

Summary File ONLY

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**IT IS BROWSABLE ON-SCREEN ONLY AND IS PROVIDED
FOR YOUR INFORMATION TO DECIDE WHETHER TO
BECOME A PROSPECTIVE TENDERER ONLY**

Note: This file may contain a brief scope statement, or an extract from the RFT documents, or a full exhibited copy – depending on the specific circumstances.

To participate in this tender process you **MUST** first download or order a full copy of the Request for Tender (RFT) documents, including the responsible components, and any addenda issued to date.

To do this return to the RFT web page on this web site and copy the RFT documents to your own computer or network – the blue “**DOWNLOAD A SOFT COPY**” link at the bottom provides access to the page from which you can do this.

NSW Department of Environment and Climate Change

Request for Tenders (RFT)

Document

FOR

PROPOSED NEW COTTAGE

MILDENHALL

CONTRACT NO/ RFT NO: DECC-187-2008

AUGUST 2008

**TENDER CLOSING – Date/Time is:
By 9.30am on Tuesday 2 September, 2008**

CONSULTANTS:

GRAEME BARR ARCHITECTS
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LENNOX HEAD NSW 2478
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F 0266877973
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E graemebarr@graemebarr.com

Graeme Barr, Nominated Registered Architect, #4244

PHILIP WALLACE ENGINEER
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AMENDMENTS:

Amendment Number	Description	Date
A	Paving section for tendering to be itemized page 8	5/8/2008

**Minor Works Contract
Version 1.2 September 2006**

**CONDITIONS OF TENDERING - GENERAL INFORMATION FOR
TENDERERS**

The RFT documents consist of:

Conditions of Tendering which describe the conditions for tender submission and the tender process. The Conditions of Tendering will not form part of any Contract. The Conditions of Tendering also describe evaluation criteria to be used in selecting the best tender. You should consider and address the evaluation criteria when developing and submitting your tender.

Tender Form which is to contain details about the Tenderer and a commitment to the rates/prices tendered with a schedule of rates tender process. Rates and/or lump sum prices are to be provided for items on a Schedule of Rates form, which is to be submitted with the Tender Form.

Schedule of Rates which is to contain the tendered rates for individual items of work that require quantity measurement for payment purposes, and prices for lump sum items which require verification of full or partial completion to enable payment.

Other Tender Schedules which are tender schedules, other than the above, you may be required to complete with your tender. These have been designed to make completing and evaluating tenders easier. If you want your tender to be considered and fully evaluated you must complete these forms accurately and thoroughly.

Contract Information which contains key details of the proposed Contract such as the name and address of the Principal and the Principal's Representative, completion time, payment methods and other details.

General Conditions of Contract which are the required General Conditions of Contract for the NSW Department of Environment and Climate Change related contracts. If you tender based on other conditions of contract, your tender may not be considered.

Contract Schedules which contain forms and information that add to the General Conditions of Contract.

Technical Specification which provides the technical requirements for any Contract and descriptions of the work required under any Contract. You should take care to show in your tender that you are capable of meeting the Specification in carrying out the work under the Contract.

Drawings which further describe the work under any Contract, and may be bound into one volume with the other tender documents, or provided as a separate volume.

Appendices which, where applicable, are other documents referred to in the body of the other tender documents.

The following checklist is provided to guide your final check before you lodge your tender:

- have you read the information, including any Addenda, thoroughly?
- have you contacted the Contact Person about any information you don't understand or to obtain any extra information needed?
- have you completed the Tender Form and any required Tender Schedules thoroughly and accurately?
- do you have the necessary insurances and other capabilities and capacities needed to carry out the work under any Contract?
- have you included all relevant information in your tender?

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CONDITIONS OF TENDERING

1. Contact Person	<p>Refer requests for clarification, information or advice regarding these tender documents only to the Contact Person:</p> <p>Name: Graeme Barr Architects, Graeme John Barr nominated registered architect 4244.</p> <p>Telephone: 0266877973</p> <p>Facsimile: 0266877973</p> <p>If before the closing date, it becomes evident that there is:</p> <ul style="list-style-type: none"> - a discrepancy in the tender documents; - an omission in the information provided; or - information arising out of inquiries should be made available to all Tenderers, <p>the Principal will provide a written update to all recipients of the tender documents by way of an Addendum.</p>
2. The Works	Refer to the Extent of Works item in the Contract Information.
3. Site access	<p>Tenderers and their agents or representatives must obtain permission to inspect the Site from the Contact Person at least 48 hours prior to requiring access to the Site.</p> <p>Contact Mr Sean Court Ph 66209300</p>
4. Other Park activities	<p>The Site is within the Park indicated in the tender documents, and the Park will continue to operate normally during the carrying out of the Works.</p> <p>Normal operations include:</p> <ul style="list-style-type: none"> - access to some visitor areas by the public; <p>day to day access to and maintenance of roads, trails, tracks and buildings by Park staff and various contractors; and</p> <p>movement of both Park and public motor vehicles, including heavy plant, cars, trucks and buses.</p>
5. Pre-tender meeting	Not Applicable.
6. Acceptable legal entities	<p>The Principal contracts only with recognised and acceptable legal entities having appropriate financial assets. The Principal does not contract with companies under any form of external administration.</p> <p>Tenders submitted by an unincorporated business such as a sole trader, partnership or business name must identify the legal entity that proposes to enter any Contract.</p> <p>A tender from a Tenderer that is a trustee or other organisation considered to need more working capital may only be considered by the Principal where the Tenderer undertakes to:</p> <ul style="list-style-type: none"> - provide additional security in the form of Contract Schedule 1 – Form of Unconditional Undertaking, from a financial institution approved by the Principal, for an amount up to 20% of the Contract Sum; and - if a trustee, provide an undertaking that the Tenderer will ensure, for the duration of the Contract, the total value of the trust beneficiaries' loans to the trustee is always greater than the total value of trust beneficiaries' loans from the trustee. <p>If the Principal requires an undertaking, the Principal will advise the Tenderer of the amount required, and the Tenderer must provide to the Principal a signed statement as follows (without the undertaking relating to loans for Tenderers other than trustees):</p> <p>'If (insert the legal name of the Tenderer) is awarded Contract Number (insert the contract number) for (insert the contract description) it will provide additional security in the amount of (insert the security amount advised by the Principal) in accordance with clause 65 of the General Conditions of Contract, and it undertakes to ensure that, for the duration of the Contract, the total value of the trust beneficiaries' loans to the trustee is always greater than the total value of trust beneficiaries' loans from the trustee.'</p> <p>Failure to provide the signed statement may result in the Tenderer's tender being passed over.</p>
7. Submission of tenders	<p>Lodge the Tender Form, Tender Schedules and any other information required:</p> <p>Electronic Tender Box for RFT DECC-187-2008 at https://tenders.nsw.gov.au</p> <p>Or in a sealed envelope addressed to Department of Environment and Climate Change, Parks and Wildlife Group, Cape Byron Trust, Tender Box, National Parks and Wildlife Offices, Tallow Beach Rd, Byron Bay.</p> <p>Tenders must be in a sealed envelope clearly marked Contract No: CONTRACT NO. DECC-187-2008, ie with the subcontract numbers being tendered upon written after the Contract Number)</p> <p>by the time and date shown on the cover page.</p>

	Tenders lodged by facsimile or e-mail will not be considered.
8. Documents to be lodged	The following documents must be completed and submitted by the Tenderer: <ul style="list-style-type: none"> - Tender Form; and, - Schedule of Rates
9. Alternative tenders	The Principal may consider alternative tenders, provided the alternative tender meets the scope, functional intent and design intent described in the tender documents. Where such an alternative tender is proposed, a detailed description of the alternative must be submitted, stating clearly the manner in which it does not comply with the detailed requirements of the tender documents. Alternative tenders will not be considered unless the Tenderer has also submitted an acceptable conforming tender.
10. Late tenders	In accordance with the NSW Government <i>Code of Practice for Procurement</i> , late tenders will only be considered when it is clear that there is no possibility of the integrity and competitiveness of the tendering process being compromised. Copies of the <i>Code of Practice for Procurement</i> may be obtained at: http://www.treasury.nsw.gov.au/procurement/cpfp_ig.htm .
11. Evaluation of tenders	<p>By tendering, the Tenderer agrees that the Principal may gather, monitor, assess and communicate information about the Tenderer's performance and capacity.</p> <p>All tenders will be evaluated using some or all of the following criteria:</p> <ol style="list-style-type: none"> 1. Conformity with the tender documents, including allowed alternatives, delivery period and quality proposed; 2. Lump sum price(s) and/or any rates, and value for money; 3. Demonstrated relevant experience and previous performance, and ability to perform within set time frames; 4. Proposed innovation, approach and methodology, including extent of recycled or salvaged materials, plant and equipment identified for incorporation into the Works; 5. Tenderer's financial capacity (as a pass/fail criterion); 6. Tenderer's capacity and ability to complete the work, including proposed management, organisation, subcontractors, personnel, management systems/practice and current commitments; 7. Construction Time (short construction time will be preferred); 8. Knowledge of the local environment; 9. Principal's administration costs; and <p>When a scoring system is used to assist in tender evaluation, the ratio of price to non-price criteria will be 60:40.</p> <p>If required, submit additional information, by the stipulated date and time, to allow further consideration of the tender before any tender is accepted. Failure to meet this requirement may result in the tender being passed over or evaluated without the additional information.</p> <p>Tenders which do not comply with any requirement of, or which contain conditions or qualifications not required or allowed by the tender documents may be passed over.</p>
12. Appropriate trade licences	<p>All building, plumbing, sanitary/sewerage, gasfitting, communications and electrical work must be carried out by appropriately licensed/authorised persons.</p> <p>Tenderers must complete the SCHEDULE OF LICENCES ISSUED BY NSW OFFICE OF FAIR TRADING OR AUSTRALIAN COMMUNICATION AUTHORITY (ACA) and submit it with the Tender Form.</p>
13. Financial assessment of Tenderers	<p>NET WORTH (TOTAL ASSETS, EXCLUDING ANY ASSETS OF COMPANY DIRECTORS, LESS TOTAL LIABILITIES LESS INTANGIBLE ASSETS); EXCEEDS 5% OF THE CONTRACT SUM;</p> <p>CURRENT RATIO (RATIO OF CURRENT ASSETS TO CURRENT LIABILITIES) EXCEEDS 1; AND</p> <p>WORKING CAPITAL (CURRENT ASSETS LESS CURRENT LIABILITIES) EXCEEDS 10% OF THE CONTRACT SUM.</p> <p>By tendering, the Tenderer agrees that the Principal may gather, monitor, assess and communicate information about the Tenderer's financial position.</p>
14. Acceptance of tenders	<p>The Principal may accept a tender that does not conform strictly with all requirements of the tender documents.</p> <p>The Principal is not bound to accept the lowest or any tender. The Principal may pass over any tender which does not comply with any requirement of, or which contain conditions or qualifications not required or allowed by, the tender documents. No qualification or departure from a condition is accepted unless the Principal gives an acceptance or formal agreement in writing.</p> <p>A tender is not accepted until notice in writing of acceptance by the Principal is handed to the Tenderer or is sent by prepaid post to, or left at the address stated in the Tender Form, or transmitted by facsimile to the Tenderer's facsimile number.</p>

	Acceptance of any tender will also involve the issue of an official purchase order, which is required by the Principal's computerised financial and payment system.
15. Long service levy	Tenderers' attention is drawn to clause 22, General Conditions of Contract. The successful Tenderer must pay to the Building and Construction Industry Long Service Payments Corporation or the Corporation's agent the amount of the long service levy payable in respect of the building and/or construction work under the <i>Building and Construction Industry Long Service Payments Act, 1986</i> ; and produce to the Principal's Representative the document evidencing payment of the levy.
16. NSW Government Code of Practice for Procurement	The Tenderer must comply with the NSW Government <i>Code of Practice for Procurement</i> . Lodgement of a tender is evidence of the Tenderer's agreement to comply with the <i>Code</i> for the duration of any Contract that may be awarded.
17. Environment and cultural heritage	<p>General The successful Tenderer must use work practices and procedures that ensure that no damage occurs to flora, fauna or cultural and Aboriginal heritage artefacts.</p> <p>Animals The Tenderer is reminded that bringing animals into a National Park or other protected site is an offence under the <i>National Parks and Wildlife Act, 1974</i>. Handlers/owners of animals will be subject to the law enforcement processes of the <i>Act</i>, including issue of infringement notices and immediate removal of the animal and animal handler/owner from the protected site.</p> <p>Activity Approval A Review of Environmental Factors has been completed and an Activity Approval has been obtained by the Principal.</p> <p>The Activity Approval Conditions are attached as Appendix 1. These conditions will form part of any Contract and must be observed, unless they are specifically amended in writing by the Principal.</p>
18. Occupational Health and Safety Management	<p>The successful Tenderer must comply with the management requirements specified in clause 53, General Conditions of Contract.</p> <p>Submit with the tender details of any OH&S fines and prosecutions pertaining to the Tenderer or any proposed subcontractors that are current or were incurred during the last three years.</p> <p>Provide a copy of a site-specific OH&S/safety management plan implemented with a comparable contract within the last twelve months.</p>
19. Environmental management	The successful Tenderer must comply with the environmental management requirements specified in clause 56, General Conditions of Contract.
20.	Not applicable
21. Exchange of information between Government agencies	<p>The Tenderer authorises the Principal and its employees and agents to make information concerning the Tenderer available to other NSW Government agencies or local government authorities. Such information may include, but is not limited to, any information provided by the Tenderer to the Principal and any information relating to the Contractor's performance under any Contract.</p> <p>The Tenderer acknowledges that any information about the Tenderer from any source, including substantiated reports of unsatisfactory performance may be taken into account by the Principal and NSW Government agencies in considering whether to offer the Tenderer future opportunities for NSW Government work.</p> <p>The Principal regards the provision of information about the Tenderer to any NSW Government agency or local government authority as privileged under Section 22 of the <i>Defamation Act 1974</i>. The Principal and the State of NSW will reject claims in respect of any matter arising out of the provision or receipt of such information, including any claim for loss to the Tenderer arising out of the communication.</p>
22. Goods and Services Tax	<p>The prices and rates tendered must include Goods and Services Tax (GST) where it is payable. The tender must identify and state the value of any GST Free or Input Taxed Supplies to be made under any Contract. A Tenderer that wishes to enter into a Voluntary Agreement for withholding Pay As You Go taxation must say so in the tender and provide the information required for the approved form of a Voluntary Agreement as required by the <i>A New Tax System (Pay As You Go) Act 1999</i>.</p> <p>The prices and rates from Tenderers not registered for GST, or who advise in their tender that they wish to enter into a Voluntary Agreement for withholding Pay as You Go taxation, will be weighted by a 10% loading in assessing tender price relativity.</p>
23. Protection of privacy	<p>The Tenderer warrants, in respect of any personal information provided in its tender or any Contract arising from this tender, that the information is accurate, up to date and complete, and that individuals to which the personal information refers authorise its collection and are aware:</p> <ul style="list-style-type: none"> - that the information is being collected, and will be held by the Principal at the address shown on the Tender Form;

	<ul style="list-style-type: none"> - that the information is being collected for the purpose of evaluating tenders, and the administration of any Contract arising from those tenders, and may be made available to other NSW Government agencies or local government authorities for those purposes; - whether the supply of the information by the individual is required by law or is voluntary, and any consequences for the individual if the information (or any part of it) is not provided; and - of the existence of any right to access and correct the information.
24. Disclosure of information	<p>Details of any Contract awarded as a result of this tender process may be disclosed in accordance with NSW Government policy. Information that may be disclosed includes information about the Contract, the identity of the successful Tenderer, the price payable under the Contract, significant evaluation criteria and Contract provisions for re-negotiation (where applicable). Further details of this policy may be obtained from the Principal.</p> <p>The Principal may publish the identities of all Tenderers, but will not disclose other information included in an unsuccessful tender unless the relevant Tenderer agrees, or release is determined under the <i>Freedom of Information Act 1989</i> or is otherwise legally required.</p> <p>For contracts valued over \$100,000, the Principal will normally publish the names of Tenderers when tenders close, and the other information about the Contract specified above, on a noticeboard adjacent to the tender box or on a public noticeboard in the office in which tenders were lodged, and on the Department of Environment and Conservation/NPWS website http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Tenders, within 90 days after award of the contract. For other contracts the Principal will disclose the specified information on request.</p>
25. Industrial relations	<p>The successful Tenderer must plan and manage industrial relations in accordance with the NSW Government <i>Industrial Relations Management Guidelines</i>. A copy may be obtained at: http://www.construction.nsw.gov.au/publications.</p> <p>Submit when requested a list the Federal and NSW awards to which the Tenderer and proposed subcontractors are bound; and a list the enterprise, workplace or other enforceable industrial relations agreements to which the Tenderer is bound, and copies of those agreements.</p> <p>The successful Tenderer will, on request, be required to provide appropriate information to verify compliance with these awards, enterprise or workplace agreements and all other legal obligations relating to employment.</p> <p>When requested, demonstrate an understanding of the industrial issues that may affect any Contract and subcontracts and the approach proposed to deal with these issues, and describe the Tenderer's industrial relations management performance on recent projects with particular reference to such issues in a completed Tender Schedules – <i>Undertaking to Comply with Code of Practice and Implementation Guidelines</i>.</p>
26. Tenderer's responsibilities	<p>Tenderers shall have the responsibility to:</p> <ul style="list-style-type: none"> - not alter or change DEC tender document wording and or numbering in any way. The DEC reserves the right to exclude any bid not complying with this clause. - provide in the form of attachments all necessary additional information, with reference to each relevant section including a full statement of deviations or suggested alternatives.

TENDER FORM – RFT: DECC-187-2008

Location of Tender Closing Office: Tender Box, National Parks and Wildlife Service Office, Tallow Beach Rd, Byron Bay, NSW, 2481 or postage to Byron Coast Manager NPWS, Tallow Beach Rd, Byron Bay, NSW, 2481.

Electronic tender box: <https://tenders.nsw.gov.au>

Name of Tenderer
(in block letters):

A.B.N.
(if applicable):

Address:

Telephone number:

Facsimile number:

e-mail address:

hereby tender(s) to perform the work for
NOMINATE TENDER NAMES AND NUMBERS HERE

(CONTRACT NO. **DECC-187-2008**)

in accordance with the following documents:

Tender Form
Tender Schedules
Contract Information
General Conditions of Contract
Contract Schedules
Technical Specification
Drawings
Appendices

and Addenda numbers:

At the rates and prices in the attached Schedule of Rates, which include GST.

Signed for the Tenderer by:
(Authorised Officer)

In the Office Bearer capacity of:
Name (in block letters):

Dated this.....Day of

SCHEDULE OF RATES 1

(Submit with Tender Form)

Complete the Schedule by inserting the tendered rates under RATE or where Lump Sum appears, by inserting the tendered lump sum price amount for the items of work under AMOUNT. Where a rate is tendered, insert under AMOUNT the amount arrived at by multiplying the tendered rate by the quantity. The rates and lump sums tendered will form part of the Contract. Refer to clause 46, Application of Schedule of Rates, General Conditions of Contract. The correct extended amounts and total will be used to assess tenders. The rates and lump sums must include GST. Note the addition of these items is to total the complete works.

Description /Tender Parts (Refer to all items in the Specifications. Drawings and the Referenced Documents. All items are to include specification preliminaries, general items, profit and GST. Note the addition of these items is to total the complete works.) Note: The Principal may select only Parts of the Tender	Amount (Excluding GST)
1 General Requirements (including works supervision and coordination, insurances, plant and equipment, temporary services, requirements of authorities, etc);	
2 Site Preparation;	
3 Concrete Construction;	
4 Masonry Construction;	
5 Timber and Steel construction itemized as follows:	
a. Labour;	
b. Supply and delivery of timber framing and fascias/barges;	
c. Supply and delivery of steel;	
d. Supply, delivery and installation of bamboo flooring;	
e. Supply and delivery of hardware;	
6 Insulation and sarking itemized as follows;	
a. Wall insulation and sarking supply and delivery;	
b. Wall insulation and sarking installation;	
c. Roof insulation and sarking supply and delivery;	
d. Roof insulation and sarking installation;	
7 Roofing itemized as follows:	
a. Roofing, rainwater gutters and downpipes and trims supply, delivery and installation;	
b. Compressed awnings supply, delivery and installation;	
8 Cladding (including interior FC products) itemized as follows:	
a. Claddings supply and delivery;	
b. Claddings installation;	
9 Doors and Windows itemized as follows:	
a. Windows and doors supply;	
b. Installation of the windows and doors	
c. Hardware supply, delivery and installation by a nominated subcontractor (do not include a cost for this but allow for the coordination in 1 General);	By others
10 Lining itemized as follows:	
a. Supply, delivery and installation of linings;	
b. Supply and delivery of trims;	
c. Installation of trims;	

Description /Tender Parts	Amount
(Refer to all items in the Specifications. Drawings and the Referenced Documents. All items are to include specification preliminaries, general items, profit and GST. Note the addition of these items is to total the complete works.) Note: The Principal may select only Parts of the Tender	(Excluding GST)
11 Block and Tile finishes (including waterproofing);	
12 Floor Coatings and Coverings (preparation only);	
13 Painting;	
14 Timber Fixtures itemized as follows:	
a. Supply, delivery and installation of kitchen and bathroom cupboards;	
b. Supply, delivery and installation of bedroom, linen and services cupboards (not curtains);	
c. Supply, delivery and installation of the external bbq bench;	
d. Supply, delivery and installation of the grabrails;	
15 Plumbing and Drainage:	
a. Supply and delivery of the fittings;	
b. Installation of the fittings;	
c. Supply, delivery and installation of the hot water heater and plumbing;	
d. Supply, delivery and installation of the sanitary and drainage systems (including pump out to amenities block but not the landscape clearing of the path for the pipe from Geoff's Shed to the Amenities Block);	
e. Supply, delivery and installation of the water storage tank;	
16 Electrical Installations itemized with the following options;	
a. Retain existing power pole;	
b. Move power pole beside earth bank with combined meters;	
c. Move power pole beside Lighthouse Rd with combined meters;	
17 Paving and Roads;	
a. Exposed Aggregate and grasscrete paving;	
b. Access road paving, and gutter and drainage;	
18 Landscaping (turf only and planting by the Principal);	
19 Appliances, Fixtures, PC Sums and Provisional Sums (itemize each section);	
a. Shower screens	
b. Mirrors	
c. Stone Panel in Living Rm	\$300
d. Contingency Sum	\$4900
(Included 20- Internal Finishes Schedule and 21-Referenced Documents)	
Subtotal	
GST	
TOTAL INCLUDING GST	

Signed for the Tenderer by:
(Authorised Officer)

In the Office Bearer capacity of:

Name (in block letters):

SCHEDULE OF LICENCES ISSUED BY NSW OFFICE OF FAIR TRADING OR AUSTRALIAN COMMUNICATIONS AUTHORITY (ACA)

(Submit when Requested by Principal)

Provide details of the relevant licence issued by the NSW Office of Fair Trading or the Australian Communications Authority (as applicable), for the person responsible for the carrying out and certifying the relevant building, plumbing/draining, gasfitting, electrical and telephone/radio/communications work.

Licensed Builder

Name:

Address:

.....

Licence Number:

Expiry date:

Licensee's Signature:

Licensed Electrical Contractor

Name:(To be advised when successful nominated subcontractor is selected).....

Address:

.....

Licence Number:

Expiry date:

Licensee's Signature:

Licensed Plumbing Contractor

Name:(To be advised when successful nominated subcontractor is selected).....

Address:

.....

Licence Number:

Expiry date:

Licensee's Signature:

SCHEDULE OF EXPERIENCE

(Submit with Tender Form)

List recent projects of comparable size and complexity to the work under the Contract, clearly identifying for each project, the Tenderer's (and proposed subcontractors') role in the project, the value and duration of the project role and the date the project role was completed.

Note where the projects were on sites of comparable high cultural and social heritage significance.

Include the Tenderer's record of working on comparable environmentally sensitive sites.

Signed for the Tenderer by:

.....
(Authorised Officer)

In the Office Bearer capacity of:

Name (*in block letters*):

SCHEDULE OF TENDERER'S REFEREES

(Submit with Tender Form)

List the names, titles and contact address and telephone numbers of a least 2 referees who can attest to the performance of the Tenderer (and proposed subcontractors) with the projects listed on the Schedule of Experience.

