insight building certifiers pty ltd

Construction Certificate
Determination

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

$30.00 28/7/06 Rep 196567

Certificate No. 2006/1426

Council	**Pittwater**
Determination date of determination	**Approved** **27 July 2006**
Subject land Address Lot No, DP No.	 **60 Hudson Parade, Clareville** **Lot 56 DP 7794**
Applicant Name Address Contact No. (phone)	 **Mr Richard Cole** **139 Palmgrove Road, Avalon Beach NSW 2107** **9918 3843**
Owner Name Address Contact No. (phone)	 **Jennie Mackenzie** **60 Hudson Parade, Clareville NSW 2107** **9918 3843**
Description of Development Type of Work	 **Reconstruction of an Existing Driveway**
Builder or Owner/Builder Name Contractor Licence No/Permit	 **Parallel Constructions Pty Ltd** **39265**
Value of Work Building	 **$45,000.00**
Attachments	1. **Copy of completed Construction Certificate Application Form** 2. **Pittwater Council receipt no. 196292 for payment of Long Service Levy**

COUNCIL COPY

SCANNED
1 AUG 2006
PITTWATER COUNCIL

Suite 12/90 Mona Vale Road Mona Vale NSW 2103 PO Box 326 Mona Vale NSW 1660 ph: 9998 6003 fax 9979 1555
email: info@insightcert.com.au **ABN** 54 115 090 456

Plans & Specifications certified

List plans no(s) & specifications Reference

1. Architectural Details & Construction Specifications, reference no. 0218 Drawing nos. A01, A02 & A03, prepared by Richard Cole Architecture, dated 26 July 2006
2. Structural Details, reference no. 40307 Drawing no. S01, S02, S03 & S04, prepared & certified by MtK Consulting Engineers, dated 14 May 2004
3. Landscape Plan, reference no. 0408 Drawing nos. L01 & L02, prepared & certified by Trish Dobson Landscape Architect, dated 7 May 2004
4. Street Level as issued by Pittwater Council dated 19 April 2006
5. Driveway Long Sections & Design Certification, reference no. 0218, Drawing no. A03, prepared by Richard Cole Architecture, dated 26 July 2006 & 27 July 2006, retrospectively.

Certificate

I certify that the work if completed in accordance with these plans and specifications will comply with the requirements of S81A(5) of the Environmental Planning and Assessment Act 1979.

Signed .....

Date of endorsement 27 JUL 2006

Certificate No. **2006/1426**

Certifying Authority

Name of Accredited Certifier	Tom Bowden
Accreditation No.	93
Accreditation Authority	Dept of Infrastructure, Planning & Natural Resources (NSW Accreditation Scheme)
Contact No.	(02) 9999 0003
Address	13/90 Mona Vale Road, Mona Vale NSW 2103

Development Consent

Development Application No.	**NO192/06**
Date of Determination	**10 July 2006**

BCA Classification **10b**

Pittwater Council

REPRINTED

OFFICIAL RECEIPT

25/07/2006 Receipt No: 196292

To JENNIE MACKENZIE

60 HUDSON PDE
CLAREVILLE NSW 2107

Applic.	Reference	Amount
GL Recei	QLSL-Builders N0192/06 60 HUDSON PDE	$158.00

Total:	**$158.00**
Amounts Tendered	
Cash	$0.00
Cheque	$158.00
Db/Cr Card	$0.00
Money Order	$0.00
Agency Rec	$0.00
Total	$158.00
Rounding	$0.00
Change	$0.00
Nett	**$158.00**

Printed 25/07/2006 3:56:56 PM

Cashier: PTasker

INsight building certifiers pty ltd

RECEIVED
27 JUL 2006

APPLICATION FOR A CONSTRUCTION CERTIFICATE

1. Applicant's details

It is important that we are able to contact you if we need more information. Please give us as much details as possible

Mr [X] Mrs [ ] Ms [ ] Dr [ ] Other [ ]

Given Names (or ACN): RICHARD

Family Name (or Company): COLE

Postal Address (we will post all mail to this address)

139 PALM GROVE ROAD

AVALON BEACH NSW Post Code 2107

Daytime telephone: (02) 9918 3843

Alternate no.:

Mobile no.: 0418 627 024

2. Owner's consent

Every owner of the land must sign this form. If the owner is a company the form must be signed by an authorized director and the common seal must be stamped on this form. If the property is a unit under the strata title or a lot in a community title, then in addition to the owner's signature, the common seal of the body corporate must be stamped on this form over the signature of the owner and signed by the Chairman or Secretary of the Body Corporate or the appointed managing agent.

Owner(s): Jennie Mackenzie

Address: 60 Hudson Pde

Clareville 2107

As owner(s) of the land to which this application relates, I/We consent to this application. I/We also consent for the Principal Certifying Authority and/or Accredited Certifier to enter the land to carry out inspections relating to this application.

Signature(s): J Mackenzie

Without the owner's consent we will not accept the application. This is a very strict requirement for all applications. If you are signing on the owner's behalf as the owner's legal representative, you must state the nature of your legal authority and attach documentary evidence (eg, power of attorney, executor, trustee, company director, etc).

3. Location of property

Unit/Street no.: 60

Street name: HUDSON PARADE

Suburb: CLAREVILLE

Post code: 2107

COUNCIL COPY

Legal Property Description (these details are shown on your rate notices, property deeds, etc)

Lot no.: 56

DP no.: 7794

4. Description of work

What type of work do you propose to carry out?

Please describe briefly everything that you want approved.

CONSTRUCTION OF A NEW DRIVEWAY & TURNING BAY @ THE FRONT OF THE PROPERTY.

5. Estimated cost of work

The estimated cost of the development or contract price may be subject to review

Estimated cost of work $ 45,000.00

6. Development Consent

Council Consent no. N0192/06

Date of Determination 10-07-06

7. Building Code of Australia classification

This can be found on the development consent

BCA Classification 1(a)

8. Builder's details

If known, to be completed in the case of residential building work

Name Scott Cundiff

License no. 39265

Owner/builder permit no.

9. Applicant's declaration

I apply for a Construction Certificate to carry out building works as described in this application. I declare that all the information in this application and checklist is, to the best of my knowledge, true and correct.

Signature per Richard Cole.

Date 25.07.06.

SUBMISSION REQUIREMENTS

A. GENERAL

Are the plans submitted with the Construction Certificate Application in accordance with the Development Consent?

Yes ☒ No ☐

Have all the conditions of Development Consent relating to the issue of the Construction Certificate been fully complied with?

Yes ☒ No ☐

If you have answered NO to either of the above questions, then you will need to speak with the Accredited Certifier BEFORE LODGING YOUR APPLICATION.

B. ALL PROPOSALS (has the following required information been submitted?)

Yes	No	Not Applicable	In the case of an application for a Construction Certificate for building work:
☑	☐	☐	Three (3) copies of detailed architectural plans and specifications
☑	☐	☐	The plan for the building must consist of a general plan drawn to a scale not less than 1:100 and a site plan drawn to a scale not less than 1.200. The general plan of the building is to: a) show a plan of each floor section b) show a plan of each elevation of the building c) show the levels of the lowest floor and of any yard or unbuilt on area belonging to that floor and the levels of the adjacent ground d) indicate the height, design, and full construction details e) indicate the provision for fire safety and fire resistance (if any)
☑	☐	☐	Where the proposed building work involves any alteration or addition to, or rebuilding of, an existing building, all copies of the general plan are to be coloured or otherwise marked to the satisfaction of the Council to adequately distinguish the proposed alteration, addition or rebuilding with a separate letter listing the proposed changes being submitted.
☑	☐	☐	3 copies of a specification: a) to describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply b) state whether the materials proposed to be used are new or second hand and give particular
☐	☐	☑	Where the proposed building work involves a modification to previously approved plans and specifications the general plans must be coloured or otherwise marked to the satisfaction of the Accredited Certifier to adequately distinguish the modification.
☑	☐	☐	If the proposed building work involves a modification to previously approved plans and specification which were subject of a Development Consent, has the original Development Consent been modified by Council?
not modification, resubmission due to DA lapsing.			
☐	☐	☑	Except in the case of an application for, or in respect of domestic building work: a) a list of any fire safety measures that are proposed to be implemented in the building or on the land on which the building is situated, and b) if the application relates to a proposal to carry out any alteration or rebuilding of, or addition to, an existing building, a separate list of such of those measures as are currently implemented in the building or on the land on which the building is situated. This list must specify the standard of design of each of those fire safety measures to which they were originally installed. c) This list must describe the extent, capability and basis of design of each of the measures concerned.
☐	☐	☑	Copy of BASIX Certificate & Report.
☑	☐	☐	All other documentation to satisfy conditions of Development Consent.

HOME BUILDING ACT 1989 (as amended) OWNER/BUILDER REQUIREMENTS

Applicants for work at a residential property with a value of work over $12,000 require insurance as specified in the Home Building Act 1989.

Owner Builders require Property Owner Builder's Permit issued by the Department of Fair Trading for all projects over $5,000. In addition to this permit all projects valued in excess of $12,000 may also require a contract of insurance under the provisions of the Home Building At 1989 as amended. This requirement will take effect should the property owner offer the property for sale in the ensuing period of 7 years.

Enquiries on any matters relevant to this section should be taken up with the Department of Fair Trading at Level 21, Astra House, 227 Elizabeth Street, Sydney (ph: 133220).

LONG SERVICE LEVY (applies to all classes of buildings)

A Long Service Levy at 0.35% of the cost of works is payable on projects valued $25,000 or more. This sum can be paid directly to the Long Service Payments Corporation or to Council acting as an agent to the Corporation. Partial exemption from the levy may be granted to non profit organizations, churches and to owner/builders. The levy may also be paid in instalments. Application forms for these exemptions are available from Council but all enquiries in this regard should be address to the Long Service Payments Corporation.

THE CONSTRUCTION CERTIFICATION CANNOT BE ISSUED UNLESS THE LONG SERVICE LEVY AND HOME BUILDING ACT 1989 INSURANCE (APPLICABLE TO RESIDENTIAL PROPERTIES) HAVE BEEN PAID, OR EVIDENCE OF THE EXEMPTION PROVIDED TO COUNCIL.

PARTICULARS OF THE PROPOSAL

What is the area of the land (m^2)? 1254 sqm.	Gross floor area of building (m^2) as proposed: Existing Driveway: 56m²
What are the current uses of all or parts of the building(s)/land? Residential	Location: Front of property Use: Driveway & Parking.
Does the site contain a dual occupancy? No.	What is the gross floor area of the proposed addition or new building (sq metres)? Driveway, Turning Bay: 70m²
What are the proposed uses of all parts of the building(s land? Residential	Number of pre-existing dwellings: 1 2storey dwelling 1 carport
Number of dwellings to be demolished: 0	How many dwellings proposed? Not applicable
How many storeys will the building consist of? Not applicable	Will the new building be attached to the existing building? Not applicable
	Will the new building be attached to any new building? Not applicable

MATERIALS TO BE USED

The following information must be supplied for the Australian Bureau of Statistics:

Place a tick (√) in the box which best describes the materials the new work will be constructed of:

WALLS		FLOOR		ROOF		FRAME	
Brick veneer	☐	Concrete	☒	Aluminium	☐	Timber	☐
Full brick	☐	Timber	☐	Concrete		Steel	☒ Balustrade.
Single brick	☐	Other	☐	Concrete tile	☐	Other	☐
Concrete block	☐	Unknown	☐	Fibrous cement	☐	Unknown	☐
Concrete/masonry	☐			Fibreglass	☐		
Concrete	☐			Masonry/terracotta shingle	☐		
Steel	☐			Tiles	☐		
Fibrous cement	☐			Slate	☐		
Hardiplank	☐			Steel	☐		
Timber/weatherboard	☐			Terracotta tile	☐		
Cladding-aluminium	☐			Other	☐		
Curtain glass	☐			Unknown	☐		
Other	☒ Dry Stone Walls.						
Unknown	☐						

Suite 13/90 Mona Vale Road Mona Vale NSW 2103 PO Box 326 Mona Vale NSW 1660 ph: 9999 0003 fax 9979 1555
Email: info@insightcert.com.au ABN 54 115 090 456

PITTWATER COUNCIL

Unit 9/5 Vuko Place, Warriewood NSW 2102
Telephone 9970 1111

Date: 19-Apr-06
Receipt No: 190475
Amount: $172.00

Name: Penelope Webster, Richard Cole Architecture

Postal Address: 139 Palmgrove Road
Avalon Beach NSW 2107

APPROVED ACCESS DRIVEWAY PROFILE AT:

60 Hudson Parade, Clareville 2107

The future vehicular access profile will be as per the enclosed plan **EL.**

WORK REQUIRED:

Construct: Vehicular access slab 9.5m long x 4.5m wide at gutter crossing to 3.5m wide at the boundary.

Type of Construction: Domestic

CONDITIONS OF APPROVAL:

(a) All work within the road reserve (including excavation) in connection with the above, is to be carried out by authorised contractors only.
(b) Quotations for the work specified above should be obtained from any of the contractors on the list and should be for the whole of the work stated.
(c) Construction of vehicular access will be strictly in accordance with the profile supplied and where the drive within the property is to be constructed first, it shall be the responsibility of the owner to have the work carried out in such a manner as to provide a smooth join and continuity of grading.
(d) Formwork inspection required prior to construction.
(e) Proof of approval required prior to construction.

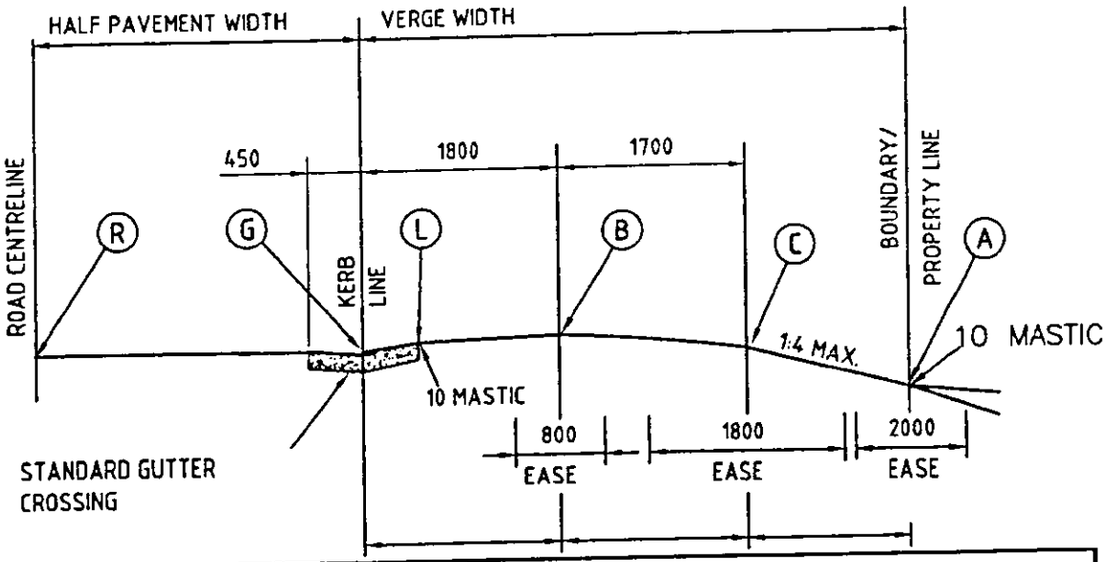
Please Note: Council will only permit an absolute maximum gradient of 25% (1 in 4) measured at any point on the driveway and that an ease may be required for access into the car stand area, carport or garage. Refer to relevant attached profile.

S. Melderis

Sigi Melderis
ASSETS / RESTORATIONS OFFICER

EXTRA LOW (EL)

FOR USE ONLY FOR SINGLE DWELLINGS OR DUAL OCCUPANCIES.



(MAX BATTER FROM EDGE OF DRIVEWAY TO FINAL G.L)
(WHERE THERE IS NO CONSTRUCTED FOOTPATH)
(1:6) (1:6 —1:2) (1:2)

POINT	REMARKS	LEVELS
R	ROAD CENTRELINE	
G	INVERT OF GUTTER	
L	BACK OF LAYBACK	MAX 100 ABOVE "G"
B	1800 FROM KERB LINE	135 ABOVE "G"
C	3500 FROM KERB LINE	15 ABOVE "G"
A	BOUNDARY	EASE REQUIRED AT GRADE CHANGE

NOTES

- To be read in conjunction with Pittwater 21 Development Controls.

PITTWATER COUNCIL

Standard Driveway Profile

EXTRA LOW

PLAN No. PWC-DW07

REV No. B

DATE 5/9/05

Cad File No:P:\Urban\Drawings - Current\Blocks & Standards\Standards\Driveways\ PWC-DW07.DWG Plot Date:14 September, 2005 - 1:49 PM

richard cole architecture

139 PALMGROVE ROAD
AVALON BEACH NSW 2107

t: 02 9918 3843
f: 02 9918 3492
m: 0418 627 024
richard@richardcolearchitecture.com.au
www.richardcolearchitecture.com.au

SPECIFICATION

CONSTRUCTION CERTIFICATE

ALTERATIONS AND ADDITIONS AT
60 HUDSON PARADE, CLAREVILLE

FOR
JENNIE MACKENZIE

July 26 2006

SPECIFICATION FOR BUILDING WORK

THE WORK

The building work described in the building contract dated .....

