

Bernie Cohen & Associates Pty Ltd Trading as

ESSENTIAL CERTIFIERS

ACN 100386650

ABN 84047117254

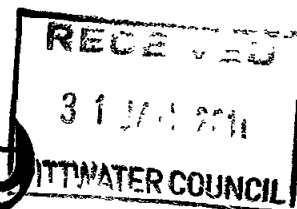
PO Box 208 Casula Mall NSW 2170 ☎ Level 1, 405 Hume Hwy, Liverpool 2170

Telephone (02) 9612 5000 ☎ Facsimile (02) 9612 5050

COUNCIL COPY



essentialCERTIFIERS



C C No

CONSTRUCTION CERTIFICATE

CC2011-00641

This certificate is issued by a Private Certifying Authority and verifies that if the applicant carries out the proposed work in accordance with the plans and specifications that are approved the work will comply with the Environmental Planning and Assessment Regulation 2000

COUNCIL

PITTWATER

APPLICANT

Name Bird, Mr Bruce & Mrs Elizabeth c/- Ian Cubitt's
Address 152 Russell Street EMU PLAINS 2750

OWNER

Name Bird, Mr Bruce & Mrs Elizabeth
Address 17 Minkara Road, BAYVIEW 2104
Contact no (telephone/fax) 9979 5748

SUBJECT LAND

Address 17 Minkara Road BAYVIEW 2104
Lot No 2
DP - 618622

DESCRIPTION OF DEVELOPMENT

Type of Work ☒ Building work ☐ Subdivision work

Description Construction of a new 'family retreat'

Essential Certifiers Liverpool Certificate No CC2011-00641

RJ:296008

COUNCIL'S D/A CONSENT

Development Consent No	N0443/10
D A Approval Date	12/11/2010

BUILDING CODE OF AUSTRALIA	
BUILDING CLASSIFICATION	10a

BUILDER or OWNER/BUILDER

Name	Ian Cubitt's Classic Home Improvements Pty Ltd
Contractor Licence No/Permit No in case of Owner Builder	66902C

\$ VALUE OF WORK

Building/Subdivision	\$117,470 00
----------------------	--------------

DATE C C APPLICATION RECEIVED

Date Received	22/11/2010
---------------	------------

DETERMINATION

Decision	Approved
Date of Decision	25/01/2011

ATTACHMENTS

- Home owners warranty certificate by QBE dated 23/11/10 ref BN-2085264
- Bushfire Threat Assessment Report by Bushfire Safety Solutions ref 2010/27A
- Dial before you dig dated 25/11/10 ref 20102988
- Sydney Water approval dated 06/05/10 ref 3435285
- Basix certificate dated 19/07/10 ref 89516
- Engineering Plans by Kneebone & Beretta Consulting Engineers Pty Ltd
Dwg no 56633-2 issue C dated 12/07/05
- Receipt by Pittwater Council dated 07/12/10 ref 288454
- \$30 00 cheque for Council submission fee

IMPORTANT NOTE It is the applicant's responsibility to ensure the mandatory PCA site sign supplied herewith, is displayed at this building site throughout construction

Essential Certifiers Liverpool Certificate No CC2011-00641

**PLANS AND SPECIFICATIONS
APPROVED/REFUSED**

List plan no(s) and specifications
reference

- Architectural Plans by Ian Cubitts Classic Home Improvements, Job no 17437
Drg no 17437 01 issue D to Drg no 17437 03 issue D dated 12/01/11
- Specification Booklet by Ian Cubitts Classic Home Improvements Pty Ltd dated 04/03/10 ref 17437

RIGHT OF APPEAL

*under S109K where the Certifying Authority is a Council an applicant
may appeal to the Land and Environmental Court against the refusal to
issue a Construction Certificate or imposition of conditions on the
consent within 12 months from the date of the decision*

ACCREDITATION BODY

BUILDING PROFESSIONALS BOARD
10 Valentine Street, Parramatta NSW 2150

CERTIFICATE

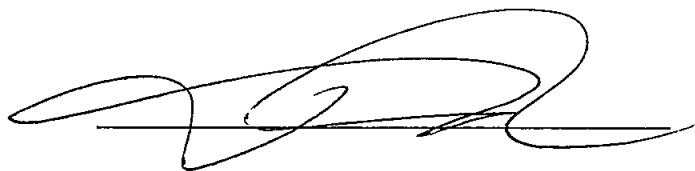
Certificate Final

I certify that the work if completed in accordance with these plans and
specifications (with such modifications verified by the Certifying
Authority as may be shown on that documentation) will comply with the
requirements of the Environmental Planning and Assessment Regulation
2000 as referred to in Section 81A(5) of the Environmental Planning
and Assessment Act 1979

CERTIFYING AUTHORITY

Name of Certifying Authority	Essential Certifiers Liverpool
Name of Accredited Certifier	Tony Raco
Accreditation No	BPB0336
Contact No	(02) 9612-5000
Address	Level 1, 405 Hume Highway, Liverpool NSW 2170

SIGNED



Essential Certifiers Liverpool Certificate No CC2011-00641



ESSENTIAL CERTIFIERS
LIVERPOOL
ABN 84047117254

SUITE 6, 387-393 HUME HIGHWAY LIVERPOOL NSW 2170
PH (02) 9824-1545 FAX (02) 9824-1754 Web Site www.esscert.com.au
BUILDING CONSULTANCY INSPECTIONS CERTIFICATION OF ESSENTIAL SERVICES TOWN PLANNING

**NOTICE OF COMMENCEMENT OF BUILDING WORK
& APPOINTMENT OF PRINCIPAL CERTIFYING AUTHORITY**

*Under Environmental Planning and Assessment Act 1979
Section 81A (2) (b), (u) or (c), or (4) (b) (u) or (c), 86 (1) and (2)*

SUBJECT LAND DETAILS

Lot No 2 DP No 618622
Street No & Suburb 17 MINKARA ROAD, BAYVIEW

Approved Development for

FAMILY RESIDENCE

CONSTRUCTION CERTIFICATE DETAILS

Certificate No

11/641

Date of Approval

25/1/11

OTHER CONSENT/S Council D/A ☒ or Complying Development ☐

Consent No

N0433/10

Date of Determination

12/11/10

PRINCIPAL CERTIFYING AUTHORITY DETAILS

I hereby consent to being appointed as Principal Certifying Authority for this project

Accredited Certifier

T. Lavo

Accreditation No

BPB0336

Accredited Certifier's signature

[Signature]

Accreditation Body

Department of Planning, Building Professionals Board
10 Valentine Street, Parramatta NSW 2150

COMPLIANCE WITH DEVELOPMENT CONSENT / COMPLYING DEVELOPMENT CERTIFICATE

Have all conditions been satisfied prior to the commencement of work



Yes



No

(Conditions may include payment of Security deposits,
Section 94 Contributions, endorsement of building work plans by Water Supply Authority, LSL Contributions)

APPROX. DATE BUILDING WORK IS TO COMMENCE

Jan 20 11

HOME BUILDING ACT 1989 REQUIREMENTS

Principal Certifying Authority has been advised of the requirements of CI 78C of the Regulation

☒ Yes ☐ No ☐ N/A - reason

Home Building Act 1989 requirements in case of building work that involves residential building work (within the meaning of the *Home Building Act 1989*) attached as follows

- (a) in the case of work by a licensee under the act
- (i) a statement detailing the licensee's name and contractor licence number, and
 - (ii) documentary evidence that the licensee has complied with the applicable requirements of that Act(*), or;
- (b) in the case of work done by any other person
- (i) a statement detailing the person's name and owner builder permit number, or
 - (ii) a declaration signed by the owner of the land, to the effect that the reasonable market cost of the labour and materials involved in the work is less than the amount prescribed for the purposes of the definition of owner-builder work in Section 29 of the Act

(*) A certificate purporting to be issued by an approved insurer under Part 6 of the *Home Building Act 1989* to the effect that a person is the holder of an insurance contract issued for the purposes of that Part, is sufficient evidence that the person has complied with the requirements of that Part.

DECLARATION

I, the undersigned, declare that I have the legal authority (express or implied) to engage a Principal Certifying Authority for the building works described in this document and verify that all information pertaining to such work is correctly stated on this form

I understand that this Notice must be given to the relevant Local Council two (2) days prior to the intention to commence building work in accordance with S81A(2)(c) of the EP&A Act and verify that no building work will commence prior to the date given in the "Date the Building Work is to Commence" section of this document

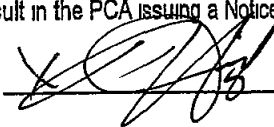

As a condition of appointing the Principal Certifying Authority stipulated on this form, I agree to undertake the following responsibilities, ensure the Builder contacts the PCA at the specified stages of development (as indicated below), to carry out building work in accordance with a current Development Approval, to notify the PCA of any intent to depart from the issued Development Approval as soon as the intention arises, and to verify all documents provided to the Private Certifying Authority are bona fide and correct in detail

I hereby authorize the Builder as detailed on the approved Construction Certificate to contact the PCA at the specified stages of development, but not limited to these stages, in order to obtain an inspection as follows

*Pre Commencement*Stormwater*Framework*Wet Areas*Completion*Any other stage as specified by the PCA

I fully understand that failure to do so may result in the PCA issuing a Notice of Intention to Serve an Order

Owner's or Tennant's Signature

Dated

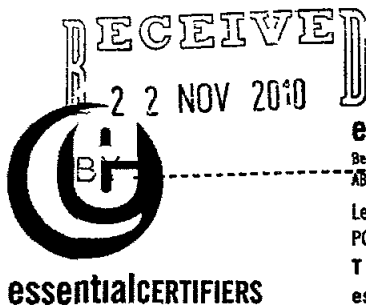
4/2/10

Print Name

B & A BIRD

Address

17, MINICARA RD
BAYVIEW



essentialCERTIFIERS

Bernie Cohen & Associates Pty Ltd 1A Essential Certifiers Liverpool
ABN 84 047 117 254

Level 1 • 405 Hume Highway Liverpool NSW 2170
PO BOX 5387 Prestons NSW 2170
T 02 9612 5000 F 02 9612 5050
essentialcertifiers.com.au

- ACCREDITED CERTIFIERS
- CONSTRUCTION CERTIFICATES
- INSPECTIONS
- FIRE SAFETY SERVICES
- BUILDING CODE CONSULTANCY

CONSTRUCTION & OCCUPATION CERTIFICATE

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

APPLICATION FORM

PART A: Description of land to be developed

LOT NO 2 STREET NO 17 DP NO 618622
STREET & SUBURB MINKARA RD, BAYVIEW

PART B: Agreement of Owner/s (all Owners must sign)

MR/MRS/MS MS SURNAME BIRD
FIRST NAME/S BRUCE CLAYTON / ELIZABETH ANNE
FULL ADDRESS 17 MINKARA RD, BAYVIEW
PHONE HOME 9979 5748 FAX 9997 5275 MOBILE 9997 7288
I/We own the land & consent to this application Dated 30/6/10
SIGNATURE OF OWNER/S: [Signature]

PART C: Builder or Owner/Builder details

FULL NAME DETAILS IAN CURBITTS CLASSIC HOME IMPROVEMENTS
FULL ADDRESS DETAILS 152 RUSSELL ST ENMU PLAINS
BUILDER'S LICENCE NO 66902C or OWNER/BUILDER PERMIT NO
PHONE 4735 2944 FAX 4735 2988 MOBILE 4735 2944

PART D: Applicant details & Billing details

MR/MRS/MS MS SURNAME BIRD FIRST NAME/S X BRUCE CLAYTON
X ELIZABETH ANNE
or BUSINESS NAME ABN
FULL ADDRESS 17 MINKARA RD, BAYVIEW
PHONE 9979 5748 FAX 9997 5275 MOBILE
EMAIL

SIGNATURE OF APPLICANT:

Dated 30/6/10 30/6/10

IMPORTANT If BILLING name & address are same as above, write "As Above" If not, please complete details below -

BILLING NAME IAN CURBITTS CLASSIC HOME IMPROVEMENTS 29 068 798 158

BILLING ADDRESS 152 RUSSELL ST, ENMU PLAINS

PART E: Description of works requiring Construction Approval

FULL DESCRIPTION OF PROPOSAL

THE CONSTRUCTION OF A DETACHED FAMILY HOME
VALUE OF WORK \$ 117,470.00 YOUR JOB/REFERENCE NO 17437

NO OF STOREYS

1

NO OF STRUCTURES

1

PART F: Relevant Local Council details

COUNCIL AREA SUBJECT SITE IS LOCATED WITHIN

PITWATER COUNCIL

COUNCIL'S DEVELOPMENT CONSENT NO

DATE OF DETERMINATION

BUILDING CLASSIFICATION/S NOMINATED ON DEVELOPMENT CONSENT

CLASS 10a

PART G: Plans & Specifications for approval

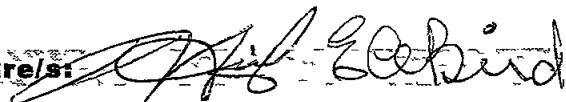
List all plan number/s & specification reference details requiring approval

1743701-1743703

PART H: Applicant's Declaration

I certify that the work will be completed in accordance with the plans & specification, & will comply with the relevant requirements of Section 81A(5) of the Environmental Planning & Assessment Act, 1979

Signature/s:



Date of Endorsement:

30/6/10

RIGHT OF APPEAL

Under Section 109K where the Certifying Authority is a Council, an applicant may appeal to the Land & Environment Court against the refusal to issue a Construction Certificate within twelve (12) months from the date of decision

PLEASE NOTE:

You may be required to pay a Long Service Levy under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 (or where such levy is payable by installments, the first installment of the levy), before the Certifying Authority can issue a certificate to you

SCHEDULE OF DETAILS FOR THE AUSTRALIAN BUREAU OF STATISTICS

Please note: This information is compulsory & must be completed in full by the applicant

Construction Certificate No <u>11/641</u>	Council's D/A Consent No <u>N0043/10</u>
---	--

Particulars of the Proposal

Area of subject site in m ² <u>20 200m²</u>	Does the site contain a Dual Occupancy? <u>NO</u>
Current use of <u>existing building/s</u> on subject site (if vacant, please state "vacant") <u>RESIDENTIAL DWELLING</u>	
Floor area of existing building/s in m ² except if being demolished <u>329m²</u>	
Gross floor area in m ² of proposed addition/s or new building/s If multiple buildings, please itemise <u>56m²</u>	
Proposed use of all parts of the addition/s or new building/s <u>DOMESTIC USE</u>	

This Section for Residential Dwellings only

Number of pre existing dwellings <u>1</u>	Number of dwellings to be demolished <u>0</u>
Number of proposed new dwellings <u>NIL</u>	Number of storeys of proposed dwelling <u>N/A</u>

Building Materials to be used

Tick the box alongside which best describes the material/s to be used in the construction of the proposed new work/s

WALLS	ROOF	FRAME	FLOOR
Brick Veneer	Aluminium	Timber	<input checked="" type="checkbox"/> Concrete
Full Brick	Concrete	Steel	Timber
Single Brick	Concrete Tiles	Other (describe below)	Other (describe below)
Concrete Block	Fibrous Cement		
Concrete/Masonry	Fibreglass		<u>TIMBER JOIST</u> <input checked="" type="checkbox"/>
Concrete	Masonry Shingle		<u>STEEL BEAMS</u> <input checked="" type="checkbox"/>
Steel	Terracotta Shingle		<u>STEEL JOIST</u> <input checked="" type="checkbox"/>
Fibrous Cement	Tiles other		
Hardiplank	Slate		
Timber/Weatherboard	<input checked="" type="checkbox"/> Steel	<input checked="" type="checkbox"/>	
Cladding/Aluminium	Terracotta Tiles		
Curtain Glass	Other (describe below)		
Other (describe below)			

Home Warranty Insurance
Certificate of Insurance
Brokers Schedule

Policy Number
BN-0034962-BWI-16



Home Warranty Insurance Fund

Level3 85 Harrington St
SYDNEY NSW 2000
Phone 1300790 723
Fax 028275 9330
ABN 78 003 191 035
AFS License No 239545



FINSURA INSURANCE BROKERS P/L P O BOX 686 CASTLE HILL NSW 1765	Name of Intermediary FINSURA INSURANCE BROKERS P/L	Account Number BN-2085264
--	--	------------------------------

Date Issued 23/11/2010

Policy Schedule Details

Builder	Business Address
IAN CUBITTS CLASSIC HOME IMPRO	152 RUSSELL STREET EMU PLAINS 2750
ABN / ACN	29 068 798 158
Licence Registration Number	U 66902C
Type of Insurance	RESIDENTIAL BUILDERS WARRANTY INSURANCE
Construction Works	NEW SINGLE DWELLING CONSTRUCTION CONTRACT
At	17 MINKARA ROAD BAYVIEW NSW 2104
State	NSW

Declared Construction Value	Contract Date	Estimated Construction Completion Date
\$119 274 00	05/03/2010	18/04/2011

Building Owner / Beneficiary MR & MRS BIRD

Limit of Indemnity	As defined in the State statute pertaining to the nsk as at the certificate issue date
Period of Insurance	As defined in the State statute pertaining to the nsk as at the certificate issue date
Expiry Date	As defined in the State statute pertaining to the nsk as at the certificate issue date

Premium				
Base Premium	Levies	Stamp Duty	GST	Total Premium
\$720 00	\$0 00	\$71 28	\$72 00	\$863 28

**Home Warranty
Insurance
Certificate of Insurance**

Policy Number
BN-0034962-BWI-16



**Home Warranty
Insurance Fund**

Level 3 85 Harrington St
SYDNEY NSW 2000
Phone 1300 790 723
Fax 02 8275 9330
ABN 78 003 191 035
AFS License No 239545



MR & MRS BIRD
17 MINKARA ROAD
BAYVIEW 2104

Name of Intermediary
FINSURA INSURANCE
BROKERS P/L

Account Number
BN-2085264

Date Issued 23/11/2010

Policy Schedule Details

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 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 Warranty Insurance Fund

In Respect of NEW SINGLE DWELLING CONSTRUCTION CONTRACT

At 17 MINKARA ROAD
BAYVIEW NSW 2104

Carried Out By BUILDER
IAN CUBITTS CLASSIC HOME IMPRO
ABN 29 068 798 158

Declared Contract Price \$119 274 00

Contract Date 05/03/2010

Builders Registration No U 66902C

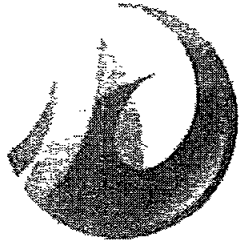
Building Owner / Beneficiary MR & MRS BIRD

Subject to the Act and the Home Building Regulation 2004 and the conditions of the insurance contract cover will be provided to the Building Owner/Beneficiary named in the domestic building contract and to the successors in title to the Building Owner/Beneficiary or the immediate successor in title to the contractor or developer who did the work and subsequent successors in title

Signed for and on behalf of NSW Self Insurance Corporation

IMPORTANT NOTICE

This Certificate must be read in conjunction with the Policy Wording and kept in a safe place
These documents are very important and must be retained by you and any successive owners of the property for the duration of the statutory period of cover



Bushfire Safety Solutions

Planning for Bushfire Protection 2006

Bushfire Threat Assessment Report

Lot 2 No. 17 Minkara Road

Bayview

Client: Mr. & Mrs. Bird

Report prepared by Bushfire Safety Solutions

Postal Address PO Box 7196 LPO South Penrith NSW 2750
Phone 9833 7200 / 0419 636 902

Report No 2010/27A Client Mr & Mrs Bird

This Report is copyright protected and can only be utilised by the Client for the purposes of this development proposal and is not available for use or to be copied in any form by others not authorised by Bushfire Safety Solutions

This Report has been prepared in accordance with the Deemed to Satisfy (DTS) & Alternate Solutions compliance provisions of each relevant NSW regulatory requirement

Email bushfiress@specbus.com www bushfiresafetysolutions.com.au

It is a condition that the use of this Report is only vested in the Client upon final payment of the Report fee

Bushfire Safety Solutions is a Corporate Member of the Fire Protection Association of Australia



Bushfire Assessment Specialists



Contents

Page

Part 1- Introduction

1 0	Introduction	3
1 1	Scope of Report	3
1 2	Property Details	4

Part 2 – Development Assessment

2 0	Development Description	5
2 1	Building Classification – Part 1 3 (BCA)	5
2 2	Bushfire Hazard Rating	6
2 3	Planning for Bushfire Protection Bushfire Threat Assessment 2006	7
2 4	Asset Protection Zone Compliance	10
2 5	Access	19
2 6	Water Supply	19
2 7	Threatened Species Assessment	20
2 8	Archaeological & Heritage Assessment	20

Part 3 - Recommendations

3 0	Recommendations	21
3 1	Summary of Recommendations	21
3 2	Conclusion	22

Appendix A – Proposed Granny Flat	24
-----------------------------------	----

References	26
------------	----



Part 1

1 0 Introduction

The purpose of this Report is to provide a Planning for Bushfire Protection on 2006 Bushfire Threat Analysis for proposed Granny Flat at Lot 2 DP 618622 known as 17 Minkara Road Bayview located within the Pittwater Local Government Area. This assessment is based on information provided by the Client and bushfire prone land mapping provided by the NSW Rural Fire Service and Pittwater Council.

Pittwater Council has requested that a bushfire threat assessment of the proposed development be undertaken to ensure the proposed Granny Flat complies with the requirements of Planning for Bushfire Protection 2006 and in particular Clause 4 1 3 Bushfire Protection Measures for Residential and Rural Development, Clause 4 3 4 "Role of construction standards for residential infill" and Appendix 3 (2010) bushfire asset protection measures.

1 1 Scope of Report

This Report addresses the following issues:

- A bushfire assessment report for a Granny Flat in accordance with the requirements of Planning for Bushfire Protection 2006,
- Recommendations for development compliance with Planning for Bushfire Protection 2006.

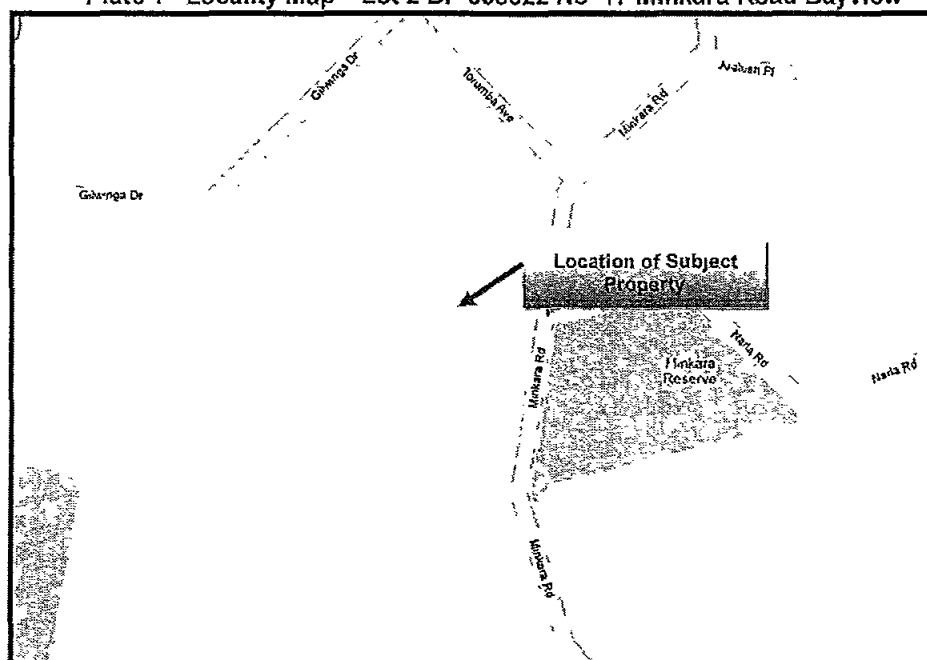


1.2 Property Details

Lot 2 DP 668622 known as 17 Minkara Road Bayview

The property has an easterly street frontage off Minkara Road. The lot is situated within an existing residential development area on the northern side of Bayview.

Plate 1 - Locality Map – Lot 2 DP 668622 No 17 Minkara Road Bayview



Lot 2 has an average 10° downslope from the front to the rear and beyond the rear lot. The lot adjoins existing residential lots to the north, east, south and west with the prominent bushfire prone vegetation to the rear of existing dwellings on the north western aspects from the subject property.

The subject property is unlikely to experience any direct impact from a passing bushfire to the north west of the lot (i.e. from the designated bushfire prone vegetation mapped area), however, as with all bushfire events the possibility of experiencing ember attack from this aspect is always a possibility.

To the south east, a bushfire could threaten the general area of Minkara Road from Minkara Reserve located opposite 17 Minkara Road Bayview to the south east.