Signed for the Tenderer by:

.....
(Authorised Officer)

In the Office Bearer capacity of:

.....

Name (*in block letters*):

.....

SCHEDULE OF PERSONNEL, MANAGEMENT AND SYSTEMS

(Submit with Tender Form)

List key personnel who are proposed for involvement in any Contract (including proposed key subcontractor personnel), clearly identifying each person's proposed role, and providing their Curricula Vitae.

Describe the management and subcontractor structure proposed.

List and briefly describe the management systems to be used.

Signed for the Tenderer by:

.....
(Authorised Officer)

In the Office Bearer capacity of:

Name (*in block letters*):

SCHEDULE OF RECYCLED/SALVAGED MATERIALS, PLANT OR EQUIPMENT (Submit with Tender Form)

Provide details of recycled/salvaged materials that may be incorporated into the Works. Add further items and details where relevant.

Note: Recycled materials will be considered if proposed to be used should be listed here:

Signed for the Tenderer by:

.....
(Authorised Officer)

In the Office Bearer capacity of:

.....

Name (*in block letters*):

.....

SCHEDULE OF FINANCIAL ASSESSMENT INFORMATION

(Submit when Requested by Principal or Financial Assessor)

Provide documents and information listed below in accordance with clause 13, Financial assessment of Tenderers, Conditions of Tendering.

1. Financial Statements for last three years for the entity under consideration, including:
 - i) Balance Sheets;
 - ii) Profit and Loss Statement;
 - iii) detailed Profit and Loss Statement;
 - iv) statement of Cash Flows;
 - v) notes to and Forming Part of the Accounts;
 - vi) an Accountant's Report; and
 - vii) where existing, Auditor's Reports.
 Consolidated accounts of a parent organisation or group to which the entity belongs are not acceptable.
2. Where latest financial statement is more than 6 months old, the latest management report showing:
 - i) a trading statement;
 - ii) a profit and loss statement; and
 - iii) a trial balance.
3. Where the company is required to lodge audited financial statements with ASIC, copies of these statements for the last three years.
4. Where any financial statement supplied is not audited, copies of the entity's tax returns for last three years.
5. A letter from the Tenderer's banker providing details of overdraft and guarantee facilities including:
 - i) Bank, Branch, and Account Names;
 - ii) type and limit of bank overdraft facility;
 - iii) type and limit of bank guarantee facility;
 - iv) current bank overdraft balance;
 - v) number and amount of bank guarantees outstanding; and
 - vi) details of other bank funding facilities available to the Tenderer, such as term loans, lines of credit, commercial bills and other debt instruments.
6. Current and projected cash flows for all work on hand.
7. Forecast budget for forthcoming financial year including Revenue and Profit and Loss.
8. Names and contact numbers of:
 - i) major suppliers; and
 - ii) major subcontractors.
9. Details relating to the Tenderer's history and Directors' Profiles.

UNDERTAKING TO COMPLY WITH CODE OF PRACTICE AND IMPLEMENTATION GUIDELINES

(Submit when Requested by Principal)

The Tenderer, if awarded the Contract, will comply with the NSW Government *Code of Practice for Procurement* in all respects, including, but not limited to, general behaviour and industrial relations management.

The Tenderer, if awarded the Contract, will, on request, provide appropriate information to verify compliance with the awards, enterprise or workplace agreements to which the Tenderer is bound, and all other legal obligations relating to employment.

Describe the industrial issues that may affect any Contract and subcontracts and the approach proposed to deal with these issues, and describe the Tenderer's industrial relations management performance on recent projects with particular reference to such issues.

Signed for the Tenderer by:

.....
(Authorised Officer)

In the Office Bearer capacity of:

.....

Name (*in block letters*):

.....

1. CONTRACT INFORMATION

The Principal is:	The Minister for the Environment for the State of New South Wales
The Contract Documents that constitute the Contract are:	<p>The following: -</p> <ol style="list-style-type: none"> 1. Tender Form and Tender Schedules 2. Contract Information 3. General Conditions of Contract 4. Contract Schedules 5. Technical Specification 6. Drawings 7. Appendices (including Appendix 1 - Activity Approval Conditions) 8. Principal's letter of acceptance (accepting a tender) and the Department of Environment and Climate Change purchase order, and any other documents referred to therein.
The Works to be carried out by the Contractor, subject to Variations under the Contract, are:	Cottage including drainage and road works.
The Site is:	As shown on the plan.
<p>Principal's Nominee is:</p> <p>For the purposes of clause 41, Disputes, General Conditions of Contract. The Principal may at any time appoint or change the person for any reason whatsoever by giving written notice.</p>	Graeme Barr Architects, Graeme John Barr, Nominated Registered Architect 4244, 4 Stonehenge Pl, Lennox Head NSW 2478
<p>Principal's Representative is:</p> <p>If no name is stated the Principal will name the person in writing within 14 days after the date of the Principal's letter of acceptance. The Principal may at any time change the person for any reason whatsoever by giving written notice.</p>	Sue Walker Area Manager Byron Coast Department of Environment and Climate Change Parks and Wildlife Group
<p>Submission of the Contractor's design</p> <p>If no period is stated it is 21 days before its use for construction.</p>	Contractor's design only required where specified.
<p>Contractor' professional indemnity insurance</p> <p>Refer to clause 29, Insurance of the Works and other insurance, General Conditions of Contract.</p>	The Contractor need not hold professional indemnity insurance.
<p>Time for possession of the Site</p> <p>If no time is stated it is 7 days after the date of the Principal's letter of acceptance.</p>	The date to give possession of sufficient of the Site is: 22/8/2008 (required start date).
<p>Completion time</p> <p>If no period is stated a reasonable period is to apply.</p>	<p>The period for Completion is to be nominated by the tenderer. Note: A quick construction time is preferred.</p> <p>Milestone 1: The supply of materials to the site by the Contractor - » calendar weeks after the Principal has accepted the tender.</p> <p>Milestone 2: Completion of all parts of the Works not included in any other Milestone - » calendar weeks after the Principal has accepted the tender.</p>

	Milestone 3: Provision of work as executed drawings, and operation & maintenance manuals - 2 calendar weeks from the Completion of Milestone 2.
Liquidated damages If no rate is stated common law damages will apply under clause 10, Completion, General Conditions of Contract.	The rate per day for liquidated damages is: see clause 10 .
Payment method If not stated monthly progress payments apply.	The method of payment will be by monthly progress payments.
Milestone Payment Schedule If no Milestones and percentages are stated, the Milestone is the whole of the Works and the percentage is 100% of the Contract Sum as adjusted under the Contract.	Not applicable:
Defects Liability Period If no period is stated then the law applies.	The Defects Liability Period, which commences at Practical Completion of the Works, is: 26 calendar weeks.
Security under clause 17 is: Refer to clause 17, Security for performance, General Conditions of Contract.	5% of the Contract Sum.
Security under clause 65 is: Refer to clause 65, Additional security and obligations for trustees, General Conditions of Contract.	If the Contractor is a trustee an unconditional bank guarantee of \$10000 is required.
Mobile plant and equipment made available by the Principal is:	Not Applicable

2. GENERAL CONDITIONS OF CONTRACT

A. GENERAL

1 Definitions	<p>1.1 NPWS means (formerly the NSW National Parks and Wildlife Service) the Parks and Wildlife Group of the NSW Department of Environment and Climate Change.</p> <p>1.2 Park means a national park, historic site, state conservation area, regional park, nature reserve, karst conservation reserve, Aboriginal area or other land reserved under the <i>National Parks and Wildlife Act 1974</i>, or any land acquired by the Minister under Part 11 of the <i>National Parks and Wildlife Act 1974</i>, and includes all roads and waters within the boundaries of any such park, site, area, reserve or land.</p> <p>1.3 Works means the whole of the work to be carried out and materials, equipment and services to be provided under the Contract.</p> <p>1.4 Contract Sum means:</p> <p>(a) where the Principal accepted a lump sum price, the lump sum;</p> <p>(b) where the Principal accepted lump sums and/or rates, the amount calculated by firstly multiplying the rates by their respective quantities in a Schedule of Rates and then adding those amounts and any lump sums,</p> <p>but excluding any additions or deductions which are made under the Contract.</p> <p>1.5 day means calendar day.</p> <p>1.6 Schedule of Rates means any schedule in the Contract stated to be a Schedule of Rates, and which shows rates payable for carrying out items of work described in the schedule and estimated quantities, and which may also include items payable with a lump sum.</p> <p>1.7 Site means the lands and other places made available to the Contractor by the Principal for the purpose of the Contract, as described in the Contract Information.</p> <p>1.8 Contractor means each of the persons named in the Contract Documents as the Contractor, and includes their executors, administrators, successors and assigns as appropriate.</p> <p>1.9 Milestones are parts of the Works, as described in the Contract Information.</p> <p>1.10 Completion means the stage in carrying out the Works when they have reached completion, and the Works are complete, and are capable of use for their intended purpose, and are free from any omissions or defects/non-conformances, and the Contractor has made good the Site and its surroundings.</p> <p>1.11 Defects Liability Period is as stated in the Contract Information and defined in clause 39.</p> <p>1.12 Variation is any change to the character, form, quality and extent of the Works directed in writing by the Principal's Representative.</p>
2 Principal's Representative	<p>2.1 The Principal will appoint the Principal's Representative, as named in the Contract Information or otherwise, who:</p> <p>(a) is authorised to exercise such authority of the Principal as is necessary under the Contract; and</p> <p>(b) will be the immediate point of contact with the Principal.</p> <p>2.2 The Principal will advise the Contractor in writing of any change of the Principal's Representative.</p> <p>2.3 The Principal's Representative may give the Contractor directions regarding the work under the Contract. The Contractor must comply with these directions.</p> <p>2.4 If the Principal's Representative gives the Contractor a direction orally in the first instance, the Principal's Representative will confirm it in writing as soon as practicable.</p> <p>2.5 The Principal's Representative may appoint an agent who may:</p> <p>(a) carry out any part of the role in addition to the Principal's Representative; and</p> <p>(b) give the Contractor directions in relation to that part.</p> <p>The Principal's Representative must notify the Contractor in writing the name of the agent and the extent of the agent's duties.</p>

3 Contractor's Representative	<p>3.1 The Contractor must notify the Principal's Representative in writing the name of the Contractor Representative or of any replacement. The Contractor's Representative must be acceptable to the Principal's Representative.</p> <p>3.2 Any directions given to the Contractor's Representative will be considered to be given to the Contractor.</p>
4 Standards of behaviour	<p>4.1 The Contractor must comply with the NSW Government <i>Code of Practice for Procurement</i>, which is available on the NSW Treasury website at: http://www.treasury.nsw.gov.au/procurement/procure-intro.htm.</p>
5 Standard of work	<p>5.1 The Contractor must carry out all work in accordance with the Contract and in accordance with all reasonable requirements of the Principal's Representative.</p> <p>5.2 The Contractor must supply materials, plant and equipment (which are new, free from defects/non-conformances and suitable for their purpose), and use standards of workmanship (including design) and work methods, which are in conformity with the Contract, the Building Code of Australia, relevant international/Australian Standards and law.</p> <p>5.3 The Contractor must complete the design of, and construct, the Works in accordance with the Principal's design and the further development of the Principal's design required under the Contract. Minor items not specifically identified in the Principal's design, which are needed for the satisfactory Completion of the Works, must be provided by the Contractor.</p> <p>5.4 The Contractor must comply with any direction of the Principal's Representative to:</p> <ul style="list-style-type: none"> (a) uncover and recover work; or (b) carry out additional testing or re-testing. <p>Compliance with the direction will be at the Contractor's cost unless the work uncovered, recovered, tested or re-tested is in conformity with the Contract, in which case the Principal's Representative will meet with the Contractor to decide on the reasonable costs payable to the Contractor. If they are unable to agree within 14 days after the meeting, the Principal's Representative will assess those costs.</p> <p>5.5 The Principal's Representative may notify the Contractor that the Principal elects to accept all or some of any defective/non-conforming work. The resulting reasonable increase or decrease in the value to the Principal of the Works, and any other reasonable loss or detriment suffered by the Principal, will be assessed by the Principal's Representative and the total amount gained paid to, or total loss deducted from the payments otherwise due to, the Contractor.</p> <p>5.6 The Principal's Representative may direct the Contractor to correct, including remove or replace, defective/non-conforming work (including during any Defects Liability Period) within the time specified by the Principal's Representative. If the Contractor does not correct the defective/non-conforming work within the time specified, the Principal's Representative may have the work corrected by others. The Principal's Representative will assess the reasonable costs of having the defective/non-conforming work corrected by others and the Contractor must pay the Principal those costs as a debt due by the Contractor.</p> <p>5.7 Notwithstanding clauses 5.2 and 11.2, the Principal will accept the incorporation into the Works of the recycled or salvaged materials, plant and equipment identified in any Schedule of Recycled/Salvaged Materials, Plant and Equipment in the Contract Documents.</p>
6 Appropriate trade licences	<p>6.1 All building, plumbing, sanitary/sewerage, gasfitting, telecommunications or electrical work must be carried out by appropriately licensed persons.</p>
7 Design by the Contractor	<p>7.1 The Contractor must develop the design of the Works provided by the Principal as is required to complete the design and construction of the Works, and when stated in the Contract Information progressively submit the completed design, comprising drawings, specifications, calculations and any statutory certificates required, to the Principal's Representative within the period stated in the Contract Information. The Contractor must not depart from the Principal's design, unless directed to by the Principal's Representative.</p> <p>7.2 The Contractor's completed design must comply with the Contract and be fit for the intended purpose of the Works which can be reasonably inferred from the Contract Documents.</p> <p>7.3 The Principal is not bound to check the Contractor's completed design for errors, omissions or compliance with the requirements of the Contract. The Principal is not liable to the Contractor for any claim whatsoever due to the Principal not detecting or notifying the Contractor of any errors, omissions or non-compliance with the requirements of the Contract in the Contractor's completed design.</p> <p>7.4 Except for the design provided by the Principal, responsibility for the completed design and its satisfaction of the Contract requirements remains solely with the Contractor and the Principal is relying on the Contractor's care, knowledge, skill and experience in carrying out this responsibility. The Contractor must grant to the Principal an irrevocable licence to use the Contractor's design for the Works. Such licence is also to include any subsequent repairs to, maintenance or servicing of (including the supply of replacement parts), or</p>

	additions or alterations to, the Works.
8 Site	<p>8.1 The Principal must give the Contractor possession of sufficient of the Site by the time stated in the Contract Information. If the Principal has not given the Contractor possession of the whole Site, the Principal will from time to time give the Contractor possession of such further parts of the Site as may be necessary to enable the Contractor to carry out the Works, but is not required to give the Contractor sole or uninterrupted possession of, or access to, the Site. The Contractor must implement a security system for the Site to prevent unauthorised entry to work sites, and give the Principal's Representative, agents and other authorised persons, and other authorised contractors reasonable and safe access to the Site.</p> <p>8.2 The Site is within a Park that will continue operating, and the Contractor must not prevent the Park from continuing to operate normally, during the carrying out of the Works. Normal operations include:</p> <ul style="list-style-type: none"> (a) access to some visitor areas by the public; (b) day to day access to and maintenance of roads, trails, tracks and buildings by Park staff and other contractors; and (c) movement of both Park and public motor vehicles, including heavy plant, cars, trucks and buses. <p>8.3 The normal occupants and other persons authorised by the Principal will continue in possession and occupancy of the areas of the Park not included in the Site.</p> <p>8.4 Access to the operating Park in order to complete the Works, must be achieved in full cooperation with, and with a minimum of disruption to, those using the Park.</p>
9 Site conditions	<p>9.1 If the Contractor discovers that the conditions on, about or below the Site differ from what ought to have reasonably been anticipated, the Contractor must inform the Principal's Representative immediately and, where possible, before the conditions are disturbed. The Contractor is not entitled to any extra payment for the different site conditions, except where the different conditions are such that the Principal's Representative directs the Contractor to carry out a Variation, and then clause 38, Variations, will apply.</p>
10 Completion	<p>10.1 The Contractor must begin work on the Site as soon as practicable after being given possession of sufficient of the Site, and carry out the work with due expedition and without undue delay.</p> <p>10.2 The Contractor must carry out the work during the hours set out in clause 51, Working hours and working days. However if the Contractor becomes aware of any situation that urgently requires remedial or protective work to prevent injury to any person or loss or damage to property, the Contractor must carry out that work immediately and notify the Principal's Representative.</p> <p>10.3 The Contractor must complete the Works within the period for Completion specified in the Contract Information as adjusted under the Contract. The Contractor must inform the Principal's Representative when, in the Contractor's opinion, the Works have reached Completion. The Principal's Representative will:</p> <ul style="list-style-type: none"> (a) determine if the Works have reached Completion, and if so, the date of Completion; and (b) give the Contractor written notice of the determination. <p>10.4 If the Contractor is delayed in reaching Completion then the Contractor must notify the Principal's Representative within 14 days after the commencement of the delay and meet with the Principal's Representative to determine the cause of delay. Where such a delay is caused by:</p> <ul style="list-style-type: none"> (a) a direction given by the Principal's Representative, except under: <ul style="list-style-type: none"> (i) clauses 5, Standard of work; or (ii) clause 40, Suspension of work, where the event giving rise to the direction was not beyond the control of the Contractor; or (b) a breach of the Contract by the Principal; or (c) any event beyond the control of the Contractor, <p>the period for Completion must be extended.</p> <p>10.5 If the Principal's Representative and the Contractor do not agree on an extension to the period for Completion within 14 days of the meeting to agree the cause and extent of delay, the Principal's Representative will assess a reasonable extension.</p> <p>10.6 The Principal's Representative may for any reason and at any time extend the period for Completion.</p> <p>10.7 If the Contractor does not achieve Completion of the Works by the last day of the adjusted period for Completion then the Contractor must pay to the Principal liquidated damages from, but excluding, that date to and including the date the Works are completed at the rate stated in the Contract Information. Where no rate is stated common law damages will apply.</p> <p>10.8 The Contract conditions apply separately to each part of the Works and work under the Contract identified in the Annexure as a Milestone, and references to the Works and work under the Contract, and to so much of the Works and work under the Contract as is included</p>

	<p>in each of the relevant Milestones identified.</p> <p>10.9 If a part of the Works and/or work under the Contract has reached Completion, but another part has not reached Completion, and the parties cannot agree upon the creation of another Milestone, the Principal's Representative may determine that the respective parts are Milestones.</p>
11 Equipment and materials incorporated into the Works	<p>11.1 The Contractor must supply at the Contractor's own cost all materials, labour and equipment required for carrying out the Works. The Contractor must use only equipment and materials that are:</p> <p>(a) in accordance with the Contract; or</p> <p>(b) otherwise acceptable to the Principal's Representative.</p> <p>11.2 The Contractor warrants that all materials and equipment that the Contractor supplies are:</p> <p>(a) suitable for their purpose;</p> <p>(b) subject to clause 5.7, in new condition and capable of safe use;</p> <p>(c) of the required quality; and</p> <p>(d) otherwise comply with the Contract.</p> <p>11.3 The Contractor must ensure that the benefit of any warranty that the Contractor obtains from a manufacturer or supplier of the materials and equipment incorporated into the Works is extended to the NSW Department of Environment and Conservation.</p>
12 Use of mobile plant and equipment made available by the Principal	Not applicable.
13 Safety of mobile plant and equipment	<p>13.1 All mobile plant and equipment, whether provided by the Principal or the Contractor must be in a safe and reliable condition, and meet all relevant safety requirements, regulations and standards.</p>
14 The security of Principal's property	<p>14.1 Every person the Contractor employs for carrying out the Works must wear an identification badge acceptable to the Principal's Representative whenever they are on the Site.</p> <p>14.2 The Contractor must:</p> <p>(a) keep safely in a manner satisfactory to the Principal's Representative any key the Principal's Representative gives the Contractor;</p> <p>(b) return such keys to the Principal's Representative when asked;</p> <p>(c) notify the Principal's Representative immediately if any such key is lost; and</p> <p>(d) ensure that the keys are not copied.</p> <p>14.3 The Contractor must ensure that all gates on the Principal's property made accessible to the Contractor are closed and locked as directed by the Principal's Representative.</p>
15 Complying with law	<p>15.1 The Contractor must comply with all laws and notices from statutory authorities in carrying out the Works. The Contractor must give all notices necessary to comply with these requirements, and pay all necessary fees, charges and other imposts, other than those notices and imposts advised by the Principal as to be given or paid (or given or paid) by the Principal. The Contractor must obtain at its own cost all licences, authorisations, approvals and consents necessary to carry out the Works not specified in the Contract as having been obtained by the Principal.</p> <p>15.2 If the Contractor finds that a condition in any document forming part of the Contract conflicts with any law or notice, the Contractor must notify the Principal's Representative setting out what the Contractor advises is necessary to enable the Contractor to comply. As soon as practicable the Principal's Representative must give the Contractor appropriate directions to enable the Contractor to continue the work lawfully.</p> <p>15.3 Any change to the Works resulting from these directions will be regarded as a Variation.</p>
16 Use of dangerous substances	<p>16.1 The Contractor must not store or use any dangerous substance in the Principal's premises without the written consent of the Principal's Representative.</p> <p>16.2 The Contractor must dispose of any dangerous substances and their containers properly away from the Principal's property.</p>
B. SECURITY AND PAYMENT	
17 Security for performance	<p>17.1 The Contractor must provide security to the Principal for the due and proper carrying out of the work under the Contract of the amount stated in the Contract Information and in accordance with this clause 17.</p> <p>17.2 The security must be in the form of Contract Schedule 1 – Form of Unconditional</p>

	<p>Undertaking, provided by a financial institution approved by the Principal.</p> <p>17.3 The Contractor must provide the security within 14 days of the date of the Principal's letter of acceptance.</p> <p>17.4 If the Contractor fails to provide the security on time, or the security is insufficient, the Principal may:</p> <p>(a) withhold 10% of each payment otherwise due to the Contractor under clause 18, Payments, up to the amount of security stated in the Contract Information; or</p> <p>(b) give the Contractor notice under clause 35, Default.</p> <p>17.5 Please note GST does not apply to Security</p>
18 Payments	<p>18.1 The Contract Information states the payment method applicable, which is either monthly progress payments or milestone payments.</p> <p>Milestone payments</p> <p>18.2 If milestone payments apply, the Contractor must give the Principal's Representative a written claim for payment when Completion of a Milestone specified in the Contract Information is reached (refer to the Milestone Payment Schedule item). The claim must identify the Milestone, the amount claimed, how the amount is calculated, deductions to which the Principal is entitled and any payment for additions claimed, with the legal and factual basis of the claim, for extra costs or other amounts to which the Contractor is entitled under, or in connection with, the Contract.</p> <p>18.3 When Completion of a Milestone is reached, the amount which the Contractor is entitled to claim and be paid is the sum of:</p> <p>(a) for work for which the Principal accepted rates, an amount calculated by applying the rates to the applicable quantities of work carried out for the Milestone;</p> <p>(b) for work for which the Principal accepted a lump sum, the percentage of that lump sum stated in the Contract Information for the Milestone;</p> <p>(c) for any additions for which the Principal has agreed or assessed an amount in writing, or for which an amount has been finally determined under clause 41, Disputes, an instalment of the amount approved or determined that reflects the value of the additions carried out,</p> <p>less payments previously made (including under clause 41, Disputes), costs payable by the Contractor to the Principal and deductions to which the Principal is entitled under, or in connection with, the Contract, including but not limited to, retention moneys, liquidated damages and other damages whether liquidated or unliquidated.</p> <p>Monthly payments</p> <p>18.4 If monthly progress payments apply, the Contractor must give the Principal's Representative a written claim for payment which must identify the month, the work carried out, the amount claimed, how the amount is calculated, deductions to which the Principal is entitled and any payment for additions claimed, with the legal and factual basis of the claim, for extra costs or other amounts to which the Contractor is entitled under, or in connection with, the Contract.</p> <p>18.5 The amount which the Contractor is entitled to claim for a monthly progress payment and be paid is the sum of:</p> <p>(a) for work for which the Principal accepted rates, an amount calculated by applying the rates to the applicable quantities of work carried out to the date of the claim;</p> <p>(b) for work for which the Principal accepted a lump sum, the proportion of the lump sum equal to the proportion of the applicable work completed to the date of the claim;</p> <p>(c) for any additions for which the Principal has agreed or assessed an amount in writing, or for which an amount has been finally determined under clause 41, Disputes, the amount approved or determined for work carried out to the date of the claim,</p> <p>less payments previously made (including under clause 41, Disputes), costs payable by the Contractor to the Principal and deductions to which the Principal is entitled under or in connection with the Contract, including but not limited to, retention moneys, liquidated damages and other damages whether liquidated or unliquidated.</p> <p>Statutory declaration</p> <p>18.6 With each claim for payment the Contractor must give the Principal a completed statutory declaration, in the form of Contract Schedule 3 – Statutory Declaration. No payment will be due until the Statutory Declaration is received.</p> <p>Time for Payment</p> <p>18.7 Within 10 Business Days after receipt of the Contractor's claim for payment, the Principal will provide to the Contractor a payment schedule identifying the claim to which it relates and stating the payment, if any, which the Principal will be making. If the payment will be less than the amount claimed by the Contractor, the payment schedule will indicate why it is less. Business Day means any calendar day other than a Saturday, Sunday, public holiday in NSW; or 27, 28, 29, 30 or 31 December. Payment will be made within, and no payment</p>