LOCATION

No/street: 60 HUDSON PARADE

Suburb/town: CLAREVILLE

Municipality/shire/city: CITY OF PITTWATER

Reference to title

Lot/position: LOT 56

Deposited Plan (DP)/Strata Plan (SP): DP 7794

THE PARTIES

Owners: JENNIE MACKENZIE

Address: 60 HUDSON PARADE CLAREVILLE 2107

Builder: SCOTT CUNCLIFF

Address: .....

Australian Business Number (ABN): .....

Licence/registration number: 39265

SIGNATURES

Owner(s) .....

Date .....

Builder .....

Date .....

GENERAL REQUIREMENTS

1 GENERAL

Interpretation

Owner: Means the same as "principal" or "proprietor".

Builder: Means the same as "contractor".

Metallic-coated: Includes zinc-coated steel, zinc/iron alloy-coated steel, and aluminium/zinc-coated steel.

Supply: Means "supply only" – do not install.

Provide: Means "supply and install".

Required: Means required by the contract documents or by the local council or statutory authorities.

Proprietary: Means identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.

Standards

Use referenced Australian or other standards (including amendments) which are current one month before the date of the contract except where other editions or amendments are required.

Manufacturers' or suppliers' recommendations

Select, store, handle and install proprietary products or systems in accordance with the current published recommendations of the manufacturer or supplier.

Visit Site

The Builder acknowledges that he has visited the site before tendering and noted conditions which may affect the nature and extent of the work. Claims attributable to neglect of this precaution shall be rejected.

Included Costs

The Builder shall be deemed to have allowed for all costs which may be incurred in completing the works by the time stated in the Contract, including overtime, bonus and incentive payments, site allowances, height, wind or dirt money or the like, taxes including sales, consumption or goods and services taxes, and other charges.

Miscellaneous Items

Any minor items clearly intended or necessary for the proper completion of the Contract, although not specifically mentioned or shown, are to be provided or executed by the Builder without extra cost to the Proprietor.

Materials and Workmanship

Unless otherwise noted, all materials used shall be new, free from defects and of best quality. The Builder shall replace all defective materials and workmanship at no additional cost to the Contract. Workmanship is to be of the highest standard.

2 CONTRACTS AND FINANCE

General conditions

ABIC SW-1 2002 Simple Works Contracts.

Payment and adjustment of contract sum

At commencement of the building work, submit a schedule of anticipated progress claims which will be made throughout the contract.

Progress claims break-down: With each progress claim, submit a statement of amounts claimed in respect of each work section or trade heading designated in the specification.

Schedule

Prior to commencement of the building work, submit a schedule of the works, broken down into trades and sections. An updated schedule is to be submitted with each progress claim.

Insurance

The Builder shall pay all necessary insurances and Worker's Compensation Cover as set out in the contract and required by authorities and industry bodies. The Builder is to provide evidence of insurance cover within 14 days of commencement of the works.

Delay and Extension of Time

Notices required by the Builder under the conditions of Contract shall be properly given at or within the times stated therein, otherwise the Date of Practical Completion shall not be extended. Extensions shall be made in "working days".

Liquidated and Ascertained Damages

Liquidated and ascertained damages of $150.00 per day shall apply as per the conditions of the contract.

Provisional Sums

A Provisional sum shall mean a sum specified, not including PC sums, to be included in the Contract Sum in respect of any work or material not specified in detail, or in respect of contingencies. Provisional sums are to be expended only on the specific written instructions of the Architect. On completion of the Contract the whole or unexpended portion of the Provisional Sums, as the case may be, shall be deducted from the Contract Sum.

Prime Cost Sums (PC Sums) - Nominated Supplies

Allow the PC Sums listed in the Schedule for the supply only of the items described. PC items shall be selected in Sydney by the Architect. The Builder shall order, purchase and take delivery of such items and be responsible for breakage or other damage thereafter. They shall be coordinated and installed by the Builder who shall allow in the tender sum for installation, builder's margin and any associated works.

3 AUTHORITIES AND ESTABLISHMENT

Prior applications and approvals

Development Consent from Pittwater Council N0192/06 Dated 10th July 2006. Construction Certificate currently under review. Maintain a stamped set of plans on site at all times. Provide the Council or Private Certifier with proof of Home Owners Warranty Insurance. The builder is responsible for any whole or partial loss of road or damage deposits which have been paid to the local authority by the owner. The builder shall conform with all approval conditions, the cost of which shall be included in the tender sum.

Critical Inspections

Under Section S81A(2)C of the EP&A Act 1979, the Builder is to advise the Principal Certifying Authority not less than 48 hours prior to the commencement of the following stages of work:

- At the commencement of building work.
- After an excavation for, and prior to the placing of any footing.
- Prior to pouring any in-situ reinforced concrete building element.
- Prior to covering of any framework for any floor, wall, roof or other building element.
- Prior to covering waterproofing in any wet areas.
- Prior to covering any stormwater drainage connections.
- After the building work has been completed and prior to any occupation certificate being issued in relation to the building.
- Any other stage as specified by the PCA.

Failure to notify the PCA of these critical stages may prevent the issue of the final occupation certificate and may incur penalties.

Temporary services and works

Provide temporary toilet accommodation. Connect to the sewer main if required by the Local Authority.

Use of existing services

Existing services may be used as temporary services for the performance of the contract.

Existing services

Attend to existing services as follows:

- If the service is to be continued, repair, divert or relocate as required. If such a service crosses the line of a required trench, or will lose support when the trench is excavated, provide permanent support for the existing service.
- If the service is to be abandoned, cut and seal or disconnect, and make safe.

Signs

Provide a signboard displaying the owners name, the lot number and the builder's name, address and licence number.

Occupied premises

For the parts of the site which are occupied premises:

- Allow occupants to continue in secure possession and occupancy of the premises for the required period.
- Make available safe access for occupants.
- Arrange work to minimise nuisance to occupants and ensure their safety.
- Protect occupants against weather, dust, dirt, water or other nuisance, by such means as temporary screens.

4 EXECUTION AND COMPLETION

Setout and Dimensions

The Builder shall be responsible for the accurate setout of the works and the verification of all dimensions and levels conveyed on the drawings. The builder shall engage the services of a Surveyor for verification of finished dimensions and levels as required by the local authorities or PCA. Notify the Architect of any discrepancies and seek instructions before proceeding. Follow figured dimensions on the drawings in preference to scaled dimensions. Check and verify dimensions before starting work.

Builders Responsibility

The builder shall be responsible for all work, materials and fittings comprised in the main contract and sub-contracts, and for their care, maintenance and protection. The Builder shall make good any damage to roads, footpaths and existing property.

Tolerances

All construction is to comply with standards and tolerances set out in the Building Code of Australia, relevant Australian Standard, and The Department of Fair Trading "Guide to Standards and Tolerances for home builders and renovators."

Survey marks

Preserve and maintain the owners survey marks in their true positions.

Rectification: If the proprietor's survey marks are disturbed or obliterated, immediately give notice and rectify the disturbance or obliteration.

Hours of work

As per Council requirements

Order of work

In one stage

Removal of temporary work, services and plant

Remove temporary work services and construction plant within 10 working days after practical completion.

Rectification: Clean and repair damage caused by the installation or use of temporary work and services and restore existing facilities used during construction to original condition.

Final cleaning
Remove rubbish and surplus material from the site and clean the work throughout. All glazing to be cleaned by a professional window cleaner.

Warranties
Name the owner as warrantee and give the owner copies of manufacturers' warranties.

Instruction manuals
Give the owner manufacturers' instruction manuals.

Operation
Ensure moving parts operate safely and smoothly.

Surveyor's certificate
Give the owner a certificate which confirms that the work, including boundary fences, has been correctly located.

Services layout
Give the owner a plan which shows the location of underground services.

Authorities' approvals
Give the owner evidence of approval of the local council and statutory authorities whose requirements apply to the work. The contractor is to arrange for all approvals including the final certificate.

Keys
Give the owner two keys for each set of locks keyed alike and two keys for each lock keyed to differ.

5 TERMITE MANAGEMENT

General
Standard: To AS 3660.1.

Chemical soil barriers – reticulation systems: Submit evidence that the system has been type tested to AS 3660.1 Appendix E.

Termite barrier notice: Provide a durable notice permanently fixed in a prominent location to BCA Volume 2 clause 3.1.3.2(b).

6 TIMBER GENERALLY

Moisture content
Make milled products from timbers seasoned:

- To within 3% of the equilibrium moisture content appropriate to the timber and its intended conditions of use.
- With no more than 3% difference between any 2 pieces in any one group.

Unseasoned timber
If unseasoned timber is provided, or variations in moisture content is likely, make allowance for shrinkage, swelling and differential movement.

Durability
General: Provide timbers with natural durability appropriate to the conditions of use or preservative- treated timbers of equivalent durability.

Minimum requirement: To the **Natural and treated timber durability table**.

- Natural durability class of heartwood: To AS 5604.
- Preservative treatment: To the AS 1604 series.

Natural and treated timber durability table

Exposure	Natural timber	Treated timber	Remarks
	Required durability class to AS 5604	Required hazard class to AS 1604 series	
Inside, above ground. Completely protected from the weather. Well ventilated	Class 4	H1	Treated timber resistant to lyctids. Untreated timber must be protected from termites
Inside, above ground. Protected from wetting with nil leaching. Well ventilated	Class 3	H2	Treated timber resistant to borers and termites. Untreated timber must be protected with a finish
Above ground, exposed to weather. Periodic moderate wetting and leaching	Class 2	H3	Treated timber resistant to borers, termites and moderate decay. Applicable to weatherboards, fascias, pergolas (above ground), window joinery, framing and decking
In-ground	Class 1	H4 (Severe wetting and leaching)	Treated timber resistant to borers, termites and severe decay. Applicable to fence posts, greenhouses, pergolas (in-ground) and landscaping timbers
		H5 (Extreme wetting and leaching and/or critical applications.)	Applicable to retaining walls, piling, house stumps, building poles, cooling tower fill

7 STEEL GENERALLY

Durability

General: Provide metals with inherent durability appropriate to the conditions of use or proprietary metallic and/or organic coatings of equivalent durability.

Minimum external requirements: To the **Stainless and coated steel table**.

Internal engineer designed steel members: Remove mill scale, rust, moisture and oil. Coat with a zinc phosphate primer to the manufacturer's instructions.

Stainless and coated steel table

External environment includes cavity wall and roof spaces not protected from moisture penetration by sheathing or sarking	**Heavy steel members including lintels more than 3.2 mm thick**	**Wall ties, connectors and accessories less than 3.2 mm thick**	**Steel cladding, lining, trims and flashings**
Low corrosivity More than 10 km from salt water with breaking surf More than 1 km from salt water without breaking surf	Galvanize after fabrication 300g/m^2	Galvanize after fabrication 300g/m^2 Metallic-coated sheet Z600/AZ200	Metallic-coated sheet AZ150
Medium corrosivity 1 – 10 km from salt water with breaking surf 100 – 1000 m from salt water without breaking surf Non-heavy industrial areas	Galvanize after fabrication 600g/m^2	Galvanize after fabrication 470g/m^2 Galvanized wire 470g/m^2	Metallic-coated sheet AZ200
Severe marine 200 – 1000 m from salt water with breaking surf 0 – 100 m from salt water without breaking surf Heavy industrial areas	Stainless steel 316 or 316L	Stainless steel 316 Engineered polymer	Metallic-coated sheet AZ200 plus organic coating

Bushfire protection	☐ Yes ☐ No
Level of construction to AS 3959	☐ 1 ☐ 2 ☐ 3
Other	Not Applicable
Prior applications and approvals	☒ Yes ☐ No
List of applications made and approvals received	Development Consent from Pittwater Council N0192/06 dated 10th July 2006
Existing services	
Toilet	☒ Yes ☐ No
Power	☒ Yes ☐ No
Telephone	☒ Yes ☐ No
Conditions of use	Builder allowed to use toilet on premises.
Site signs	☒ Yes ☐ No
Occupied premises	☒ Yes ☐ No
Period of occupation	Occupied throughout construction.
Restricted hours of work	Refer to DA Conditions.
Order of work	All work to be completed in one stage.
Termite protection	☐ Yes ☒ No
Location	**Method**
Slab	
Slab penetrations	
Slab control joint and footing/slab joints	
Under slabs	
Building perimeters	
Under suspended floors	

Timber poles and posts	
Energy efficiency approval commitments	Not Applicable
Steel generally	Refer to **Stainless and coated steel table**
External environment:	Tick as appropriate
Low corrosivity	☐
Medium corrosivity	☐
Severe marine	☒

Other requirements

Changes to Reference specification (Part A)

SITE PREPARATION

1 GENERAL

Standard

Groundworks for slabs and footings: To AS 2870.

Interpretation

Rock: Monolithic material with volume greater than 0.5 m^3 which cannot be removed until broken up by mechanical means such as rippers or percussion tools.

Bad ground: Ground unsuitable for the work, including fill liable to subsidence, ground containing cavities, faults or fissures, ground contaminated by harmful substances and ground which is, or becomes, soft, wet or unstable.

Line of influence: A line extending downward and outward from the bottom edge of a footing, slab or pavement and defining the extent of foundation material having influence on the stability or support of the footings, slab or pavement.

Subgrade: The trimmed or prepared portion of the formation on which the pavement or slab is constructed.

Immediate notice

If rock or bad ground is encountered, advise the owner immediately.

Explosives

Do not use explosives.

2 DEMOLITION

Standard

Demolition: To AS 2601.

Demolished materials

Except for materials to be salvaged and retained by the owner or re-used, take possession of demolished materials and remove them from the site. Do not burn or bury demolished materials on the site.

Support

Provide temporary support for sections of existing buildings which are to be altered and which rely for support on work to be demolished.

Weather protection

If walls or roofs are opened for alterations and additions, or the surfaces of adjoining buildings are exposed, provide temporary covers to prevent water penetration.

Security

If walls or roofs are opened for alterations or additions, provide security against unauthorised entry.

Asbestos removal

Method: Use wet removal methods recommended in the Code of Practice for the Removal of Asbestos (NOHSC: 2002), including Part 4 for insulation and lagging, and Part 9 for asbestos cement.

Monitoring: Have dust monitoring performed by an independent testing authority.

3 TREES TO BE RETAINED

Marking

Refer drawings and landscape plans for all trees, plants and shrubs to be retained. Refer drawings for all trees, plants and shrubs to be removed . Mark trees which are required to be retained using suitable non-injurious, easily visible and removable means of identification. Remove the identification on completion.

Protection

Protect trees which are required to be retained from damage. Do not remove topsoil from the area within the dripline of the trees and keep this area free of construction material and debris.

Excavation

Excavating near trees required to be retained: Use hand methods to locate, expose and cleanly remove the roots on the line of excavation.

4 ENVIRONMENTAL PROTECTION

Erosion control

Avoid erosion, contamination, and sedimentation of the site, surrounding areas, and drainage systems.

Dewatering

Keep the site free of water and prevent water flow over new work.

5 SITE CLEARING

Extent

Limit clearing to the areas to be occupied by construction, paving or landscaping. Refer DA Conditions with regards to the Asset Protection Zone and Building in Bushfire Prone Areas.

Clearing operations

Remove everything on or above the site surface, including rubbish, scrap, grass, vegetable matter and organic debris, scrub, trees noted for removal, timber, stumps, boulders and rubble. Remove grass to a depth just sufficient to include the root zone.

Grubbing

Grub out or grind stumps and roots over 75 mm diameter to a minimum depth of 500 mm below subgrade under construction, and 300 mm below the finished surface in unpaved areas.

Removal of topsoil
General: Remove the topsoil layer of the natural ground which contains substantial organic matter over the areas to be occupied by construction and paving.

Maximum depth: 100 mm.

Topsoil stockpiles
Stockpile site topsoil required for re-use. Protect stockpiles from contamination by other excavated material, weeds and building debris.

Surplus material
Take possession of surplus material and remove it from the site.

6 EXCAVATION

Extent
Excavate to give the levels and profiles required for construction, site services, paving, and landscaping. Allow for compaction or settlement.

Foundations
After excavation, confirm that the bearing capacity is adequate.

Under-floor access
Provide a minimum clearance to underside of timber bearers of 400 mm.

Bearing surfaces
Provide even plane bearing surfaces for loadbearing elements including footings. Step for level changes. Make the steps to the appropriate courses if supporting masonry.

Reinstatement
If excavation exceeds the required depth, or deteriorates, reinstate with fill to the correct depth, level and bearing value.

Existing footings
If excavation is required below the line of influence of an existing footing, use methods which maintain the support of the footing and ensure that the structure and finishes supported by the footing are not damaged.

Grading
Grade the ground surface externally and under suspended floors to drain ground or surface water away from buildings without ponding.

7 SURFACE PREPARATION

General
Before placing fill, ground slabs or load-bearing elements, remove loose material, debris and organic matter and compact the ground to achieve the required density.

Placing fill
Place fill in layers ≤ 200 mm and compact each layer to achieve the required density.

Moisture content
If necessary to achieve the required density or moisture content, adjust the moisture content of the fill before compaction.