Part 2

2 0 Development Description

The development will consist of a detached Granny Flat located on the north western aspect of the existing dwelling in the rear yard area. The site area is approximately 20,200m² with the total proposed building footprint of the building approximately 59 276m²

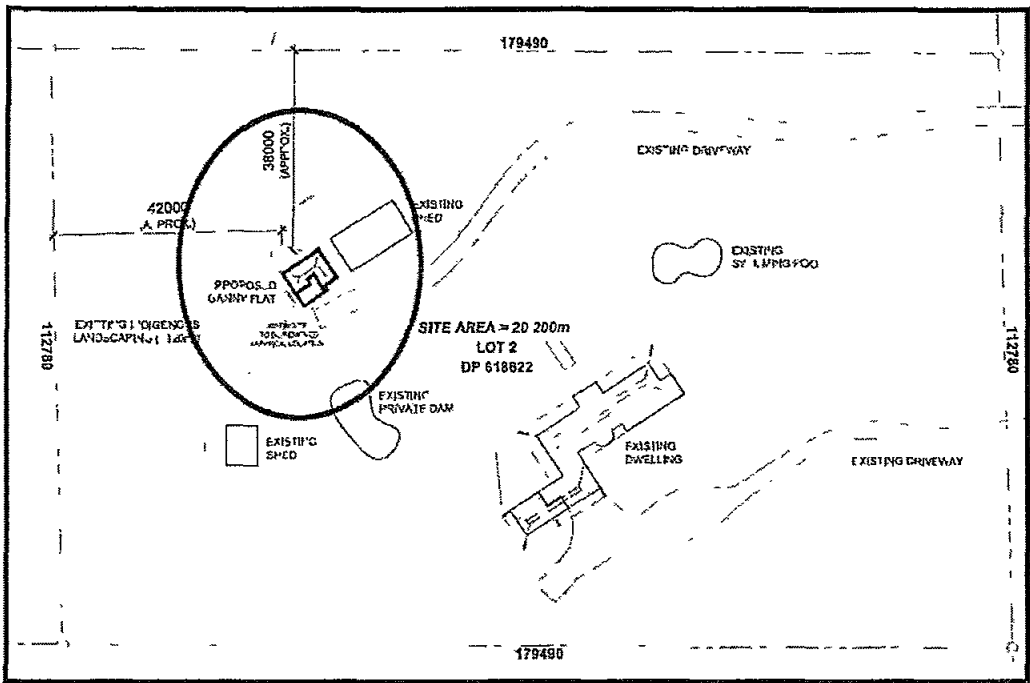


Plate 2 – Site Plan of Proposed Work 17 Minkara Road Bayview

2 1 Building Classification – Part 1 3 (BCA)

The proposed Granny Flat is classified as Class 1a in accordance with Part 1 3 of the BCA. The proposed additions are subject to the provisions of the Building Code of Australia (Volume 2 Housing Provisions) for standards of construction together with the requirements of AS 3959 Construction of Buildings in Bushfire Prone Areas – 2009 and the provisions of the Environmental Planning and Assessment Act 1979.



The proposed construction of the Granny Flat is a response to the increasing urban densities recently given approval by the State Government's SEPP "Affordable Rental Housing". This planning instrument permits secondary dwellings to be built on compliant residential lots and, for the purposes of land deemed to be bushfire prone, the 'infill development' compliance criteria specified in PBP 2006 provides a certain standard of bushfire safety required for this type of development in order to satisfy the performance standards prescribed for bushfire prone areas.

Part 2.4 of this Report will discuss bushfire safety criteria for asset protection zones and how the APZ provisions in PBP 2006 will apply to this development.

2.2 Bushfire Hazard Rating

The subject land is located within an area described as being Bushfire Prone. Pittwater Council bushfire prone land mapping has identified the lot as having an area of bushfire prone vegetation through the rear portion of the lot. In this regard, the designated bushfire prone vegetation would require management to ensure an asset protection area to protect the Granny Flat from any bushfire threat that could spread from external sources into the property.

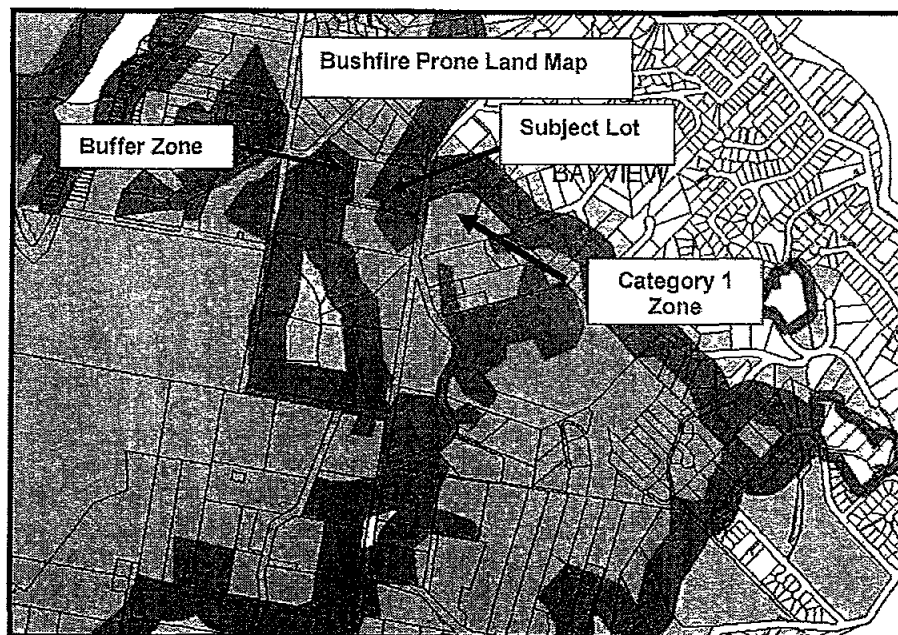


Plate 3 – Bushfire Prone Land Map Minkara Road Bayview



The proposed location of the Granny Flat indicates that the building is capable of complying with deem to satisfy requirements prescribed in Planning for Bushfire Protection 2006 (PBP 2006) for asset protection zone distances, however, with an increase in construction levels for the proposed building, the development is capable of complying with AS3959 – 2009 and the performance measures provided in PBP 2006

Accordingly, this bushfire threat assessment will recommend a deem to satisfy compliance with the requirements of Appendix 3 in PBP 2006 using BAL 29 construction standards for the proposed Granny Flat in accordance with AS 3959 (Construction of Buildings in Bushfire Prone Areas), and an APZ to an inner protection standard of construction

2 3 Planning for Bushfire Protection Bushfire Threat Assessment 2006

The Bushfire Prone Land Map for Pittwater includes the subject lot within a designated Bushfire Prone Zone and mapped as being part bushfire buffer zone and part bushfire prone vegetation within the subject lot. Bushfire prone vegetation is also located to the south east in Minkara Reserve and to the north west of 17 Minkara Road within an existing residential property at 2 Gilwina Drive

The rear lot is cleared of bushfire prone vegetation and provides general bushfire protection for 17 Minkara Road to the north west aspect

Any potential bushfire threat to 17 Minkara Road would therefore most likely be from ember attack from Minkara Reserve, located to the south east of the subject property

Based on the geographical location of the lot it is assessed as having an FDI of 100 (Table A2 3 – Planning for Bushfire Protection 2006). The site conditions provide an average effective land slope of 10° down slope from the rear of the lot through the adjoining rear property for approximately 60m

Consultation with PBP 2006 and AS 3959 – 2009 Table 2 4 2 suggests that the bushfire threat from the south eastern and northerly aspects are considered to be **High**. Based on the separation distance between the Granny Flat and the location of the bushfire prone vegetation (on adjoining properties), any potential bushfire threat to the subject property would be from possible ember attack from the south eastern aspect and to a certain extent from the north western aspect



The construction of the recommended inner protection zone will further alter the current bushfire prone mapping designations for 17 Minkara Road and, as such, change the overall locally designated bushfire threat ratings for the area

Plate 4 below provides an indication of the changes that will occur when the new APZ within 17 Minkara Road will change the overall bushfire threat designation to the subject lot

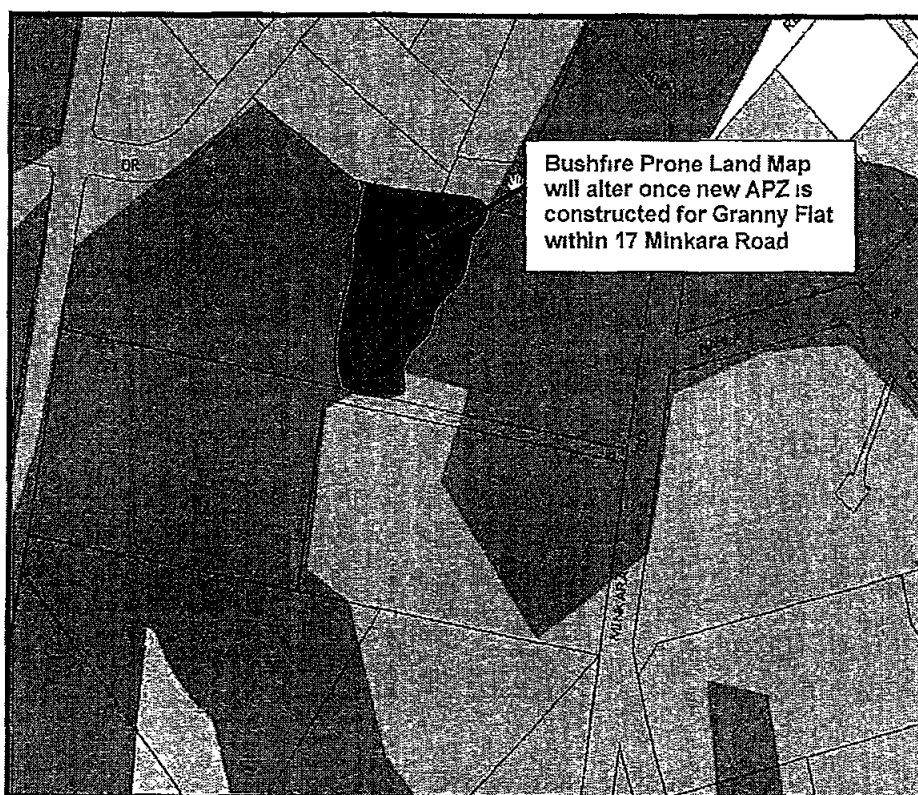


Plate 4 – Bushfire Land Map Plan – 17 Minkara Road Bayview

2.4 Asset Protection Zone Compliance

The proposed Granny Flat is considered to be similar to that of "infill development" and, as such, the proposed development will require an asset protection zone that complies with Table A3.3 for land slopes of >5 to 10° within a forest classification requiring a separation distance of 45-59m to the bushfire prone vegetation interface



The proposed setback of the Granny Flat off the rear boundary is 42m. The distance off the northern aspect of the Granny Flat is approximately 38m.

The proposed Granny Flat will achieve the minimum asset protection zone separation within the property and will therefore rely on a cleared asset protection zone and the required level of construction so as to comply with AS 3959 – 2009 and PBP 2006 for bushfire protection compliance.

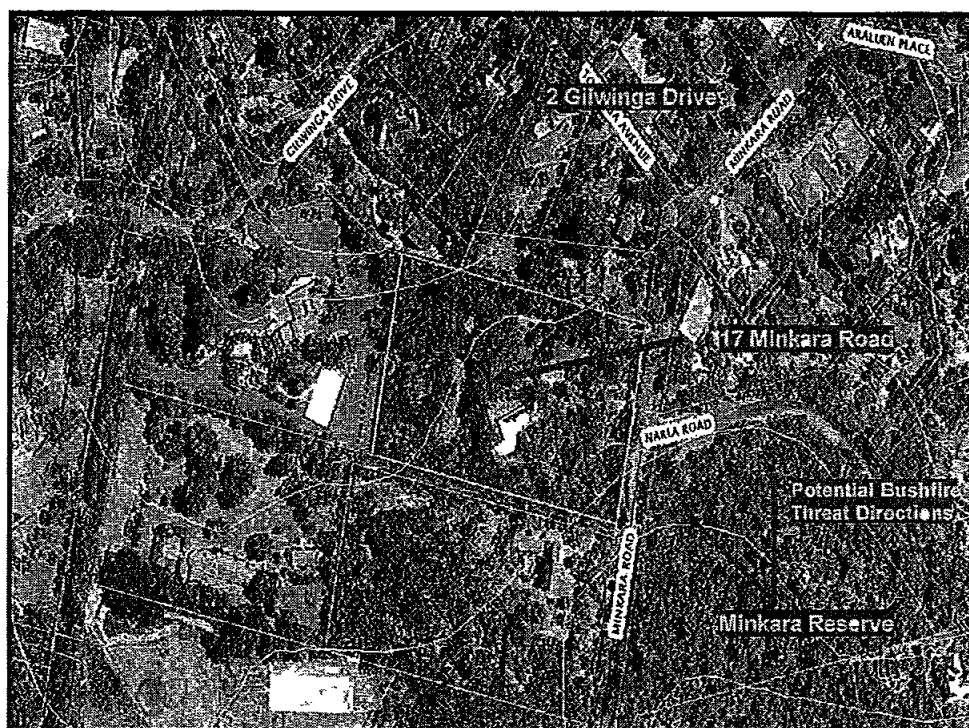


Plate 5 – Potential Bushfire Threat Directions to 17 Minkara Road

- **Defendable Space Provisions**

The available defendable space to protect the building from ember attack is located within 10m of each aspect to the Granny Flat.

Plate 6 below describes the proposed defendable space locations and the available area for asset protection for the dwelling and Granny Flat to all open aspects.

- The proposed APZ to the west is required to be a minimum 40m,
- The proposed APZ to the north is required to be 33m,



- The required APZ to the south and east of the Granny Flat is recommended to be 33m

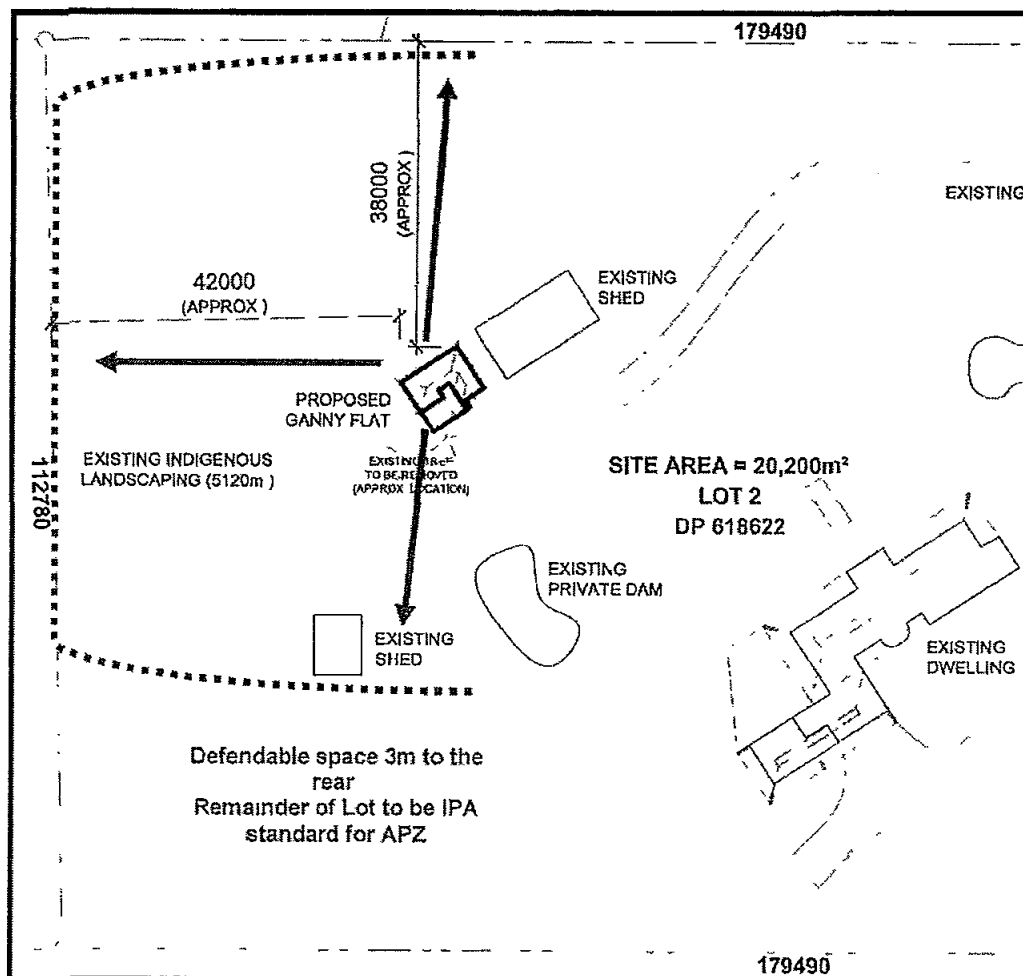


Plate 6 – Defendable Space for 17 Minkara Road

- **Building Construction Standard**

It is recommended that the proposed Granny Flat be constructed to minimum BAL 29 construction standards that include the following construction requirements

The following AS3959 – 2009 extract provides an overview of the BAL 29 construction standards required for the proposed Granny Flat



SECTION 7 CONSTRUCTION FOR BUSHFIRE ATTACK LEVEL 29 (BAL—29)

7.1 GENERAL

A building assessed in Section 2 as being BAL—29 shall comply with Section 3 and Clauses 7.2 to 7.8.

NOTE: There are a number of Standards that specify requirements for construction; however, where this Standard does not provide construction requirements for a particular element, the other Standards apply.

Any element of construction or system that satisfies the test criteria of AS 1530.8.1 may be used in lieu of the applicable requirements contained in Clauses 7.2 to 7.8 (see Clause 3.6).

NOTE: BAL—29 is primarily concerned with protection from ember attack and radiant heat greater than 19 kW/m² up to and including 29 kW/m².

7.2 SUBFLOOR SUPPORTS

This Standard does not provide construction requirements for subfloor supports where the subfloor space is enclosed with—

- (a) a wall that complies with Clause 7.4, or
- (b) a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion resistant steel, bronze or aluminium, or
- (c) a combination of Items (a) and (b) above.

Where the subfloor space is unenclosed, the support posts, columns, stumps, piers and poles shall be—

- (i) of non-combustible material, or
- (ii) of bushfire-resisting timber (see Appendix I), or
- (iii) a combination of Items (i) and (ii) above.

NOTE: This requirement applies to the principal building only and not to verandas, decks, steps, ramps and landings (see Clause 7.7).

7.2 Combustible materials stored in the subfloor space may be ignited by embers and cause an impact to the building.

7.3 FLOORS

7.3.1 Concrete slabs on ground

This Standard does not provide construction requirements for concrete slabs on ground.

7.3.2 Elevated floors

7.3.2.1 Enclosed subfloor space

This Standard does not provide construction requirements for elevated floors, including bearers, joists and flooring, where the subfloor space is enclosed with—

- (a) a wall that complies with Clause 7.4, or
- (b) a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion resistant steel, bronze or aluminium, or
- (c) a combination of Items (a) and (b) above.

Alternate Building Solutions for bushfire building compliance
Asset Protection Zone Construction Advice
Bushfire Risk Management Plans



7.3.2.2 Unenclosed subfloor space

Where the subfloor space is unenclosed, flooring material, including bearers, joists and flooring less than 400 mm above finished ground level, shall be—

- (a) non combustible (e.g. concrete, steel), *or*
- (b) of bushfire-resisting timber (see Appendix I) *or*
- (c) particleboard or plywood flooring where the underside is lined with sarking type material or mineral wool insulation *or*
- (d) a system complying with AS 1530.8.1 *or*
- (e) a combination of any of Items (a), (b), (c) or (d) above

This Standard does not provide construction requirements for elements of elevated floors, including bearers, joists and flooring if the underside of the element is 400 mm or more above finished ground level.

7.4 EXTERNAL WALLS

7.4.1 Walls

Walls shall be one of the following:

- (a) Made of non combustible material (e.g. full masonry brick, veneer mud brick, concrete, aerated concrete) *or*
- (b) Made of timber framed or steel framed walls that are sarked on the outside of the frame and clad with—
 - (i) fibre cement external cladding, a minimum of 6 mm in thickness *or*
 - (ii) steel sheet *or*
 - (iii) bushfire resisting timber (see Appendix I) *or*
 - (iv) a combination of any of Items (i), (ii) or (iii) above*or*
- (c) A combination of Items (a) and (b) above

7.4.2 Joints

All joints in the external surface material of walls shall be covered, sealed, overlapped, bricked or butt jointed to prevent gaps greater than 3 mm.

Alternatively, sarking type material can be applied over the frame prior to fixing any external cladding.

7.4.3 Vents and weepholes

Vents and weepholes in external walls shall be screened with a mesh with a maximum aperture of 2 mm, made of corrosion resistant steel, bronze or aluminum, except where they are less than 3 mm (see Clause 3.6).

7.5 INTERNAL GLAZED ELEMENTS AND ASSEMBLIES AND EXTERNAL DOORS

7.5.1 Bushfire shutters

Where fitted, bushfire shutters shall comply with Clause 3.7 and be made from—

- (a) non combustible material *or*



- (b) bushfire-resisting timber (see Appendix I) *or*
- (c) a combination of Items (a) and (b) above

7.5.2 Windows

Windows shall comply with one of the following.

- (a) They shall be completely protected by a bushfire shutter that complies with Clause 7.5.1
or
- (b) They shall comply with the following:
 - (i) Window frames and window joinery and shall be made from one of the following:
 - (A) Bushfire resisting timber (see Appendix I)
or
 - (B) Metal
or
 - (C) Metal reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel or corrosion resistant steel and the frame and the sash shall satisfy the design load performance and structural strength of the member.
 - (ii) Externally fitted hardware that supports the sash in its functions of opening and closing shall be metal.
 - (iii) Glazing shall be toughened glass minimum 5 mm.
 - (iv) Where glazing is less than 100 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the window frame (see Figure D3 Appendix D) that portion shall be screened with a mesh or perforated sheet with a maximum aperture of 2 mm made of corrosion resistant steel, bronze or aluminium.
 - (v) The openable portions of windows shall be screened with a mesh with a maximum aperture of 2 mm made of corrosion-resistant steel, bronze or aluminium.

7.5.3 Doors—Side-hung external doors (including French doors, panel fold and bi-fold doors)

Side hung external doors including French doors, panel fold and bi-fold doors shall comply with one of the following.

- (a) They shall be protected by a bushfire shutter that complies with Clause 7.5.1
or
- (b) They shall be completely protected externally by screens with a mesh with a maximum aperture of 2 mm made of corrosion-resistant steel, bronze or aluminium
or
- (c) They shall comply with the following:
 - (i) Doors shall be –
 - (A) non-combustible *or*



- (B) a solid timber door having a minimum thickness of 35 mm for the first 400 mm above the threshold, *or*
- (C) a door including a hollow core door protected on the outside by a screen door or a mesh or perforated sheet with a maximum aperture of 2 mm made of corrosion resistant steel, bronze or aluminium *or*
- (D) a fully framed glazed door where the framing is made from non combustible materials or from bushfire resisting timber (see Appendix I)
- (ii) Externally fitted hardware that supports the panel in its functions of opening and closing shall be metal
- (iii) Where doors incorporate glazing the glazing shall be toughened glass minimum 5 mm
- (iv) Where glazing is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the door (see Figure D3, Appendix D), that portion shall be screened with a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion resistant steel, bronze or aluminium
- (v) Doorframes shall be made from one of the following
 - (A) Bushfire resisting timber (see Appendix I)
 - or*
 - (B) Metal
 - or*
 - (C) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel or corrosion resistant steel and the door assembly shall satisfy the design load performance and structural strength of the member
- (vi) Doors shall be tight fitting to the doorframe and to an abutting door if applicable
- (vii) Weather strips, draught excluders or draught seals shall be installed at the base of side hung external doors

7.5.4 Doors—Sliding doors

Sliding doors shall comply with one of the following:

- (a) They shall be protected by a bushfire shutter that complies with Clause 7.5.1
 - or*
- (b) They shall be completely protected externally by screens with a mesh with a maximum aperture of 2 mm made of corrosion resistant steel, bronze or aluminium
 - or*
- (c) They shall comply with the following
 - (i) Doorframes shall be of bushfire resisting timber (see Appendix I) or aluminium or steel
 - (ii) Externally fitted hardware that supports the panel in its functions of opening and closing shall be metal
 - (iii) Where sliding doors incorporate glazing the glazed assembly shall be toughened glass minimum 6 mm except where both the fixed and openable portions of doors are screened by a mesh or perforated sheet with a maximum aperture of 2 mm made of corrosion resistant steel, bronze or aluminium



- (iv) Sliding doors shall be tight-fitting in the frames

7.5.5 Doors—Vehicle access doors (garage doors)

The following apply to vehicle access doors

- (a) Vehicle access doors shall be made from—
- (i) non-combustible material, *or*
 - (ii) bushfire resisting timber (see Appendix I), *or*
 - (iii) fibre cement sheet, a minimum of 6 mm in thickness *or*
 - (iv) a combination of any of items (i), (ii) or (iii) above
- (b) Panel lift, tilt doors or side hung doors shall be fitted with suitable weather strips, draught excluders, draught seals or guide tracks, as appropriate to the door type, with a maximum gap no greater than 3 mm
- (c) Roller doors shall have guide tracks with a maximum gap no greater than 3 mm and shall be fitted with a nylon brush that is in contact with the door (see Figure D4, Appendix D)
- (d) Vehicle access doors shall not include ventilation slots

7.6 ROOFS (INCLUDING VERANDA AND ATTACHED CARPORT ROOFS, PENETRATIONS, EAVES, FASCIAS, GABLES, GUTTERS AND DOWNPIPS)

7.6.1 General

The following apply to all types of roofs and roofing systems

- (a) Roof tiles, roof sheets and roof covering accessories shall be non-combustible
- (b) The roof/wall junction shall be sealed, to prevent openings greater than 3 mm, either by the use of fascia and eaves linings or by sealing between the top of the wall and the underside of the roof and between the rafters at the line of the wall
- (c) Roof ventilation openings, such as gable and roof vents, shall be fitted with ember guards made of non-combustible material or a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium
- (d) A pipe or conduit that penetrates the roof covering shall be non-combustible

7.6.2 Tiled roofs

Tiled roofs shall be fully sarked. The sarking shall—

- (a) have a flammability index of not more than 5 when tested to AS 1530.2
- (b) be located directly below the roof battens
- (c) cover the entire roof area including the ridge, and
- (d) extend into gutters and valleys

7.6.3 Sheet roofs

Sheet roofs shall—

- (a) be fully sarked in accordance with Clause 7.6.2, except that foil backed insulation blankets may be installed over the battens,

or



- (b) have any gaps greater than 3 mm under corrugations or ribs of sheet roofing and between roof components sealed at the fascia or wall line and at valleys hips and ridges by—
 - (i) a mesh or perforated sheet with a maximum aperture of 2 mm made of corrosion-resistant steel, bronze or aluminium, *or*
 - (ii) mineral wool *or*
 - (iii) other non combustible material *or*
 - (iv) a combination of any of items (i) (ii) or (iii) above

7.6.4 Veranda, carport and awning roofs

The following apply to veranda carport and awning roofs

- (a) A veranda carport or awning roof forming part of the main roof space [see Figure D1(a) Appendix D] shall meet all the requirements for the main roof as specified in Clauses 7.6.1 7.6.2 7.6.3 7.6.5 and 7.6.6
- (b) A veranda carport or awning roof separated from the main roof space by an external wall [see Figures D1(b) and D1(c) Appendix D] complying with Clause 7.4 shall have a non combustible roof covering and the support structure shall be —
 - (i) of non combustible material *or*
 - (ii) bushfire resisting timber (see Appendix I) *or*
 - (iii) timber rafters lined on the underside with fibre cement sheeting a minimum of 6 mm in thickness, or with material complying with AS 1530.8.1 *or*
 - (iv) a combination of any of items (i) (ii) or (iii) above

7.6.5 Roof penetrations

The following apply to roof penetrations

- (a) Roof penetrations including roof lights roof ventilators roof mounted evaporative cooling units, terrills vent pipes and supports for solar collectors shall be adequately sealed at the roof to prevent gaps greater than 3 mm. The material used to flash the penetration shall be non combustible
- (b) Openings in vented roof lights roof ventilators or vent pipes shall be fitted with ember guards made from a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion resistant steel bronze or aluminium
- (c) All overhead glazing shall be Grade A laminated safety glass complying with AS 1288
- (d) Glazed elements in roof lights and skylights may be of polymer provided a Grade A safety glass diffuser complying with AS 1288 is installed under the glazing. Where glazing is an insulating glazing unit (IGU) Grade A toughened safety glass minimum 4 mm, shall be used in the outer pane of the IGU
- (e) Where roof lights are installed in roofs having a pitch of less than 18 degrees to the horizontal, the glazing shall be protected with ember guards made from a mesh or perforated sheet with a maximum aperture of 2 mm made of corrosion resistant steel bronze or aluminium
- (f) Evaporative cooling units shall be fitted with butterfly closers at or near the ceiling level or the unit shall be fitted with non-combustible covers with a mesh or perforated sheet with a maximum aperture of 2 mm made of corrosion-resistant steel bronze or aluminium



7.6.6 Eaves linings, fascias and gables

The following apply to eaves linings, fascias and gables:

- (a) Joints in eaves linings, fascias and gables may be sealed with plastic joining strips or timber storm moulds.
- (b) Gables shall comply with Clause 7.4.
- (c) Fascias and bargeboards shall—
 - (i) where timber is used, be made from bushfire-resisting timber (see Appendix I) *or*
 - (ii) where made from metal, be fixed at 450 mm centres *or*
 - (iii) be a combination of Items (i) and (ii) above.
- (d) Eaves linings shall be—
 - (i) fibre cement sheet a minimum 4.5 mm in thickness *or*
 - (ii) bushfire-resisting timber (see Appendix I) *or*
 - (iii) a combination of Items (i) and (ii) above.
- (e) Eaves penetrations shall be protected the same as for roof penetrations (see Clause 7.6.5).
- (f) Eaves ventilation openings greater than 3 mm shall be fitted with ember guards made of non-combustible material or a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.