	<p>will be due until, 28 days after the Contractor's written claim or 7 days after the statutory declaration required under clause 18.6 is received, whichever is the later.</p> <p>Evidence of work</p> <p>18.8 Payment is not evidence of the value of work or an admission of liability or that the work is satisfactory, but is a payment on account only.</p> <p>Quantities</p> <p>18.9 Quantities for work set out in any Schedule of Rates are estimates only. The Contractor is responsible for calculating and supplying the quantities actually required to carry out the Works.</p>
19 Goods and Services Tax	<p>19.1 The Contractor must registered for GST before it submits any claim for payment and will notify the Principal if it ceases to be registered for GST.</p> <p>19.2 The Principal acknowledges that it is registered for GST.</p> <p>19.3 If the Contractor does not advise its ABN prior to making a claim, the Principal will withhold tax from payments in accordance with the <i>A New Tax System (Pay As You Go) Act 1999</i>.</p>
20 Right to recover debts	<p>20.1 If the Principal claims a sum under or arising out of the Contract or any other contract between the Principal and the Contractor, the Principal may:</p> <p>(a) set-off, withhold or deduct any debt or amount which the Contractor owes the Principal from any amount which is payable to the Contractor; and</p> <p>(b) if that is insufficient, make a demand against the security held under clause 17, Security for performance, and clause 65, Additional security and obligations for trustees.</p> <p>20.2 The Principal may recover from the Contractor any balance that remains owing after all the set-offs, withholding, deductions and demands.</p>

C. CONTRACTOR'S RESPONSIBILITY

21 Conduct	<p>21.1 The Contractor must ensure the suitability and proper conduct of all persons, including the employees and subcontractors the Contractor employs for carrying out the Works, and set reasonable standards of conduct, investigate complaints about their behaviour and take appropriate action, including removal from the Site if so warranted.</p> <p>21.2 If The Principal's Representative considers them to be unsuitable to be employed on carrying out the Works the Principal's Representative may direct the Contractor to stop employing them on the Works and remove them from the Site and the Park, and the Contractor must comply.</p>
22 Long service levy	<p>22.1 Before commencing work under the Contract, the Contractor must:</p> <p>(a) pay to the Building and Construction Industry Long Service Payments Corporation or the Corporation's agent the amount of the long service levy payable in respect of the building and/or construction work under the <i>Building and Construction Industry Long Service Payments Act, 1986</i>; and</p> <p>(b) produce to the Principal, the document evidencing payment of the levy.</p>
23 Care and protection of persons and property	<p>23.1 From and including the date the Site is made available to the Contractor until the Completion of the Works, the Contractor is responsible for the care of the Works, constructional plant and other things entrusted to the Contractor by the Principal for the purpose of carrying out the Works. The Contractor must make good at the Contractor's expense any damage that occurs to the Works and other things while responsible for their care. The Contractor is also liable for damage caused by the Contractor after Completion of the Works, including during the Defects Liability Period.</p> <p>23.2 The Contractor indemnifies and keeps the Principal indemnified against any loss of or damage to the property of the Principal (including existing property in, about or adjacent to the Works), and against any legal liability for personal injury or death, or loss of or damage to the property of others, arising from the carrying out of the Works.</p> <p>23.3 The Contractor must take effective measures for the protection, health and safety of persons and protection of property, and for the avoiding of injury to persons, and of loss or damage to property, while the Contractor is carrying out the Works.</p> <p>23.4 The Contractor must minimise and, where possible, prevent interference, damage, nuisance or inconvenience to the owners, tenants and occupiers of the premises and any property on or adjacent to the Site. The Contractor is liable for any such damage caused.</p> <p>23.5 Nothing in this clause 23 relieves the Principal from liability for the Principal's own default and defaults of others for whom the Principal is liable.</p>
24 Consistency of documents	<p>24.1 The Contract Documents will be taken as mutually explanatory and anything contained in one but not in another will be treated as if contained in all. The Contractor must notify the Principal's Representative immediately in writing if the Contractor finds an ambiguity, discrepancy or inconsistency in or between the Contract Documents before starting related</p>

	<p>work, allowing sufficient time to avoid delaying the work, and follow the directions given by the Principal's Representative.</p> <p>24.2 The Principal's Representative must give the Contractor a direction in response.</p>
25 Claims	<p>25.1 The Principal is not liable to meet a claim from the Contractor over a matter arising out of the Contract, and the claim is barred, unless the Contractor:</p> <ul style="list-style-type: none"> (a) submits the claim together with full particulars (including the legal and factual basis of the claim) in writing within 28 days of the occurrence of the event or circumstances on which the claim is based; or (b) gives written notice of the Contractor's intention to claim within that time and the Contractor submits the claim with full particulars (including the legal and factual basis of the claim) before a time otherwise agreed by the Principal. <p>25.2 Any claim by the Contractor on the Principal must be made within 28 days after the date of the Principal's Representative's written notice of Completion of the whole of the Works under clause 10, Completion. All claims whatsoever by the Contractor against the Principal made after that time are barred. However, if the Contract includes a Defects Liability Period, and the Contractor has a claim against the Principal under clause 5, Standard of work, or because of an event which occurred during the Defects Liability Period, the Contractor may make that claim up to 28 days after the end of the Defects Liability Period. If the claim is made after that time it is barred.</p>
D. INSURANCE	
25A Approved insurers and terms	<p>25a.1 All insurers used and insurance terms are subject to the approval of the Principal.</p> <p>25a.2 The Principal has approved insurers listed by the Australian Prudential Regulation Authority (APRA) as being regulated by the APRA, and Lloyds underwriters. Lists appear on the APRA website at: http://www.apra.gov.au/.</p>
26 Workers compensation insurance	<p>26.1 The Contractor must ensure that, before commencing any work under the Contract, the Contractor and each subcontractor hold the workers compensation insurance required by law. A subcontractor taken to be an employee of the Contractor under the law must be covered by the Contractor's workers compensation insurance.</p>
27 Public liability insurance	<p>27.1 The Contractor must ensure that, before commencing any work under the Contract, the Contractor holds public liability insurance, covering the Contractor, all subcontractors and the Principal, to an amount of not less than \$10,000,000 for any single occurrence.</p> <p>27.2 The public liability insurance cover must include a cross liability clause in which the insurer agrees:</p> <ul style="list-style-type: none"> (a) to waive all rights which entitle it to enforce the rights of others (otherwise known as "rights of subrogation"), or to take action against any of the persons insured; and (b) for this purpose, to act as if a separate policy had been issued to each of those persons insured.
28 Insurance of the Works and other insurance	<p>28.1 The Contractor must ensure that before commencing work on the Site, the Contractor holds or takes out insurance covering the Contractor, all subcontractors and the Principal, for loss or damage to the Works, any temporary works and all materials, constructional plant and other things that are brought onto the Site, stored off the Site or in transit, by or on behalf of the Contractor, or are entrusted to the Contractor by the Principal, regardless of whether such items are incorporated into the Works. The amount insured must not be less than the Contract Sum for any one occurrence.</p> <p>28.2 If the work under the Contract includes work described in (a), (b) or (c) below, the Contractor must hold the following additional insurance policies before starting such work:</p> <ul style="list-style-type: none"> (a) for the use of water-borne craft in excess of 8 metres in length; marine liability insurance; (b) for the design of the Works to be covered by insurance held by the Contractor where specified in the Contract Information; professional indemnity insurance; and (c) asbestos decontamination, including stripping, encapsulation or removal; asbestos decontamination work insurance. <p>The policy under (a) must be in the name of the Contractor and must cover the Contractor, the Principal, and all subcontractors employed from time to time in relation to the carrying out of the Works, for their respective rights and interests and cover their liabilities to third parties. The policy must be for an amount not less than \$10,000,000 for any one occurrence and include a cross-liability clause in which the insurer agrees to waive all rights of subrogation or action against any of the persons covered.</p> <p>The policy under (b) must cover the Contractor for liability to the Principal for a minimum amount of \$500,000 or 20% of the Contract Sum, whichever is greater, for loss (whether economic loss only or other loss) in a single occurrence arising from errors or omissions in design of the Works carried out by the Contractor or any subcontractor.</p> <p>The policy under (c) must be a policy of insurance covering the work, taken out within 30 days of asbestos decontamination work commencing, with an insurer and in terms both</p>

	approved in writing by the Principal, covering the Contractor, Principal and all subcontractors employed on the Works.
29 Maintaining insurance policies	<p>29.1 For the purpose of defining the insured under insurance policies required by the Contract, the Principal will mean the State of NSW, Minister for the Environment for the State of NSW, Director-General of the NSW Department of Environment and Conservation, and other employees and agents of the NSW Department of Environment and Conservation.</p> <p>29.2 The Contractor must maintain all required insurance policies until reaching Completion of the whole of the Works and for any Defects Liability Period described in the Contract Information, except for any professional indemnity insurance, which must be held for 7 years after this time.</p> <p>29.3 If the Contractor fails to effect or maintain any insurance, the Principal may effect the insurance at the Contractor's cost, or act under clause 35, Default.</p>
E. ADMINISTRATION	
30 Agreement and consent	30.1 Wherever the Principal's consent or agreement is required, it must not be withheld unreasonably. Wherever the Contractor's agreement is required, it must not be withheld unreasonably.
31 Unconditional Undertakings – approved institutions	31.1 For the purpose of giving Unconditional Undertakings, the Principal has approved banks, building societies, credit unions and insurance companies listed by the Australian Prudential Regulation Authority (APRA) as being regulated by the APRA. Lists appear on the APRA website at: http://www.apra.gov.au/ .
32 Joint and several liability	<p>32.1 If two or more persons enter the Contract as the Contractor, then each such person individually and jointly must comply with its conditions and is jointly and severally liable.</p> <p>32.2 If the Contractor gives the Principal a notice, it must be treated as a notice by all of the persons that are the Contractor.</p> <p>32.3 If the Principal gives the Contractor a notice or direction, it must be treated as a notice and direction to all of the persons that are the Contractor.</p>
33 Subcontracting	<p>33.1 The Contractor may only subcontract any part of the work if the Principal agrees in writing first.</p> <p>33.2 An agreement to allow the Contractor to subcontract will not relieve the Contractor of any of the Contractor's responsibilities or obligations under the Contract.</p> <p>33.3 The Contractor is liable to the Principal for the acts, defaults and neglect of any subcontractors, or any persons they employ, as fully as if they were the Contractor's acts, defaults or neglect.</p> <p>33.4 The Contractor is responsible for paying subcontractors for their work.</p>
34 Assignment	34.1 The Contractor may only assign or transfer a right or benefit under the Contract to another person if the Principal agrees in writing first.
35 Default	<p>35.1 Without prejudice to any other rights which the Principal has, including the Principal's common law rights for damages or to terminate without first giving notice to remedy a breach, if the Contractor commits a substantial breach of the Contract, including:</p> <ul style="list-style-type: none"> (a) failing to carry out a direction of the Principal's Representative within the time specified or if no time is specified, within a reasonable time; or (b) not progressing the carrying out of the Works at a reasonable rate or with due expedition and without undue delay; or (c) failing to carry out the Works with due skill, care and competence; or (d) failing to maintain any registration or licence required by law to carry on activities required under the Contract; (e) failing to provide security as required under clause 17, Security for performance; (f) failing to provide security as required under clause 65, Additional security and obligations for trustees: or (g) failing to effect and maintain insurance policies as required under the Contract, <p>the Principal may, in writing, specify the breach and ask the Contractor to give reasons why the Principal should not take further action.</p> <p>35.2 If the Contractor either fails to give a written response within 7 days of receiving the Principal's notice, or fails to give reasons satisfactory to the Principal, then the Principal may immediately:</p> <ul style="list-style-type: none"> (a) terminate the Contractor's employment under the Contract by notice in writing to the Contractor; and (b) at its sole discretion, employ others to complete the Works. <p>35.3 The Principal will calculate the difference between:</p> <ul style="list-style-type: none"> (a) the cost to the Principal of having the Works completed by others; and (b) the amount that would have been paid to the Contractor to complete the Works. <p>If the calculation results in a shortfall to the Principal, the difference will be a debt due by the</p>

	<p>Contractor to the Principal that must be paid to the Principal within seven days of a written demand for payment.</p> <p>The Principal may make provisional assessments of the amounts payable to the Principal under this clause 35 and may demand them against the security held under clause 17, Security for performance, and clause 65, Additional security and obligations for trustees.</p>
36 Bankruptcy or insolvency	<p>36.1 If the Contractor indicates it does not have the resources to perform the Contract, is wound up or is declared insolvent then the Principal, may immediately terminate the Contract by notice in writing to the Contractor, in which case the respective rights and liabilities of the parties will be the same as they would be at common law if the Contractor had wrongfully repudiated the Contract.</p> <p>36.2 The Contractor will be considered to be wound up if an application for winding up is made which is not stayed within 14 days or a winding-up order is made. The Contractor will be considered insolvent if: a controller, administrator, receiver, receiver and manager, provisional liquidator, or liquidator is appointed; or a mortgagee enters into possession of any property of the Contractor; or notice is given of a meeting of creditors for the purposes of a deed of arrangement; or any actions having a similar effect are taken.</p>
37 Termination for convenience	<p>37.1 The Principal may terminate the Contract by giving notice, with effect from the date stated in the notice, for its convenience and without the need to give reasons. The Contractor must leave the Site by the date stated in the termination notice and remove all plant, equipment and temporary work (including amenities) it has brought onto the Site for carrying out the Works that is not part of the Works and is not required by the Principal.</p> <p>37.2 If the Contract is terminated under clause 37.1, the Principal must pay the Contractor:</p> <ul style="list-style-type: none"> (a) the value of all work carried out (as determined under clause 18, Payments) up to the date the termination notice takes effect, taking into account all previous payments; plus (b) the reasonable, direct costs of removal of the temporary work and other things from the Site incurred by the Contractor, but only if the Contractor complies with a strict duty to mitigate costs; plus (c) 2% of the difference between the Contract Sum, adjusted by any amounts the Principal has agreed or assessed in writing, or amounts finally determined under clause 41, Disputes, and the total of all amounts paid and payable to the Contractor under (a) and (b) above. <p>37.3 The payments referred to in this clause 37 are full compensation for termination under clause 37, and the Contractor has no claim for damages or other entitlement whether under the Contract or otherwise.</p> <p>37.4 If the Contract is terminated under clause 37.1, the Principal must return the security held under clause 17, Security for performance, and clause 65, Additional security and obligations for trustees, subject to its rights under the Contract.</p> <p>37.5 The Contractor must include in all subcontracts, including supply agreements, an equivalent provision to this clause 37.</p>
38 Variations	<p>38.1 The Principal's Representative may direct the Contractor to carry out a Variation and the Contractor must carry out the direction. The Principal's Representative and Contractor must meet to agree on the reasonable amount payable to, or deductible from the amount otherwise payable to, the Contractor for the Variation. If they do not agree within 14 days after the meeting, the Principal's Representative will assess that amount.</p> <p>38.2 A Variation will not invalidate the Contract.</p> <p>38.3 A Variation must be assessed:</p> <ul style="list-style-type: none"> (a) using the rates and prices in any Schedule of Rates where they apply; and (b) using reasonable prices otherwise.
39 Defects Liability Period	<p>39.1 The Contractor must make good any part of the Works which is not in conformity with the Contract, which becomes apparent prior to Completion or during the Defects Liability Period stated in the Contract Information and as required by law.</p> <p>39.2 At the end of the Defects Liability Period, or within 28 days after the date of Completion of the Works if there is no Defects Liability Period stated, the Principal will return any security held as Unconditional Undertakings or otherwise under clause 17, Security for performance, less any amounts payable by the Contractor to the Principal.</p>
40 Suspension of work	<p>40.1 The Principal's Representative may direct the Contractor to suspend all or part of the Works and the Contractor must carry out the direction. If the need to suspend the work is due to any act or omission of the Principal, the Principal's Representative and Contractor must meet to agree on the reasonable extra costs payable to the Contractor which resulted from the suspension. If they do not agree within 14 days after the meeting, the Principal's Representative will assess those extra costs.</p> <p>40.2 The Contractor must recommence the suspended parts of carrying out the Works as soon as practicable after being directed to do so by the Principal's Representative.</p>
41 Disputes	<p>41.1 If either party is dissatisfied with an act or omission of the other party in connection with the Contract, including assessment of a claim, failure to agree, or a direction, that party must</p>

	<p>notify the Principal's Nominee and the other party in writing of a dispute within 14 days of the act or omission. The notifying party must provide particulars, including the factual and legal basis of any claimed entitlement. If a party gives notice of a dispute but not within the time provided by this clause 41, then it is not entitled to interest for the period before the party gave notice.</p> <p>41.2 Within 7 days of the giving of the notice, the Contractor and Principal's Nominee will meet to attempt to resolve the dispute.</p> <p>41.3 If the dispute is not resolved within 14 days after the notice providing all particulars of the dispute, the parties must appoint an independent Expert. If the parties fail to agree upon an Expert, either may request the Chief Executive Officer of the Australian Commercial Disputes Centre Ltd Sydney to nominate an Expert. If there is no Chief Executive Officer or the Chief Executive Officer fails to make a nomination within a reasonable time, the Principal will nominate an Expert.</p> <p>41.4 The person nominating the Expert must not nominate:</p> <ul style="list-style-type: none"> (a) an employee of the Principal or Contractor; (b) a person who has been connected with the Contract; or (c) a person upon whose appointment the Principal and the Contractor have previously failed to agree. <p>41.5 When the person to be the Expert has been agreed on or nominated, the Principal, on behalf of both parties, must appoint the expert by letter of engagement, copied to the Contractor, setting out:</p> <ul style="list-style-type: none"> (a) the dispute being referred to the Expert for a decision; (b) the Expert's fees; (c) the procedures detailed in this clause 41; and (d) any other matters which are relevant to the engagement. <p>41.6 The Principal and the Contractor must share equally the Expert's fees and out-of-pocket expenses, including any security deposit if required. Each party must otherwise bear their own costs and share equally any other costs of the process.</p> <p>41.7 Each party must make written submissions to the Expert and provide a copy to the other party as follows:</p> <ul style="list-style-type: none"> (a) within 7 days after the appointment of the Expert, the notifying party must submit details of the claimed act or omission or other matter; and (b) within 14 days after receiving a copy of that submission, the other party must submit a written response and that response may include cross-claims. <p>41.8 The Expert must decide whether any claimed event, act or omission did occur and, if so:</p> <ul style="list-style-type: none"> (a) when it occurred; (b) what term of the Contract or other obligation in law, if any, requires the other party to pay the claimant money or otherwise act in respect of it; and (c) the merits in law of any defence or cross-claim raised by the other party. <p>41.9 The Expert must then decide the amount, if any, which one party is legally bound to pay the other on account of the event, act or omission or other matters.</p> <p>41.10 The Expert must also decide any other questions required by the parties, as set out in the dispute referred to the Expert.</p> <p>41.11 In making the decision, the Expert acts as an expert and not as an arbitrator and is:</p> <ul style="list-style-type: none"> (a) not liable for acts, omissions or negligence; (b) to make the decision on the basis of the written submissions from the parties and without formalities such as a hearing; (c) required within 35 days of appointment, or another period agreed by the parties, to give the decision in writing, with brief reasons, to each party; and (d) bound by the rules of natural justice. <p>41.12 If the Expert decides that one party is to pay the other an amount exceeding \$250,000 (calculating the amount without including interest on it), and within 14 days of receiving the decision of the Expert, either party gives notice in writing to the other that the party is dissatisfied, the decision will be of no effect and either party may then commence litigation.</p> <p>41.13 Unless a party has a right to commence litigation under clause 41.12:</p> <ul style="list-style-type: none"> (a) the parties must treat each determination of the Expert as final and binding and give effect to it; and (b) if the Expert decides that one party owes the other party money, subject to clause 18, that party must pay the money within 28 days of receiving the decision of the Expert.
42 Service of documents	<p>42.1 Any direction, notice or other document must be:</p> <ul style="list-style-type: none"> (a) delivered in person; or

	<p>(b) sent by prepaid post to the address last notified in writing; or</p> <p>(c) sent by facsimile to the facsimile number last notified in writing; or</p> <p>(d) sent by e-mail to the address last notified in writing.</p> <p>42.2 If a document is posted, it will be taken to be received within 3 days after posting.</p> <p>42.3 If a document is sent by facsimile or e-mail, it will be taken to be received at the time stated on a report of satisfactory transmission.</p>
43 Individual validity of conditions	43.1 A court ruling that a condition of the Contract is unlawful, invalid, unenforceable or in conflict with any rule of law, statute, ordinance or regulation does not affect the remaining conditions.
44 Applicable law	44.1 The Contract is governed by the laws of New South Wales, and the parties submit to the non-exclusive jurisdiction of the courts of New South Wales.

F. GENERAL ADMINISTRATION AND MANAGEMENT

45 Exchange of information between Government agencies	<p>45.1 The Contractor authorises the Principal and its employees and agents to make information concerning the Contractor available to other NSW Government agencies or local government authorities. Such information may include, but is not limited to, any information provided by the Contractor to the Principal and any information relating to the Contractor's performance under the Contract.</p> <p>45.2 The Contractor acknowledges that any information about the Contractor from any source, including substantiated reports of unsatisfactory performance may be taken into account by the Principal and NSW Government agencies in considering whether to offer the Contractor future opportunities for NSW Government work.</p> <p>45.3 The Principal regards the provision of information about the Contractor to any NSW Government agency or local government authority as privileged under Section 22 of the <i>Defamation Act 1974</i>. The Principal and the State of NSW will reject claims in respect of any matter arising out of the provision or receipt of such information, including any claim for loss to the Contractor arising out of the communication.</p>
46 Application of Schedule of Rates	<p>46.1 Item 1 is payable by instalments. Such instalments must be included in payments to the Contractor whenever payment becomes due in respect of Item 2 of the Schedule of Rates. Each instalment must be the same proportion of Item 1 as the payment amount due under Item 2 is of the total for Item 2. The total payment under Item 1 must not exceed the amount stated for Item 1 in the Schedule of Rates.</p> <p>Item 2 Australian Standard method of measurement of building works, edition 5 and AS1181.</p>
47 Security of payment	<p>47.1 General</p> <p>In this clause 47 "subcontract" includes an agreement for supply of goods or services (including professional services and plant hire) or both and "subcontractor" includes a supplier of goods or services (including professional services and plant hire) or both.</p> <p>The Contractor must ensure that each subcontract, whether written or oral, entered into by the Contractor or any subcontractor in respect of the work under the Contract and which has a value of \$25,000 or more at the commencement of the subcontract, includes provisions in the form or to the effect of the form, as the case may be, of those contained in this clause 47, including the provisions of this subclause 47.1.</p> <p>GST does not apply to security payments.</p> <p>47.2 Options as to form of security</p> <p>Each subcontract which:</p> <p>(a) requires the subcontractor to provide a cash security to its principal;</p> <p>(b) allows the subcontractor's principal to deduct retention moneys from any payment made by it to the subcontractor; or</p> <p>(c) provides for both of the above,</p> <p>must allow the subcontractor the option at any time to provide an Unconditional Undertaking or Unconditional Undertakings in lieu of a cash security or retention moneys.</p> <p>To the extent that the subcontractor provides an Unconditional Undertaking or Undertakings, the subcontractor's principal must not deduct retention moneys and must forthwith release to the subcontractor any retention moneys or cash security then held.</p> <p>47.3 Trust for cash security and retention moneys</p> <p>Each subcontract must include a provision having the effect that:</p> <p>(a) when a party receives or retains security in cash or converts security to cash, that security is held in trust by the security holder from the time of receipt, retention or</p>

GENERAL CONDITIONS OF CONTRACT

conversion, as the case may be, and the security holder must forthwith deposit the money into a trust account in a bank selected by that party;

- (b) the moneys must be held in trust for whichever party is entitled to receive them until they are paid in favour of that party and the security holder must maintain proper records to account for such moneys; and
- (c) any interest earned by the trust account must not be held in trust, and must be owned by the party holding the security.