8 PILING

Bored piers
After excavating bored piers, remove loose material and water from the base and confirm the bearing capacity. Do not allow loose material to fall down the hole before or during concreting; provide galvanised steel pier liners if necessary.

9 SERVICE TRENCHES

Excavation
Generally, make trenches straight between manholes, inspection points and junctions, with vertical sides and uniform grades.

Trench widths
Keep trench widths to the minimum consistent with the laying and bedding of the relevant service and construction of manholes and pits.

Backfilling
General: Backfill service trenches as soon as possible after laying the service. Place backfill in layers. Compact each layer to a density sufficient to minimise settlement.

Backfill material: Excavated spoil or well graded inorganic material with maximum particle size of 75 mm.

- Next to services: Do not place any particles greater in size than 25 mm within 150 mm of services.
- Under paved areas: Coarse sand, controlled low strength material or fine crushed rock.

In reactive clay sites classified M, M-D, H, H-D or E to AS 2870: Impervious material.

Demolition items

Not Applicable

External buildings

Not Applicable

Other items for demolition

Not Applicable

Materials to be salvaged

Not applicable

Removal of asbestos products ☐ Yes ☒ No

Description

Temporary fence ☐ Yes ☒ No

Description

Existing trees, plants and shrubs

Refer DA Conditions, drawings and landscape plan for all trees, plants and shrubs to be retained.

Existing trees, plants and shrubs to be removed

Refer DA Conditions, drawings and landscape plan for all trees, plants and shrubs to be removed.

Other requirements

Changes to Reference specification (Part A)

CONCRETE CONSTRUCTION

1 GENERAL

Cross reference

Conform to the *General requirements* section for termite protection.

Standards

Concrete structures generally: To AS 3600.

Ground slabs and footings: To AS 2870.

2 GROUND SLAB VAPOUR BARRIER

Material

General: Provide a proprietary vapour barrier which consists of high impact resistant polyethylene film minimum 0.2 mm thick which has been pigmented and branded by the manufacturer.

Base preparation

Blind the surface with sufficient sand to cover any hard projections. Wet the sand just before placing the vapour barrier.

3 REINFORCEMENT

Minimum lap

Splice as follows:

- Mesh generally: 225 mm.
- Trench mesh: 500 mm.
- Bars: Greater of either 500 mm or 25 x bar diameter.
- Strip footing intersections and corners: For full width of intersecting reinforcement.
- Support reinforcement in its correct position on proprietary stools.
- Cover: To the **Minimum cover to reinforcement table**.

4 FORMED SURFACE FINISH

Visually important surfaces

Standard: To AS 3610-1995 (*Formwork for concrete*).

For concrete of surface finish class 1, 2, or 3 set out the formwork to give a regular arrangement of panels, joints, bolt holes, and similar visible elements in the formed surface. Form 45° bevels, 25mm on the face on corners and angles.

Surface finish class 2

Location: All exposed concrete

5 UNFORMED SURFACE

Screeding

Standard: To AS 3610-1995 (*Formwork for concrete*).

For concrete of surface finish class 1, 2, or 3 set out the formwork to give a regular arrangement of panels, joints, bolt holes, and similar visible elements in the formed surface. Form 45° bevels, 25mm on the face on corners and angles.

Surface finish class 2

Location: All exposed concrete

6 FORMED SURFACES

Tolerance classes

Determine tolerance classes using a straight edge placed anywhere on the surface in any direction.

Tolerances class table

Class	Measurement	Maximum deviation (mm)
A	3 m straight edge	3
B	3 m straight edge	6
C	600 mm straight edge	6

Screeding

Strike off, consolidate and level slab surfaces to finished levels, to tolerance class C.

External surfaces are to be accurately screeded to ensure that water does not pond.

7 CONCRETE

Pre-mixed supply

Standard: To AS 1379 by the batch production process.

Maximum slump: 100 mm.

Concrete placing

Depth: If concrete is deeper than 350 mm, place it in layers so that each succeeding layer is blended into the preceding one by the compaction process.

Slabs and pavements: Place concrete uniformly over the width of the slab so that the face is generally vertical and normal to the direction of placing.

Compaction

Vibrate concrete to remove entrapped air, but avoid over- vibration that may cause segregation.

Finish

Formed surfaces: To AS 3610.

- Visible: Smooth to a 3 mm tolerance.
- Not visible: To a 6 mm tolerance.

Unformed surfaces:

- Generally: Machine floated finish to a 3 mm tolerance.
- Areas for tiling: Screeded finish to a 6 mm tolerance.

Tolerance: Deviation from a 3 mm straight edge placed anywhere on the slab in any direction.

Minimum cover to reinforcement table

Concrete element	Location	Minimum concrete strength (MPa)	Minimum cover to reinforcement (mm)
Unreinforced concrete	Generally	20	
Reinforced concrete	Unless noted otherwise below	25	20
	Exterior: temperate, near- coastal (1 km to 50 km) and on ground and protected by membrane (bottom cover)		30
	On ground and unprotected by membrane (bottom cover)		40
	Footings		50
	Exterior: tropical, near- coastal (1 km to 50 km) and in contact with fresh water	32	40
	Exterior: coastal (100 m to 1 km) and permanently submerged in salt water	40	45
	Exterior: in tidal or splash zones	50	50

Curing

Protection: Protect concrete from premature drying and from excessive hot, cold and/or windy conditions.

Method: Cure concrete by either of the following:

- Using a proprietary curing compound.
- Keeping it covered and moist for the following periods:
  - In-ground footings: 2 days.
  - Exposed footings, beams and slabs: 7 days.

Formwork removal

Remove timber formwork.

Stripping times

Leave formwork for suspended structures in place after pouring concrete for the following periods:

- Vertical surfaces: 2 days.
- Bottom surfaces: 7 days with shoring and backprops left in position for 21 days.

8 JOINTS

Construction joints

Joint preparation: Roughen and clean the hardened concrete joint surface, remove loose or soft material, free water and foreign matter. Dampen the surface before placing the concrete.

Slip joints

If concrete slabs are supported on masonry, provide proprietary pre-lubricated slip joints.

9 REMOVAL AND REPLACEMENT

After forms have been removed, concrete which is not formed as shown on the drawings, or which is out of alignment or level beyond required tolerances or which shows a defective surface which cannot be properly repaired or patched shall be removed or rebuilt.

Any concrete which fails to meet compressive strength requirements may be rejected. Remove rejected concrete from the site as required by AS 3600

Ground slab vapour barriers

Type

Cromford 0.2mm or equal

Other requirements

Final Finish: Broom Finish

Changes to Reference specification (Part A)

PLUMBING INSTALLATIONS

1 GENERAL

Cross references

Refer to the following sections:

- *Site preparation*, for service trenches.
- *Roofing*, for roof plumbing and rainwater tanks.
- *Tile finishes*, for waterproofing of wet areas.
- *Painting*, for priming steel or iron before installation and exposed piping required to be painted.

Authorised products

Standard: Listed in the WaterMark Product Database, unless otherwise required by the Network Utility Operator.

Connections

Excavate to locate and expose the connection points and connect to the authorities' mains. On completion, backfill and compact the excavation and reinstate surfaces and elements which have been disturbed such as roads, pavements, kerbs, footpaths and nature strips.

2 MATERIALS AND COMPONENTS

Finishes

Finish exposed piping, including fittings and supports as follows:

- Internal locations such as toilet and kitchen areas: Bright chrome plate.
- Externally: Paint.
- Concealed but accessible spaces (including cupboards and non-habitable enclosed spaces): Leave unpainted except for required identification marking.

Valves

Finish valves to match connected piping.

3 CONSTRUCTION GENERALLY

General

Install piping in straight lines and to uniform grades. Arrange and support the piping so that it remains free from vibration and water hammer, while permitting thermal movement. Keep the number of joints to a minimum. Prevent direct contact between incompatible metals.

Concealment: If practicable, conceal piping and fittings requiring maintenance or servicing so that they are accessible within non-habitable enclosed spaces such as roof spaces, subfloor spaces and ducts. Keep pipelines in subfloor spaces at least 150 mm above ground and ensure access can be provided throughout for inspection. Provide at least 25 mm clearance between adjacent pipelines (measured from the piping insulation where applicable).

Pipes under pressure embedded in concrete: Use only copper pipe with the minimum number of joints. Pressure test and rectify leaks before concrete is poured.

Building penetrations: If piping passes through building elements provide purpose-made metal or plastic sleeves formed from pipe sections. Prime steel or iron before installation.

Pipe supports: Materials: The same as the piping, or galvanized or non-ferrous metals, with bonded PVC-U or glass fibre woven tape sleeves where needed to separate dissimilar metals.

Cover plates: Where exposed piping emerges from wall, floor or ceiling finishes, provide cover plates of non-ferrous metal, finished to match the piping, or of stainless steel.

4 STORMWATER

Standard

General: To AS/NZS 3500.3 or AS/NZS 3500.5.

Connect stormwater runoff from new driveway to existing site stormwater system.

Cleaning

During construction, use temporary covers to openings and keep the system free of debris. On completion, flush the system using water and leave it clean.

Pipelaying

Lay pipelines with the spigot ends in the direction of flow.

Downpipe connections

Turn up drain branch pipelines to finish 50 mm above finished ground or pavement level.

Subsoil drains

Connection: Connect subsoil drains to the stormwater drainage system.

Trench width: Minimum 450 mm.

Subsoil drains: Provide proprietary perforated plastic pipe.

Filter fabric: Provide a polymeric fabric formed from a plastic yarn containing stabilisers or inhibitors to make the filaments resistant to deterioration due to ultraviolet light.

Filter sock: Provide a polyester permeable sock capable of retaining particles of 0.25 mm size. Securely fit or join the sock at each joint.

Backfilling: Backfill with 20 mm nominal size washed screenings, to the following depths:

- To the underside of the bases of overlying structures such as pavements, slabs and channels.
- To within 75 mm of the finished surface of unpaved or landscaped areas.

Pits

Cover levels: Locate the top of covers or gratings, including frames as follows:

- In paved areas: Flush with the paving surface.
- In landscaped areas: 25 mm above finished surface.
- Gratings taking surface water runoff: Set to receive the runoff without ponding.

FENCES AND EXTERNAL WALLS

1 GENERAL

Cross reference

Refer to the *General requirements* section for timber durability.

2 MATERIALS AND COMPONENTS

Galvanizing

Galvanize mild steel components as follows:

- Threaded fasteners: To AS 1214.
- Other components: To AS/NZS 4680.

Concrete

Standard: To AS 1379 or proprietary packaged mix.

Concrete posts

Reinforce and precast from concrete to AS 1379.

3 CONSTRUCTION GENERALLY

Clearing

Clear vegetation on the fence alignment. Grub out the stumps and roots of removed trees or shrubs and trim the grass to ground level, but do not remove the topsoil.

Excavation

Excavate footings so that they have vertical sides and a firm base.

Minimum footing size

Generally: 200 mm diameter x 600 mm deep.

In loose material: 250 mm diameter x 900 mm deep.

In rock: 250 mm diameter x 300 mm deep.

Line and level

Erect posts vertically to follow the contours of the natural ground.

Earth footings

Place 100 mm of gravel in the footing base under posts and backfill with earth around posts, compacting firmly by hand or machine in 150 mm deep layers.

Concrete footings

Place mass concrete around posts and finish with a weathered top falling from the post to ground level.

4 RETAINING WALLS

Construction

Where dry stone walls act as retaining walls, construct the stonework to be free draining through the wall. Batter back the wall face 50 – 70 mm for every 300 mm in height. Cap the top of the wall. Backfill progressively, with a layer at least 300 mm thick of porous material, such as coarse aggregate or crushed rock in the size range 20 – 40 mm.

Minimum thickness: 450 mm.

5 DRY STONE WALLS

Natural stone: Stone of uniform quality in each grade, sound and free from defects liable to affect its strength, appearance, durability or proper functioning under the intended conditions of use.

Field stone:	Local weathered uncut random sized natural stones.
Quarried stone:	Cut or uncut random or regular size stone.
Location:	Refer to Drawings
Source of supply:	Gosford Quarries.
Depth:	Cut to depth of 200mm
Height and length:	Cut to sizes to suit square rubble uncoursed pattern.
Face Finish:	Rock face to each stone unit.
Pattern:	Square rubble uncoursed
Copings depth:	200mm
Coping height:	Random
Coping length:	Random across units. Min 200mm
Joints:	Provide recessed mortar joint so that joints appear "dry". Maximum visible joint size 20mm.

Construction

Generally: Select the stones for their locations and lay them in the wall with the minimum of stonecutting so that

- each stone is stable, non-rocking, and firmly interlocked with its neighbours without mortar;

- the wall face shows reasonably regular, flat and vertical stone faces;
- vertical joints or perpends between stones are spanned by the next stone above;
- stones are laid generally as through stones whenever possible; and
- at least 50% of footings, 30% of wall stones, and all coping stones are laid as through stones.

Footings: Select the largest, flattest and most regular stones for footings, and set them one third of their depth into the ground.

Copings: Select stones of reasonably uniform size and finish the top of the wall to a level line.

REFERENCED DOCUMENTS

AS 1163	1991	Structural steel hollow sections
AS 1214	1983	Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)
AS 1231	2000	Aluminium and aluminium alloys – Anodic oxidation coatings
AS 1288	1994	Glass in buildings – Selection and installation
AS 1324		Air filters for use in general ventilation and airconditioning
AS 1324.2	2003	Methods of test
AS 1366		Rigid cellular plastics sheets for thermal insulation
AS 1366.3	1992	Rigid cellular polystyrene – Moulded (RC/PS – M)
AS 1366.4	1989	Rigid cellular polystyrene – Extruded (RC/PS-E)
AS/NZS 1367	2000	Coaxial cable systems for the distribution of analogue television and sound signals in single and multiple unit installations
AS 1379	1997	Specification and supply of concrete
AS 1397	2001	Steel sheet and strip – Hot-dipped zinc-coated or aluminium/zinc-coated
AS/NZS 1546		On-site domestic wastewater treatment units
AS/NZS 1546.1	1998	Septic tanks
AS/NZS 1546.2	2001	Waterless composting toilets
AS/NZS 1546.3	2001	Aerated wastewater treatment units
AS/NZS 1547	2000	On-site domestic wastewater management
AS/NZS 1554		Structural steel welding
AS/NZS 1554.1	2004	Welding of steel structures
AS 1562		Design and installation of sheet roof and wall cladding
AS 1562.1	1992	Metal
AS/NZS 1562.3	1996	Plastic
AS/NZS 1571	1995	Copper – Seamless tubes for airconditioning and refrigeration
AS 1604		Specification for preservative treatment
AS 1604.1	2000	Sawn and round timber
AS/NZS 1604.2	2004	Reconstituted wood-based products
AS/NZS 1604.3	2004	Plywood
AS 1627	Various	Metal finishing - Preparation and pretreatment of surfaces
AS 1668		The use of mechanical ventilation and air-conditioning in buildings
AS 1668.2	2002	Ventilation design for indoor air contaminant control
AS 1672		Limes and limestones
AS 1672.1	1997	Limes for building
AS/NZS 1677		Refrigerating systems
AS/NZS 1677.2	1998	Safety requirements for fixed applications
AS 1684		Residential timber-framed construction
AS 1684.3	1999	Cyclonic areas
AS 1684.4	1999	Simplified – Non-cyclonic
AS 1720		Timber structures
AS 1720.1	1997	Design methods
AS 1789	2003	Electroplated zinc (electrogalvanized coatings on ferrous articles (batch process)
AS/NZS 1859		Reconstituted wood-based panels – Specifications
AS/NZS 1859.1	2004	Particleboard
AS/NZS 1859.2	2004	Dry-processed fibreboard
AS/NZS 1859.3	1996	Decorative overlaid wood panels
AS/NZS 1859.4	2004	Wet-processed fibreboard
AS 1860	1998	Installation of particleboard flooring
AS/NZS 1860		Particleboard flooring
AS/NZS 1860.1	2002	Specifications
AS 1909	1984	Installation of timber doorsets (obsolescent)
AS 1926		Swimming pool safety
AS 1926.1	1993	Fencing for swimming pools
AS 1926.2	1995	Location of fencing for private swimming pools
AS 2047	1999	Windows in buildings – Selection and installation
AS 2049	2002	Roof tiles
AS 2050	2002	Installation of roofing tiles
AS 2159	1995	Piling – Design and installation