7.6.7 Gutters and downpipes

This Standard does not provide construction specific material requirements for downpipes.

If installed, gutter and valley leaf guards shall be non-combustible.

With the exception of box gutters, gutters shall be metal or PVC-U.

Box gutters shall be non-combustible and flashed at the junction with the roof with non-combustible materials.

7.7 VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS

7.7.1 General

Decking shall be either spaced or continuous (i.e. without spacing).

There is no requirement to enclose the subfloor spaces of verandas, decks, steps, ramps or landings.

C7.7.1 Spaced decking is nominally spaced at 3 mm (in accordance with standard industry practice) however, due to the nature of timber decking with seasonal changes in moisture content, that spacing may range from 0.5 mm during service. The preferred dimension for gaps is 3 mm (which is in line with other permissible gaps) in other parts of this Standard. It should be noted that recent research studies have shown that gaps at 5 mm spacing afford opportunity for embers to become lodged in between timbers which may contribute to a fire. Larger gap spacings of 10 mm may preclude this from happening but such a spacing regime may not be practical for a timber deck.



7.7.2 Enclosed subfloor spaces of verandas, decks, steps, ramps and landings

7.7.2.1 Materials to enclose a subfloor space

The subfloor spaces of verandas, decks, steps, ramps and landings are considered to be 'enclosed' when—

- (a) the material used to enclose the subfloor space is—
 - (i) non-combustible *or*
 - (ii) bushfire-resisting timber (see Appendix I), *or*
 - (iii) a mesh or perforated sheet with a maximum aperture of 2 mm made of corrosion-resistant steel, bronze or aluminium *or*
 - (iv) a combination of any of items (i), (ii) or (iii) above; and
- (b) all openings greater than 3 mm are screened with a mesh or perforated sheet with a maximum aperture of 2 mm made of corrosion-resistant steel, bronze or aluminium.

7.7.2.2 Supports

This Standard does not provide construction requirements for support posts, columns, stumps, stringers, piers and poles.

7.7.2.3 Framing

This Standard does not provide construction requirements for the framing of verandas, decks, ramps or landings (i.e., bearers and joists).

7.7.2.4 Decking

Decking shall be—

- (a) of non-combustible material *or*
- (b) of bushfire-resisting timber (see Appendix I) *or*
- (c) a combination of items (a) and (b) above.

7.7.3 Unenclosed subfloor spaces of verandas, decks, steps, ramps and landings

7.7.3.1 Supports

Support posts, columns, stumps, stringers, piers and poles shall be—

- (a) of non-combustible material *or*
- (b) of bushfire-resisting timber (see Appendix I) *or*
- (c) a combination of items (a) and (b) above.

7.7.3.2 Framing

Framing of verandas, decks, ramps or landings (i.e., bearers and joists) shall be—

- (a) of non-combustible material *or*
- (b) of bushfire-resisting timber (see Appendix I), *or*
- (c) a combination of items (a) and (b) above.

7.7.3.3 Decking

Decking shall be—

- (a) of non-combustible material *or*
- (b) of bushfire-resisting timber (see Appendix I) *or*
- (c) a combination of items (a) and (b) above.



7.7.4 Balustrades, handrails or other barriers

Those parts of the handrails and balustrades less than 125 mm from any glazing or any combustible wall shall be—

- (a) of non combustible material, or
- (b) bushfire resisting timber (see Appendix F), or
- (c) a combination of items (i) and (ii) above

Those parts of the handrails and balustrades that are 125 mm or more from the building have no requirements

7.8 WATER AND GAS SUPPLY PIPES

Above ground, exposed water and gas supply pipes shall be metal

Extract – AS 3959 – 2009 for construction advice only – BAL 29

It is recommended that the proposed development be provided with the following passive bushfire protection measures

- 1 A fire fighting water supply is to be provided and to be a minimum of 5000 litres and incorporated into a recommended onsite water supply system that includes a fire fighting pump system. The fire fighting hose is to be capable of reaching all building elevations and is to be general fire fighting hose standard (not plastic garden hose)
- 2 It is further recommended that the dwelling and Granny Flat have non flammable roof gutter protection to prevent leaf litter build up and that all roof valleys be protected to prevent leaf litter accumulations at roof intersections and the like. These provisions are not specifically covered in AS3959 but will assist in reducing the potential for ember instigated fire to take hold in and around the roof area of each building

2.5 Access

The proposed development has a tar sealed road which complies with Section 4.1.3 in PBP 2006

2.6 Water Supply

The requirements of Chapter 4 in PBP 2006 are satisfied as the property is provided with a reticulated water supply service



2.7 Threatened Species Assessment

The owner has advised that there is no threatened species on site as the land is fully cleared of native vegetation within the proposed development area, whilst the remainder of the site is covered with open grass and garden areas.

2.8 Archaeological and Heritage Assessment

The owner has advised that there are no archaeological or heritage covenants upon the land.



Part 3

3 0 Recommendations

The proposed construction of the Granny Flat has been assessed in accordance with the requirements of Planning for Bushfire Protection 2006, AS 3959 – 2009 and the Building Code of Australia Volume 2 Class 1 & 10 Housing Provisions

Given the development is within an existing residential area, the bushfire protection requirements under PBP 2006 have been discussed in Part 2 of this Report and together with the following recommendations would provide the proposed development with a high level of bushfire protection

Recommendation 1 – Asset Protection Zone

The required AZP for the development is recommended to comply with the following requirements

- 1 Required APZ to be constructed as an Inner Protection Area to all aspects from the Granny Flat to the lot boundary line,
- 2 All landscaping to be kept clear of the Granny Flat with no combustible landscape materials abutting the building curtilidge

Recommendation 2 – Level of Construction

It is considered that the construction standard for the proposed Granny Flat given its proximity to the surrounding bushfire prone vegetation will require BAL 29 construction building requirements to protect the building from bushfire attack

3 1 Summary of Recommendations

The following summary of recommendations is proposed for the Granny Flat at 17 Minkara Road Bayview so as to comply with PBP 2006 requirements and AS 3959 - 2009

- All aspects to Inner Protection Zone construction standards including the north western aspect (prominent bushfire prone aspect),



- All landscaping to be kept clear of the dwelling and Granny Flat with no combustible landscape materials abutting the building curtilidge

BAL 29 building construction for the proposed Granny Flat to comply with AS 3959 - 2009 and include the following bushfire construction safety upgrade -


- A fire fighting water supply is to be provided and to be a minimum of 5000 litres and incorporated into a recommended onsite water supply system that includes a fire fighting pump system. The fire fighting hose is to be capable of reaching all building elevations (for each building) and is to be general fire fighting hose standard (not plastic garden hose)
- It is further recommended that the dwelling and Granny Flat have non flammable roof gutter protection to prevent leaf litter build up and that all roof valleys be protected to prevent leaf litter accumulations at roof intersections and the like. These provisions are not specifically covered in AS3959 but will assist in reducing the potential for ember instigated fire to take hold in and around the roof area of each building


3.2 Conclusion

The Bushfire Assessment of the proposed new Granny Flat at Lot 2 No 17 Minkara Road Bayview has been provided in accordance with the requirements of Planning for Bushfire Protection 2006. The assessment has also taken into account the requirements of relevant legislation under the Rural Fires Act (and Regulations) and the Environmental Planning and Assessment Act 1979 (as applicable to bushfire assessment for development applications), AS 3959 Construction of Buildings in Bushfire Prone Areas and the Building Code of Australia.



The recommendations within this Report provide deem to satisfy based compliance requirements with all of the above regulatory provisions to enable a Section 79BA Bushfire Authority to be issued by the New South Wales Rural Fire Service as part of the determination of the Development Application for 17 Minkara Road Bayview

Signed  Dated 7 June 2010
Steve Parrott - MAIBS
Bushfire Safety Solutions

Member of Fire Protection Association of Australia 
Bachelor of Applied Sc (EH)
Grad Dip (Building in Bushfire Prone Areas)



Appendix A

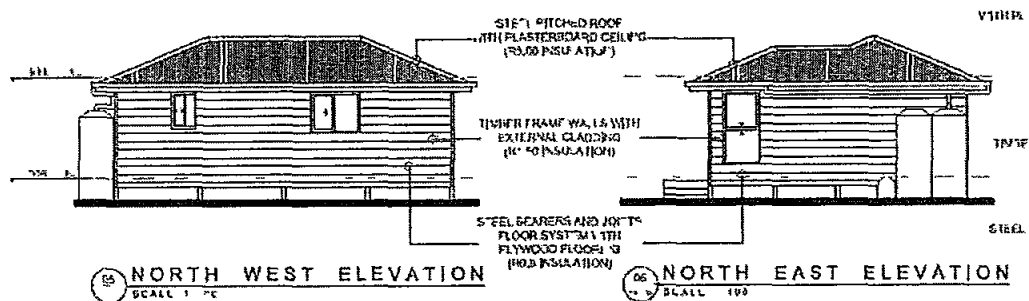
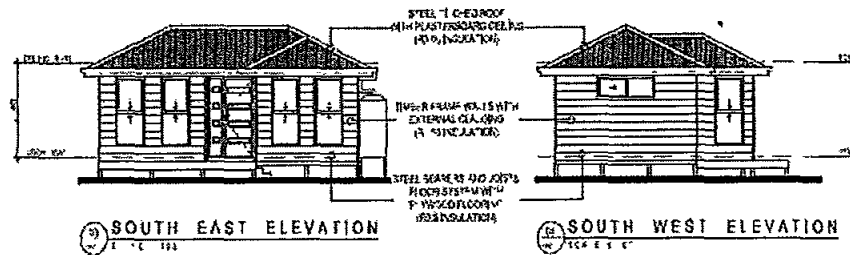
Proposed Granny Flat

Lot 2 No. 17

Minkara Road

Bayview

NSW



Notes

Subfloor area to be fully enclosed to prevent ember penetration under sub floor area of building

Valleys to be protected so as to prevent leaf litter accumulations,

Windows and door openings to be protected in accordance with BAL 29 construction requirements as prescribed in AS 3959 – 2009



References

AS 3959 (Construction of Buildings in Bushfire Prone Areas)

NSW Rural Fire Service – Guidelines for Asset Protection Zones (June 2003)

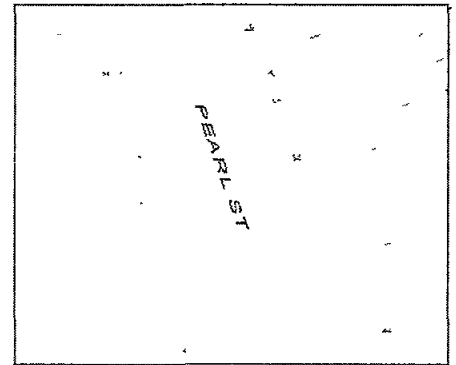
NSW Rural Fire Service – Bushfire Attack Assessor 2007

NSW RFS Development Control Note 02 - 2004

Planning for Bushfire Protection 2006 – New South Wales Rural Fire Service

1 Property Lines

- **property line (PL)** sometimes referred to as **building line (BL)** is the standard dimensioning reference point on all EA plans and represents property boundaries
- Typically the **PL** is the boundary between private property & local council's footpath area or nature reserve. Most residential fences and office blocks are erected along the **PL**
- **kerb line (KL)** is less frequently referred to on EA plans and where used will be identified clearly as **KL**
- Numbers listed within property boundaries should correspond to recognised **street numbers**

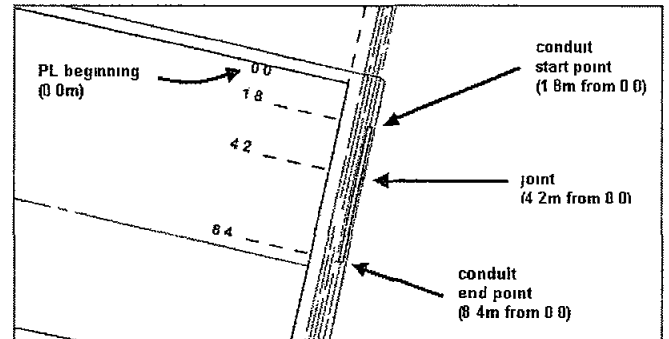


2 Datum References

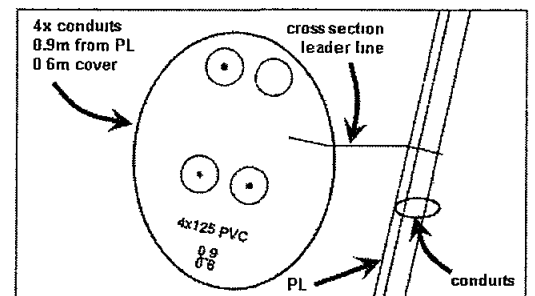
- **'datum references'** identify distances (in metres) from significant features (such as corners of property boundaries) to reference points such as EA assets (eg **conduits**, **cables**, **joints**)

3 Cross Sections

- **cross sections** displayed on EA plans detail information relating to the relative position (ie distance from the **property line** and the depth of **cover**) of EA assets
- **cover** is a term used to refer to the depth of cables underground
- A **cross section** leader line will be drawn indicating the location of the displayed **cable** or **conduit** information on EA plans
- The distance from **property line** (in metres) and depth of **cover** (in metres) references may be displayed as (eg 0.6 metres from **PL** and 0.5 metres underground)
- Where distance and cover are not recorded they will be clearly marked as **NR**
- **Note** distance and cover where indicated may be different to the actual position of the cables (eg fill may have been placed at site that has changed the ground level)

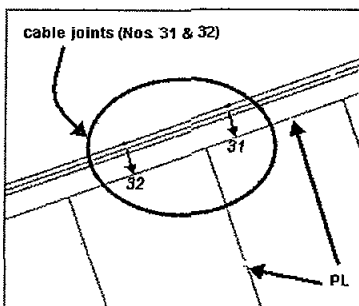


0.6
0.5



4 Cable Joints and Joint Reports

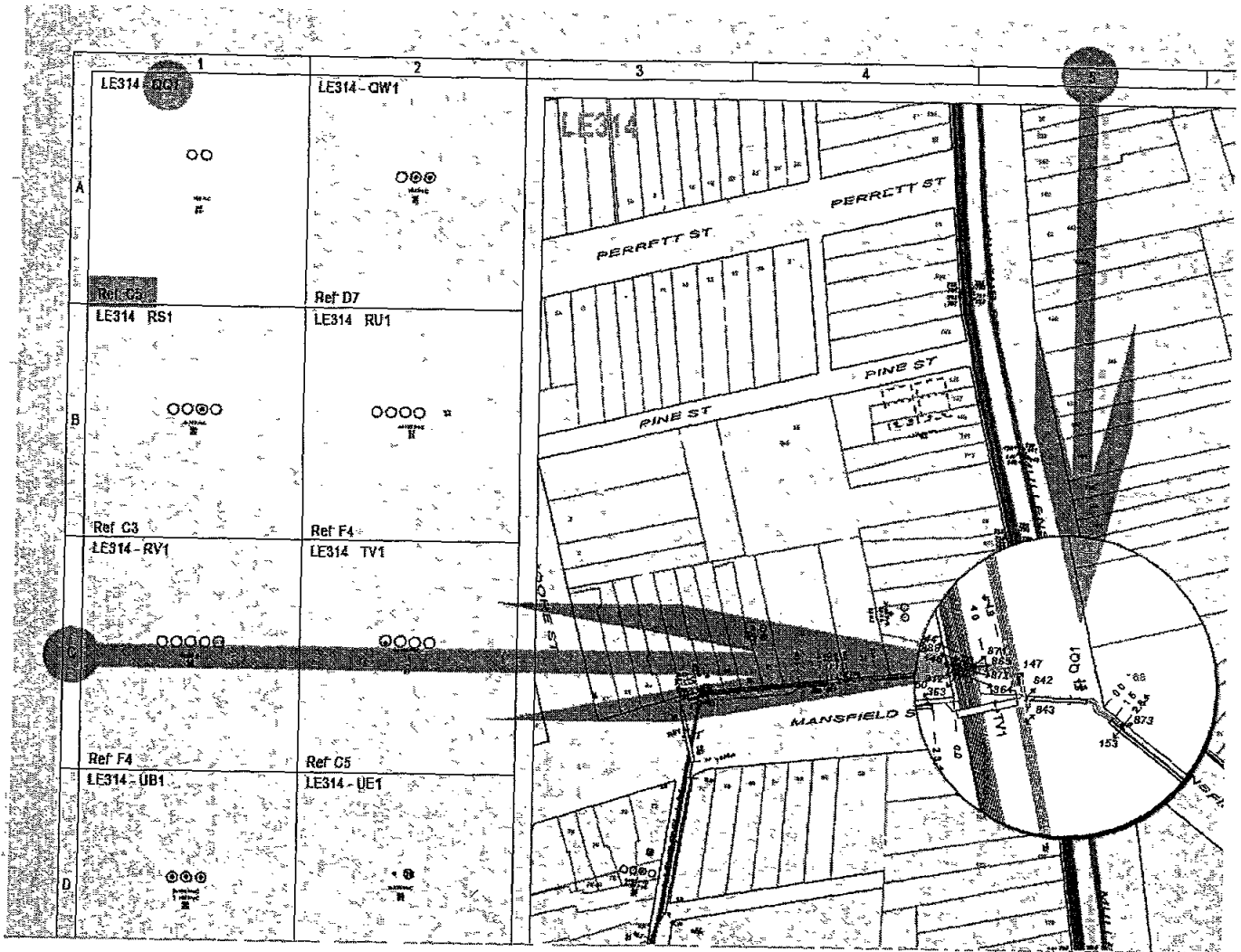
- **cable joints** (numbered individually) and **joint reports** (attached to EA plans) can provide information relating to the relative position of EA assets distance from the **property line** (in metres) and the depth of **cover** (in metres)

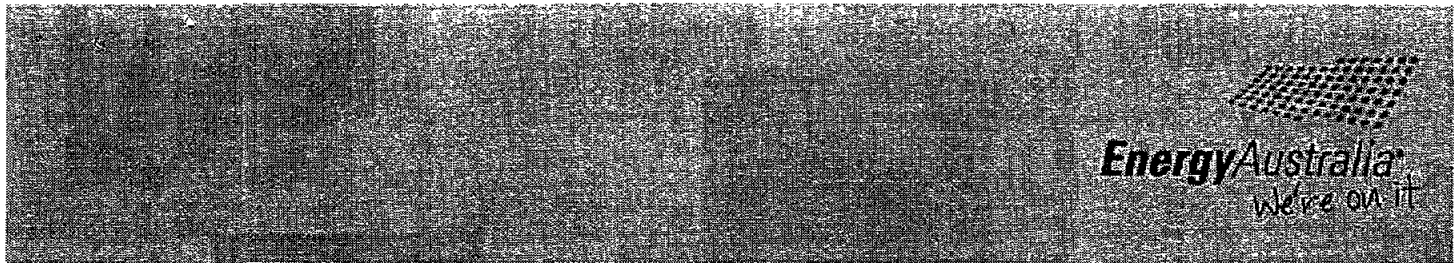


JOINT DETAIL REPORT			
No	Blk-Pg	PVCvr	Joint Location
Map	LE912		
31	524-24	1 14/0 69	61.7 E of Pearl Lane EPL
32	524-24	1 14/0 69	57.6 E of Pearl Lane EPL
joint position (1.14m from PL 0.69 cover)			

5 Cross Section Detail Boxes

- **cross section detail boxes** on the sides of an EA plan are used when there is insufficient room to display **cable** and / or **conduit** information on the EA plan
- EA plans are bordered by numeric identifiers along the *top and bottom borders* and alpha identifiers along the *side borders*
- A **cross section leader line** and annotation is drawn on the EA plan for a reference to **cable** and/or **conduit** information in the **cross section detail boxes**



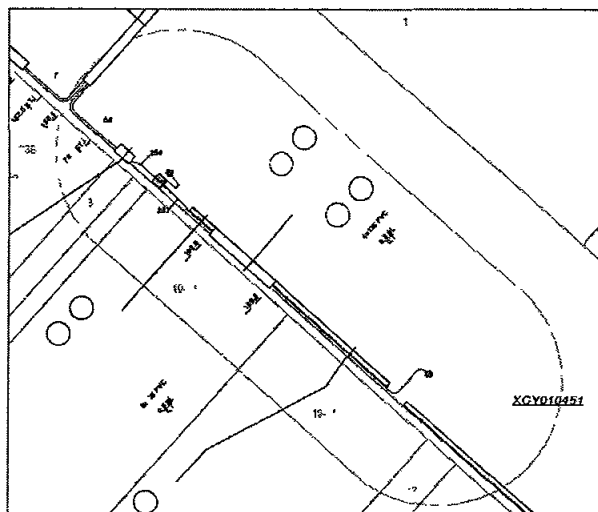
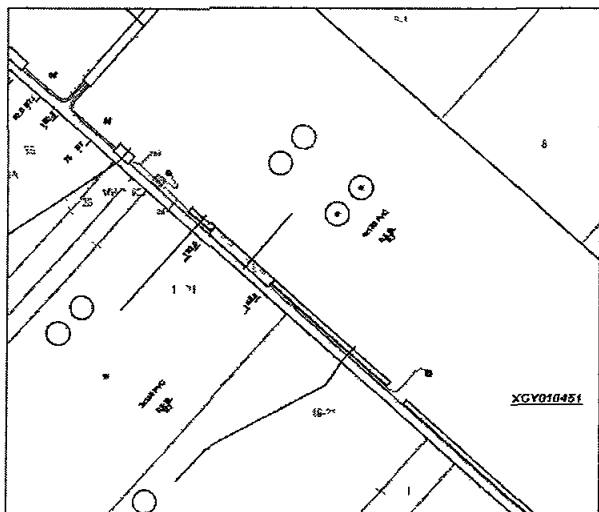
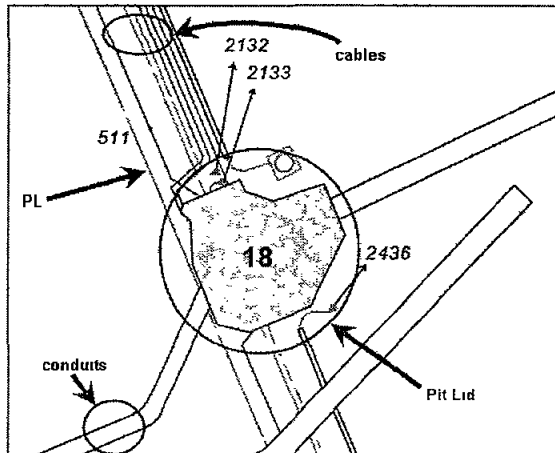