If the party holding security has a policy of insurance protecting subcontract payments due to the other party which is equivalent to the HIA Security of Payment Bond, then compliance with the above of this subclause is not required.

Whenever requested by the Principal to provide evidence verifying that the Contractor is holding in trust an amount which the Contractor must be holding in trust, the Contractor must provide evidence to the reasonable satisfaction of the Principal that the amount is held in trust. If the Contractor fails to do so then, in addition to any other remedy which the Principal may have against the Contractor, the Principal may withhold an equivalent amount from payments to the Contractor.

47.4 Payments

Each subcontract must include:

- (a) an obligation for the subcontractor's principal to pay the subcontractor regular progress payments of 100% of the value of work, goods or services provided by the subcontractor less only retention moneys, if any, paid into the trust account referred to in subclause 47.3.
- (b) an entitlement to progress payments within a period not exceeding,
 - in the case of the Contractor's subcontractors, 28 days; and
 - in the case of all other subcontractors, 35 days, after the date upon which a progress claim, which includes work, goods or services provided under the subcontract, is lodged by the Contractor with the Principal's Representative.
- (c) provisions equivalent to the next two paragraphs of this subclause.
 - nothing in this subclause must be read so as to prevent the Contractor from paying a subcontractor an amount in excess of that claimed from the Principal, or before the time stipulated in this subclause 47.4.
 - if any provision of the first paragraph of this subclause 47.3 is inconsistent with any other provision in a subcontract, the provisions of the first paragraph will prevail to the extent of the inconsistency.

47.5 Alternative dispute resolution

Each subcontract must include provisions incorporating the dispute resolution procedures outlined in the Contract except that, in each case, it must not be mandatory for the subcontractor to pursue the contractual dispute resolution mechanism if the only remedy sought by the subcontractor is an order that the subcontractor's principal pay to it an amount which is not disputed to be due and payable under the subcontract.

47.6 Documents to be provided to subcontractors

Each subcontract must include a provision which requires the subcontractor's principal to provide to the subcontractor, before the subcontractor commences work under the subcontract, a copy of the following provisions of the contract between the subcontractor's principal and its principal:

- (a) the provision equivalent to this clause 47; and
- (b) the clauses relating to proof of payment of subcontractors, times for payment claims and payment and alternative dispute resolution.

47.7 Register of subcontracts

Maintain a register of all subcontracts which have a value of \$25,000 or greater showing brief details of the subcontract work, the name, address and telephone number of the subcontractor, and provide an up to date copy of the register when requested by the Principal's Representative.

If further requested by the Principal's Representative, provide an unpriced copy of the subcontract agreement within 14 days of such request.

48	Not Applicable
49 Audit and review	<p>49.1 Make available, on request, all records, including those of or relating to subcontractors relevant to compliance with requirements of the Contract, for the purposes of audit, review or surveillance by the Principal. Provide all reasonable assistance during the audits or reviews including attendance by the Contractor.</p> <p>49.2 Promptly implement effective corrective action on matters disclosed by audit or review.</p>
50 Order of work under the	<p>50.1 Submit when requested by the Principal, a program in the form of a bar chart and network diagram, showing the dates by which and the times within which the various stages or parts</p>

Contract	of the work under the Contract are to be carried out.
51 Working hours and working days	<p>51.1 Unless the Contract provides otherwise, the working hours on the Site will be up to 9 hours per day worked between 7 a.m. and 5 p.m., and the working days will be Monday to Friday inclusive, but excluding public holidays and one day every 4 weeks, usually a Monday which is a rostered day off.</p> <p>51.2 In approving a change to the working hours or working days the Principal's Representative may attach conditions. Such conditions may include, but will not be limited to, a prohibition of or restriction on the performance of work which requires surveillance, and may also include a requirement that the Contractor meets the costs of surveillance, by or on behalf of the Principal, of work during times approved by the Principal's Representative.</p>
52 Existing services	<p>52.1 Existing services include, but are not limited to, drains, watercourses, public utilities, water, sewerage, stormwater, telecommunications, electricity and the like, and include both above ground and below ground services.</p> <p>52.2 The Contractor is responsible for determining the location and type of all existing services.</p> <p>52.3 The Contractor must notify the Principal's Representative immediately upon the discovery of any existing services obstructing the Works.</p> <p>52.4 Subject to clause 9, Site conditions, where an existing service obstructs the Works and requires diversion or relocation, the Contractor must bear all resulting costs and delays.</p> <p>52.5 Existing services obstructing the Works or if damaged in the course of the Contract, must be dealt with as follows:</p> <ul style="list-style-type: none"> (a) if the service is to be continued: repair, divert and relocate as required; and (b) if the service is to be abandoned: cut and seal or disconnect and make safe as required. <p>52.6 Where an existing service is damaged by the Contractor for any reason whatsoever, the Contractor must bear all costs and any delays for repairing or disconnecting the service.</p>
53 Occupational Health and Safety management	<p>Requirement</p> <p>53.1 The Contractor and Contractor's health and safety management must comply, and the Contractor must ensure all subcontractors comply, with the NSW Government <i>OH&S Management Systems Guidelines 4th edition</i> (OH&S Guidelines) including the following obligations:</p> <p>53.2 When any part of the Site is made available to, or occupied by, anyone authorised by the Principal, ensure a report, containing the information employers and controllers of premises are required to provide under clauses 13(3) and 38 of the <i>NSW Occupational Health and Safety Regulation 2001</i> (OH&S Regulation 2001), is provided to the Principal and that person before they use the Site. The report must include all the available information about the hazards and risks not eliminated and the controls in place. Such information must also be included in operation and maintenance manuals, or equivalent, provided for the Works.</p> <p>Principal contractor</p> <p>53.3 The principal contractor under the OH&S Regulation 2001 appointed by the Principal for work on the Site is the Principal. Where reasonably practicable, comply with the instructions relating to the OH&S Regulation 2001 issued by this principal contractor.</p> <p>Cooperate with the Principal and any other contractors engaged by the Principal on the Site to ensure the Contractor's OH&S responsibilities are discharged in a coordinated manner.</p> <p>OH&S/safety management plan and Safe Work Method Statements</p> <p>53.4 Document, implement and maintain a site-specific OH&S/safety management plan with Safe Work Method Statements for all work under the Contract and covering all subcontractors/consultants, in accordance with Contract Schedule 3 – Occupational Health and Safety Management Plan.</p> <p>53.5 The OH&S/safety management plan must address all the elements applicable for the work involved, including statements of responsibilities, design and other consultant services, OH&S induction and training, incident management, risk/hazard identification/assessment and control, consultation, Safe Work Method Statements and site safety rules (as applicable). Where the Contractor is responsible for design, the OH&S/safety management plan must comply with the OH&S Guidelines management plan requirements for design.</p> <p>53.6 Submit the OH&S/safety management plan and Safe Work Method Statements no later than 14 days before the work for which they apply commences, at least covering that work. Do not start the work before complying documents are submitted. Submit any revisions to the documents.</p> <p>Guidance on preparation of management plans and Safe Work Method Statements</p> <p>53.7 Guidance on OH&S management plans and Safe Work Method Statements is contained in NSW Government publication <i>How to prepare Site-specific Safety Management Plans and Safe Work Method Statements</i>, which is available at: http://www.construction.nsw.gov.au/publications.</p>

- 53.8 Such guidance on preparing these is also available in the WorkCover *Subby Pack* with a Safe Work Method Statement form (see <http://www.workcover.nsw.gov.au>).
- 53.9 As part of the OH&S management plan implementation, inspect the work sites and identify hazards arising from the sites. Assess the risk of harm to health and safety of any person arising from any hazard identified, and implement measures to eliminate or control/minimise and monitor all such risks. Involve the person(s) performing the work in identifying the hazards and assessing risks at the work site.
- 53.10 In reviewing and assessing risks, take into account, but do not only rely on, any hazard identification or risk assessment or risk management information provided by the Principal. The Principal does not represent that it has identified all hazards applicable to the work.
- 53.11 The Safe Work Method Statements must cover all health and safety risks, be regularly reviewed and amended when conditions change. They must as a minimum, where applicable, be submitted for, cover and be certified as covering the control of risks with, all work involving electrical installations and use of power tools (including explosive tool); scaffolding, formwork and temporary supports; moving plant and work near traffic; unloading materials and equipment; excavations and trenching; work at heights; confined spaces; hazardous substances; demolition work; use of explosives; gas installations; work near public places; and work involving drowning risks.

Certification of formwork

- 53.12 In this clause 53, the terms "qualified engineer" and "formwork" have the meanings given in Clause 209 of the OH&S Regulation 2001. "Related Entities" means businesses, one of which is owned wholly or in part by the other or that have proprietors, directors, officers, shareholders or employees in common.
- 53.13 Inspection and certification of formwork, if required by clause 233 of the OH&S Regulation 2001, must be carried out by a qualified engineer who is not a proprietor, director, officer, or employee either of the entity carrying out the formwork erection or a Related Entity to that entity. In addition, if the Contractor carries out the design of the formwork, then the qualified engineer must not be a proprietor, director, officer or employee either of the Contractor or a Related Entity to the Contractor.
- 53.14 If such inspection and certification are required, the Contractor and any subcontractors involved must include the inspection and certification as actions in Safe Work Method Statements for the erection and use of formwork, and they must be hold points in the Contractor's and subcontractors' Inspection and Test Plans.
- 53.15 Submit formwork certification before commencing the use of the formwork. Do not use the formwork before this certification is submitted.

Design

- 53.16 Periodically review and revise design prepared under the Contract to ensure that all reasonably foreseeable hazards and risks to health and safety (including in the execution of the design, and in the use, maintenance, repair, operation and demolition of the built asset designed) are identified, assessed and, where practicable, eliminated. Where it is not practicable to eliminate risks, to the extent practicable, effectively control the risks by design or, where this is not practicable, by operational requirements. Document and report on, as part of regular design reports, the review and identification of hazards/risks and controls, including any operational requirements.

Site Safety Rules

- 53.17 Site safety rules must, as a minimum, effectively identify and implement the provisions shown below. Site safety rules must make it a condition of entry to the applicable work site that all employees and visitors comply with the provisions.
- (a) **Industry OH&S Induction.** All persons working on the work site must complete, and display evidence of completing, Industry OH&S Induction prior to commencing work on the work site.
 - (b) **Site Induction.** All persons working on or visiting the work site must attend a Site Induction prior to entering the work site. Visitors may enter a work site if accompanied by a person who has attended a Site Induction.
 - (c) **Safe Work Method Statements.** Safe Work Method Statements must be prepared before the work starts and then used for all work activities assessed as having health and safety risks. They must be revised when conditions change.
 - (d) **Safety Helmets and Footwear.** Safety helmets and footwear must be worn by all supervisors, other employees, and visitors in building and construction areas at all times. The helmets must comply with AS 1801. The footwear must comply with AS 2210.
 - (e) **Safety Vests.** Safety vests must be worn by all supervisors, other employees and visitors in building and construction areas at all times when plant and equipment is in operation at the work site or at other times as directed by the Contractor or relevant subcontractor.

- (f) **Alcohol and Drugs.** The consumption of alcohol, during working hours, and illegal drugs is prohibited.
- (g) **Personal Protective Equipment (PPE).** PPE, such as safety eye protection, hearing protection, safety gloves and masks and the like, must be worn, particularly when welding, drilling and with all other tasks with similar risks.
- (h) **Accidents and Incidents.** Accidents and injuries must be reported immediately to the Contractor's and applicable subcontractor's site representative in charge.
- (i) **First Aid.** All persons requiring first aid treatment must contact the first aid officer who will administer the treatment and record the injury in the WorkCover NSW Register of Injuries, including the person's name and the nature of the injury.
- (j) **Fire Prevention.** Fire prevention must be employed by all persons on the work site, and an appropriate fire extinguisher must be on hand for all hot work.
- (k) **Housekeeping.** Work areas must be kept clean and tidy, with rubbish and other safety hazards, cleaned up promptly. All protruding nails must be removed immediately from timber.
- (l) **Electrical.** All temporary electrical work and electrical plant must comply with the WorkCover NSW *Code of Practice for Electrical Practices for Construction Work* and AS/NZS 3000 *Wiring Rules*.
- (m) **Leads and Power Tools.** Every owner must ensure all leads and power tools are inspected and tagged by a licensed electrician prior to their use and thereafter at monthly intervals. All details of their inspection must be recorded in a work site log book. Details on the tags and in the log book must include the licence number of the electrician, date of the inspection and the owners plant number of the item inspected. The maximum length of any power lead must not exceed 30 metres.
- (n) **Mobile Plant.** Every owner of mobile plant must ensure that it is registered with WorkCover NSW when required and that operators are appropriately qualified. Mobile plant must be fitted with working hazard lights/reversing lights and beepers.
- (o) **Hazardous Substances.** Chemicals and other hazardous substances must be used and stored in compliance with the relevant Material Safety Data Sheets (MSDS) and details must be recorded on the Register of Hazardous Substances.
- (p) **Working at Height.** Working at heights above 2 metres must be in accordance with WorkCover NSW requirements, including clause 233, OH&S Regulation 2001, regarding formwork certification.
- (q) **Security and Public Access.** Security measures, including perimeter fencing, will be used to prevent unauthorised access to building and construction areas, and ensure safe access and passage for all those on and adjacent to the work site.
- (r) **Toolbox Talks.** There will be regular discussions between and consultation with those working on the work site on site health and safety matters.

Accident and incident management

53.18 Before commencing any work on the Site, nominate to the Principal the persons who will be responsible for investigating accidents and incidents and initiating corrective actions outside normal working hours. Nominate procedures for contacting them. Notify promptly any changes to such nominations and procedures.

Serious incident reports

53.19 Immediately notify WorkCover NSW and the Principal of any serious incident. Then formally notify WorkCover NSW in accordance with the OH&S Regulation 2001 (Part 12.1), using the prescribed form, and immediately supply an additional copy to the Principal. If requested, supply a written report to the Principal in the form directed.

Prohibition and Improvement Notices (PIN's) and On-The-Spot Fines

53.20 Immediately notify the Principal of any PIN or on-the-spot fine issued by WorkCover NSW for a breach. Provide the Principal with a copy of the PIN or fine notice and written details of the corrective action taken by the Contractor and the applicable subcontractor to rectify the breach and to prevent recurrence.

Construction Work Site Checklist

53.21 Provide to the Principal at each regular site meeting a completed *Construction Work Site Checklist* (in the form of Contract Schedule 4) covering all work involving health and safety risks, and reviewing the reasonable health and safety precautions taken. Rectify all non-conformance indicated by the completed Checklists and prevent recurrences.

Failure to comply

53.22 If at any time the Contractor has not carried out its obligations under this clause 53, then notwithstanding any other provisions of the Contract, no payment will be due to the Contractor until the 7th day after the required action has been carried out.

54 Hazardous substances	<p>54.1 Definition</p> <p>A hazardous substance includes a substance that is listed in the document entitled <i>List of Designated Hazardous Substances</i> published by Worksafe Australia; or a substance that fits the criteria for a hazardous substance set out in the document entitled <i>Approved Criteria for Classifying Hazardous Substances</i> published by Worksafe Australia.</p> <p>Asbestos, material containing asbestos, polychlorinated biphenyl (PCB) and lead based paints are recognised as hazardous substances. Other substances in certain situations are also considered hazardous and therefore require controlled handling. Examples are glues, solvents, cleaning agents, paints, and water treatment chemicals.</p> <p>Work involving stone, rock, concrete, masonry and such materials containing silica, is hazardous work under the Contract. The Contractor is responsible for the control of any hazard which may arise from the presence of silica.</p> <p>54.2 Response to unexpected discovery</p> <p>If any hazardous substance not planned for by the Contractor is discovered on the Site (asbestos, lead paint, rock, silica and concrete are known to be on the site and no extra cost or time will be permitted in dealing with these materials), the Contractor must suspend all work which may result in exposure to such hazardous substance and notify the Principal's Representative immediately of the type of substance and its location. See also clause 9, Site conditions.</p> <p>With the initial notification, or as soon as practicable thereafter, where the Contractor is not to locate and/or manage the hazardous substance under the Contract, submit details, including:</p> <ul style="list-style-type: none"> (a) the additional work and additional resources the Contractor estimates to be necessary to deal with the substance so that work and subsequent use of the Works may proceed safely and without risk to health; (b) the time the Contractor anticipates will be required to deal with the substance and any expected delay in achieving Completion; (c) the Contractor's estimate of the cost of the measures necessary to deal with the substance; and (d) other details reasonably required by the Principal's Representative. <p>The Contractor must, in planning and carrying out any work dealing with the substance, take all reasonable steps:</p> <ul style="list-style-type: none"> (e) to carry out the work concurrently with other work wherever possible; and (f) to otherwise minimise any delaying effects of the work on Completion within the period for Completion. <p>54.3 Responsibility for decontamination</p> <p>Control of, and decontamination with, any hazardous substances is the responsibility of:</p> <ul style="list-style-type: none"> (a) the Principal, in respect of any such substances not identified in the Contract Documents, or not to be located by the Contractor under the Contract, which are discovered on the Site; and (b) the Contractor, in respect of any such substances identified in the Contract Documents or to be located by the Contractor under the Contract. <p>54.4 Decontamination by Principal</p> <p>Where the Principal is responsible for the control of, and decontamination with, any hazardous substances following their location, the Principal's Representative may suspend the whole or any part of carrying out the Works until the hazardous substances are isolated or removed.</p> <p>54.5 Decontamination by Contractor</p> <p>Where the Contractor is responsible for the control of any hazardous substances and decontamination the Site following their location, it must handle, use, isolate, remove and dispose of such substances in accordance with statutory requirements.</p> <p>54.6 Working hours:</p> <p>When the Contractor is required to decontaminate occupied work sites containing hazardous substances, all such decontamination must be carried out outside normal hours of occupation, unless otherwise approved in writing by the Principal's Representative. Normal hours of occupation are between 8.30 a.m. and 4 p.m. and normal days of occupation are Monday to » inclusive.</p>
55 Asbestos decontamination	<p>55.1 Requirement</p> <p>Where the Contractor is responsible for asbestos decontamination work, including stripping, encapsulation or removal, comply with and carry out all work in accordance with the relevant statutory requirements, standards, codes and guidelines, including but not limited to the requirements of the following, where applicable: -</p> <ul style="list-style-type: none"> ▪ <i>Occupational Health and Safety Act 2000</i>

	<ul style="list-style-type: none"> ▪ <i>Occupational Health and Safety Regulation 2001</i> ▪ WorkCover NSW requirements ▪ Worksafe Australia - <i>Asbestos: Code of Practice and Guidance Notes</i> ▪ <i>Environmentally Hazardous Chemicals Act 1985</i> ▪ <i>Waste Avoidance and Resource Recovery Act 2001.</i> <p>Where registration or a licence for the asbestos decontamination work is required, submit a copy of the current licence or registration certificate.</p> <p>55.2 Notification</p> <p>Notify the local office of WorkCover NSW and the Principal's Representative of the intention to commence any asbestos decontamination not less than seven days prior to such work commencing.</p> <p>55.3 Work method</p> <p>In addition to any other occupational health and safety management provisions of the Contract, provide also the following details of the proposed work: -</p> <ul style="list-style-type: none"> ▪ description of work to be done, proposed methods and work area ▪ description and location of decontamination units and changing areas ▪ location of drains to be used and type of liquid waste filters ▪ type of respirators or air hoods ▪ description of what will take place if an asbestos fibre leak occurs ▪ what emergency plans including communications will be in place. <p>55.4 Notwithstanding any other provisions of the Contract, submit a program and plan (integrated with the Project Environmental Management Plan, Site-specific Safety Management Plan, and applicable subcontractor/consultant Site-specific Safety/OH&S Management Plan(s) and Safe Work Method Statements) which outline how the requirements of this clause 55 will be met.</p> <p>55.5 Monitoring</p> <p>Provide dust and other required monitoring by an independent testing authority on each day during decontamination and on completion of decontamination in each area where decontamination occurred.</p>
<p>56 Environmental management</p>	<p>General Requirements</p> <p>56.1 The Activity Approval Conditions attached as Appendix 1 must be observed, regardless of whether details contained in the conditions are observed or allowed for in the design of the Works or part thereof provided by the Principal.</p> <p>56.2 The Contractor must avoid unnecessary interference with or damage to native plants and animals or their habitats. If the work could interfere with native plants or animals or their habitats, then the Contractor must inform the Principal's Representative immediately, and stop work until the Contractor has identified an appropriate work method and the Principal's Representative has consented to work resumption.</p> <p>Bringing animals into a Park is an offence under the <i>National Parks and Wildlife Act, 1974</i>. Owners of animals will be subject to the law enforcement processes of the <i>Act</i>, including issue of infringement notices and immediate removal of the animal and animal handler/owner from the Park.</p> <p>56.3 When travelling to a work area, the Contractor and all employees must, unless directed otherwise by the Principal's Representative, use either:</p> <ul style="list-style-type: none"> (a) a marked public trail or road; or (b) if there is no marked public trail or road, then a route specified by the Principal's Representative. <p>The Contractor must not deviate from the required route without the consent of the Principal's Representative.</p> <p>56.4 If the Contractor discovers anything which the Contractor thinks may be an Aboriginal relic or site on the Site, then the Contractor must inform the Principal's Representative immediately and stop work until the Contractor has identified an appropriate work method and the Principal's Representative has consented to work resumption.</p> <p>It is against the law to interfere with or damage Aboriginal relics or sites unless authorised in writing by the DEC to do so.</p> <p>56.5 The Contractor must comply, and ensure all subcontractors comply, with the NSW Government <i>Environmental Management Systems Guidelines</i> (EMS Guidelines).</p> <p>56.6 Project Environmental Management Plan</p> <p>Document, implement and maintain a Project Environmental Management Plan that covers the requirements of this clause 56 and the work under the Contract, and complies with the EMS Guidelines.</p> <p>Submit the Project Environmental Management Plan no later than 14 days before design or</p>

construction work for which it applies commences, at least covering that work. Submit revisions to the Plan.

56.7 As part of the Project Environmental Management Plan implementation, ensure that each subcontractor (including each consultant that is able to influence environmental outcomes) documents, implements and maintains an appropriate management plan. The plans must be compatible and coordinated with the Project Environmental Management Plan and comply with the EMS Guidelines.

56.8 When the Contractor's Project Environmental Management Plan fully identifies and assesses the environmental hazards/risks/opportunities associated with the work of a subcontractor/consultant; and provides complete and commonly applicable provisions for statements of responsibilities, design and other relevant services, environmental induction and training, incident management, risk/hazard/opportunity identification/assessment and control, consultation and work method statements; the subcontractor/consultant may adopt the Contractor's Plan, and submit only work method statements for the work activities assessed as having environmental risks/opportunities.

56.9 Ensure that the Contractor's certification of the provision and compliance of subcontractor/consultant management plans and work method statements are submitted no later than 14 days before the design or construction work for which they apply commences, at least covering that work. Do not start the work before complying certification is submitted. Submit revisions to the certification following reviews, revisions and amendments.

56.10 Design

Periodically review and revise design prepared under the Contract to ensure that all reasonably foreseeable hazards and risks to, and opportunities to improve, the environment (both in the execution of the design, and in the use, maintenance, repair, operation and demolition of the built asset designed) are identified and assessed, and the risks eliminated (where practicable) and opportunities realised. Where it is not practicable to eliminate risks, to the extent practicable, effectively control the risks by design or, where this is not practicable, by operational requirements. Document and report on, as part of regular design reports, the review and the identification of hazards/risks, opportunities and controls, including any operational requirements.