AS 2185	1978	Fibrous plaster products
AS 2201		Intruder alarm systems
AS 2201.1	1998	Systems installed in client's premises
AS/NZS 2208	1996	Safety glazing materials in buildings
AS/NZS 2269	2004	Plywood – Structural
AS/NZS 2311	2000	The painting of buildings
AS/NZS 2312	2002	Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings
AS 2358	1990	Adhesives – For fixing ceramic tiles
AS/NZS 2455		Textile floor coverings – Installation practice
AS/NZS 2455.1	1995	General
AS/NZS 2588	1998	Gypsum plasterboard
AS/NZS 2589		Gypsum linings in residential and light commercial construction – Application and finishing
AS/NZS 2589.1	1997	Gypsum plasterboard
AS 2592	1983	Gypsum plaster for building purposes
AS 2601	2001	The demolition of structures
AS 2627		Thermal insulation of dwellings
AS 2627.1	1993	Thermal insulation of roof/ceilings and walls in dwellings
AS 2663		Textiles – Fabrics for window furnishings
AS 2663.1	1997	Uncoated fabrics
AS 2663.2	1999	Coated curtain fabrics
AS 2688	1984	Timber doors (obsolescent)
AS 2689	1984	Timber doorsets (obsolescent)
AS/NZS 2699		Built in components for masonry construction
AS/NZS 2699.1	2000	Wall ties
AS/NZS 2699.2	2000	Connectors and accessories
AS/NZS 2699.3	2002	Lintels and shelf angles (durability requirements)
AS/NZS 2728	1997	Prefinished/prepainted sheet metal products for interior/exterior building applications – Performance requirements
AS 2796		Timber – Hardwood – Sawn and milled products
AS 2796.1	1999	Product specification
AS 2820	1993	Gate units for private swimming pools
AS 2870	1996	Residential slabs and footings – Construction
AS/NZS 2904	1995	Damp-proof courses and flashings
AS/NZS 2908		Cellulose-cement products
AS/NZS 2908.2	2000	Flat sheets
AS/NZS 2918	2001	Domestic solid fuel burning appliances – Installation
AS/NZS 2924		High pressure decorative laminates – Sheets made from thermosetting resins
AS/NZS 2924.1	1998	Classification and specifications
AS/NZS 3000	2000	Wiring rules
AS/NZS 3008		Electrical installations – Selection of cables
AS/NZS 3008.1.1	1998	Cables for alternating voltages up to and including 0.6/1 kV – Typical Australian installation conditions
AS/NZS 3017	2001	Electrical installations – Testing and inspection guidelines
AS/NZS 3018	2001	Electrical installations – Domestic installations
AS/NZS 3086	1996	Telecommunications installations – Integrated communications cabling systems for small office/home office premises
AS 3137	1992	Approval and test specification – Luminaires (lighting fittings)
AS 3439		Low-voltage switchgear and controlgear
AS 3439.3	2002	Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use – Distribution
AS/NZS 3500		Plumbing and Drainage
AS/NZS 3500.1	2003	Water services
AS/NZS 3500.2	2003	Sanitary plumbing and drainage
AS/NZS 3500.3	2003	Stormwater drainage
AS/NZS 3500.4	2003	Heated water services
AS/NZS 3500.5	2000	Domestic installations
AS 3566		Self-drilling screws for the building and construction industries
AS 3566.1	2002	General requirements and mechanical properties
AS 3566.2	2002	Corrosion resistance requirements
AS 3600	2001	Concrete structures
AS 3623	1993	Domestic metal framing
AS 3660		Termite management

AS 3660.1	2000	New buildings
AS/NZS 3666		Air-handling and water systems of buildings – Microbial control
AS/NZS 3666.1	2002	Design, installation and commissioning
AS 3700	2001	Masonry structures
AS 3715	2002	Metal finishing – Thermoset powder coatings for architectural applications of aluminium and aluminium alloys
AS/NZS 3718	2003	Water supply – Tap ware
AS 3727	1993	Guide to residential pavements
AS 3740	2004	Waterproofing of wet areas within residential buildings
AS 3786	1993	Smoke alarms
AS 3798	1996	Guidelines on earthworks for commercial and residential developments
AS/NZS 3823		Performance of electrical appliances –Airconditioners and heat pumps
AS/NZS 3823.1.1	1998	Non-ducted airconditioners and heat pumps – Testing and rating for performance
AS/NZS 3823.1.2	2001	Test methods – Ducted airconditioners and air-to-air heat pumps – Testing and rating for performance
AS/NZS 3823.2	2003	Energy labelling and minimum energy performance standard (MEPS) requirements
AS 3958		Ceramic tiles
AS 3958.1	1991	Guide to the installation of ceramic tiles
AS 3958.2	1992	Guide to the selection of a ceramic tiling system
AS 3959	1999	Construction of buildings in bushfire prone areas
AS 3972	1997	Portland and blended cements
AS 3999	1992	Thermal insulation of dwellings – Bulk insulation – Installation requirements
AS 4055	1992	Wind loads for housing
AS 4100	1998	Steel structures
AS/NZS 4200		Pliable building materials and underlays
AS/NZS 4200.1	1994	Materials
AS/NZS 4200.2	1994	Installation requirements
AS 4254	2002	Ductwork for air-handling systems in buildings
AS/NZS 4256		Plastic roof and wall cladding materials
AS/NZS 4256.2	1994	Unplasticized polyvinyl chloride (uPVC) building sheets
AS/NZS 4256.3	1994	Glass fibre reinforced polyester (GRP)
AS/NZS 4256.4	1995	Unplasticized polyvinyl chloride (uPVC) wall cladding boards
AS/NZS 4256.5	1996	Polycarbonate
AS/NZS 4386		Domestic kitchen assemblies
AS/NZS 4386.1	1996	Kitchen units
AS 4440	2004	Installation of nailplated timber trusses
AS/NZS 4455	1997	Masonry units and segmental pavers
AS/NZS 4505	1998	Domestic garage doors
AS/NZS 4667	2000	Quality requirements for cut-to-size and processed glass
AS/NZS 4600	1996	Cold-formed steel structures
AS/NZS 4680	1999	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
AS 4766 (Int)	2002	Polyethylene storage tanks for water and chemicals
AS/NZS 4782		Double-capped fluorescent lamps – performance specifications
AS/NZS 4782.2	2004	Minimum Energy Performance Standard (MEPS)
AS/NZS 4783		Performance of electrical lighting equipment – Ballasts for fluorescent lamps
AS/NZS 4783.2	2002	Energy labelling and minimum energy performance standards requirements
AS 4809	2003	Copper pipe and fittings – Installation and commissioning
AS/NZS 4859		Materials for the thermal insulation of buildings
AS/NZS 4859.1	2002	General criteria and technical provisions
AS 5039	2003	Security screen doors and security window grilles
AS 5040	2003	Installation of security screen doors and window grilles
AS 5601	2004	Gas Installation Code
AS 5604	2003	Timber – Natural durability ratings
AS/ACIF S008	2001	Requirements for authorised cabling products
AS/ACIF S009	2001	Installation Requirements for Customer Cabling (Wiring Rules)
SAA HB28	1997	The design of residential slabs and footings
SAA HB29	2000	Communications Cabling Manual, Module 2: Communications Cabling Handbook
SAA HB33	1992	Domestic open fireplaces
SAA HB36	1993	Building in bushfire-prone areas – Information and advice
SAA HB40		The Australian Refrigeration and Air Conditioning Code of Good Practice

SAA HB40.1	2001	Reduction of Emissions of Fluorocarbon Refrigerants in Commercial and Industrial Refrigeration and Airconditioning Applications
SAA HB40.2	2001	Reduction of Emissions of Fluorocarbons in Residential Airconditioning Applications
SAA HB109	1998	Footings for reinforced masonry houses
SAA HB301	2001	Electrical installations - designing to the Wiring Rules
ACADS-BSG Camel		Manual for calculating cooling and heating loads – electronic method
AIRAH DA09	1998	Load estimation and psychrometrics
APAS-0015/1	2003	Full gloss alkyd enamel for exterior and interior use (buildings)
APAS-0115	2003	Lightly pigmented solvent borne ranch finish for exterior timber
APAS-0200/1	2003	One pack semi gloss pigmented solvent borne paving paint for concrete
APAS-0200/2	2003	One pack full gloss pigmented solvent borne paving paint for concrete
APAS-0205	2003	One pack clear moisture cured finish for timber
APAS-0260/1	2003	Interior gloss latex paint (buildings)
APAS-0260/2	2003	Semi gloss interior latex paint in MCR (buildings)
APAS-0260/3	2003	Low gloss interior latex paint in MCR (buildings)
APAS-0260/4	2003	Washable flat finish for interior use (buildings)
APAS-0280/1	2003	Gloss exterior latex paint in MCR (buildings)
APAS-0280/2	2003	Semi gloss latex paint, exterior (buildings)
APAS-0280/3	2003	Flat or low gloss exterior latex finish in MCR (buildings)
APAS-0280/5	2003	Heavily pigmented low gloss latex ranch finish for exterior timber
APAS-2916	2001	Organic zinc rich coating for protection of steel
AREMA/CSIRO		Manual for calculating cooling and heating loads – manual method
ASHRAE	2001	ASHRAE fundamentals handbook
ASTM C534	2003	Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form
BCA 2.6		Energy efficiency
BCA 3.1.3.2(b)		Acceptable construction – Site preparation – Termite risk management – Installation of termite barriers
BCA 3.2.4		Site classification
BCA Figure 3.3.3.1		Typical brick ties spacings in cavity and veneer construction
BCA Table 3.3.3.1		Corrosion protection for wall ties
BCA 3.3.3.2		Acceptable construction – Masonry – Masonry accessories – Wall ties
BCA Figure 3.3.3.5		Lintels supporting roofs and masonry walls
BCA 3.4.1		Sub floor ventilation
BCA Table 3.4.1.2		Sub-floor ventilation and clearance
BCA 3.4.2.2		Acceptable construction – Framing – Steel framing – General
BCA 3.9.2		Acceptable construction – Safe movement and access – Balustrades
BCA 3.12.1		Acceptable construction – Energy efficiency – Building fabric
BCA 3.12.1.3		Acceptable construction – Energy efficiency – Building fabric – Roof lights
BCA 3.12.2		Acceptable construction – Energy efficiency – External glazing
BCA 3.12.3		Acceptable construction – Energy efficiency – Building sealing
BCA 3.12.5.3		Acceptable construction – Energy efficiency – Services – Heating and cooling ductwork
Carrier		Manual for calculating cooling and heating loads – manual method
Carrier E20		Manual for calculating cooling and heating loads – electronic method
CBPI TN 21A	1985	Design of Free-Standing Walls
Trane Trace		Manual for calculating cooling and heating loads – electronic method

richard cole architecture

139 PALMGROVE ROAD
AVALON BEACH NSW 2107

t: 02 9918 3843
f: 02 9918 3492
m: 0418 627 074
richard@richardcolearchitecture.com.au
www.richardcolearchitecture.com.au

27th July, 2006

Pittwater Council
PO Box 882
Mona Vale NSW 1660

CERTIFICATE of COMPLIANCE WITH DCP 21 SECTION B6.1 for WORKS at 60 HUDSON PARADE, CLAREVILLE.

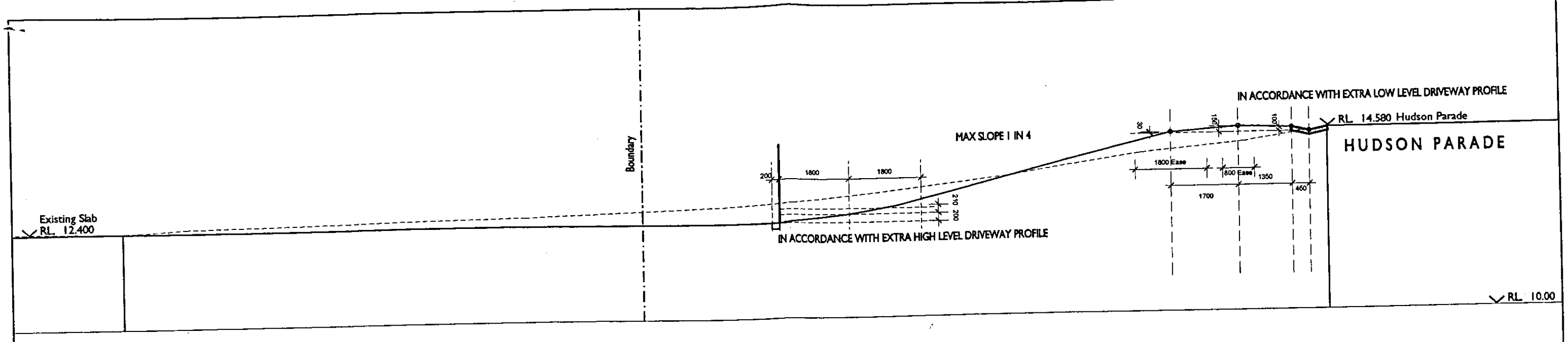
To Whom it May Concern,

Please be advised that works to be carried out at 60 Hudson Parade, Clareville as approved in DA N0192/06 and set out in approved drawings A01-A04 dated 10-07-06 comply with the requirements of Pittwater Council DCP 21 Section B6.1.

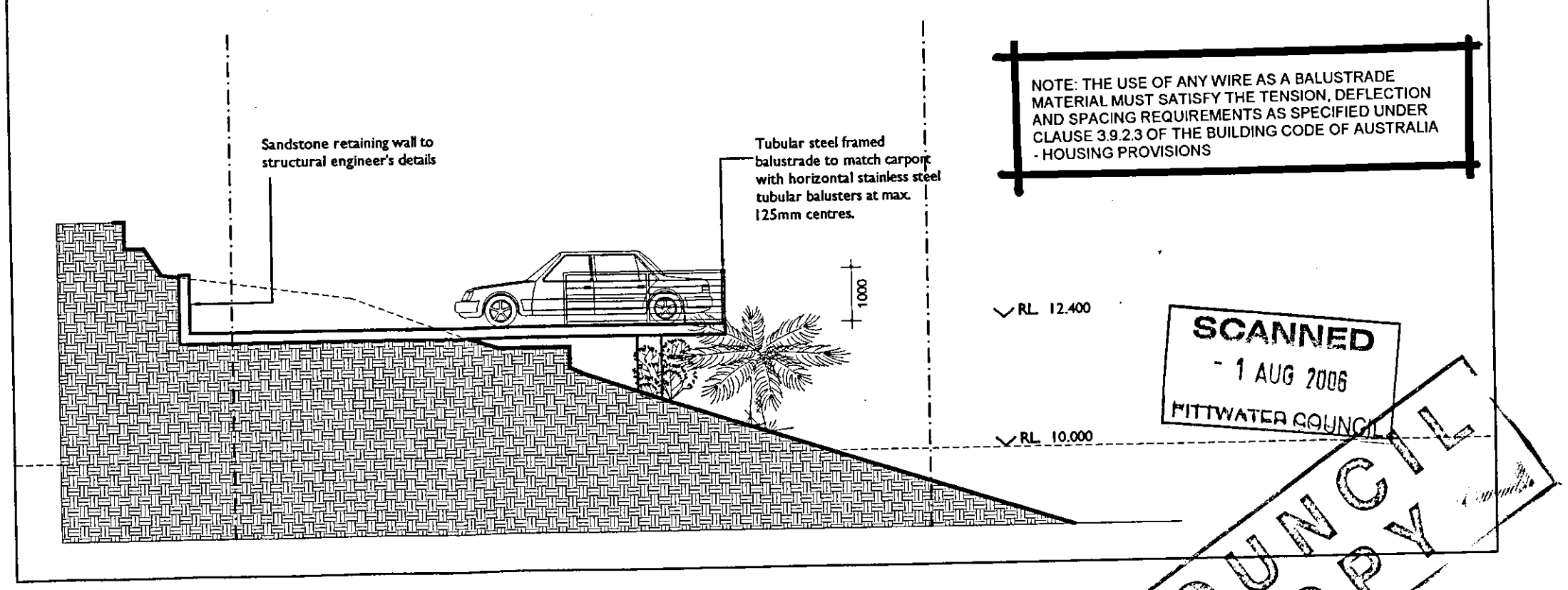
Please contact the office if you have any further queries.

Kind Regards.

