater tank.		✓	✓
The applicant must configure the stormwater tank to collect runoff from:			
- at least 48 square metres of roof area of the development (excluding the area of the roof which drains to any rainwater tank or private dam) - at least 40 square metres of impervious areas		✓	✓
The applicant must connect the stormwater tank to:			
a sub-surface or non-aerosol irrigation system, or if the stormwater has been appropriately treated in accordance with applicable regulatory requirements, to at least one outdoor tap in the development (Note: NSWHealth does not recommend that stormwater be used to irrigate edible plants which are consumed raw.)		✓	✓
Swimming pool			
The swimming pool must not have a volume greater than 50 kilolitres.	✓	✓	✓
The swimming pool must be outdoors.	✓	✓	✓

Thermal Comfort Commitments				Show on CC/DOC plans & specs	Show on DA plans	Certifier check
Floor, walls and ceiling/roof						
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.						
Construction	Additional insulation required (R-Value)	Other specifications				
floor - concrete slab on ground, 104 square metres	1 (slab edge)	In-slab heating system				
floor - suspended floor above open subfloor/ 35 square metres, concrete	0.9 (or 1.5 including construction) (down)	site slope > 10% below floor				
external wall - cavity brick	0.50 (or 1.17 including construction)					
ceiling and roof - flat ceiling / flat roof, concrete/bare internal ceiling and roof - flat ceiling / flat roof, none	0.50 (or 1.17 including construction) ceiling: 2.5 (up), roof: none	concrete/bare internal, light (solar absorptance < 0.475)				
Note Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia						

Energy Commitments	Show on DA plans	Show on CCDC plans & specs	Certifier check
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 1 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Swimming pool			
The development must not incorporate any heating system for the swimming pool.		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system with the capacity to generate at least 2.6 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
Other			
The applicant must install an induction cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Thermal Comfort Commitments	Show on DA plans	Show on CC/DOC plans & specs	Certifier check		
Windows, glazed doors and skylights					
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door. The dwelling may have 1 skylight (<0.7 square metres) and up to 2 windows/glazed doors (<0.7 square metres) which are not listed in the table. The following requirements must also be satisfied in relation to each window and glazed door: - Except where the glass is 'single clear' or 'single bronze', each window and glazed door must have a U-value no greater than that specified in the table. SHGC and Low E must be achieved using the THERM system U-values and SHGC must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. - The leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 millimetres above the head of the window or glazed door, except that a projection greater than 500 mm and up to 1500 mm above the head must be twice the value in the table. - Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35. - Unless they have adjustable shading, pergolas must have fixed battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm. - Overshadowing buildings/vegetation must be of the height and distance from the centre and the base of the window and glazed door, as specified in the 'overshadowing' column.	✓ ✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓ ✓		
Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W1 (F2.01) - LEVEL 2 S TERRACE - LITTLE CASEMENT	S	2.30	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	awning (fixed) 600 - 1200 mm	1-2 m high, <1.5 m away
W2 (F2.02) - LEVEL 2 S TERRACE - BIG SLI DER	S	6.30	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	awning (fixed) 600 - 1200 mm	1-2 m high, <1.5 m away
W3 (F2.03) - LEVEL 2 ENTRY - LITTLE CASEMENT	W	3.20	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	eave/verandah/pergola/balcony 450-600 mm	1-2 m high, <1.5 m away
W4 (F2.04) - LEVEL 2 ENTRY - SLIDING	W	7.10	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	eave/verandah/pergola/balcony 450-600 mm	>4m high, 2.5 m away

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshading
W5 (F2.08) - LEVEL 2 SLOPED	N	19.40	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	awning (fixed) 600-1,200 mm	>4m high, 8-12 m away
W6 (F2.08) - LEVEL 2 TERRACE - LIVING SLIDER	E	6.70	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	eave/verandah/pergola/balcony 450 mm	>4m high, 5-8 m away
W7 (F2.07) - LEVEL 2 TERRACE - BED SLIDERS	NE	16.00	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	awning (adjustable) 1,200-2,000 mm	>4m high, 5-8 m away
W8 (F2.08) - LEVEL 2 TERRACE - ENSUITE - FIXED	NE	6.50	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	awning (fixed) 1,200-2,000 mm	>4m high, 2-5 m away
W9 (F2.09) - EXTERNA L - MAN BED ENSUITE - FIXED	E	1.50	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	awning (fixed) 600-1,200 mm	>4m high, 2-5 m away
W10 (F2.10) - LEVEL 2 HIGH OVER STAIRS - FIXED	N	3.60	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	awning (fixed) 600-1,200 mm	>4m high, 5-8 m away
W11 (F2.11) - HIGH LIGHT BETWEEN ROOFS	E	1.90	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	none	>4m high, 5-8 m away
W12 (F1.01) - LEVEL 1 W TERRACE SLIDER	W	2.20	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	none	>4m high, 2-5 m away
W13 (F1.02) - LEVEL 1 CASEMENT ON STAIRWELL	N	1.90	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	awning (fixed) 600-1,200 mm	>4m high, 2-5 m away
W14 (F1.03) - LEVEL 1 SLOPED	N	15.60	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	awning (fixed) 600-1,200 mm	>4m high, 8-12 m away
W15 (F1.04) - LEVEL 1 SLOPED	E	5.70	timber or uPVC, single pyrolytic low-e (U-value 3.99, SHGC 0.4)	none	>4m high, 2-5 m away

Energy Commitments	Show on DA plans	Show on CC/DC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: electric heat pump - air sourced	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: ceiling fans; Energy rating: n/a		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: ceiling fans; Energy rating: n/a			✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: wood heater; Energy rating: n/a		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: gas hydronic system; Energy rating: n/a		✓	✓
The wood heater must have a compliance plate confirming that it complies with the relevant Australian standards, and must be installed in accordance with the requirements of all applicable regulatory authorities			
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to lapside or roof; Operation control: manual switch on/off			
Kitchen: individual fan, ducted to lapside or roof; Operation control: manual switch on/off			
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
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 1 of the bedrooms / study; - at least 2 of the living / dining rooms;		✓	✓

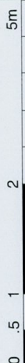
[illegible]

Cabbage Tree House

Jan & Graeme Page

**PETER STUTCHBURY
ARCHITECTURE**

5 / 364 Barrenjoey Road
Newport NSW 2107



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PLOT DATE 24 Mar, 2015
FILE NAME CT plans_CC.vwx
DRAWING ISSUE

1 CC Submission 24.03.15

NOTES

SITE WORKS

- bushfire protection zone
- extent of works site
- demolition
- bulk excavation
- bulk fill
- tree to be demolished
- existing tree to be retained and protected

Peter J Boyce & Associates
Ph: 0412 928 500

This PLAN/DOCUMENT forms part of the approval granted under Construction Cert No. **EX1519** And all work must be carried out in accordance with the Building Code of Australia 2007 and subsequent amendments

Accredited Building Surveyor BS3 No. 0643

Project

Cabbage Tree House

Proprietor

Jan & Graeme Page

Project Address

Lot 8

DP 19161

88 Cabbage Tree Road

Bayview, NSW 2104



Architect

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f. 9979 5367

e. admin@peterstutchbury.com.au

0 5 10 25m

Scale 1:500 @ A3

Drawing Name

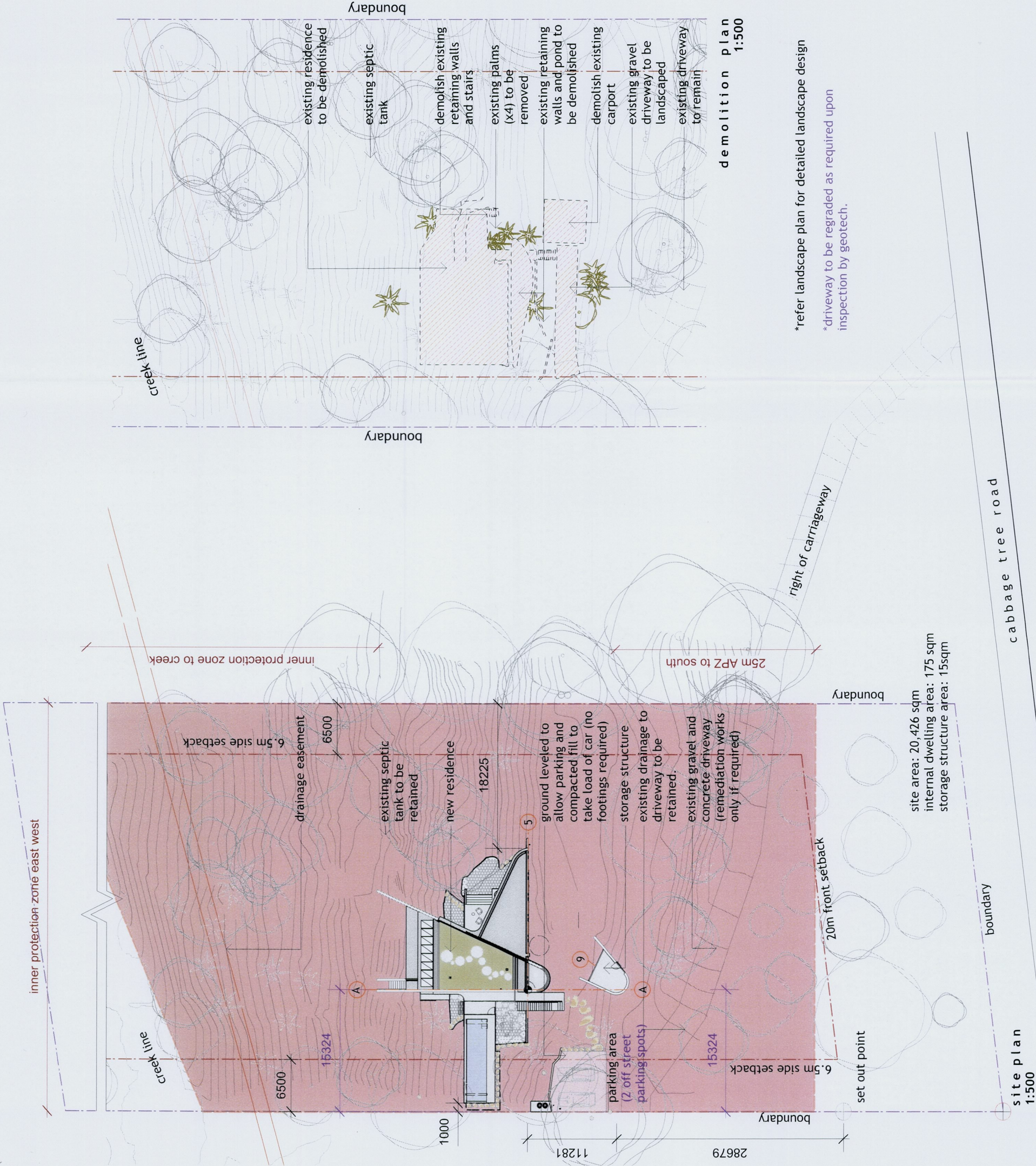
SITE & DEMOLITION PLAN

Issue 1

Drawing Number

CC 100

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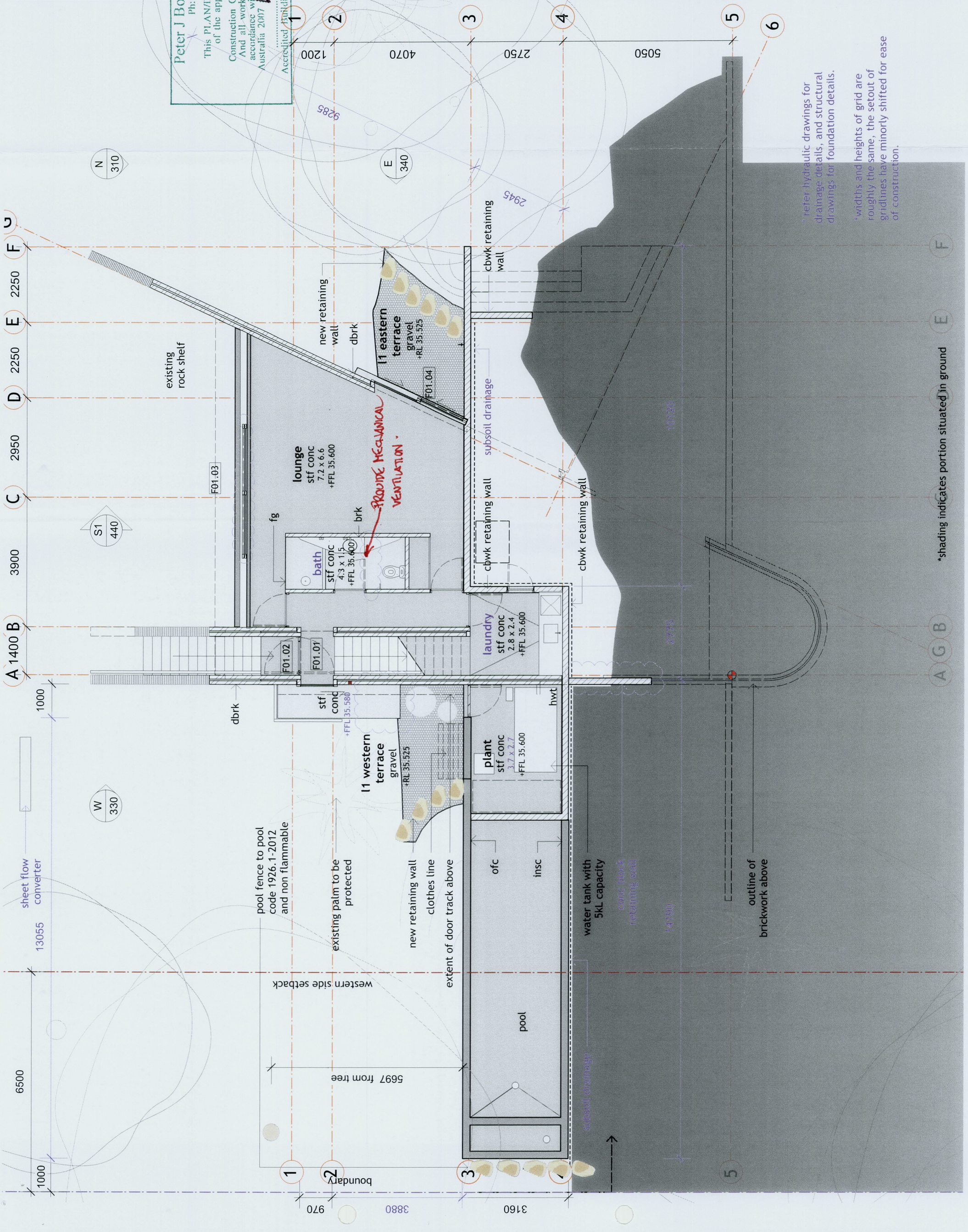


PLOT DATE 24 Mar, 2015
FILE NAME CT plans_CC.vv
DRAWING ISSUE
1 CC Submission 24.03.15

NOTES

- brk - 110mm double brick (w/ 50 cavity)
- dbrk - 190 concrete blockwork
- cbwk - core filled, circular hollow section compressed fibre cement concrete
- concrete stepping stones
- concrete topping
- concrete pipe
- floor glazing
- floor drains
- isolation joint
- light switch
- BS1363 tap
- off form concrete
- square hollow section
- set out point
- steel trowel finish
- toilet roll holder
- wall tap
- brick
- concrete block
- concrete
- metal mesh - copper
- form ply
- cimentel fc sheet
- FX XX frame no.
- SX stair number
- JX XX joinery no.
- BX XX balust./hand. no.

Peter J Boyce & Associates
Ph: 082 928 500
This PLAN/DOCUMENT is for the construction of the approach driveway and associated works. And all work must be carried out in accordance with the Building Code of Australia 2007 and subsequent amendments. Accredited Building Surveyor BS1363 0043



Project
Cabbage Tree House
Proprietor
Jan & Graeme Page
Project Address
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88 Cabbage Tree Road
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Scale 1:100 @ A3
Drawing Name
LEVEL 1 PLAN
Issue
1
Drawing Number
CC 210

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*Refer hydraulic drawings for drainage details, and structural drawings for foundation details.
*widths and heights of grid are roughly the same, the setout of gridlines have minorly shifted for ease of construction.

*shading indicates portion situated in ground

western side setba

5697 from tree

stf conc awn

pool

pool fence

garden terrace

gravel

new retaining wall

min 900

pool fence to 1926.1-2012 and non flammable

subsoil drainage

900 CLEAR To DECK.

3727

3

4

5

cbwk
retaining

PLOT DATE 24 Mar, 2015
FILE NAME CT plans_CC.vwx
DRAWING ISSUE
1 CC Submission 24.03.15

NOTES

- brk - 110mm brick - 110mm
- dbrk - double brick (w/ 50 cavity)
- cbwk - 190 concrete blockwork
- stf - 190 concrete blockwork
- mt - 190 concrete blockwork
- ofc - 190 concrete blockwork
- shs - 190 concrete blockwork
- so - 190 concrete blockwork
- stf - 190 concrete blockwork
- trh - 190 concrete blockwork
- wt - 190 concrete blockwork
- brk - 110mm brick - 110mm
- concrete block
- concrete
- metal mesh - copper
- form ply
- cimentel fc sheet
- FX XX frame no. SX stair number
- JX XX joinery no. BX XX balust./hand. no.

Peter J Royce & Associates
This plan is a preliminary design and is not to be used for construction without the written consent of Peter J Royce & Associates.

Construction of this building must be in accordance with the Building Code of Australia 2009 and subsequent amendments.

Accommodated Building Survey No. 0143

mt mixer tap

ofc off form concrete

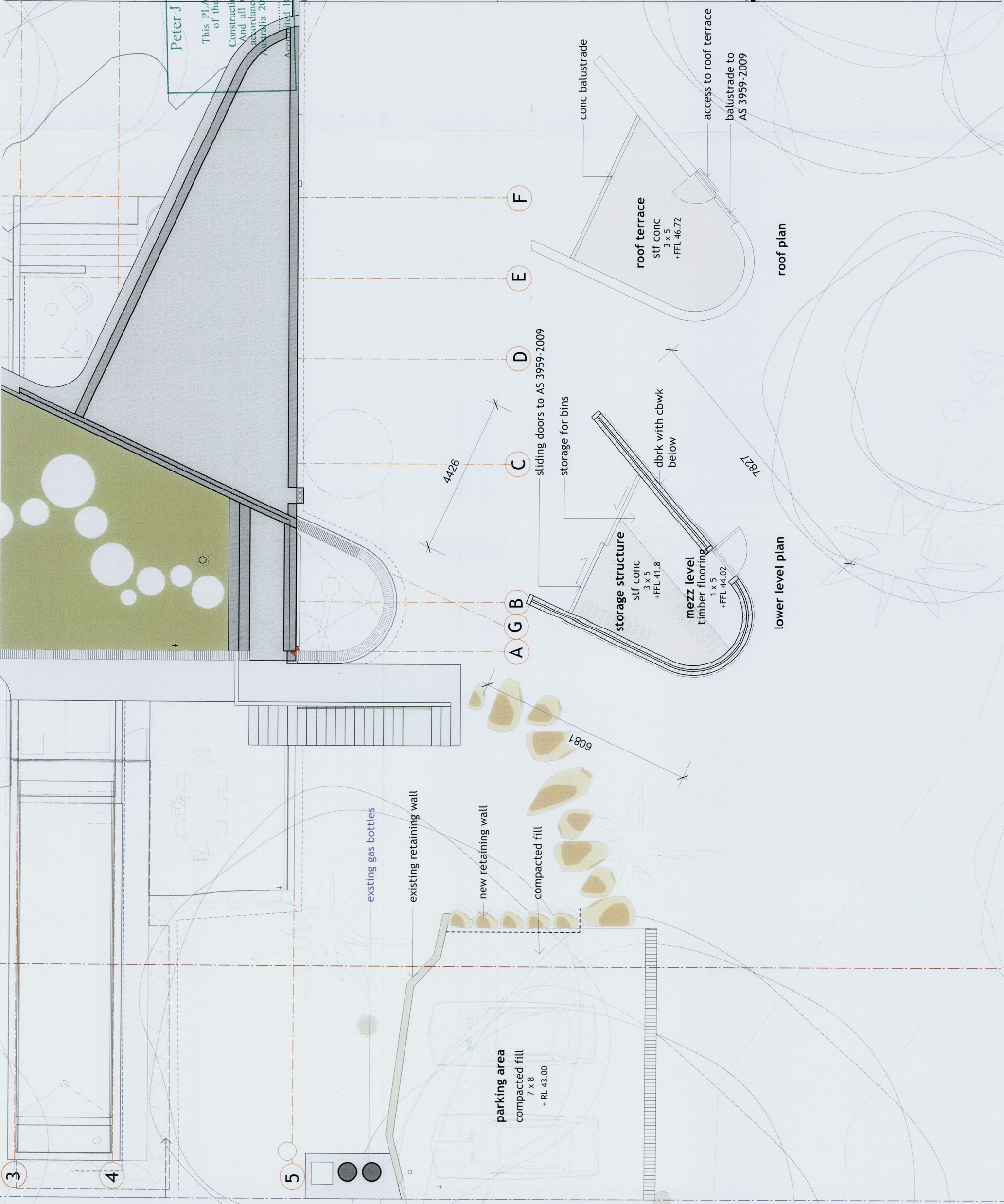
shs square hollow section

so set out point

stf steel trowel finish

trh toilet roll holder

wt wall tap



Project
Cabbage Tree House
Proprietor
Jan & Graeme Page
Project Address
Lot 8
DP 19161
88 Cabbage Tree Road
Bayview, NSW 2104
Architect
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ARCHITECTURE**
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Newport NSW 2107
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f. 9979 5367
e. admin@peterstutchbury.com.au

Scale 1:100 @ A3
Drawing Name
STORAGE & PARKING PLAN
Issue
1
Drawing Number
CC 240

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PLOT DATE 24 Mar, 2015
FILE NAME CT elevations_C
DRAWING ISSUE
1 CC Submission 24.03.15

Peter J Boyce
NOTES
Associates
Ph: 9412 928 500

brick - 110mm
NT form saddle brick (w/ 50 cavity)
concrete blockwork
core filled
circular hollow section
And all work must be carried out in accordance with the Building Construction joint Australia 2007 and subsequent amendments

concrete
concrete stepping stones
Burveur BHP concrete topping
dp
fg
fw
ij
ls
mt
ofc
shs
so
stf
trh
wt

fixed glazing
isolation joint
light switch
mixer tap
off form concrete
square hollow section
set out point
steel trowel finish
toilet roll holder
wall tap
brick
concrete block
concrete
metal mesh - copper
form ply
cimentel fc sheet
FX.XX frame no. (SX) stair number
JX.XX joinery no. (BX.XX) balust./hand. no.

concrete block
concrete
metal mesh - copper
form ply
cimentel fc sheet
FX.XX frame no. (SX) stair number
JX.XX joinery no. (BX.XX) balust./hand. no.

Project
Cabbage Tree House

Proprietor
Jan & Graeme Page

Project Address

Lot 8
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Architect

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ARCHITECTURE

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Scale 1:100 @ A3

Drawing Name
NORTH ELEVATION

Issue
1
Drawing Number
CC-310

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* refer hydraulic drawings for drainage details, and structural drawings for foundation details.

*widths and heights of grid are roughly the same, the setout of gridlines have minorly shifted for ease of construction.

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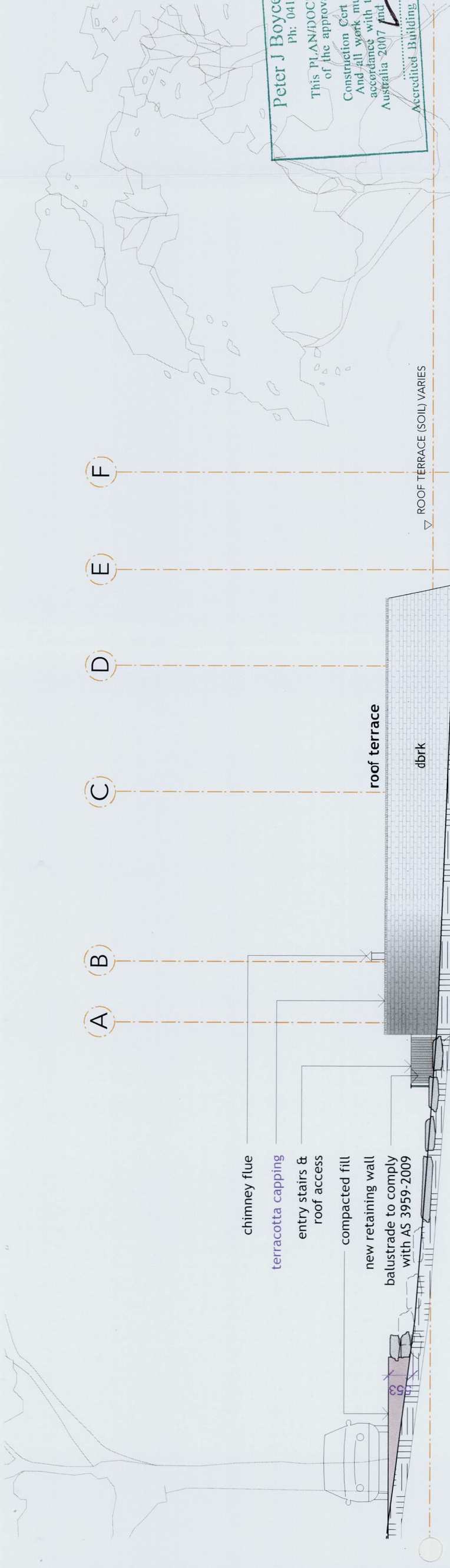
A

B

C

D

E



PLOT DATE 24 Mar, 2015
FILE NAME CT elevations_C
DRAWING ISSUE
1 CC Submission 24.03.15

NOTES

- brk - 110mm brick - 110mm
- dbrk - double brick (w/ 50 cavity)
- cbwk - 190 concrete blockwork
- cf - core filled
- chs - circular hollow section
- cfe - compressed fibre cement
- cs - construction joint
- cs - concrete
- cs - concrete stepping stones
- cs - concrete topping
- cs - down pipe
- cs - fixed glazing
- cs - floor waste
- cs - isolation joint
- cs - mixer tap
- cs - off form concrete
- cs - BS1188 hollow section
- cs - set out point
- cs - steel trowel finish
- cs - toilet roll holder
- cs - wall tap
- cs - brick
- cs - concrete block
- cs - concrete
- cs - metal mesh - copper
- cs - form ply
- cs - cementel fc sheet
- cs - frame no. (SX) stair number
- cs - joinery no. (BX,XX) balust/hand. no.

Peter J Boyce & Associates
Ph: 0412 920 1500
This PLAN/DRAWING forms part of the approval of the approval for the building. And all work must be carried out in accordance with the Building Code of Australia 2007 and subsequent amendments.
Accredited Building Surveyor BS1188
Accredited Building Surveyor BS1188

roof terrace

▽ ROOF TERRACE (SOIL) VARIES

▽ BED ROOF FSL 41.13

△ BED 2 FCL 40.93

▽ L2 FFL 38.35

△ L1 FCL 38.18

▽ L1 FFL 35.60

Project
Cabbage Tree House

Proprietor
Jan & Graeme Page

Project Address
Lot 8
DP 19161
88 Cabbage Tree Road
Bayview, NSW 2104

Architect
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e. admin@peterstutchbury.com.au

Scale 1:100 @ A3
Drawing Name
SOUTH ELEVATION

Issue
1
Drawing Number
CC 320

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* refer hydraulic drawings for drainage details, and structural drawings for foundation details.

*widths and heights of grid are roughly the same, the setout of gridlines have minorly shifted for ease of construction.

PLOT DATE	24 Mar, 2015
FILE NAME	CT elevations_CC
DRAWING ISSUE	

1	CC Submission	24.03.15
---	---------------	----------

NOTES

brk	brick - 110mm
dbrk	double brick (w/ 50 cavity)
cbwk	190 concrete blockwork

core filled
circular hollow section
compressed fibre cement

construction joint
concrete
formwork
concrete stepping stones

concrete topping
down pipe
fixed glazing

floor waste
 isolation joint
 light switch

o/c	off form concrete
shs	square hollow section
so	set out point

stf	steel trowel finish
trh	toilet roll holder
wt	wall tap

brick
concrete block

concrete

metal mesh - copper

	form ply
	cimentel fc sheet
EY VV frame 20	CV state number

JX.XX joinery no. BX.XX balust./hand, no.
 JX.XX staircase no. BX.XX stair number

Project

Cabbage Tree House
Proprietor

Jan & Graeme Page
Project Address

Lot 8
DP 19161
88 Cabbage Tree Road

Bayview, NSW 2104
Architect

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f. 9979 5367
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Scale 1:100 @ A3

Issue	Drawing Number	EAST ELEVATION
-------	----------------	----------------

1
CC 340

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* refer hydraulic drawings for drainage details, and structural drawings for foundation details

*widths and heights of grid are roughly the same, the setout of gridlines have minorly shifted for ease of construction.

average slope of site
(in area of proposed development)

PLOT DATE 24 Mar, 2015
FILE NAME CT sections_CG.vw
DRAWING ISSUE
1 CC Submission 24.03.15

NOTES

Peter J Boyle & Associates
Ph: 08 928 5100
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Accredited Building Surveyor
Peter J Boyle & Associates
Ph: 08 928 5100
This PLAN/DRAWING is the property of the approved building surveyor. It is to be used for the construction of the building only. It is not to be used for any other purpose. And all work must be carried out in accordance with the Building Code of Australia 2007 and subsequent amendments.