56.11 Induction and training

As part of the implementation of the Environmental Management Plan:

- (a) identify the environmental training, including environmental awareness and management training, needs of all personnel involved in the work under the Contract;
- (b) ensure all persons working on or visiting a work site complete, and display evidence of completing, environmental induction prior to entering the work site (though visitors may enter a work site without completing an induction if accompanied by a person who has attended a site induction) as part of industry and site induction required; and
- (c) maintain records of environmental training and induction.

56.12 Incident management

Before commencing any work on the Site, nominate to the Principal the persons who will be responsible for investigating environmental incidents and initiating corrective actions outside normal working hours. Nominate procedures for contacting them. Notify promptly any changes to such nominations and procedures.

56.13 Incident reports

Where there is a duty under legislation (particularly under the *Protection of the Environment Operations Act 1997*) to notify a regulatory authority (such as the Environmental Protection Authority) of incidents that harm or threaten to harm the environment/ecosystems, property or persons, immediately notify the authority and the Principal of any such incident. Use any applicable prescribed form, and immediately supply an additional copy to the Principal. If requested, supply a written report to the Principal in the form directed.

Immediately notify the Principal of any prosecution, fine or other penalty issued by an authority for such an incident or a breach. Provide the Principal with a copy of any related notification or notice, and written details of the corrective action taken by the Contractor and the applicable subcontractor to rectify any non-conformance and breach, and to prevent recurrence.

56.14 Construction Site Environmental Management Inspection Checklist

Provide to the Principal at each regular site meeting a completed *Construction Site Environmental Management Inspection Checklist* (in the form of Contract Schedule 6) covering all work involving environmental risks and opportunities, and reviewing the reasonable precautions and actions taken. Rectify all non-conformances indicated by the completed Checklists and prevent recurrences.

56.15 Failure to comply

If at any time the Contractor has not carried out its obligations under this clause 56, then notwithstanding any other provisions of the Contract, no payment will be due to the

	Contractor until the 7th day after the required action has been carried out.
57 Ecologically sustainable development	<p>57.1 Requirement</p> <p>The NSW Government is committed to Ecologically Sustainable Development and to advancing sustainable development practices generally in the design, construction and operation of built assets, particularly buildings, across the commercial, residential and industrial development sectors. It aims to make buildings healthier and affordable. It also aims to reduce the impact of buildings and other built assets on the environment by reducing the demand on non-renewable resources, such as energy and water, and reducing pollutants and greenhouse gas emissions.</p> <p>Address the applicable Ecologically Sustainable Development principals, performance areas and associated strategies described in the <i>Environmental Performance Guide for Buildings</i> that may be accessed at: http://asset.gov.com.au/environmentguide/.</p> <p>Allow for all the strategies, and applicable objectives, management measures and outcomes required as part of the documentation, provision, implementation and maintenance of the Project Environmental Management Plan.</p> <p>57.2 Restricted Timbers</p> <p>Do not use the following timbers or their products for work under the Contract:</p> <p>(a) rainforest timbers, unless certification is provided that they are plantation grown; or</p> <p>(b) timber from Australian high conservation forests.</p> <p>57.3 Timber Preservatives</p> <p>Do not use timber preservatives containing copper chrome arsenic (CCA) in marine, aquatic or sensitive environments.</p> <p>Use of CCA treated timber in other areas must be approved by the Principal's Representative.</p>
58 Waste management	<p>58.1 Requirement</p> <p>Implement the required waste minimisation and management measures as part of the Project Environmental Management Plan implementation. Recycle and divert from landfill surplus soil, rock, and other excavated or demolition materials, wherever this is practical. Also separately collect and stream quantities of waste concrete, bricks, blocks, timber, metals, plasterboard, paper and packaging, glass and plastics and offer them for recycling or incorporation into the works where practical.</p> <p>Ensure that no waste from the Site is conveyed to or deposited at any place that cannot lawfully be used as a waste facility for that waste.</p> <p>58.2 Monitoring</p> <p>Monitor waste volumes and record their method and location of disposal and whether or not that location was a place that could lawfully be used as a waste facility for that waste. Submit to the Principal's Representative every two months a progress report, and a summary report before Completion, on the implementation of waste management measures, including the record of waste volumes generated/recycled/disposed of, and their method and location of disposal, in the form of Contract Schedule 7 – Waste Management Report.</p> <p>Report immediately to the Principal's Representative the details of any waste from the Site which has been conveyed to or deposited at any place that cannot lawfully be used as a waste facility for that waste.</p>
59 Pest control	<p>59.1 Do not use any chemical pesticides and termiticides for new construction work. Use preventive treatment by physical means to minimise the risk of pest infestations.</p> <p>59.2 Chemical treatments may be used in existing buildings only as a last resort for the eradication of pest and termite infestations. Chemical pesticides used for this purpose must be registered by the National Registration Authority for Agricultural and Veterinary Chemicals and applied by a Pest Control Operator licensed by WorkCover NSW.</p> <p>59.3 Pest preventive methods must comply with AS 3660.1:2000 <i>Protection of Buildings from Subterranean Termites</i>, except for references to chemical soil barriers, as well as supplementary standards for existing buildings.</p>
60 Work method	<p>60.1 If the Contract prescribes a particular work method or the Principal or Principal's Representative directs that a particular work method must be used to the exclusion of the other work methods, then that work method is part of the Contract.</p> <p>60.2 Otherwise, the work method is not part of the Contract and the Contractor is free to use any work method. This is so even though, before or after acceptance of the Contractor's tender, the Contractor made known to the Principal the Contractor's proposed work method and the Principal accepted or approved it.</p> <p>60.3 If the work method is not part of the Contract, the fact that the proposed work method is impractical or impossible or the Contractor, with or without the approval of the Principal's Representative, uses another work method will:</p> <p>(a) not entitle the Contractor to make a claim on the Principal;</p>

	<p>(b) not be grounds for an extension of time for Completion; or</p> <p>(c) not cause the Contract to be frustrated.</p>
61 Industrial relations management	<p>61.1 The Contractor must systematically manage, and ensure all subcontractors manage, all aspects of industrial relations with employees on the Site and otherwise in connection with the Contract.</p> <p>61.2 Subject to the provisions of any relevant statutory requirement and the express provisions of the Contract, the Contractor must comply, and ensure all subcontractors comply, with the NSW Government <i>Industrial Relations Management Guidelines</i>. A copy may be obtained at: http://www.construction.nsw.gov.au/publications.</p> <p>61.3 The Contractor acknowledges that it has allowed in the Contract Sum for all the costs and expenses involved with complying with all relevant awards, memoranda of understanding, enterprise and industrial agreements, project specific agreements/awards and all other employer obligations.</p> <p>61.4 The Contractor must ensure that the rates of pay and conditions of employment specified in the relevant awards, enterprise and industrial agreements, project specific agreements/awards and relevant legislation, for all employees of the Contractor and subcontractors, are always observed in full.</p> <p>61.5 The Contractor must keep the Principal fully and promptly informed of industrial relations issues which affect or are likely to affect the carrying out of the Works.</p> <p>61.6 Submit, before beginning work on the Site, confirmation that the Contractor will comply with the industrial relations aspects of the <i>NSW Government Code of Practice for Procurement</i>.</p> <p>61.7 If at any time the Contractor has not carried out its obligations under this clause 61, then notwithstanding any other provision of the Contract, no payment will be due to the Contractor until the 7th day after the required action has been carried out.</p>
62 Standards	<p>62.1 Where the Contract requires compliance with a standard or code, unless otherwise specified that standard or code must be the one current at the closing date for tenders, except for the Building Code of Australia, which must be the one current at the date of Completion of the Works.</p>
63 Cleaning up	<p>63.1 All visible external and internal surfaces, including fittings, fixtures and equipment, must be free of marks, dirt, dust, vermin and unwanted materials, as a condition of Completion.</p>
64 Proprietary items	<p>64.1 Identification by the Principal of a proprietary item does not imply exclusive preference for the item so identified, but indicates the required properties of the item.</p> <p>64.2 The Contractor may offer an alternative to any proprietary item by applying in writing for approval to use the alternative. Except to the extent that the approval, if any, of the Principal of an alternative includes a contrary provision, the approval will constitute a Variation, and be subject to the adopting of the alternative not directly or indirectly resulting in any increase in the cost to the Principal of the Works or in any delay in carrying out the Works.</p>
65 Additional security and obligations for trustees	<p>65.1 If the Contractor is a trustee and if otherwise required by the Principal: -</p> <p>(a) within 14 days of the date of the Principal's letter of acceptance, the Contractor must give the Principal an Unconditional Undertaking as security for any amount stated in the Contract Information, in the form of Schedule 1 – Form of Unconditional Undertaking, provided by a financial institution acceptable to the Principal.</p> <p>(b) the security will be retained by the Principal against the due and proper performance of the Contract by the Contractor.</p> <p>(c) unless the Principal has made or intends to make a demand against the Unconditional Undertaking, the Principal will return the Unconditional Undertaking within 28 days after the date of Completion of the Works.</p> <p>65.2 If the Contractor is a trustee, in accordance with the signed statement provided to the Principal, the Contractor warrants that it will and must ensure that, for the duration of the Contract, the total value of the trust beneficiaries' loans to the trustee is always greater than the total value of trust beneficiaries' loans from the trustee.</p> <p>65.3 GST is not applicable on Security.</p>

CONTRACT SCHEDULE 1 – FORM OF UNCONDITIONAL UNDERTAKING

At the request of ('the Contractor')
and in consideration of ('the Principal')
accepting this undertaking in respect of the contract for

..... (\$.....)(‘the Sum’).

Should the Financial Institution be notified in writing, purporting to be signed by or for and on behalf of the Principal that the Principal requires payment to be made of the whole or any part or parts of the Sum, it is unconditionally agreed that the Financial Institution will make the payment or payments to the Principal forthwith without reference to the Contractor and notwithstanding any notice given by the Contractor not to pay same.

DATED at _____ this _____ day of 20....

[Print name of person signing the Undertaking]

[Position / Title]

CONTRACT SCHEDULE 3 – OCCUPATIONAL, HEALTH AND SAFETY PLAN

In accordance with the clause *Occupational Health and Safety Management*, the Contractor must document, implement and maintain a site-specific OH&S management plan and Safe Work Method Statements that cover the health and safety hazards and risks with carrying out the Works. Guide and sample documents are available from the Principal to assist with preparing the OH&S management plan and Safe Work Method Statements. The WorkCover *Subby Pack* also provides guidance on preparing these and a Safe Work Method Statement form (see <http://www.workcover.nsw.gov.au>).

1. The Contractor's OH&S management plan must:
 - (a) show the name and registered office address of the organisation;
 - (b) address each of the safety management elements outlined below, as they relate to the work under the Contract, including any subcontractors involved; and
 - (c) show the signature of a senior management representative of that organisation and the date signed.
2. The Contractor's OH&S management plan must include and describe the following:
 - (a) a statement of responsibilities for all those with an OH&S responsibility with the work under the Contract;
 - (b) arrangements for OH&S induction and training;
 - (c) hazard identification and risk assessment, with risk control and review processes;
 - (d) arrangements for managing OH&S incidents, with the name of the responsible person(s);
 - (e) site safety rules and the means of disseminating these and other information to those working on the Site; and
 - (f) identification of, and means of documenting and implementing, Safe Work Method Statements.
- 1s. The Contractor's Safe Work Method Statements must:
 - (a) be on organisation's letterhead and show the name and registered office address of the organisation; and
 - (b) be signed as authorised by a senior management representative of that organisation and show the date signed.
- 2s. The Contractor's Safe Work Method Statements must be prepared for all work activities assessed as having a significant safety risk and must include a description/identification of the following:
 - (a) the work activities to be undertaken, including the step-by-step sequence involved in doing the work and identification of work activities with health and safety hazards and risks;
 - (b) the potential hazards and health and safety risks associated with the work and with each step of the work;
 - (c) the controls that will be in place to minimise the significant hazards and risks with activities;
 - (d) all precautions to be taken to protect health and safety;
 - (e) all health and safety instructions to be given to persons involved with the work;
 - (f) health and safety legislation, codes or standards applicable to the work, and where these are kept;
 - (g) the names and qualifications of those who will:
 - (i) supervise the work; and
 - (ii) inspect and approve for use work areas, work methods, protective measures, plant, equipment and power tools;
 - (h) what training is required, and will be or has been given to each of the people involved, with the work;
 - (i) the names of all those involved with the work, and those who will be or have been trained in the work activities described in the Safe Work Method Statement, and the names and qualifications of those responsible for training them;
 - (j) the plant and equipment that will most likely be used on the work sites (eg. ladders, scaffolds, grinders, electrical leads, welding machines, fire extinguishers and the like);
 - (k) any WorkCover permits required to complete the work; and
 - (l) the inspection and maintenance checks that will be or have been carried out prior to use on the equipment listed.

CONTRACT SCHEDULE 4 – CONSTRUCTION WORK SITE CHECKLIST (guide only)

Contract/work and work site(s): _____

Contract No: _____ Date: Fromto.....

Contractor's Representative: _____ Tel: _____

This Checklist must be completed by the Contractor's Representative and provided to the Principals Representative at each site meeting. The Checklist is a guide only, and the Contractor may use a more detailed document to cover the issues.

All non-conformances must be rectified immediately and action documented.

(Please place your initials in the boxes DO NOT use ticks or crosses)

BASIC POINTS	YES	NO	COMMENTS & ACTIONS
a) Have all personnel on site had safety induction training (including visitors)?			
b) Have risk assessment policies been applied?			
c) Do all operators have appropriate certification to operate plant and equipment			
d) Are Safety Helmets being worn by all (including visitors)?			
e) Is Hi-viz safety clothing being worn?			
f) Are safety boots being worn?			
g) Is hearing protection being worn whilst doing or working near noisy operations?			
h) Are supervisors, site workers wearing, UV protective equipment and clothing?			eg. hand, eyes, skin, respiratory
i) What is the usual level of compliance?	Circle One		100% 75% 50% less than 25%
j) List group(s) not wearing safety equipment and action taken?	***	***	
k) Is there a fully stocked first aid box on site?			
l) Is there a qualified first aid person on site?			Name/s
m) What informal safety rating would you give this site?	***	***	Poor Fair Good
n) Have you issued written safety instructions this week?			How many - To whom -
o) Have there been any accidents since last meeting?			If yes - provide details

SITE AREA	YES	NO	COMMENTS & ACTIONS
a) Is the site area clear of rubbish, and or scattered materials, etc?			
b) Is there a rubbish / waste container on site?			
c) Are sediment / erosion controls operational and inspected / maintained daily?			
d) Is traffic control signage relevant to the work and inspected / maintained daily?			
e) Is an emergency /serious accident procedure displayed on site?			
f) Are barriers / fences, along / around trenches / work areas in good order and maintained daily?			
g) Are there construction warning signs displayed?			
h) Are excavations correctly shored, benched or battered?			
i) Are there suitable extinguishers on site?			
j) Where is the nearest telephone in case of an emergency?	***	***	Location

(Please place your initials in the boxes DO NOT use ticks or crosses)

HAZARDOUS SUBSTANCES	YES	NO	COMMENTS
a) Does the site have a Hazardous Substances Register, (with MSDS's available) for the chemicals used on site?			
b) Have site workers using chemicals been trained in how to use the chemicals safely?			If yes who conducted the training?
c) Are all containers of chemicals adequately labelled (including decanted ones)?			

ELECTRICAL / MECHANICAL HAND TOOLS	YES	NO	COMMENT & ACTIONS
a) Do the machines / tools on site have guards fitted / warning signs displayed?			
b) Are the leads and plugs in good condition?			
c) Are the extension leads off the ground?			
d) Do electrical tools / equipment have <u>current</u> inspection tags?			
e) Are there explosive tools in use on site? Are the warning signs for explosive powered tools displayed?			

WORKCOVER VISITS	YES	NO	COMMENTS & ACTIONS
a) Have any WorkCover NSW representative(s) attended the site since the last site meeting?			
b) If Yes to (a) when did they attend?	****	****	Date / /
c) Did WorkCover issue any Prohibition and / or Improvement Notices (PINs)?			If yes - provide details
d) Did WorkCover issue any on-the-spot fines to the Contractor, Subcontractor or employees?			If yes - provide details

General comments about this work site(s) (including follow up action)

CONTRACTOR'S REPRESENTATIVE _____ SIGNATURE & DATE ____/____/____

PRINCIPAL'S REPRESENTATIVE _____ SIGNATURE & DATE ____/____/____

CONTRACT SCHEDULE 5 – STATUTORY DECLARATION**Definitions**Oaths Act (NSW)
Ninth Schedule*The Principal is**The Contractor is*

ACN/ABN.....

The Contract is Contract No.

Contract Title.....

dated(date of Principal's letter of acceptance) between the party identified as the Principal and the party identified as the Contractor.

Declaration*Full name* I,*Address* of

do hereby solemnly declare and affirm that:

- 1 I am the representative of the Contractor in the Office Bearer capacity of

*Insert position
title of the
Declarant*

- 2 I am in a position to make this statutory declaration about the facts attested to.

REMUNERATION OF CONTRACTOR'S EMPLOYEES ENGAGED TO CARRY OUT WORK IN CONNECTION WITH THE CONTRACT

- 3 All remuneration payable to the Contractor's relevant employees for work done in connection with the Contract to the date of this statutory declaration has been paid and the Contractor has made provision for all other benefits accrued in respect of the employees.

Relevant employees are those engaged in carrying out the work done in connection with the Contract.

Remuneration means remuneration or other amounts payable to relevant employees by legislation, or under an industrial instrument, in connection with work done by the employees [s127 (6) of the Industrial Relations Act 1996].

REMUNERATION OF THE EMPLOYEES OF SUBCONTRACTORS ENGAGED TO CARRY OUT WORK IN CONNECTION WITH THE CONTRACT

- 4 The Contractor *is/is not* a principal contractor for the work done in connection with the Contract, as defined in section 127 of the Industrial Relations Act 1996.

Delete the words
in italics that are
not applicable.

- 5 Where the Contractor is also a principal contractor for work done in connection with the Contract, the Contractor has been given a written statement in its capacity of principal contractor under section 127(2) of the Industrial Relations Act 1996 by each subcontractor in connection with that work stating that all remuneration payable by each subcontractor to the subcontractor's relevant employees for work done in connection with the Contract to the date of this declaration has been paid, and each subcontractor has made provision for all other benefits accrued in respect of each subcontractor's employees.

- 6 I am aware that the Industrial Relations Act 1996 requires any written statement provided by subcontractors must be retained for at least 6 years after it was given and declare that the Contractor has accordingly made arrangements for the secure retention of the written statements.

WORKERS COMPENSATION INSURANCE OF THE CONTRACTOR'S WORKERS

- 7 All workers compensation insurance premiums payable by the Contractor to the date of this statutory declaration in respect of the work done in connection with the Contract have been paid. This statutory declaration is accompanied by a copy of any relevant certificate of currency in respect of that insurance.

WORKERS COMPENSATION INSURANCE FOR WORKERS OF SUBCONTRACTORS

- 8 The Contractor *is / is not* a principal contractor for work done in connection with the Contract, as defined in section 175B of the Workers Compensation Act 1987. Delete the words *in italics* that are not applicable.
- 9 Where the Contractor is also a principal contractor for work done in connection with the Contract, the Contractor has been given a written statement under section 175B of the Workers Compensation Act 1987 in the capacity of principal contractor in connection with that work to the intent that all workers compensation insurance premiums payable by each subcontractor in respect of that work done to the date of this statutory declaration have been paid, accompanied by a copy of any relevant certificate of currency in respect of that insurance.
- 10 I am aware that the Workers Compensation Act 1987 requires any written statement provided by subcontractors and any related certificate of currency must be retained for at least 7 years after it was given and declare that the Contractor has accordingly made arrangements for the secure retention of the written statements.

EMPLOYER UNDER THE PAY-ROLL TAX ACT

- 11 The Contractor *is registered as / is not required to be registered as* an employer under the Pay-roll Tax Act 1971. Delete the words *in italics* that are not applicable.
- 12 All pay-roll tax payable by the Contractor in respect of wages paid or payable to the relevant employees for work done in connection with the Contract to the date of this statutory declaration has been paid.
- 13 The Contractor *is / is not* a principal contractor for work done in connection with the Contract, as defined in section 31G of the Pay-roll Tax Act 1971. Delete the words *in italics* that are not applicable.
- 14 Where the Contractor is also a principal contractor for work done in connection with the Contract, the Contractor has been given a written statement under section 31H of the Pay-roll Tax Act 1971 in the capacity of principal contractor in connection with that work to the intent that all pay-roll tax payable by each subcontractor in respect of the wages paid or payable to the relevant employees for that work done to the date of this statutory declaration has been paid.
- 15 I am aware that the Pay-roll Tax Act requires any written statement provided by subcontractors must be retained for at least 5 years after it was given and declare that the Contractor has accordingly made arrangements for the secure retention of the written statements.

PAYMENTS TO SUBCONTRACTORS

- 16 The Contractor has paid every subcontractor, supplier and consultant all amounts payable to each of them by the Contractor as at the date of this statutory declaration with respect to engagement of each of them for the performance of work or the supply of materials for or in connection with the Contract.
- 17 The provisions of clause "SECURITY OF PAYMENT", if included in the Contract, have been complied with by the Contractor.
- 18 The Contractor has been informed by each subcontractor and consultant to the Contractor (except for subcontracts and agreements not exceeding \$25,000 at their commencement) by written statement in equivalent terms to this declaration (made no earlier than the date 14 days before the date of this declaration):
- .1 that their subcontracts with their subcontractors, consultants and suppliers comply with the requirements of clause "SECURITY OF PAYMENT", if included in the Contract, as they apply to them; and
 - .2 that all of their employees, subcontractors, consultants and suppliers, as at the date of the making of such a statement have been paid all remuneration and benefits due and payable to them by, and had accrued to their account all benefits to which they are entitled from, the subcontractor or consultant of the Contractor or from any other of their subcontractors or consultants (except for their subcontracts and agreements not exceeding \$25,000 at their commencement) in respect of any work for or in connection with the Contract.
- 19 I am not aware of anything to the contrary of any statutory declaration referred to in paragraph 18 of this declaration and on the basis of the statements provided, I believe the matters set out in paragraph 18 to be true.
- 20 And I make this solemn declaration, as to the matters aforesaid, according to the law in this behalf made, and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Signature of
Declarant

.....

declared at

Place

on.....

Date before me

*Signature of
legally authorised
person* before
whom the
declaration is
made*

*Name and title of
person* before
whom the
declaration is
made*

Notes:

1. In this declaration:
 - (a) the words “principal contractor”, “employee”, “employees” and “relevant employees” have the meanings applicable under the relevant Acts;
 - (b) the word “subcontractor” in paragraphs 5, 6, 9, 10, 14 and 15 has the meaning applicable under the relevant Act; and
 - (c) otherwise the words “Contractor” and “subcontractor” (including “supplier” and “consultant”) have the meanings given in or applicable under the Contract.
2. * The declaration must be made before one of the following persons:
 - (a) where the declaration is sworn within the State of New South Wales:
 - (i) a justice of the peace of the State of New South Wales;
 - (ii) a solicitor of the Supreme Court of New South Wales with a current practising certificate;
 - (iii) a notary public; or
 - (iv) another prescribed person legally authorised to administer an oath under the Oaths Act (NSW); or
 - (b) where the declaration is sworn in a place outside the State of New South Wales:
 - (i) a notary public; or
 - (ii) any person having authority to administer an oath in that place.

CONTRACT SCHEDULE 6 – CONSTRUCTION SITE ENVIRONMENTAL MANAGEMENT INSPECTION CHECKLIST (guide only)

Contract/work and work site(s): _____ _____ Inspected by: _____ Designation: _____	Contract No: _____ Date(s): _____
---	--------------------------------------

Instructions: This Checklist is to be completed by the inspecting party (such as Contractor's Representative) at the time of making the site inspection. Initials (NOT ticks or crosses) should be placed in the applicable **Yes/No** box as appropriate.

Where an item is not applicable, the notation **N/A** should be placed in the **Comments and Actions** box.