Penelope Webster
B.Arts; B.Arch (Hons 1)
Graduate Architect
RICHARD COLE ARCHITECTURE



01 Long Section
1:100



NOTE: THE USE OF ANY WIRE AS A BALUSTRADE MATERIAL MUST SATISFY THE TENSION, DEFLECTION AND SPACING REQUIREMENTS AS SPECIFIED UNDER CLAUSE 3.9.2.3 OF THE BUILDING CODE OF AUSTRALIA - HOUSING PROVISIONS

SCANNED
- 1 AUG 2006
PITTWATER COUNCIL

COUNCIL COPY

02 Cross Section
1:100

richard cole architecture
139 PALMGROVE ROAD
AVALON BEACH NSW 2107
t: 02 9918 3843
f: 02 9918 3492
m: 0418 627 024
richard@richardcolearchitecture.com.au
www.richardcolearchitecture.com.au

No.	Description	Date
A	Development Application	05-12-02
B	Revised Development Application	20-05-03
C	Resubmitted Development Application	10-07-06
D	Construction Certificate	26-07-06

Jennie Mackenzie

New Driveway & Turning Bay

60 Hudson Parade

Long & Short Sections

Project number	0218	Checked by	RC
Date	26-07-06	Scale	1:100 @ A3
Drawn by	RC		A03

MACKENZIE HOUSE

Proposed New Driveway and Turning Bay at No 60 Hudson Parade, Clareville
for
Jennie Mackenzie

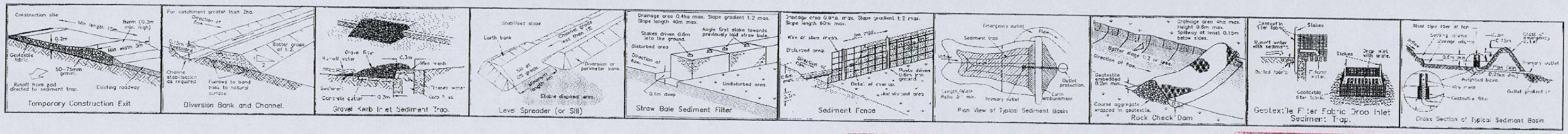
CONSTRUCTION CERTIFICATE

July 26 2006

139 PALMGROVE ROAD
AVALON BEACH NSW 2107

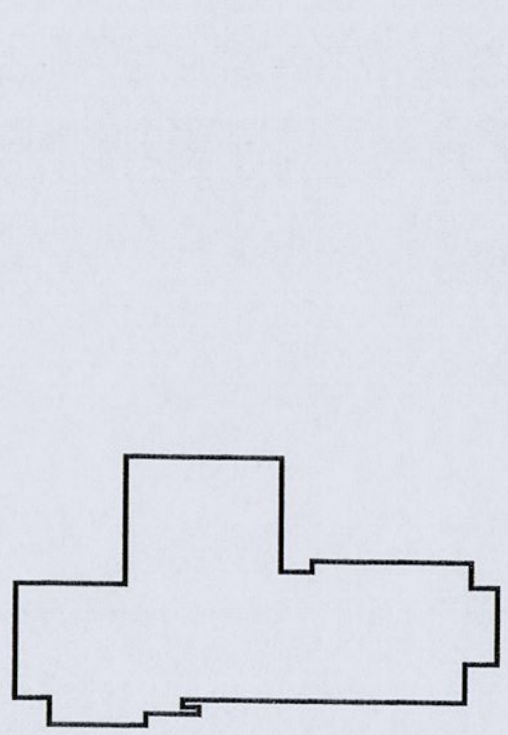
t: 02 9918 3843
f: 02 9918 3492
m: 0418 627 024
richard@richardcolearchitecture.com.au
www.richardcolearchitecture.com.au

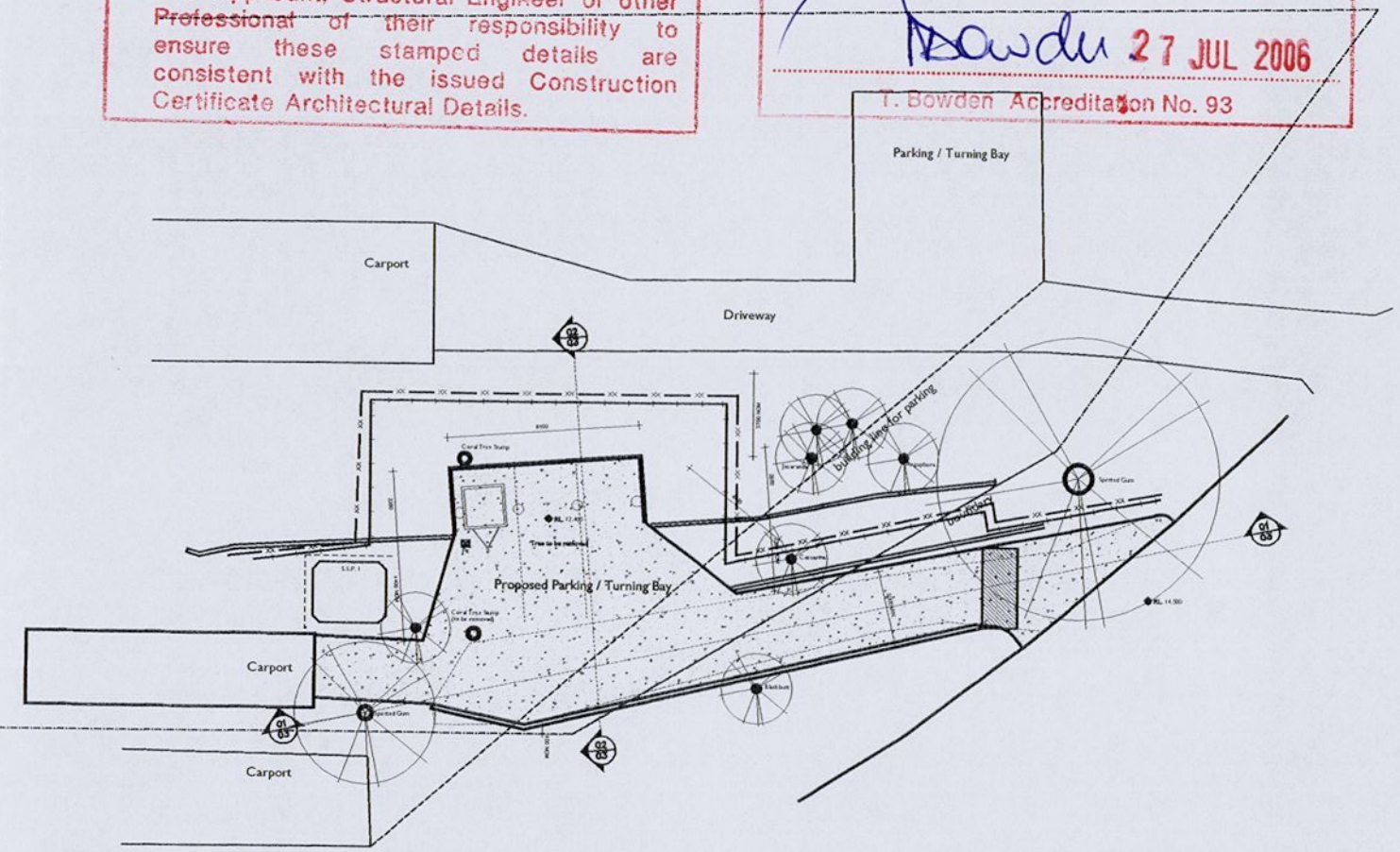
acn:092 590 415 abn:52 092 590 415
nominated architect: Richard Cole B.Sc.(Arch) (Hons 1) B.Arch.(Hons1) Reg. No. 6330

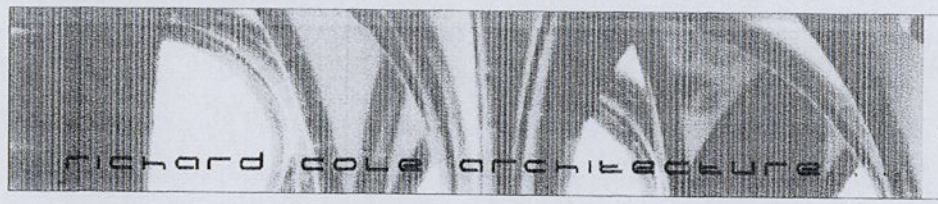


LEGEND

- Perimeter Bank
- Diversion Bank
- Level Spreader
- Waterway – natural grassed
  - constructed grassed
  - constructed grass with check dam
- Sediment Basin
- Sediment Trap
- Sediment Fence
- Straw Bale Sediment Filter
- Catchment Boundary
- Vegetative Filter Strip
- Cut Area
- Fill Area
- Soil Stock Pile
- Temporary Construction Exit
- Limit of Clearing and Grading







139 PALMGROVE ROAD
AVALON BEACH NSW 2107

t: 02 9918 3843
f: 02 9918 3492
m: 0418 627 024
richard@richardcolearchitecture.com.au
www.richardcolearchitecture.com.au

No.	Description	Date
A	Development Application	05-12-02
B	Revised Development Application	20-05-03
C	Resubmitted Development Application	10-07-06
D	Construction Certificate	26-07-06

Jennie Mackenzie

New Driveway & Turning Bay

60 Hudson Parade

Site Plan

Project number	0218	Checked by	RC
Date	26-07-06	Scale	1:300 @ A3
Drawn by	RC		A01

Driveway

02/03

8100

3700 NOM

2850

4440

2350

4400 NOM

3280 NOM

3000 MIN

400 NOM

Coral Tree Stump

RL 12.400

Tree to be removed

Pit

S.S.P. 1

Proposed Parking / Turning Bay

Coral Tree Stump (to be removed)

building line for parking

boundary

Jacaranda

Angophora

Spotted Gum

Casuarina

RL. 14.580

Blackbutt

Spotted Gum

01/03

02/03

Carport

Carport

richard cole architecture

139 PALMGROVE ROAD
AVALON BEACH NSW 2107

t: 02 9918 3843
f: 02 9918 3492
m: 0418 627 024
richard@richardcolearchitecture.com.au
www.richardcolearchitecture.com.au

nominated architect : Richard Cole B.Sc.(Arch) (Hons 1) B.Arch.(Hons1) Reg.No. 4288

No.	Description	Date
A	Development Application	05-12-02
B	Revised Development Application	20-05-03
C	Resubmitted Development Application	10-07-06
D	Construction Certificate	26-07-06

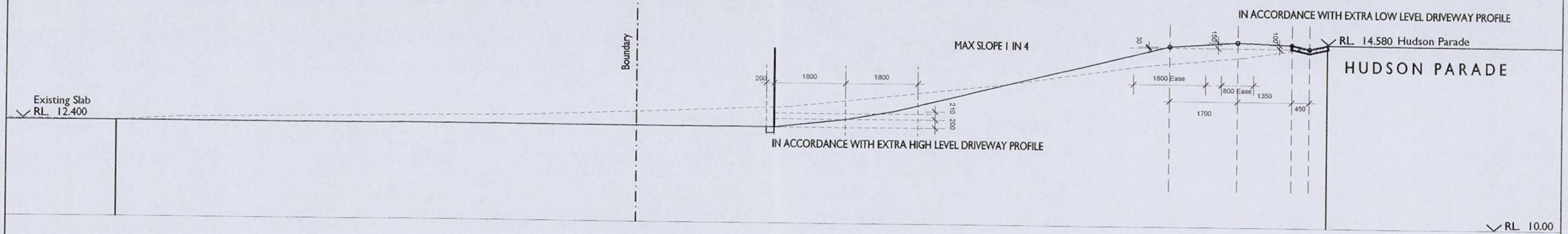
Jennie Mackenzie

New Driveway & Turning Bay

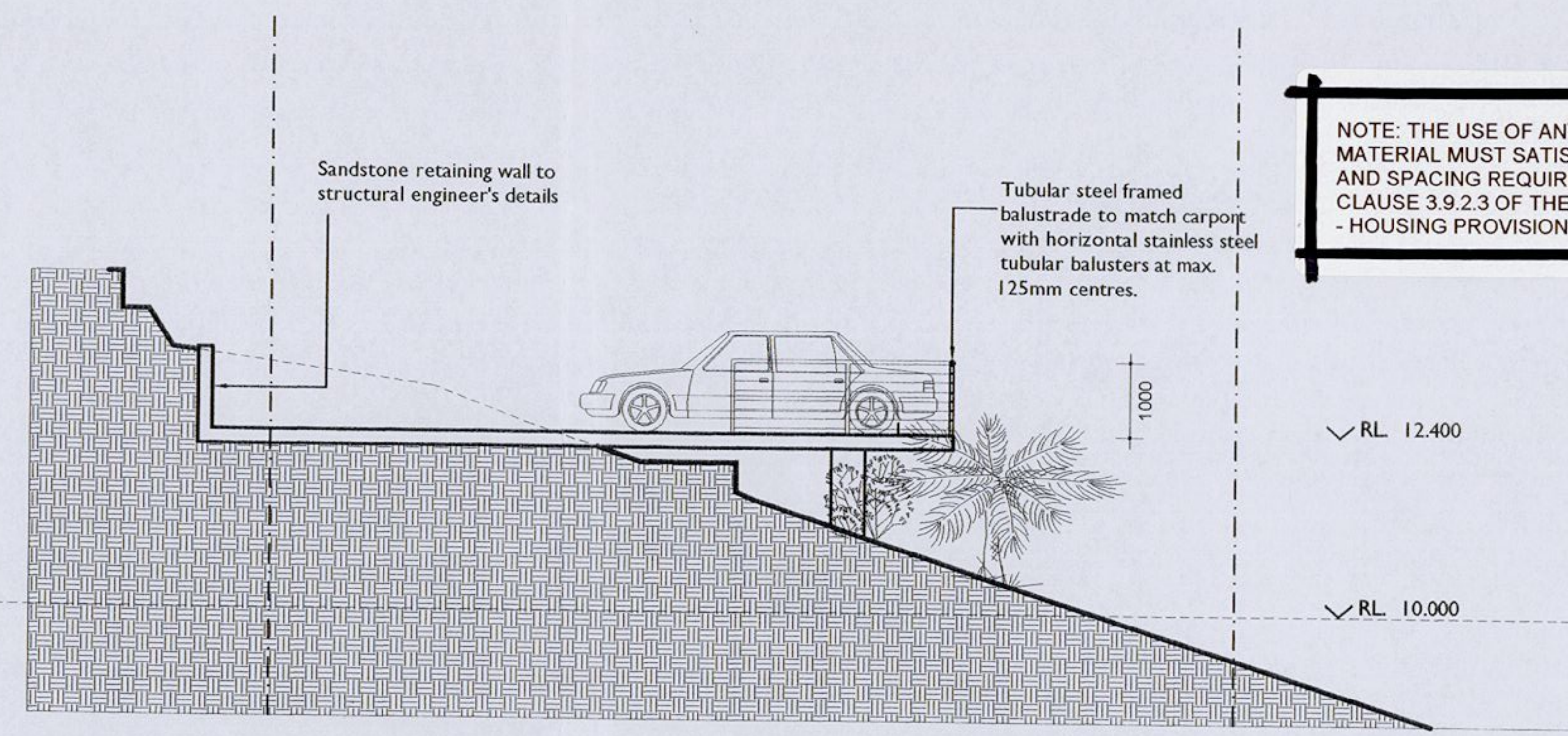
60 Hudson Parade

Plan

Project number	0218	Checked by	RC
Date	26-07-06	Scale	1:100 @ A3
Drawn by	RC		A02



01 Long Section
1:100



NOTE: THE USE OF ANY WIRE AS A BALUSTRADE MATERIAL MUST SATISFY THE TENSION, DEFLECTION AND SPACING REQUIREMENTS AS SPECIFIED UNDER CLAUSE 3.9.2.3 OF THE BUILDING CODE OF AUSTRALIA - HOUSING PROVISIONS

02 Cross Section
1:100

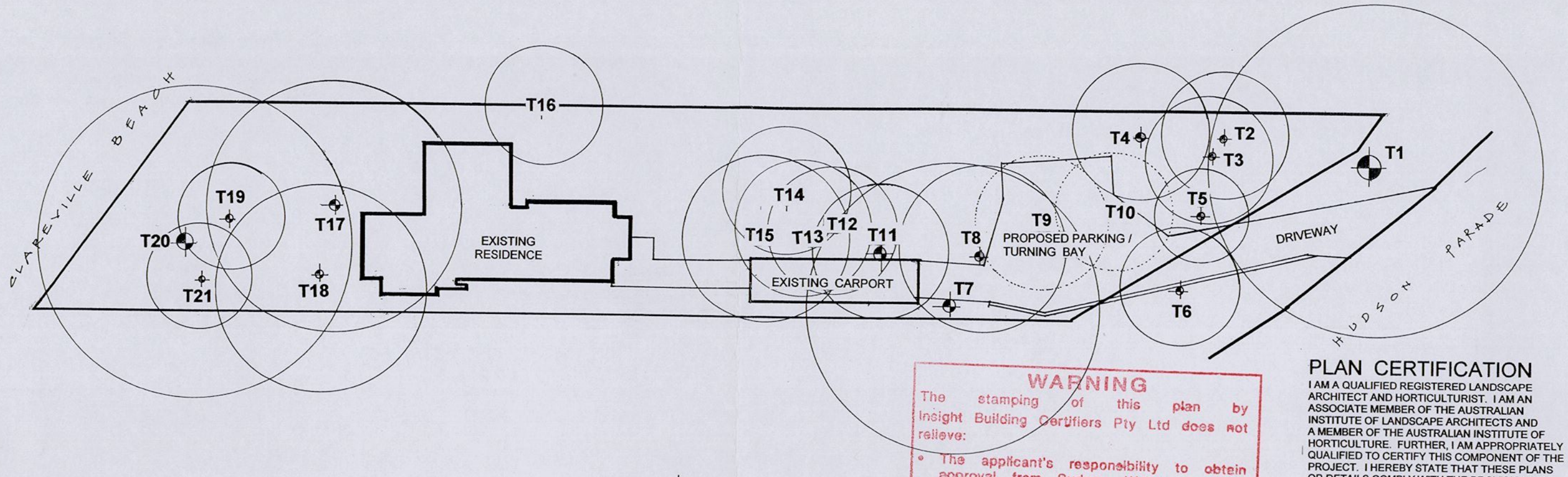
richard cole architecture
139 PALMGROVE ROAD
AVALON BEACH NSW 2107
t: 02 9918 3843
f: 02 9918 3492
m: 0418 627 024
richard@richardcolearchitecture.com.au
www.richardcolearchitecture.com.au

No.	Description	Date
A	Development Application	05-12-02
B	Revised Development Application	20-05-03
C	Resubmitted Development Application	10-07-06
D	Construction Certificate	26-07-06