- ls 10mm brick 10mm
- mt double brick (w/ 50 cavity)
- ofc 190 concrete blockwork
- shs circular hollow section
- so compressed fibre cement
- sfr construction joint
- trh steel trowel finish
- wt toilet roll holder
- brick wall tap
- concrete block
- concrete
- metal mesh - copper
- form ply
- cimentel fc sheet
- FX XX frame no.
- SX stair number
- JX XX joinery no.
- BX XX balust./hand. no.

Project
Cabbage Tree House

Proprietor
Jan & Graeme Page

Project Address
Lot 8
DP 19161
88 Cabbage Tree Road
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Architect

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Scale 1:100 @ A3

Drawing Name
SECTION 1

Issue
1
Drawing Number
CC 440

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* refer hydraulic drawings for drainage details, and structural drawings for foundation details.

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storage structure behind

conc slab to engineers detail
to hold drainage cell and soil
concrete balustrade

dbrk

ctw

terracotta capping

dbrk

stormwater tank (osd)
with 2kL capacity

rainwater tank
5kL capacity
cbwk retaining wall

existing ground line

conc slab to
engineers detail
cbwk retaining wall

piers to rock to
engineers detail

conc slab to
engineers detail

brk pier to
engineers detail

5

4

3

2

1

1094

roof terrace
dbrk

fig

conc beam

dining
F02.06

cfb

living
dbrk

bath

F01.04

cfb

2000

F02.11

F02.12

1000

1094

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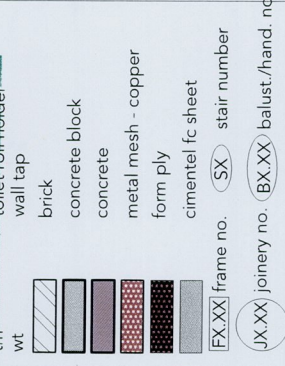
1094

NOTES	
brk	brick - 110mm
dbrk	double brick (w/ 50 cavity)
cbwk	190 concrete blockwork
cf	core filled
chs	circular hollow section
cfc	compressed fibre cement
cj	construction joint

Peter J Boyce & Associates concrete stepping stones
concrete topping
Ph: 04 928 500 down pipe

This **PLAN/DOCUMENT** form fixed glazing
of the approval granted under waste
isolation joint
Construction Cert No. **20044** light switch
And all work must be carried out in
accordance with the Building Code of Australia 2007 and subsequent amendments

set out point
steel trawel finish
toilet handle



Project **Cabbage Tree House**

Proprietor Jan & Graeme Page

Project Address Lot 8
DP 19161
88 Cabbage Tree Road
Bayview, NSW 2104

Architect **PETER STUTCHBURY
ARCHITECTURE**

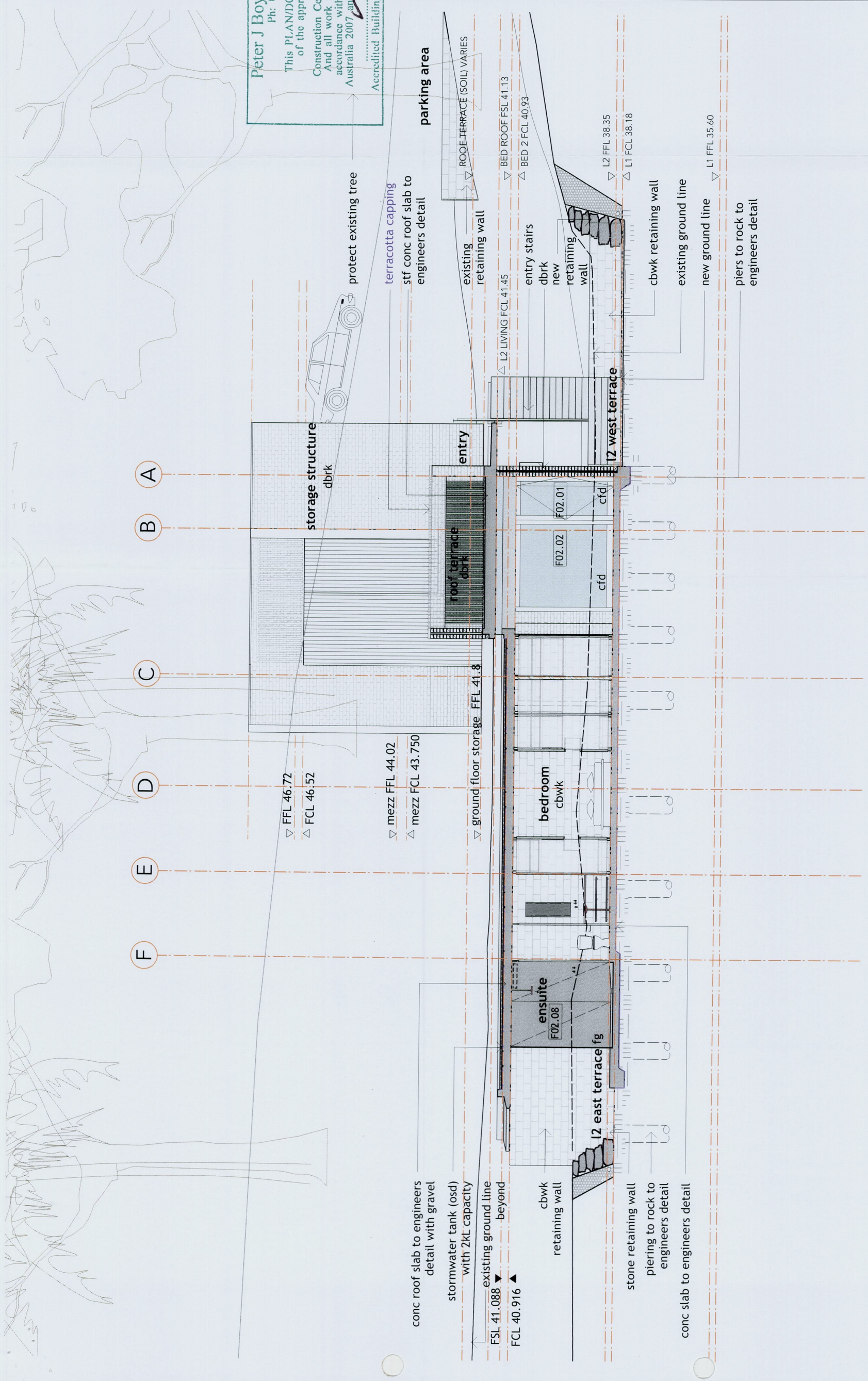
5/364 Barrenjoey Road
Newport NSW 2107

p. 9979 5030
f. 9979 5367
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Scale **1:100** @ A3

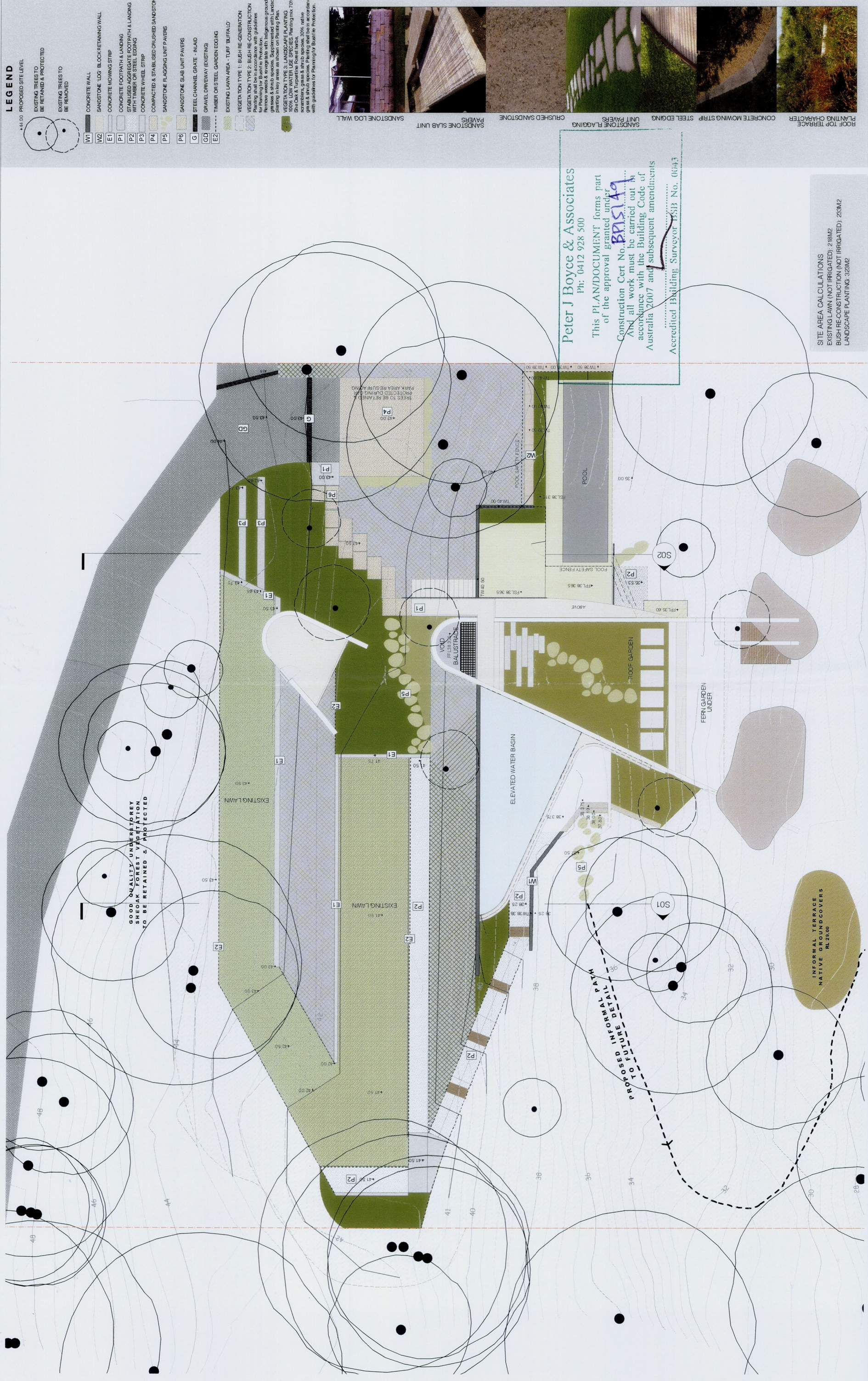
Issue	Drawing Name	Drawing Number
1	SECTION 2	CC 460

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*widths and heights of grid are roughly the same, the setout of gridlines have minorly shifted for ease of construction.





PLANTING SCHEDULE

GROUNDCOVERS

Quantity	Latin Name	Common Name	Spread	Height	Scheduled Size
602	Dichondra repens	Kidney Turf	350	100	tube
6	Leucophriza brownii	Cushion Bush	900	900	150mm
8	Pandorea pandoreana	Water Vine	900	300	150mm
93	Viola hederacae	Native Violet	400	100	150mm

GRASSES

Quantity	Latin Name	Common Name	Spread	Height	Scheduled Size
148	Cymbopogon refractus	Kynbopogun	400	600	150mm
22	Isoplexis nodosa	Knobby Club Rush	600	600	150mm
77	Lomandra Tanika	Tanika	600	600	150mm
25	Lomandra longifolia	Sparly Headed Mart Rush	1200	1000	150mm
84	Lomandra spp. rubiginosa	Lomandra Seascape	750	1000	150mm
207	Microlaena stipoides	Wispang Grass	300	500	150mm
271	Themeda australis	Kangaroo Grass	400	400	50mm
5	Bechnum gibbum	Palm Fern	900	800	5L
3	Cyathea australis	Tree Fern	3000	5000	45L
16	Doodia aspera	Doodia	600	500	5L

SHRUBS

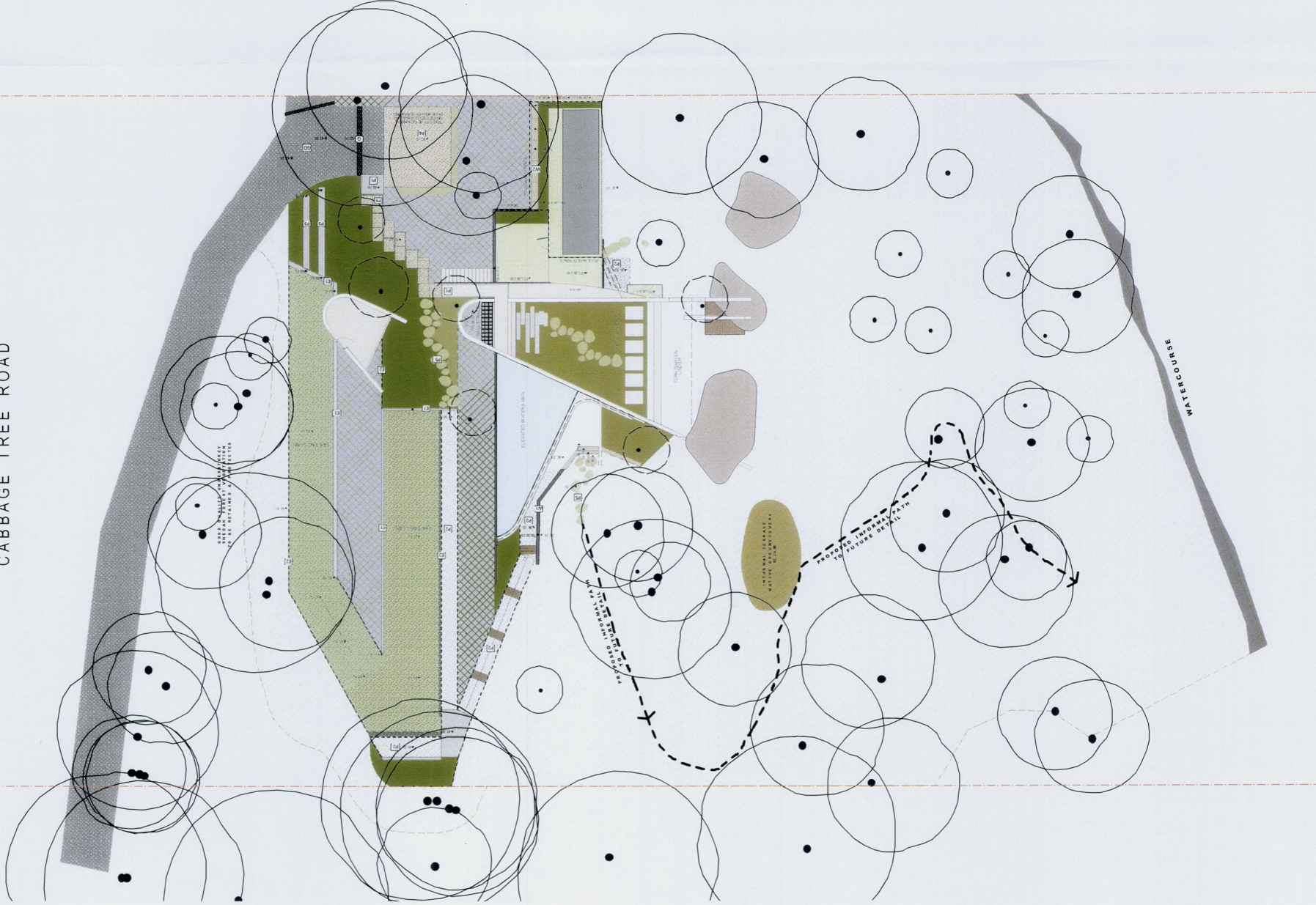
Quantity	Latin Name	Common Name	Spread	Height	Scheduled Size
1	Banksia robur	Swamp Banksia	2000	1500	15L
12	Banksia spinulosa	Harpin Banksia	1500	1500	5L
29	Crinum pedunculatum	Swamp Lily	1000	1500	5L
11	Doryanthes excelsa	Gymea Lily	2000	2000	15L
8	Westringia fruticosa Mundi	Westringia Mundi	900	400	5L

TREES

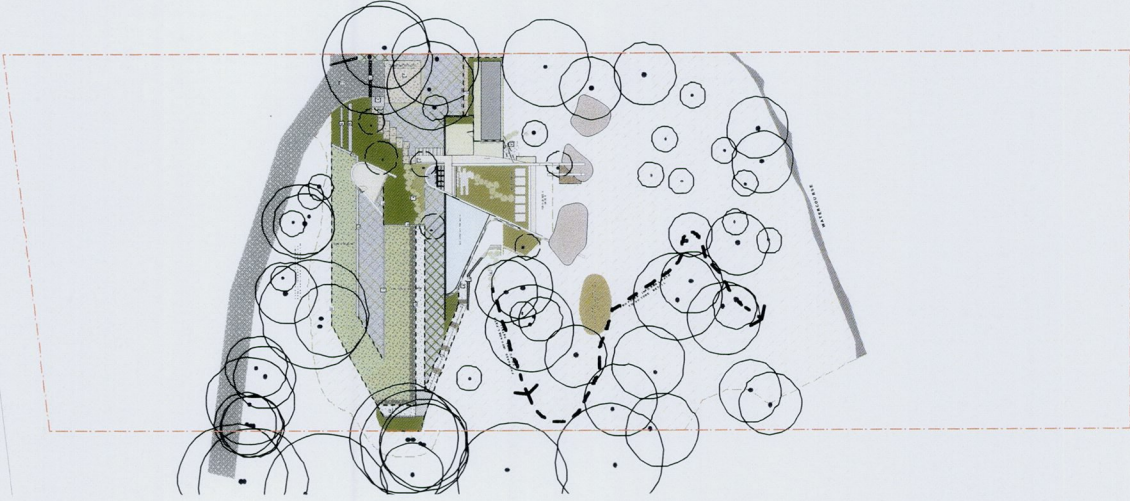
Quantity	Latin Name	Common Name	Spread	Height	Scheduled Size
1	Elaeocarpus eumundi	Elaeocarpus	3000	10000	75L



CABBAGE TREE ROAD



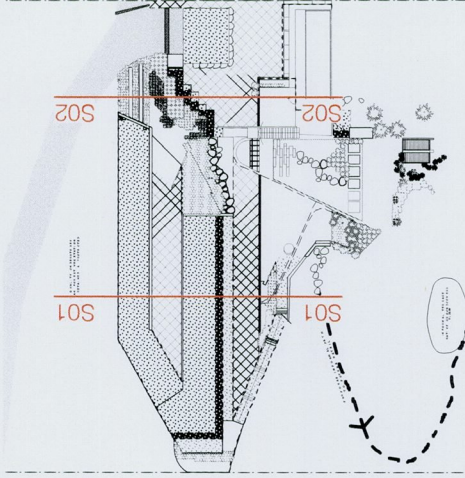
CABBAGE TREE ROAD



EXTENT OF PROPERTY 1:500 @ A1

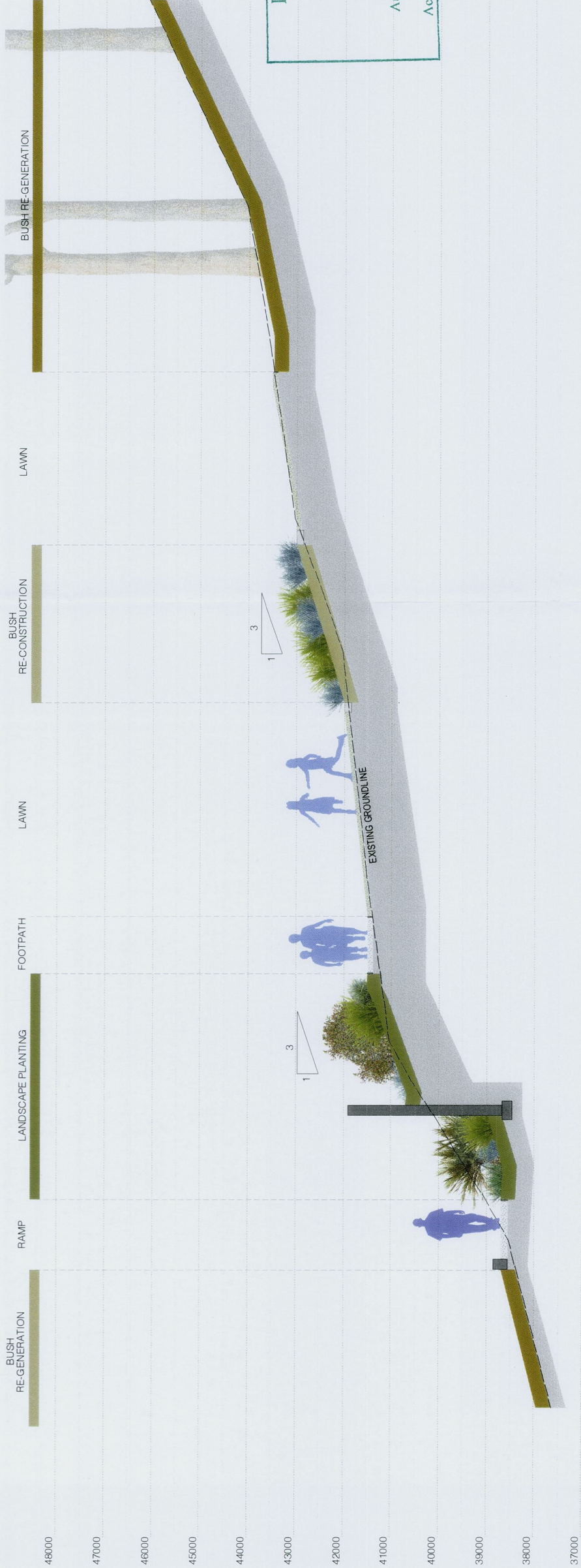
LEGEND

- +41.00 PROPOSED SITE LEVEL
- EXISTING TREES TO BE RETAINED & PROTECTED
- EXISTING TREES TO BE REMOVED
- CONCRETE WALL
- W1
- W2
- W3
- W4
- W5
- W6
- W7
- W8
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- W10
- W11
- W12
- W13
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KEY PLAN N.T.S

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Peter J Boyce & Associates
Ph: 0412 928 500

This PLAN/DOCUMENT forms part
of the approval granted under
Construction Cert No. **BA51A9**
And all work must be carried out in
accordance with the Building Code of
Australia 2007 and subsequent amendments

Accredited Building Surveyor 15513 No. 0043

88 Cabbage Tree Road, Bayview

Landscape

DRAWINGS FOR DEVELOPMENT APPLICATION PURPOSES ONLY

PROJECT
Cabbage Tree House-Landscape

CLIENT
Jan & Graeme Page

DRAWING
LANDSCAPE SECTIONS

DATE
28/04/2014

ISSUE
ISSUED TO SHARON'S LAW
FOR DEVELOPMENT APPLICATION
FOR DEVELOPMENT APPLICATION
REVISED STORMWATER TOWNS LOCATION

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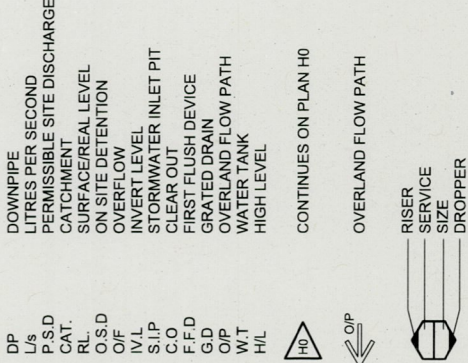
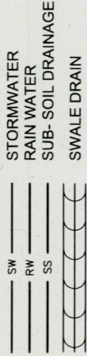
PROJECT NO.
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DATE
28/03/2014

88 CABBAGE TREE ROAD, BAYVIEW

SITE STORMWATER MANAGEMENT

LEGEND:



AUTHORITY

- PITTWATER COUNCIL
- NSW WORKCOVER

INSTALLATION STANDARDS AND CODES:

- PLUMBING CODE OF AUSTRALIA
- AS3500.1, AS3500.2, AS3500.3, AS3500.4 - 2003
- PITT WATER COUNCIL 21 DCP PART B AND APPENDIX 11

STORMWATER MANAGEMENT DESIGN AND SITE HYDROLOGY

- DESIGN IS BASED ON COMPLIANCE WITH P21 DCP PARTS
- B 5.6 RAINWATER TANKS
- B 5.7 O.S.D.
- B 5.8 WATER QUALITY

DESIGN STORM EVENT

- 1 IN 20 YR IFD = 204mm/hr FOR PIT AND PIPE SYSTEM
- 1 IN 100 YR IFD = 262mm/hr FOR OVERLAND FLOW AND O.S.D
- THE PROJECT INCLUDES A RE-BUILD OF AN EXISTING 3 BEDROOM DWELLING TO BE REPLACED WITH A 1 BEDROOM DWELLING
- EXISTING IMPERVIOUS AREA = 183m²
- NEW IMPERVIOUS AREA = 251m² APP.
- TOTAL INCREASE = 68m²

CATCHMENT AREAS

- CAT. 1 = 53m², CARPARK
- CAT. 2 = 23m², PAVEMENT
- CAT. 3 = 45m², ROOF ZONE DRAINAGE TO WATER TANK No.1
- CAT. 4 = 29m², ROOF ZONE DRAINAGE TO WATER TANK No.1 VIA O.S.D No.1
- CAT. 5 = 42m², ROOF ZONE DRAINAGE TO WATER TANKS No.1 AND No.2
- TOTAL AREA 192m² COLLECTED INTO WATER TANKS No.1 AND No.2
- BALANCE OF INCREASED IMPERVIOUS AREA, 69m², DISCHARGE AS SHEET FLOW TO PERVIOUS ZONES.

B.5.7 TABLE DETERMINES THAT A MINIMUM O.S.D CAPACITY OF 6000 LITRES IS REQUIRED.

THIS IS PROVIDED AS FOLLOWS.

- O.S.D No.1 CAPACITY IS 2.3m³, DISCHARGE FROM CAT. No.3
- O.S.D No.2 CAPACITY IS 3.7m³, DISCHARGE FROM CAT. No.3

AN INTERMEDIATE WATER STORAGE TANK No.1, PROVIDES 5KL FOR USE IN LANDSCAPE WATERING AND TOILET FLUSHING. THIS IS SUPPORTED BY THE BALANCE OF STORAGE IN TANK No.2 OF 1.3m³.

TOTAL ROOF AREA DRAINING TO RE-USE WATER VOLUME STORED IN WATER TANKS No.1 AND No.2.

- CAT. 3 TO TANK No.2
- -26% RETAINED FOR RE-USE
- -74% CONTROLLED IN O.S.D
- TOTAL CAT. 3 ROOF AREA TO TANK No.2 = 11.7m²

- CAT. 4 = 29.0m²
- CAT. 5 = 42.0m²

TOTAL ROOF AREA HARVESTED TO WATER TANKS 82.7m²

WATER VOLUME OF WATER STORED FOR RE-USE

- W.T No.1 = 5000
- W.T No.2 = 1300

6300 LITRES

FINAL OUTFALL OF STORMWATER FROM SITE CATCHMENT IS CONTROLLED IN A 50m LONG SHEET FLOW CONVERTER TRANSFORMING A CONCENTRATED FLOW OF 12.4L/s INTO A NON-CONCENTRATED SHEET FLOW. OUTFALL FROM SWALE DRAIN No.1 DISCHARGE TO AN EROSION CONTROL DEVICE TO CONVERT FLOWS TO NON-CONCENTRATED TYPES. BOTH OUTFALL POINT DISCHARGE TO A GRASS ZONE FOR CONTROL OF SEDIMENTS AND NUTRIENTS. TERMINATION POINT IS A MINIMUM OF 20m FROM EXISTING CREEK LINE.