Where a non-conformance is identified, a brief explanation is to be provided in the corresponding **Comments and Actions** box. **All non-conformances must be rectified immediately and action documented.**

The completed Checklist and details of any corrective actions must be provided to the Principal's Representative at each site meeting. The Checklist is a guide only, and where applicable use a more detailed document to cover the issues.

Weather conditions (tick (✓) appropriate boxes):

Fine ☐ Light rain ☐ Heavy rain ☐ Light wind ☐ Strong wind ☐

Other (provide description): _____

1 General	Yes	No	Comments & Actions
1.1 Is the site is in a generally tidy condition?			
1.2 Is all equipment, materials, etc contained within work area boundary?			
1.3 Are there any obvious signs of construction-related disturbance outside of construction area(s)?			

2 Documents	Yes	No	Comments & Actions
2.1 Is the Project Environmental Management Plan (Project EMP) readily accessible?			
2.2 Is there documentary evidence of compliance with any previously issued Comments and Actions?			
2.3 Is an environmental incident response plan displayed in prominent position?			
2.4 Is there an accessible complaints register?			
2.5 Is there documentation of any training undertaken since last inspection?			

2.6 Is there appropriate documentation for any waste material disposed of offsite (Waste Management Report)?			
--	--	--	--

3 Soil Disturbance and Erosion Control	Yes	No	Comments & Actions
3.1 Have required erosion control measures been correctly installed and are they functional? Check that there are: <ul style="list-style-type: none"> no gaps in silt fences/barriers; no material lying across filter material or build up of silt; or no obvious signs of significant seepage through fences. 			
3.2 Are there any obvious signs of overflow from sediment detention basins?			
3.3 Are there any obvious signs of uncontrolled drainage leaving the site?			
3.4 Are drainage inlets protected by sediment trapping measures?			
3.5 Are any materials, temporary structures/works in drainage lines?			
3.6 Where required, are drainage outlets provided with energy dissipaters to minimise erosion?			
3.7 Have works been scheduled to minimise areas exposed at any one time?			
3.8 Are areas where construction activities have ceased being stabilised and rehabilitated?			
3.9 Is there minimal dirt on adjacent public roads?			
3.10 Are diversion banks and drains located appropriately?			

4 Stockpile Management	Yes	No	Comments & Actions
4.1 Do stockpiles appear adequately maintained and managed (measures in place to prevent dust and soil run-off)?			
4.2 Are there separate stockpiles for different material, eg weed infested soil and clean soil?			
4.3 Are any stockpiles located within the tree drip line (3m from tree base)?			
4.4 Are stockpiles located on the contour at least 2m from waterways, roads and slopes of greater than 10%?			
4.5 Is the stockpile height is less than 2m?			
4.6 Are there diversion banks on the upper side of the stockpile?			
4.7 Is there dust control for the stockpile?			

<u>Water Quality</u>	Yes	No	Comments & Actions
5.1 Does water quality in down slope areas appears to be unaffected by construction work?			
5.2 Any there any apparent illegal discharges to sewers – (cleaning of paint brushes – plaster – concrete and the like)?			
5.3 Are all hazardous materials (eg fuels, chemicals, and the like) stored in an impervious bund that can contain 120% of the volume of the largest container stored in that bund?			
5.4 Are all hazardous materials stored in a covered area more than 20m away from drainage lines or flood prone areas?			
5.5 Is a spill kit readily accessible?			
5.6 Is the on-site refuelling of construction plant restricted to a designated area more than 20m away from waterways and stormwater inlets?			
5.7 Is the wash down of construction plant/vehicles restricted to a designated area (eg truck wash out area)?			
5.8 Are there any obvious signs of fuel spills, oil leakage, and the like from construction plant (check both plant and ground)?			
5.9 Are the relevant Material Safety Data Sheets (MSDS) available onsite?			

<u>6 Noise and Vibration</u>	Yes	No	Comments & Actions
6.1 Is there documentary evidence that all required noise suppression measures have been installed and are operating in accordance with manufacturer's instructions and/or relevant environmental protection licence conditions?			
6.2 Is all noise monitoring equipment (if installed) operating correctly?			
6.3 Is the relevant plant and equipment switched off when not in use?			
6.4 Have the local residents that are likely to be affected by offensive noise and/or vibration been notified?			
6.5 Have local residents been notified of works to be undertaken outside of normal working hours?			
6.6 Have the siting of work areas, vehicle and plant parking areas, material stockpiles and equipment storage has been arranged to minimise noise?			
6.7 Are there appropriate noise and vibration controls for activities adjacent to local residents and other sensitive receivers?			

<u>7 Air Quality</u>	Yes	No	Comments & Actions
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7 Air Quality	Yes	No	Comments & Actions
7.1 Is dust suppression equipment readily accessible?			
7.2 Are there any obvious signs of dust deposition outside of construction area(s)?			
7.3 Is spoil being prevented from being tracked onto public roads?			
7.4 Are the haul roads being kept damp (where required)?			
7.5 Is the air quality monitoring equipment (where installed) operating correctly?			
7.6 Is there spraying for dust control?			
7.7 Is there stabilisation of stockpiles or erection of dust screens?			
7.8 Do any vehicles or plant items have visible exhaust for more than 10 seconds?			
7.9 Is burning off evident where prohibited onsite?			

8 <u>Waste Management and Minimisation</u>	Yes	No	Comments & Actions
8.1 Are waste receptacles accessible and clearly marked with regard to waste type?			
8.2 Is all recyclable material separated as per the waste management requirements (records available)?			
8.3 Are appropriate records of the type, amounts, date, transport, and disposal site of waste kept, possibly in a waste management register?			
8.4 Do trucks removing spoil from the site have their loads covered?			
8.5 Are contaminated land or areas fenced off?			

9 <u>Vegetation</u>	Yes	No	Comments & Actions
9.1 Are all required vegetation protection measures in place and functional?			
9.2 Are any construction materials stored inside vegetation protection zones?			
9.3 Are there any obvious signs of construction activity within protected vegetation areas?			
9.4 Are there measures in place to minimise clearing such as protective fencing, webbing, marker tape and the like?			
9.5 Are disturbed areas stabilised and revegetated?			

10 <u>Archaeology/Heritage</u>	Yes	No	Comments & Actions
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10.1 Are all required protection measures in place and functional?			
10.2 Are construction materials stored outside heritage protection zones?			
10.3 Are any obvious signs of construction activity within protected areas?			
10.4 Is any vibrating equipment being used adjacent to heritage items?			

11 <u>Traffic Management</u>	Yes	No	Comments & Actions
11.1 Have all required traffic control measures been implemented in accordance with the Project EMP (such as warning signs, temporary road closures and the like)?			
11.2 Are all construction plant parked on site?			
11.3 Are any private vehicles of construction personnel obstructing the passage of local traffic?			

12 <u>Community Consultation</u>	Yes	No	Comments & Actions
12.1 Have local residents been notified 5 days prior to the commencement of works, for work outside of the normal working hours?			
12.2 Have local residents been notified 5 days prior to construction of activities that are likely to cause dust, offensive noise or access?			
12.3 Are complaints being reported to the Principal's Representative?			
12.4 Is the Complaints Register complete and have actions detailed been implemented?			

13 <u>Other</u>	Yes	No	Comments & Actions
13.1 Is the access to any private properties being obstructed?			
13.2 Are pedestrian routes adjacent to work sites being obstructed (or are appropriate alternative routes in place)?			

General comments about this work site(s) (including follow up action)

CONTRACTOR'S REPRESENTATIVE _____ SIGNATURE & DATE ____/____/____

PRINCIPAL'S REPRESENTATIVE _____ SIGNATURE & DATE ____/____/____

CONTRACT SCHEDULE 7 – WASTE MANAGEMENT REPORT

The Contractor is to complete this form bi-monthly and return to the Principal at the following site meeting. Before Completion the Contractor is to submit a summary report for the whole Contract to the Principal. The client agency will keep a copy of this report on file with the summary report to assist the agency to comply with the Government WRAPP reporting requirements.

Principal/client agency:**Date:****Project name:****Location of the Contract Site:****Contractor's Representative:****Principal's Representative:****Contractor:****Office location:****Contact number:****Contact number:****Purchasing - VEGETATION AND CONSTRUCTION AND DEMOLITION MATERIALS***Note: fill out ten (10) categories*

Material	Total quantity purchased		Quantity purchased with recycled content		Comments (if applicable)
Landscaping materials		tonnes		tonnes	
Concrete		tonnes		tonnes	
Fill		tonnes		tonnes	
Asphalt		tonnes		tonnes	
Aggregates		tonnes		tonnes	
Virgin Excavated Natural Material		tonnes		tonnes	
Timber		tonnes		tonnes	
Sand		tonnes		tonnes	
Bricks and roof tiles		tonnes		tonnes	
Glass		tonnes		tonnes	
Plasterboard		tonnes		tonnes	
Steel		tonnes		tonnes	
Non-ferrous metal		tonnes		tonnes	
Other categories		tonnes		tonnes	

Waste - VEGETATION AND CONSTRUCTION AND DEMOLITION MATERIALS

Note: fill out ten (10) categories

Material	Total quantity generated		Total quantity recycled		Total quantity disposed of		Method and location of disposal
Vegetation waste		tonnes		tonnes		tonnes	
Concrete		tonnes		tonnes		tonnes	
Fill		tonnes		tonnes		tonnes	
Asphalt		tonnes		tonnes		tonnes	
Timber		tonnes		tonnes		tonnes	
Virgin Excavated Natural Material		tonnes		tonnes		tonnes	
Bricks and roof tiles		tonnes		tonnes		tonnes	
Glass		tonnes		tonnes		tonnes	
Plasterboard		tonnes		tonnes		tonnes	
Steel		tonnes		tonnes		tonnes	
Non-ferrous metal		tonnes		tonnes		tonnes	
Mixed waste		tonnes		tonnes		tonnes	
Other categories		tonnes		tonnes		tonnes	

CONTRACTOR'S REPRESENTATIVE _____ SIGNATURE & DATE ____/____/____

Definitions of waste and purchasing materials

The following category definitions will assist to fill out the tables above.

Note: Descriptions of vegetation, construction and demolition materials are broad to encompass the range of activities undertaken by Government agencies. If a material used is not described below exactly, EITHER list it under the category that it fits into best and briefly describe it in the comments section OR list it as an 'Other Category' with a description.

Purchases

Material	Description
Landscaping materials	Bark, chips, soil amenders, soil mixes, mulches, compost.
Concrete	Mixture of cement, sand and aggregates (or substitutes eg. fly ash).
Fill	Low cost material such as soil, sand, calcium carbonate etc.
Asphalt	Any materials containing bituminous hydrocarbons. May contain additives such as concrete. Includes recycled asphalt pavement.
Aggregates	Rock or other hard materials (eg. concrete, ground up stone or bricks etc.) between 4.25mm and 100mm particle size. Meets Australian Standards specification.
Virgin Excavated Natural Material (VENM)¹	Clay, gravel, sand, soil or rock not mixed with any other type of waste excavated from natural areas that have not been used by human activities such as industry, farming or mining.
Timber	Wood materials used for formwork or other construction purposes.
Sand	Very fine hard aggregate between 0.75mm and 4.25 mm in size. Meets Australian Standard specification.
Bricks and roof tiles	Clay bricks and roof tiles mixed together. This can include small amounts of concrete or plaster render.
Glass	Sheet glass used for doors, windows, partitioning etc.
Plasterboard	Composite wood material used for interior panels for buildings.
Steel	Metal building materials including such things as reinforced steel joints, 'Reo', etc.
Non-ferrous metal	Metal building materials other than steel-based items. Such things as aluminium cladding etc.
Other categories	Agencies can report on other major categories of materials they are purchasing.

Waste

Material	Description
Vegetation waste	Vegetation materials such as leaves, grass, branches, logs including materials that have been processed eg chipped, mulched or composted. Note: this category does not include green or putrescible waste such as food scraps.
Concrete	Mixture of cement, sand and aggregates (or substitutes eg. fly ash).
Fill	Low cost material such as soil, sand, calcium carbonate etc.
Asphalt	Any materials containing bituminous hydrocarbons. May contain additives such as concrete. Includes recycled asphalt pavement.
Timber	Wood materials used for formwork or other construction purposes.
Virgin Excavated Natural Material (VENM)²	Clay, gravel, sand soil or rock not mixed with any other type of waste excavated from natural areas that have not been used by human activities such as industry, farming or mining.
Bricks and roof tiles	Clay bricks and roof tiles mixed together. This can include small amounts of concrete or plaster render.
Glass	Sheet glass used for doors, windows, partitioning etc.
Plasterboard	Composite wood material used for interior panels for buildings
Steel	Metal building materials including such things as reinforced steel joints, 'Reo', etc.
Non-ferrous metal	Metal building materials other than steel-based items. Such things as aluminium cladding etc.
Mixed waste	Mixed waste of which no one material comprises 50% or more of the load
Other categories	Agencies can report on other categories of waste they are generating or recycling.

^{1,2} VENM is usually associated with major infrastructure projects and payment of Section 88 waste levies. It is defined in the *Protection of the Environment Operations Act 1997*.

4. TECHNICAL SPECIFICATION

Refer to the Specifications #20830709.

5. DRAWINGS

Refer to the drawings.

SPECIFICATION

SPECIFICATION
of the work to be done
and the
materials to be used
in the construction
of:

PROJECT: **Proposed Holiday Cottage
Mildenhall**

PROJECT NO: **20830709**

PRINCIPAL: **Department of Environment and
Climate Change
Parks and Wildlife Group
Cape Byron Trust**

SITE: **Cape Byron Headland Reserve
Clarks Beach,
Lighthouse Rd,
Byron Bay NSW 2481**

The whole of the works to
be in
accordance with this
specification and the
accompanying drawings
and specifications
prepared by and
to the satisfaction of:

ARCHITECT: **Graeme Barr
Architects
4 Stonehenge Pl,
Lennox Hd NSW 2478
Ph and Fax 02 66 877973
AUSTRALIA
Email: graemebarr@graemebarr.com
www.graemebarr.com
Registered Architect 4244**

May 2008

SPECIFICATION FOR BUILDING WORK

THE WORK	Proposed Holiday Cottage
The building work described in the building contract dated	
No/street	Lighthouse Rd,
Suburb/town	Byron Bay
Municipality/shire/city	Byron Shire
Reference to title	
Lot/position	
Deposited Plan (DP)/Strata Plan (SP)	
Volume	
Folio	
THE PARTIES	
Principal(s)	Department of Environment and Climate Change
Address	Byron Coast Area, Tallow Beach Rd, Byron Bay, PO Box, 127 Byron Bay NSW 2481
Contractor	
Address	
Australian Company Number (ACN/ABN)	
Licence/registration number	
SIGNATURES	
Principal(s)
Date
Contractor
Date

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1 GENERAL REQUIREMENTS

1.1 GENERAL**Interpretation**

Owner: Means the same as “principal” or “proprietor”.

Builder: Means the same as “contractor”.

Architect: Means the same as “principal’s nominee” and “contract administrator”.

Supply: Means “supply and delivery 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.

Standard: Australian Standards (AS) for materials and workmanship.

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.

Bushfire protection

If required, provide protection to AS 3959-1999 (*Construction of buildings in bushfire prone areas*).

1.2 CONTRACTS AND FINANCE**General conditions**

Minor Works Contract Version 1.2, 2006, between Principal and Contractor with an Architect as the Principal’s Nominee. Refer to Schedules of the Contract.

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.

PC and Provisional Sums in the Specification are to be included in the tender and adjusted at the end of the project in accordance with the amounts used and the Contract Conditions.

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.

Note: Under the terms of the Contract the agreement is between the Contractor and the Principal and the Architect does not pay for building works or other matters within the building contract.

Contingency Sum

The Contingency Sum is a Provisional Sum for unforeseen items and is to be expended at the discretion of the Architect. Any money not expended from the Contingency Sum is to be deducted from the Contract Sum at Practical Completion.

Insurance

Provide all required insurances including Contractor’s all risk policy, workers’ compensation insurance, insurance of the works and neighbouring property and persons, and public liability (minimum \$10000000).

Provide all statutory insurance.

Execution of the Contract

Sign the second page of the Specification, initial each page of the Specification, sign each page of the drawings and sign the Contract in the appropriate place. Three copies of drawings and specifications are to be signed and dated. The Principal, Contractor and the Architect are to retain one copy each.

Requests for Information

A tenderer submitting a tender acknowledges an understanding of the drawings, specifications, and contract. The tenderer by submitting a tender has reported any omissions, discrepancies, errors, or ambiguities prior to tendering. The Contractor may have to reimburse the Principal for Architect’s time in responding to Requests for information (RFIs) when the answer can be found in the contract documents.

1.3 AUTHORITIES AND ESTABLISHMENT**Prior applications and approvals**

All required approvals will be provided by the Principal.

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.

Temporary services and works

Provide toilet, power and water. Coordinate with the Principal and protect the existing buildings and roads and contents while building the works.

Signs

No sign required or permitted.

1.4 EXECUTION AND COMPLETION**Survey marks**

Retain survey marks and reinstall if moved.

Schedule of Contracts

Description /Tender Parts (Refer to all items in the Specifications. Drawings and the Referenced Documents. All items are to include specification preliminaries, general items, profit and GST. Note the addition of these items is to total the complete works.) Note: The Principal may select only Parts of the Tender	Amount (Excluding GST)
1 General Requirements (including works supervision and coordination, insurances, plant and equipment, temporary services, requirements of authorities, etc);	
2 Site Preparation;	
3 Concrete Construction;	
4 Masonry Construction;	
5 Timber and Steel construction itemized as follows:	
a. Labour;	
b. Supply and delivery of timber framing and fascias/barges;	
c. Supply and delivery of steel;	
d. Supply, delivery and installation of bamboo flooring;	
e. Supply and delivery of hardware;	
6 Insulation and sarking itemized as follows;	
a. Wall insulation and sarking supply and delivery;	
b. Wall insulation and sarking installation;	
c. Roof insulation and sarking supply and delivery;	
d. Roof insulation and sarking installation;	
7 Roofing itemized as follows:	
a. Roofing, rainwater gutters and downpipes and trims supply, delivery and installation;	
b. Compressed awnings supply, delivery and installation;	
8 Cladding (including interior FC products) itemized as follows:	
a. Claddings supply and delivery;	
b. Claddings installation;	
9 Doors and Windows itemized as follows:	
a. Windows and doors supply;	
b. Installation of the windows and doors	
c. Hardware supply, delivery and installation by a nominated subcontractor (do not include a cost for this but allow for the coordination in 1 General);	By others
10 Lining itemized as follows:	
a. Supply, delivery and installation of linings;	
b. Supply and delivery of trims;	

Description /Tender Parts	Amount (Excluding GST)
(Refer to all items in the Specifications. Drawings and the Referenced Documents. All items are to include specification preliminaries, general items, profit and GST. Note the addition of these items is to total the complete works.) Note: The Principal may select only Parts of the Tender	
c. Installation of trims;	
11 Block and Tile finishes (including waterproofing);	
12 Floor Coatings and Coverings (preparation only);	
13 Painting;	
14 Timber Fixtures itemized as follows:	
a. Supply, delivery and installation of kitchen and bathroom cupboards;	
b. Supply, delivery and installation of bedroom, linen and services cupboards (not curtains);	
c. Supply, delivery and installation of the external bbq bench;	
d. Supply, delivery and installation of the grabrails;	
15 Plumbing and Drainage:	
a. Supply and delivery of the fittings;	
b. Installation of the fittings;	
c. Supply, delivery and installation of the hot water heater and plumbing;	
d. Supply, delivery and installation of the sanitary and drainage systems (including pump out to amenities block but not the landscape clearing of the path for the pipe from Geoff's Shed to the Amenities Block);	
e. Supply, delivery and installation of the water storage tank;	
16 Electrical Installations itemized with the following options;	
a. Retain existing power pole;	
b. Move power pole beside earth bank with combined meters;	
c. Move power pole beside Lighthouse Rd with combined meters;	
17 Paving and Roads;	
18 Landscaping (turf only and planting by the Principal);	
19 Appliances, Fixtures, PC Sums and Provisional Sums (itemize each section);	
a. Shower screens	
b. Mirrors	
c. Stone Panel in Living Rm	\$300
d. Contingency Sum	\$4900
(Included 20- Internal Finishes Schedule and 21-Referenced Documents)	
Subtotal	
GST	
TOTAL INCLUDING GST	

Supervising Contractor

The Supervising Contractor is to supervise construction and ensure all aspects of the Works are coordinated and built in accordance with the Specification and all other associated contractors are coordinated and built in accordance with the Specification. Tenders for supervising contractor are to be included in section 1-General Requirements.

Order of work

Order of Work Schedule:

This is not the total list but supplied to give a preliminary program of work for subcontractor coordination.

- 1 Establish site with sheds, temporary services, and fences around the site;

- 2 Setout building;
- 3 Excavate site for footings and slabs;
- 4 Install drains and water connections including site drains and water connections;
- 5 Install electrical connection underground from the power pole to the building meter board location;
- 6 Termimesh penetrations of the slab;
- 7 Install membranes, reinforcing and pour concrete footings and slabs;
- 8 Install frames and wind bracing;
- 9 Install insulated roofing;
- 10 Lay rock walls and flash to frame where required;
- 11 Fit membranes and claddings to the building;
- 12 Install electrical and plumbing services;
- 13 Fix and finish linings;
- 14 Construct external fences;
- 15 Prepare ground for planting and turf;
- 16 Turf and mulch garden beds;
- 17 Prepare carpark and access road;
- 18 Fit floor coverings;
- 19 Fit internal doors, frames, architraves, skirtings and trims;
- 20 Install cupboards and other joinery items;
- 21 Fitout electrical and plumbing items;
- 22 Paint linings;
- 23 Plant shrubs and trees;
- 24 Commission appliances and fittings;
- 25 Finish the building work and all items in the contract;
- 26 Clean up site, remove temporary services and clean buildings;
- 27 Hand keys and manuals and warranties to Principal

Submit a Work Program within 2weeks of acceptance of the tender.

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.

Touch up after all trades and generally clean up and make good after them.

Clean up the site removing all building rubbish, surplus materials, plant, etc.

Spread any surplus soil as may be directed.

Clean all floors and paving.

Clean and polish all glass, fitments, etc. Remove all stickers and clean.

Remove all stains and dirt marks.

Ease all doors and windows, including locks, latches, sills, tracks, etc.

Remove all overpaint from services including tiles, fixed furniture and hardware.

Leave all fittings, services and equipment in working order and the whole job generally in a first class condition.

Replace all cracked, broken or defective glazing.

Hand the keys suitably tagged to the Principal.

Warranties

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

Instruction manuals

Give the Principal manufacturers' instruction manuals.

Operation

Ensure moving parts operate safely and smoothly.

Surveyor's certificate

Not required.

Services layout

Give the Principal a plan which shows the location of underground services.

Authorities' approvals

The Principal is the regulatory authority within the National Park and Council approvals are not required apart from Byron Shire Council Section 68 requirements – Plumbing and Drainage.

Keys

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

Note: This is for the construction locks and the Principal will change keying and barrels to their keying system.

1.5 TERMITE PROTECTION**General**

Standard: To AS 3660.1-2000 (*Termite management - New buildings*).

Termite protection schedule

Location	Method
Slab edges	Min 75mm high exposed slab edge
Slab	Slab to be its own barrier
Slab junctions	Termimesh
Posts	Seal hollow sections with Kordon around
Penetrations	Termimesh

Chemical soil barriers - reticulation systems: Submit evidence that the system has been type tested to AS 3660.1-2000 (*Termite management - New buildings*) 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) and AS 3660.1 – 2000 (*Termite management – New buildings*) Appendix A.

1.6 TIMBER GENERALLY**Unseasoned timber**

If unseasoned timber is provided, or variations in moisture content are 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.

No rainforest timber is to be used. Only plantation timber is to be used.

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

- Natural durability classification: To AS/NZS 1604.1 2000 (*Specification for preservative treatment - Sawn and round timber*) Table F2.
- Preservative treatment: To the AS/NZS 1604 series (*Specification for preservative treatment*).