Jennie Mackenzie
New Driveway & Turning Bay
60 Hudson Parade

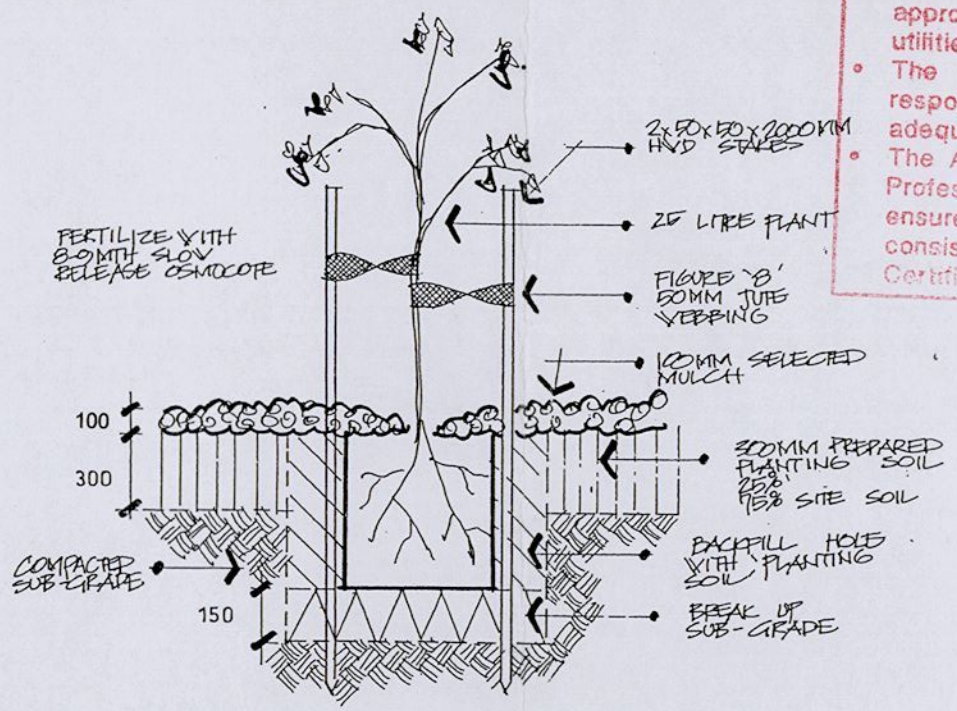
Long & Short Sections

Project number	0218	Checked by	RC
Date	26-07-06	Scale	1:100 @ A3
Drawn by	RC		A03

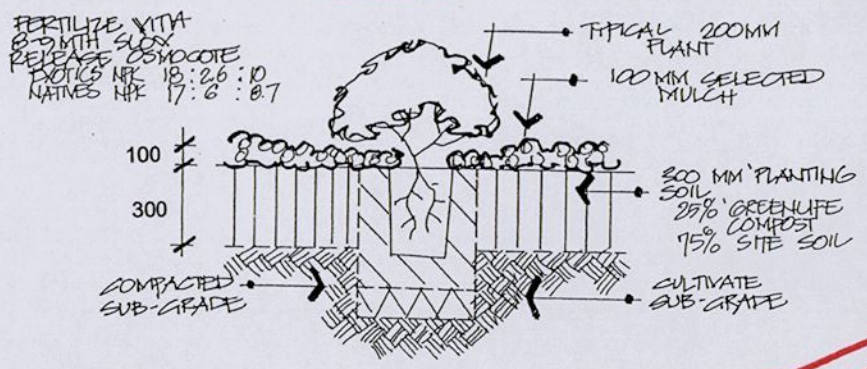


EXISTING TREE SCHEDULE

NO	SPECIES	TRUNK DIAM	HEIGHT	SPREAD	STATUS
T1	Corymbia maculata	1400mm	25m	18m	Retain
T2	Pittosporum undulatum	300mm	7m	6m	Retain
T3	Corumbia maculata	400mm	13m	5m	Retain
T4	Jacaranda mimosifolia	300mm	11m	9m	Retain
T5	Allocasuarina littoralis	250mm	8m	4m	Retain
T6	Eucalyptus sp	300mm	9m	7m	Retain
T7	Corymbia maculata	1000mm	23m	15m	Retain
T8	Brachychiton acerifolia	300mm	12m	8m	Retain
T9	Albizzia sp	200mm	9m	6m	Remove
T10	Lagerstroemia indica	5x100mm	5m	7m	Remove
T11	Corymbia maculata	400mm	15m	6m	Retain
T12	Glochidion ferdinandi	200mm	6m	5m	Retain
T13	Jacaranda mimosifolia	150mm	7m	7m	Retain
T14	Pittosporum undulatum	150mm	5m	4m	Retain
T15	Jacaranda mimosifolia	250mm	7m	7m	Retain
T16	Cypress sp	400mm	8m	5m	Retain
T17	Corymbia maculata	600mm	18m	14m	Retain
T18	Jacaranda mimosifolia	400mm	10m	10m	Retain
T19	Corymbia maculata	200mm	18m	4m	Retain
T20	Corymbia maculata	800mm	23m	8m	Retain
T21	Corymbia maculata	250mm	13m	4m	Retain



D1 TYPICAL PLANTING DETAIL
25 LITRE POT
SCALE 1:25



D2 TYPICAL PLANTING DETAIL
200MM POT
SCALE 1:25

WARNING

The stamping of this plan by Insight Building Certifiers Pty Ltd does not relieve:

- The applicant's responsibility to obtain approval from Sydney Water or other utilities.
- The Structural Engineer of their responsibility to ensure the structural adequacy of this project.
- The Applicant, Structural Engineer or other Professional of their responsibility to ensure these stamped details are consistent with the issued Construction Certificate Architectural Details.

PLAN CERTIFICATION

I AM A QUALIFIED REGISTERED LANDSCAPE ARCHITECT AND HORTICULTURIST. I AM AN ASSOCIATE MEMBER OF THE AUSTRALIAN INSTITUTE OF LANDSCAPE ARCHITECTS AND A MEMBER OF THE AUSTRALIAN INSTITUTE OF HORTICULTURE. FURTHER, I AM APPROPRIATELY QUALIFIED TO CERTIFY THIS COMPONENT OF THE PROJECT. I HEREBY STATE THAT THESE PLANS OR DETAILS COMPLY WITH THE PROVISIONS OF THE BUILDING CODE OF AUSTRALIA AND/OR THE RELEVANT AUSTRALIAN STANDARDS AND THE PROVISIONS OF THE PITTWATER D.C.P. No 23 LANDSCAPE and VEGETATION MANAGEMENT.

IN ACCORDANCE WITH DEVELOPMENT CONSENT DA 165/03 THIS PLAN COMPLIES WITH OR MAKES SPECIFICATIONS FOR THE FOLLOWING CONDITIONS:

B 45a PARTS 1,2,3,4,5,6,9,10

TRISH DOBSON ..... DATE 1.5.04

TRISH DOBSON
REGISTERED LANDSCAPE ARCHITECT, HORTICULTURIST
30 BINBURRA AVENUE, AVALON NSW 2107
PH 9918 3020 FAX 9918 3020 MB 0408 983020

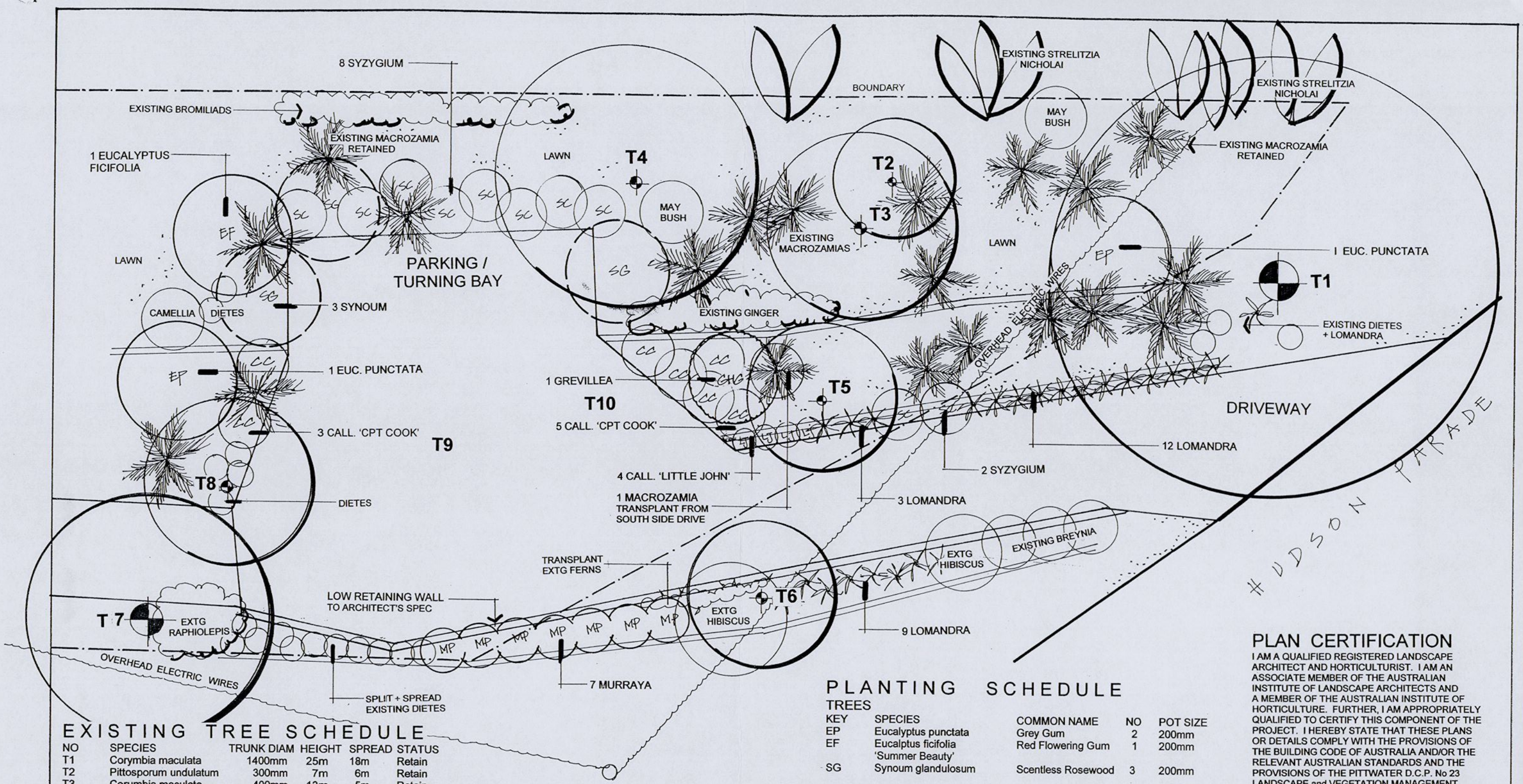
LANDSCAPE PLAN
PARKING / TURNING BAY
MACKENZIE HOUSE
60 HUDSON PARADE
CLAREVILLE

SITE PLAN + DETAILS

SCALE 1:300
DATE 28.4.03
DWG 0408 / CC-L01
ISSUE A

L01

COUNCIL COPY



EXISTING TREE SCHEDULE

NO	SPECIES	TRUNK DIAM	HEIGHT	SPREAD	STATUS
T1	Corymbia maculata	1400mm	25m	18m	Retain
T2	Pittosporum undulatum	300mm	7m	6m	Retain
T3	Corumbia maculata	400mm	13m	5m	Retain
T4	Jacaranda mimosifolia	300mm	11m	9m	Retain
T5	Allocasuarina littoralis	250mm	8m	4m	Retain
T6	Eucalyptus sp	300mm	9m	7m	Retain
T7	Corymbia maculata	1000mm	23m	15m	Retain
T8	Brachychiton acerifolia	300mm	12m	8m	Retain
T9	Albizzia sp	200mm	9m	6m	Remove
T10	Lagerstroemia indica	5x100mm	5m	7m	Remove

PLANTING SCHEDULE

TREES

KEY	SPECIES	COMMON NAME	NO	POT SIZE
EP	Eucalyptus punctata	Grey Gum	2	200mm
EF	Eucalptus ficifolia 'Summer Beauty'	Red Flowering Gum	1	200mm
SG	Synoum glandulosum	Scentless Rosewood	3	200mm

SHRUBS + GRASSES

CC	Calistemon 'Cpt Cook'	Dwarf Bottlebrush	7	200mm
GHG	Grevillea 'Honey Gem'	Golden Grevillea	1	200mm
LJ	Callistemon 'Little John'	Dwarf Bottlebrush	4	150mm
LL	Lomandra longifolia	Spiny Mat Rush	24	150mm
MP	Murraya paniculata	Orange Jessamine	7	200mm
SC	Syzygium 'Cascade'	Weeping Lillypilly	10	25 litre

PLAN CERTIFICATION

I AM A QUALIFIED REGISTERED LANDSCAPE ARCHITECT AND HORTICULTURIST. I AM AN ASSOCIATE MEMBER OF THE AUSTRALIAN INSTITUTE OF LANDSCAPE ARCHITECTS AND A MEMBER OF THE AUSTRALIAN INSTITUTE OF HORTICULTURE. FURTHER, I AM APPROPRIATELY QUALIFIED TO CERTIFY THIS COMPONENT OF THE PROJECT. I HEREBY STATE THAT THESE PLANS OR DETAILS COMPLY WITH THE PROVISIONS OF THE BUILDING CODE OF AUSTRALIA AND/OR THE RELEVANT AUSTRALIAN STANDARDS AND THE PROVISIONS OF THE PITTWATER D.C.P. No 23 LANDSCAPE and VEGETATION MANAGEMENT.

IN ACCORDANCE WITH DEVELOPMENT CONSENT DA 165/03 THIS PLAN COMPLIES WITH THE INTENTIONS OF CONDITIONS AS FOLLOWS:

B 45a PARTS 1,2,3,4,5,6,9,10

TRISH DOBSON ..... DATE 7/5/04

TRISH DOBSON
REGISTERED LANDSCAPE ARCHITECT, HORTICULTURIST
30 BINBURRA AVENUE, AVALON NSW 2107
PH 9918 3020 FAX 9918 3020 MB 0408 983020

LANDSCAPE PLAN
PARKING / TURNING BAY
MACKENZIE HOUSE
60 HUDSON PARADE
CLAREVILLE

PLANTING PLAN

SCALE 1:100
DATE 28.4.03
DWG 0408 / CC-L02
ISSUE A

L02

GENERAL NOTES:

GENERAL

G1. The drawings are to be read together with all Architects drawings and specifications.

G2. Dimensions shall not be obtained by scaling from the drawings. All setting out dimensions shall be verified and discrepancies shall be referred to the Engineer prior to commencement of work.

G3. Care is required during construction so that structural elements are not over stressed and that the works and excavations required therefore are kept stable at all times.

G4. Design, materials and workmanship are to be in accordance with current S.A.A standards and statutory authority regulations except where varied by these documents.

G5. Design live loads for floors are as follows:- Generally = 1.5 kPa.
Balcony = 3.0 kPa.

FOOTINGS

F1. Footings to be constructed and back filled as soon as possible following excavation to avoid softening by rain or drying out by exposure.

F2. Footings must bear 250 mm (minimum) into natural ground clear of organic material.

F3. If rock or variable bearing strata is encountered during excavation of the footings, all footings/piers are to be excavated to similar material. The Engineer is to be contacted for approval or review.

F4. Footings to be cast in approved material having an allowable capacity as follows:

Sand Foundations:

SA1. Required bearing capacity 100 kPa.
SA2. Trenches must be cleaned of all debris and hand compacted prior to placement of reinforcement.

Clay Foundations:

CL1. Required bearing capacity 150 kPa.
CL2. Trenches must be cleaned of all debris. Soft spots must be cut out and filled as per compacted fill notes, prior to placement of reinforcement.

Shale Foundations:

SH1. Required bearing capacity 400 kPa.
SH2. Excavation for footings into shale must be cast or capped with plain concrete on the same day as excavation.

Sandstone Foundations:

SS1. Required bearing capacity 650 kPa.
SS2. Scrape weathered surface to remove cleaved sandstone under footings.

COMPACTED FILL

CF1. Clear organic material and topsoil under proposed slabs/footings.

CF2. Filling shall be granular material compacted in not more than 200 mm layers to a minimum dry density ratio (AS 1289/E4.2 1982) of 98 percent. A Geotechnical Engineer must varify the compaction.

CF3. During clearing and excavation for slabs and footings cut out soft spots and fill as above.

STEEL

S1. All steel work to be grade 300 steel. Hollow sections to be grade 250 or 350 as appropriate. Design, fabrication and erection to be in accordance with AS 4100.