FLOOD RISK ASSESSMENT

PITWATER FLOOD MAPPING CURRENTLY IS NOT INDICATING A FLOOD RISK AT THIS PROPERTY. AS THE PROPERTY IS LOCATED IN THE UPPER CATCHMENT OF THE CREEK THAT EXTENDS THROUGH THE LOWER GOLF COURSE THE RISK OF POTENTIAL FLOOD RISK HAS BEEN ASSESSED. THE CATCHMENT ABOVE THE PROPERTY EXTENDS TO THE WEST TO MINKARA ROAD AND INCLUDES A TOTAL URBAN AREA OF 4ha. BASED ON URBAN RUNOFF FACTOR OF 0.65 COE A TYPICAL FLOW AT CREEK LINE ADJACENT BUILDING IS 1.89m³/s AT A MAXIMUM DEPTH IN EXISTING CREEK FORM OF 1.5m APP. AS THE DIFFERENTIAL IN HEIGHT BETWEEN EXISTING CREEK LINE BANK AND BUILDING FOOTPRINT IS A MINIMUM OF 15.5m NO FLOOD RISK POTENTIAL EXISTS

Peter J Boyle & Associates

Ph: 0412 928 500

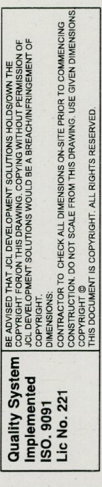
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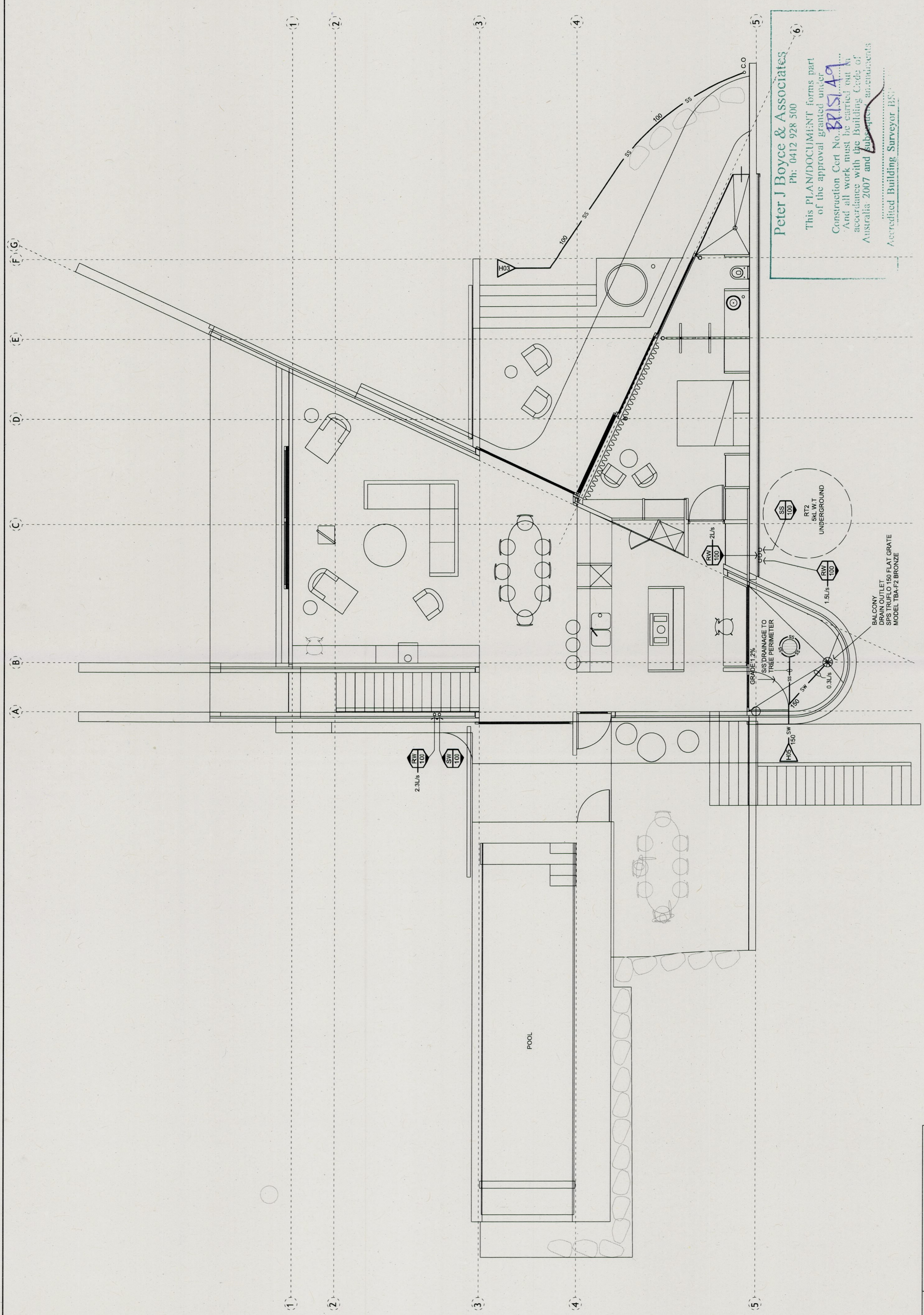
Construction Cert No. **B151A9**
And all work must be carried out in accordance with the Building Code of Australia 2007 and subsequent amendments

Accredited Building Surveyor BSI2 No. 0043

PLAN SCHEDULE

- H01 - TITLE PAGE AND LEGEND
- H02 - SITE PLAN
- H03 - LEVEL 1 FLOOR PLAN - S.W AND SERVICES
- H04 - LEVEL 2 FLOOR PLAN
- H05 - STORMWATER MANAGEMENT PLAN AND SERVICES
- H06 - DETAIL PLAN





Peter J Boyce & Associates
Ph: 0412 928 500
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Accredited Building Surveyor (BS)

Quality System
Implemented
ISO 9001
Lic No. 221

CONSTRUCTION CERTIFICATE	
Issue	Description
1	CONSTRUCTION CERTIFICATE

Project	88 CABBAGE TREE ROAD, BAYVIEW
Drawing Title	LEVEL 2 FLOOR PLAN
Date	23/03/15

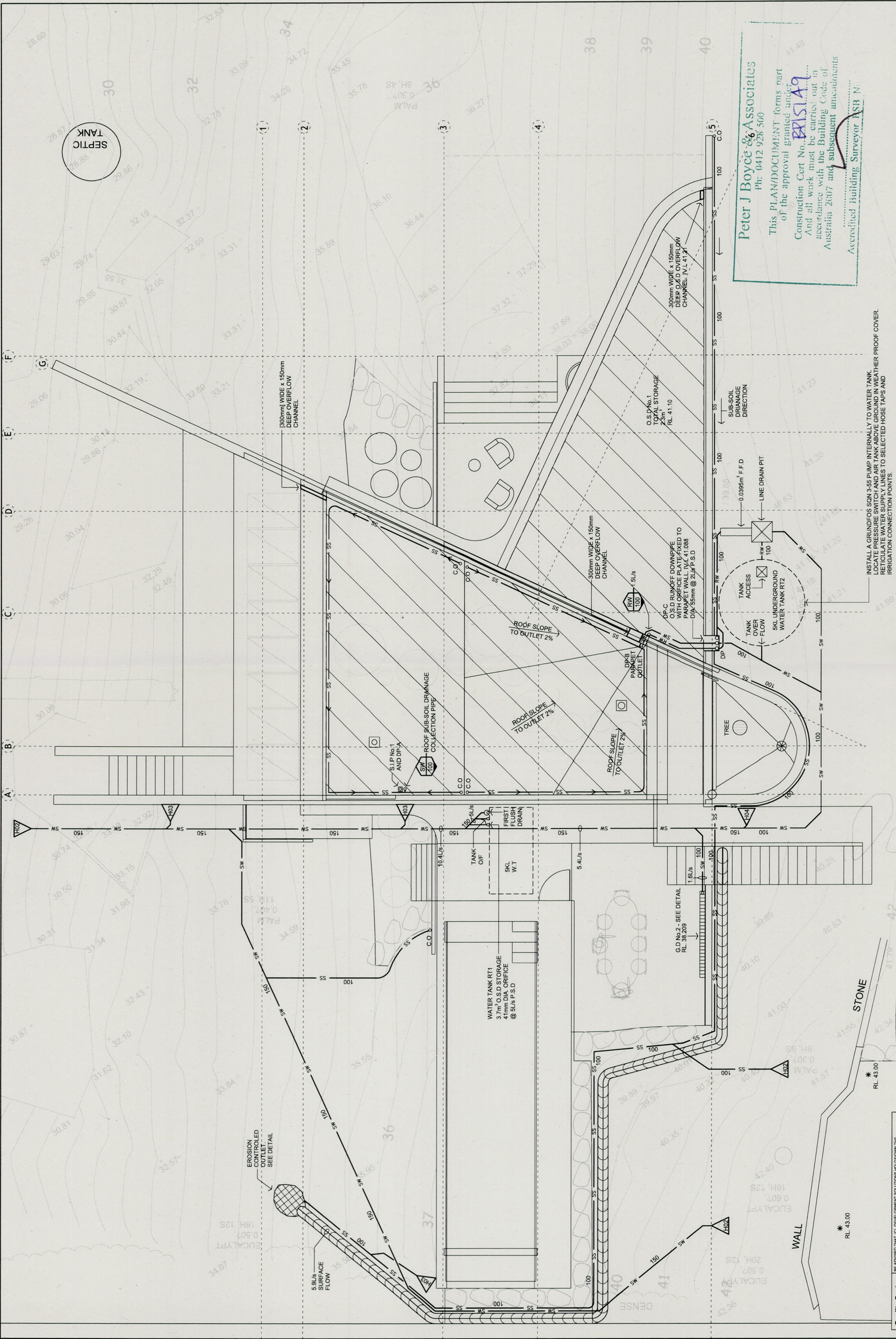
Date	23/03/15	Drawn By	L OLIVE
Scale	1:50	Design By	J OLIVE
Plan No.	4/6	Checked By	

Drawing No.	2013-P45/H04
CONSTRUCTION CERTIFICATE	1

JCL DEVELOPMENT SOLUTIONS

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Menunga N.S.W. 2537
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Email: jcl@netspeed.com.au

North Point



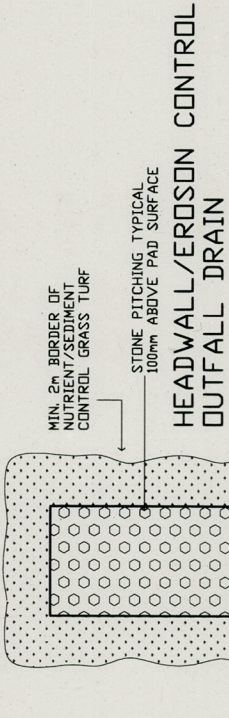
Peter J Boyce & Associates
Ph: 0412 928 500

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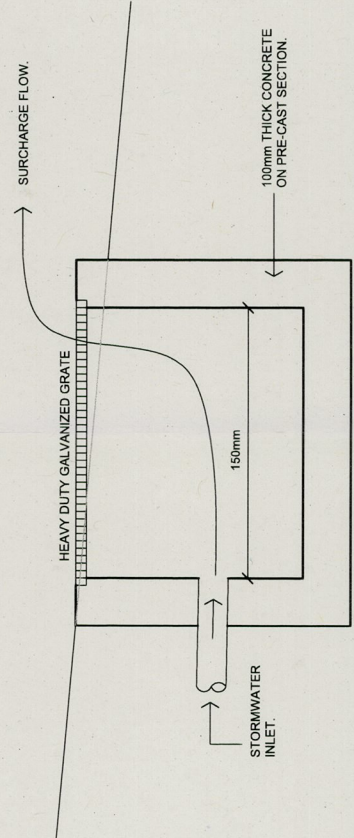
Accredited Building Surveyor ASB N

INSTALL A GRUNDFOSS SON 3-55 PUMP INTERNALLY TO WATER TANK
LOCATE PRESSURE SWITCH AND AIR TANK ABOVE GROUND IN WEATHER PROOF COVER
RETICULATE WATER SUPPLY LINES TO SELECTED HOSE TAPS AND
IRRIGATION CONNECTION POINTS

Quality System Implemented ISO 9001 Lic No. 221	Project 88 CABBAGE TREE ROAD, BAYVIEW		Drawing Title STORMWATER MANAGEMENT PLAN AND SERVICES		North Point
	Date 23/03/15		Issue Description: 1 CONSTRUCTION CERTIFICATE		
Drawing No. 2303/15		Drawn By LOUIVE	Checked By LOUIVE	Scale 1:50	Plan No. 5/6
Project No. 2303/15		Drawing No. A1		Sheet No. 1	
Client JCL DEVELOPMENT SOLUTIONS		Project Manager JCL DEVELOPMENT SOLUTIONS		Project No. 2013-P45/H05	
Contract No. 2013-P45/H05		Contract Date 2013-03-15		Contract Value \$1,500,000	
Contract Address 88 CABBAGE TREE ROAD, BAYVIEW		Contract Description STORMWATER MANAGEMENT PLAN AND SERVICES		Contract Status COMPLETED	
Contract Start Date 2013-03-15		Contract End Date 2013-03-15		Contract Completion 100%	
Contract Completion 100%		Contract Completion 100%		Contract Completion 100%	

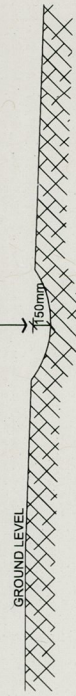
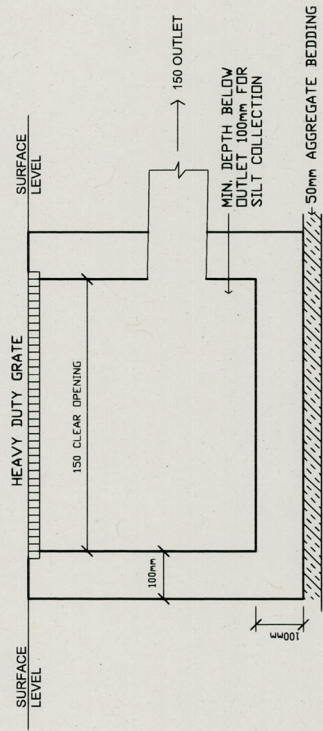


HEADWALL/EROSION CONTROL OUTFALL DRAIN

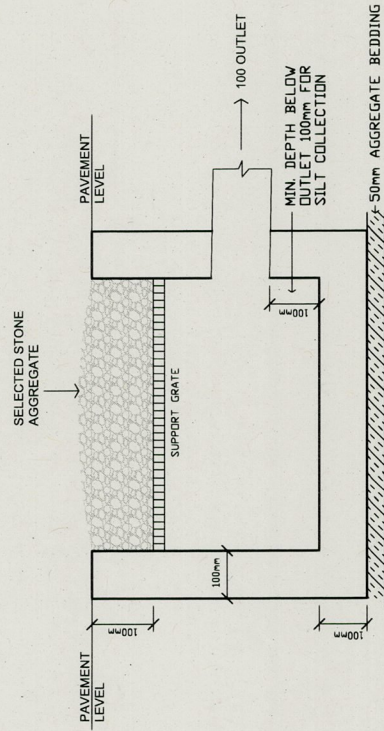


TYPICAL SHEET FLOW SURCHARGE DEVICE.

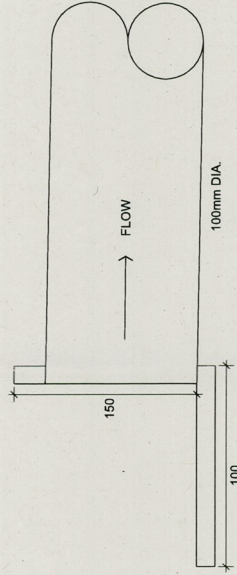
GRADED DRAIN No.1



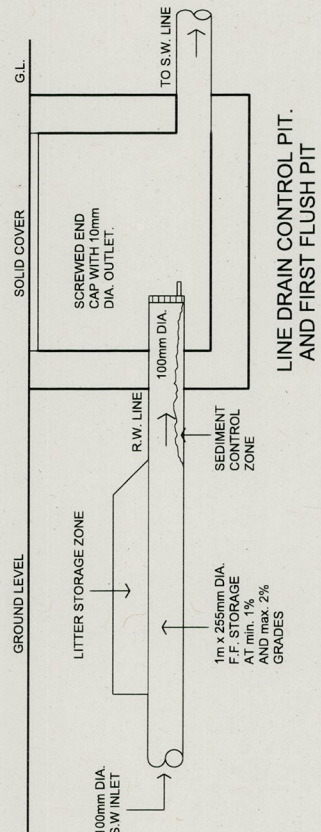
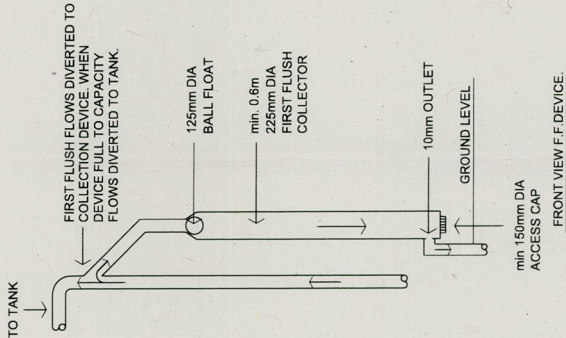
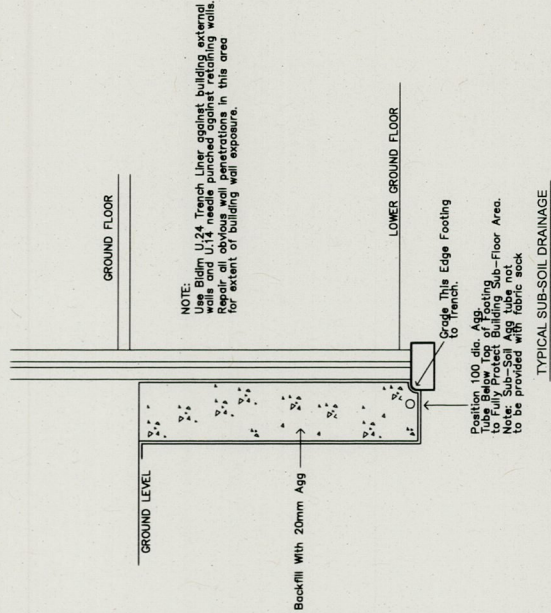
TYPICAL SWALE DRAIN.



GRADED DRAIN No.2



PARAPET OUTLET



LINE DRAIN CONTROL PIT. AND FIRST FLUSH PIT

Peter J Boyce & Associates
Ph: 0412 928 500
100mm D.F.A.
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S.I.P No.1
450 x 450 x 300 DEEP
NOTE: ROOF S/S CONNECTED TO S.W VIA DROPPER Building Surveyor BSA No. 6047

Quality System Implemented
Lic No. 221
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1	CONSTRUCTION CERTIFICATE	23/03/15	Date
Issue	Description		

Project	88 CABBAGE TREE ROAD BAYVIEW
Drawing Title	DETAIL PLAN

Date	23/03/15	Drawn By	LOLIVE	Project No.	2013-P45/H06
Scale	N.T.S	Design By	JOLIVE	Issue	CONSTRUCTION CERTIFICATE
Plan No.	6/6	Checked By			1

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JCL
DEVELOPMENT
SOLUTIONS

North Point

CABBAGE TREE HOUSE

FOR

JAN & GRAEME PAGE

88 CABBAGE TREE ROAD
BAYVIEW, NSW 2104

STRUCTURAL DRAWING LIST

- S01-01

COVER SHEET
- S01-02

STRUCTURAL NOTES - SHEET 1
- S01-03

STRUCTURAL NOTES - SHEET 2
- S02-01

FOOTING PLAN
- S02-05

FOOTING DETAILS
- S03-01

LEVEL 1 PLAN
- S03-02

LEVEL 1 - TOP AND BOTTOM REINFORCEMENT PLAN
- S04-01

LEVEL 2 PLAN
- S04-02

LEVEL 2 - TOP AND BOTTOM REINFORCEMENT PLAN
- S05-01

MAIN BEDROOM ROOF
- S05-02

MAIN BEDROOM ROOF - TOP AND BOTTOM REINFORCEMENT PLAN
- S06-01

ROOF TERRACE PLAN
- S06-02

ROOF - TOP AND BOTTOM REINFORCEMENT PLAN
- S10-01

STRUCTURAL DETAILS - SHEET 1
- S10-02

STRUCTURAL DETAILS - SHEET 2
- S10-03

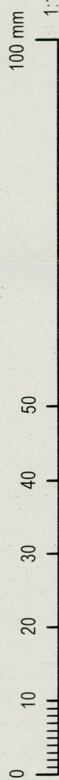
STRUCTURAL DETAILS - SHEET 3
- S10-04

STRUCTURAL DETAILS - SHEET 4
- S10-05

STRUCTURAL DETAILS - SHEET 5
- S10-06

STRUCTURAL DETAILS - SHEET 6
- S10-07

STRUCTURAL DETAILS - SHEET 7



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Accredited Building Surveyor BSB No. 0043

B	CONSTRUCTION CERT	K.P.	2403-15		
A	ISSUED FOR TENDER	L.J.	15-08-14		
No.	REVISION DESCRIPTION	DRAWN	DATE		

CONSTRUCTION CERTIFICATE

NOT TO BE USED FOR CONSTRUCTION

CERTIFICATE

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van der Meer Consulting

van der meer

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www.vandermeer.com.au
van der Meer (NSW) Pty Ltd
A.B.N. 56 152 266 961

PROJECT TITLE	CABBAGE TREE HOUSE
CLIENT	JAN & GRAEME PAGE
DRAWING TITLE	COVER SHEET

PROJECT LEADER		SIGNATURE	
R.M.			
DESIGNER			
R.M.			
DRAFTSPERSON		DATE	JULY 2014
L.J.		SHEET SIZE	
SCALE			
N/A			
USER No.	SY140-004	DRAWING No.	S01-01
		REVISION	B

SLAB ON GROUND NOTES

- S61 REFER STRUCTURAL NOTES FOR CONCRETE GRADE
- S62 SLAB TO BE POURED ON A VAPOUR BARRIER MEMBRANE OVER 30mm FCR OVER 120mm THICK CRUSHED ROCK TO SUBGRADE SPECIFICATION (COMPACT TO 100% MOD)
- S63 REFER TYPICAL SLAB ON GROUND SECTION
- S64 SLAB TO BE BUILT OFF COMPACTED SUBGRADE AT 4% CBR. CBR % TO BE VERIFIED BY GEOTECHNICAL CONSULTANT
- S64 CONCRETE SLUMP SHALL BE 60mm PRIOR TO ADDITION OF SUPERPLASTICIZER. 120mm SLUMP AFTER ADDITION OF SUPERPLASTICIZER
- S65 NO WATER TO BE ADDED TO THE CONCRETE MIX ON SITE
- S66 CURING OF CONCRETE TO BE IN ACCORDANCE WITH AS 3600 AND SHALL COMMENCE WITHIN 2 HOURS OF FINISHING OPERATIONS AND SHALL BE MAINTAINED FOR A MINIMUM OF 7 DAYS USING AN APPROPRIATE CURING METHOD. CURING COMPOUND OR CONTINUOUS POWDERING WITH POTABLE WATER
- S67 ALPHATIC ALCOHOL WHEN SHADE TEMPERATURE EXCEEDS 30°C SPRAY THE EXPOSED SURFACE OF CONCRETE WITH ALPHATIC ALCOHOL IMMEDIATELY FOLLOWING OPERATION WITH FINE FILM OF SPRAYED SURFACE HAS BEEN RE-WORKED
- S68 CONCRETE MAXIMUM DRYING SHRINKAGE TO BE 600 MICROSTRAIN AT 56 DAYS. ENSURE JOINT LOADS ARE 300mm MIN. FROM SLAB JOINTS (EDGE DISTANCE). MOVE JOINT IF REQUIRED TO ACHIEVE A 300mm EDGE DISTANCE
- S68 CONCRETE SAW CUTS (SA) SHALL COMMENCE WITHIN 4 TO 12 HOURS AFTER CONCRETE SETS

MASONRY

GENERAL

- M1 ALL WORKMANSHIP AND MATERIAL SHALL COMPLY WITH AS 3700 AND OTHER RELEVANT AUSTRALIAN STANDARDS
- M2 MINIMUM DURABILITY REQUIREMENTS
- | LOCATION | SALT ATTACK RESISTANCE GRADE OF MASONRY UNIT | DURABILITY CLASS OF WALL TIES AND BUILT-IN COMPONENTS |
|---|--|---|
| INTERIOR MASONRY | GENERAL PURPOSE M3 | R3 |
| EXTERIOR MASONRY ABOVE DAMP PROOF COURSE | GENERAL PURPOSE M3 | R3 |
| BELOW DAMP PROOF COURSE OR IN CONTACT WITH GROUND | EXPOSURE M4 | R4 |
- M3 PROVIDE TEMPORARY PROPPING TO WALLS AS REQUIRED TO MAINTAIN STABILITY DURING CONSTRUCTION, INCLUDING THE DESIGN OF TOM AND NEEDLING WHERE REQUIRED
- M4 OBTAIN ENGINEER'S APPROVAL BEFORE COMMENCING MASONRY WALLS ON SUSPENDED SLABS
- M5 NO STACKED OR MASONRY IN PALLETS TO BE PLACED ON SUSPENDED FLOORS WITHOUT PROPPING TO FORTHWORK ENGINEER'S APPROVAL
- M6 CUTTING AND CHASING OF MASONRY WALLS IS NOT PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER
- M7 MASONRY WALLS MUST NOT BE BUILT ON PROPPED SLABS
- M8 PROVIDE WATERPROOFING AND DRAINAGE TO BACK OF WALLS AS REQUIRED IN ACCORDANCE WITH ARCHITECT'S SPECIFICATION
- M9 BACK FILL RETAINING WALLS AFTER OBTAINING ENGINEERS APPROVAL WITH CLEAN GRANULAR FILL FREE FROM CLAY AND OTHER ORGANIC MATTER
- M9 ALL OPENINGS IN MASONRY ARE TO BE ADEQUATELY SUPPORTED BY EITHER REINFORCED MASONRY OR STEEL LIMITS

BRICKWORK AND UNREINFORCED CONCRETE BLOCKWORK

M10 MINIMUM STRENGTH REQUIREMENTS

WALL TYPE	STRENGTH OF MASONRY UNIT	MORTAR CLASS #
CLAY BRICKWORK	$f_{m} \geq 20 \text{ MPa}$	M3
CONCRETE BLOCKWORK (UNREINF)	$f_{m} \geq 10 \text{ MPa}$	M3

(REFER NOTE M2)

UNLESS A HIGHER CLASSIFICATION IS REQUIRED FOR DURABILITY

- M11 PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS AS FOLLOWS

WALL TYPE	JOINT WIDTH	MAX JOINT SPACING
CLAY BRICKWORK	20mm	1m
CONCRETE BLOCKWORK (UNREINF)	10mm	6m

- M12 PROVIDE BED JOINT REINFORCEMENT AT 500mm MAX VERTICAL SPACING AND 2 BED JOINTS ABOVE AND BELOW OPENINGS
- M13 PROVIDE SUP JOINTS BETWEEN THE TOP OF LOADBEARING SLIP JOINTS SHALL BE 2 LAYERS OF ALCOR OR GRANDIF GRAFTON SJ-100-50 / WALL WIDTH OR APPROVED EQUIVALENT UNLESS NOTED OTHERWISE
- M14 ENSURE TOP OF WALLS ARE FINISHED LEVEL AND SMOOTH
- M14 NONLOADBEARING WALLS SHALL BE KEPT 20mm CLEAR OF STRUCTURE OVER FIX TOP OF WALLS TO STRUCTURE OVER WITH MINIMUM 20mm CLEARANCE. PROVIDE 20mm CLEARANCE FROM CENTRES FOR BRICKWORK CENTRES FOR BLOCKWORK CAPABLE OF VERTICAL BUT NOT HORIZONTAL MOVEMENT

REINFORCED CONCRETE BLOCKWORK

- M15 CONCRETE BLOCKS SHALL BE BOREAL CORE FILL BLOCKS - DOUBLE U TYPE OR SIMILAR APPROVED
- M16 MINIMUM STRENGTH REQUIREMENTS
- | WALL TYPE | STRENGTH OF MASONRY UNIT | MORTAR CLASS # |
|----------------------------|-----------------------------|----------------|
| CONCRETE BLOCKWORK (REINF) | $f_{m} \geq 15 \text{ MPa}$ | M3 |
- # UNLESS A HIGHER CLASSIFICATION IS REQUIRED FOR DURABILITY (REFER NOTE M2)
- M17 CONCRETE BLOCKS SHALL BE BOREAL CORE FILL BLOCKS - DOUBLE U TYPE OR SIMILAR APPROVED
- M18 ALL PERPENDS SHALL BE FILLED WITH MORTAR EXCEPT WEEPHOLES
- M19 GROUT FOR CORE FILLING SHALL BE IN ACCORDANCE WITH AS3600, WITH THE FOLLOWING PROPERTIES
- STRENGTH GRADE S20
 - MAX AGGREGATE SIZE 10mm
 - SLUMP 230mm $\pm$ 25mm
 - MIN CEMENT CONTENT 300 kg/m³
- M20 PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS AS FOLLOWS

- M17 LAY BOTTOM COURSE OF BLOCKS ON FULL MORTAR BED
- M18 ALL PERPENDS SHALL BE FILLED WITH MORTAR EXCEPT WEEPHOLES
- M19 GROUT FOR CORE FILLING SHALL BE IN ACCORDANCE WITH AS3600, WITH THE FOLLOWING PROPERTIES
- STRENGTH GRADE S20
 - MAX AGGREGATE SIZE 10mm
 - SLUMP 230mm $\pm$ 25mm
 - MIN CEMENT CONTENT 300 kg/m³
- M20 PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS AS FOLLOWS

WALL TYPE	JOINT WIDTH	MAX JOINT SPACING
CONCRETE BLOCKWORK (REINF)	15mm	12m

- M21 AT CORNERS, CONTROL JOINTS SHALL BE WITHIN HALF THE SPECIFIED JOINTS SPACING FROM THE CORNER. JOINTS SHALL BE SEALED WITH AN APPROVED FLEXIBLE SEALANT
- M21 PROVIDE CLEANOUT OPENINGS AT THE BASE OF ALL REINFORCED CONCRETE WALLS. REMOVE ALL INJURY PRODUCTIONS BEFORE GROUTING
- M22 ADDITIONAL CLEANOUT OPENINGS SHALL BE PROVIDED ABOVE EACH HORIZONTAL POUR BREAK
- M22 MAXIMUM HEIGHT OF POUR FOR GROUTING SHALL NOT EXCEED 3.8m FOR 190 BLOCKWORK, AND 0.8m FOR 140 BLOCKWORK
- M23 STOP POUR 50mm BELOW TOP OF BLOCK TO PROVIDE KEY FOR SUBSEQUENT POUR
- M23 GROUT SHALL BE THOROUGHLY COMPACTED IN THE CORES BY RODDING OR MECHANICAL VIBRATION
- M24 REINFORCEMENT SHALL BE SECURELY TIED IN POSITION WHERE REINFORCEMENT IS NOT TO BE EXPOSED. PROVIDE PROTECTIVE CLEAR COVER TO THE FACE OF THE SHEL AS NOMINATED ON THE DRAWINGS