6 Pits

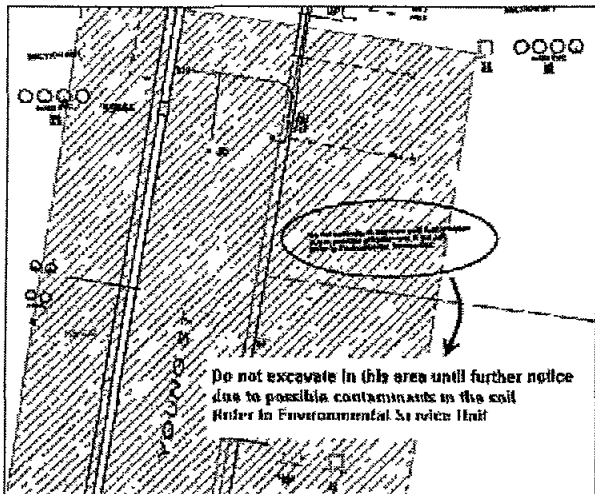
- Underground **pits** are numbered on EA plans positioned relative to the **property line (PL)** and can be found on either the footpath (nature strip) or the road

7 Proposal Areas

- There are areas where underground work may have been issued for construction by EA but details are not yet completely displayed on EA plans. In such cases a shaded **proposal area** is displayed on the EA plan indicating underground work may have commenced in the vicinity but is not yet complete
- In some instances cables and other assets within the shaded **proposal area** will be shown in a **bright magenta** colour indicating that the *proposed* new work displayed within the shaded area is based on initial planning documentation

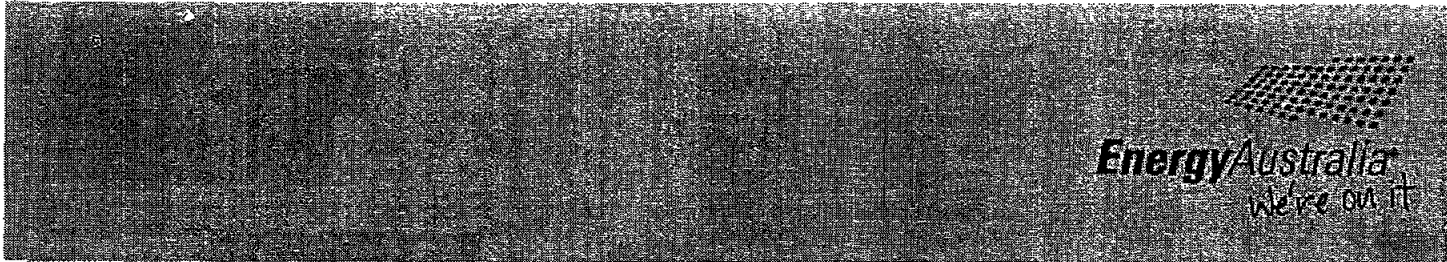


- In other instances the shaded **proposal area** itself may be shown as a **blue** colour indicating that the new work displayed within the shaded area on the EA plan is yet to include details regarding final depths and dimensioning
- Please note in cases where these shaded **proposal areas** are displayed on EA plans



Energy Australia's design plans showing the proposed position of its underground cables, overhead lines and structures have been prepared solely for Energy Australia's own planning use. They show the proposed position of such underground cables, overhead lines and structures as proposed at the time of planning and have not necessarily been corrected to take into account any changes to road widths, road levels, fences and buildings subsequent to proposed installation. Actual installations may vary from proposed installations as it may be necessary to take account of unforeseen above ground or subterranean constructions. Therefore Energy Australia does not hold out that the design plans show more than the proposed presence or absence of its underground cables, overhead lines and structures in the street and will accept no liability for inaccuracies in the information shown on such design plans from any cause whatsoever.

- Any further information regarding information displayed for **proposal areas** can be obtained by contacting the Energy Australia One Call Automation (EAOCAS) office at the number indicated on the response to your DBYD enquiry for further



information

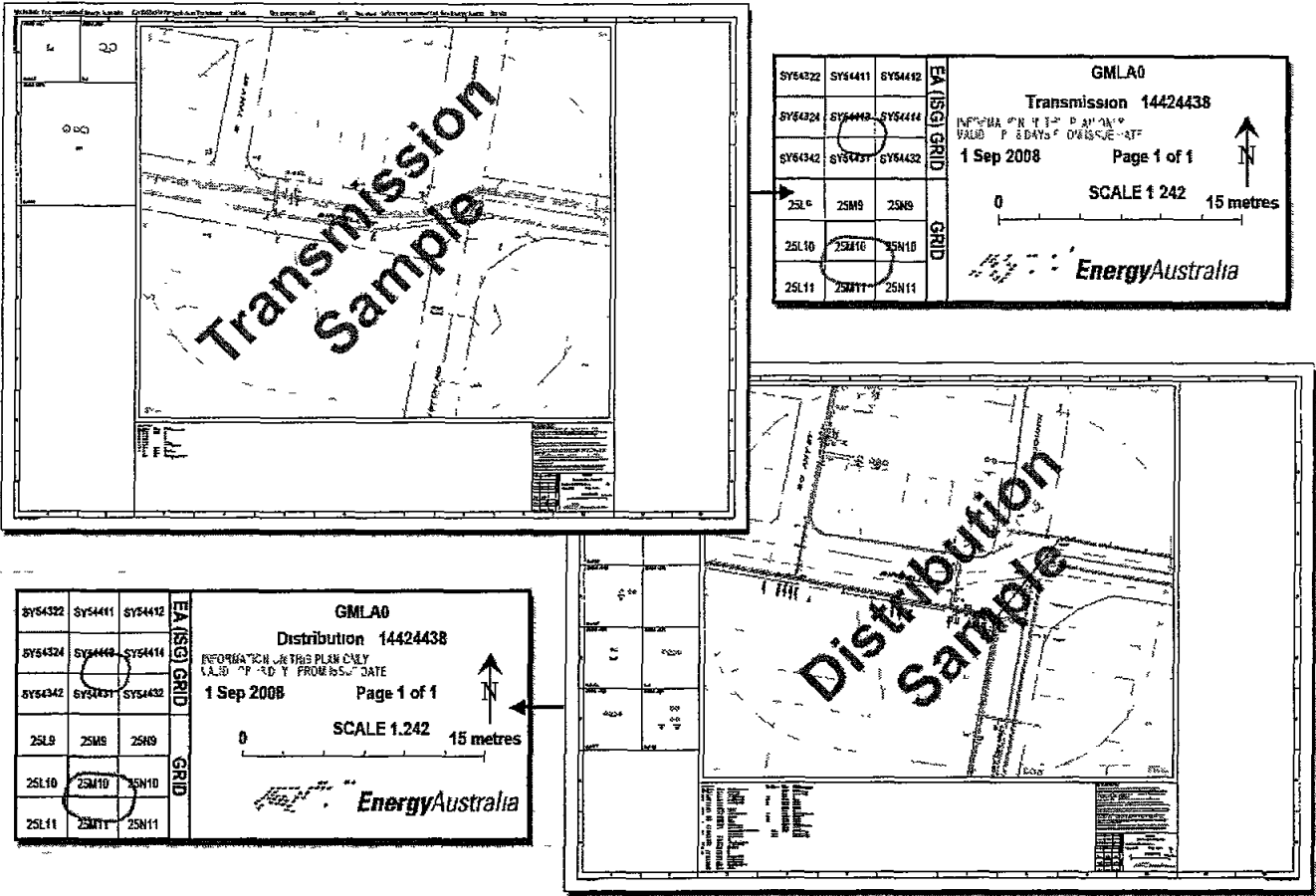
- If you notice an **orange shaded area** on your plan **DO NOT PROCEED** with excavation. You will need to contact the Energy Australia One Call Automation (EAOCAS) office at the number indicated on the response to your DBYD enquiry and arrange for assistance (see sample on previous page)

8 EA (ISG) Map Grid

- The pale grey line indicates the **1 1000 EA (ISG) map grid border**
- The pale grey annotation located in the corners of the EA plan window indicates the **1 1000 EA (ISG) map grid reference**
- The **1 1000 EA (ISG) map grid border and reference** on EA plans should be used when reading the **joint report** (see section 4 of this document for more detail) to accurately locate underground cables
- The buffer area shown on the plan should relate to the area requested on the original Dial Before You Dig request
- The **grid index box** can be used for reference where necessary (located in the bottom right corner of the EA plans) and will also indicate the buffer area shown on the plan

9 EA "Distribution" and "Transmission" Plans

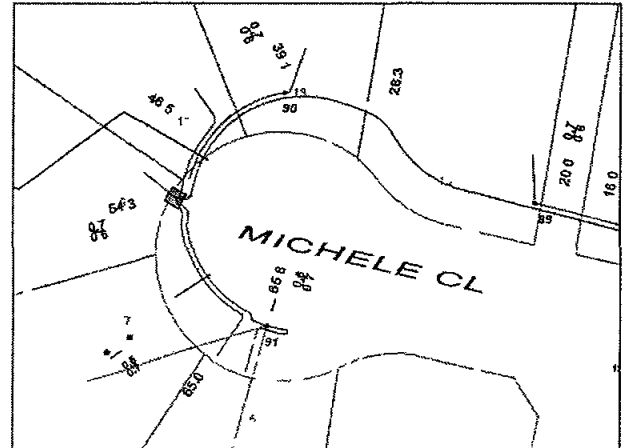
- The EA plans supplied may identify both **distribution** and **transmission** voltage assets for the area defined in the DBYD request
- In the Sydney region the EA plans are separately labelled as **Distribution – nnnnnnn** & **Transmission – nnnnnnn** where **nnnnnnn** refers to the DBYD sequence number quoted



- In the Hunter region the EA plans show combined **distribution** and **transmission** voltage assets and are clearly labelled as **Distr + Trans – nnnnnnn** where **nnnnnnn** refers to the DBYD sequence number
- Some plans may have transmission cables in the area when these cables are present there will be a warning printed at the top of the plan supplied indicating appropriate contact details

10 "Shifting Land Base" On EA Distribution and Transmission Plans

- In some instances the plans supplied may indicate road or property outlines that appear to have shifted in relation to the EA assets displayed
- In such instances always refer to the **property line** (in metres) and depth of **cover** (in metres) references displayed on the nearest relevant **cross sections** to obtain EA asset location information (see section 3 Cross Sections for more detail)





Switch on to safety.

Working near
EnergyAustralia cables.

Finding out what's below the surface can save your life.
Call Dial Before You Dig on 1100 or visit 1100.com.au



EnergyAustralia

Changes in the Law

NSW legislation now requires people who are planning to do excavation work to obtain copies of underground electricity cable plans through Dial Before you Dig (Phone - 1100) and to make sure that the plans are no more than 30 days old when excavation commences

The aim of the legislation is to ensure that when workers dig near electricity cables they will establish the exact location of the cables and thus avoid coming into contact with them or damaging them. This will ensure worker safety and also prevent disruption to EnergyAustralia's electricity network.

This brochure gives you a brief overview of how to prepare for excavation works near or around electricity cables. It is important that you also consult our guide Reading EnergyAustralia Plans and make sure that workers engaged in excavation works fully understand how to read the plan. If the people actually doing the digging can't read the plans it is essential that the work is directed by a person who has been trained to read EnergyAustralia's plans.

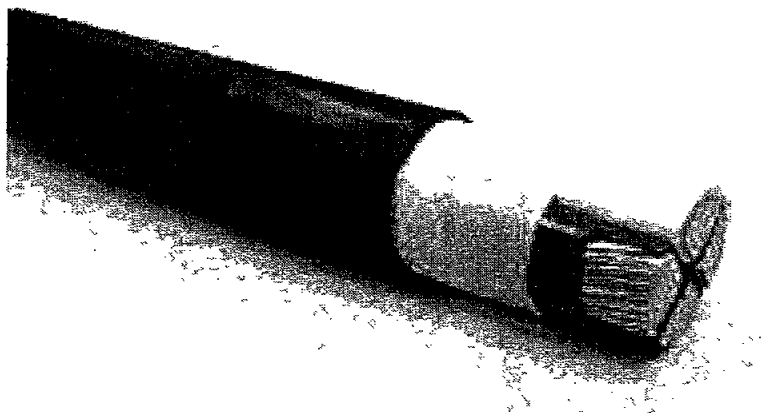
You must also consult EnergyAustralia's Network Standard NS156 which contains comprehensive information concerning all the issues that arise when excavating near underground cables (such as safety hazards from asbestos conduits and organochlorine pesticides).

Excavating near Transmission Cables

If any cable plan you receive says 'You are working near transmission cables' it is compulsory to notify EnergyAustralia two weeks before work is scheduled to begin. EnergyAustralia will then arrange for an EnergyAustralia representative to attend the site during excavation work.

For Sydney and the Central Coast contact 9962 4558

For Newcastle and the Hunter contact 0400 566 818



Be prepared Wise words for safety at work

Here are some simple precautions you and your workers need to follow in order to be as safe as possible

- Make sure that you have the latest cable plan available
- Keep a copy of the cable plan on site at all times
- Make sure the excavation work is conducted or directed by staff who are trained to read the plan
- Hand dig until the exact location of the cable has been established
- Have on site at all times a first aid kit and a person trained in resuscitation
- Wear protective clothing including safety footwear and safety helmet
- Have emergency contact numbers on site
- Set up safety barriers witches hats and warning lights to reduce the risk of injury to the general public
- Comply with all WorkCover requirements and codes

See also

WorkCover Guidelines Work Near Underground Assets

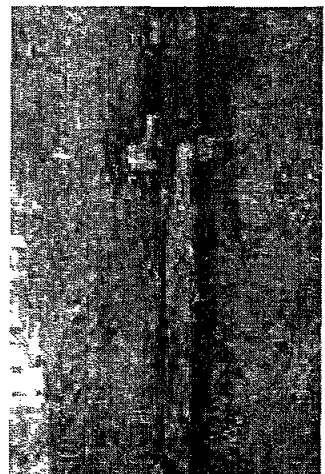
WorkCover Code of Practice Excavation Work

WorkCover Code of Practice Work Near Overhead Powerlines (if applicable)

Before you start Complete the checklist Stop and look around

Before you start excavating consult the flow chart and fill in the checklist at the end of this brochure

Then be sure to look for clues where cables might be located on the site for example pits distribution pillars (green and other colours) cables attached to the side of poles street lights without overhead wires



Do all power cables look the same?

No. Power cables come in different sizes, colours and coverings. They may be covered in black plastic sheath, steel wires in a sticky bitumen like material, or even a simple lead or steel wire/tape sheath.

What else should I look for below ground level?

Cables may also be buried in orange PVC or PE conduits or even in earthenware or steel pipes. A bank of cables may be covered with electrical bricks, plastic warning markers or protective covers, or they may not be covered at all. If they have been buried close to the surface, they may be covered by concrete slabs or steel plates.

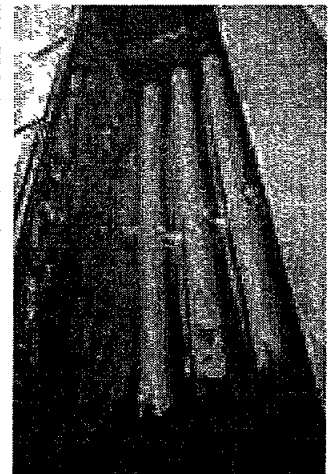
When in doubt, ask EnergyAustralia

If you have any questions about excavating near EnergyAustralia cables, read **NS156** (available at energy.com.au).
For further information call 13 15 35

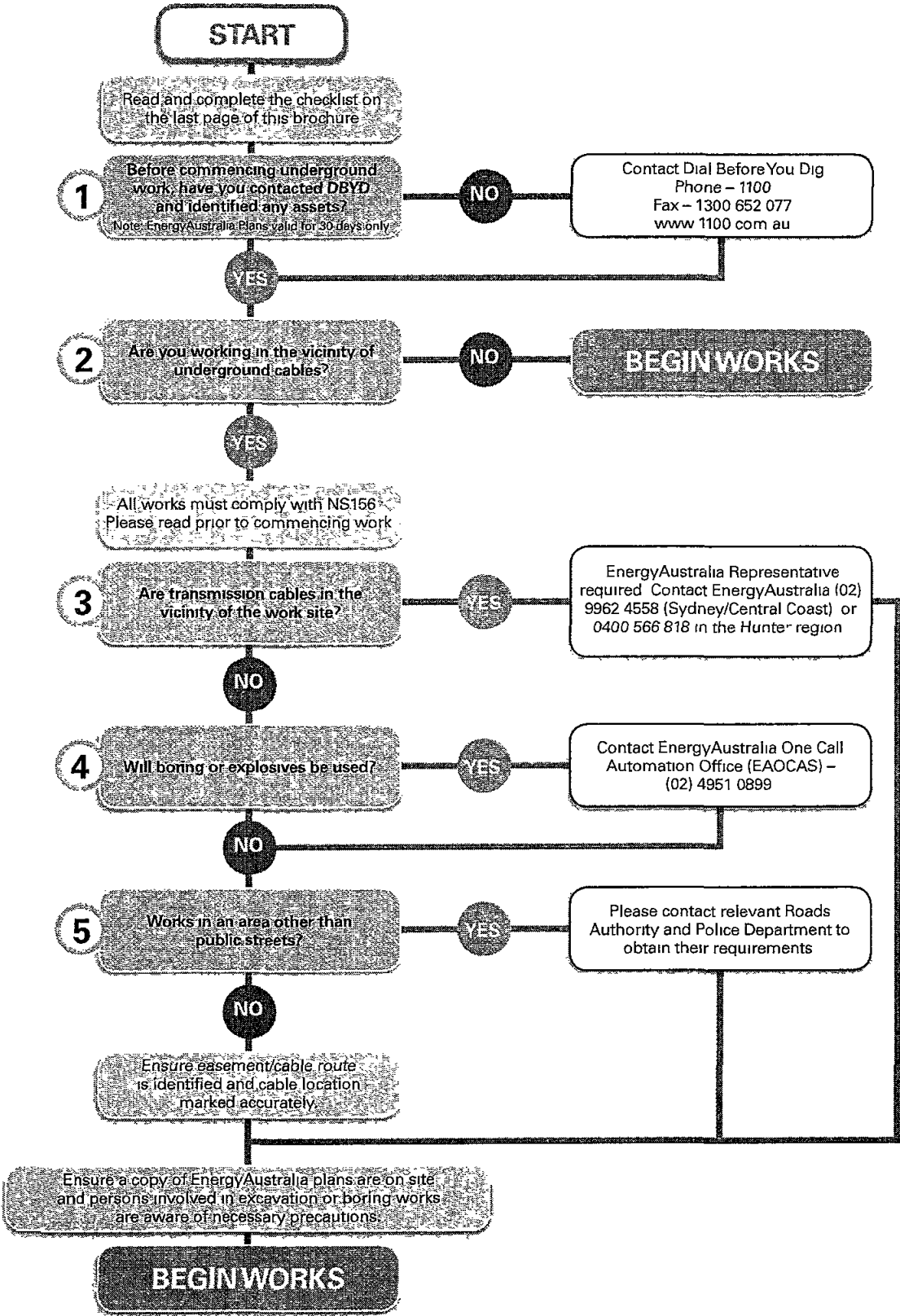
You've taken every precaution but accidents still happen. What now?

If you damage an electricity cable, it is compulsory to notify EnergyAustralia on **13 13 88**.

Striking power cables can cause serious damage to the cables and endanger the lives of anyone who comes in contact with them. Machinery and hand-operated plant such as jack hammers can become alive if it is in contact with electrical cables or equipment. Keep people well away from machinery and the work site if contact is made with a cable.



Energy Wise Flow Chart for Work Near EnergyAustralia Cables



EnergyAustralia Checklist for work near or around underground cables

It is the responsibility of the constructor to ensure that underground pits ducts and cables are not damaged as a result of construction work. It is also your duty to protect your workers from harm or injury This checklist is intended to be used as a guide to what Constructors should do to make sure they have satisfied the minimum requirements to minimise the damage to underground networks

PLANS, LOCATION and NOTIFICATIONS	Completed
Have you obtained all relevant utilities plan by calling 1100 Dial Before You Dig service? (Allow at least 5 working days for plans)	
Have you examined the plans and assessed all possible impacts on EnergyAustralia's network?	
Do you have both Underground Distribution & Transmission Plans (if applicable) on site at all times?	
Have all cables and conduits shown on the EnergyAustralia plans been located and marked on the ground?	
If you are planning to use a bore have you ensured that the equipment is calibrated?	
Have you obtained a current copy and understood the requirements of EnergyAustralia's Network Standard NS156 Working Near or Around Underground Cables?	
For a copy of NS156 phone the EnergyAustralia One Call Automation (EAOAS) office at the number indicated on the response to your DBYD enquiry or visit http://www.energy.com.au/network_standards	
INSPECTION OF WORK BY ENERGYAUSTRALIA'S REPRESENTATIVE	
Where the proposed work is near or around* any transmission cable is the EnergyAustralia representative on site to observe the work and warn or stop works if they are performed in a manner which may endanger the cables or workers before you start?	
Where the proposed work is near or around* cable other than transmission and/or conduits are any requirements specified by EnergyAustralia's representative clearly understood and ready to be applied before you start the work?	
PROTECTION	
Have you checked that all people on site have been made aware of the presence and location of ALL EnergyAustralia underground cables and/or conduits especially boring drilling and trenching machine operators?	
Have you checked for the presence of any asbestos or asbestos containing material in EnergyAustralia's underground network assets?	
Have you checked for the presence of any Organo Chloride Pesticides (OCP) in transmission trenches?	
Is the site supervisor monitoring all machine operators working near or around EnergyAustralia's underground cables and/or conduits?	
Are the requirements specified by EnergyAustralia's representative being followed?	
Are EnergyAustralia's requirements in place for any exposed cables and/or conduits to be supported and protected?	
Have you marked all exposed underground cables and/or conduits with flags that are clearly visible from within all machinery used on site?	
Have safety barriers fencing or para webbing been erected to protect staff and the public as well underground cables and/conduits in areas that are at risk?	

*Refer to NS156

In the event of DAMAGE to EnergyAustralia cables or conduits, call 13 13 88 immediately

It is your responsibility to protect EnergyAustralia's cables and conduits from damage and your Duty of Care to protect your workers from harm or injury

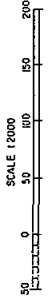
Signed _____ Date ____/____/____
Responsible person on site

For more information call 13 15 35 or visit energy.com.au



TERR HILLS

CAUTION: THE GAS MAINS IN THIS AREA MAY BE LAD IN MATERIAL CONTAINING ASBESTOS



THIS MAP UPDATED ON 22/1/08
THIS PLAN IS DIAGRAMATIC ONLY DISTANCES
SCALED FROM THIS PLAN MAY NOT BE ACCURATE
DATE ALTERED BY

CR9C	CC9D	PB7C
TH3A	TH3B	MVIA
TH3C	TH3D	MVIC

ADJOINING MAPS

461	PITTSWATER
-----	------------

NETWORK AREA
MUNICIPALITY AREA



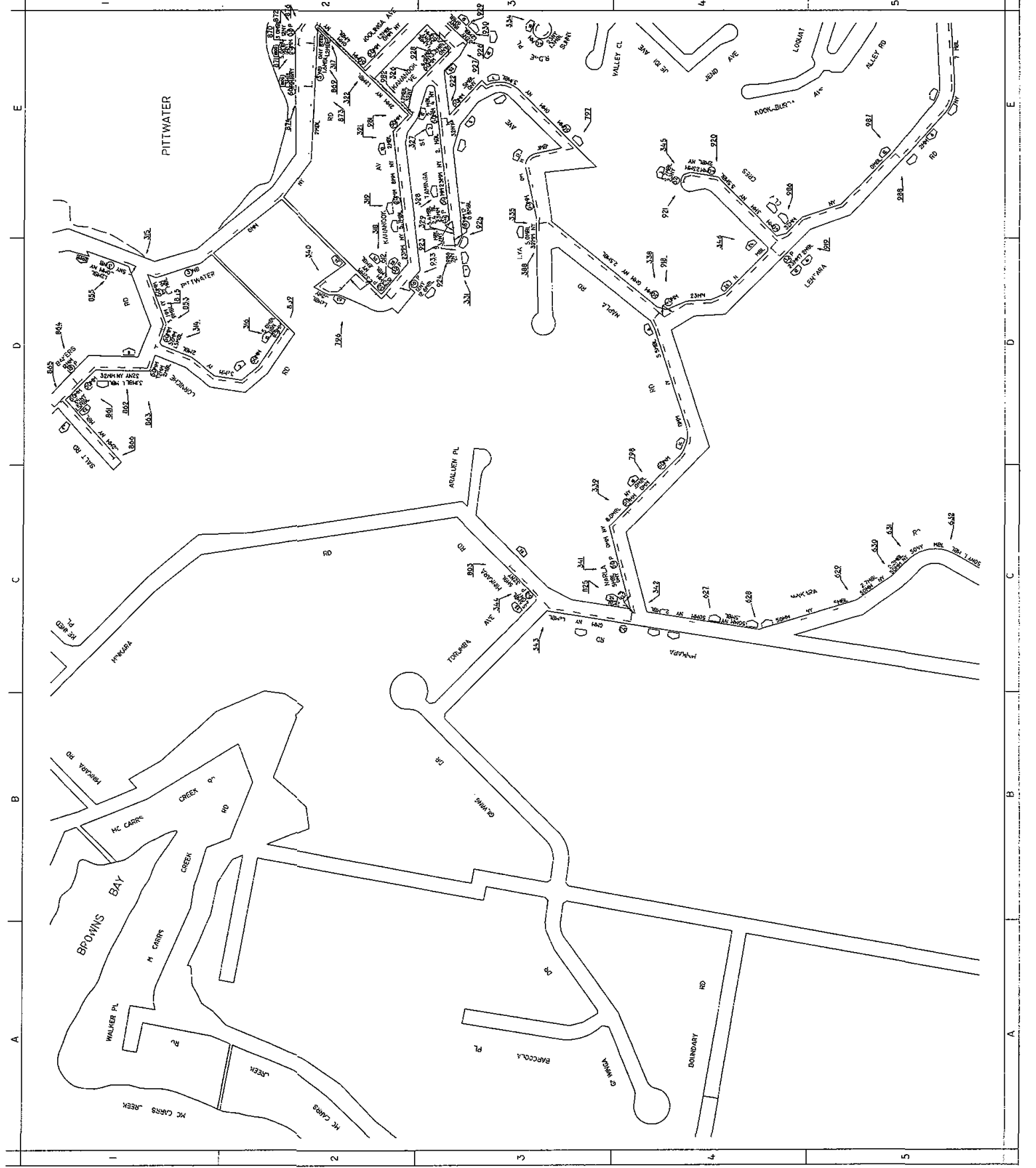
KEY

- TRUNK MAIN 7000 KP
- PRIMARY MAIN 3500 KP
- SECONDARY MAIN 1050 KP
- 300 KPa
- 200 KP
- 7 KP
- 400 KP
- 100 KP
- 2 KP

PROPOSED MAINS

- STEEL MAIN PROJECT NUMBER
- PRESSURE MONITORING STATION
- VALVE
- SYSTEM PRESSURE REGULATOR
- SIPHON
- NETWORK NODES
- ITEM DETAIL SKETCH AVAILABLE
- VALVE NUMBER (OLD NUMBERING)
- 6 INCH CAST IRON MAIN
- 100MM STEEL MAIN
- 100MM POLYETHYLENE/NYLON MAIN
- 50MM NYLON INSERTED INTO
- 60MM MAIN CAST IRON MAIN
- 50MM 50MM NY
- 12MHL
- 1957
- YEAR LAD
- MUNICIPALITY BOUNDARY
- NETWORK BOUNDARY
- HOUSE NUMBER

TERRY HILLS 3B





Network Protection

In reply to your enquiry, there are gas mains at the location of your intended work as per the attached map. For an explanation of the map, please see the key below. The following excavation guidelines apply.