S2. Steel work shall have one of the following grades of corrosion protection:-

a. Thoroughly cleaned wire brushing, followed by two coats of zinc phosphate primer equivalent to Dulux Luxaprime applied by hand using brushes to achieve a total dry film thickness of 70 microns.

b. Preparation Blast clean to a minimum standard Class 2.5 in accordance with AS 1627 Part 4.
Primer 2-pack epoxy phosphate at dft 75 microns
(Dulux Durepon P14).
Barrier Coat 2-pack epoxy micaeous iron oxide, dft 100 microns
Finish Coat 2-pack epoxy high gloss acrylic to dft 75 microns
(e.g. Dulux Acrathane I F) in an approved colour.

c. Hot dipped galvanized to AS 4680
Where galvanized coating is broken on site make good Interzinc 52 Primer, two pack Intercure 420 and top coat with Interthane 990 by International Paints and apply the following surface coating:

Galmet Ketite Etch Primer, one coat 10 microns DFT
Galmet Keytite Steel Primer, 1 to 2 coats 25 microns DFT
Galmet Roof Paint, two coats 30 microns DFT

ELEMENT	SURFACE TREATMENT
INTERNAL ELEMENTS	'A'
EXTERNAL ELEMENTS AND ELEMENTS WITHIN EITHER SKIN OF EXTERNAL WALLS	'C'

S3. All bolts to be grade 4.6/S unless noted otherwise.
All bolts to be M16 bolts unless noted otherwise.
All bolts, nuts and washers are to be hot dip galvanized to AS 4680.

S4. All welds to be 6 mm continuous fillet welds unless noted otherwise.

S5. All cleat and base plates are to be 10 mm thick unless noted otherwise.

S6. Workshop drawings shall be prepared and two copies submitted to the engineer for review prior to fabrication commencement.

CONCRETE

C1. All workmanship and materials shall be in accordance with AS 3600.

C2. Concrete quality shall be as follows and shall be verified by tests.

ELEMENT	STRENGTH	SLUMP	MAX. AGG. SIZE
FOOTINGS	20 MPa	80 mm	20 mm
SLAB ON GROUND	25 MPa	80 mm	20 mm
INTERNAL SUSPENDED SLABS	32 MPa	80 mm	20 mm
EXTERNAL SUSPENDED SLABS Greater than 1 km from sea	32 MPa	80 mm	20 mm
EXTERNAL SUSPENDED SLABS Less than 1 km from sea	40 MPa	80 mm	20 mm
BLOCK INFILL	20 MPa	230 mm	10 mm

C3. Clear concrete cover to reinforcement shall be as follows unless otherwise shown-

ELEMENT	EXPOSURE CLASSIFICATION TO AS 3600	CLEAR COVER
FOOTINGS	N.A.	65 mm
SLABS - INTERNAL	A1	25 mm
SLABS - EXTERNAL Greater than 1 km from sea	B1	40 mm
SLABS - EXTERNAL Less than 1 km from sea	B2	45 mm
BEAMS & COLUMNS - INTERNAL	A1	30 mm
BEAMS & COLUMNS - EXTERNAL	B2	45 mm

C4. Sizes of concrete elements do not include thickness of applied finishes.

C5. Construction joints where not shown shall be to the approval of the engineer.

C6. Beam depths are written first and include slab thickness, if any.

C7. No holes or chases other than those shown on the structural drawings shall be made in concrete elements without the prior approval of the engineer.

C8. Reinforcement is represented diagrammatically it is not necessarily shown in true projection.

C9. Splices in reinforcement are not to be located in positions of maximum moment, any laps other than that shown shall be subject to the approval of the engineer. Where the lap length is not shown it shall be sufficient to develop the full strength of the reinforcement.

C10. Welding of reinforcement shall not be permitted unless shown on the structural drawings.

C11. Pipes or conduits shall not be placed within the concrete cover to reinforcement without the approval of the engineer.

C12. All reinforcing bars shall comply with AS 1302. All fabric shall comply with AS 1303 and AS 1304 and shall be supplied in flat sheets.

C13. Reinforcement symbols:
S - Grade 230S Deformed bar
C - Grade 410C Cold worked deformed bar
Y - Grade 400Y Deformed bar
R - Grade 230R Plain bar
F - Grade 450F Welded plain wire fabric
RF - Grade 500RW Welded ribbed wire fabric
The number immediately following these symbols is the number of millimeters in the bar diameter.

C14. Fabric reinforcement to be lapped 225 minimum at the ends and sides unless noted otherwise.

C15. All reinforcement shall be firmly supported on plastic chairs spaced at a maximum of 900 and 800 centres both ways under rod and fabric reinforcement respectively. Rods shall be tied at alternate intersections.

C16. Formwork must be cleaned of all debris prior to casting of concrete.

C17. Minimum stripping times for form work shall be as recommended in AS 1509 or as directed by the engineer.

C18. The finished concrete shall be a dense homogeneous mass, completely filling the form work, thoroughly embedding the reinforcement and free of air pockets. All concrete elements including slabs on ground and footings shall be compacted with mechanical vibrators.

C19. Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, followed by prevention of loss of moisture for seven days followed by a gradual drying out . Approved sprayed on curing compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.

C20. Shrinkage reducing admixtures such as 'Eclipse' or approved equivalent, if specified, must be added to mix prior to pour.

C21. Water reducing agents, if specified, must be added to mix prior to pour. No extra water to be added.

C22. Where vertical slab/beam surfaces are formed against a masonry (or other) wall, provide 10 mm (Ableflex) or styrene separation material.

BRICKWORK

BR1. Brickwork is to be constructed with mortar in the ratio 1:1:6, Cement:Lime:Sand and to be adequately cured prior to being loaded. Sand is to be clean with no clay content. Masonry to be constructed to AS 3700.

BR2. Two layers of approved greased metal based slip material shall be used over all load bearing walls that support concrete slabs and placed on smooth brickwork or trowelled mortar finish. Non load-bearing walls shall have 10 mm compressible material and ties to the slab soffit.

BR3. No brickwork or blockwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests.

BR4. Control joints to be placed at a maximum of 8 m centres.

BR5. Exposure grade bricks to be used below damp proof course.

BR6. Separation control joint material between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bitumastic fibreboard internal UNO.

BR7. Provide 316 stainless steel wall ties below DPC to AS.3700.

Ensure the following minimum standards are complied with:
Within 1Km of breaking surf or 100m of still water provide stainless steel wall ties above DPC to AS.3700.
In areas of heavy industrial pollution provide stainless steel wall ties above DPC to AS.3700.
All other areas provide galvanized wall ties above DPC to AS.3700.

BLOCKWORK

BL1. Concrete blocks shall have a minimum compressive strength of 15 MPa and conform to AS 1500. Mortar is to be 1:1/2:3, Cement:Lime:Sand. Masonry to be constructed to AS 3700.

BL2. Where cores of hollow blocks are to be filled, properly compacted concrete with 10 mm aggregate and 230 mm slump shall be used. Clean out openings must be utilized for all cores.

BL3. Location of actual starters is critical to suit block cores, allow 55 mm cover from the outside of blockwork. All reinforcement lap lengths to conform to AS 3600.

BL4. Control joints to be placed at a maximum of 8m centres.

BL5. Separation control joint material between slabs and blockwork walls shall be: 10 mm Spandex External UNO.

BL6. Retaining walls or any reinforced and concrete core filled block walls to be of Double 'U' Block Construction.
Bitumastic fibreboard internal UNO.

BL6. Retaining walls or any reinforced and concrete core filled block walls to be of Double 'U' Block Construction.

TIMBER

T1. All timber design and construction to be to AS 1720. AS 1684 is relevant to domestic construction in sheltered locations. All oregon to be grade F7 unless noted otherwise. All hardwood to be minimum grade F14. Exposed timber to be CCA treated radiata pine (to AS 1604) redried after full impregnation, or hardwood durability class 1 or 2.

T2. All joists to have blocking over support bearers and at maximum 3m centres.

T3. Roof trusses to be designed by the manufacturer to AS 1720. Pre camber to be an amount equal to dead load deflection u.n.o. Three copies of shop details to be submitted for review prior to commencing construction.

T4. All holes for bolts to be exact size. Washers to be used under all heads and nuts to be at least 2.5 times the bolt diameter. Bolts to be M16 grade 4.6 unless noted otherwise.

T5. Provide timber lintel over door openings of similar size to floor joists where required for spans up to 1800 mm.

T6. Treat all exposed cut ends with XJ Clear by Protim or approved equivalent.

INSPECTIONS BY ENGINEER

24 HOURS NOTICE IS REQUIRED BEFORE ANY SITE INSPECTION
1. Bearing strata of all footings prior to concrete pour.
2. Any reinforcement prior to concrete pour.
3. Timber and Steel framing prior to cladding.
4. Steel lintels after installation.

WARNING

The stamping of this plan by Insight Building Certifiers Pty Ltd does not relieve:

- The applicant's responsibility to obtain approval from Sydney Water or other utilities.
- The Structural Engineer of their responsibility to ensure the structural adequacy of this project.
- The Applicant, Structural Engineer or other Professional of their responsibility to ensure these stamped details are consistent with the issued Construction Certificate Architectural Details.

COUNCIL COPY

A3

DOCUMENT CERTIFICATION

Date : 14/5/2008

Michael Kelett.....
(For MtK Consulting)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, C.P.Eng
Institute of Engineers Membership No. 642185
I hereby state that this drawing is in compliance with the conditions of the development consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

MTK Consulting
Structural, Civil, Stormwater
ABN 58 605 578 841
PO Box: 703
DEE WHY NSW 2099
Ph: (02) 9999 6922 Fax: (02) 9979 5263
e-mail : mtk@summit.net.au

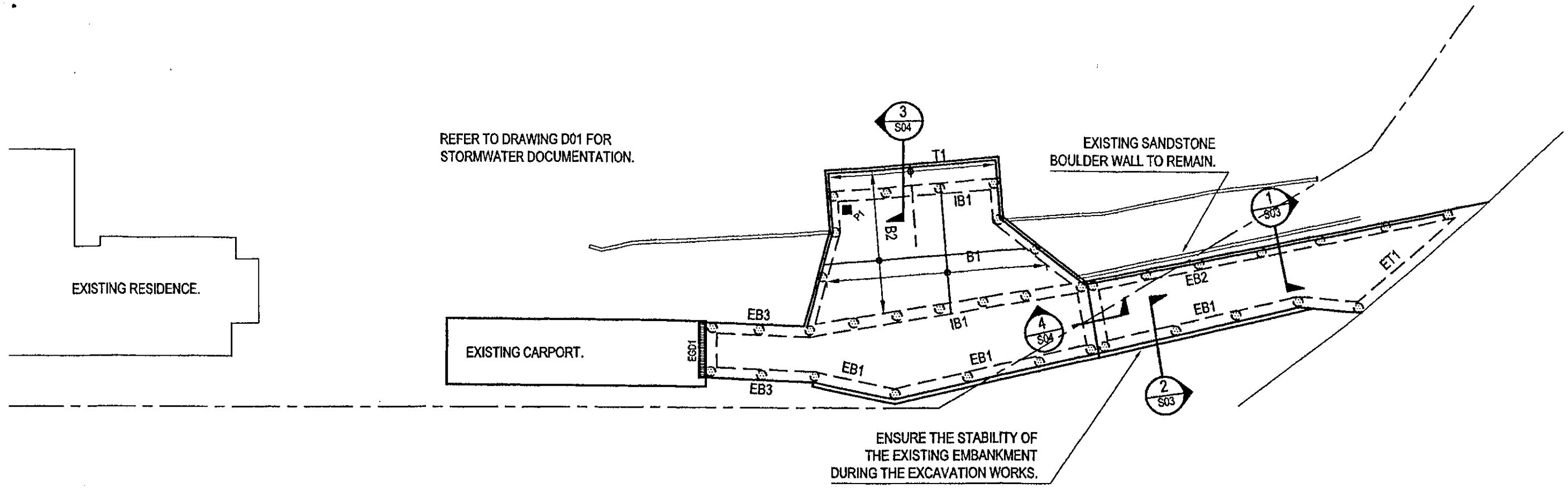
Project:
PROPOSED WORKS
at: 60 HUDSON PARADE
CLAREVILLE

Drawing Title:
GENERAL NOTES

Date:	Rev:	Amendment:
1		

Date:	Design:	Drawn:
MARCH 2004	M.K.	M.K.

Job No:	Drawing No:	Rev:
40307	S01	-



B1 = N16's AT 200mm CENTRES.
B2 = N16's AT 300mm CENTRES.
T1 = N16's AT 300mm CENTRES EXTRA.

PROPOSED DRIVEWAY PLAN

SCALE = 1 : 200

PROVIDE 200mm SLAB WITH N12's @ 300mm CENTRES BOTH WAYS TOP AND BOTTOM UNO.
ADDITIONAL TOP BARS SHOWN ON PLAN.
PROVIDE 3 N12's TO THE UNDERSIDE OF THE TOP STEEL AT 50mm CTS AT RE-ENTRY CORNERS
INVESTIGATION REGARDING THE EXACT LEVELS OF THE PROPOSED DRIVEWAY ALONG THE SOUTHERN BOUNDARY SHOULD BE CARRIED OUT PRIOR TO EXCAVATION WORKS COMMENCING.
ADVSIE ENGINEER FOR INSPECTION.
INSTRUCTIONS TO BE GIVEN ON SITE FOR TEMPORARY SHORING IF REQUIRED PRIOR TO EXCAVATION.
PLANS TO BE READ IN CONJUNCTION WITH THE SURVEY AND ARCHITECTURAL DETAILS.

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.

A3

DOCUMENT CERTIFICATION
Date: 14/5/2004
Michael Kelett
(For MtK Consulting)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, C.P.Eng
Institute of Engineers Membership No. 642185
I hereby state that this drawing is in compliance with the conditions of the development consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

MTK Consulting
Structural, Civil, Stormwater
ABN 58 605 578 841
PO Box 703
DEE WHY NSW 2099
Ph: (02) 9999 6922 Fax: (02) 9979 5263
e-mail : mtk@summit.net.au

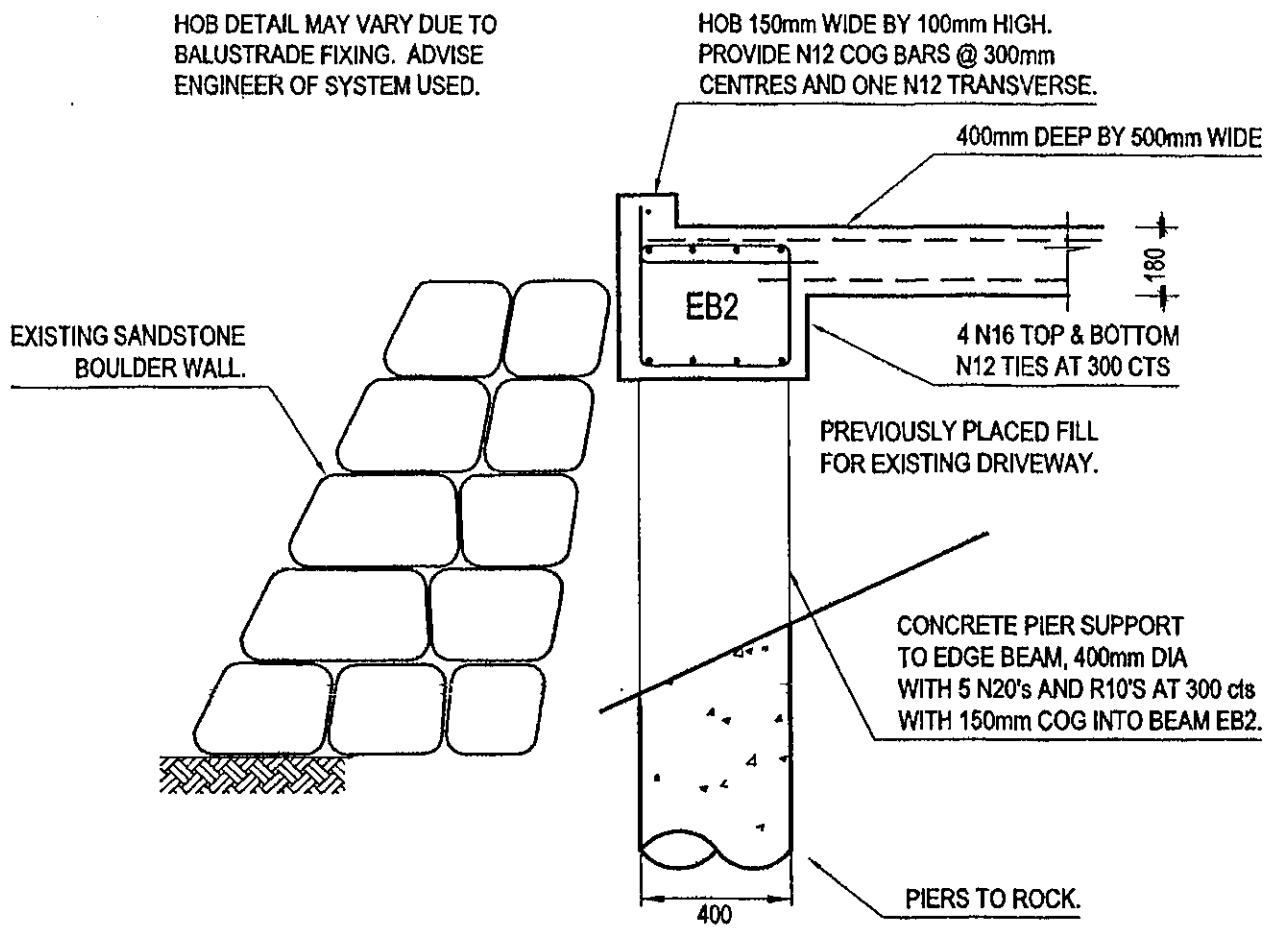
Project:
PROPOSED WORKS
at: 60 HUDSON PARADE
CLAREVILLE