STRUCTURAL STEELWORK

GENERAL

- S1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100 AND OTHER RELEVANT AUSTRALIAN STANDARDS
- S2 THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS REQUIRED TO MAINTAIN THE STRUCTURE IN A STABLE CONDITION DURING ALL STAGES OF CONSTRUCTION
- S3 ALL CONNECTIONS TO BE IN ACCORDANCE WITH ASS - STANDARDISED STRUCTURAL CONNECTIONS. MINIMUM CONNECTION TO BE 10 PLATE, 2 L200 8 8/8 BOLTS UNLESS NOTED OTHERWISE
- S4 IN ADDITION TO THE DETAILS SHOWN ON THE STRUCTURAL DRAWINGS, PROVIDE ADDITIONAL CLEATS AND ATTACHMENTS AS DETAILED BY THE ARCHITECT
- S5 ALL BEAM MEMBERS SHALL BE FABRICATED AND ERRECTED WITH NATURAL CAMBER UP
- S6 THE ENDS OF ALL HOLLOW SECTIONS SHALL BE SEALED WITH 60mm PLATES UNLESS NOTED OTHERWISE
- S7 ALL BEAMS AND LINES SHALL BE GROUTED WITH AN APPROVED GROUT AND CURING COMPOUND PRIOR TO A MINIMUM COMPRESSIVE STRENGTH OF 40 MPa AT 7 DAYS
- S8 THICKNESS OF GROUT SHALL BE 20mm UNLESS NOTED OTHERWISE
- S8 ROOF BRACING (INCLUDING DIAGONAL STRUT BRACING) SHALL BE SUPPORTED FROM EVERY 2ND PURLIN WITH HOOK BOLTS FIXED THROUGH THE PURLIN WEB

STEEL PROPERTIES

S9 STEEL SHALL COMPLY WITH THE FOLLOWING UNLESS NOTED OTHERWISE

COMPONENT	AUS STAND	GRADE
HOT ROLLED SECTIONS (UB, UC, BT, CT, PFC, TB, EA, UA)	AS 3678.1	300 PLUS
WELDED SECTIONS (HSB, SHS, RHS)	AS 3678.2	300 PLUS
HOLLOW SECTIONS (CHS, SHS, RHS)	AS 1163	C350
PLATE AND FLOORPLATE	AS 3678	250
HOT ROLLED BARS (FLATS, SQUARES AND ROUNDS)	AS 3678.1	300 PLUS

- S10 FOR EACH BATCH OF STEEL SUPPLIED, THE CONTRACTOR SHALL OBTAIN A CERTIFICATE OF COMPLIANCE FROM THE STEEL SUPPLIER CERTIFYING COMPLIANCE WITH THE RELEVANT AUSTRALIAN STANDARDS
- S10 NOTE: THE CONTRACTOR SHALL NOT SUBSTITUTE ALTERNATIVE GRADES OF STEEL WITHOUT APPROVAL OF VAN DER MEER CONSULTING. REDESIGN TO ALTERNATIVE GRADES SHALL BE AT THE CONTRACTOR'S EXPENSE

BOLTING

S11 BOLTS SHALL COMPLY WITH THE FOLLOWING

CATEGORY	AUS STAND	BOLT GRADE	METHOD OF INSTALLATION (IN ACCORD WITH AS 4100)
4.6S	AS 1111	4.6	SNUG TIGHT
8.8S	AS 1252	8.8	SNUG TIGHT
8.8TB	AS 1252	8.8	FULL TENSORING
8.8TF	AS 1252	8.8	FULL TENSORING UNLESS TO BE FREE FROM APPLIED FINISHES

- S12 FOR EACH BATCH OF BOLTS, THE CONTRACTOR SHALL OBTAIN A MANUFACTURER'S TEST CERTIFICATE AND A COMPLIANCE CERTIFICATE FROM THE STEEL SUPPLIER CERTIFYING COMPLIANCE WITH THE RELEVANT AUSTRALIAN STANDARD
- S13 UNLESS NOTED OTHERWISE
- ALL BOLTS SHALL BE M20
 - ALL BOLTS (EXCEPT HOLDING DOWN BOLTS) SHALL BE CATEGORY 8.8S
 - HOLDING DOWN BOLTS SHALL BE CATEGORY 4.6S UNLESS NOTED OTHERWISE
 - OVERSIZE FOR BOLTS WASHERS SHALL BE GALVANIZED
 - OVERSIZE FOR BOLTS WASHERS SHALL NOT BE USED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER

- S14 PROVIDE 65 x 65 x 5mm THICK HOT DIPPED GALVANISED WASHERS AT CONNECTIONS WHERE 40mm x 12mm SLOTTED HOLES ARE REQUIRED
- PROVIDE 75 x 75 x 6mm THICK HOT DIPPED GALVANISED WASHERS AT CONNECTIONS WHERE 40mm oversized HOLES ARE REQUIRED

- S15 ALL BOLTS SHALL BE FITTED WITH APPROPRIATE WASHERS IN ACCORDANCE WITH AS 1252

WELDING

- S16 ALL WELDING SHALL BE IN ACCORDANCE WITH AS 1554
- S17 UNLESS NOTED OTHERWISE, ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS
- ALL BUTT WELDS SHALL BE COMPLETE PENETRATION BUTT WELDS
 - ALL WELDS SHALL BE CATEGORY SP
 - ELECTRODES SHALL BE E46XX/60XX
- S18 ALL WELDS SHALL BE MADE IN THE SHOP EXCEPT WHERE SITE WELDS ARE SHOWN ON THE DRAWING OR OTHERWISE APPROVED BY THE ENGINEER
- S19 WHERE USED IN AN EXTERNAL APPLICATION, WELD AND WELDING TO HAVE A CONTINUOUS SSAM WELD IN BETWEEN
- S20 ALL WELDS SHALL BE SUBJECT TO INSPECTION AND TESTING IN ACCORDANCE WITH AS 1554. THE EXTENT OF NON-DESTRUCTIVE EXAMINATION SHALL NOT BE LESS THAN THE FOLLOWING

WELD CAT	WELD TYPE	EXTENT OF NON-DESTRUCTIVE EXAMINATION
		VISUAL SCANNING VISUAL EXAMINATION OTHER METHODS
GP	ALL	100% 10% NIL
SP	FILLET	100% 25% NIL
SP	BUTT	100% 50% NIL

PROTECTIVE COATINGS

- S21 ALL STEELWORK SHALL BE GIVEN A PROTECTIVE COATING IN ACCORDANCE WITH AS 2312
- S22 EXTERIOR ATMOSPHERIC CORROSION CATEGORY C
- S23 REFER TO ARCHITECTURAL SPECIFICATIONS AND REQUIREMENTS FOR ALL DECORATIVE OR VISIBLE STEELWORK
- S24 UNLESS OTHERWISE APPROVED, COATING SYSTEMS FOR NON-DECORATIVE STEELWORK SHALL BE AS FOLLOWS

INTERIOR STEELWORK SURFACE PREPARATION PRIMER	ABRASIVE BLAST CLEAN CLASS 2 H 75 μ m DULUX LUXAPRIME ZP
EXTERIOR STEELWORK SURFACE PREPARATION PRIMER	ABRASIVE BLAST CLEAN CLASS 2 H 75 μ m DULUX AQUAGALV
STEELWORK BUILT INTO MASONRY (EG LINTELS, STIFFENERS)	HOT DIP GALVANISED - HDG600

- COURTY WITH ALL MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS AND CONFIRM COMPATIBILITY OF PRIMERS WITH ANY TOP COATS PROPOSED BY THE ARCHITECT
- S25 WHERE NOMINATED, GALVANISING SHALL BE IN ACCORDANCE WITH TABLE 1 OF AS 4680
- S26 ANY FURTHER WELDING JOINTS ARE TO BE PAINTED WITH 2 COATS OF APPROVED GALVANISED/PAINT

- S27 IN ADDITION TO THE FINISH SPECIFIED, STEELWORK IN CONTACT WITH THE GROUND, OR BELOW SLAB ON FILL, IS TO BE COATED WITH INTERZONE 954 MODIFIED EPOXY OR APPROVED EQUIVALENT, TO A MINIMUM THICKNESS OF 50 μ m
- S28 POOL WALLS AND FLOOR TO BE CAST AGAINST FIRM NATURAL SOIL OR WELL CONSOLIDATED FILL OF SAFE BEARING VALUE 200 kPa
- S29 ALL CONCRETE TO BE PRESSURE APPLIED BY AN APPROVED SHOTCRETE METHOD WITH A COMPRESSIVE STRENGTH $f_{c'} \geq 25 \text{ MPa}$ AT 28 DAYS
- S30 REINFORCEMENT TO BE RIGIDLY SECURED AND LOCATED AS INDICATED
- S31 ALL CORNERS IN PLANT TO HAVE 300mm RADIUS UNLESS NOTED OTHERWISE
- S32 ENGINEER TO BE NOTIFIED IF GROUND WATER IS ENCOUNTERED DURING EXCAVATION
- S33 ADEQUATE GROUND WIRES TO BE INSTALLED TO ESTABLISH THE THICKNESS AND SURFACE PLANES OF SHOTCRETE BUILD-UP
- S34 POOL IS DESIGNED TO PROJECT A MAXIMUM OF 120mm ABOVE NATURAL GROUND
- S35 CLEAR COVER TO REINFORCEMENT

SWIMMING POOL

- P1 POOL WALLS AND FLOOR TO BE CAST AGAINST FIRM NATURAL SOIL OR WELL CONSOLIDATED FILL OF SAFE BEARING VALUE 200 kPa
- P2 ALL CONCRETE TO BE PRESSURE APPLIED BY AN APPROVED SHOTCRETE METHOD WITH A COMPRESSIVE STRENGTH $f_{c'} \geq 25 \text{ MPa}$ AT 28 DAYS
- P3 REINFORCEMENT TO BE RIGIDLY SECURED AND LOCATED AS INDICATED
- P4 ALL CORNERS IN PLANT TO HAVE 300mm RADIUS UNLESS NOTED OTHERWISE
- P5 ENGINEER TO BE NOTIFIED IF GROUND WATER IS ENCOUNTERED DURING EXCAVATION
- P6 ADEQUATE GROUND WIRES TO BE INSTALLED TO ESTABLISH THE THICKNESS AND SURFACE PLANES OF SHOTCRETE BUILD-UP
- P7 POOL IS DESIGNED TO PROJECT A MAXIMUM OF 120mm ABOVE NATURAL GROUND
- P8 CLEAR COVER TO REINFORCEMENT
- P9 WALKWAY FLOOR 30mm TO WATER FACE 50mm TO SOIL FACE 75mm TO SOIL FACE 100mm TO WATER FACE 150mm TO WATER FACE 200mm TO WATER FACE 250mm TO WATER FACE 300mm TO WATER FACE 350mm TO WATER FACE 400mm TO WATER FACE 450mm TO WATER FACE 500mm TO WATER FACE 550mm TO WATER FACE 600mm TO WATER FACE 650mm TO WATER FACE 700mm TO WATER FACE 750mm TO WATER FACE 800mm TO WATER FACE 850mm TO WATER FACE 900mm TO WATER FACE 950mm TO WATER FACE 1000mm TO WATER FACE 1050mm TO WATER FACE 1100mm TO WATER FACE 1150mm TO WATER FACE 1200mm TO WATER FACE 1250mm TO WATER FACE 1300mm TO WATER FACE 1350mm TO WATER FACE 1400mm TO WATER FACE 1450mm TO WATER FACE 1500mm TO WATER FACE 1550mm TO WATER FACE 1600mm TO WATER FACE 1650mm TO WATER FACE 1700mm TO WATER FACE 1750mm TO WATER FACE 1800mm TO WATER FACE 1850mm TO WATER FACE 1900mm TO WATER FACE 1950mm TO WATER FACE 2000mm TO WATER FACE 2050mm TO WATER FACE 2100mm TO WATER FACE 2150mm TO WATER FACE 2200mm TO WATER FACE 2250mm TO WATER FACE 2300mm TO WATER FACE 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WATER FACE 32250mm TO WATER FACE 323

NOTES:

- REFER DRG No. S01-02 AND S01-03 FOR STRUCTURAL NOTES
- FOR ALL SET OUT DIMENSIONS LEVELS SET DOWNS HOBS, KERBS AND FALLS REFER TO ARCHITECT'S DRAWINGS

LEGEND:

Q / DENOTES CONCRETE PIER TYPE
REFER TO PILE SCHEDULE ON DRAWING No. S02-05 FOR DETAILS

SF _ DENOTES STRIP FOOTING TYPE
REFER DRAWING No. S02-05 FOR DETAILS

WALL PLAN LEGEND:

==== DENOTES LOABEARING BRICKWORK OVER

===== DENOTES LOABEARING BLOCKWORK OVER

1

2

3

4

5

A

B

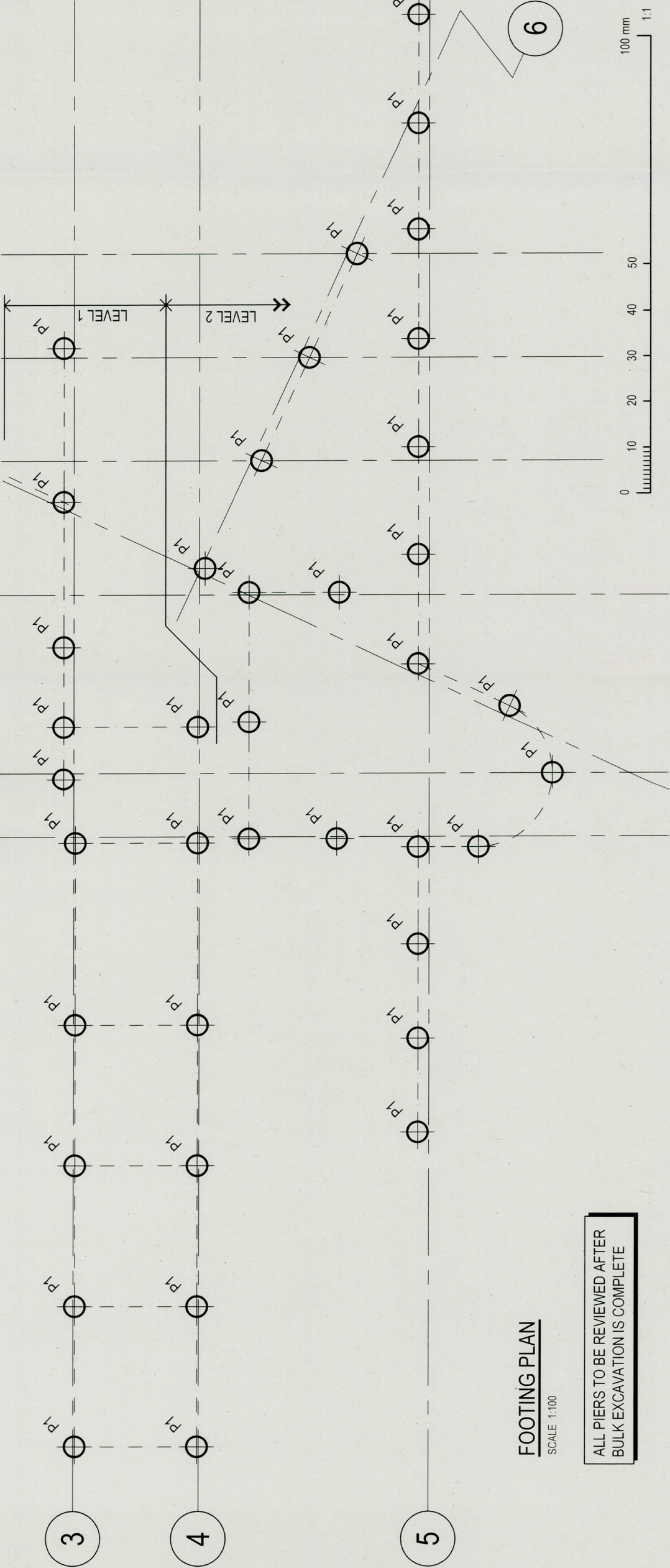
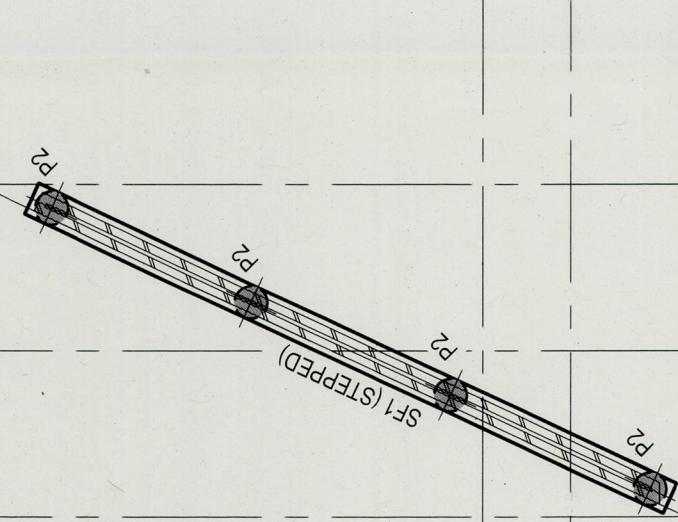
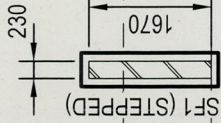
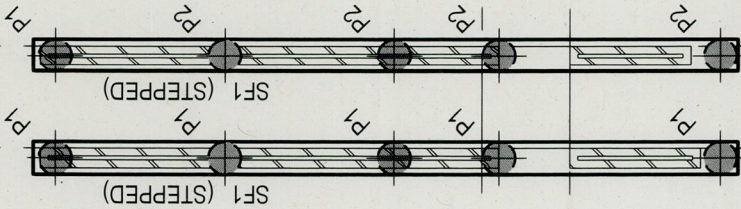
C

D

E

F

G



FOOTING PLAN
SCALE 1:100

ALL PIERS TO BE REVIEWED AFTER
BULK EXCAVATION IS COMPLETE

Peter . Boyce & Associates
Ph: 0412 928 500

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B	CONSTRUCTION CERT.	K.P.	24-03-15
A	ISSUED FOR TENDER	L.J.	15-08-14
No.	REVISION DESCRIPTION	DRAWN	DATE

DRAWING STATUS

CONSTRUCTION CERTIFICATE
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A.B.N. 56 156 266 901
www.vandermeer.com.au

PROJECT TITLE

CABBAGE TREE HOUSE

CLIENT

JAN & GRAEME PAGE

DRAWING TITLE

FOOTING PLAN



PROJECT LEADER

R.M.

DESIGNER

R.M.

DRAFTSPERSON

L.J.

SCALE

1:100

SHEET SIZE

A3

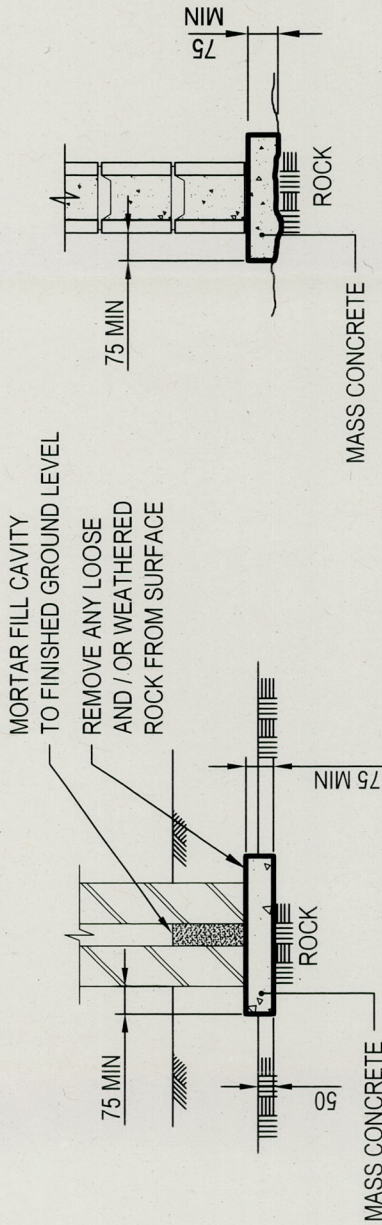
DATE

JULY 2014

REVISION

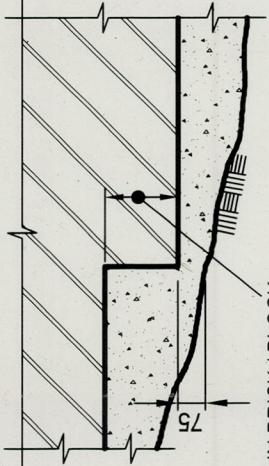
SY140-004 S02-01 B

- NOTES:
- REFER DRG No. SY1-02 AND SY1-03 FOR STRUCTURAL NOTES
 - FOR ALL SET OUT DIMENSIONS LEVELS SET DOWNS HOBBS, KERBS AND FALLS REFER TO ARCHITECT'S DRAWINGS



BRICKWORK

BLOCKWORK

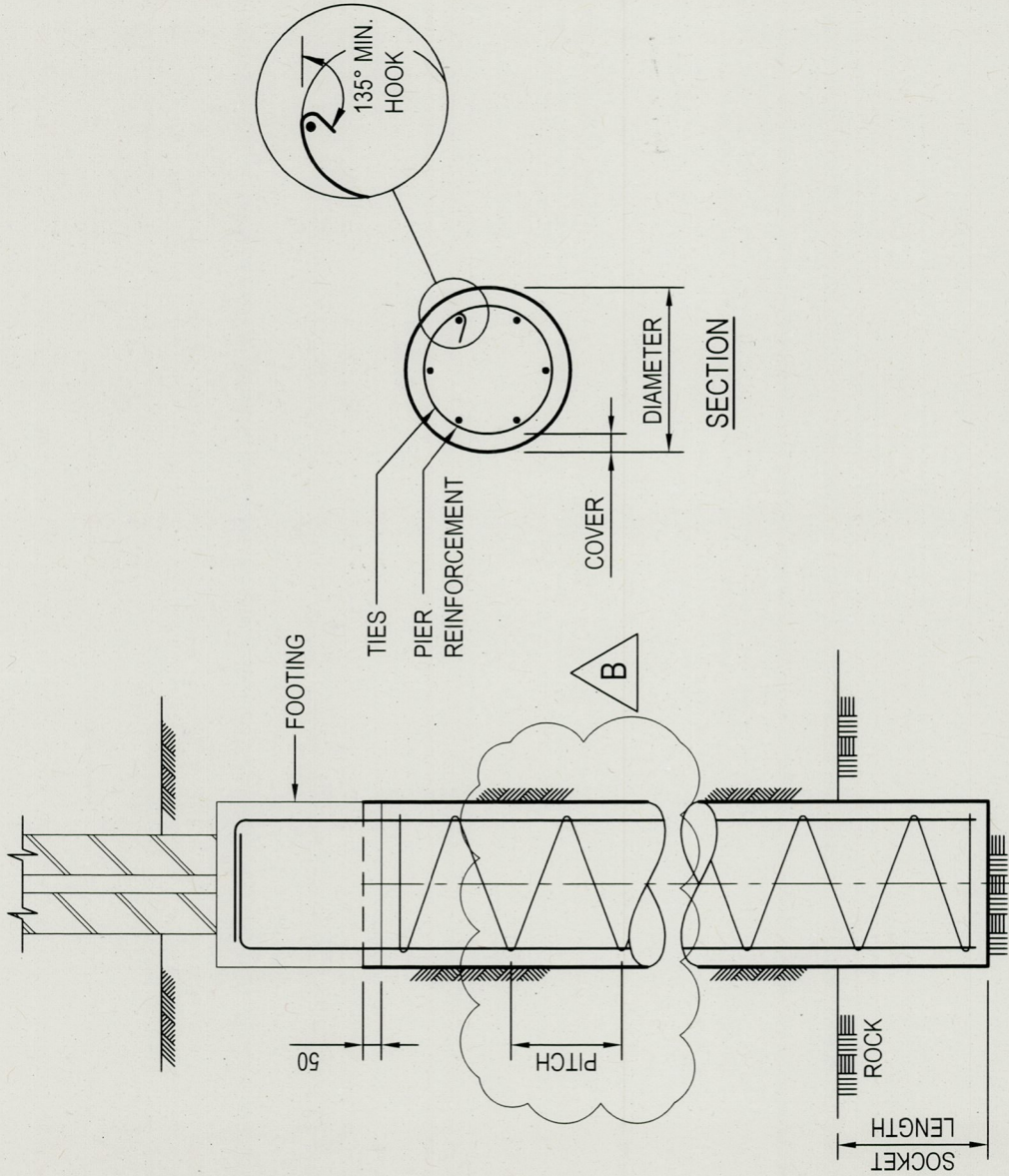


STEP IN BRICK / BLOCK
COURSES TO SUIT
2 C/S MAX - BLOCK
3 C/S MAX - BRICK

ELEVATION

LEVELLING STRIP DETAIL

SCALE 1:20

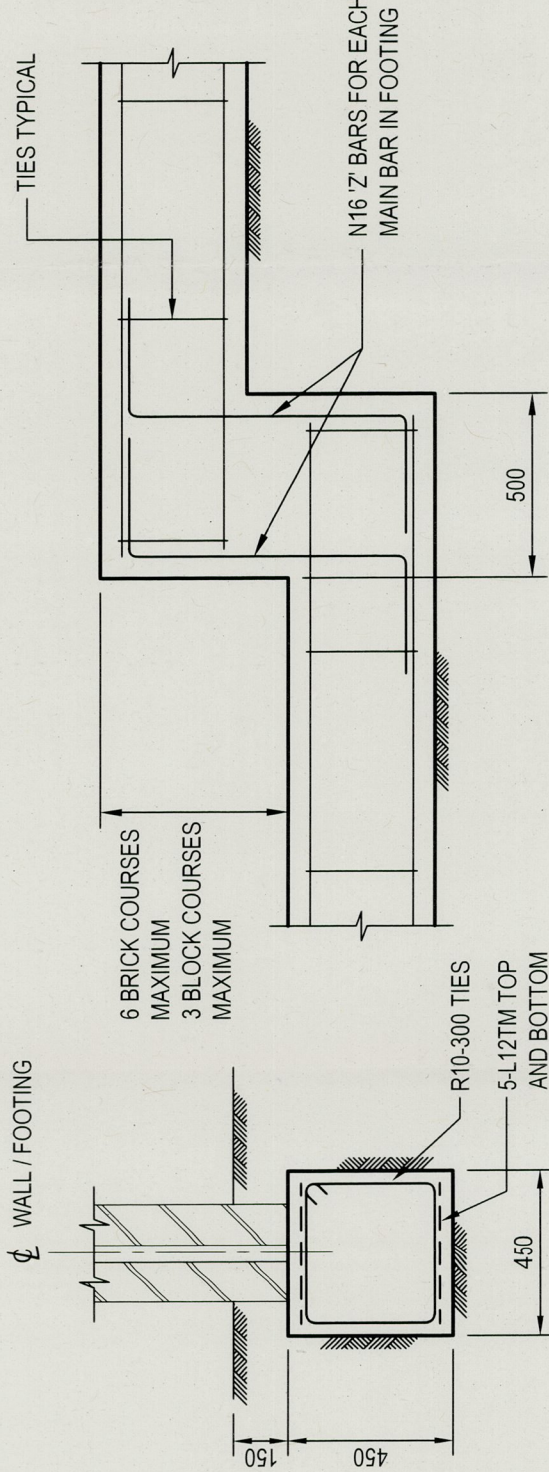


ELEVATION

TYPICAL PIER DETAIL

SCALE 1:20

PIER SCHEDULE				
PILE TYPE	P1	P2		
DIAMETER	450 Ø	450 Ø		
REINFORCEMENT	6-N16	6-N16		
TIES (SPIRAL)	R10 - 300 PITCH	R10 - 300 PITCH		
ALLOWABLE BEARING ON SANDSTONE	1250 kPa	2250 kPa		
ALLOWABLE LOAD	200 kN	350 kN		
COVER	50 mm	50 mm		
SOCKET LENGTH	1000 mm	1000 mm		



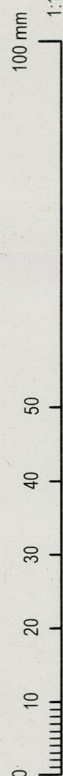
STRIP FOOTING - SF1

SCALE 1:20

TYPICAL STEP IN THICKENINGS AND STRIP

FOOTINGS

SCALE 1:20



1:1

Peter J Boyce & Associates
Ph: 0412 928 500
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B	CONSTRUCTION CERT.	K.P.	24.03.15		
A	ISSUED FOR TENDER	L.J.	15-08-14		
No.	REVISION DESCRIPTION	DRAWN	DATE		