Excavation Guidelines

If you are going to excavate/bore within 0.4m of the gas main location as indicated on the map, you must excavate carefully by hand. If you can't locate the gas main, contact the local depot.

Sydney North (02) 9397 9290

MAXIMUM ALLOWABLE OPERATING PRESSURE			KEY	
—T—	TRUNK MAIN	7000 kPa	◀▶	VALVE
—P—	PRIMARY MAIN	3500 kPa	□	SYSTEM PRESSURE REGULATOR
—S—	SECONDARY MAIN	1050 kPa	S	SIPHON
— — —		300 kPa	6NB	6 INCH CAST IRON MAIN
— — —		210 kPa	150MM	150MM STEEL MAIN
— — —		7 kPa	110MM PE/NY	110MM POLYETHYLENE / NYLON MAIN
—400—		400 kPa	⑤ NB 50MM NY	50MM NYLON INSERTED INTO
—100—		100 kPa		6 INCH CAST IRON MAIN
—30—		30 kPa	12MBL	DISTANCE IN METRES OF MAIN FROM
— — —		2 kPa	123	BUILDING LINE (TOLERANCE OF 0.4M)
— — —	PROPOSED MAINS		123	HOUSE NUMBERS
			123	NETWORK BOUNDARY
			123	NETWORK NODES

Warning The enclosed plans show the position of Jemena Gas Networks (NSW) Ltd's underground gas mains and installations in public gazetted roads only. Individual customers' services and services belonging to other third parties are not included on these plans. These plans have been prepared solely for the use of Jemena Gas Networks (NSW) Ltd and Jemena Asset Management Pty Ltd (together **Jemena**) and any reliance placed on these plans by you is entirely at your own risk. The plans may show the position of underground mains and installations relative to fences, buildings etc. as they existed at the time the mains etc. were installed. The plans may not have been updated to take account of any subsequent change in the location or style of those features since the time at which the plans were initially prepared. Jemena makes no warranty as to the accuracy or completeness of the enclosed plans and does not assume any duty of care to you nor any responsibility for the accuracy, adequacy, suitability or completeness of the plans or for any error, omission, lack of detail, transmission failure or corruption in the information provided. Jemena does not accept any responsibility for any loss that you or anyone else may suffer in connection with the provision of these plans, however that loss may arise (including whether or not arising from the negligence of Jemena, its employees, agents, officers or contractors). The recipient of these plans must use their own care and diligence in carrying out their works and must carry out further surveys to locate services at their work site. Persons excavating or carrying out other earthworks will be held responsible for any damage caused to Jemena's underground mains and equipment.

In case of Emergency Phone 131 909 (24 hours)

Sarala
02 9397 9000

Jemena Asset Management Pty Ltd ABN 53 086 013 461
for and on behalf of Jemena Gas Networks (NSW) Ltd ABN 87 003 004 322

DUTY OF CARE



IMPORTANT

- Please read and understand all the information and disclaimers provided below
- Sketches and Plans provided by Telstra are circuit diagrams only and indicate the presence of telecommunications plant in the general vicinity of the geographical area shown. exact ground cover and alignments cannot be given with any certainty and cover may alter over time. Telecommunications plant seldom follow straight lines and careful on site investigation is essential to uncover and reveal its exact position
- Due to the nature of Telstra plant and the age of some cables and records, it is impossible to ascertain the location of all Telstra plant. The accuracy and/or completeness of the information can not be guaranteed and accordingly Telstra plans are intended to be indicative only

"DUTY OF CARE"

When working in the vicinity of telecommunications plant you have a legal Duty of Care that must be observed. The following points must be considered -

1. It is the responsibility of the owner and any consultant engaged by the owner, including an architect, consulting engineer, developer, and head contractor to design for minimal impact and protection of Telstra plant. Telstra will provide plans and sketches showing the presence of its network to assist at this design stage
2. It is the owner's (or constructor's) responsibility to -
 - a) Request plans of Telstra plant for a particular location at a reasonable time before construction begins
 - b) Visually locate Telstra plant by hand digging (pot-holing) where construction activities may damage or interfere with Telstra plant (see Essential Precautions and Approach Distances section for more information)
 - c) Contact Telstra's **Plan Services** (see below for details) if Telstra plant is wholly or partly located near planned construction activities

DAMAGE

ANY DAMAGE TO TELSTRA'S NETWORK MUST BE REPORTED TO 132203 IMMEDIATELY

- The owner is responsible for all plant damage when works commence prior to obtaining Telstra plans or failure to follow agreed instructions
- Telstra reserves all rights to recover compensation for loss or damage to its cable network or other property including consequential losses

PLAN SERVICES

For all Telstra DBYD (Dial Before You Dig) map enquiries please contact Telstra Plan Services

email - TelstraPlans@team.telstra.com

fax - (02) 4961 3714

phone (for urgent onsite or optic fibre enquiries) **1800 653 935**

ASSET RELOCATIONS

For all enquiries relating to the relocation of Telstra assets please phone - **1800 810 443**

CONCERNING TELSTRA PLANS

- For plans of Telstra locations contact **Dial Before You Dig** at least 2 business days prior to digging (<http://www.1100.com.au> or phone 1100)
- Fast response can be made by Telstra if an email address is provided (if posted may take up to one week or longer to

- receive plans)
- Telstra plans and information provided are **valid for 60 days** from the date of issue
- Telstra owns and retains the copyright in all plans and details provided in conjunction with the applicant's request. The applicant is authorised to use the plans and details only for the purpose indicated in the applicant's request. The applicant must not use the plans or details for any other purpose. The plans and details should be disposed of by shredding or any other secure disposal method after use.
- Telstra plans or other details are provided only for the use of the applicant, its servants or agents. **The applicant may not give the plans or details to other parties, and may not generate profit from commercialising the plans or details.**
- Please contact Telstra **Plan Services** (see above for details) immediately should you locate Telstra assets not indicated on these plans.
- Telstra, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Telstra against any claim or demand for any such loss or damage.
- Please ensure Telstra plans and information provided remains on-site at all times throughout your construction phase.

ESSENTIAL PRECAUTIONS and APPROACH DISTANCES

NOTE If the following clearances cannot be maintained, please contact Telstra Plan Services (see above for details) for advice on how best to resolve this situation

1 On receipt of plans and sketches and before commencing excavation work or similar activities near Telstra's plant, **carefully locate this plant first** to avoid damage. Undertake prior manual exposure such as potholing when intending to excavate or work **closer** to Telstra plant than the following approach distances:

- Where Telstra's plant is in an area where road and footpaths are well defined by kerbs or other features a minimum clear distance of 600mm must be maintained from where it could be reasonably presumed that plant would reside.
- In non-established or unformed reserves and terrain, this approach distance must be at least 1.5 metres.
- In country/rural areas which may have wider variations in reasonably presumed plant presence, the following minimum approach distances apply:
 - a) Parallel to major plant: 10 metres (for IEN optic fibre and copper cable over 300 pairs)
 - b) Parallel to other plant: 5 metres
- Note: Even manual pot-holing needs to be undertaken with extreme care, commonsense and employing techniques least likely to damage cables. For example, orientate shovel blades and trowels parallel to the cable rather than digging across the cable.
- If construction work is parallel to Telstra plant, then careful hand digging (pot-holing) at least every 5m is required to establish the location of all plant, hence confirming nominal locations before work can commence.

2 Maintain the following minimum clearance between construction activity and **actual location** of Telstra Plant:

Jackhammers/Pneumatic Breakers	Not within 1.0m of actual location
Vibrating Plate or Wacker Packer Compactor	Not within 0.5m of Telstra ducts 300mm compact clearance cover before compactor can be used across Telstra ducts
Boring Equipment (in line, horizontal and vertical)	Not within 2.0m of actual location Constructor to hand dig (pot-hole) and expose plant
Heavy Vehicle Traffic (over 3 tonnes)	Not to be driven across Telstra ducts (or plant) with less than 600mm cover Constructor to check depth via hand digging
Mechanical Excavators, Boring and Tree Removal	Not within 1.0m of actual location Constructor to hand dig (pot-hole) and expose plant

- All Telstra pits and manholes should be a minimum of 1.2m in from the back of kerb after the completion of your work.
- All Telstra conduit should have the following minimum depth of cover **after the completion of your work** -
- Footway 450mm**
- Roadway 450mm at drain invert and 600mm at road centre crown**
- For clearance distances relating to Telstra pillars, cabinets and RIMs/RCMs please contact Telstra Plan Services (see above for details).

FURTHER ASSISTANCE

Assistance can be obtained by contacting Telstra **Plan Services**

Where on-site location is provided, the owner is responsible for all hand digging (pot-holing) to visually locate and expose Telstra plant.

If plant location plans or visual location of Telstra plant by digging reveals that the location of Telstra plant is situated wholly or partly

where the owner plans to work then Telstra's Network Integrity Group must be contacted through Telstra Plan Services to discuss possible engineering solutions

NOTE

If Telstra relocation or protection works are part of the agreed solution then payment to Telstra for the cost of this work shall be the responsibility of the principal developer or constructor. The principal developer or constructor will be required to provide Telstra with the details of their proposed work showing how Telstra's plant is to be accommodated and these details must be approved by the Regional Network Integrity Manager prior to the commencement of site works.

RURAL LANDOWNERS - IMPORTANT INFORMATION

Where Telstra owned cable crosses agricultural land Telstra may provide a once off free on-site electronic cable location. The Telstra Plan Services operator will provide assistance in determining whether a free on-site location is required.


















Please note

- The exact location including depth of cables can only be verified by pot holing which is not covered by this service
- This service is only available to assist private rural land owners
- This service covers one hour on-site only. Additional time can be purchased directly from the Accredited Plant Locator

For further information including terms and conditions, please contact Telstra Plan Services as listed above.

PRIVACY NOTE

Your information has been provided to Telstra by DBYD to enable Telstra to respond to your DBYD request. Telstra keeps your information in accordance with its privacy statement entitled 'Protecting Your Privacy' which can be obtained from Telstra either by calling 1800 039 059 or visiting our website at www.telstra.com.au/privacy.

<h1 style="text-align: center;">A GUIDE TO READING Telstra PLANS</h1>		Telstra Corporation Limited ABN 33 06 1775 006
 <p>Exchange (major cable present)</p>  <p>Footway access chamber (can vary from 1 lid to 12-lid)</p>  <p>Roadway access chamber</p>  <p>Pillar/cabinet (above the ground / free standing)</p>  <p>Above ground complex equipment housing (eg RIM) Please Note This equipment is powered by 240V electricity</p>  <p>PT Public telephone Please Note This equipment is powered by 240V electricity</p>  <p>Direct buried cable</p>	 <p>Single to multiple round conduit Configurations 1 2 4 9 respectively P100 (Attached text denotes conduit type and size)</p>  <p>Multiple square conduit Configurations 2 4 6 respectively E85 (Attached text denotes conduit type and size)</p>	 <p>Cable jointing pit (number indicating pit type)</p>  <p>Buried cable jointing pit (number indicating pit type)</p>  <p>Elevated cable joint (above ground joint on buried cable)</p>  <p>Cable loop (direct buried)</p>  <p>Telstra Plant in shared utility trench</p>  <p>Aerial Cable (above ground)</p>  <p>Aerial cable (attached to joint use pole e.g. power)</p>  <p>SMOF Optical fibre cable direct buried</p>

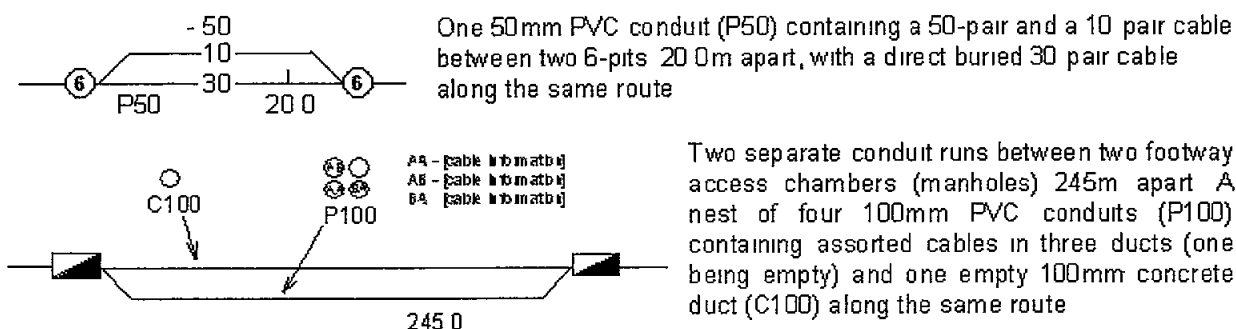
Some examples of conduit type and size

A	Asbestos cement	P	PVC / plastic	C	Concrete
GI	Galvanised iron	E	Earthenware		

Conduit sizes *nominally* range from 20mm to 100mm

P50	50mm PVC conduit
P100	100mm PVC conduit
A100	100mm asbestos cement conduit
E 85	85mm square earthenware conduit

Some examples of how to read Telstra plans



WARNING Telstra's plans show only the presence of cables and plant. They only show their position relative to road boundaries, property fences etc. at the time of installation and Telstra does not warrant or hold out that such plans are accurate thereafter due to changes that may occur over time. DO NOT ASSUME DEPTH OR ALIGNMENT of cables or plant as these vary significantly. The customer has a DUTY OF CARE when excavating near Telstra cables and plant. Before using machine excavators, TELSTRA PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG (potholing) to identify its location. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

Electronic plans - PDF and DWF maps

If you have received Telstra maps via email, you will have received the maps as either a PDF file (for smaller areas) or DWF file (for larger area requests). If you are unable to launch any one of the softcopy files for viewing and printing, you may need to download and install one or more of the free viewing and printing products such as Adobe Acrobat Reader (for PDF files) or Autodesk Design Review 2010 (for DWF files) available off the internet.

PDF files

PDF is the default softcopy format for all requests that range in size from 0 metres (eg point requests) to requests up to approx *500m in length (*depends on geographic location of request). The PDF file is formatted to A3 portrait sheet, however it can be printed on any size sheet including from A4 to A0, either as the full sheet or selected areas to suit needs and legibility (to print a selected area, zoom up and print current view). If there are multiple layers of Telstra network, you may receive up to 2 sheets in the single PDF file attachment supplied. There are three types of layers of network normally recorded: local network, mains cables, or a combined layer of local and mains (usually displayed in rural or semi-rural areas). If mains cable network is present in addition to local cables (ie as separate layer in a particular area), the mains will be shown on a separate sheet. The mains cable information should be read in conjunction with the local cable information.

DWF files

This is the default softcopy format for all requests that are over 500m in length. Maximum length for a DWF automated response is approx 2500m - depending on geographic location of request (non-automated longer). The DWF files differ from PDF in that DWF are vector files made up of layers that can be turned on or off and are not formatted to a specific sheet size. This makes them ideal for larger areas and for transmitting over email etc.

How to view Telstra DWF files -

Telstra DWF files come with all layers turned on. You may need to turn individual layers on or off for viewing and printing clarity. Individual layer names are CC (main cable/conduit), DA (distribution or local area network), and sometimes a combined layer - CAC. Layer details can be viewed by either picking off the side menu or by selecting window then layers off the top menu bar. Use layers to turn individual layers off or on (double click or right click on layer icon).

How to print Telstra DWF files -

DWF files can be printed on any size sheet. They can be printed in their entirety or by selected areas of interest. Some DWF coverage areas are large and are not suited to printing legibly on a single A4 sheet - you may need several prints if you only have an A4 printer. Alternately, an A3, A1 or larger printer should be used. To print - zoom in or out and then by changing the print range settings, you can print what is displayed on your screen to suit your paper size. If you only have a small printer, eg A4, you may need to zoom until the text is legible on your screen for it to be legible on the print (which is why you may need several prints). To print what is displayed on your screen, the view setting should be changed from full page to current view. The current sheet setting should also be selected. You may need to print layers separately for clarity and legibility (details above on how to turn layers on or off).

How to change the background colour from white to black (when viewing) Telstra DWF files -

If using Autodesk Design Review, the background colour can be changed by selecting Tools then options then sheet. Tick the box 'override published paper colors' and select the colour required using the tab provided.

Further information -

If you require further assistance with supplied PDF or DWF plans, eg with legibility or you believe there may be missing information, please contact Telstra Plan Services (contact details above - you will need to supply the Telstra sequence number of the plan request).

Telstra automated plan service

Telstra provides an automated plan response for the majority of DBYD requests received (currently around 80%). Requestors must supply a current email address on their request to DBYD and must also be able to accept a standard format, ie PDF or DWF. An automated response can be provided a lot faster than the alternative, which is a mailed hardcopy. This can avoid unnecessary delays in waiting for plans to arrive. Being softcopy, it can easily be sent directly to a worksite and can be available 7 days a week. The automated system can be configured for individual requestors to receive either PDF/DWF (where small requests are PDF and

larger requests are DWF) or alternately all in DWF (both small and large requests) Please contact Plan Services for further details or to be configured Please note all requests over *500m (approx) in size can only be supplied in DWF format and there are size limits on what can be provided (* actual size depends on geographic location of requested area)

Data Extraction Fees

In some instances a data extraction fee may be applicable for the supply of Telstra information Typically a data extraction fee may apply to - large projects requests to be supplied in non standard formats excessive hardcopy printing requests for non digging purposes Further details can be obtained by contacting Telstra Plan Services

ACCREDITED PLANT LOCATORS (For your area)

On-site assistance should be sought from an **Accredited Plant Locator** if the telecommunications plant cannot be located within 2.5 metres of the locations indicated on the drawings provided

On-site advice should be obtained from a suitably qualified contractor highly skilled in locating Telstra plant if there is any doubt whatsoever about the actual location of the telecommunications plant the best method for locating the telecommunications plant or the correct interpretation of the drawings provided In the case where Telstra plant is outside a recognised road reserve Telstra recommends that Telstra Plan Services are contacted for assistance prior to engaging an Accredited Plant Locator

For the assistance of customers Telstra has established strict criteria to assess the skill of contractors that may be engaged by owners requiring Telstra plan locating services to perform any of the following activities if requested to do so by the owner

- review Telstra's plans to assess the approximate location of Telstra plant
- advise owners of the approximate location of Telstra plant according to the plans
- advise owners of the best method for locating Telstra plant
- advise owners of the hazards of unqualified persons attempting to find the exact location of Telstra plant and working in the vicinity of Telstra plant without first locating its exact position
- perform trial hole explorations by hand digging (pot holing) to expose Telstra plant with a high degree of skill competence and efficiency and utilising all necessary safety equipment

Telstra has provided a number of contractors with certification as an Accredited Plant Locator

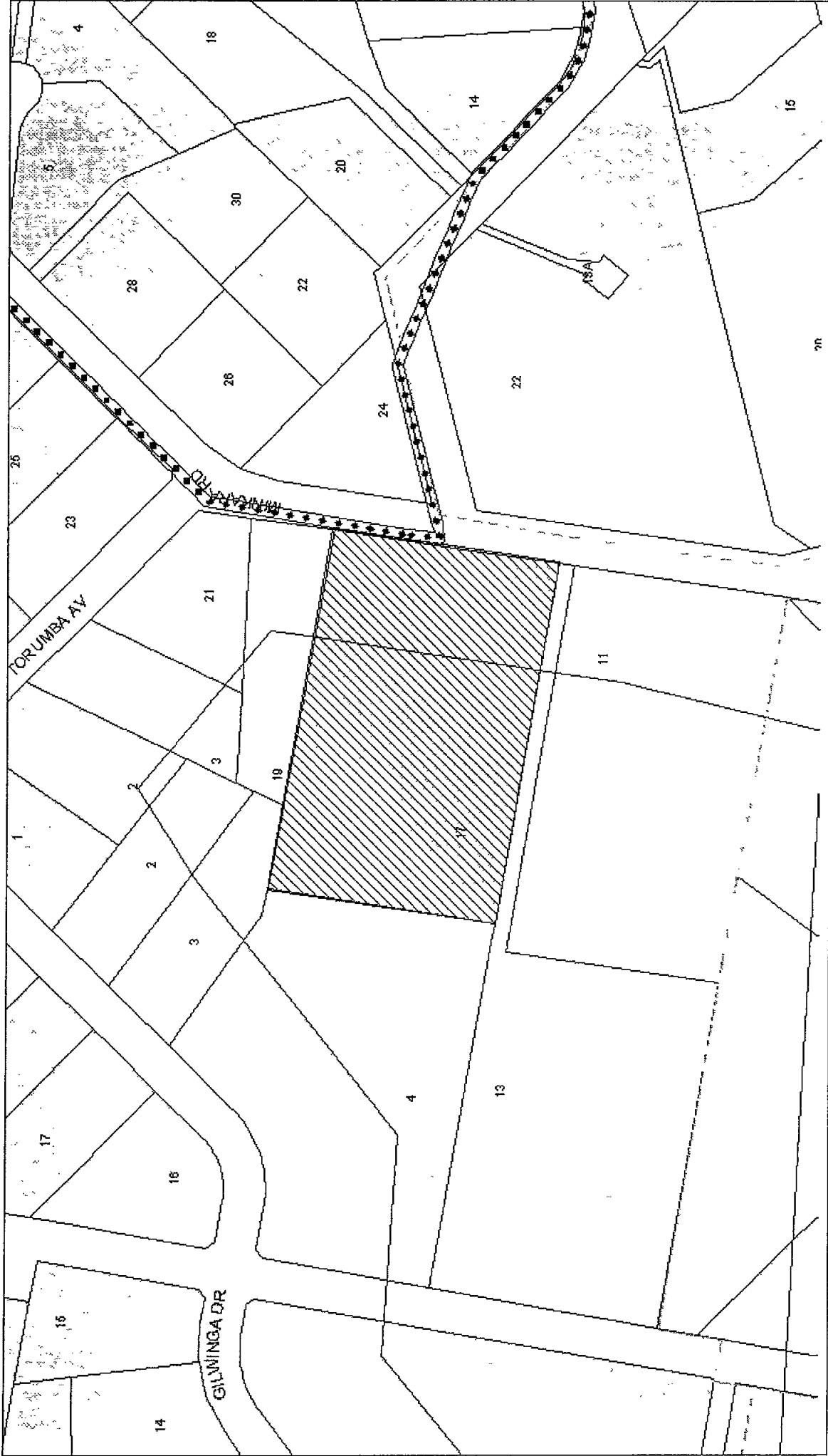
A list of Accredited Plant Locators operating in your area is attached Accredited Plant Locators are certified by Telstra to perform the tasks listed above Owners may engage Accredited Plant Locators to perform these services, however Telstra does not give any warranty in relation to these services that Accredited Plant Locators are competent or experienced to perform any other services

The attached list provides the names and contact details for Accredited Plant Locators who service your area and can provide you with assistance in locating Telstra plant on site These organisations have been able to satisfy Telstra that they have a sound knowledge of telecommunications plant and its sensitivity to disturbance appropriate equipment for locating telecommunications plant and competent personnel who are able to interpret telecommunications plans and sketches and understand safety issues relevant to working around telecommunications plant They are also able to advise you on the actions which should be taken if the work you propose will/could result in a relocation of the telecommunications plant and/or its means of support

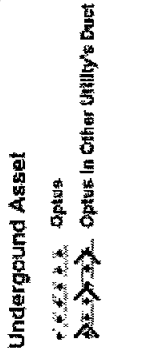
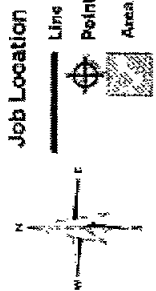
We recommend that you engage the assistance of one of these Accredited Plant Locators as a step towards discharging your Duty of Care obligations when seeking the location of Telstra's telecommunications plant

Please Note

- 1 Each Accredited Plant Locator is NOT permitted to provide depth of communications plant unless physically exposed by hand digging
- 2 The details of any contract agreement or retainer for site assistance to locate telecommunications plant shall be for you to decide and agree with the organisation engaged Telstra is not a party to any contract entered into between an owner and an Accredited Plant Locator The Accredited Plant Locators are able to provide guidance concerning the extent of site investigations required
- 3 Payment for the site assistance will be your responsibility and payment details should be agreed before the engagement is confirmed
- 4 Telstra does not accept any liability or responsibility for the performance of or advice given by an Accredited Plant Locator Accreditation is an initiative taken by Telstra towards the establishment and maintenance of competency standards However performance and the advice given will always depend on the nature of the individual engagement
- 5 Each Accredited Plant Locator has been issued with a certificate which confirms the Accreditation Every 2 years Telstra will reassess the accreditation and where appropriate will issue a letter confirming the accreditation for the next 2 years You have the right to request the organisation you engage to show evidence of their ID card
- 6 Neither the Accredited Plant Locator nor any of its employees are an employee or agent for Telstra and Telstra is not liable for any damage or loss caused by the Accredited Plant Locator or its employees
- 7 The attached list contains the current names and contact details of Accredited Plant Locators who service your area however these details are subject to change



Optus
Cable Optus Underground OVERVIEW MAP
Scale 1 2500 Printed On 25/11/2010
Sequence Number 20102989
Location 17 Minkara Rd



This document is confidential and may also be privileged and might confidentially nor privilege is waived lost or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate but no responsibility is assumed for any error or omission.