Drawing Title:
DRIVEWAY
PLAN

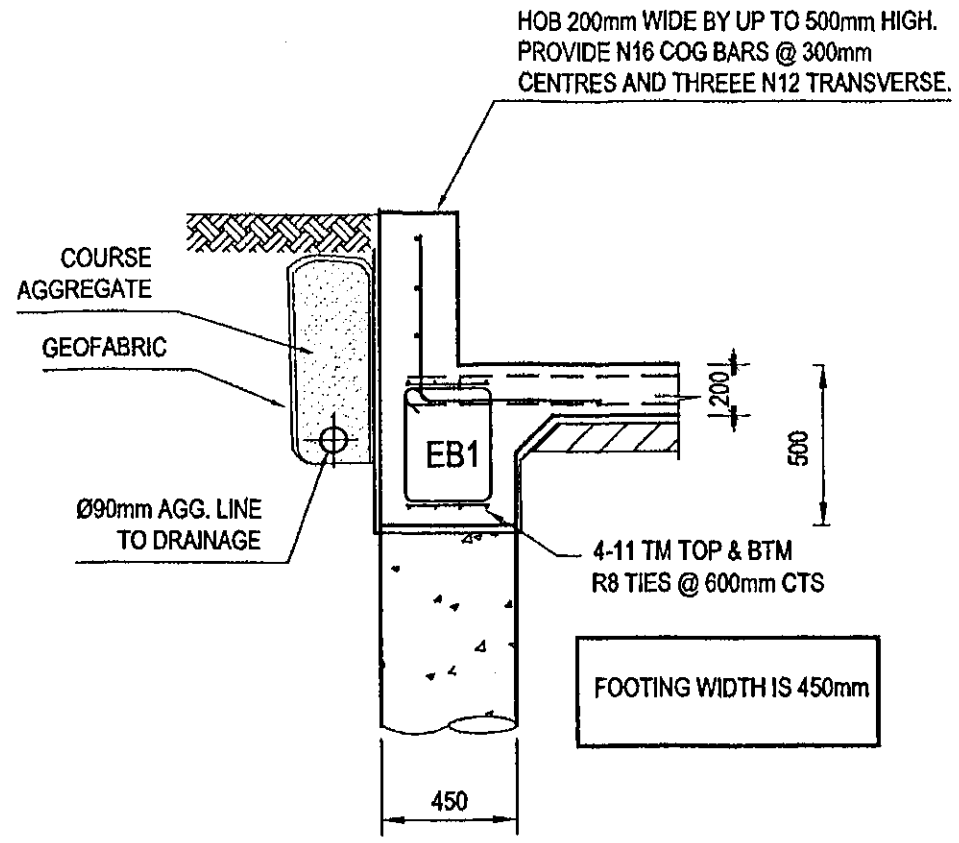
Date:	Rev:	Amendment:

Date:	Design:	Drawn:
MARCH 2004	M.K.	M.K.

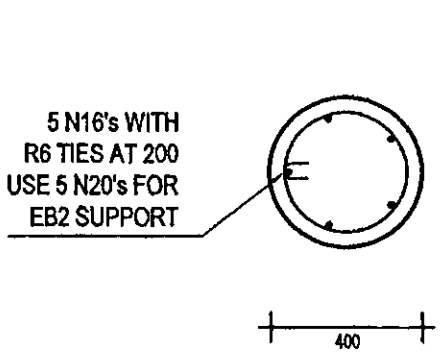
Job No:	Drawing No:	Rev:
40307	S02	-

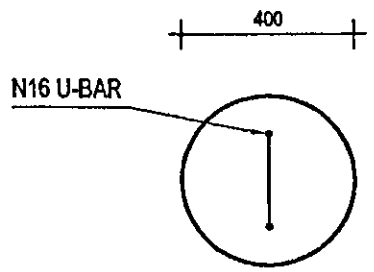


SECTION 1 — SCALE = 1:20 — S02



SECTION 2 — SCALE = 1:20 — S02





WHERE PIER IS IN GROUND AND LESS THAN 900mm DEEP.

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: SO1.

TYPICAL FOOTING PIER SECTION

SCALE = 1 : 20

A3

DOCUMENT CERTIFICATION
Date: 14/5/2004
Michael Kelett
(For MtK Consulting)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, C.P.Eng
Institute of Engineers Membership No. 642185
I hereby state that this drawing is in compliance with the conditions of the development consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

MTK Consulting
Structural, Civil, Stormwater
ABN 58 605 578 841
PO Box: 703
DEE WHY NSW 2099
Ph: (02) 9099 6922 Fax: (02) 9979 5263
e-mail : mtk@summit.net.au

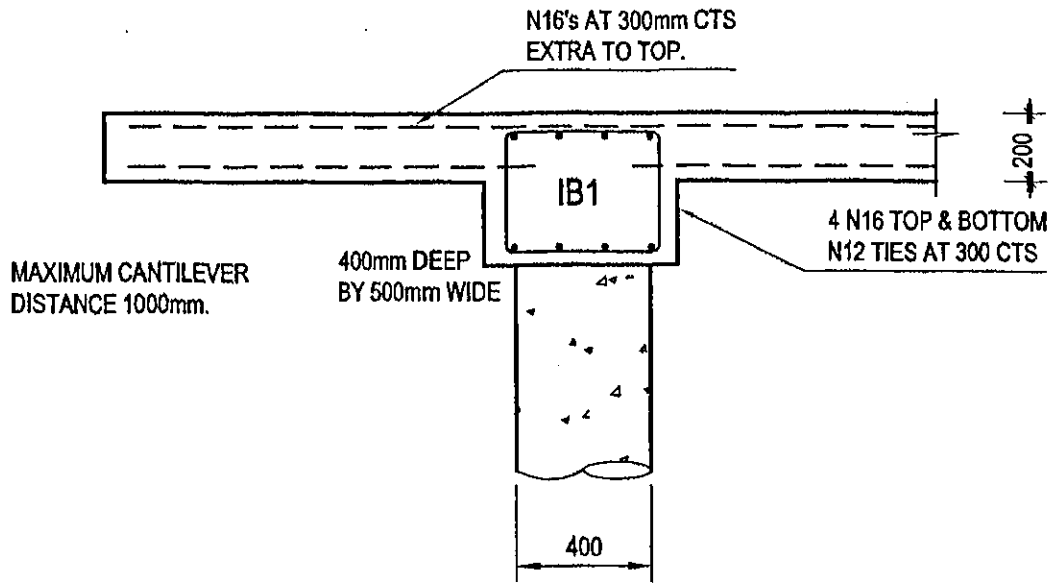
Project: PROPOSED WORKS at: 60 HUDSON PARADE CLAREVILLE

Drawing Title: DRIVEWAY DETAILS

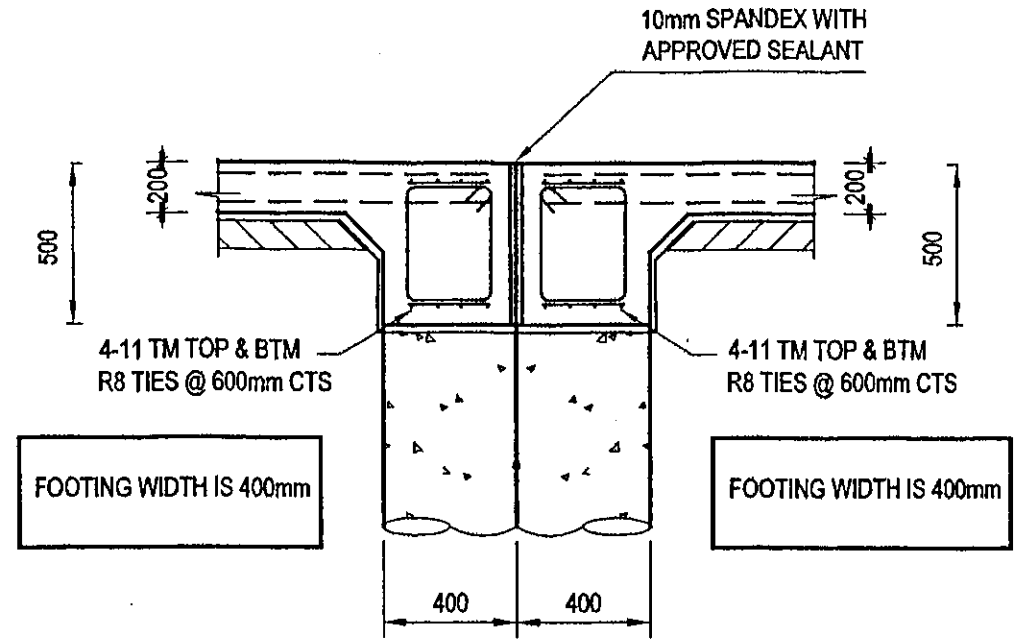
Date:	Rev:	Amendment:

Date:	Design:	Drawn:
MARCH 2004	M.K.	M.K.

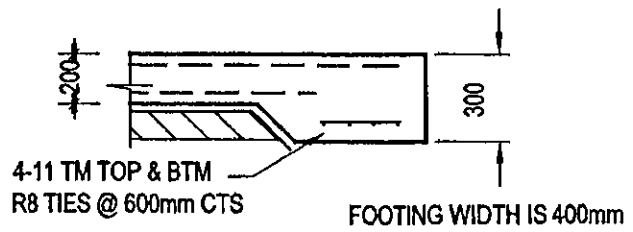
Job No:	Drawing No:	Rev:
40307	S03	-



SECTION 3
SCALE = 1:20 S02



SECTION 4
SCALE = 1:20 S02



EDGE THICKENING ET1

SCALE = 1 : 200

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.

A3

DOCUMENT CERTIFICATION
Date : 14/5/2004
Michael Kelett.....
(For MtK Consulting)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, C.P.Eng
Institute of Engineers Membership No. 642185
I hereby state that this drawing is in compliance with the conditions of the development consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

MTK Consulting
Structural, Civil, Stormwater
ABN 58 605 578 841
PO Box: 703
DEE WHY NSW 2099
Ph: (02) 9999 6922 Fax: (02) 9979 5263
e-mail : mtk@summit.net.au

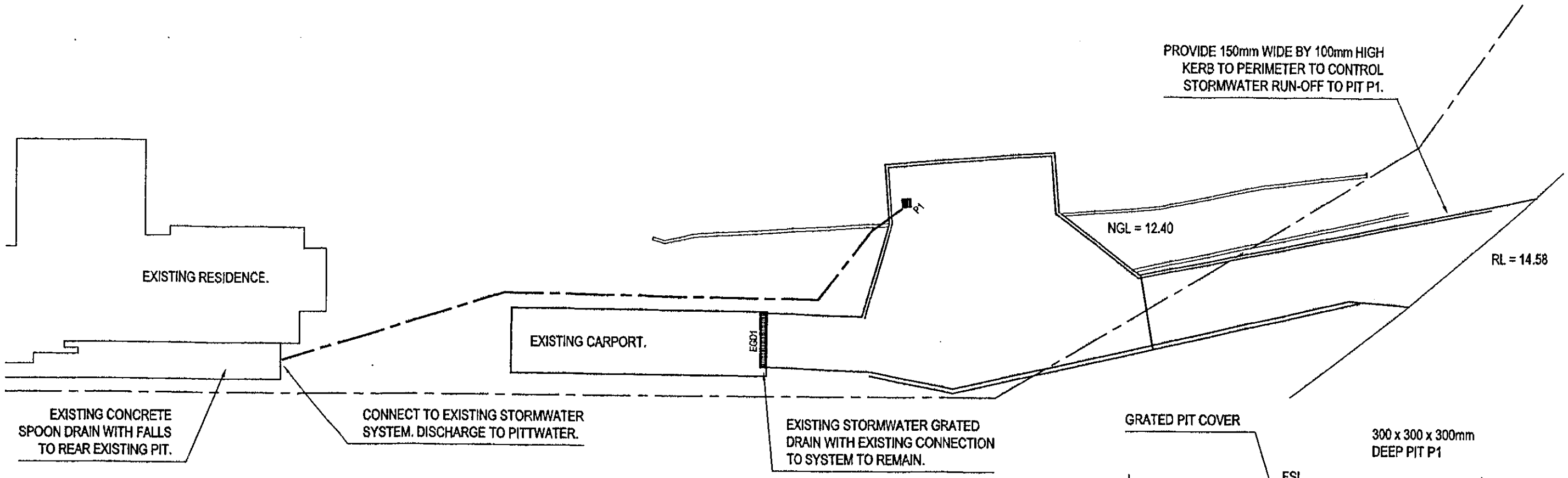
Project: PROPOSED WORKS at: 60 HUDSON PARADE CLAREVILLE

Drawing Title: DRIVEWAY DETAILS

Date:	Rev:	Amendment:

Date:	Design:	Drawn:
MARCH 2004	M.K.	M.K.

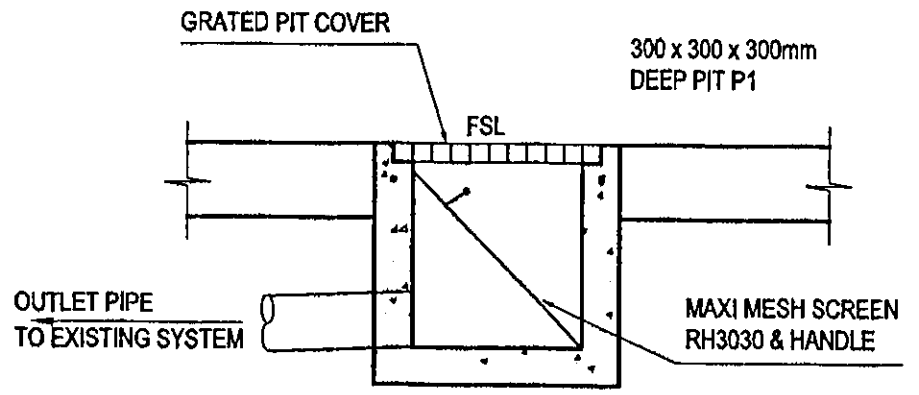
Job No:	Drawing No:	Rev:
40307	S04	-



SITE PLAN

SCALE = 1 : 200

ALL NEW STORMWATER PIPES ARE TO BE 100mm DIA SEWER GRADE uPVC PIPES ONO.
DISCHARGE FROM GD1 AND PIT P1 TO BE PIPED DIRECTLY TO THE EXISTING SYSTEM.
PROVIDE FALLS TO PIT P1 AND EXISTING GRATED DRAIN.
DRAWING TO BE READ IN CONJUNCTION WITH THE PROPOSED LANDSCAPE PLAN, ARCHITECTURAL PLAN AND THE SURVEY DRAWING.
REFER TO DRIVEWAY LONG-SECTION FOR LEVELS ON ARCHITECTURAL PLAN.



PIT P1

SCALE = 1 : 20

NOTES: STORMWATER

1 - ALL PIPES TO BE 100mm Ø SEWER GRADE UNLESS NOTED OTHERWISE.
2 - ALL PIPES TO BE uPVC TO AS 1254-1973 UNLESS NOTED OTHERWISE.
3 - ALL DOWN PIPES TO BE LAYED AT 2 % MIN GRADE UNLESS NOTED OTHERWISE.
4 - ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.M.D.D. BELOW PAVEMENTS.
(NO COMPACTION REQUIRED BELOW LANDSCAPING)
COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM.
BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN. TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED.
5 - DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK.
6 - PROVIDE CLEANING EYES AT ALL DOWNPIPES.
7 - ALL PITS TO BE PRECAST OR CAST INSITU UNLESS NOTED OTHERWISE.
CAST INSITU PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE.
WALLS TO BE REINFORCED WITH 1 Y12 TOP TIE UNLESS NOTED OTHERWISE.
CAST INSITU PITS GREATER THAN 1000 DEEP TO BE MINIMUM 900x600 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH Y12 AT 300 EACH WAY UNLESS NOTED OTHERWISE.
8 - ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEP IRONS AS PER COUNCIL STANDARDS.
9 - ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS.
10 - PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO EPA GUIDELINES AND COUNCIL SPECIFICATIONS. ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION OF THE SITE TO COUNCIL SATISFACTION.
11 - ALL LEVELS SHOWN ARE TO AHD
12 - ENSURE ALL PITS AND STORMWATER LINES ARE CLEAR OF EXISTING TREES AND TREE ROOTS.
13 - ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO uPVC.

A3

DOCUMENT CERTIFICATION
Date : 14/5/2009
Michael Kelett.....
(For MK Consulting)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, C.P.Eng
Institute of Engineers Membership No. 642185
I hereby state that this drawing is in compliance with the conditions of the development consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

MTK Consulting
Structural, Civil, Stormwater
ABN 58 605 578 841
PO Box: 703
DEE WHY NSW 2099
Ph: (02) 9999 6922 Fax: (02) 9979 5263
e-mail : mtk@summit.net.au

Project:
PROPOSED WORKS
at: 60 HUDSON PARADE
CLAREVILLE

Drawing Title:
STORMWATER PLAN

Date:	Rev:	Amendment:

Date:	Design:	Drawn:
MARCH 2004	M.K.	M.K.

Job No:	Drawing No:	Rev:
40307	D01	-