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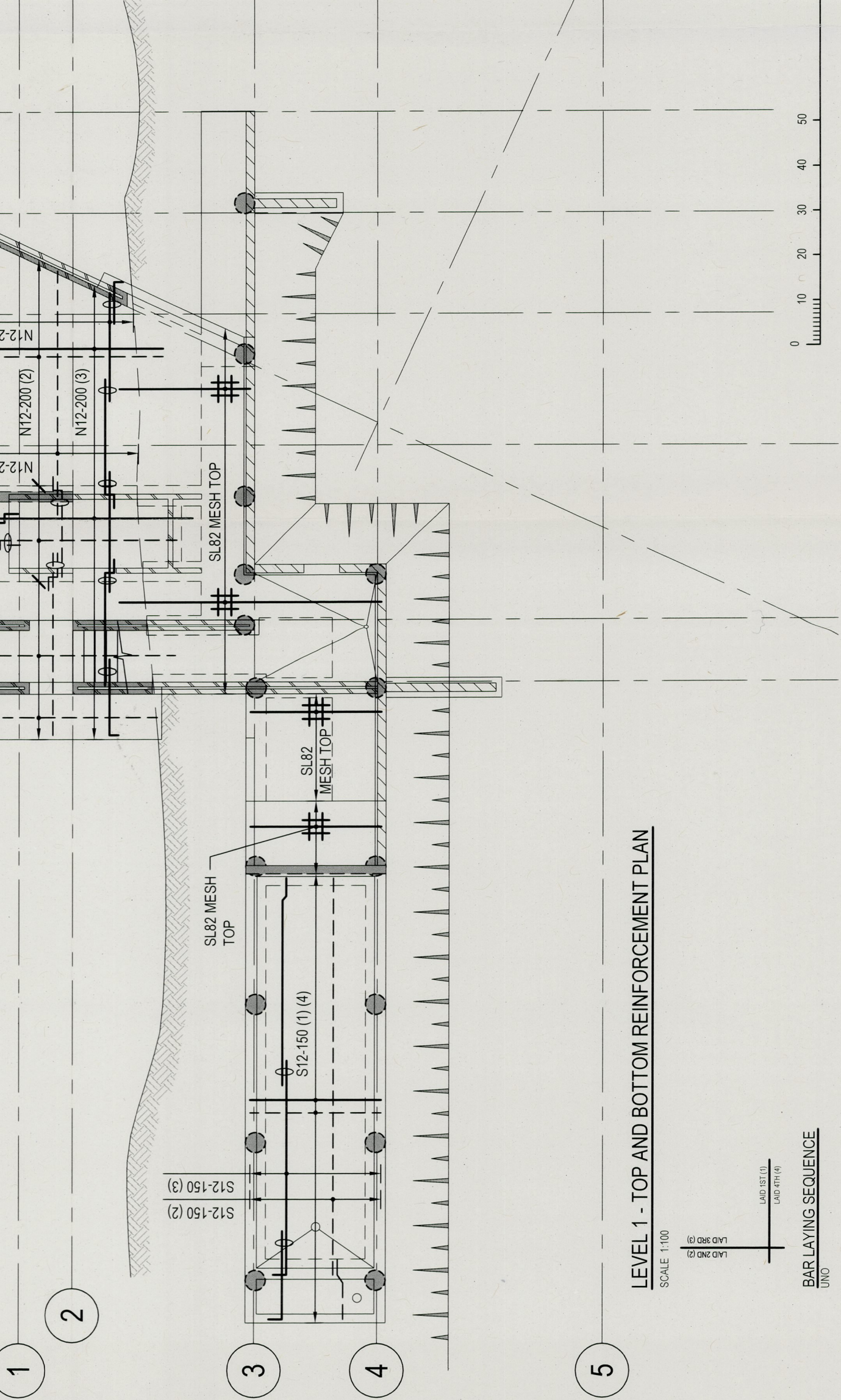
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van der meer
LEVEL 3, 38 CHANDOS STREET
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www.vandermeer.com.au
van der Meer (NSW) Pty Ltd

PROJECT TITLE	CABBAGE TREE HOUSE
CLIENT	JAN & GRAEME PAGE
DRAWING TITLE	FOOTING DETAILS

PROJECT LEADER		SIGNATURE	
R.M.			
DESIGNER			
R.M.			
DRAFTSPERSON			
L.J.			
DATE	JULY 2014		
SHEET SIZE	A3		
SCALE	1:20		
DRAWING NO.	SY140-004	REVISION	B

NOTES

- REFER DRG No. S01-02 AND S01-03 FOR STRUCTURAL NOTES
- FOR ALL SET OUT DIMENSIONS LEVELS, SET DOWNS, HOBS, KERBS AND FALLS, REFER TO ARCHITECT'S DRAWINGS



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Ph: 0412 928 500

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Accredited Building Surveyor BSB No. 0043

A		CONSTRUCTION CERT.	K.P.	24-03-15
No.	REVISION DESCRIPTION	DRAWN	DATE	

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www.vandermeer.com.au
van der Meer (NSW) Pty Ltd
A.B.N. 56 158 266 501

PROJECT TITLE	CABBAGE TREE HOUSE
CLIENT	JAN & GRAEME PAGE
DRAWING TITLE	LEVEL 1 PLAN - TOP AND BOTTOM REINFORCEMENT PLAN
PROJECT LEADER	R.M.
DESIGNER	R.M.
DRAFTSPERSON	L.J.
DATE	JULY 2014
SHEET SIZE	A3
SCALE	1:100
DRAWING NO.	SY140-004
REVISION	S03-02 A

NOTES:

- REFER DRG. No. S10-02 AND S10-03 FOR STRUCTURAL NOTES
- FOR ALL SET OUT DIMENSIONS, LEVELS, SET DOWNS, HOBS, KERBS AND FALLS, REFER TO ARCHITECT'S DRAWINGS

LEGEND:

UB_ DENOTES UPTURN BEAM TYPE
REFER SECTIONS FOR DETAILS

S' DENOTES STEEL COLUMN TYPE
REFER SECTIONS FOR DETAILS

172 DENOTES SLAB / BEAM THICKNESS

RW_ DENOTES RETAINING WALL TYPE
REFER SECTIONS FOR DETAILS

EB_ DENOTES EDGE BEAM TYPE
REFER SECTIONS FOR DETAILS

IT_ DENOTES INTERNAL THICKENING TYPE
REFER SECTIONS FOR DETAILS

IJ DENOTES ISOLATION JOINT
REFER SECTIONS FOR DETAILS

WALL PLAN LEGEND:

/// DENOTES LOABEARING BRICKWORK OVER

//// DENOTES LOABEARING BLOCKWORK OVER

===== DENOTES LOABEARING WALL UNDER

REFER TO PLAN OF LEVEL BELOW FOR WALL TYPE

Peter J Boyle & Associates
Ph: 0412 928 500

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Accredited Building Surveyor BSB No. 0043

D	VERT CUT NOTE REMOVED	L.J.	25-03-15
C	CONSTRUCTION CERT.	K.P.	24-03-15
B	ISSUED FOR TENDER	L.J.	17-10-14
A	ISSUED FOR TENDER	L.J.	15-08-14
No.	REVISION DESCRIPTION	DRAWN	DATE

DRAWING STATUS

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van der Meer Consulting

van der meer

LEVEL 2 OF CHANGING STREET
ST LEONARD'S NSW 2055
Telephone 612-8456 0437 Fax 612-8456 1370 A.B.N. 56 156 266 301

PROJECT TITLE

CABBAGE TREE HOUSE

CLIENT

JAN & GRAEME PAGE

DRAWING TITLE

LEVEL 2 PLAN



PROJECT LEADER

R.M.

DESIGNER

R.M.

DRAFTSPERSON

L.J.

DATE

JULY 2014

SHEET SIZE

A3

SCALE

1:100

JOB No

SY140-004

DRAWING No

S04-01

REVISION

D

LEVEL 2 PLAN

SCALE 1:100

FALLS TO
ARCHITECTS DETAILS

150 THICK SLAB FOR RAINWATER TANK

UNDERGROUND RAINWATER TANK
REFER TO ARCHITECT FOR DETAILS

RW1

RW2

RW3

EB1

SC1

IT1

SC3

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

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SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

LEVEL 2 PLAN

SCALE 1:100

FALLS TO
ARCHITECTS DETAILS

150 THICK SLAB FOR RAINWATER TANK

UNDERGROUND RAINWATER TANK
REFER TO ARCHITECT FOR DETAILS

RW1

RW2

RW3

EB1

SC1

IT1

SC3

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

IT1

SC1

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SC1

IT1

SC1

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IT1

SC1

IT1

SC1

NOTES:

- REFER DRG No. S01-02 AND S01-03 FOR STRUCTURAL NOTES
- FOR ALL SET OUT DIMENSIONS, LEVELS, SET DOWNS, HOBS, KERBS AND FALLS REFER TO ARCHITECT'S DRAWINGS

Peter J Boyce & Associates

Ph: 0412 928 500

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DRAWING STATUS	
A	CONSTRUCTION CERT.
No.	REVISION DESCRIPTION
DRAWING STATUS	
K.P. 24-03-15	
DATE	

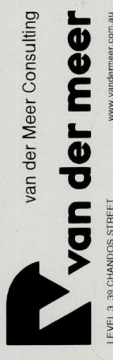
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A.B.N. 56 152 266 901

PROJECT TITLE
CABBAGE TREE HOUSE

CLIENT
JAN & GRAEME PAGE

DRAWING TITLE
LEVEL 2 PLAN - TOP AND BOTTOM REINFORCEMENT PLAN

PROJECT LEADER
R.M.

DESIGNER
R.M.

DRAFTSPERSON
L.J.

DATE
JULY 2014

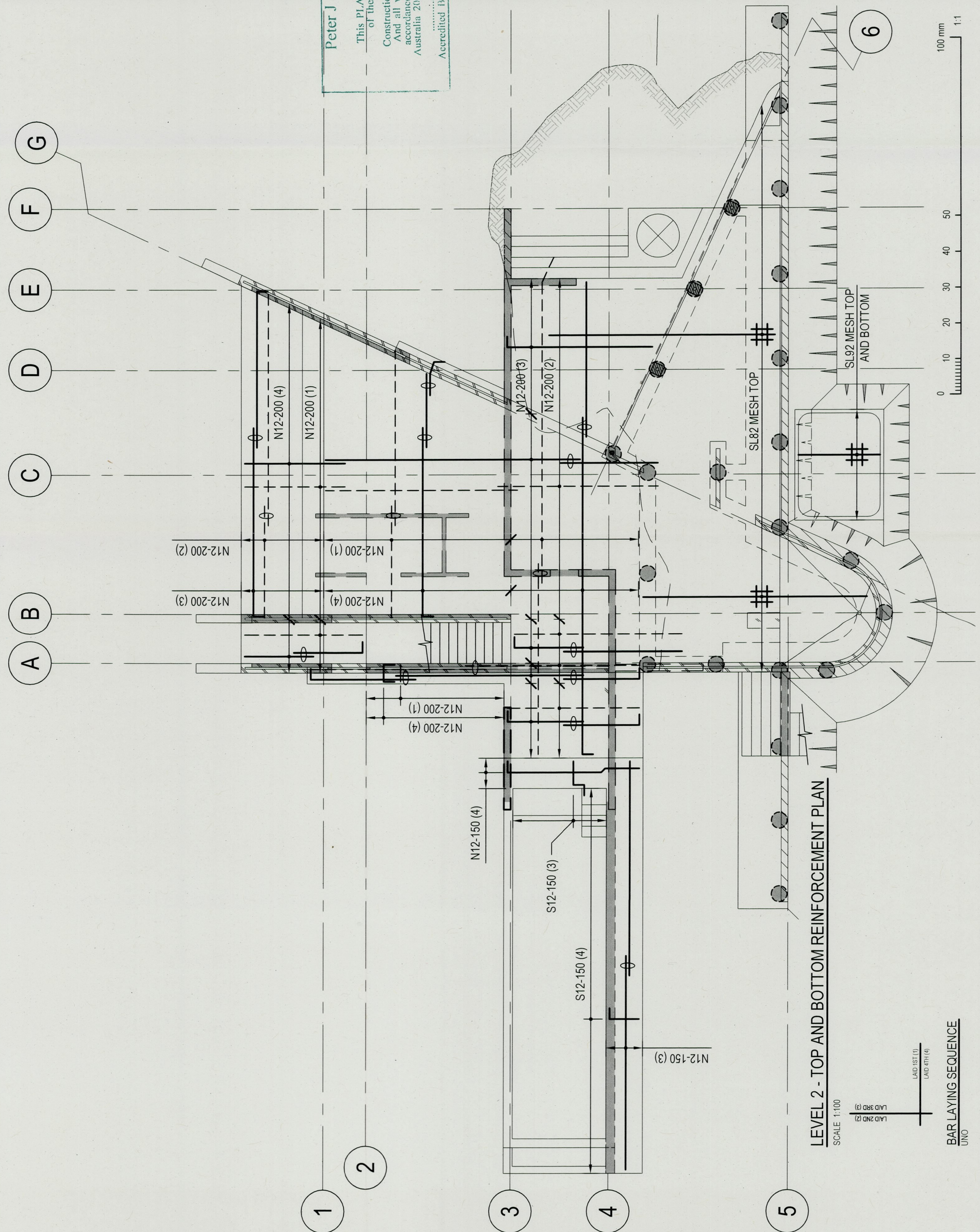
SHEET SIZE
A3

SCALE
1:100

JOB No.
SY140-004

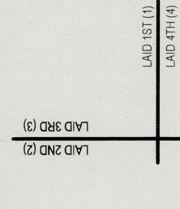
DRAWING No.
S04-02

REVISION
A



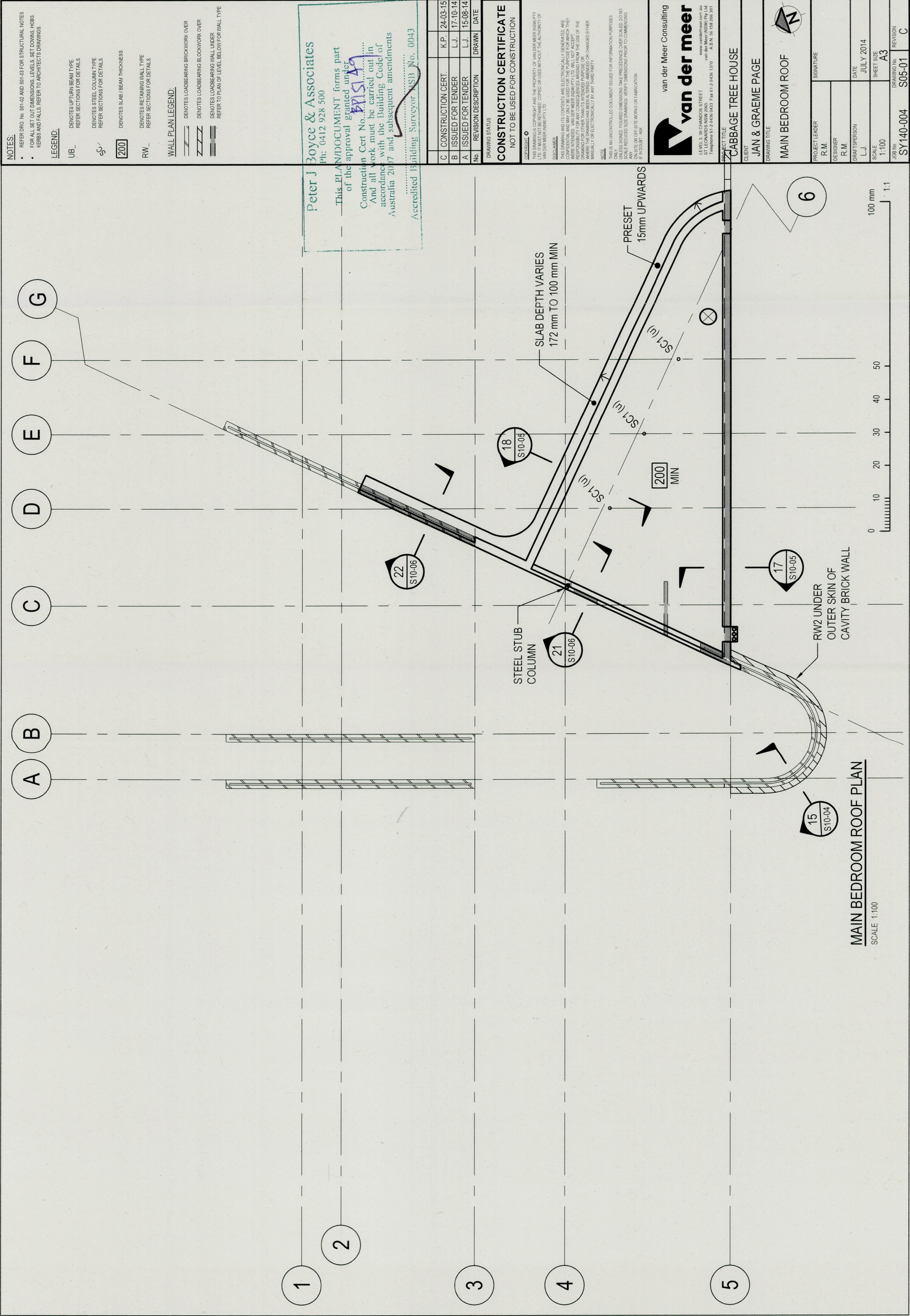
LEVEL 2 - TOP AND BOTTOM REINFORCEMENT PLAN

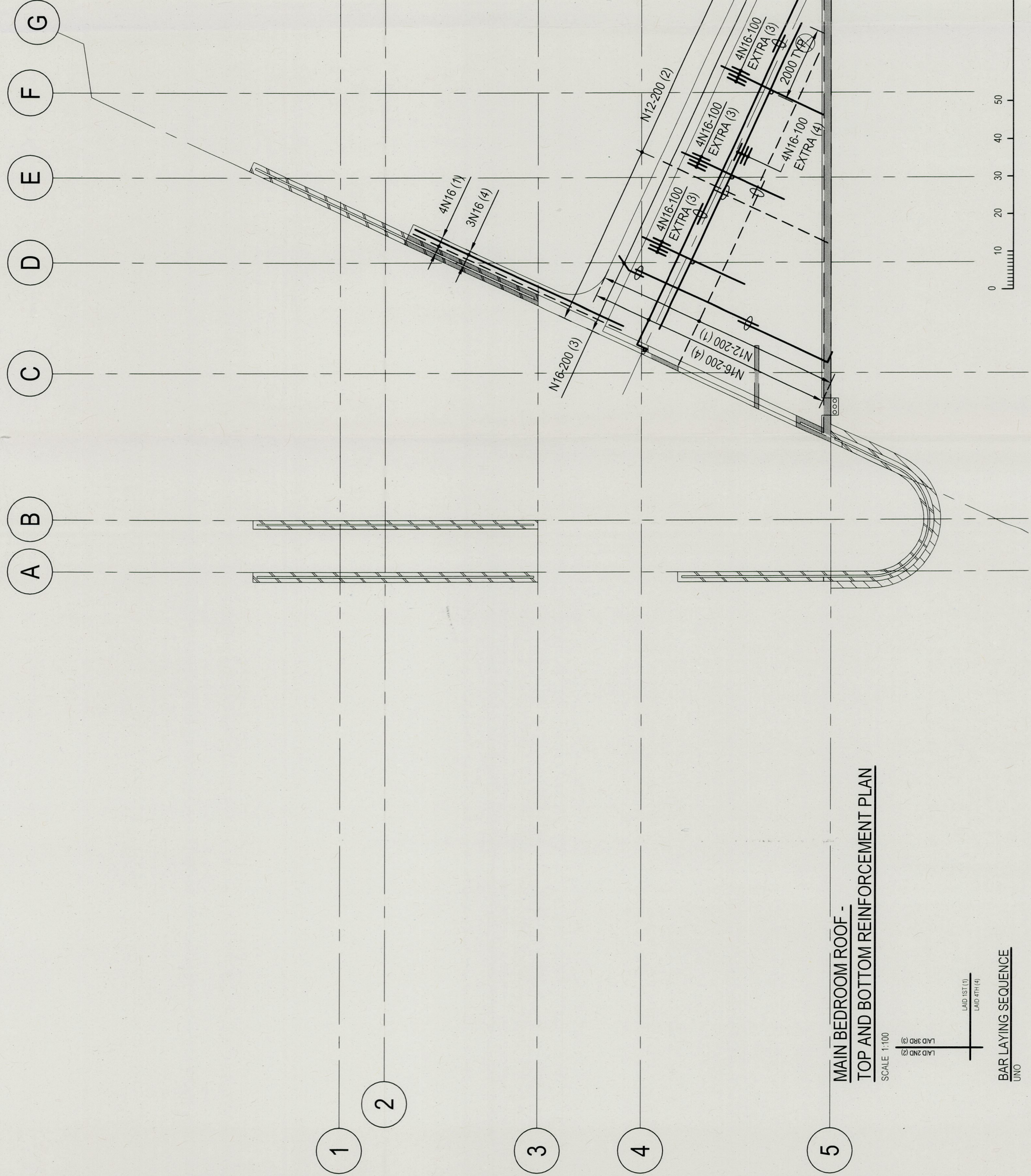
SCALE 1:100



BAR LAYING SEQUENCE

UNO





NOTES:

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- FOR ALL SET OUT DIMENSIONS, LEVELS, SET DOWNS, HOBS, KERBS AND FALLS, REFER TO ARCHITECT'S DRAWINGS

Peter J Boyce & Associates

Ph: 0412 928 500

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No.	REVISION DESCRIPTION	DRAWN	DATE
A	CONSTRUCTION CERT.	K.P.	24-03-15

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van der Meer Consulting

van der meer

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A.B.N. 56 152 265 301

PROJECT TITLE

CABBAGE TREE HOUSE

CLIENT

JAN & GRAEME PAGE

DRAWING TITLE

MAIN BEDROOM ROOF - TOP & BOTTOM REINFORCEMENT PLAN

PROJECT LEADER	DESIGNER	DRAFTSPERSON	DATE	SHEET SIZE	SCALE
R.M.	R.M.	L.J.	JULY 2014	A3	1:100

JOB No.

SY140-004

DRAWING No.

S05-02

REVISION

A

NOTES:

- REFER DRG. No. S01-02 AND S01-03 FOR STRUCTURAL NOTES
- FOR ALL SET OUT DIMENSIONS, LEVELS, SET DOWNS, HOBBS, KERBS AND FALLS, REFER TO ARCHITECT'S DRAWINGS

LEGEND:

UB DENOTES UPTURN BEAM TYPE
REFER SECTIONS DETAILS

200 DENOTES SLAB BEAM THICKNESS

WALL PLAN LEGEND:

--- DENOTES LOABEARING BRICKWORK OIER

ZZZZ DENOTES LOABEARING BLOCKWORK OIER

--- DENOTES LOABEARING WALL UNDER

REFER TO PLAN OF LEVEL BELOW FOR WALL TYPE

Peter J Boyce & Associates
Ph: 0412 928 500

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C	CONSTRUCTION CERT.	K.P.	24-03-15
B	ISSUED FOR TENDER	L.J.	17-10-14
A	ISSUED FOR TENDER	L.J.	15-08-14
No.	REVISION DESCRIPTION	DRAWN	DATE

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Telephone 81 2 8426 0437 Fax 61 2 8426 1370
A.B.N. 56 156 266 301

PROJECT TITLE
CABBAGE TREE HOUSE

CLIENT
JAN & GRAEME PAGE

DRAWING TITLE
ROOF TERRACE PLAN

PROJECT LEADER
R.M.

DESIGNER
R.M.

DRAFTSPERSON
L.J.

DATE
JULY 2014

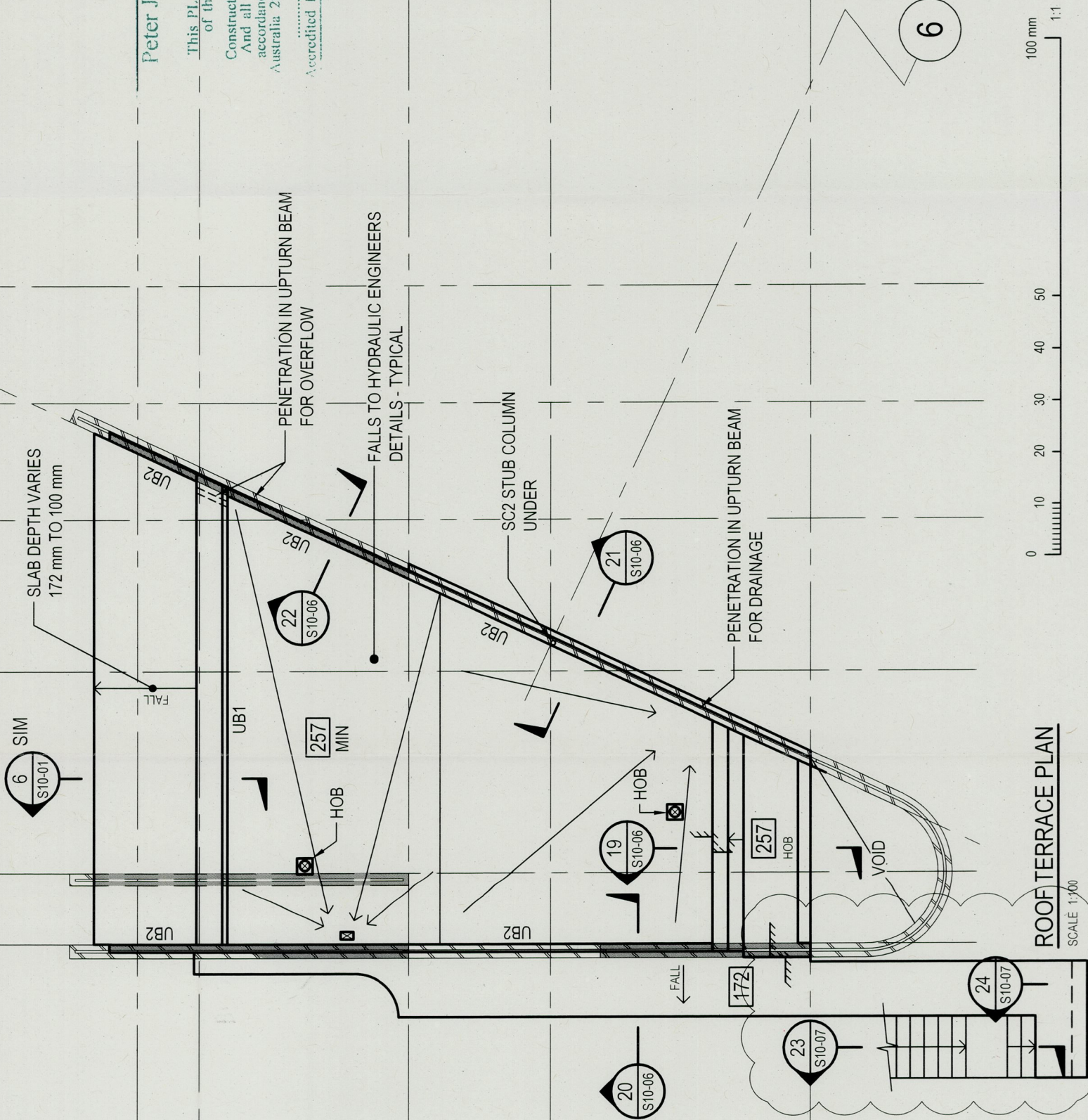
SHEET SIZE
A3

SCALE
1:100

DRAWING NO.
SY140-004

REVISION
S06-01

REVISION
C



ROOF TERRACE PLAN

SCALE 1:100

NOTES:

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Peter J Boyce & Associates
Ph: 0412 928 500

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Building Surveyor BSB No. 0043

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A	ISSUED FOR TENDER	L.J.	15-08-14
No.	REVISION DESCRIPTION	DRAWN	DATE

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A.B.N. 56 158 265 901

PROJECT TITLE

CABBAGE TREE HOUSE

CLIENT

JAN & GRAEME PAGE

DRAWING TITLE

STRUCTURAL DETAILS

SHEET 1

PROJECT LEADER

R.M.

DESIGNER

R.M.

DRAFTSPERSON

L.J.