Telstra Accredited Plant Locaters - New South Wales (Central Region)

If a physical location is required please contact a Telstra accredited locater from the list below (fees apply)

Name & areas covered	Contact details
AB1 Installations Stroud Maitland / Hunter Valley	0429 435 327
Abitek Pty Ltd Rouse Hill Sydney Penrith Richmond Woolongong Katoomba Newcastle	(02) 8814 7899 or 0413 327 243 Fax (02) 8814 7855
Action Locating Sydney Newcastle Woolongong	0415 228 466 (02) 9671 5600
Advanced Ground Locations Maitland Newcastle Central Coast Maitland / Hunter Valley	(02) 4930 3195
All About Pipes Leppington	(02) 9606 2320 or 0408 790 010 Fax (02) 9606 2325
Aquatek Australia Pty Ltd All Areas	0418 612 445 (02) 9971 1294
Austerberry Directional Drilling Services Sandgate Newcastle Area	0419 223 199 or (02) 4920 6615 Fax (02) 4967 6572
Australian Locating Services All Areas	0412 227 434 1300 761 545
Australian Underground Services All Areas	1300 224 664
Barry Bros Specialised Servcies Sydney Penrith Richmond Woolongong Katoomba Macarthur	(02) 8723 8777 Fax (02) 9773 0777
Barry Bros Specialised Servcies Newcastle Central Coast Maitland / Hunter Valley	0408 672 536
Barry Schultz Fibre & Pipe Locations North Harbour	(02) 88147233 0416 058 060
Bedrock Bobcat & Excavation Pty Ltd Minnamurra Woolongong Macarthur	(02) 4237 5659 or 0418 645 391 Fax (02) 4237 8029
Bradmac Locating Services - Winmalee	0434 157 409 Fax (02) 4754 3735
Cable & Pipe Locations Coffs Harbour Yamba Dorrigo Grafton Nambucca Kempsey	0408 730 430 Fax (02) 6649 1236
Chris Bates and Associates Tighes Hill Mid North Coast Newcastle Hunter Valley and Central Coast	0408 427 391 Fax (02) 4969 4028
Civilscan Pty Ltd Greater Sydney	0416 068 060
D & K Vacuum Excavation Sydney Penrith Richmond Katoomba	(02) 47292428 0422 764 271
Down Under Consulting - Westleigh	0408 150 345
Down Under Pipeline Surveys Pty Ltd Orangeville	(02) 4653 1286 or 0418 675 374 Fax (02) 4653 1747
Duds Sydney Penrith Richmond Katoomba	0418 267 964
Durkin Construction Pty Ltd Auburn	(02) 9712 0308 or 0413 158 255 Fax (02) 9712 0206
Excavac Potholing Sydney Penrith Richmond Katoomba Bathurst	0414 521 808 Fax (02) 4631 1450
Geotrack Locating Services - Wyoming Central Coast	0411 243 517 (02) 4364 0364
Ground Scan Locating White Rock	0414 640 640 Fax (02) 6332 2599
Groundsearch Blacktown	(02) 9829 1479 0417 411 569
GS Polson Rural Fencing - Denman Maitland / Hunter Valley	(02) 6547 2140 0427 451 251
GWN Pty Ltd Hunter Valley Newcastle Maitland / Hunter Valley	0422 775 210 Fax (02) 4938 3421
Hunter Ground Search - Cameron Park	(02) 4953 1244 or 0418 684 819

Hunter Smith Management NSW & ACT	(02) 8090 2695 or 0422 224 761 Fax (02) 8282 5056
JFTA Pty Ltd Sydney Richmond	(02) 82138677
Kerr Technologies - Wollongong Woolongong Southern Highlands South Coast to Bega West to Wagga North to Newcastle Inc Sydney/West Sydney	(02) 4262 2009 or 0417 622 009 Fax (02) 4262 0364
Laneyne Electrical Pty Ltd - Dapto Helensburg to Uladulla Southern Highlands	(02) 4262 5166 or 0412 079 079 Fax (02) 4262 8167
Line tel Pty Ltd Sydney	(02) 9601 8472 0418 677 809
Locaters Sydney Penrith Richmond Macarthur	0418 262 025
Locaters Woolongong Woolongong Macarthur	0409 113 313
Locating Tracing Services Sydney Penrith Richmond Central Coast	0417 147 945 02 8824 6654 (A H)
MSG Locating - Tamworth Maitland / Hunter Valley	0448 674 601
Mudix Newcastle Newcastle Central Coast Maitland / Hunter Valley	(02) 4946 1699
North West Civil Tamworth Scone All North Coast Hunter Valley & North West	(02) 6762 8911 or 0438 914 875 Fax (02) 6762 8633
Online Pipe & Cable Locating - Girraween	1300 665 384 or 0418 402 234 Fax (02) 9676 6127
Optical Technologies Pty Ltd Sydney Richmond	(02) 9501 4922 0402 354 322
Pied Piper Cable & Pipe Locaters Port Jackson	(02) 88147233 0416 068 060
Pipeline Technology Services	(08) 8351 7000 or 0419 878 220 Fax (08) 8159 7537
Point Locations Sydney Penrith Richmond Woolongong Macarthur	(02) 4284 1532 or (02) 4268 4812 0417 683 939
Power Serve Pty Ltd - Newcastle Sydney Newcastle Maitland / Hunter Valley	(02) 4949 0100 or 0427 107 403
Riteway Traffic Control Tuggerah Central Coast Newcastle/Hunter	0419 212 969
Rubicof Pty Ltd- Cessnock Newcastle Central Coast Maitland / Hunter Valley	(02) 4990 5718 or 0418 683 451 or 0418 227 108 or 0418 103 265 Fax (02) 4991 2600
Rutherford Electrical Engineering Services Rutherford	(02) 4932 7344 Fax (02) 4932 5219
Seek Locations Pty Ltd Tuncurry Forster Gloucester Taree Port Macquarie Karuah Kempsey	(02) 6555 8550 or 0407 256 858 Fax (02) 6555 2548
Suresearch Aust Wentworthville Sydney Penrith Richmond Woolongong Katoomba Macarthur Central Coast Newcastle Maitland Hunter Valley Port Macquarie	1300 884 520 or 0408 221 046 Fax (02) 8915 1487
Sydwide Concrete Saw & Pipe Locators Pty Ltd	0400 815 095 Fax (02) 9822 7048
Topcrew P/L TIAS Excavac Potholing Sydney	Fax (02) 46311450 0414521808
Underground Service Locations Pty Ltd - Gosford Central Coast	(02) 4324 7496 or 0408 677584 Fax (02) 4323 2626
Vac U Digga Pty Ltd Ormeau	1300 822 834 Mob 0409 468 711 Fax 07 3807 5599
Wayne Cini Plumbing Mirrabooka	0488 925 432



25/11/2010

Network Operations Centre Asset Analysis

1 Lyonpark Road
Macquarie Park NSW 2113
Ph 1800 505 777
Fax 1300 307 035

To Mr Jye Saliba

Company Ian Cubitt's Classic Home Improvements

Address 152 Russell St

Emu Plains Nsw 2750

Fax 0247352988

Asset Location Reply

Dear Mr Jye Saliba

With reference to your enquiry of

- Location 17 Minkara Rd Bayview NSW 2104
- Sequence No 20102989
- Dial Before You Dig Job No 4347272
- Dial Before You Dig Customer No 932171

After referring to the Optus and/or Uecomm asset database OPTUS find that within the vicinity of your proposed works there are

EXISTING Optus UNDERGROUND ASSETS

Please refer to the attached map for further details as you are responsible for any damage you may cause to Optus and/or Uecomm assets due to negligence on your part

Note You must not commence work without first obtaining an on site location of the Optus underground plant and approval of your works plans Only Optus staff (or Optus approved location contractors) are to provide onsite location services for Optus plant You can arrange Optus and/or Uecomm onsite locations by calling Optus on 1800 505 777 and Optus or its approved representatives will attend your site to identify the exact location of Optus assets (the Optus and/or Uecomm Asset Alignment)

Optus requires 2 clear business days notice to conduct an on site location

The initial on site location visit will not normally incur a charge but at the discretion of Optus subsequent site visits may incur a charge to be applied at an hourly rate

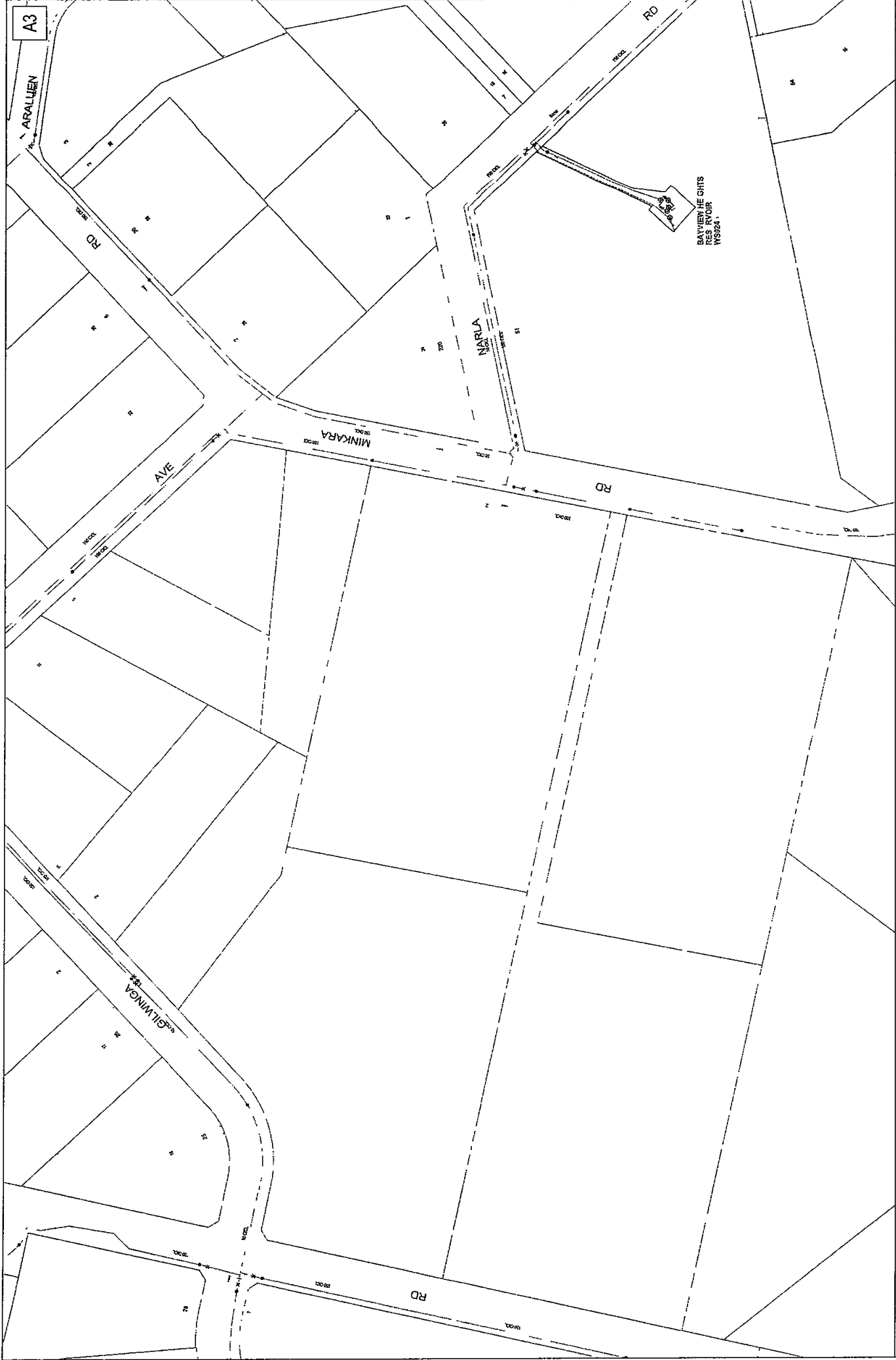
We thank you for your enquiry and appreciate your continued use of the Dial Before You Dig Service and/or Optus Asset Analysis Service If you require further information please contact Optus on **1800 505 777**

This reply relates only to the location indicated above and is valid for 14 days from the sent date Where additional works are planned that have not been specified with this reply Optus require that an additional enquiry be submitted In the case of no additional location request being submitted Optus will hold the relevant party responsible for any damage to Optus and/or Uecomm plant and all expenses incurred by Optus as a result of asset damage



Optus Limited
ACN 052 833 208

IMPORTANT This transmission may be confidential and privileged Unauthorised use is prohibited If you have it in error please notify us and shred this document
Thank you



ATTENTION

Accuracy of plans not to be assumed – see Clause 4. Plans not for conveying purposes

The accompanying plan(s) in relation to Sydney Water's pipelines are forwarded in response to your recent Dial Before You Dig inquiry. Please note the following important information and bases upon which the plan(s) are issued

- 1 The accompanying plans have been generated by an automated system. The plans should cover the area highlighted in the Locality Indication Only window on your Caller Confirmation. It is that defined area which is used to automatically generate the plans and not UBD or address information or any free text information provided to Dial Before You Dig. It is important therefore that you be accurate in defining your dig site when you lodge your enquiry with Dial Before You Dig. It is the enquirer's responsibility to resubmit the enquiry to Dial Before You Dig if the information supplied does not match the proposed dig site.
- 2 Plans indicate the general position of Sydney Water's pipelines and associated structures and fittings (pipelines) at the time of their construction. Sydney Water does NOT guarantee that all its existing pipelines are shown on the plans. (Particular care should be exercised in newer developments as pipeline details may not yet have been supplied to Sydney Water). Plans have NOT necessarily been adjusted to reflect any subsequent changes to surface levels, road alignments, fences, buildings and the like. Pipeline locations are approximate and accordingly the plans are NOT suitable for scaling purposes.
- 3 Plans do NOT show locations of property services (often called house service lines) belonging to and/or serving individual customers and which are usually connected to Sydney Water's pipelines.
- 4 You accept the plans on the understanding that Sydney Water does not warrant their accuracy or completeness. This means that you cannot rely solely on the plans as a conclusive record of the location of Sydney Water's pipes nor the location of any other underground pipes or cables. The safe and proper excavation and exposure of underground pipes and cables is your responsibility. No liability will accrue to Sydney Water for damage, loss or injury as a consequence of excavation undertaken by you or your employees or agents. You are also referred to the warning below.
- 5 To determine their precise location, Sydney Water's pipelines MUST first be exposed by pot holing using hand held tools or vacuum techniques i.e. before any mechanical means of excavation are employed.
- 6 Asbestos cement pipelines may form part of Sydney Water's water and sewerage reticulation systems and if damaged can pose a risk to health.
- 7 Persons excavating in the vicinity of Sydney Water's pipelines MUST exercise care and suitably protect Sydney Water's pipelines. Protection may include timbering, sheet piling, support and/or bracing or tomming to prevent movement.
- 8 Any movement in a pipeline could result in joint failure, flooding and death or injury to persons (in addition to damaged assets). The protection of Sydney Water's pipelines benefits the safety of workers.
- 9 Constructors are legally responsible for any damage and financial loss resulting from their interfering with Sydney Water's pipelines. In an emergency call 13 20 90 (24 hours 7 days).
- 10 Minimum clearances MUST be maintained between Sydney Water's pipelines and underground services belonging to other parties.
- 11 Plans MUST be approved by Sydney Water (usually signified by stamping) prior to landscaping and/or building over or adjacent to any Sydney Water asset.
- 12 Backfilling of excavation work in the immediate vicinity of Sydney Water's pipelines MUST comply with Sydney Water's standards.

Further information and guidance is available on Sydney Water's website at www.sydneywater.com.au / Building Developing and Plumbing where the following documents can be found under Dial Before You Dig

- Avoid Damaging Water and Sewer Pipelines
- Water Main Symbols
- Sewer Symbols
- Depths of Mains
- Guidelines for Building Over/Adjacent to Sydney Water Assets
- Clearances Between Underground Services

or call 13 20 92 for Customer Enquiries

NOTE

If you lodged your enquiry via telephone or facsimile, be aware that on line enquiries 24 hours per day 7 days per week to www.dialbeforeyoudig.com.au will enable you to receive colour plans in pdf format 24/7 via email.

The plans were prepared primarily for Sydney Water's internal business needs and for the primary purpose of recording the approximate location of Sydney Water's pipes. You are referred to the disclaimer above.

The plans do not indicate any other pipes or cables, for example, electrical cables, whether owned by Sydney Water or others. You must ensure that any proposed excavation is conducted safely and in compliance with all relevant safety and other laws.

NOTICE: This communication is confidential. If you are not the nominated recipient, please destroy all copies immediately. Sydney Water Corporation prohibits unauthorised copying and/or distribution of this communication.

Hydra Legend



Sewer

Sewer Main (with flow arrow & size type annotation)	
Disused Main	
Pressure Main (Rising Main)	
Maintenance Hole with upstream depth to invert	
Terminal Maintenance Shaft	
Maintenance Shaft	
Maintenance Hole with Overflow Weir	
Rodding Point	
Ventshaft INDUCT	
Ventshaft EDUCT	
Vertical	
Lamphole	
Property Connection Point (with chainage to downstream MH)	
Concrete Encased Section	
Sewer Rehabilitation	
Pumping Station	
Sewer Mining	

Sewer - Low Pressure Sewer

Low Pressure Sewer Main	
Pump Unit (Alarm Electrical Cable Pump Unit)	
Property Valve Boundary Assembly	
Stop Valve	
Reducer / Taper	
Flushing Point	

Sewer - Vacuum

Vacuum Sewer Main	
Divisional Valve	
Vacuum Chamber	
Clean Out Point	

Stormwater

Stormwater Pipe	
Stormwater Channel	
Stormwater Gully	
Stormwater Maintenance Hole	

Property Details

Boundary Line	
Lot Number	
House Number	
Development Application Reference	
Easement	
Location of SWC Heritage item - Please call 13 20 92 during office hours and ask for the Heritage Unit	

Water

Water Main - Potable (with size type annotation)	
Disconnected Main - Potable	
Proposed Main - Potable	
Water Main - Recycled	
Special Supply Conditions - Potable	
Special Supply Conditions - Recycled	
Restrained Joints - Potable	
Restrained Joints - Recycled	
Hydrant	
Maintenance Hole	
Stop Valve	
Stop Valve with By-pass	
Stop Valve with Tapers	
Closed Stop Valve	
Air Valve	
Valve	
Scour	
Reducer / Taper	
Vertical Bends	
Reservoir	
Symbols for Recycled Water as per Potable above Main and Symbol colour as indicated	

Private Mains

Potable Water Main	
Recycled Water Main	
Sewer Main	
Symbols for Private Mains shown grey Main colour as indicated	

PIPELINE MATERIAL ABBREVIATIONS

ABBREVIATION	INTERPRETATION
ABS	acrylonitrile butadiene styrene
AC	asbestos cement
BRICK	brick
CI	cast iron
CICL	cast iron cement lined
CONC	concrete
COPPER	copper
DI	ductile iron
DICL	ductile iron cement (mortar) lined
EPDM	ethylene propylene diene monomer
EW	earthenware
FIBG	fibreglass
FL BAR	forged locking bar
GI	galvanised iron
GRP	glass reinforced polyester
HDPE	high density polyethylene
MS	mild steel
MSCL	mild steel cement lined
PE	polyethylene
PP	polypropylene
PVC	polyvinylchloride
PVC-M	polyvinylchloride modified
PVC O	polyvinylchloride oriented
PVC PW	polyvinylchloride profile wall
PVC SW	polyvinylchloride smooth wall
PVC-U	polyvinylchloride unplasticised
RC	reinforced concrete
S	steel
SCL	steel cement (mortar) lined
SGW	salt glazed ware
SS	stainless steel
STONE	stone
VC	vitrified clay
WI	wrought iron
WS	woodstave

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

Construction		Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Insulation requirements				
The applicant must construct the new or altered construction (floor(s) walls, and ceilings/roofs) in accordance with the specifications listed in the table below, except that a) additional insulation is not required where the area of new construction is less than 2m2, b) insulation specified is not required for parts of altered construction where insulation already exists				
Construction	Additional insulation required (R-value)	Other specifications		
suspended floor with open subfloor framed (R0.7)	R0.8 (down) (or R1.50 including construction)		✓	✓
external wall framed (weatherboard, fibro, metal clad)	R1.30 (or R1.70 including construction)			
external wall framed (weatherboard, fibro metal clad)	R1.30 (or R1.70 including construction)			
external wall framed (weatherboard, fibro, metal clad)	R1.30 (or R1.70 including construction)			
external wall framed (weatherboard, fibro, metal clad)	R1.30 (or R1.70 including construction)			
flat ceiling, pitched roof	ceiling R3.00 (up), roof foil/sarking	dark (solar absorptance > 0.70)		

Glazing requirements				Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors						
The applicant must install the windows, glazed doors and shading devices in accordance with the specifications listed in the table below Relevant overshadowing specifications must be satisfied for each window and glazed door						
The following requirements must also be satisfied in relation to each window and glazed door						
Each window or glazed door with standard aluminium or timber frames and single clear or toned glass may either match the description or, have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions						
For projections described in millimetres, the leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 mm above the head of the window or glazed door and no more than 2400 mm above the sill						
Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35						
Pergolas with fixed battens must have battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window The spacing between battens must not be more than 50 mm						
Overshadowing buildings or vegetation must be of the height and distance from the centre and the base of the window and glazed door, as specified in the 'overshadowing' column in the table below						
Windows and glazed doors glazing requirements						
Window / door no.	Orientation	Area of glass inc. frame (m ²)	Overshadowing Height (m)	Distance (m)	Shading device	Frame and glass type
W1	SE	1.62	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium, single clear, (or U-value 7.63, SHGC 0.75)
W2	SE	1.62	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium single clear, (or U-value 7.63 SHGC 0.75)
W3	SE	0.84	0	0	eave/verandah/pergola/balcony >=900 mm	standard aluminium single clear, (or U-value 7.63, SHGC 0.75)
W4	SW	1.62	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium single clear, (or U-value 7.63, SHGC 0.75)

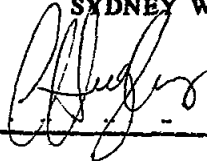
Legend
In these commitments, "applicant" means the person carrying out the development
Commitments identified with a "✓" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development)
Commitments identified with a "✓" in the "Show on CC/CDC plans & specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development
Commitments identified with a "✓" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate for the development may be issued

**SYDNEY WATER
APPROVED**

1. Position of structure in relation to Sydney Water's assets is satisfactory
2. Connections to Sydney Water sewer/water services may only be made following the issue of a permit to a licensed plumber/drainier
3. It is the owner's responsibility to ensure that all proposed fittings will drain to Sydney Water's sewer
4. Any Plumbing and/or Drainage Work is carried out in accordance with the Sydney Water Act 1994 AS 3500 and the NSW Code of Practice
5. Gullies, Inspection Shafts and Boundary Traps shall not be placed under any Roof, Balcony, Verandah, Floor or other cover unless otherwise approved by Sydney Water
6. Property No 3435285