Natural and treated timber durability table

Untreated natural durability class in AS1604.1 Table 2	Preservative treated hazard class to AS 1604 series	Exposure	Situation and uses
Class 4	H1	Inside, above ground. Completely protected from the weather. Well ventilated.	Protect treated timber from termites.
Class 3	H2	Inside, above ground. Protected from wetting with nil leaching. Well ventilated.	Framing, flooring, joinery in dry situations. Protect untreated timber with a finish and maintain well.

Untreated natural durability class in AS1604.1 Table 2	Preservative treated hazard class to AS 1604 series	Exposure	Situation and uses
Class 2	H3	Above ground, exposed to weather. Periodic moderate wetting and leaching.	Weatherboard, fascia, pergolas (above ground), window joinery, framing and decking
Class 1	H4	In-ground. Severe wetting and leaching.	Fence posts, greenhouses, pergolas (in-ground) and landscaping timbers
	H5	In-ground contact with or in fresh water. Extreme wetting and leaching.	Retaining walls, piling, house stumps, building poles, cooling tower fill.

Note: Do not use CCA timber where it can be touched by people in accordance with the BCA.

1.7 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**.

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	Light steel framing, wall ties, connectors and accessories less than 3.2 mm thick	Steel cladding, lining, trims and flashings
Severe marine - Less than 1 km from breaking surf - Less than 100 m from salt water without breaking surf	Stainless steel 316 or 316L	Stainless steel 316	Stainless steel 316

2 SITE PREPARATION

2.1 GENERAL

Standard

Groundworks for slabs and footings: To AS 2870-1996 (*Residential slabs and footings – Construction*).

Interpretation

Rock: Monolithic material with volume greater than 0.5 m³ 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 Principal immediately.

Explosives

Do not use explosives.

2.2 DEMOLITION

Standard

Demolition: To AS 2601-2001 (*The demolition of structures*).

Demolition items

- | | |
|--|---|
| 1 Generally: | Remove all items of building from the top down to make way for all new work whether specifically mentioned or not. Co-ordinate with the schedule of work. |
| 2 Stormwater Pipe: | Replace site stormwater drains |
| Materials to be salvaged and retained: | Stormwater pipes of the size specified. |

Demolished materials

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

2.3 ENVIRONMENTAL PROTECTION

Erosion control

Avoid erosion, contamination, and sedimentation of the site, surrounding areas, and drainage systems. Provide temporary barriers to prevent erosion and movement of contaminants.

Dewatering

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

2.4 SITE CLEARING

Extent

Limit clearing to areas to be occupied by construction, paving or landscaping.

Clearing operations

Remove everything on or above the site surface, including rubbish, scrap, grass, vegetable matter and organic debris, scrub, trees, timber, stumps, boulders and rubble. Remove grass to a depth just sufficient to include the root zone. Ensure the soil is of sufficient compaction to take the structures over.

Grubbing

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

Location: Remove all tree stumps from the area of the building. The Contractor is to inspect prior to tendering to determine the extent of stump removal and site clearing.

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.

2.5 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.

Bearing surfaces

Provide even plane bearing surfaces for load-bearing 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 any 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.

2.6 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 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.

2.7 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 stabilized with cement, controlled low strength material or fine crushed rock.
- In reactive clay sites classified M, H or E to AS 2870-1996 (*Residential slabs and footings – Construction*): Impervious material.

Existing and New Stormwater

New roof stormwater: Connect to a water tank and the overflow to the site stormwater disposal system (rubble drain) in an approved location.

Old stormwater drains: Adjust to the engineers details

3 CONCRETE CONSTRUCTION

3.1 GENERAL**Cross reference**

Refer to the *General requirements* worksection for termite protection and the Specification.

Standards

Concrete structures generally: To AS 3600-2000 (*Concrete structures*).

Ground slabs and footings: To AS 2870-1996 (*Residential slabs and footings - Construction*).

3.2 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.

Type: As approved

Base preparation

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

3.3 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
- Re-entrant corners: Provide a minimum of 1800 3 bar F8TM to all internal re-entrant corners in slabs.

Minimum cover

Unprotected by membrane on ground or external surfaces: 40 mm.

Protected by membrane on ground: 30 mm.

Internal surfaces: 20 mm.

Aggressive soil or salty environment: 65 mm.

Refer to the engineers details.

3.4 CONCRETE**Ready mixed supply**

Standard: To AS 1379-1997 (*Specification and supply of concrete*).

Maximum slump: 100 mm.

Strength at 28 days: Footings 25MPa and other strengths as required.

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.

Curing

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

Method: Cure concrete by:

- using a proprietary curing compound; or
- 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.

3.5 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.

4 MASONRY CONSTRUCTION

4.1 GENERAL

Cross references

Refer to the following worksections:

- *Specification.*

Standard

Masonry generally: To AS 3700-2001 (*Masonry structures*).

Masonry units: To AS/NZS 4455-1997 (*Masonry units and segmental pavers*).

4.2 MATERIALS AND COMPONENTS

Steel components

Galvanizing: Galvanize mild steel components (including fasteners) to AS 1214-1983 (*Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)*), or AS/NZS 4680- (*Hot-dip galvanized (zinc) coatings on fabricated ferrous articles*), as appropriate.

Durability requirements: To AS/NZS 2699.2-2000 (*Built-in components for masonry construction – Connectors and accessories*)

Stone masonry units

Type:

Rock pebbles about 100-150dia in a large mortar bed

Construction:

Construct to sizes shown to match old Mildenhall walls.

Colour:

Grey/brown mix

Damp Course:

Provide a damp proof course over the slab recess

Double Wall:

To the bathroom wall provide double courses with DPC in between courses or minimum 35mm cavity



Picture of old Mildenhall stonewalls.

Masonry durability

Requirement: Conform to AS 3700, Table 5.1.

Wall ties

Standard: To AS/NZS 2699.1-2000 (*Built-in components for masonry construction – Wall ties*)

Non-seismic areas: Type A.

Seismic areas: Type B.

Flashings and damp-proof courses

Standard: To AS/NZS 2904-1995 (*Damp-proof courses and flashings*).

Mortar materials

Sand: Fine aggregate with a low clay content and free from efflorescing salts, selected for grading and colour for facework.

Mortar colour: Standard mortar

Mortar mix table (cement, lime, sand ratios)

Provide mortar mixes as follows (cement:lime:sand):

Mortar class to AS 3700	Bricks or blocks			Water thickener
	Clay/Stone	Concrete	Calcium silicate	
Masonry cement				
M3	1:0:4	1:0:4	n/a	No
Portland cement				
M3	1:1:6	1:1:6	n/a	Optional
	1:0:5	1:0:5	1:0:5	Yes

4.3 CONSTRUCTION GENERALLY

Joints and cutting

Set out masonry with joints of uniform width and the minimum cutting of masonry units.

Joints

Externally: Tool to give a dense water-shedding finish.
Internally: Rake to give a key if wall is to be plastered.
Type: Sponged smooth

Rod

Roughly level courses. Provide a slight fall on the top of the seat walls discharging the water away from the building.

Bond

Double leaf construction with cavity min 20 wide in the middle of the wall.

Perpends

Keep perpends in alternate courses roughly vertically aligned and fill them completely with mortar.

Colour mixing

In facework, distribute the colour range of units evenly to prevent colour concentrations.

Appearance

Leave facework clear of mortar smears, stains and discolouration. Do not clean using an acid solution and do not erode joints if using pressure spraying.

4.4 DAMP-PROOF COURSES

Location

Provide damp-proof courses in the following locations:

- Walls adjoining infill floor slabs on membranes: In the course above the underside of the slab in internal walls and inner leaves of cavity walls. Project 40 mm and dress down over the membrane turned up against the wall.
- Cavity walls built off slabs on ground: In the bottom course of the outer leaf, continuous horizontally across the cavity and up the inner face bedded in mortar, turned 30 mm into the inner leaf one course above; or, in masonry veneer construction, fastened to the inner frame 75 mm above floor level.

Installation

Lay in long lengths. Lap the full width of angles and intersections and 150 mm at joints. Step as necessary, but not more than two courses per step. Preserve continuity of damp-proofing at junctions of damp-proof courses and waterproof membranes. Install at least 150 mm above adjacent finished ground. Sandwich damp-proof courses between mortar.

Openings

Do not close the cavity at the jambs of external openings. Place weather bar in the wall at window openings to install windows.

Cavity flashings

Location: Provide flashings in the following locations:

- Floors: Full width of outer leaf immediately above slab, continuous across cavity and up the inner face bedded in mortar, turned 30 mm into the inner leaf two courses above.
- Under sills: 30 mm into the outer leaf bed joint one course below the sill, extending up across the cavity and under the sill in the inner leaf or the frame. Extend at least 150 mm beyond the reveals on each side of the opening.

- Over lintels to openings: Full width of outer leaf immediately above the lintel, continuous across cavity, 30 mm into the inner leaf two courses above or turned up against the frame and fastened to it. Extend at least 150 mm beyond the ends of the lintels.
- At abutments with structural frames or supports: Vertical flashing in the cavity from 150 mm wide material, wedged and grouted into a groove in the frame opposite the cavity.
- At roof abutments with cavity walls: Cavity flashing immediately above the roof and over-flash the roof apron flashing.

Installation: Sandwich flashings between mortar except where on lintels.

Pointing: Point up joints around flashings to fill voids.

Weepholes

General: At ground floors, provide weepholes in the form of open perpend to external leaves of cavity walls in the course above cavity flashings.

Maximum spacing: Every third perpend.

4.5 WALL TIES

Wall tie application

Classification: To AS/NZS 2699.1.

Type: To BCA Volume 2 clause 3.3.3.2 (*Acceptable construction – Masonry – Masonry accessories - Wall ties*).

Spacing: To BCA Volume 2 Figure 3.3.3.1 (*Typical brick ties spacings in cavity and veneer construction*).

Corrosion protection: To BCA Volume 2 Table 3.3.3.1 (*Corrosion protection for wall ties*). Stainless steel wall ties.

4.6 STEEL LINTELS

Cold-formed lintels

General: Proprietary cold-formed flat-based type designed to AS/NZS 4600-1996 (*Cold-formed steel structures*).

Material: Mild steel galvanized to AS/NZS 4680-1989 (*Hot-dip galvanized (zinc) coatings on fabricated ferrous articles*). Do not cut after galvanizing.

Corrosion protection: To AS/NZS 2699.3-2002 (*Built-in components for masonry construction – Connectors and accessories*).

Steel flats and angles

Sizes: To BCA Volume 2, Figure 3.3.3.5 (*Lintels supporting roofs and masonry walls*).

Material: Mild steel galvanized to AS/NZS 4680. Do not cut after galvanizing.

Corrosion protection: To AS/NZS 2699.3 (*Built-in components for masonry construction - Lintels and shelf angles (durability requirements)*).

Installation

General: Install with the longest leg vertical. Keep lintels 5 mm clear of heads and frames. Pack mortar between the angle upstand and supported masonry units.

Propping: To prevent deflection or excessive rotation, temporarily prop proprietary cold-formed lintels until the masonry reaches its required strength.

Minimum propping period: 3 days.

5 TIMBER AND STEEL CONSTRUCTION

5.1 GENERAL**Cross references**

Refer to the following worksections:

- *Specification.*

Standards

Timber framing and flooring: To AS 1684.4-1999 (*Residential timber-framed construction - Simplified - Non-cyclonic*) or AS 1720.1-1997 (*Timber structures – Design methods*).

Structural steelwork: To AS 4100-1998 (*Steel structures*).

Cold-formed steel framing: Provide a proprietary system designed to AS 3623-1993 (*Domestic metal framing*).

Preparation of metal surfaces: To AS 1627- Various (*Metal finishing - Preparation and pretreatment of surfaces*).

5.2 MATERIALS AND COMPONENTS**Cold-formed steel framing**

Cold-form sections from zinc-coated steel or aluminium/zinc alloy coated steel to AS 1397-2001 (*Steel sheet and strip - Hot-dipped zinc-coated or aluminium/zinc-coated*).

Corrosion protection: To BCA Volume 2 clause 3.4.2.2.

Self-drilling screws

Standard: To AS 3566.1-2002 (*Self-drilling screws for the building and construction industries - General requirements and mechanical properties*).

Corrosion resistance: Highest class to AS 3566.2-2002 (*Self-drilling screws for the building and construction industries - Corrosion resistance requirements*), Table 1.

Flashings and damp-proof courses

Standard: To AS/NZS 2904-1995 (*Damp-proof courses and flashings*).

Timber fasteners

Metal washers: Provide washers to the heads and nuts of all bolts and coach screws.

Steel straps: Zinc-coated steel to AS 1397-2001 (*Steel sheet and strip - Hot-dipped zinc-coated or aluminium/zinc-coated*), minimum size 25 x 1 mm or 30 x 0.8 mm.

Stainless Steel

Note: All steel to be Stainless Steel 316 grade fully welded to match. Grind all welds smooth.

Timber roof trusses

Type: See drawings. Construct proprietary nail plated trusses where detailed.

5.3 CONSTRUCTION GENERALLY**Welding**

Standard: To AS/NZS 1554.1-1995 (*Structural steel welding - Welding of steel structures*).

Grommets

Provide grommets to isolate piping and wiring from cold-formed steel framing.

Swarf

Remove swarf and other debris from cold-formed steel framing immediately after it is deposited.

CCA (copper chrome arsenic)-treated timber

Greasing: Before placing bolts in contact with CCA-treated timber, coat the shank of the bolt in grease or a bituminous coating.

Steel framing: Do not fix CCA-treated timber directly in contact with cold-formed steel framing.

Priming steel

All steel is to be stainless steel 316 grade.

LOSP

Treat all framing timber and opaque painted internal trim with LOSP treatment. This is the orange (not the blue) treatment and certification is required from the supplier.

5.4 FLOORS**General**

Standard: To AS 1684.4-1999 (*Residential timber-framed construction*).

Floor Framing

Provide floor framing if required.

Timber Strip Flooring

Material:	Bamboo strip flooring
Colour:	Suede (dark coffee colour)
Manufacturer:	Style Bamboo Flooring or equal .
Size:	Nom 95x12mm
Joint:	T&G with end matching
Finish:	6 coats of factory applied gloss finish
Subbase:	Lay bamboo strip flooring over a secure and dry concrete subbase (min 60 day cure)
Level:	Level floor to within 5mm in 3000mm radius. Grind and level with Ardit if necessary
Moisture Barrier:	Apply a Sika MB moisture barrier before laying floor
Fixing:	Fix with manufacturer's recommended adhesive. Allow flooring to acclimatize before laying. Lay in straight long lengths.
Edges:	Edge gap to AS1684 covered with skirting
Program:	Install after all other trades are finished.
Abutments:	At abutments with hard finishes such as aluminium angles, tiles etc use urethane finished cork strips.

5.5 WALL FRAMING**Timber wall framing**

Provide LOSP treated gauged timbers for studs, noggings and plates in double-faced walls or alternatively provide light steel framing.

Additional support

General: Provide additional support in the form of noggings, trimmers and studs for fixing lining, cladding, hardware, accessories, fixtures and fittings as necessary.

Maximum spacing of noggings: 1350 mm centres.

Damp-proof courses

Clad-frame walls: Provide damp-proof courses under the bottom plate of external clad-frame walls built off slabs or masonry dwarf walls.

Flashings

Provide flashings to external openings sufficient to prevent the entry of moisture.

5.6 ROOF AND CEILING FRAMING**Wall plates**

Fixing: Fix LOSP timber wall plates to masonry, with either straps or bolts. Screw or nail plates to timber floor framing.

Nailing strips

Where timber joists, rafters or purlins bear on steel members, provide 50 mm thick nailing strips bolted to the flange of the steel member at 450 mm maximum centres.

Strutted framing

General: Construct traditional LOSP timber pitched roof framing, and roof trusses, consisting of rafters and ceiling joists supported at intermediated points by a system of underpurlins strutted off walls or strutting beams and braced by collar ties, and ceiling hanging beams. LOSP treat all structural timber.

Roof Framing

Provide LOSP roof framing as required and secure to wall framing.

Beam framing

General: Construct framing for flat or pitched roofs where the ceiling follows the roof line, consisting of rafters, trimmers or purlins acting as beams to support both ceiling and roof covering.

Treatment: LOSP treat timbers

Roof trusses

General: Factory-assemble LOSP treated trusses.

Camber: 10 mm upward in bottom chord.

Connections: Connector plates pressed to contact with the truss members. No knots in plate area.

Joints: No gaps greater than 2 mm.

Overhangs: Free from spring or splits.

Installation: To AS 4440-1997 (Installation of nailplated timber trusses).

Support: Support trusses on bottom chord at two points only, unless designed for additional support.

Vertical movement: Over internal walls provide at least 10 mm vertical clearance and use bracing methods which allow for vertical movements.

Additional support

Provide a frame member behind every joint in fibre cement sheeting or any lining or cladding.

5.7 TIMBER ROOF TRIM**Priming timber**

Prime exposed timber all round before fixing and re-prime cut edges if trimmed in-situ.

Fascia, valley gutter and barge boards

All barges and fascias preprimed paint finish grade timber barges and fascias ex 150 high.

Minimum thickness:

- Fixed at up to 600 mm centres: 19 mm.
- Fixed at 600 – 900 mm centres: 32 mm.

6 INSULATION AND SARKING

6.1 GENERAL

Interpretation

Sarking-type material: Flexible membrane material normally used for waterproofing, vapour retarding or thermal reflective insulation.

6.2 MATERIALS AND COMPONENTS

Bulk insulation

Cellulosic fibre (loose fill): To AS/NZS 4859.1-2002 (*Materials for the thermal insulation of buildings - General criteria and technical provisions*), Section 5.

Mineral wool blankets and cut pieces: To AS/NZS 4859.1, Section 8.

Polystyrene (extruded rigid cellular sheets): To AS 1366.4-1992 (*Rigid cellular plastics sheets for thermal insulation - Rigid cellular polystyrene - Extruded (RC/PS-E)*).

Polystyrene (moulded rigid cellular sheets): To AS 1366.3-1992 (*Rigid cellular plastics sheets for thermal insulation - Rigid cellular polystyrene - Moulded (RC/PS - M)*).

Reflective insulation: To AS/NZS 4859.1, Section 9.

- Type: CSR

Wool: To AS/NZS 4859.1, Section 6.

Sarking material

Standard: To AS/NZS 4200.1-1994 (*Pliable building materials and underlays - Materials*).

Floor insulation: Provide perforated material.

Insulation types and ratings

Wall: R1.5 CSR fibreglass or woolblend wall batts

Roof: R2.5 CSR Anticon 75, 80mm thick, fibreglass blanket bonded to foil sarking.

6.3 INSTALLATION

Bulk insulation

Standard: To AS 3999-1992 (*Thermal insulation of dwellings - Bulk insulation - Installation requirements*).

Batts: Fit tightly between framing members. If support is not otherwise provided, secure nylon twine to the framing and stretch tight.

Loose fill: Provide boxing to retain loose fill on external edges, cavities and penetrations, and to prevent spilling.

Sarking material

Standard: To AS/NZS 4200.2-1994 (*Pliable building materials and underlays - Installation requirements*).

Wall sarking

General: Provide vapour-permeable sarking under cladding which does not provide a permanent weatherproof seal, including

- boards fixed vertically or diagonally including Hardiplank, Harditex, Hardiflex;
- boards or planks fixed in exposed locations where wind-driven rain can penetrate the joints; and
- unpainted or unsealed cladding.

Installation: Apply to the outer face of external stud walls from the top plate down over the bottom plate and flashing. Run across the studs and lap at least 150 mm at joints.

Roof sarking

Location: Sarking bonded to fibreglass insulation.

Ridge ventilation: Finish sarking at least 50 mm clear of ridges.

7 ROOFING**7.1 GENERAL****Cross reference**

Specification.

7.2 MATERIALS AND COMPONENTS**Flashing material**

Standard: To AS/NZS 2904-1995 (*Damp-proof courses and flashings*).

Fasteners

Self-drilling screws: To AS 3566.1-2002 (*Self-drilling screws for the building and construction industries – General requirements and mechanical properties*).

Corrosion resistance: Class 3 to AS 3566.2-2002 (*Self-drilling screws for the building and construction industries – Corrosion resistance requirements*), Table 1.

Exposed fasteners: Provide fasteners which are prefinished with a coating to match the roofing material, or provide matching purpose-made plastic caps.

7.3 ROOFING**Design and installation**

Standard: To AS 1562.1-1992 (*Design and installation of sheet roof and wall cladding – Metal*).

Custom Orb

Roof material:	Colorbond Custom Orb Ultra 0.48 BMT
Extent:	As detailed.
Manufacturer:	Bluescope Steel
Design and installation:	Fix with colour matched roofing screws.
Roof colour:	Windspray
Roof capping colour:	To match roof
Accessories:	Provide material with the same finish as roofing sheets.

Awnings:

Awning material:	15mm thick compressed sheet in single pieces
Extent:	Where shown on the drawings
Manufacturer:	James Hardie
Finish:	Paint finish
Roof colour:	Windspray
Roof screws:	Stainless steel screws countersunk and epoxy filled (sand down smooth)

Visible accessories

Provide material with the same finish as roofing sheets.

Eaves

Treat ends of sheets as follows:

- Generally: Close off ribs at tops and bottoms of sheets, and over supports by mechanical means or with purpose-made fillers or end caps.
- At gutters: Project sheets 50 mm into gutters.

Swarf

Remove swarf and other debris as soon as it is deposited.

7.4 ROOF PLUMBING**Selection and installation of rainwater goods**

Standard: To AS/NZS 3500.3.2 (*National Plumbing and Drainage – Stormwater drainage – Acceptable solutions*).

PVC rainwater goods and accessories: To AS/NZS 2179.2 (Int) -1998 (*Specifications for rainwater goods, accessories and fasteners – PVC rainwater goods and accessories*)

Sealing: Seal fasteners and mechanically fastened joints with silicone sealant.

Flashings and cappings

General: Flash projections above or through the roof with **two part flashings** consisting of an apron flashing and an over-flashing, with at least 100 mm vertical overlap. Provide for independent movement between the roof and the projection.

Note: Silicone sealing, with no flashings, of penetrations will not be permitted.

Wall abutments: Where a roof abuts a wall, provide 2 part flashings consisting of over-flashings and base flashings.

Type: Colorbond barge rolls to custom orb barges and verges.

Gutters

Minimum slope of eaves gutters: 1:200.

Guttering and downpipe prefinish colour:	Gutters –	Colorbond 150mm half round gutters by Stramit or equal with exposed brackets and overflow slots
	Colour:	Windspray
	Downpipes –	Colorbond Windspray 90mm diameter painted to match walls

Rainwater Tank

Provide a water tank in the location as detailed on the drawings.

8 CLADDING

8.1 GENERAL

Cross references

Refer to the following worksections:

- *General requirements*, for timber durability.
- *Insulation and sarking*, for wall sarking requirements.

8.2 MATERIALS AND COMPONENTS

Flashing material

Standard: To AS/NZS 2904-1995 (*Damp-proof courses and flashings*).

Install under flashings and colorbond flashings to completely exclude water from entering the building and structure.

Fasteners

Steel nails: Hot-dip galvanized to AS 4680- (*Hot-dip galvanized (zinc) coatings on fabricated ferrous articles*).

Self-drilling screws: To AS 3566.1-2002 (*Self-drilling screws for the building and construction industries – General requirements and mechanical properties*).

Corrosion resistance: Class 3 to AS 3566.2-2002 (*Self-drilling screws for the building and construction industries – Corrosion resistance requirements*), Table 1.

8.3 FIBRE CEMENT CLADDING

Standard

General: To AS/NZS 2908.2-2000 (*Cellulose-cement products – Flat sheets*) Type A Category 3.

Fibre cement Cladding

Hardiflex

Location:	To the external and internal walls where shown
Type:	6mm flat Hardies Hardiflex sheets
Framing:	Provide timber framing as required to fit the claddings
Joints:	Place 42x11mm preprimed timber cover strips over the joins for paint finish
Finish:	Paint finish to sheets and cover beads to match and as specified

Hardiplank

Location:	To the external walls where shown
Type:	Hardies Hardiplank smooth 230 wide smooth
Framing:	Provide timber framing as required to fit the claddings
Joints:	Proprietary joiners with timber external and internal stops. Stagger end joints where necessary to an approved pattern
Finish:	Paint finish to sheets and cover beads to match and as specified

Harditex

Location:	To the external walls where shown
Product:	Hardies Harditex 7mm thick sheet with recessed and set joints
General:	Provide a proprietary system of single faced fibre cement sheets with recessed edges.
Arrangement:	Set out in even panels with joints coinciding with framing as required.
Finish:	Finish with smooth texture finish to match sponge finished render and paint over..