SCALE

1:20

SHEET SIZE

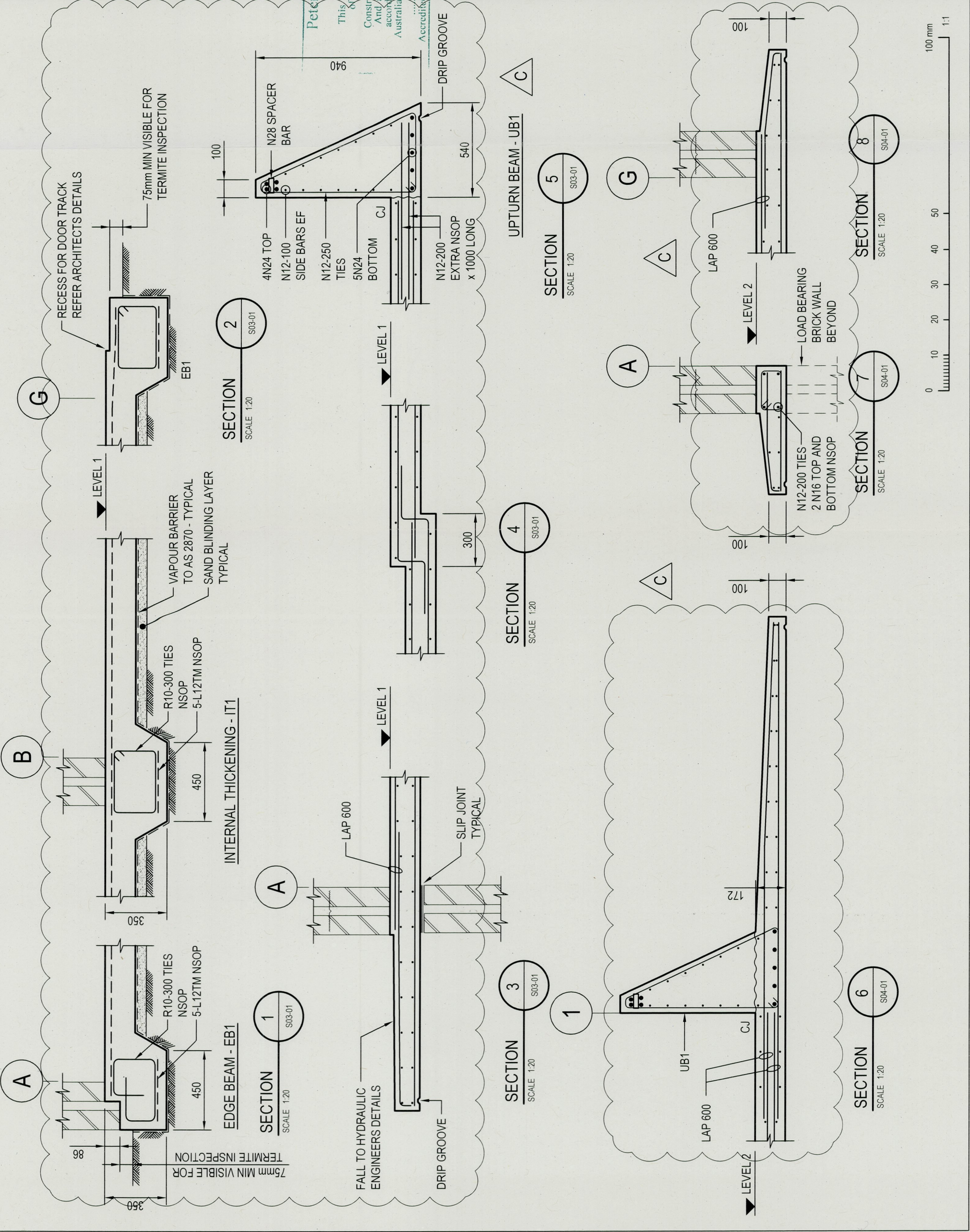
A3

DRAWING No.

SY140-004

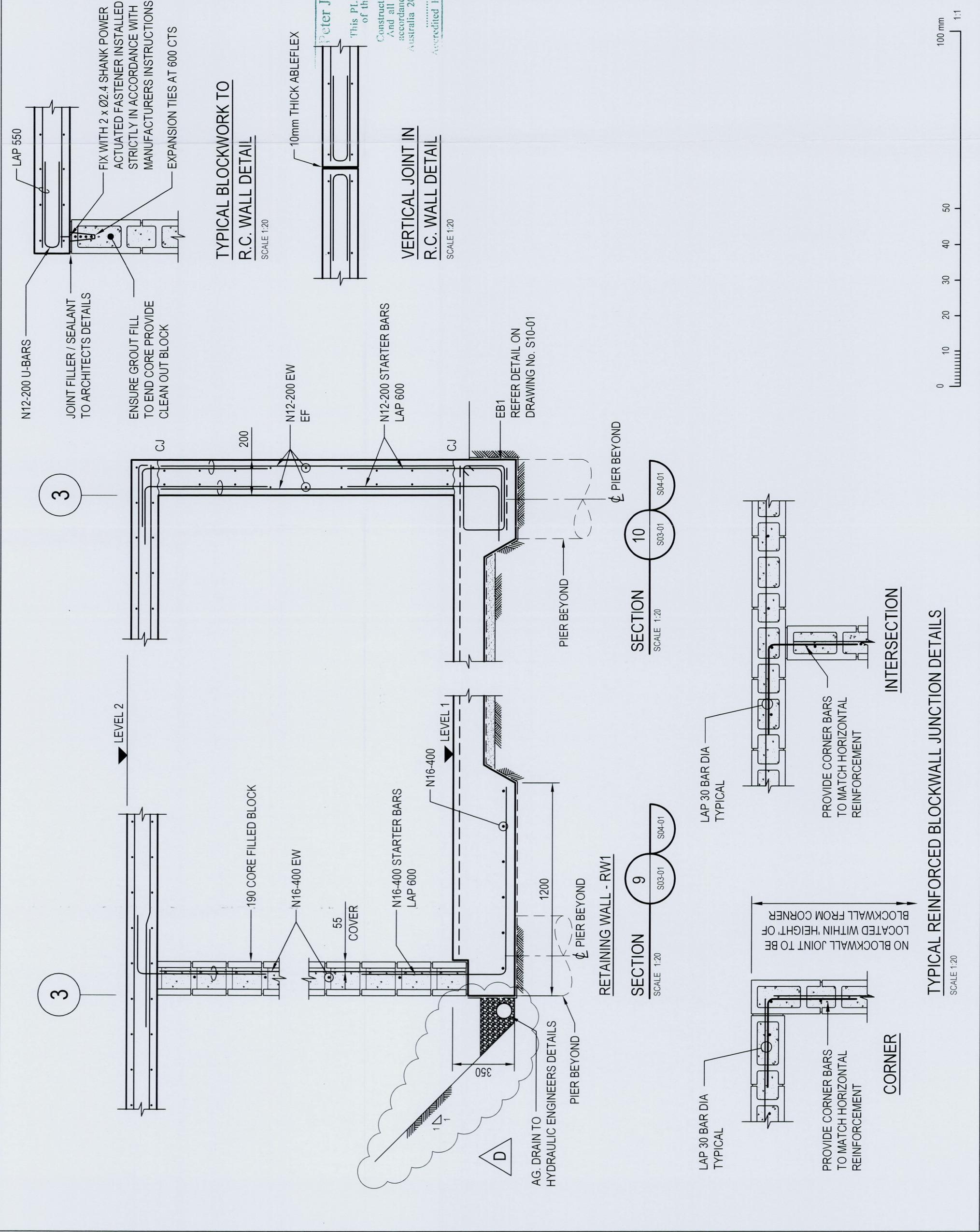
REVISION

C



NOTES:

- REFER DRG. No. S10-02 AND S10-03 FOR STRUCTURAL NOTES
- FOR ALL SET OUT DIMENSIONS LEVELS, SET DOWNING HOBS, KERBS AND FALLS REFER TO ARCHITECT'S DRAWINGS



Peter J Boyce & Associates
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Accredited Building Surveyor BSB No: 0043

D	BATTER REVISED	L.J.	25-03-15
C	CONSTRUCTION CERT.	K.P.	24-03-15
B	ISSUED FOR TENDER	L.J.	17-10-14
A	ISSUED FOR TENDER	L.J.	15-08-14
No.	REVISION DESCRIPTION	DRAWN	DATE

DRAWING STATUS
CONSTRUCTION CERTIFICATE
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PROJECT TITLE	CABBAGE TREE HOUSE
CLIENT	JAN & GRAEME PAGE
DRAWING TITLE	STRUCTURAL DETAILS SHEET 2
PROJECT LEADER	R.M.
DESIGNER	R.M.
DRAFTSPERSON	L.J.
DATE	JULY 2014
SHEET SIZE	A3
SCALE	1:20
JOB No.	SY140-004
DRAWING No.	S10-02
REVISION	D

NOTES:

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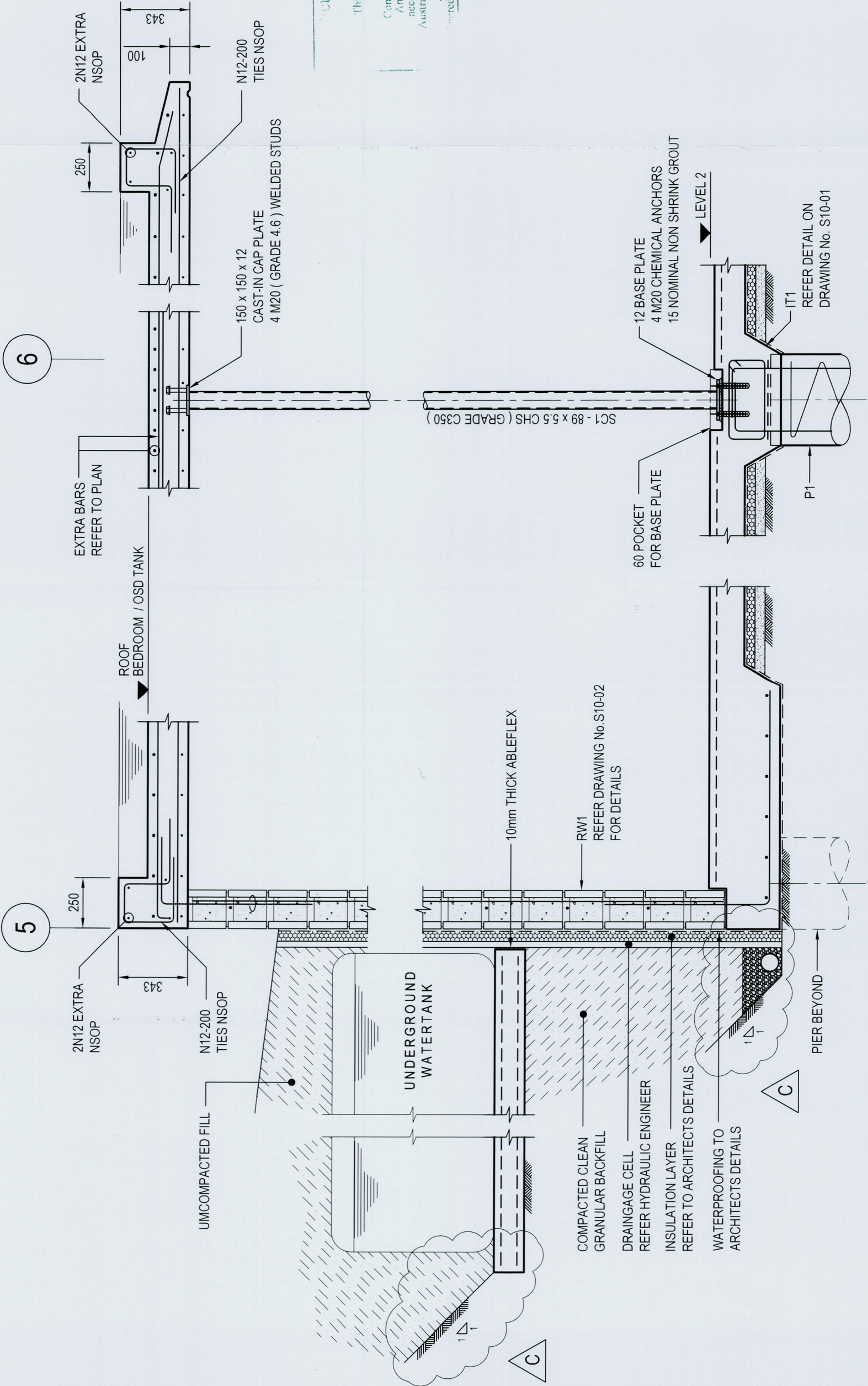
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NOTES:

- REFER DRG. No. S10-02 AND S10-03 FOR STRUCTURAL NOTES
- FOR ALL SET OUT DIMENSIONS, LEVELS, SET DOWN'S, HOBBS, KERBS AND FALLS, REFER TO ARCHITECT'S DRAWINGS



Boyce & Associates
Ph: 0412 928 500

This PLAN/DOCUMENT forms part
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Construction Cert No. **6215149**
And all work must be carried out in
accordance with the Building Code of
Australia 2007 and subsequent amendments
Certified Building Surveyor HSB No. 0043

C	BATTER REVISED	L.J.	25-03-15
B	CONSTRUCTION CERT.	K.P.	24-03-15
A	ISSUED FOR TENDER	L.J.	15-08-14
No.	REVISION DESCRIPTION	DRAWN	DATE
DRAWING STATUS			
CONSTRUCTION CERTIFICATE			
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van der Meer Consulting
van der meer
LEVEL 1, 100/101, 102 STREET
ST LEONARDS NSW 1501
Telephone 61 2 8436 8437 Fax 61 2 8436 1370
A.B.N. 58 158 265 901

PROJECT TITLE		CABBAGE TREE HOUSE	
CLIENT		JAN & GRAEME PAGE	
DRAWING TITLE		STRUCTURAL DETAILS SHEET 5	
PROJECT LEADER	R.M.	SIGNATURE	
	DESIGNER		
DRAFTSPERSON	R.M.	DATE	
L.J.		JULY 2014	
SCALE		SHEET SIZE	
1:20		A3	
JOB NO.	DRAWING NO.	REVISION	
SY140-004	S10-05	C	

NOTES:

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J Boyce & Associates
Ph: 0412 928 500

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Accredited Building Surveyor BSB No. 06643

C	CONSTRUCTION CERT.	K.P.	24-03-15
B	ISSUED FOR TENDER	L.J.	17-10-14
A	ISSUED FOR TENDER	L.J.	15-08-14
No.	REVISION DESCRIPTION	DRAWN	DATE

DRAWING STATUS

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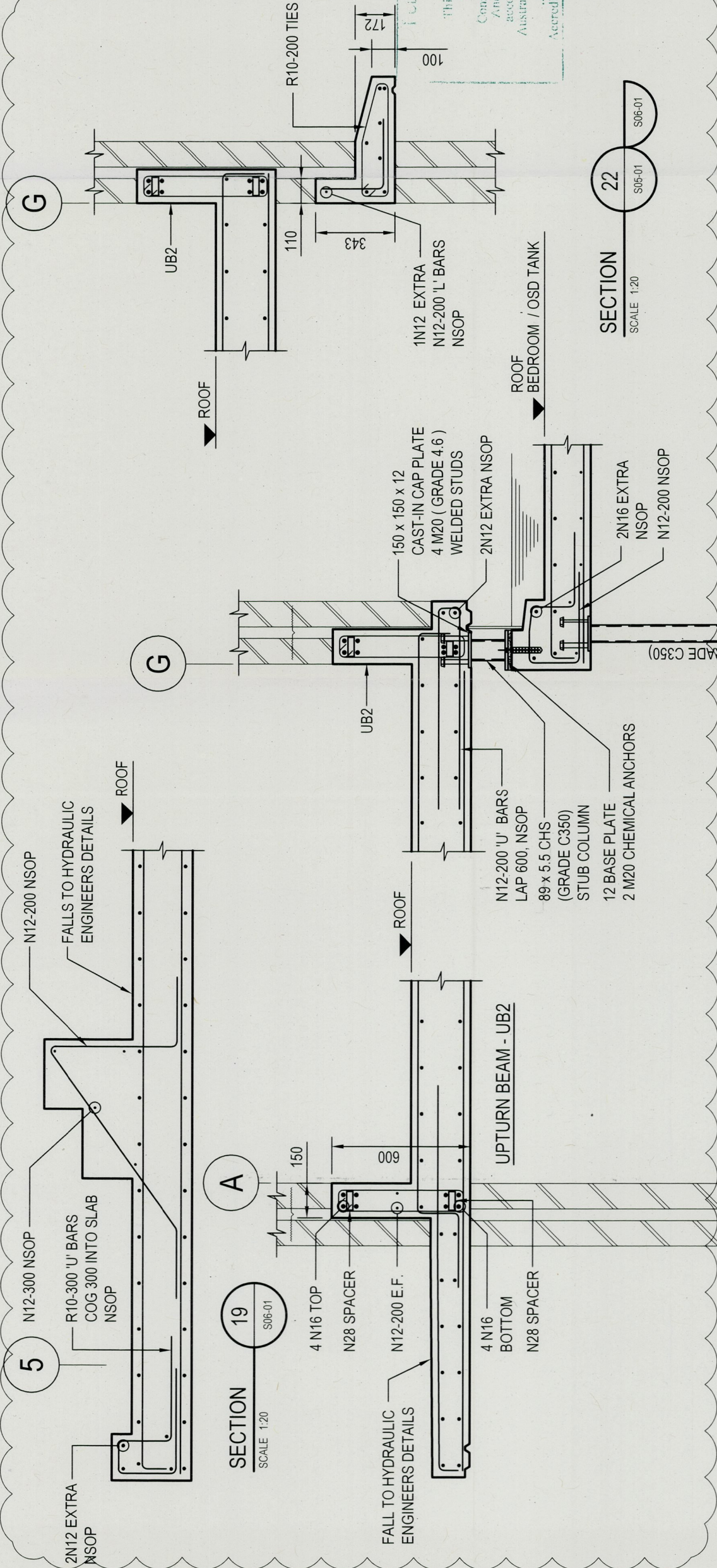
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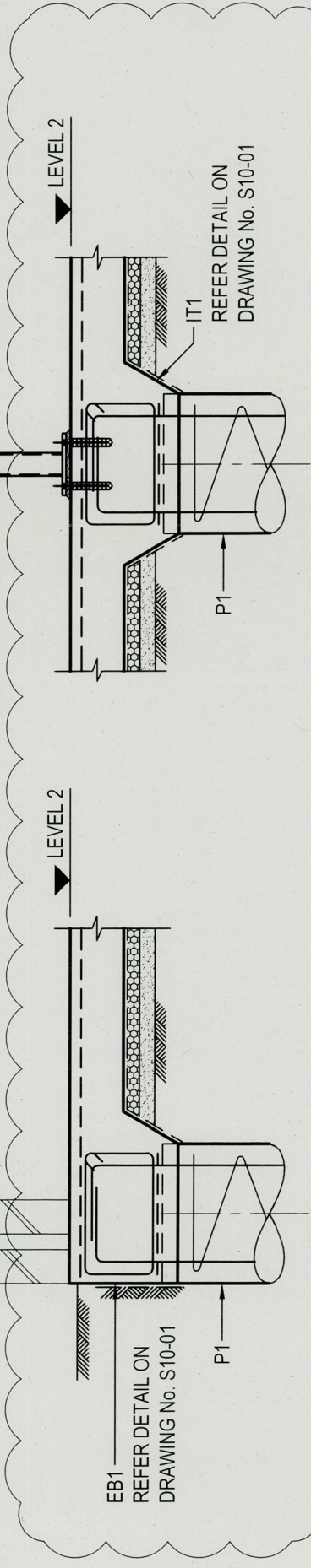


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PROJECT TITLE		CABBAGE TREE HOUSE	
CLIENT		JAN & GRAEME PAGE	
DRAWING TITLE		STRUCTURAL DETAILS	
SHEET 6			
PROJECT LEADER	SIGNATURE		
	R.M.		
	DESIGNER		
	R.M.		
	DRAFTSPERSON		
	L.J.	DATE	JULY 2014
	SCALE	SHEET SIZE	
	1:20	A3	
JOB No.	SY140-004	DRAWING No.	REVISION
		S10-06	C

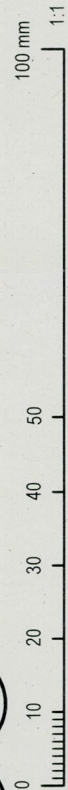


SECTION 22
SCALE 1:20



SECTION 20
SCALE 1:20

SECTION 21
SCALE 1:20



- REFER DRG. No. S01-02 AND S01-03 FOR STRUCTURAL NOTES.
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Accredited Building Surveyor BSB No. 0043

D	BATTIER REVISED	L.J.	25-03-15
C	CONSTRUCTION CERT.	K.P.	24-03-15
B	ISSUED FOR TENDER	L.J.	17-10-14
A	ISSUED FOR TENDER	L.J.	15-08-14
No.	REVISION DESCRIPTION	DRAWN	DATE

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van der Meer Consulting



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CABBAGE TREE HOUSE

JAN & GRAEME PAGE

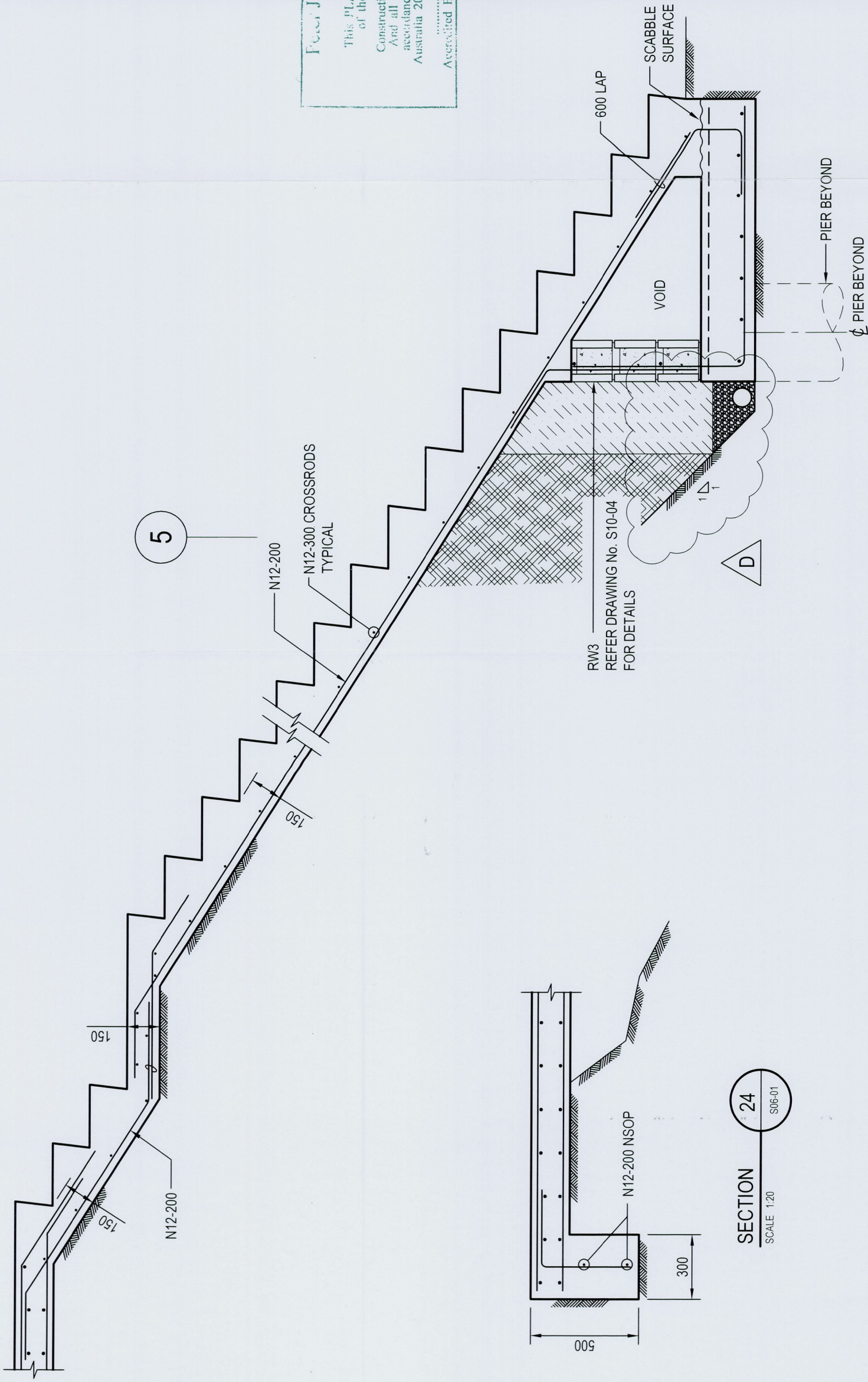
STRUCTURAL DETAILS
SHEET 7

R.M.

N. IV.	DATE
DRAFTSPERSON	

SCALE 1:20	SHEET SIZE A3
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JOB No.	DRAWING No.	REVISION
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SECTION

SCALE 1:20

23

S04-01 S06-01

SECTION

SCALE 1:20

24

S06-01

0 10 20 30 40 50 100 mm 1:1

Cabbage Tree-14 21 November 2014

CONTENTS

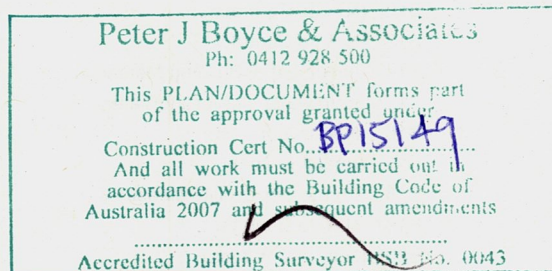
PRELIMINARIES	A
INITIAL WORK	B
CONCRETE	C
BLOCKWORK	D
BRICKWORK	E
STEELWORK + METALWORK	F
CARPENTRY + JOINERY	G
GLAZING	H
INSULATION & MEMBRANES	I
APPLIED FINISHES	J
NOT ALLOCATED	K
NOT ALLOCATED	L
DRAINAGE + PLUMBING	M
ELECTRICAL WORK	N
LANDSCAPE WORK	O
EQUIPMENT	P

PITTWATER COUNCIL DEVELOPMENT CONSENT

FOR TENDER

SPECIFICATION

CABBAGE TREE HOUSE
88 Cabbage Tree Road
Bayview NSW 2104
for
Jan and Graeme Page



21 November 2014

Prepared NW
Checked ET/BK

peter stutchbury architecture

5/364 barrenjoey road newport nsw 2106

ph (02) 9979 5030 fx (02) 9979 5367 email: admin@stutchburyarchitecture.com.au

A**PRELIMINARIES****A.01****SITE**

Location: Site of the works is No.88 Cabbage Tree Road, Bayview, 2104. (Lot 8, DP 19161).

A.02**CONDITIONS OF CONSENT**

Observe: Conditions of Consent for DA No. N0105/14 as determined by Pittwater Council.

Liaise with Architect in regard to satisfying: Conditions of Consent.

The following conditions shall be satisfied by the Contractor or others as indicated:

Condition: GROUP A : Prescribed Conditions.

A1	BCA compliance.	Spec. Cl. A.03
A2	Home Building Act compliance.	Spec. Cl. A.03
A3	Critical stage inspections.	Spec. Cl. A.04
A4	Sign requirements.	Spec. Cl. A.17
A5	(PCA requirement.)	##
A6	(PCA requirement.)	##
A7	Hours of construction.	Spec. Cl. A.17

GROUP B : Matters to be Incorporated.

B1	Scope of consent.	By Architect.
B2	Aboriginal Engravings or Relics.	Spec. Cl. B.01
B3	Identified hazards – Geotech. Report.	By Structural Eng'r.
B4	Bushfire asset protection.	Spec. Cl. B.02
B5	Protection of services.	Spec. Cl. B.06
B6	Bushfire resistant construction.	By Architect.
B7	Swimming pool surrounds.	By Architect.
B8	Landscaping compliance.	Landscape Plan.
B9	Noxious weeds elimination.	Spec. Cl. O.09
B10	Noxious weeds elimination.	Spec. Cl. O.09
B11	(N.A. to Contract.)	##
B12	(N.A. to Contract.)	##
B13	(N.A. to Contract.)	##
B14	Placement of Building Materials.	Spec. Cl. A.17.
B15	Stormwater Harvesting Tanks.	Hydraulics Plan.
B16	(N.A. to Contract.)	##
B17	Detention Tank.	Hydraulics Plan.
B18	Stormwater Quality Measures.	Hydraulics Plan.
B19	(N.A. to Contract.)	##
B20	(N.A. to Contract.)	##
B21	Internal driveway finish.	Spec. Cl. O.01
B22	Off-street Parking.	By Architect.
B23	Geotech. Risk Management.	By Structural Eng'r.
B24	(N.A. to Contract.)	##
B25	Landscaping compliance.	Spec. Cl. O.05
B26	Landscaping compliance.	Spec. Cl. O.05
B27	Landscaping compliance.	Spec. Cl. O.05
B28	Swimming Pool compliance.	Spec. Cl. P 02
B29	Swimming Pool compliance.	Spec. Cl. P 01
B30	Materials and colours.	By Architect.
B31	Clearance from Boundary.	By Architect.
B32	BASIX Compliance.	By Architect.

GROUP C : Prior to Issue of Construction Certificate.

C1	Documents to PCA	By Architect.
C2	Water stamped plan to PCA.	By Architect.

C3	Geotech Form 2 to PCA	By Architect.
C4	Stormwater to PCA	By Civil Engineer.
C5	Stormwater to PCA	By Civil Engineer.
C6	Stormwater to PCA	By Civil Engineer.
C7	Work to Public Road reserve.	By Architect.
C8	Civil Engineering details.	By Civil Engineer.
C9	Geotech. Risk Management.	By Architect.
C10	Erosion & Sediment Control Plan.	By Civil Engineer.

GROUP D : Prior to Commencement of Works.

D1	Demolition requirements.	Spec. Cl. B.04, B.10
D2	Stamped Plans on site.	Spec. Cl. A.05
D3	Geotech. Risk Management.	By Civil Engineer
D4	Depositing of Fill.	Spec. Cl. B.12
D5	Depositing of Fill.	Spec. Cl. B.12
D6	Depositing of Fill.	Spec. Cl. B.12
D7	Depositing of Fill.	Spec. Cl. B.12
D8	Excavations and backfilling.	Spec. Cl. A.17, B.14.
D9	Excavations and Demolition.	Spec. Cl. A.17.
D10	(Identical to D3.)	##
D11	Sediment & Erosion Controls.	By Civil Engineer.
D12	Sediment & Erosion Controls.	By Civil Engineer.
D13	All Weather Accessway.	Spec. Cl. A.17.
D14	Clay removal from vehicles.	Spec. Cl. B.10.
D15	Waste Management.	Spec. Cl. A.17.
D16	Work to Road Reserve.	Spec. Cl. A.17.
D17	Work to Road Reserve.	Spec. Cl. A.17.
D18	Work to Road Reserve.	Spec. Cl. A.17.
D19	Sign requirements.	Spec. Cl. A.17.
D20	Storage of materials or waste.	Spec. Cl. A.16, A.17.
D21	Work adjacent trees.	Spec. Cl. A.17, B.07.
D22	Work with Asbestos.	Spec. Cl. B.05

GROUP E : Prior to Occupation Certificate.