Reece, Penrith
Quick Check Agent on behalf of
SYDNEY WATER

Per



6,5,10

SYDNEY WATER

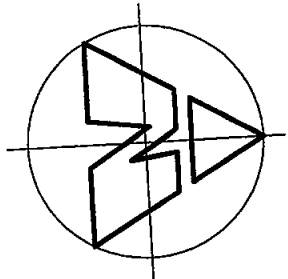
**SYDNEY WATER
APPROVED**

1. Position of structure in relation to Sydney Water's assets is satisfactory
2. Connections to Sydney Water sewer/water services may only be made following the issue of a permit to a licensed plumber/drainier
3. It is the owner's responsibility to ensure that all proposed fittings will drain to Sydney Water's sewer
4. Any Plumbing and/or Drainage Work is carried out in accordance with the Sydney Water Act 1994, AS 3500 and the NSW Code of Practice
5. Gullies, Inspection Shafts and Boundary Traps shall not be placed under any Roof, Balcony, Verandah, Floor or other cover unless otherwise approved by Sydney Water
6. Property No 3435285

Reece, Penrith
Quick Check Agent on behalf of
SYDNEY WATER

Per

[Signature] 6, 5, 10



SITE ANALYSIS	
TOTAL SITE AREA	20 200m
EXISTING DWELING	329m
EXISTING DRIVEWAY & HARD SURFACE	1 240m
EXISTING SHEDS	145m²
EXISTING SWIMMING POOL	78m
TOTAL EXISTING IMPERVIOUS AREA	1 792m
TOTAL AREA OF PROPOSED	56m
TOTAL NEW IMPERVIOUS AREA	1 848m (9 /)
TOTAL PROPOSED PERVIOUS AREA	18 352m (91.6)

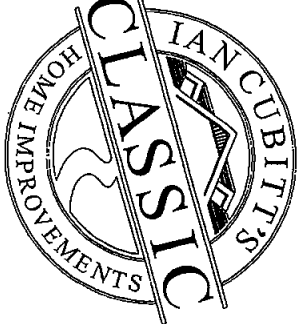
FLOOR SPACE RATIO	
TOTAL SITE AREA	20 200m
EXISTING FLOOR AREA	329m
EXISTING FLOOR SPACE RATIO	0.016 1
PROPOSED FLOOR AREA	40m
TOTAL PROPOSED FLOOR AREA	369m
PROPOSED FLOOR SPACE RATIO	0.018 1

C U R R E N T I S S U E	
12-01-11	CC ISSUE
19-07-10	DA ISSUE
22-06-10	DA ISSUE
31-03-10	DA ISSUE
Date	Amendment

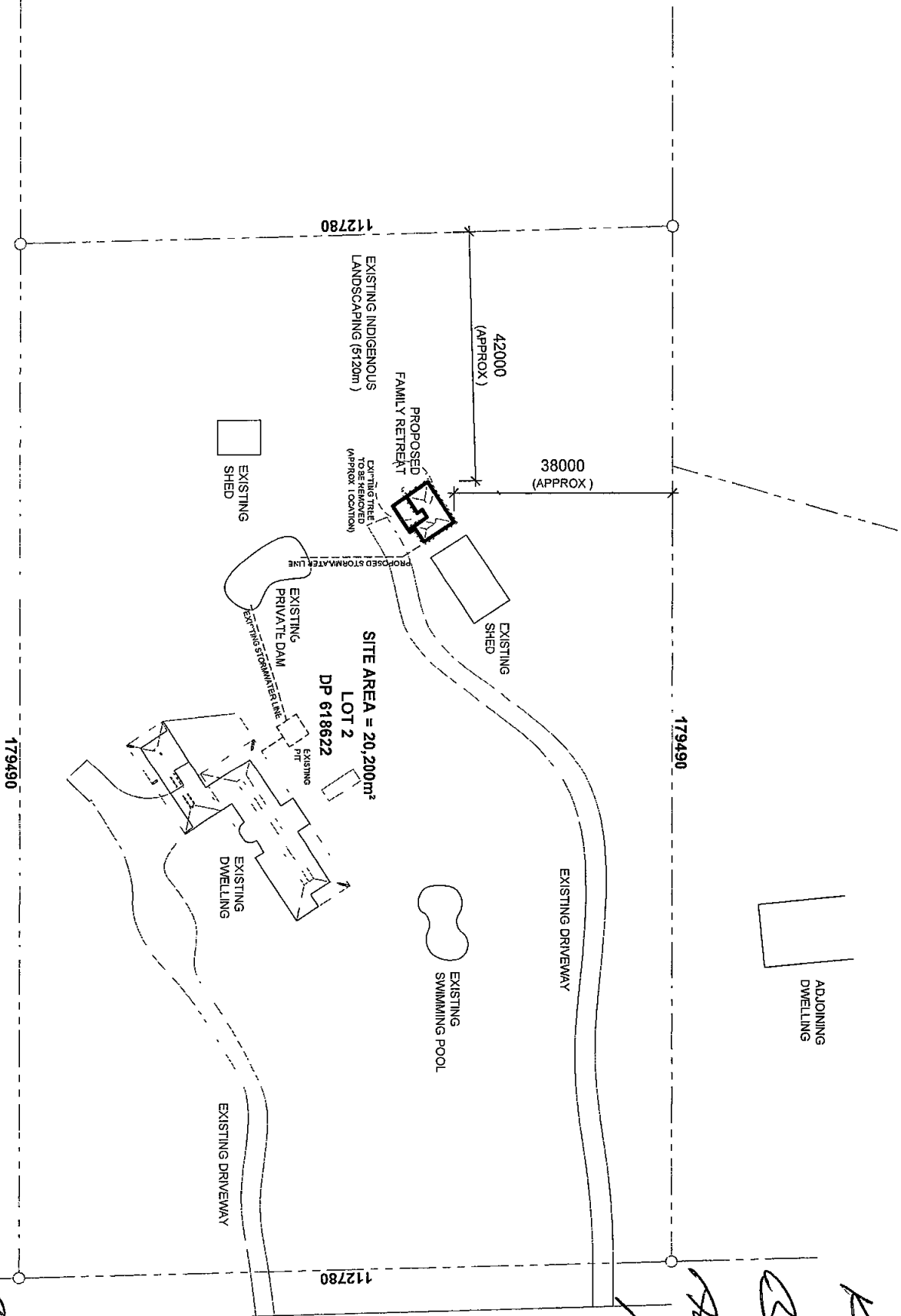
CLASSIC HOME IMPROVEMENTS	
152 Russell Street Finu Plains NSW 2750 Ph (02)4735 2944	
www.classichomeimprovements.com.au Lic 66902C	
Checked	Drawn
M Mounjdian	V Zinghini

Proposed	
FAMILY RETREAT	
for	
Mr & Mrs BIRD	
At Site Address	
17 MINKARA ROAD, BAYVIEW 2104	

Lot No	2
Date	31-03-10
Job no	17437
DP No	618622
Sheet	01 of 03
Drg No	17437 01



01 SITE PLAN
SCALE 1 1000



MINKARA ROAD

This is the plan/spec referred to in
Essential Certifier's Certificate No

11/00641

Officer T Rago
Accred with Lic BPB0036

* COLOURS &
FURNISHINGS AS
PER OLD COLOUR
NO 443/10
CARD. # B.7.

NOTES:
Kitchen on
Bar Mercurius
Also notes
per 17437

BASIX COMMITMENTS

LIGHTING

MINIMUM OF 40% OF NEW OR ALTERED LIGHT FIXTURES ARE FITTED WITH FLUORESCENT COMPACT FLUORESCENT OR LIGHT EMITTING DIODE (LED) LAMPS

FIXTURES

NEW OR ALTERED SHOWERHEADS ARE TO HAVE A FLOW RATE NO GREATER THAN 9 LITRES PER MINUTE OR A 3 STAR WATER RATING

NEW OR ALTERED TOILETS ARE TO HAVE A FLOW RATE NO GREATER THAN 4 LITRES PER AVERAGE FLUSH OR A MINIMUM 3 STAR WATER RATING

NEW OR ALTERED TAPS ARE TO HAVE A FLOW RATE NO GREATER THAN 9 LITRES PER MINUTE OR MINIMUM 3 STAR WATER RATING

INSTALLATION REQUIREMENTS

CONSTRUCTION ADDITIONAL INSULATION REQUIRED (R VALUE) OTHER SPECIFICATIONS

SUSPENDED FLOOR WITH OPEN SUBFLOOR FRAMED R0.8 (DOWN) (OR R1.50 INCLUDING CONSTRUCTION) (R0.7)

EXTERNAL WALLS FRAMED (WEATHERBOARD FIBRO R1.30 (OR R1.70 INCLUDING CONSTRUCTION) METAL CLAD)

FLAT CEILING PITCHED ROOF CEILING R3.00 (UP) ROOF FOLLSARKING DARK (SOLAR ABSORPTANCE > 0.70)

WINDOWS AND GLAZED DOORS

WINDOW / DOOR No	ORIENTATION	AREA OF GLASS (m ²)	SHADING DEVICE	FRAME AND GLASS TYPE
W1	SE	1.62	EAVE >=600mm	STANDARD ALUMINIUM SINGLE CLEAR (OR U VALUE 7.63 SHGC 0.75)
W2	SE	1.62	EAVE >=600mm	STANDARD ALUMINIUM SINGLE CLEAR (OR U VALUE 7.63 SHGC 0.75)
W3	SE	0.84	EAVE >=900mm	STANDARD ALUMINIUM SINGLE CLEAR (OR U VALUE 7.63 SHGC 0.75)
W4	SW	1.62	EAVE >=600mm	STANDARD ALUMINIUM SINGLE CLEAR (OR U VALUE 7.63 SHGC 0.75)
W5	SE	1.62	EAVE >=600mm	STANDARD ALUMINIUM SINGLE CLEAR (OR U VALUE 7.63 SHGC 0.75)
W6	SE	1.62	EAVE >=600mm	STANDARD ALUMINIUM SINGLE CLEAR (OR U VALUE 7.63 SHGC 0.75)
W7	NE	1.62	EAVE >=600mm	STANDARD ALUMINIUM SINGLE CLEAR (OR U VALUE 7.63 SHGC 0.75)
W8	NW	1.2	EAVE >=600mm	STANDARD ALUMINIUM SINGLE CLEAR (OR U VALUE 7.63 SHGC 0.75)
W9	SW	1.08	EAVE >=600mm	STANDARD ALUMINIUM SINGLE CLEAR (OR U VALUE 7.63 SHGC 0.75)

BUSHFIRE REQUIREMENTS

THE PROPOSED ~~CONSTRUCTION~~ *improvements* IS TO BE CONSTRUCTED TO MINIMUM BAL 29 CONSTRUCTION STANDARDS IN AS3959 2009 AND THE BUSHFIRE THREAT ASSESSMENT REPORT PREPARED BY BUSHFIRE SATETY SOLUTIONS (REPORT No 201027A)

A FIRE FIGHTING WATER SUPPLY IS TO BE PROVIDED AND BE A MINIMUM OF 5000L AND INCORPORATED INTO A RECOMMENDED ONSITE WATER SUPPLY SYSTEM THAT INCLUDES A FIRE FIGHTING PUMP SYSTEM. THE FIRE FIGHTING HOSE IS TO BE CAPABLE OF REACHING ALL BUILDING ELEVATIONS AND IS TO BE GENERAL FIRE FIGHTING HOSE STANDARD

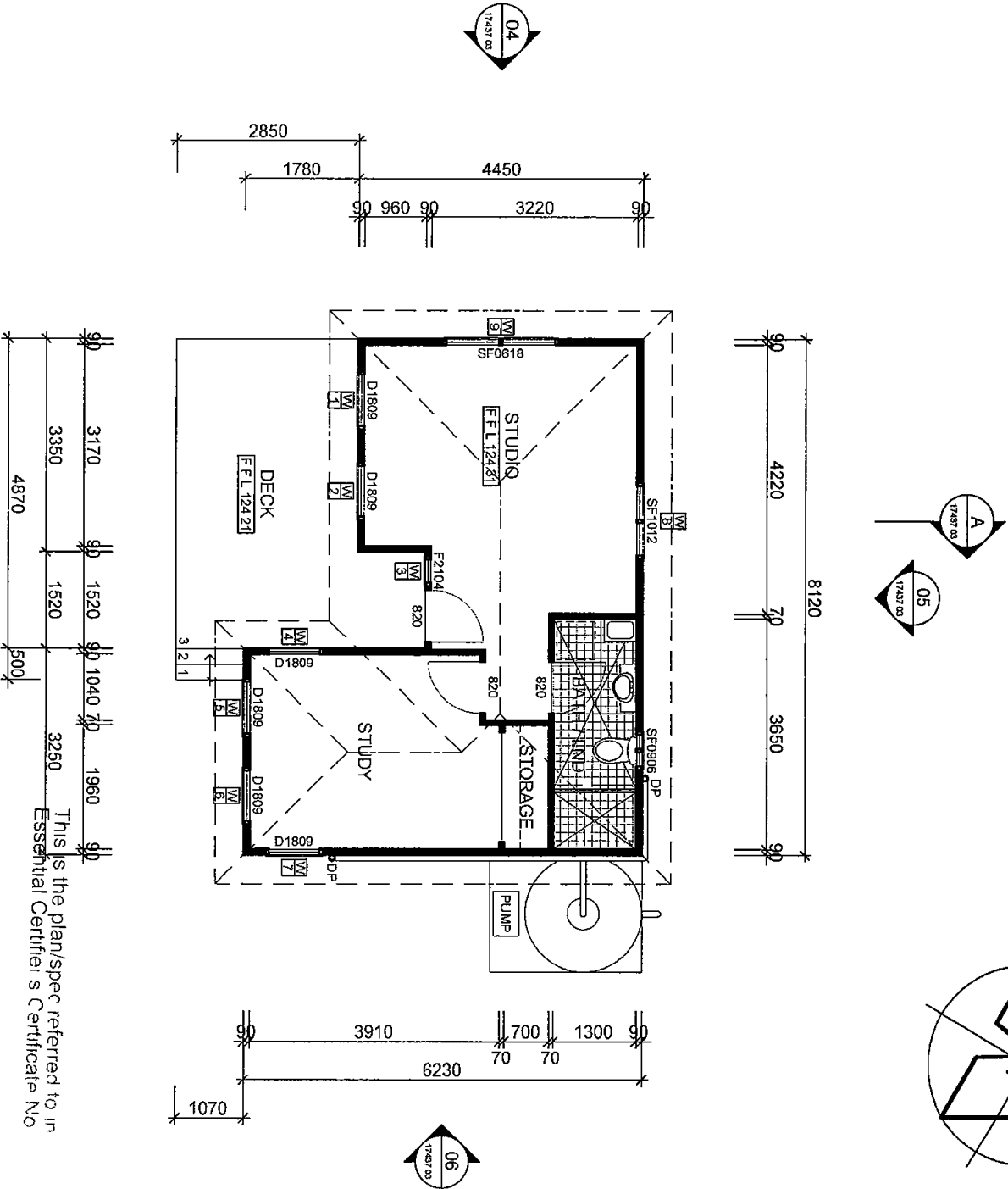
THE EXISTING DWELLING AND ~~CONSTRUCTION~~ *improvements* ARE TO HAVE NON-FLAMMABLE ROOF GUTTER PROTECTION TO PREVENT LEAF LITTER BUILD UP AND THAT ALL ROOF VALLEYS BE PROTECTED TO PREVENT LEAF LITTER ACCUMULATION AT ROOF INTERSECTIONS AND THE LIKE

Figured dimensions only to be used. DO NOT SCALE from drawing. All dimensions are to be verified on site prior to commencement of work. This drawing remains the property of Ian Cubitts Classic Home Improvements and is subject to copyright.

CURRNT ISSU E		D	
12-01-11	CC ISSUE	D	
19-07-10	DA ISSUE	C	
22-06-10	DA ISSUE	B	
31-03-10	DA ISSUE	A	
Date	Amendment	Issue	

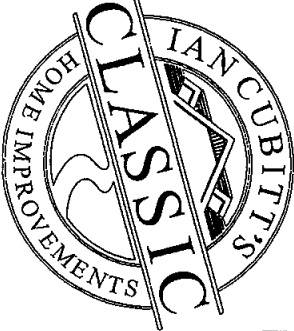
CLASSIC HOME IMPROVEMENTS		Proposed	
152 Russell Street Etnu Plains NSW 2750 Ph. (02)4735 2944		for	
www.classichomeimprovements.com.au Lic 66902C		Mr & Mrs BIRD	
Checked		At Site Address	
M Mounjdian		17 MINKARA ROAD, BAYVIEW 2104	

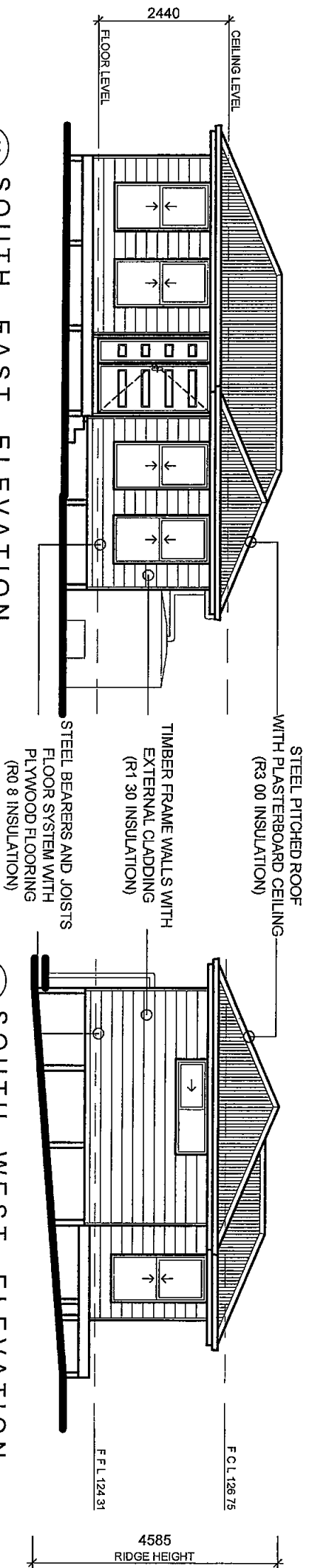
02 FLOOR PLAN SCALE 1:100



11/00641

Officer T. Raco
Accred. Co. No. 5220039





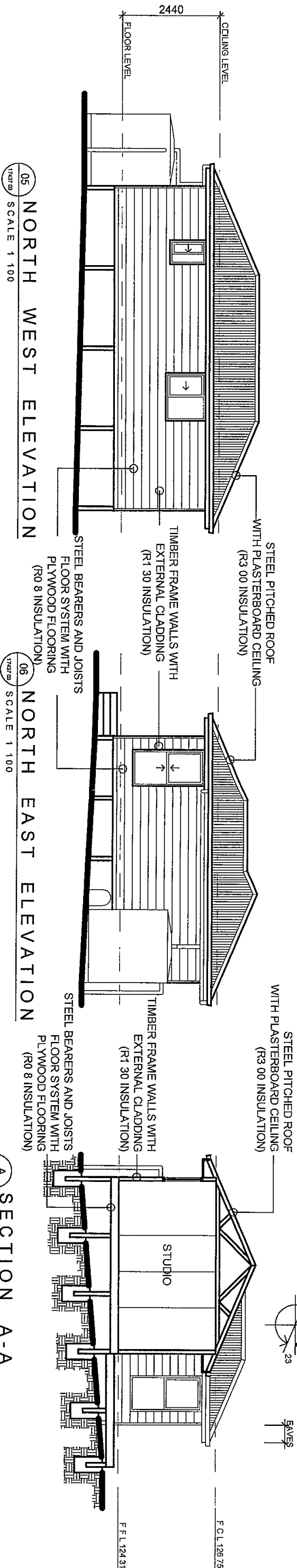
03 SOUTH EAST ELEVATION
SCALE 1 100

04 SOUTH WEST ELEVATION
SCALE 1 100

This is the plan/section reformatted for
Essential Certifier's Certification

11/00641

Officer J Ratu
Accreditation No BPR0536



05 NORTH WEST ELEVATION
SCALE 1 100

06 NORTH EAST ELEVATION
SCALE 1 100

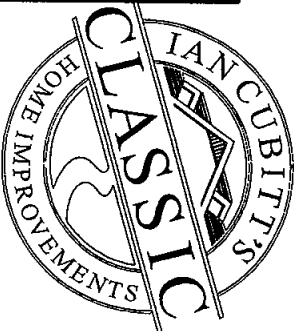
A SECTION A-A
SCALE 1 100

Figured dimensions only to be used DO NOT SCALE from drawing All dimensions are to be verified on site prior to commencement of work This drawing remains the property of Ian Cubitts Classic Home Improvements and is subject to copyright			
CURRENT ISSUE		Proposed	
12-01-11	CC ISSUE	FAMILY RETREAT	
19-07-10	DA ISSUE	for	
22-06-10	DA ISSUE	Mr & Mrs BIRD	
31-03-10	DA ISSUE	17 MINKARA ROAD, BAYVIEW 2104	
Date	Amendment		

Ian Cubitts
CLASSIC HOME IMPROVEMENTS
152 Russell Street Bmru Plains NSW 2150 Ph (02)4735 2944
www.classichomeimprovements.com.au Lic 66902C

Checked M Mounjdian
Drawn V Zinghini
At Site Address

Lot No	2	DP No	618622
Date	31-03-10	Sheet	03 of 03
Job no	17437	Drg No	17437 03

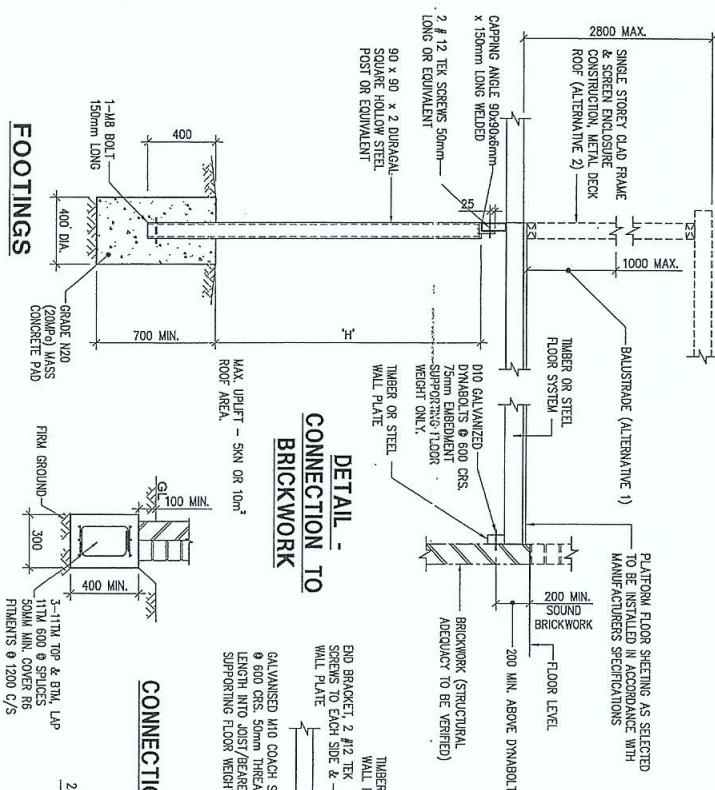


STRUCTURAL STEELWORK

- NOTES:
- THIS DRAWING TO BE READ IN CONJUNCTION WITH THE WORKING DRAWING AND SPECIFICATION.
 - WORKMANSHIP AND MATERIALS TO COMPLY WITH A.S.3600 AND ASSOCIATED AUSTRALIAN STANDARDS.
 - CONCRETE COMPRESSIVE STRENGTH IN ACCORDANCE WITH A.S.3600 TO BE 20MPa.
 - CONCRETE SLUMP TO BE 80mm.
 - GRADE FINISHED GROUND SURFACE TO DIVERT WATER AWAY FROM FOOTING ON ALL SIDES AND TO PREVENT FLOODING.
 - TERRACE PROTECTION TO BE IN ACCORDANCE WITH A.S.3660.1-1995 AND COUNCIL'S REQUIREMENTS.
 - THESE DETAILS HAVE BEEN DESIGNED ON THE BASIS OF WIND FORCES IN ACCORDANCE WITH AS/NZS 1170 PT. 2-2002 WIND CODE FOR TERRACE CATEGORY 2, PARTIALLY-SHIELDED, EXPOSED A AND BASIC WIND SPEEDS $V_{ref} = 41m/sec$ AS DENIED IN THAT CODE AND ENCLOSURE HEIGHT NOT EXCEEDING 2.6m AND BALUSTRADE HEIGHT NOT EXCEEDING 1m. AND ROOF SHEETING DESIGNED AS NON-TRAFFICABLE.
 - STRIP & PAD FOOTINGS DESIGNED TAKING INTO ACCOUNT CLASS "W" (MODERATELY REACTIVE) SOIL CONDITIONS AND AS2870.
- WORKMANSHIP AND MATERIALS TO BE IN ACCORDANCE WITH THE FOLLOWING:
- ASTM A36 - STEEL HOLLOW SECTIONS FOR GENERAL STRUCTURAL PURPOSES
 - AS3678 & AS3679 - STRUCTURAL STEEL - ORDINARY WELDABLE GRADES
 - AS4100 - STEEL STRUCTURES CODE
 - AS1534 - STRUCTURAL WELDING CODE
 - AS1600 - ROLLED FORMED STEEL STRUCTURALLY CODE (DURALUM SECTIONS)
- UNLESS OTHERWISE NOTED, WELDS TO BE CONTINUOUS JOINTS OF SIZE EQUAL TO THE THICKNESS OF THE THINNER MEMBER, WIND OR FROM OR WHICHEVER IS THE LESSER. BOLTS TO BE 16mm DIAMETER AND CONNECTION PLATES TO BE 10mm THICK.
- PARTICULAR CARE TO BE TAKEN WITH THE FINISHED APPEARANCE OF EXPOSED WELDS. BOTH THOSE CARRIED OUT IN THE FACTORY AND THOSE PERFORMED ON SITE. THESE ARE TO BE FINISHED TO GIVE A TRADESMANLIKE AND REGULAR APPEARANCE AND ARE TO BE TO THE OWNERS SATISFACTION.
- ALL STEELWORK NOT DIPPED GALVANISED UNLESS OTHERWISE APPROVED BY ARCHITECT.
- END BRACKET, 2 #12 TEK SCREWS TO EACH SIDE & WALL PLATE
- TIMBER OR STEEL BEAMERS (STRUCTURAL) ADEQUACY TO BE VERIFIED
- WALL PLATE
- 230/350 SQ. BHK PIER
- MASS CONC. PAD
- FOOTING
- PLAN - FOOTINGS
- EXISTING RESIDENCE
- SPAN OF ENCLOSURE OR DECK
- PLAN - FOOTINGS
- EXISTING RESIDENCE
- WIDTH OF ENCLOSURE OR DECK