E1	Obtain Occupation Certificate.	Spec. Cl. A.20
E2	Geotech. Form 3 to PCC.	Spec. Cl. A.20
E3	SW Harvesting Certificate to PCC.	Spec. Cl. A.20
E4	SW Detention Certificate to PCC.	Spec. Cl. A.20
E5	SW System to PCC.	Spec. Cl. A.20
E6	(Identical to E2.)	Spec. Cl. A.20
E7	Restoration of Public Infrastructure.	Spec. Cl. A.20
E8	Pool Filter Acoustic Certification.	Spec. Cl. A.20

Note:

Contractor shall satisfy Specification references to Consent Conditions listed above.

Geotechnical Report by Douglas Partners (25 October 2013) includes recommendations for site stability, excavation methodology and support, foundation and retaining structure design, and inspection/testing requirements. These are incorporated in construction documents prepared by Architect and specialist consultants.

A.03**COMPLIANCE****Observe:**

Current Standards Association of Australia (SAA) specification for all materials & workmanship.

Current Building Code of Australia (BCA) requirements for the generality of building work.

Current provisions of the Home Building Act.

BASIX Certificate No. 514934S dated 15 April 2014.

Note: Current SAA Specifications required by this clause are not limited to the SAA Specifications referred to in the trade sections of this Specification.

Work performed to 'accepted industry standards' as required by this specification requires all trades to observe applicable Australian Standards.

A.04**BUSHFIRE ASSESSMENT**

This clause lists recommendations of a Bushfire Risk Assessment for the subject block dated 5 March 2014 and applies to all trades as follows:

- 1 Construction shall comply with Section 3 of AS3959-2009: *Construction of buildings in bushfire-prone areas*.
- 2 Construction shall comply with BAL-29 of AS3959-2009 and section A3.7 Addendum Appendix 3 of *Planning for Bushfire Protection 2006*.
- 3 Any new fencing shall comply with with RFS *Fast Fact 2/06*.
- 4 Roofing shall be fitted with non-combustible leaf protection.
- 5 Swimming pool shall incorporate a 'take off' pipe from the bottom of the pool sized to provide unimpeded flow to a fire-fighting pump.
 - a. Standpipe of take-off pipe shall be metal and on non-hazard, protected side of pool.
 - b. Standpipe shall incorporate a metal gate or ball valve and a 65mm Stortz fitting, all suited to full 50mm ID water flow.
 - c. Hardened ground for truck access shall be within 4m of water source.
 - d. A 3kW deisel pump (Provided by Owner) shall be made available to water supply and attached to a suitable fire-fighting hose (Provided by Owner).
 - e. An 'SWS' marker shall be obtained (by Owner) from the local RFS and fied to satisfaction of RFS.
- 6 Any electricity or gas connections shall satisfy Section 4.1.3 of *Planning for Bushfire Protection*.
- 7 At commencement of building work and thereafter property around building shall be managed to satisfy Section 4.1.3 and Appendix 5 of *Planning for Bushfire Protection* and RFS *Standards for Asset Protection Zones*.
 - a North as Inner Protection Area, minimum 30m.
 - b. East as Inner Protection Area, minimum 18m.
 - c. West as Inner Protection Area, minimum 15m.
 - d. South as Inner Protection Area, minimum 25m.
- 8 Any new landscaping shall comply with principles of Appendix 5 of *Planning for Bushfire Protection*.
- 9 Property access road shall comply with Section 4.1.3(2) of *Planning for Bushfire Protection*.

A.05**REGULATIONS, NOTICES, FEES**

Additional to compliance with Development and Construction Consent, Builder shall:

Obtain all other approvals, give all notices, pay all other fees.

Satisfy all Authorities having jurisdiction over the works.

Arrange for Critical Stage Inspections as determined by Developoment Consent Cl. A3.

A.06CONSTRUCTION DOCUMENTSObserve:

Consent Condition D.2.

Keep on site a stamped copy of approved plans for the duration of the works.

Construction documents shall be taken as mutually explanatory.

Large scale drawings [e.g. details] take precedence over small scale drawings [e.g. plans and elevations].

If a discrepancy is found in documents, ask Architect for ruling.

A.07SHOP DRAWINGS, ETC

In time for revision and before fabrication, supply to Architect 3 copies of shop drawings and written information where Specified.

Approval by Architect of shop drawings does not relieve Builder's responsibility for their correctness except where an error or omission is caused by error or omission in a document supplied by Proprietor or his agent.

A.08BUILDER TO INFORM HIMSELF

Prior to tender examine the site and examine all information relevant to circumstances affecting the tender which is obtainable by reasonable inquiry.

A.09SUB CONTRACTS

Sub-contractors, nominated or otherwise, shall conform to the overall organisation of the job.

A form of contract with sub-contractors shall not be more stringent than the Head Contract.

Builder will be responsible for standard and correctness of materials and workmanship provided by sub-contractors.

A.10VARIATIONS & ARCHITECTS INSTRUCTIONS

Obtain an Architect's Instruction before commencing any work which will incur a variation claim.

Claims for monetary variation shall be for full cost of the variation with GST noted separately and shall include any consequent claim for time variation, otherwise no time claim shall exist.

A.11PROGRAM

Issue Program to Architect no later than Progress Claim No.1.

Program shall show commencement & completion of all sections of Contract with special reference to sequence of work as it affects Proprietor. Program shall be updated at site meetings.

A.12 **DELAY & EXTENSION OF TIME**

Claims for delay and extension of time due to wet weather or another cause shall state: Date, cause of delay, number of working hours affected, work affected, extension claimed.

Submit such Claims at Site Meeting immediately following the dates claimed.

A.13 **EXISTING SERVICES**

Prior to possession by Contractor, water and electricity charges shall be fully paid up by Proprietor.

Utilise available services and pay all charges during construction.

A.14 **WORKMANSHIP AND MATERIALS**

Materials shall be new and of best quality, to Architect's satisfaction.

Workmanship shall be performed to accepted industry standards.

Notify Architect upon receipt of any document considered to describe impracticable work.

Utilise manufactured articles, materials and equipment as directed by manufacturer.

A.15 **UNIFORMITY OF FINISH**

The finish of any specified surface or product shall be uniform in all respects for the full extent of the finish throughout the works.

A.16 **REINSTATEMENT**

Observe: Consent Condition E7.

Reinstate any damage to public or private property arising from execution of the works, to match surrounding work and condition previously existing.

A.17 **MATERIALS & EQUIPMENT**

Observe: Consent Condition B14, D20.

Storage and protection of materials and equipment is Contractor's responsibility from commencement until Practical Completion.

Do not store materials except within a defined area outside dripline of any tree to be retained.

Make good any deterioration, damage or loss that occurs during this period.

A.18 **WORKS SITE MANAGEMENT**

Observe: Consent Conditions GROUP D.

NSW Work Cover: "Site Security and Public Access onto Housing Construction Sites."

Works Site: 'Works Site' means the area within the limits shown on the Site Plan (blue tone).

Building activities, including access, sheds, storage, stockpiling and rubbish management shall be confined to the Works Site.

- Signage:** Provide a sign incorporating the Architect's name and contact number plus the information listed in Council's Consent Condition D19.
No other signage shall be permitted without approval of the Architect unless required by law.
Remove signage on Practical Completion.
- Site Manager:** Keep upon the works a competent Site Manager [General Foreman]. An instruction to him shall be deemed to have been given to the Builder.
At tender provide information regarding the experience of Site Manager.
- Access:** Provide and maintain all-weather accessway for the duration of the works to a standard not less than indicated in Consent Condition D13.
- Site Office:** Provide and equip a temporary site office for management of the works.
- Site Amenities:** Provide temporary sanitary facilities, dressing rooms etc., required by Awards for use of workmen and any temporary sheds, covers etc. for the working and storage of materials.
- Services:** Contractor may utilise existing water and electricity services. Relocation of meters etc. and payment of charges shall be by Contractor.
- Site Meetings:** Site meetings shall occur at agreed intervals to discuss progress and coordination of the works, attended by the Contractor, Architect and others as appropriate.
The Architect shall chair site meetings, prepare minutes and distribute copies to participants.
- Working Hours:** No work shall be undertaken outside the hours noted in Development Consent Condition A7.
- Safety:** Observe Consent Condition D 8, D9.
Keep site safe at all times to the satisfaction of workplace safety authorities including all required signage, lighting, screens, balustrades, scaffolding, platforms, and protective clothing.
Remove same when no longer required.
- Scaffolding:** Provide and remove at completion all necessary scaffolding and platforms. Scaffolding shall comply with the regulations of the Lifts and Scaffold Act and the Department of Labour and Industry.
- Clothing:** Provide protective clothing for workers as be required by any industrial ordinance, award or agreement.
Provide safety helmets for authorised visitors to the site.
- Erosion:** Observe Consent Conditions B14, D11, D12.
Prior to commencement of work establish temporary erosion and sediment control measures as indicated on Civil Engineer's Erosion and Sediment Control plan.
Maintain erosion and sediment control for the duration of the Contract until completion of Landscape work.

Trees:	Carry out by hand any works within 5 metres of any existing tree to be retained in compliance with Consent Condition D21.
Waste:	Observe Consent Conditions D15, D18, D20. Comply with approved Waste Management Plan. Retain dockets regarding waste disposal to identify facility in receipt of waste. Do not accumulate waste, demolished or rejected materials except in a defined area or bin set aside for the purpose. Remove waste when collection area is full or if there is a safety or fire risk created by waste.
Dust:	Take practicable measures to restrict dust caused by the works including water sprays and minimising work in windy weather.
Noise:	Minimise noise resulting from work under the Contract. Fit equipment and tools with noise suppressors as recommended by equipment manufacturers.
Site Security:	Maintain security of the Works Site until Practical Completion. Provide against intruders and safeguard works during working and non-working hours. Losses from site shall be Builder's responsibility.
Off-site Work:	Obtain permission of adjoining owners before making any trespass onto their property. Observe Consent Conditions D16, D17, D18. Any off-site work shall be carried out only after permission has been obtained from the owner and/or Authority having jurisdiction. Backfilling or making good to disturbed surfaces shall be to the satisfaction of the owner and/or Authority.
Access:	Notify neighbours in writing days and time when shared road access may be obstructed.

A.19**EMBER AND RODENT PROTECTION**

This Clause applies to all trade areas of the works.

Check for all penetrations through walls, floors, eaves, and roofing and seal against entry of wind-blown bushfire embers or rodents with well secured bronze mesh, wire pitch 5mm.

Scope is not clear, therefore to be carried out as a variation on a labour and materials basis.

A.20**COMMISSIONING OF SERVICES & EQUIPMENT**

Prior to Practical Completion all Hydraulic, Electrical and Mechanical installations shall be:

- Clean, all labels and packaging removed.
- Consumables supplied.
- Guarantees supplied.
- Fully operational and tested by specialist installers.
- Manuals supplied including user-friendly instructions.
- Owner instructed in operation by installer.

A.21**PRACTICAL COMPLETION****A**

Practical Completion occurs when:

Compliance Certificate from Certifying Authority and Home Owner's Warranty are lodged with the Architect.

BASIX commitment are certified complete.

Consent Conditions Groups E & B are satisfied.

GROUP E : Prior to Occupation Certificate.

E1	Obtain Occupation Certificate.	CONTRACTOR
E2	Geotech. Form 3 to PCC.	CONTRACTOR
E3	SW Harvesting Certificate to PCC.	CONTRACTOR
E4	SW Detention Certificate to PCC.	CONTRACTOR
E5	SW System to PCC.	CONTRACTOR
E6	(Identical to E2.)	CONTRACTOR
E7	Restoration of Public Infrastructure.	CONTRACTOR
E8	Pool Filter Acoustic Certification.	CONTRACTOR

GROUP B : Noxious weed control.

CONTRACTOR

B

Architect shall also be satisfied that:

Building is watertight, rodent, termite & weather-proof.

Finishes are complete & surfaces cleaned.

Doors and windows eased & furniture adjusted.

Glass and sanitaryware clean, labels removed.

All guarantees lodged with Architect.

Service meters read, Builder's costs ascertained.

Services and equipment commissioned.

Plant, equipment & rubbish removed from site.

Keys (two per door) tabulated & handed to Architect.

Ground surfaces restored to original grades.

A.22**DEFECTS LIABILITY PERIOD**

During defects liability period, immediately rectify defects affecting safety, health or essential building functions and other defects within a reasonable period.

A.23**SCHEDULE RATES**

As part of tendering, Tenderers shall indicate rates for carrying out the following excavation operations. Actual quantities shall be agreed as work proceeds.

Excavation in rock – bulk:	\$	/cu.m. measured in ground.
Excavation in rock – detail:	\$	/cu.m. measured in ground.
Excavation other than rock:	\$	/cu.m. measured in ground.
Bored piers 450mm diam.)	\$	/m. depth.
Excavation deposited off-site:	\$	/ tonne truck load.

Note:

At tendering pricing of bored piers shall assume 1m socket in rock plus 2m pier depth.

A.24

PROVISIONAL SUMS

Allow the Overall Provisional Sum of:

[\$ 95,000]

Allow for:

The above sum allows for items listed on the Schedule below and excludes GST.

taking delivery & checking correct quantities, storage of materials, fixings & connections making good, risks, replacement & damage.

Cost of scheduled item is net, carries no discount to Builder, but includes cost of delivery to site.

Claims for payment against Provisional Sum items shall be made progressively, including supporting evidence, amount previously paid, proportion completed to date if applicable.

Any unexpended part of the Sum will be deducted on settlement, together with a pro-rata part of the Builder's margin.

SCHEDULE OF PROVISIONAL SUMS

Cl.	Item
B.01	Demolition. Complete.
C.11	Swimming Pool Concrete work.
G.02	Balust./Handrail Supply and Install.
G.05	Sliding tracks (2) Supply only.
G.06	W&D Furniture Supply only.
G.07	Joinery Supply and Install.
H.04	Pool bal/fence Supply and install.
M.13	Hydronic heating Supply and install.
N.10	Light pendants Supply only.
O.01	Landscape Supply and Install.
P.01	Pool fit out. Supply and Install.
P.03	Hearth plate Supply only.
P.04	Solar panels. Supply and Install.

B

INITIAL WORK

B.01a

DEMOLITION

Carry out complete demolition and removal of the existing dwelling including asbestos removal and tree removal, all as specified below.

Observe:

AS 2601-2001: *The Demolition of Structures.*

Work Cover: *Demolition Licensing.*

Work Cover: *Short Guide to Working with Asbestos Cement.*

DEMOLITION GENERALLY

Consent Condition D1, D14.

License:

Demolition shall be carried out by a licensed demolition sub-contractor.

Refer:

Plan: Demolition, Erosion Control and Waste Management.

Before demolition, disconnect & cap off existing sewer at septic tank. (Retain septic tank.)

Carry out demolition as indicated including removal of hazardous materials, disconnection and blanking off of services and removal of footings.

All demolished materials shall become property of the Contractor and shall be removed from site.

Provide 24 hours written notice to Council of destination of demolition material to an approved disposal depot.

ASBESTOS REMOVAL

Observe: Consent Condition D22.

Engage a suitably qualified person to ascertain the nature and extent of any asbestos to be removed.

Tender Note: As the nature, extent and duration of asbestos removal is unknown at the time of tendering, the cost of asbestos removal shall constitute a variation to the Contract.

Carry out removal in accordance with Pittwater Council guidelines for safe handling and disposal of hazardous materials.

Display sign: DANGER ASBESTOS REMOVAL IN PROGRESS.

Dispose of asbestos legally and provide tip receipts as evidence of proper disposal.

TREE REMOVAL

Refer: Site Plan and Landscape Plan.

Carry out tree removal without damage to remaining vegetation or natural rock formations.

Only trees specifically approved for removal or lopping shall be removed or lopped.

Tree removal shall include stump grinding.

Carry out tree lopping as directed by Arborist, including measures to prevent decay at lopping sites.

B.02 ABORIGINAL ENGRAVINGS & RELICS

Observe: Consent Condition B.2

If aboriginal engravings or relics are found, cease work immediately and notify Architect.

B.03 BUSHFIRE ASSET PROTECTION

Observe: Consent Condition B.4.

Maintain bushfire asset protection zone for the duration of the works as indicated on plans.

B.04 EROSION AND SEDIMENT CONTROL

Refer: Preliminaries Section: Works Site Management.

Carry out erosion & sediment control measures as detailed and specified.

B.05 PROTECTION OF SERVICES

Observe: Consent Condition B5.
All services (power, water, gas, communications) to the site shall be laid in-ground to satisfy 4.1.3 of *Planning for Bushfire Protection*, 2006.

B.06 TREE PROTECTION

Refer: Site Plan.

Observe: Consent Condition D21.

Provide protection for all trees within the works area except those noted to be removed on the Site Plan and Landscape Plan.

Ensure protection extends to neighbour's trees at west boundary near pool and parking platform.

Protection shall include for mechanical damage and soil contamination.

Confirm details of proposed tree protection to Architect for approval prior to commencement of any work on site.

B.07 SETTING OUT

Refer: Site Plan.

Contractor shall be responsible for setting out the works

Primary set out shall be carried out by a licensed surveyor who shall Certify the works as set out comply with the Development Consent.

If setting out is incorrect, perform without extra charge all work necessary to correct it before proceeding with the works.

At Practical Completion provide a Surveyor's Certificate stating that the works as built conform to the building envelope approved by the Development Consent and that the structure is true to the contract documents.

B.08 EXCAVATION

Refer: Geotechnical Assessment.

Structural Engineer's site works notes.

Schedule Rates in Preliminaries Section.

Observe: Consent Conditions: D01, D14.

Remove clay from vehicles prior to leaving site.

Excavate to depth and firm bearing to satisfaction of Geotechnical and Structural Engineer for foundations.

Excavate to depth for compacted road base sub-grade and sand blinding below slabs.

Excavate as required for installation of tanks and drainage lines.

Stockpile within the Works Site excavated material suitable for landscaping or back-filling; otherwise remove excavated material from site

Provide shoring, props or strutting for protection and safety.

Provide 24 hours written notice to Council of destination of excavated material to an approved disposal point.

B.09**DEPOSITING OF FILL**

Observe: Consent Conditions D4, D5, D6, D7, D8.

B.10**TOPSOIL STOCKPILE**

Topsoil means excavated material approved for re-use as topsoil.

Remove topsoil to its full depth from affected areas and stockpile. Protect from wind and water erosion. Provide adequate drainage.

B.11**BACKFILLING**

Refer: Structural Engineer's notes.

Observe: Consent Condition D8.

Filling shall be approved excavated material or blue metal 20mm nom. size.

Fill generally as follows:

1. Under slabs: 50mm free draining filling.
2. Around sub-soil drains: Free draining filling.
3. Service trenches: Free draining filling.
4. Under external paving: excavated material.
5. External unpaved filled areas: Excavated material: Finish with topsoil.
6. Backfill: Excavated material.

Place filling in layers 150mm deep measured loose. Bring filling to optimum water content, & compact each layer thoroughly and uniformly with a vibrating roller.

Hand tamp against ground or perimeter beams or walls and consolidate each layer of filling

B.12**EXCESS EXCAVATION**

Excess excavation and consequent backfilling, compacting or testing shall not justify a contract variation or extension of time.

Where excavation exceeds required depth, fill back to correct depth with material as follows:

- Below slabs on ground: Excavated material;
- In service trenches: 1:20 cement/sand mix.

B.13**OFF SITE WORK**

Refer: Preliminaries Section Cl. A.17

B.14**DRAINAGE**

Refer: Site Plan.

Civil Engineer's plans and specification.

Generally: After demolition and during building set-out, review scope, location and effectiveness of all drainage with Architect prior to finalising invert levels at entry points.

Carry out stormwater management in accordance with Civil Engineer's design, including stormwater

and rainwater lines, sub-soil and surface water drainage, cleaning eyes, various pits, first flush storage and tank overflows.

Note: Aspects of drainage shall be carried out during the course of construction and do not constitute 'initial work.'

B.15 SANDSTONE RETAINING WALLS

Refer: Plans.
Civil engineer's plan.
Excavate to form level base and provide base course of compacted blue metal for length of wall.
Provide geotextile fabric to base of wall and turn up back of wall. Place ag. line along back of wall.
Utilise excavated rock where possible to establish dry stacked sandstone retaining walls laid over levelled base and backfill

B.16 DRIVEWAY

Refer: Site Plan.
Maintain existing driveway from damage during construction and reinstate any damage or erosion prior to completion.

B.17 LANDSCAPE WORK

Refer Landscape Section.

C

CONCRETE

C.01 CONCRETE GENERALLY

Observe: Carry out concrete work in accordance with:
(a) Structural Engineer's drawings and notes, read in conjunction with the Architectural drawings.
(b) The following supplementary clauses.
Refer: Architectural drawings for detailed concrete profiles, dimensions, drips, recesses & pockets.

C.02 BASE COURSE

Refer: Structural Engineer's notes.

C.03 SUB-SLAB INSULATION

Scope: Level 2 in contact with ground.
40mm thick rigid board eq. to Polysoboard XPS distributed by Solartex.

C.04 VAPOUR BARRIER

Observe: AS 2870: Vapour barriers & damp-proof membranes.
Refer: Structural Engineer's notes.
Note: Give sufficient notice for inspection to be made of membrane installation.

C.05

TERMITE PROTECTION

- Observe: AS 3660 - *Protection of Buildings from Subterranean Termites.*
- Scope: All new work.
- Termite protection shall be carried out by a specialist.
- Ensure that a full and effective termite barrier is achieved.
- Construct subfloor and ground-works to provide an effective termite barrier. Intention of construction is to avoid chemical soil barriers, using a combination of:
- Correct levels of excavation;
 - Minimum 75mm fully exposed inorganic margin between ground and building interior;
 - Stainless steel mesh where concrete slabs abut walls;
 - Stainless steel mesh collar to slab on grade penetrations.
- Compliance: Obtain certification that protection complies with AS 3660. Furnish same to Architect.
- Durable Notice Install in the electrical meter box a durable notice, permanently fixed, indicating:
- 1 method of protection
 - 2 date of installation
 - 3 installer's name, address, phone no.
 - 4 recommendations for scope & frequency of future termite activity inspections.

C.06

CONCRETE JOINTS

- Refer: Structural Engineer's drawings for any construction joints and water stops.

C.07

FORMWORK & SURFACES

- Observe: Accuracy and finish of concrete surfaces shall comply with tolerances defined in AS 3610-1995: *Formwork for Concrete* and AS 3610.1-2010: *Documentation and Surface Finish.*
- Accuracy: Confirm accuracy of formwork with Architect and Structural Engineer prior to placing concrete.
- Adequacy: Engage a licensed Structural Engineer and provide certification that formwork will support concrete without deflection during placement.
- Formwork and Finish:
- | | | |
|-----------------|-----------------|--|
| Off Form: | Formply Class 2 | Visible surface.
inc. swimming pool. |
| | | Seal joints between form-boards to avoid leakage. |
| Formply Class 3 | | Concealed surface above ground level. |
| Formply Class 5 | | Concealed surface below ground level. |
| Unformed: | Steel trowel | Main slab. |
| | Screed | Set-downs |
| Falls | | Even falls to outlets and slab edges as indicated. |
| | | Refer to hydraulic details. |
| | | Set-down in showers: min.10mm. |

Falls to wastes: 1:60 - 1:80.
Flood test falls to outlets in slabs to Laundry, Plant Room Roof, Bath, and Ensuite.

Formwork set-out: Refer to Architect's slab soffit plans and elevations.
Formply to be arranged in full sheets.

C.08 RUST STAINING

After stripping Level 1 floor slab review incidence of rust staining to off-form soffit and agree with Architect any additional measures required to minimise staining.

C.09 CONCRETE DETAILS

Refer: Details.
Form concrete thresholds as detailed.
Form drips, reglets, rebates and recesses for length of applicable detail using dressed WRC, painted with releasing agent.
Form grooves for steel inserts, weather bars and the like with masonry saw against straight edge.

C.10 IN-FLOOR HEATING

Note: Overall Provisional Sum allows for provision of Hydronic in-floor heating in structural slab.
Confirm inclusion or exclusion of this item prior to preparation of slab.

C.11a SWIMMING POOL

Note: BASIX commitment: max. volume 50 kilolitres.
~~Overall Provisional Sum allows for complete concrete work by Specialist pool sub-contractor west of construction joint indicated on plans.~~

Refer: Structural Engineer's drawings and notes.
Specialist pool contractor's drawings and notes.
Equipment Section of this Specification.
Provide reinforced concrete swimming pool and balance tank as detailed.

C.12 CONCRETE PROTECTION

Protect concrete floor surfaces and salient angles of exposed concrete in trafficked areas until Practical Completion.

D

BLOCKWORK

D.01 BLOCKWORK GENERALLY

Observe: AS 3700: SAA Masonry Code.
Refer: Structural Engineer's notes.

- Generally: Exposed blockwork shall be face work in both 190 and 290mm thickness blocks, with flush joints and light bagging during laying.
Confirm bagging suitable with small sample area on day-one of block laying.
Damaged blocks shall be rejected for face work.
Provide construction joints & vertical DPCs where indicated.
- Coursing: Set out block coursing down from structural slab soffit. Coursing to be full block except where base course is laid in slab set-down..

D.02 ABUTMENT TO BRICKWORK

- Horizontally: As noted by Structural Engineer, provide slip joint
- Vertically: Provide 10mm space at blockwork abutments to brickwork, double sealed with Silasec structural sealant [colour GREY] over backing rod.
Tie blockwork to brickwork with SS ties every seventh course

D.03 DAMPCOURSE

- Material: Standard Grade "Alcor" full thickness of walls, lapped full width of angles & 150 at intersections.
- Generally: Place over reinforcing bars and locate such that rising moisture in exposed blockwork is arrested max one course above lower ground level. Step as necessary.
- Extent: Where wall is below grade and forms part of the external skin of the building.

D.04 RETAINING WALL PROTECTION

- Refer: Structural Engineer's drawings.
Civil Engineer's drawings.
Concrete Section.
- To [retaining] face of retaining walls apply Wolfen Membranes Australia (WMA) IB Polyester/PVC Sheet: 1.5mm thick complete with concealed fixing & finishing details.
or
3-coat membrane eq. to Pabco Hydroseal.
- Where not otherwise protected, stop membrane 100mm below ground level and protect membrane prior to back-filling with 4.5mm thick fibre cement sheet.
- Insulate behind retaining walls adjacent habitable rooms and wet areas as for sub-slab insulation. refer to Concrete Section.
- Place against membrane protection or insulation Atlantis Drainage Cell barrier [30mm thickness] including geofabric silt barrier.
- Ensure ground water flows freely through drainage cell to sub-soil drainage.

D.05 CAPPING TO BLOCK WALLS

- Finish top of block walls by striking core fill concrete and trowel smooth.

D.06**ON COMPLETION**

On completion clean blockwork, build in loose blocks and make good after other trades.

Seal internal exposed blockwork with clear silicone solution equal to Dampseal.

E**BRICKWORK****E.01****SAMPLE**

Sample: Provide sample of brickwork, area approx. 2 sq.m. including section of curved brickwork. Sample shall include bricks, mortar and capping tiles.

Allow time for mortar to achieve mature colour and obtain approval from Architect before proceeding with brickwork generally.

E.02**BRICKWORK GENERALLY**

Observe AS 3700-1988 -SAA Masonry Code.

Refer: Structural Engineer's notes.

Stack bricks neatly and cover with waterproof sheet.

Build up brickwork to forms & dimensions shown, plumb and level, courses straight and true, reveals true and plumb. Build in flashings, ties, brackets, anchors, conduits, pipes and other items specified.

Support partially constructed walling to resist wind loadings.

Lay brickwork in stretcher bond.

Build in wall ties as specified below.

Cavity walls to have nominal 50mm cavities clear of mortar and droppings with battens laid on ties and lifted and cleaned at every course.

Bricks Recycled dry-press bricks, colour BLOND. (probable origin, 'Brookvale Cream'). (Possible supplier: 'Cheap as Bricks')

Capping: Terracotta capping tiles 310 x 55 x 28-30mm, "Cotto" as supplied by 'Eco Outdoor Products.' Laid on edge.

Mortar: Mortar to all brickwork and capping: 1:1:6 cement coloured OFF WHITE to achieve approved colour, lime, sand, parts by volume, mechanically mixed.

Joints: Bed joints to face brickwork to be struck (weathered) with flush perpend.

except

Bed joints to single skin wet area walls to be flush.

Bed joint to capping course to be shallow raked.

Joints to capping to be flush, nom.10mm. Capping joints to curved wall shall be tight at inside face with uniform spread to outside face.

Finish	Brickwork shall finished 'raw', ie. without further paint application.
Gauge	Vertical gauge: 7 courses = 600mm; horizontal gauge: 4 bricks (3 perpend) = 950mm. Set out point for brick rod is finished surface level of the concrete ground floor slab.
Membranes	Under all brickwork built off concrete slabs, provide one layer of 3-ply bituminous felt.
Insulation:	To all cavity brickwork enclosing internal space provide 15mm thick Reflectapanel including spacers installed to Manufacturer's instructions.
Cutting:	Carry out square and angle cuts to brickwork with neat bolster strike.
Penetrations	Arrange penetrations through walls to suit brick coursing and form wherever possible during the course of bricklaying.
Weepholes	Provide weepholes where cavity flashings occur and at the base of all walls, both cavity walls to buildings and solid walls to site works. Weepholes shall be neatly expressed open perpend, evenly spaced, nom. 900mm centres.