DETAIL - CONNECTION TO BRICKWORK

DETAIL - CONNECTION TO TIMBER FRAME



FOOTINGS

MASS CONCRETE PADS TO BEAR ON FIRM NATURAL GROUND WITH A SAFE BEARING CAPACITY OF AT LEAST 2000kPa. SITE CLASSIFICATION TO AS 2870 TO BE A5/M & H. H. MAXIMUM FREE STANDING (UNBRACED) POST HEIGHT

DETAIL - STRIP FOOTING

TYPE 1

SINGLE ROW OF PAD FOOTINGS

SPAN (m)	No. PADS IN ROW 1
700	1
800	2
900	2
1000	2
1100	2
1200	2
1300	2
1400	2
1500	2

TYPE 2

MULTIPLE ROWS OF PAD FOOTINGS

MAX. SPACING (m)	No. PADS PER ROW
700	1
800	2
900	2
1000	2
1100	2
1200	2
1300	2
1400	2
1500	2

DETAIL - PAD FOOTING

TYPE 1

SINGLE ROW OF PAD FOOTINGS

MAX. SPACING (m)	No. PADS IN ROW 1
700	1
800	2
900	2
1000	2
1100	2
1200	2
1300	2
1400	2
1500	2

TYPE 2

MULTIPLE ROWS OF PAD FOOTINGS

MAX. SPACING (m)	No. PADS PER ROW
700	1
800	2
900	2
1000	2
1100	2
1200	2
1300	2
1400	2
1500	2

TABLES FOR BALUSTRADE/OPEN AWNING CONSTRUCTION (MAX. DRAWINGS BY ESSENTIAL ENGINEERS LIVERPOOL)

BALUSTRADE HEIGHT ≤ 1000mm (ALTERNATIVE 1)

NOTE: PAD SPACING TO BE DESIGNED IN ACCORDANCE WITH THE ALLOWABLE SPAN FOR JOISTS & BEAMERS FOR BOTH ALTERNATIVES

Engineer of their responsibility to ensure the structural adequacy of the project

TABLES FOR SINGLE STOREY CLAD FRAME & SCREEN ENCLOSURE CONSTRUCTION (ALTERNATIVE 2)

NOTE: PAD SPACING TO BE DESIGNED IN ACCORDANCE WITH THE ALLOWABLE SPAN FOR JOISTS & BEAMERS FOR BOTH ALTERNATIVES

Engineer of their responsibility to ensure the structural adequacy of the project

KNEEBONE & BERETTA CONSULTING PTY LTD

STRUCTURAL & CIVIL ENGINEERS

ABN 69 489 315 729

15-19 MARION STREET, PARARAMATTA, N.S.W., 2150

TELEPHONE (02) 9695-8299

WEBSITE: www.kneeboneandberetta.com

E-MAIL: ADDRESS: info@kneeboneandberetta.com

SCALE: AS SHOWN

DATE: 27.1.04

DRAWN: AJV

CHECKED: BM/TC

APPROVED: [Signature]

PROPOSED STANDARD DETAILS FOR IAN CUBITT'S CLASSIC HOME IMPROVEMENTS

STEEL POST & FOOTING DETAILS

DRAWING NUMBER: 56633-2

ISSUE: C



This is the plan/spec referred to in
Essential Certifier's Certificate No

11/00641

Officer T Raco
Accred a/c No 3230336

IAN CUBITT'S CLASSIC HOME IMPROVEMENTS PTY LIMITED

SPECIFICATION

Building Works Agreement Number 17437

Concept Drawing dated 4th March 2010

This Specification in conjunction with the Concept drawings forms part of the above Building Works Agreement and satisfies the performance provisions of the Building Code of Australia and complies with all relevant Codes and Standards

CONTRACTOR Ian Cubitt's Classic Home Improvements Pty Limited
Builder's Licence Number 66902C ABN 29 068 798 158

OWNER Mr & Mrs B and A Bird

ADDRESS 17, Minkara Rd , Bayview NSW

SITE ADDRESS 17, Minkara Rd , Bayview NSW

This specification describes the building works to be carried out by the Contractor for the Owner

DESCRIPTION OF THE WORK

ACACIA SERIES 2 GARDEN STUDIO (Traditional) as detailed in the
Concept Drawing referred to above

AUTHORITIES

By Contractor

The Contractor shall be responsible for obtaining all the approvals and certificates from council, and any other statutory body as may be relevant to the contracted work

PRELIMINARIES

The Contractor shall provide the following

LAB

Toilet Facilities

The Contractor/~~Owner~~ shall provide a portable toilet for the period of time the Contractor requires the toilet on site

The Owner agrees for the Contractor and sub-contractors to use the existing toilet facilities

Approved by Owner  CH

BULK EXCAVATION

The Contractor shall be responsible for the following excavation

- Level area to allow for commencement of works

EXCAVATION

The Contractor shall be responsible for the following excavation

- for footings

Where the Contractor is responsible for excavation the contract price includes the cost of excavation in soil only
Where excavation involves excavation in rock this cost is not included in the contract price and the cost of such work shall be in addition to the contract price and a chargeable extra

The Contractor shall ~~remove all excavated material from site /~~ leave on site ✓

FLOOR/DECKING

The contractor shall supply and install

- Steel bearers and joists Steel stanchions
- 15mm plywood structural flooring with thermal and vapour barrier
- 15mm compressed fibro flooring to wet areas
- Merbau decking 500mm high on steel stanchions as per plan

HANDRAIL

- No handrail has been provided to deck If required a separate quote will be provided

STEPS (External)

The Contractor shall provide steps with open risers as follows

- Merbau
- Width 900mm

EXTERNAL FRAME

- Timber stud frame
-

EXTERNAL WALL CLADDING

The new external walls will be constructed using

- Hardie Scyon cladding
-
- Sarking behind James Hardie products
- Polyester batts to walls (R 1.5)

Note Sarking and polyester batts must be used behind all James Hardie products

Contractors Initial 

Version – 15/06/09

Page 2

Clients Initial 
Zab

INTERNAL WALLS

- Timber stud frame
-

WALL LININGS

Existing Residence

-

New Work

The Contractor will provide internal wall linings finished with 10mm smooth finish plasterboard

CEILING LININGS

The ceiling linings to the new work will be 10mm smooth finish plasterboard

CEILING HEIGHT

The ceiling height to the new work will be 2400mm minimum or as otherwise specified

CORNICE

The cornice to the new work will be 90mm plasterboard standard cove

SKIRTING

The skirting is to be supplied by the Contractor and fitted by the Contractor

Skirting to match existing skirting as far as reasonably possible to maximum height allowed of 75mm

ARCHITRAVES

The architraves to be supplied by the Contractor and fitted by the Contractor

Architraves to match existing architraves as far as reasonably possible to maximum width allowed of 75mm

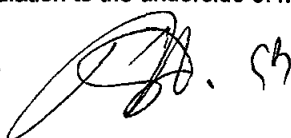
ROOF

Material

The new roof will be constructed using

- Softwood roof framing to Australian Standards
- Colorbond metal deck roofing
- Insulflex 500 (R 2.7) insulation to the underside of metal
- Level ceiling

Colour

Bushland  SH

INSULATION

Ceilings

The Contractor is to supply and install (R1.5) Polyester insulation batts to the new ceiling areas

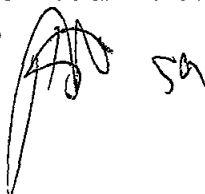
Walls

The Contractor is to supply and install (R1.5) Polyester insulation batts to the new perimeter walls

The Contractor shall supply and install sarking to the new perimeter walls clad with / Hardie Scyon

FASCIA / EAVES

Unless otherwise agreed the fascia and eave material will as far as reasonably possible match the existing

Timber fascia  SH

Contractors Initial

SB

Page 3

Clients Initial


EAB

Version - 15/06/09

GUTTERS AND DOWN PIPES

Gutters

The Contractor shall install to the new work

- Colorbond steel 125mm quad

• Colour *Bushland* *SA*

Down pipes

The Contractor shall install to the new work , 100x50mm Colorbond,

Colour *T B A after wall colour decided* *SA*

GUTTERGUARD

- Steel gutterguard supplied

STORM WATER DISPOSAL

All down pipes will discharge into the existing storm water disposal system unless otherwise specified

10 lineal metres of storm water has been allowed in the contract price Should the number of lineal metres of storm water required to connect into the existing storm water disposal system exceed that allowed the cost of the additional metres shall be in addition to the contract price and a chargeable extra

Storm water excavation into soil is allowed for in the contract price, where excavation involves excavation in rock the cost of such work shall be in addition to the contract price and a chargeable extra

RAINWATER TANKS

The Contractor shall supply and install a *steel* *SA* poly water tank including downpipe connection, storm water connection and electrical connection as follows

Slimline tank 2000 litre,

Base

- Concrete block 750mmx450mmx50mm

Pump

- Budget orange (runs 1 tap)

Colour

WINDOWS

The Contractor shall supply and install

Aluminium Sliding windows as follows

- As per plans
- Colour *white* *SA*

Aluminium Double hung windows as follows *SA*

- As per plans
- Colour *white* *SA*

All opening sashes to have manufacturer's keyed alike window locks

WINDOW FLY SCREENS

The fly screens will be Aluminium coloured frames with Steel screen mesh *SA*

- Colour *white*

Contractors Initial *SB*

Version – 15/06/09

Page 4

Clients Initial *LAB*

EXTERNAL DOORS

The Contractor shall supply and install

- To be selected from Hume doors
- Selection

XN1 GlueChip Newing For SB

INTERNAL DOORS

Contractor shall supply standard size internal doors and the Contractor to fit doors

Door type

- Internal 4 panel doors
-

Door Furniture

All internal door furniture is to be supplied by Contractor as follows

- Entrance set locking
- Passage set
- Deadlock external double sided

Unless otherwise agreed all door furniture will be the standard door furniture used by the contractor at the time of construction

PLUMBING AND DRAINING

The Contractor will carry out plumbing and drainage work as specified below in accordance with the Water Board regulations

An allowance has been made to connect the plumbing points to the existing system, including

- Shower
- Vanity
- Tub
- Sink
- Floor waste
- Washing machine
- Toilet
- Electric 100litre HWS

BATHROOM PACKAGE

The Contractor shall supply and install the Prime Cost items as listed below

- Venecia dual flush toilet suite
- Chrome toilet tap
- Posh Bristol 750mm vanity unit
- Posh Bristol vanity tap set
- Dominique corner shower base (pack 2 / 3)
- Clear corner glass shower screen (pack 2 / 3) Sliding door
- Posh Bristol shower tap set
- Plumbing installation and fit out
- Floor waste with chrome grate
- 1x2 Globe-light, heat & fan IXL
- 1x Double GPO (power point)
- Waterproofing
 - Tiles to floor area
 - Tiles from floor to ceiling
- Tile laying and supplies

Square Fee SB

Contractors Initial

SB

Page 5

Clients Initial

[Signature]
EAB

Version - 15/06/09

- Aluminium framed mirror
- Towel holder
- Toilet roll holder
- Soap holder

All plumbing items are supplied by Reece Plumbing and are Quality Certified Products
All taps are AAA rated water saving taps

KITCHEN PACKAGE

- Laminated bench tops in a range of colours
- Laminated doors available in a range of colours
- Overhead and under bench cupboards and drawers
- White melamine lining of cupboards and drawers
- Electric ~~or / gas~~ cooktop
- Electric under bench oven
- Electric re-circulating rangehood
- Stainless steel single bowl sink with basket waste
- AAA rated water saving tap set

LAUNDRY PACKAGE

- Stainless steel slim line tub with under tub cabinet
- AAA rated water saving tap set

HOT WATER SERVICE

5 Star energy saving ~~Gas/LPG instantaneous system~~ / or electric HWS

ELECTRICAL

The Contractor will carry out electrical work as specified and in accordance with authority requirements

The Owner will carry out electrical work in accordance with authority requirements

Provide 1 Sub-board and safety switch

Provide 9 new light points

Provide 6 new internal double power points

Provide 1 new compulsory smoke detector

Disconnection of any existing electrical shall be the Contractors responsibility

Additional light / power circuits have not been included in initial quotation and are subject to electrical contractor assessment

All light points will consist of a white batten holder and switches from the H P M standard range

Relocation, disconnection, reconnection or alterations to telephones, TV aerals, alarm systems, air conditioning units and other such items are not included in the contract price and are the responsibility of the Owner

CONNECTION OF SERVICES (GRANNY FLATS / STUDIOS)

Please note the following

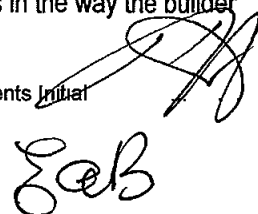
- Stormwater line in, is included in this specification
- Sewer line in, is not included in this specification Connection to new Biocycle supplied by client
- Cold water line in, is included in this specification
- Electrical cabling in, is included in this specification
- Allowance to connect to services to maximum of 28meters Allowance made in soft soil for standard trench excavation However as there may be tree roots or rocks in the way the builder

Contractors Initial



Page 6

Clients Initial



Version - 15/06/09

reserves the right to vary the price if any obstruction is met. An inspection of the site will be made when the exact position of the building is decided

FLOOR TILES

The Contractor shall supply and install tiles of the Owner's choice. Tiles are a Prime Cost item and the allowance included in the contract price is \$25 per square metre

- Floor of bathroom
- Walls to ceiling height
- Tub splash back
- Sink splash back

~~The Owner shall supply and install all tiling~~

WARDROBE DOORS

The Contractor shall supply and install mirrored / vinyl sliding doors

- Size 1 800 White
- Colour

WARDROBE FITOUT

The Contractor shall supply and install an internal robe fit-out in white melamine

The configuration will be type - 1 (2) 3, 4, 5, 6, 7 as per drawing supplied

Type 2

PAINTING, STAINING AND SANDING

The contract price does not include painting, staining, sanding or other such work. The Owners are responsible for all such work both internally and externally

The Owners are responsible for ensuring that all such work is carried out in accordance with relevant standards and manufacturers specifications applicable to the materials supplied and in a timely manner so as to properly protect and preserve the work

SPECIAL CONDITIONS AS DISCUSSED WITH THE OWNER

- Excavated material to be spread on site
- The Owner is responsible for the removal of trees and scrub before construction
-
-

NOTES

1 Basix requirements may require additional changes to the specifications included above

Blank lined area for notes or signatures.

Contractors Initial

[Handwritten signature]

Version – 15/06/09

Clients Initial

[Handwritten signature]
LOB

GENERAL CONDITIONS

EXISTING SERVICES

Non visible services

Where any of the existing non visible services (such as sewage lines water pipes underground drains electrical cables, telephone lines and other services) affect the carrying out of the work and need re-routing replacement or other work to be undertaken in respect thereof then the cost of such work shall be in addition to the contract price and a chargeable extra

Note The electrician will assess the electrical supply and connection prior to the commencement of work At which time he will determine the most appropriate way to maintain the supply of power during the construction period Should additional work or materials be required (i.e. temporary power box) then this will be a chargeable extra to be paid by the Owners

Due to the age and condition of equipment such as hot water heaters relocation may result in unavoidable damage Where the Contractor is responsible for the relocation of hot water heater or other existing equipment the Contractor shall not be

responsible for any damage caused to such equipment as a result of relocation other than as a result of negligence on the part of the Contractor

As a result of legislative requirements relocation of power entry meter boxes or other electrical work may require rewiring or upgrading of the electrical system Such work is not included in the contract price and if required shall be in addition to the contract price and a chargeable extra

WARRANTIES

In accordance with and to the extent required by the Home Building Act the Contractor warrants that

- (a) the work will be performed in a proper and workmanlike manner and in accordance with the Building Works Agreement and the plans and this specification forming part of that Agreement,
- (b) all materials supplied by the Contractor will be good and suitable for the purpose for which they are used and that unless otherwise stated in the Agreement, those materials will be new,
- (c) the work will be done in accordance with and comply with the Home Building Act or any other law
- (d) the work will be done with due diligence and within the time stipulated in the Agreement, or if no time is stipulated within a reasonable time,
- (e) if the work consists of the construction of a dwelling the making of alterations or additions to a dwelling or the repairing renovation decoration or protective treatment of a dwelling the work will result to the extent of the work conducted in a dwelling that is reasonably fit for occupation as a dwelling and
- (f) the work and any materials used in doing the work will be reasonably fit for the specified purpose or result if the Owner expressly makes known to the Contractor or another person with the express or apparent authority to enter into or vary contractual arrangements on behalf of the Contractor the particular purpose for which the work is required or the result that the Owner desires the work to achieve so as to show that the Owner relies on the Contractor's skill and judgement

The Contractor and the Owner agree that the Guide to Standards and Tolerances for home builders and renovators published by the Office of Fair Trading will apply where standards and tolerances are not prescribed in legislation

INSURANCE

The Contractor shall effect and maintain during the course of construction public liability insurance building works insurance and workers compensation insurance

SURVEYS

A peg out survey is to be provided by the Owner at the Owner's cost if required by regulatory authorities

SEWER CONNECTION

No allowance has been made to replace the existing sewer to the board connection

No allowance has been made for any alteration to or additional work caused by existing or former septic installations or drains

FINANCING CHARGES AND OTHER REQUIREMENTS

The Owners are responsible for arranging all finance if any, and all charges levied and other requirements by the financier or otherwise associated with the financing (including surveys, inspections etc) are not included in the contract price and shall be arranged by and paid for by the Owner

UNUSED MATERIALS

Unless otherwise agreed all demolished materials and any unused or surplus materials shall be/remain the property of the Contractor and all such materials shall be removed from site by the Contractor

CONTRACTOR'S RUBBISH

Unless otherwise agreed all rubbish resulting from the works shall be removed from the site by the Contractor

Contractors Initial



Version – 15/06/09

Page 9

Clients Initial



VEGETATION REMOVAL

Where the area associated with the works or access to the works is affected by trees, shrubs or other vegetation the Owner is responsible for removal and disposal. Removal and disposal of vegetation is not included in the contract price and where such work is required to be carried out by the Contractor the cost of such work shall be in addition to the contract price and a chargeable extra.

ASBESTOS

Should asbestos be encountered on the site unless specifically stated otherwise in this specification, all costs associated therewith including reports/assessments, removal and disposal shall be in addition to the contract price and a chargeable extra.

SIGNS

In accordance with council requirements the Owner agrees to allow the Contractor to display a site sign during the construction period. The sign shall be erected prior to commencement of the work.

BASIX REQUIREMENTS

BASIX is a new legislative requirement dealing with energy and water consumption in respect of new dwellings. In order to obtain council approval for all work above \$50 000 in value, a BASIX certificate must be obtained. Our company will obtain a BASIX certificate at no extra cost, except for as noted below.

To pass the BASIX assess and to obtain a BASIX certificate certain variations may need to be made to the proposed works such as, the inclusion of a rainwater tank, the inclusion of an energy efficient hot water system, etc. The cost of such variations if required are not included in the contract price. Where such variations are applicable a written quote will be prepared and forwarded to the Owner's for approval.

FOUNDATIONS/FOOTINGS

New work

All footings are designed for site classifications A, S and M as defined in Australian standard 2870.

All concrete shall comply with Australian standards 1379 and 3600.

The contract price does not include the following:

- piling down from footings to an even bearing on undisturbed natural material of the same type throughout
- requirements for site classifications other than A, S and M
- building over the Water Boards sewer
- building adjacent to the Water Boards sewer

where such work is required the cost of such work shall be in addition to the contract price and a chargeable extra.

Existing structure

No allowance has been made for additional footings to the existing residence which council may require due to unusual soil conditions.

WATERPROOFING

Where waterproofing to wet areas is required the Contractor will be responsible for completion of the waterproofing in accordance with relevant Australian standards and provision the relevant certificate to council. The Owner will be provided with a copy of the certificate upon receipt by the Contractor of the final payment.

ADDITIONAL RESPONSIBILITIES OF OWNERS

Provision of plans and certain payments

The Owners are responsible for providing:

- Accurate house plan
- Accurate Site Plan
- Accurate Sewage Diagram
- Lot Number and Deposit Plan Number
- Bushfire Report and payment of the cost thereof, if required by council
- Refundable Damage Deposit if required by council
- An engineer's report or certificate on the existing structure if required

CONTRACTORS MARGIN

Unless stated otherwise the provisional allowances and prime cost items provided for in this specification do not include a Contractors margin and such margin will be added to the Total Contract Value once the actual cost is ascertained. The margin will be twenty five percent (25%) of the cost of such items.

DELAYS AND EXTENSION OF TIME

The Contractor is entitled to a reasonable extension of time to complete the work as a result of any matter over which the Contractor has no control including but not limited to delays in obtaining approvals, industrial disputes, unavailability of materials and/or fittings, adverse weather, an act of God (fire, explosion, earthquake or civil commotion) and a variation or a request for a variation by the Owner.

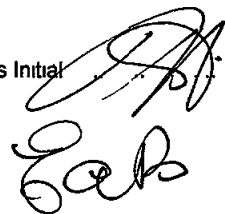
Contractors Initial



Version – 15/06/09

Page 10

Clients Initial



ENDING THE AGREEMENT

Where this agreement is cancelled for any reason (including problems with obtaining council or other statutory approvals) the Contractor shall be entitled to charge in addition to any costs incurred a reasonable fee to cover time involved in seeking approvals and administrative and other tasks

Should the Owner fail to comply with any of the terms of this agreement then the Contractor may where such fault is capable of remedy issue a written notice to the Owner requiring the matter to be rectified within fourteen (14) days

Should the Owner become bankrupt go into liquidation, have a receiver or officer manager appointed, execute a deed of assignment or arrangement or if the matter referred to in the clause above are not rectified or are not capable of being rectified then the Contractor may terminate this agreement and recover all outstanding monies

SITE ACCESS AND USE OF FACILITIES

The Owners shall

- allow clear and unhindered access to all work areas and allow multiple trades to work simultaneously on the site
- allow the Contractor to place a rubbish bin on the site or nominate an area for placement of rubbish for removal by the Contractor
- allow use by employees of the Contractor and sub-contractors of existing water, electricity and toilet facilities unless otherwise agreed
- ensuring all work areas are prior to commencement of the building work, free of all waste, fittings furniture and goods including any floor coverings

Toilet Facilities

Should the Owner not wish to allow the employees of the Contractor and sub-contractors to use the existing toilet facilities the Contractor shall organise a portable toilet that shall be an additional cost to the Owner for the period of time the Contractor requires the toilet on site

WORK TO BE CARRIED OUT BY OWNER OR BY OTHER CONTRACTORS ENGAGED BY THE OWNERS

Where any part of the work is undertaken by the Owner or by other contractors engaged by the owners it is the responsibility of the Owners to ensure that all such work is undertaken in a good and workman like manner materials are of the kind and quality suitable for the purpose and comply with all relevant Australian standards laws and the requirements of the local council and all statutory authorities

Where such work involves modification of addition to, application of coatings (such as painting, staining, rendering, tiling etc) or otherwise involves materials supplied or work carried out by the Contractor the Owners are responsible for ensuring that such work is carried out in accordance with the manufacturers specifications and recommendations and relevant standards applicable to the materials supplied and work carried out by the Contractor

The Contractor shall not be responsible or liable in any way whatsoever for any work undertaken by the Owners or other contractors engaged by the Owners

Maintenance

The Owners are responsible for ensuring that all reasonable routine and preventative maintenance, appropriate to the materials supplied and work carried out by the Contractor is undertaken in a timely and proper manner

The Contractor shall not be responsible or liable in any way whatsoever for failure or other problems caused by lack of proper and timely maintenance

FIXED PRICE CONTRACT

Whilst the total contract price stated in the Building Works Agreement is a fixed price Owners are warned that the price may vary under certain circumstances as detailed in this Specification This is because not all costs can be absolutely determined at the outset although the Contractor has attempted to make reasonable estimates given the known conditions The reasons for potential increases include

- Increases in taxes
- Prime Cost Items
- Council or other legislative requirements
- Basix certificate requirements
- Existence of non-visible services such as sewer lines, water pipes and electrical cables
- Requests by statutory bodies during the approval process such as bush fire reports and engineering certificates
- The existence of asbestos

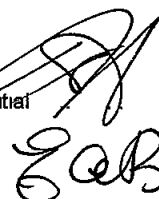
Contractors Initial



Version – 15/06/09


Page 11

Clients Initial



We the Owners authorise Ian Cubitt's Classic Home Improvements Pty Ltd to proceed with the Work and we agree to pay the progress payments as detailed in the Building Works Agreement and to pay the balance on completion

B c Bird, ANNE BIRD

 E. C. Bird

4/3/10

Printed Name

S. Brown

Shelton

5/3/10

Q

Page 12

~~Clients Initial~~

20