E.03WALL TIES TO CAVITIES

Provide 4mm galv. cavity wall ties spaced 600mm c/c horizontally, vertically every third course, staggered; and every course within 300mm of jambs of openings and ends of walls.

Ends of walls abutting concrete blockwork shall be tied to same with 32 x 1.6mm galvanised straps 700mm long, one end bent up 50mm and Ramset to concrete and other end built into joints of wall at 430mm centres vertically.

E.04DAMPCOURSING & FLASHING

Observe: AS/NZS 2904-1995 - *Damp Proof Courses & Flashings*.

Dampcoursing shall be equal to standard grade Alcor damp course.

Provide a dampcourse to all external walling extending full width and length of walling, lapped 200mm at intermediate joints.

External skin dampcourses shall be laid generally 150mm and maximum 300mm above finished ground line and stepped as required.

Step down dampcourse across wall cavity and lay in maximum lengths. Jointing shall be made with a well rolled and flattened joint.

Each dampcourse abutting a concrete ground slab shall be laid in the nearest bed joint to floor lines or as directed.

Where cavity is closed by masonry, separate internal and external brickwork by dampcoursing extending well beyond abutment of brickwork and fitted so that moisture cannot be conducted to inner skin by way of dampcoursing.

Note: Reveals to cavity brick openings require vertical DPC 'zig-zag' for height of opening. Ensure DPC is concealed by flush joints of brickwork.

E.05 CONTROL JOINTS

Refer: Structural Engineer's notes.
Form vertical control joint in brick walling 12mm wide using temporary timber batten.
Fill control joint, full height, with 50 x 25 closed cell back-up strip and point joint with an approved two part polysulphide sealant coloured light grey.

E.06 ON COMPLETION

On completion, clean all cavities and weep holes, build-in all loose bricks, make good after other trades and point up as necessary.
Clean down brickwork with dilute acid.
Seal internal exposed brickwork with clear silicone solution equal to Dampseal.

F STEELWORK & METALWORK

F.01 METALWORK GENERALLY

Shop Drwgs: Provide shop drawings of fabricated items for approval minimum two weeks prior to commencement of shop fabrication.

Fabrication: Carry out fabrication in an approved workshop.
Match colour of sheet metals & extrusions in colour-finished work.
Cut edges, drilled holes, joints and flat sheets to be clean, neat, free from burrs & indentations.
Remove sharp edges without excessive radius.
Fit mitre joints accurately to a fine hairline.
Form bends in steel tube without deforming true cross section.

Compatibility: Prevent direct contact between incompatible metals by means of separation layers, sleeves or gaskets of plastic film, bituminous felt, mastic, paint coatings and the like.
Separation materials shall not be visible on exposed surfaces.

Movement: Provide for thermal movement in joints, fastenings, sheet metal, thin sections and installation of assemblies.

Welding: Refer to Structural Engineer's specification.
There shall be no site welding.

Fixings: Provide screws, bolts, rivets and washers of a type and material suitable for their task, galvanically compatible, sufficient in quantity and matching in finish the components fastened.
Exposed metal thread screws shall have c/sunk Phillips heads.

	Countersinking for screws shall be exact size for screw head, which shall finish flush.
<u>Anchors:</u>	Install concrete anchors in accordance with manufacturer's recommendations, sized to suit load, gripping firmly. Withdraw any loose anchor grout into position.
<u>Galvanising:</u>	Hot dip galvanise supports & brackets to satisfy AS.1214. Protect threads against need to re-cut. Repair damage to galv. surface with 2-coats of 2-pot cold galv. compound.
<u>Paint Priming:</u>	Unless otherwise specified any ferrous surface not galvanised shall be primed and painted.
<u>SS:</u>	Unless specified otherwise stainless steel [SS] shall be Grade 304. Grade 316 is noted for architectural applications. Surfaces including welded joints shall be acid cleaned and finished to decorative finish N4.
<u>Installation:</u>	Where practicable, check dimensions of spaces into which fabricated items are to be fitted before fabrication begins.

F.02

STRUCTURAL STEEL

<u>Refer:</u>	Structural Engineer's notes & plans. Architects details.
<u>Scope:</u>	CHS x 3 to Bedroom 2. SHS x 1 to Kitchen. Provide welded top and bottom plates flush with concrete structure.
<u>Finish:</u>	Metal primer and paint.

F.03

ALUMINIUM

<u>Observe:</u>	AS/NZS 1866: 1977: <i>Extruded rod, bar, solid & hollow shapes.</i> AS 1231: 2000: <i>Anodic oxidation coatings.</i>
<u>Refer:</u>	Architect's Plans and Details. Glazing Section. Door and Window Schedule. Provide pocket glazing frames to fixed glass windows and shower screens. Provide al. angle (40 x 40 x 3) at door thresholds to wet area topping. Provide ditto al. angle to sliding door track set-downs at openings.
<u>Note:</u>	Pool provisional sum included for al. channel glazing pocket to receive pool fence.

F.04

SUNDRY METAL ITEMS

<u>Refer:</u>	Architect's Plans and Details.
<u>Scope:</u>	Vent grating and duct from Bathroom 1. Cleats to stair treads. Tracks to sliding systems. Handrails. Balustrades. Division bars. Fabricate and install the above items to detail in connection with trades specified elsewhere.

F.05 FIREPLACE

Refer: Equipment Section.

F.06 SWIMMING POOL BALUSTRADE

Observe: Consent Condition B28.
AS 1926 – 2012: *Safety barriers for swimming pools.*

Refer: Details.
Swimming Pool balustrade and gate is integrated fabricated metal and glass, all as detailed.

F.07 CURTAIN TRACKS

Supply and install Silent Gliss 1080 hand operated curtain tracks as shown on concrete plans.

Curtains to be supplied by client.

G CARPENTRY & JOINERY**G.01 GENERALLY**

Observe: Comply with AS 1684: *Construction in Timber Framing.*

Size & space timber appropriate to stress grade.

Exposed timber shall be dressed unless noted otherwise, arrises cleaned with 1mm splay.

Prime timber to be primed on all faces. Touch up any damage.

Timbers to be in long lengths.

Fixings: To be suited to task & exposure to corrosion.

Moisture content: Confirm appropriate MC for site and deliver accordingly or stack on site to achieve required MC before fabrication or fixing.

Selection: The following timbers are to be used unless otherwise specified:

Solid joinery: HW Class A BLACKBUTT
[approved source].

Balustrades: As noted below.

Handrails: As noted below.

G.02 BALUSTRADES & HANDRAILS

Refer: Elevations and Sections..

Overall Provisional Sum allows for the complete supply and installation of items as follows:

- 1.1 Handrail to Stair 1.
- 1.2 Balustrade to West Terrace.
- 2.1 Handrail to Stair 2.
- 2.2 Balustrade to West Terrace.
- 2.3 Balustrade to East Terrace.

- 3.1 Balustrade to Roof awning.
- 3.2 Balustrade to Roof Terrace.
- 3.3 Handrail to Stair 3.

G.03**STAIR TREADS**

- Refer:** Details.
Provide laminated Blackbutt treads, 270x 75mm, ends grooved to receive galv. steel wall support 50 x 50 x 4.5mm angle cleats.
- Finish:** Sadolin Classic Wood protection.

G.04**CFC LININGS**

- Refer:** Plans, Details.
- Scope:** Shower recesses and as skirting over membrane turn-ups in wet areas.
Provide 9mm thick Cemintel BareStone Panel CFC sheets as manufactured by CSR, incorporating 'waterblock' technology.
Machine edges with small arris, fix with structural adhesive, allow 2mm gap at abutting edges and fill gap with grey sealant.
- Note:** Additional CFC items are included in the Joinery Provisional Sum.

G.05a**DOORS, WINDOWS, SCREENS**

- Refer:** Plans.
Schedule: Doors and Windows.
- Shop Drawings:** Provide shop drawings of all fabricated glazed door, window and mesh screen units including tracks, hinges and seals.
HW Glazed Units & Screens.
- Material:** Class A Blackbutt to the following units:
F1.01, F1.04, F1.05, F1.06,
F2.01, F2.02, F2.03, F2.04, F2.09, F2.10, F2.11, F2.12.
Screen material: Bronze flyscreen.
- Finish:** Sadolin Classic Wood protection.
- Seals:** Where required to exclude draughts seals generally shall be equal to Raven range, inserted in saw kerfs to suit.
Solid core doors.
F1.03, F1.07, F1.08, F1.09, F1.10, F1.11, F2.06.
Solid core door 32mm thick, B grade [exterior] ply faces, HW solid edge strips, paint finish.
Hardware.
- Sliding 1:** Sliding track systems generally (vertical units) shall be eq. to Cowdroy Maxi Roller heavy duty sliding door track system. Angle head track as detailed in lieu of standard head guide.
- Sliding 2:** **Overall Provisional Sum** allows for the supply only of sliding track systems to F1.05 and F2.12 (inclined units) including head and sill tracks.
Refer to detail for assembly.
- Hinges:** Provide 4x SS butt hinges to each leaf.

Pivots: Provide 8560G-COVER-PB RTS 85 floor pivot with flat spindle cover plate to suit 7421 timber door strap zinc, complete with accessories

G.06 FURNITURE TO WINDOWS & DOORS

Refer: Plans, Frames Schedule.

Overall Provisional Sum allows for supply only of furniture to windows and doors.

Except function hardware, i.e. sliders, hinges, pivots, friction stays noted above which shall be supplied by Builder.

Allow to fix mortice type latch and locksets, flush bolts and flush pulls all as indicated.

G.07a

JOINERY FIT-OUT

Refer: Plans and Details.

Overall Provisional Sum allows for supply and installation of joinery items scheduled below, including preparation [cut-outs and the like].

Item	Location	Function
J1.1	Bathroom	Vanity.
J1.2	Bed 1	Wardrobe.
J1.3	Store	Bench.
J2.1	Living	Credenza 1.
J2.2	Kitchen	Open Shelves
J2.3	Kitchen	Bench 1.
J2.4	Kitchen	Bench 2.
J2.5	Kitchen	Bench 3.
J2.6	Kitchen	Pantry 1. (CFC)
J2.7	Kitchen	Pantry 2. (CFC)
J2.8	Kitchen	Storage. (CFC)
J2.9	Bed 2.	Storage. (CFC)
J2.10	Bed 2.	Storage. (CFC)
J2.11	Bed 2.	Open Shelving (CFC)
J2.12	Bed 2.	Storage. (CFC)
J2.13	Ensuite	Vanity. (CFC)
J.2.14	Kitchen	Desk (CFC)
J.2.15	Bed ensuite	Pivot Wall. (CFC)

Note 1: Allow to install inclusions noted on plans.

Note 2: CFC panels as detailed associated with certain joinery items noted above are not included in the Overall Provisional Sum and shall be priced by the Builder.

H**GLAZING****H.01****CODES**

Note: On completion certify glazing installation satisfies the requirements of wind loads noted below.

Observe: AS 1288: *Installation of glass in buildings.*
 AS 2208: *Safety Glazing Materials.*
 AS 1170.2: *Loads on Structures, wind loads.*
 BASIX commitments.

Note: Engineer advises wind pressure is 1.5kPa.

H.02**EXTERNAL GLAZING**

Observe: External glass shall satisfy BASIX commitments and AS 2208.

Product: Grade A clear Low E toughened safety glass equal to Comfort-Plus of thickness to suit dimensions and exposure, installed to satisfy AS 1288. Colour tint: Nil.

Glazing shall be single glazing.

Certify: Provide Certification that glass units are toughened safety glass of correct thickness and satisfy BASIX commitments.

Refer: Door and Window Schedule and details.

Breakage: Replace at no cost to Owner any broken or cracked glass prior to Practical Completion.

H.03**SHOWER SCREEN**

Refer: Wet area room detail.
 Door and Window Schedule.

Product: 10mm toughened safety glass, exposed edges ground and polished.
 Install with silicon seal insert into al. glazing channel set flush with adjacent wall or floor surface.

Certify: Provide Certification that glass unit is toughened safety glass of correct thickness.

H.04a**SWIMMING POOL BALUSTRADE**

Observe: Consent Condition B28.
 AS 1926 – 2012: *Safety barriers for swimming pools.*

Refer: Details.
 Metalwork Section for integrated glass and metal swimming pool balustrade.

H.05**MIRRORS**

Mirrors shall be 6mm thickness, edges polished, fixing concealed (double sided structural adhesive tape).

Provide as follows:

L1 Bathroom size 460 x 1960.

L2 Ensuite size 390 x 1200.

L2 Master bed size 460 x 1960.

H.06**CLEANING & REPLACEMENT**

Replace at no cost to Owner damaged glass prior to Practical Completion.

Before handing over, clean glass, replace damaged glass. Leave glazing in good condition.

I INSULATION & MEMBRANES**I.01****GENERALLY**

Refer: AS 3999-1992: *Thermal Insulation of Dwellings - Bulk Insulation - Installation requirements.*

Observe: BASIX thermal comfort commitments

I.02**SLAB ON GROUND INSULATION**

Refer: Concrete Section.

I.03**SLAB SOFFIT INSULATION**

Refer: Concrete Section.

Scope: Level 1 slab soffit where off ground.
Thermatec Technologies 'Mascoat DTI' sprayed ceramic coating 3mm thickness (5 coats) applied by specialist applicator.
Finish up to straight edge at exposed edges. Remove straight edge on completion.

I.04**RETAINING WALL INSULATION**

Refer: Blockwork Section.

I.05**ROOF INSULATION**

Performance: Combined R Value: R2.5 to all areas.

Refer: Detail sections.

Scope: Bed 2 roof – 30mm thickness.
Garden roof – 50mm thickness.
Rigid insulation board equal to Polyisobaord PIP distributed by Solartex.

I.06**CAVITY WALL INSULATION**

Refer: Brickwork Section.

I.07**INSULATION TO RETAINING WALLS**

Refer: Blockwork Section.

I.08**MEMBRANES TO ROOF**

Refer: Detail sections.

Scope: Bed 2 Roof & Garden Roof installed by specialist sub-contractor equal to Wolfen Membranes Australia (WMA) specification.

Bed 2 roof: WMA GWSK Polyester/PVC Sheet: 2.3mm thick.

Garden Roof: WMA IB Polyester/PVC Sheet: 1.5mm thick complete with concealed fixing & finishing details.

I.09 MEMBRANE TO WET AREAS

- Observe:** AS 3740: *Waterproofing of wet areas within residential buildings.*
- Scope:** Bathroom 1 & 2.
Extend membrane across full area of floor under topping and turn up all round including full height of shower area in accordance with Code.
- Material:** Equal to Duromastic flexible acrylic and fibreglass sheet. Install in accordance with manufacturer's instructions.
- Finish:** Final surface to be concrete topping.

J APPLIED FINISHES**J.01 GENERALLY**

- Ensure finishing sub-contractor approves sub-base before commencing work.
- Ensure proper adhesion of finishes to structures & protection of finishes upon completion.
- Grade paving to even falls where required to floor wastes. (Min. 1:80). Lay level where falls are not required.
- Clean finishes thoroughly on completion.

J.02 CONCRETE TOPPING

- Scope:** Bathrooms to Levels 1 and 2.
Lay concrete topping to falls indicated, steel float finish, brass division bar where topping abuts concrete..
Flood test falls to floor waste.
Seal with eq. to Porters All-Purpose Concrete Seal.
- Division Bars:** Refer to metalwork section.
Where topping abuts adjacent floor finish fix at angle to base slab such that top edge is flush with adjacent floor.

J.03 CONCRETE SURFACE SEAL

- Scope:** Trafficable concrete floors, external paving and steps.
- Item:** Finish steel trowel finish floor surfaces with clear seal eq. Porters All-Purpose Concrete Seal.
- Sample:** Seal a small discrete area in Plant Room before general application. Confirm colour and texture with Architect.

J.04 PAINTING

- Observe:** AS 2311: *Painting of Buildings.*
Apply correct coating systems in compliance with Manufacturer's recommendations to produce satisfactory results.

- Products shall be shelf-line, of high quality, mutually compatible and compatible with surfaces to which they are applied.
- Note:** All internal paint shall be low VOC.
- Workmanship:** Ensure surfaces are ready to receive finish.
Make good defective surfaces before painting.
Protect floors and other surfaces.
Mask adjacent surfaces when spraying.
Remove or mask hardware, switch plates, etc., before painting. Replace on completion.
Finish paintwork to be even colour & smooth in all places.
- Completion:** Touch up where required, clean off marks, paint spots & stains.
If defects appear in paintwork before end of maintenance period, make good and repaint.

J.04**PAINTING SCHEDULE**

- Note:** Colours to be selected by Architect
- Timber (HW)** Sadolin Classic Wood protection (2 coats).
- Timber (doors)** Prime, undercoat + low-sheen enamel (2 coats).
- CFC** Refer to CFC Specification.
- Steel:** Undercoat + low-sheen enamel (2 coats).

M**DRAINAGE & PLUMBING****M.01****GENERALLY**

- Licence:** Work shall be carried out by a licensed Plumber and Gas Fitter.
- Observe:** AS 3500: *National Plumbing & Drainage Code*.
Local authority guidelines.
BASIX commitments.
- Liaison:** Liaise and coordinate with authorities.
Provide certification that all works are approved.

M.02**WASTE DRAINAGE**

- Make applications, pay fees, and obtain approvals for drainage from all new fixtures and stacks to Water Board requirements.
- Disconnect & remove redundant sewer lines.
- Before commencing work, confirm proposed arrangement of drainage to septic tank and grey water tank with Architect.
- Test drainage to satisfaction of Board's Inspector & carry out any required rectification.
- Waste & Vent Pipes:**
- Assemble waste and vent pipe system with PVC tubing, complete with PVC traps, cleaning eyes and necessary incidentals.
- Provide brackets, bolts, patent anchors, etc., to secure fixtures.

Confirm with Architect position of visible vent pipes and roof penetrations.

M.03**SEPTIC TANK**

Existing septic tank and associated absorption trenches shall be re-used.

Cap off and remove existing waste line to septic tank and provide new line fully concealed in ground from new house.

M.04**WATER SERVICE**

Before commencing work confirm proposed water reticulation with Architect.

Extend new water service from existing service which terminates at existing carport.

Main branches shall be 18 mm copper pipe.

Minor branches to each draw off point shall be of 12 mm copper pipe.

Isolate cold water service to HWS, Level 1 and Level 2 with stop cocks.

Fixtures: Recessed pipes connected to fixtures shall be union jointed. Any exposed pipe copper.

Hot water: Provide separate reticulation to hot water points from HW storage tank. Refer to next Clause.

Lagging: All hot water pipes shall be fully lagged except where exposed in wet areas.

Tank water: Provide separate reticulation of tank water to WC cisterns, laundry and hose cocks.

Standpipes Support any stand pipe off adjacent structure.

Pipe Fixing: Fix pipes to eliminate loose pipes and water hammer. Clips & screws to be copper and brass.

M.05a**HOT WATER AND HEATING**

Refer: Civil Engineer's Plans and notes.

Provide domestic hot water service integrated with Hydronic in-floor heating to three zones in 2nd Floor concrete slab.

Provide all insulated reticulation and isolating valves required for hot water and heating.

Heating system shall be equ. to F2040 (12 kW) based on an indoor unit VVM320 as supplied by GeoExchange. (Contact: Yale Carden, phone 8404 4193)

On completion:

- Commission Hydronic equipment.
- Provide copies of all warranties and manuals.
- Demonstrate to the Owner use and maintenance of Hydronic equipment.

M.06**SANITARY WARE**

Observe: BASIX commitments.

Refer: Wet area details indicate scope selection and location of sanitary ware including external bath.

Obtain, install to mfr's instructions and test sanitary ware.

M.07 **TAPWARE**

Observe: BASIX commitments.
Refer: Wet area details indicate scope, selection and location of tapware .
Obtain, install and test tapware.
Hose cocks, stop cocks, valves shall be standard brass capstan pattern.

M.08 **WET AREA SUNDRIES**

Refer: Wet area details indicate scope, selection and location of bathroom accessories and cabinets.
Obtain and install to mfr's instructions.

M.09 **FLOOR WASTES**

Refer: Wet area details indicate location and selection of floor wastes.
Obtain and install including grate and waste with integral collar, flashing sealed to waterproof membrane.

M.10 **STORMWATER RETICULATION**

Refer: Initial Work section.

M.11 **TANKS & PUMP**

Refer: Equipment Section.

M.12 **GAS INSTALLATION**

Refer: Plans.
Civil Engineer's plans and notes.
Reposition LPG gas tank to new location indicated on Site Plan.
Extend gas reticulation from new tank attachment and provide isolation valve at house prior to reticulation to wall mounted gas heater where indicated.
Ensure gas lines are safely protected in-ground
Provide gas Hot Water System

M.13a **IN-FLOOR HEATING**

Scope: Refer Hot Water and Heating Section

N**ELECTRICAL WORK****N.01****GENERALLY**

- Observe:** Carry out work by a licensed electrician in accordance with AS 3000: *Electrical Installations*.
Disconnect and remove redundant electric cables as necessary to carry out work.
Electrical work includes new consumers mains to new meter box and all conduit, wiring, supply and installation of light fittings, power points, switches, fans and connection to appliances.
Carry out patching or making good after electrical work by a trade-appropriate person.

N.02**TESTS**

- Carry out insulation and continuity tests during progress of work and supply testing apparatus.
On completion, test the installation to satisfaction of Architect and Supply Authority. Provide a copy of Notice of Compliance.

N.03**CONSUMERS MAINS & METERING**

- Refer:** Preliminaries Section: Existing Services.
Site Plan and Electrical Plan.
Provide new main from existing pole on site to a new pit and extend in ground to meter box.
Provide underground cable markers and protect conduit in ground.
Provide additional cable draw-in pit if required.
Underground mains and sub-mains shall be Cu. PVC/PVC SDI in HD orange conduit complete with earth wiring to comply with Wiring Rules.
Protect main switch board by service fuses and switch, and provide circuit breakers with integral earth leakage relays to each circuit.
Arrange for Supply Authority metering to be re-established at new location including "Application for Service" forms. Obtain signatures and arrange reconnection of power on behalf of Owner.
Record and submit "As Installed" details of mains installation.
- Meter Box:** Provide NSW standard galv. steel meter box, size 600 x 600 x 260d recessed in brickwork.
Refer West Elevation.

N.04**ELECTRICAL PLAN & RETICULATION**

- Refer:** Electrical Plan shows location of light, power, accessory & switch points. Plan is diagrammatic.
Confirm position of all items with Architect prior to installation.
Arrange circuits to provide spare capacity.
Note extensive reticulation in concrete slabs.

N.05 CONDUITS

Conduits shall be min. 20mm diam. light duty, complete with accessories and draw wires, concealed in slabs or wall except where agreed by Architect.

Concealed conduit may be corrugated. Exposed conduit shall be rigid PVC.

N.06 CABLES

Minimum size of sub-circuit cables:

General power sub-circuits	2.5mm ² .
Lighting sub-circuits	1.5mm ² .

N.07 SPECIAL CIRCUITS

Provide special circuits for:

Electric oven and cook top.

Pool plant.

Pump to water pump.

Hot Water System.

N.08 SWITCH PLATES

Internal: Socket outlets, light switches & flush plates shall be Clipsal 'Slimline' flush mounted, colour BROWN.

Dimmers: Provide dimmers to switching of fittings as noted.

External: Clipsal 'Slimline' mounted in weatherproof box.

N.09 ELECTRICAL APPLIANCES

TBS Appliances shall be supplied by Owner.

Take delivery, unpack, remove labels, install and test the following appliances:

Kitchen:	Cook top.
	Oven
	Rangehood
	DWM
	Refrigerator.
Laundry:	WM
	Dryer.

N.10a LIGHT FITTINGS AND FANS

Refer: Electrical plans indicate selection and location of light fittings and fans.

Overall Provisional Sum allows for the supply only of pendant light fittings and ceiling fans.

For all other light fittings refer to Schedule prepared by Tovo Lighting, No.1111 printed on 05-11-2014.

Obtain items noted on Tovo Schedule, wire, install and test.

Provide appropriate remote transformers to serve grouped ELV. Locate transformers where agreed by Architect.

Fans:

- Bathroom 1: Concealed exhaust fan in fabricated metal duct with cord pull operation. Mount cord switch on duct cover remote from shower head.
- Bathroom 2: Exhaust fan mounted in wall with all-weather louvre on external wall face. Switch with room switches.
- Kitchen: Exhaust fan to be supplied as part of range hood installation.

N.11 DATA LINE and CABLE TV

Install cable TV line & terminal where indicated.
Provide Cat.5 underground data line to distribution box.

N.12 SMOKE ALARMS

Install hard wired smoke alarms where indicated.

O

LANDSCAPE WORK

O.01 LANDSCAPE CONTRACT

- Observe: Consent Conditions B25, B26, B27.
Except for items noted in the following clauses,
Overall Provisional Sum allows for the complete supply and installation of Landscape work indicated on the Landscape Plans comprising:
- | | |
|---------|----------------------|
| DA 01 H | Landscape plan. |
| DA 02 H | Planting plan. |
| DA 03 H | Landscape site plan. |
| DA 04 H | Landscape sections. |

O.02 INTERNAL DRIVEWAY

- Observe: Consent Conditions B21.
Hydraulic Engineer's plans and specification.

O.03 FLOODED ROOF and SURFACE DRAINS

- Refer: Site Plan, Roof Plan.
- Roof: Provide membrane, insulation and FC protective sheeting all as previously specified.
Provide gravel to depth indicated using 30mm sieve selected river pebbles.
- Drains: To surface drains indicated provide similar pebbles.

O.04 TOPSOIL

- Refer: Site Plan.
Initial Work Section.(topsoil stockpile)
- Scope: Garden roof.
East and West Terrace areas.
Backfilled areas behind retaining walls.
Provide additional topsoil where existing stockpiled topsoil is insufficient for restoration of the site.

Provide topsoil, lightly compacted so that finished surface is smooth and ready for cultivation.

Feather topsoil edges into adjoining undisturbed ground and finish flush with abutting surfaces.

O.05**ON COMPLETION**

Observe:

Consent Conditions: B09, B10.

Ensure that on completion the site is free of environmental and noxious weeds. Provide confirmation to Architect.

P**EQUIPMENT****P.01a****SWIMMING POOL FINISHING & FIT-OUT**

Observe:

Consent Condition B29.

Provide complete finishing and fit-out of the pool as follows:

- a. Plumb MDX head to base of ballast trough, 2 in-floor cleaning heads and eq. to Astral CTX pump to allow cleaning of trough.
- b. Install all necessary 40mm & 50mm Class 12 pressure plumbing to pool shell to provide for skimmer box, main drain, filtration, heating and return lines.
- c. Run plumbing to pool equipment location below eastern end of pool.
- d. Apply slurry coat and approved waterproof membrane prior to applying internal finish to pool.
- e. Fix selected waterline tiles to pool waterline (300mm), vanishing edge and 300mm into ballast trough. Allow \$1,000 for supply only of waterline tiles.
- f. Provide internal finish to pool and ballast trough eq. to Beadcrete Glass Bead, colour ebony.
- g. Supply and install filtration and chlorination as follows:
 - . Main drain and skimmer box.
 - . Mineral water chlorinator eq. to Astral Viron.
 - . Cartridge filter eq. to Astral.
 - . Pump eq. to Hurlcon CTX 1.5Hp.
 - . 10m (allowance) backwash to sewer drain.
- h. Provide lighting installation comprising No.3 off multi-colour flush mounted LED underwater lights with SS trim and transformers.
- i. Connect pool equipment to electrical supply.
- j. Provide plumbing for automatic pressure pool cleaner and install equ. to Polaris 390 Sport Pressure Cleaner and booster pump.
- k. Provide hand-over kit, manual cleaning equipment and chemical test kit.
- l. Provide eq. to Astral Viron 10 Pool Controller and install where indicated.

On completion:

- d. Acid wash the swimming pool.
- e. Fill pool and balance water chemicals.
- f. Prime pumps and commission all equipment.
- g. Provide copies of all warranties and manuals.
- h. Demonstrate to the Owner use and maintenance of all pool equipment.

P.03

FIREPLACE AND FLUE

Provide Nectre model MK1 (with legs) slow combustion fire place by Pecan Engineering P/L complete with flue kit & cowl to suit ceiling height, passing through prepared concrete plinth on Garden Roof.

Overall Provisional Sum allows for provision of steel hearth plate.

Place under fireplace.

P.04a

SOLAR COLLECTORS

Provide roof mounted solar panel (No.8 panels) system eq. to Australia Wide Solar, including inverter and attachment to main switch board.

P.05

TANKS AND PUMP

Refer: Civil Engineer's drawings and specification.
Initial Works section: Drainage.

Observe: Stormwater tank. Condition B15.
Detention tank. Condition B17, B18.

Provide tanks and pumps as follows:

RT1 5Kl concrete by Taylex Tanks in ground behind retaining wall.

RT2 5Kl Slimline PVC tank by Polywater Tanks in plant room adjacent pool.

Install tanks in accordance with mfr's instructions including sub-base preparation and maintenance access.

Connect water supply pipes and outlets including overflows and first flush storage system.

Pumps: Provide pumps as nominated on Civil Engineer's plans and notes.