Eaves lining

Type: To the soffits where detailed provide a proprietary system of Hardiflex fibre cement sheets 4.5mm thick nailed at minimum 200 mm centres to bearers at maximum 600 mm centres.

Provide timber framing for the soffit.

Joints: Neat tight butt joints and paint finish.

9 DOORS AND WINDOWS**9.1 GENERAL****Cross references**

Refer to the following worksections

- *Specification*

9.2 MATERIALS AND COMPONENTS**Flashings**

Standard: To AS/NZS 2904-1995 (*Damp-proof courses and flashings*).

Metal finishes

Zinc plating: To AS 1789-1984 (*Electroplated coatings – Zinc on iron or steel*), at least service condition number 2.

Anodising: To AS 1231-2000 (*Aluminium and aluminium alloys – Anodic oxidation coatings*), at least class AA10.

Thermoset powder coating: To AS 3715-1989 (*Metal finishing – Thermoset powder coatings for architectural applications*), or AS 4506-1998 (*Metal finishing – Thermoset powder coatings*) as appropriate.

Glass

Selection and installation: To AS 1288-1994 (*Glass in buildings – Selection and installation*).

Doorsets

Timber doors: To AS 2688-1984 (*Timber doors*).

Timber frames and jamb linings: To AS 2689-1984 (*Timber doorsets*).

Security screen doors: To AS/NZS 2803.1-1994 (*Doors – Security Screen – Hinged*) or AS/NZS 2803.2- (*Doors – Security Screen – Sliding*).

Windows

Selection: To AS 2047-1999 (*Windows in buildings – Selection and installation*).

Preglazing

If possible, preglaze doors and windows. Glaze with clear glass to Standards and the BCA. Opaque satin lite glazing in the ensuite.

Windows (See Schedule for locations)**Type 1 – Louvres**

Manufacturer:	Breezway
Material and Type:	Aluminium frame with glass louvres
Finish type:	Clear anodized
Glass:	Clear unless otherwise specified. Obscure glazing is to be opaque satin lite type where nominated
Blade Size:	152mm
Screens:	Black nylon insect mesh
Openers and Locks:	Proprietary openers and locks to each window. Double banks in bathroom windows. One map rod for the building.
Fixed Windows:	Matching aluminium frames for fixed glazing. Coloured glass supplied by the Principal where nominated
External Frames:	NG Rosewood frame to house all louvres. Flash frames to walls.
External Architraves:	No external architraves except in Hardiflex walls (use back mould to frame). In Hardiflex walls provide cover battens around windows
Internal Architraves:	Architraves to hardiflex walls and set reveals to plasterboard walls
Sill boards:	Fit 20 thick timber sill boards for paint finish. Project sill boards 20mm beyond the wall linings

Type 2 – Fixed Glazing

Manufacturer:	Martins Wood Turning or Dayal Singh Joinery or equal
Type:	Fixed panel window 45mm thick. Solid NG Rosewood rails and stiles and glazed panels. Frame the windows with nom 120x45 NG rosewood stiles, top rail and 190x45 bottom rail (note: to match the bifolding doors). Provide glazed panels per window leaf with glazing bars to detail. Silicon seal the corner join of the glass in corner windows

Prefinish type: Clear finish with Sikkens

Finish:	Clear finish with Sikkens
Glass:	Safety glass where required.
Insect screen:	-
Sill:	Kwilla sill stepped
External Architraves:	No external architraves except in Hardiflex walls. In Hardiflex walls provide cover battens around windows
Internal Architraves:	Architraves to hardiflex walls and set reveals to plasterboard walls
Sill boards:	NG Rosewood sills
Type 3 – Aneeta Window	
Manufacturer:	Aneeta Windows Pty Ltd
Material:	Powder coat aluminium windows
Type:	2 pane sashless double hung sashes fitted into bifold and/or double doors NG rosewood timber frames. Seal the join of the Aneeta window with the timber door frame. Ensure the doors shut completely and the Aneeta doesn't clash with the doors. Refer to Aneeta Windows Pty Ltd for details. Ensure the windows are securely fixed within the door frames
Locks:	Aneeta lock to hold window open in 2 positions
Prefinish type:	Powder coat
Prefinish colour:	Dulux powdercoat colour "Hunter Red"
Glass:	As scheduled with safety glass
Screens:	Black stainless steel Crimsafe mesh in matching frames
Sealing:	Ensure the seal against the timber doors is completely watertight and does not permit water to enter the building or door assembly

External doors (See Schedule for locations)**Type 1- Bifold Doors**

Manufacturer:	Martins Wood Turning or Dayal Singh or equal
Type:	Bifolding glazed panel door 45mm thick. Solid NG rosewood rails and stiles and single glazed panel unless otherwise specified. Frame the doors with nom 120x45 NG rosewood stiles, top rail and a 190x45 bottom rail. Provide a single glazed panel per door leaf except for the doors with opening double hung window sashes inside the door panel. Rebate the meeting style of the pass door with the rest of the doors
Bifold Hardware:	Centor bifolding door tracks, wheels, carriages, guides, flushbolts, hinges with handles, lock, latch and handles
Prefinish type:	Clear finish with Sikkens
Finish:	Clear finish with Sikkens
Glass:	Safety glass where required
Insect screen:	Black stainless steel insect mesh to the window inserts only. Roll our Centor (or Henderson) insect screens to other bifold doors with meeting style and floor track.
Sill:	Centor metal sill stepped 5mm behind. Place with tracks in lower face of the sill. Provide drains to the sill at 1200mm c/s max. Inside top of the sill is to be flush with the internal floor finish. Provide tiled internal and external sills.
External Architraves:	External architraves in Hardiflex walls. Provide cover battens around doors.
Internal Architraves:	Architraves to Hardiflex walls and set reveals to plasterboard walls

Type 2 – Double Doors

Manufacturer:	Martins Wood Turning or Dayal Singh or equal
Material:	NG Rosewood 45mm thick
Type:	Double doors with bearing s/steel hinges. Provide an opening double hung Aneeta window sashes inside each door panel. Frame the doors with nom 120x45 NG rosewood stiles, top rail and a matching 190x45 bottom rail. Rebate stiles at meeting edges
Frame:	Timber (NG rosewood)
Sill:	Kwilla sill stepped 5mm. Inside top of the sill is to be flush with the internal floor finish
Prefinish type:	Clear finish with Sikkens
Finish:	Clear finish with Sikkens

Glass:	As scheduled with safety glass
Insect screen:	Black stainless steel insect mesh to the window inserts only. Insect screen doors only over Aneeta inserts.
External Architraves:	External architraves
Internal Architraves:	Architraves to Hardiflex walls and set reveals to plasterboard walls
<u>Type 3 – Entry Door</u>	
Manufacturer:	Martins Wood Turning or Dayal Singh or equal
Material:	NG rosewood 45mm thick
Type:	Single door with bearing s/steel hinges. Frame the doors with nom 120x45 NG rosewood stiles, top rail and a matching 190x45 bottom rail. Solid NG rosewood door panel
Frame:	Timber (NG rosewood)
Sill:	Tile internal and external sill stepped 5mm at an aluminium angle and the inside flush with the floor finish
Prefinish type:	Clear finish with Sikkens
Finish:	Clear finish with Sikkens
Glass:	As scheduled with safety glass
Insect screen:	No insect screen
External Architraves:	External architraves
Internal Architraves:	Set reveals to plasterboard and/or villaboard walls

Type 4 – Service Door

Manufacturer:	Corinthian or equal
Material:	Solid core for paint finish 40mm thick. Smooth faced doors
Glazing:	No glazing
Frame:	Paint finish timber frame (65mm width)
Hinges:	Stainless steel butt hinges
Insect screen:	No insect screens
Finish:	Paint (prefinish with oil based primer before installing)
Sill:	Kwilla sill stepped and the inside flush with the floor finish
External Architraves:	External architraves
Internal Architraves:	Architraves and reveals

Type 5 – Laundry Door

Manufacturer:	Martins Wood Turning or Dayal Singh or equal
Material:	NG rosewood 45mm thick
Type:	Single door with bearing s/steel hinges. Frame the doors with nom 120x45 NG rosewood stiles, top rail and a matching 190x45 bottom rail.
Frame:	Timber (NG rosewood)
Sill:	Kwilla sill stepped 5mm and the inside flush with the floor finish
Prefinish type:	Clear finish with Sikkens
Finish:	Clear finish with Sikkens
Glass:	Obscure glazing with safety glass
Insect screen:	No insect screen
External Architraves:	External architraves
Internal Architraves:	Set reveals to plasterboard and/or villaboard walls

Internal doors (See Schedule for locations)**Type 6 – Internal Panelled Door**

Manufacturer:	Martins Woodturning or Dayal Singh or equal
Material:	NG rosewood for clear paint finish
Type:	120x40 stiles and top rail with a 190x40 bottom rail. Panel within frame
Insect screen:	None
Frame:	Matching NG rosewood door frame with planted stop

Hinges:	Stainless steel loose pin butt hinges
Sill:	No sill
Finish:	Clear finish paint
Panels:	Solid NG rosewood or obscure glazing as nominated
Internal Architraves:	Set reveals to plasterboard and/or villaboard walls

Type 7 – Curtains

Manufacturer and Type: The Principal will provide the curtains and rods and clips

Reveals: Contractor is to plasterboard and paint the reveals and cupboards to take the curtains.

Type 6 – Internal Bi-parting Cavity Sliding Panelled Door

Manufacturer:	Martins Woodturning or Dayal Singh or equal
Material:	NG rosewood for clear paint finish
Type:	120x40 stiles and top rail with a 190x40 bottom rail. Panel within frame
Insect screen:	None
Frame:	Bi-parting cavity sliding door frame
Hinges:	Stainless steel loose pin butt hinges
Sill:	No sill
Finish:	Clear finish paint
Panels:	Obscure glazing as nominated
Internal Architraves:	Set reveals to plasterboard and/or villaboard walls

9.3 CONSTRUCTION GENERALLY**Standards**

Doorset installation: To AS 1909-1984 (*Installation of timber doorsets*).

Window installation: To AS 2047-1999 (*Windows in buildings – Selection and installation*).

Security screen doors installation: To AS/NZS 2804.1-1995 (*Installation of security screen doors – Hinged*) or AS/NZS 2804.2 –1996 (*Installation of security screen doors – Sliding*)

Ensure windows and doors exclude water from entering the building.

Flashings and weatherings

Install window and door flashings, weather bars, drips, storm moulds, seals, caulking and pointing so that water is prevented from penetrating the building between frames and the building structure. All doors and windows are to completely stop water from entering the building, assembly and structure.

Installation

Install doorsets and windows so they:

- are plumb, level, straight and true;
- are adequately fixed or anchored to the building structure;
- will not carry building loads, including loads caused by structural deflection or shortening; and,
- prevent water entry into the building, assembly or structure

Fixing

Packing: Pack behind fixing points with durable full width packing.

Linings

Provide jamb linings and/or plasterboard linings as necessary to all stud walls to suit the stud framing.

9.4 TIMBER DOORS**Door thickness**

Generally: 35 mm.

External doors and doors over 900 mm wide: 40 mm.

Door construction

External doors: Solid core and solid framed doors as specified.

Internal doors: Solid framed doors as specified.

Medium density fibreboard doors: Board designated by the manufacturer as having a moisture resistance which is suitable for the exposure of the door.

Priming

Prime timber doors on top and bottom edges before installation.

Door stops

Install door stops to prevent door furniture striking the wall or other surface.

Hinge table

Provide 3 hinges for external doors and door leafs over 2040 mm in height or 820 mm in width and as follows:

Thickness of door (maximum)	Weight of door (maximum)	Number of hinges (per door leaf)	Size of hinges (steel)
40 mm	68 kg	3	Lane S/steel fixed pin type (loose pin internal doors) 100 x 75 x 1.6 mm (extended hinges where nominated) S/steel bearing hinges where nominated Centor hinges where nominated

9.5 LOCKSETS

Note: All hardware is to be PC Sum for the supply, delivery and installation unless otherwise specified.

External Panelled Door:	Delf 9052 mortice locks, scp. Delf scp 3019SC/3018SC lever sets on backing plates.
External Double Doors:	Delf 9052 mortice locks, scp. Scope euro turn snibs. Delf scp 3019SC/3018SC lever sets on backing plates. Delf 9052RKSS rebate kits.
External Bifold Doors:	Scope G7005.45 mortice bifold/sliding door locks, scp with matching excutcheons. Delf scp 3019SC lever sets and passage set on backing plates. (Bifolds are to have Centor hinges, guides, runners, D handles on hinges, flush bolts etc and these are not part of the PC sum and are to be supplied fitted to the bifold doors by the door manufacturer.)
Internal Door :	Scope DFTL.60SS tubular latch with Delf 3018SC handle sets on backing plates.
Internal Door (privacy):	Delf 2427-57 SS mortice locks with Delf 3018PSC privacy handle sets on backing plates.
Coat Hooks:	Superior Brass Single Hook, Single Hook, Chrome finish, #33212
Barrel bolts:	French Doors – Scope Barrel Bolt Offset, Satin finish
Cabin Hooks:	Scope CH01.150SS Brass Cabin Hook, Chrome finish
Door Stops:	Scope DS335 Door Stops Wall Mount, Chrome finish

Locks: Bi-Lock

External doors

Provide and fit locks and latches as scheduled.

Internal doors

Provide and fit locks and latches as scheduled.

Door lockset mounting heights

To centreline of spindle: 1 m above finished floor for Double and Panelled doors.

Keying

Set up locks to the Principal's Bi-Lock System.

9.6 DOOR SCHEDULE

Note: Sizes are nominal and may be varied to standard sizes with the approval of the Principals. Verify sizes. Ease and adjust all doors and hardware.

Door Number	Door Type	Width m	Height m	Hardware	Remarks
D01 Entry	Type 3	0.82m	2.04m	3 hinges Mortice lock 2 levers Door stop	Raven RP2 door seal KA1
D02 Laundry	Type 5	0.82m	2.04m	3 hinges Mortice lock 2 levers Door stop	Raven RP2 door seal KA1
D03 Living	Type 1	3.5m	2.04m	Centor Hinges with D pull backs Centor flush bolts Centor tracks and guides 3 hinges to passdoor Sliding/bifold lock 2 Handles Door stop	Provide ferrules in the sill and in the concrete to hold the doors shut and open as required. Drain the sills away from the building into an ag drain under the external paving. Fit weather strips to all edges of the bifold doors to exclude water and dust. Bifold hardware is to be supplied with the doors and is not part of the PC Sum for hardware. KA1
D04 Bed3	Type 2	1.7m	2.04m	6 extended hinges Mortice lock Rebate kit 2 levers 2 barrel bolts Door stop 2 cabin hooks	Fit Aneeta windows and screens to doors. Raven RP2 door seals KA1
D05 Bed2	Type 2	1.7m	2.04m	6 extended hinges Mortice lock Rebate kit 2 levers 2 barrel bolts Door stop 2 cabin hooks	Fit Aneeta windows and screens to doors. Raven RP2 door seals KA1
D06 Bed1	Type 2	1.7m	2.04m	6 extended hinges Mortice lock Rebate kit 2 levers 2 barrel bolts Door stop	Fit Aneeta windows and screens to doors. Raven RP2 door seals KA1

Door Number	Door Type	Width m	Height m	Hardware	Remarks
				2 cabin hooks	
D07 Cleaners Cpd	Type 4	0.72m	2.04m	3 hinges Mortice lock 2 levers Door stop	Raven RP2 door seal KA2
D08 Linen Cpd	Type 6	0.82m	2.04m	3 hinges Tubular latch 2 levers	Timber panel
D09 Bed1	Type 6	0.82m	2.04m	3 hinges Privacy latch 2 handles Door stop	Obscure glazed panel
D10 Bath 2	Type 6	0.82m	2.04m	3 hinges Privacy latch 2 handles Door stop	Obscure glazed panel
D11 Bath 1	Type 6	0.82m	2.04m	3 hinges Privacy latch 2 handles Door stop	Obscure glazed panel
D12 Bed 3	Type 7	1.03m	2.04m	Curtain rod Curtain	Principal will provide curtain and rod
D13 Bed 2	Type 7	1.2m	2.04m	Curtain rod Curtain	Principal will provide curtain and rod
D14 Bed 1	Type 7	1.2m	2.04m	Curtain rod Curtain	Principal will provide curtain and rod.
D15 Bed 2	Type 8	1.4m	2.04m	Cavity slider track and frame Flush pulls with privacy latch	Obscure glazed panel Biparting

9.7 WINDOW SCHEDULE

Note: Sizes are nominal and should be checked on site.

All louvre windows are to be keyed alike

Clear glazing unless otherwise specified

All louvre windows in one bank unless otherwise specified

Heights are nominal and generally line up the tops of the windows and doors by adjusting sill heights

Window Number	Window	Sash Type (viewed from outside)	Width m	Height m	Remarks (Mk all window locks)
W01 Bathroom 2	Type 1	Louvre	0.8m	1.071m	Obscure glazing in 2 banks. 4 louvres at the bottom and 3 louvres at the top

Window Number	Window	Sash Type (viewed from outside)	Width m	Height m	Remarks (Mk all window locks)
W02 Kitchen	Type 1	Louvre	0.8m	1.071m	
W03 Corridor 2	Type 1	Louvre	0.8m	1.071m	
W04 Bathroom 1	Type 1	Louvre	0.8m	1.071m	Obscure glazing in 2 banks. 4 louvres at the bottom and 3 louvres at the top
W05 Bed 3	Type 1	Louvre	0.8m	1.071m	
W06 Bed 1	Type 1	Louvre	0.8m	1.071m	Couple to D06
W07 Bed 1	Type 1	Louvre	0.8m	1.071m	Couple to D06
W08 Bed 1	Type 1	Louvre	0.8m	1.071m	
W09 Bathroom 2	Type 1	Louvre	0.8m	1.071m	Obscure glazing in 2 banks. 4 louvres at the bottom and 3 louvres at the top
W10 Kitchen	Type 1 Highlites	Louvre/Louvre/ Louvre/Louvre/ Louvre	3.60m	0.5m	One standard opener per louvre bank.
W11 Living	Type 1 Highlites	Louvre/Louvre/ Louvre/Louvre/ Louvre	3.60m	0.5m	One standard opener per louvre bank.
W12A&B Living	Type 2	Corner fixed window	2x0.86m	2.04m	Silicone seal corner join 2 x 40mm thick horizontal glazing bars Flash sill Line up head with doors beside
W13A&B Living	Type 2	Corner fixed window	2x0.86m	2.04m	Silicone seal corner join 2 x 40mm thick horizontal glazing bars Flash sill Line up head with doors beside
W14 Bathroom2	Type 1	Fixed	0.35m	0.22m	Coloured obscure glass – Orange
W15 Bathroom2	Type 1	Fixed	0.35m	0.22m	Coloured obscure glass – Green
W16 Bathroom2	Type 1	Fixed	0.35m	0.22m	Coloured obscure glass – Yellow
W17 Bed 3	Type 3	Aneeta 2 pane sashless window	0.58m	1.73m	
W18 Bed 3	Type 3	Aneeta 2 pane sashless	0.58m	1.73m	

Window Number	Window	Sash Type (viewed from outside)	Width m	Height m	Remarks (Mk all window locks)
		window			
W19 Bed 2	Type 3	Aneeta 2 pane sashless window	0.58m	1.73m	
W20 Bed 2	Type 3	Aneeta 2 pane sashless window	0.58m	1.73m	
W21 Living	Type 3	Aneeta 2 pane sashless window	0.58m	1.73m	
W22 Living	Type 3	Aneeta 2 pane sashless window	0.58m	1.73m	
W23 Bed 1	Type 3	Aneeta 2 pane sashless window	0.58m	1.73m	
W24 Bed 1	Type 3	Aneeta 2 pane sashless window	0.58m	1.73m	

10 LINING**10.1 GENERAL****Cross reference**

Refer to the *Specification*.

10.2 MATERIALS AND COMPONENTS**Plasterboard**

Standard: To AS/NZS 2588-1998 (*Gypsum plasterboard*).

Sheet thickness: nom 10mm

Location: All internal walls and ceilings unless otherwise specified

Wet area plasterboard: Wet area plasterboard to the bathroom ceilings
and to the bathroom walls and behind kitchen sink

Fibrous cement products

Hardiflex: Standard: To AS 2185-1978 (*Fibrous plaster products*).

Sheet thickness: 6mm Hardiflex

Location: See Finishes Schedule and details

Joints: Place 42x11mm preprimed timber cover strips over the joints for paint finish. Rebate edges to fit over plasterboard abutments.

10.3 SHEET LINING**Supports**

Install timber battens or proprietary cold-formed galvanized steel furring channels

- if framing member spacing exceeds the recommended spacing;
- if direct fixing of the sheeting is not possible due to the arrangement or alignment of the framing or substrate; and
- to support fixtures.

Installation

Plasterboard: To AS/NZS 2589.1-1997 (*Gypsum linings in residential and light commercial construction – Application and finishing – Gypsum plasterboard*).

Framed construction: Screw or nail or combine with adhesive.

Masonry construction: Adhesive-fix direct to masonry.

Wet areas: Do not use adhesive and use wet area boards.

Joints

General: Provide recessed edge sheets and finish flush with perforated reinforcing tape.

External corner joints: Make over zinc-coated steel corner beads.

Wet areas: Provide the flashings, trim and sealants necessary to ensure wet areas are waterproofed.

Joints in tiled areas: Do not apply a topping coat after bedding perforated paper tape in bedding compound.

Control joints: Install purpose-made zinc-coated control joint beads in walls and ceilings at the following maximum centres and to coincide with structural movement joints:

- Plasterboard: 12 m.
- Fibre cement: 7.2 m.

10.4 TRIM**General**

Provide timber, not medium density fibreboard, trim, such as beads, skirtings, architraves, mouldings and stops, where necessary to make neat junctions between components and finishes.

Cornice

Types: Square set cornice

Skirtings

Types: 68x11 for paint finish with a splay top

Architraves

Types: 68x11 for paint finish with a splay top (note: no architraves in plasterboard lined walls).

11 BLOCK AND TILE FINISHES**11.1 GENERAL****Standards**

Follow the guidance given in AS 3958.1-1991 (*Ceramic tiles – Guide to the installation of ceramic tiles*) and AS 3958.2-1992 (*Ceramic tiles – Guide to the selection of a ceramic tiling system*).

11.2 MATERIALS AND COMPONENTS**Exposed edges**

If available, provide purpose-made border tiles with the exposed edge (whether round, square or cushion) glazed to match the tile face.

Accessories

If available, provide tile accessories such as round edge tiles, cove tiles, step treads and nosings to stairs, landings, and thresholds, skirtings, sills, copings and bath vents, which match the surrounding tiles, composition, colour and finish.

Adhesives

Standard: To AS 2358-1990 (*Adhesives – For fixing ceramic tiles*).

PVA (polyvinyl acetate)-based adhesives: Do not use in wet areas or externally.

Mortar materials

Cement: To AS 3972-1997 (*Portland and blended cements*), type GP.

Sand: Fine aggregate with a low clay content selected for grading.

Bedding mortar

Proportioning: Select proportions from the range 1:3 to 1:4 cement:sand to obtain satisfactory adhesion. Provide minimum water.

Grout

White grout for wall tiles.

Cement based grout for floor tiles.

Cement-based proprietary grout: Mix with water. Fine sand may be added as a filler in wider joints.

Portland cement-based grout: Mix with fine sand. Provide minimum water consistent with workability.

Proportioning:

- For joints up to 3 mm: 1:2 cement:sand.
- For joints over 3 mm: 1:3 cement:sand.

Preparation

Prepare the substrates, including the following:

- Remove deleterious and loose material and leave the surface dust-free and clean.
- For mortar bedding, wet the substrate as necessary to achieve suitable suction. Alternatively, apply a proprietary bonding agent to the substrate to improve adhesion.

Block and tile schedule

Location	Wall/Floor	Manufacturer	Type	Size	Colour	Remarks
Bathroom 1 and 2	Wall	Johnson or equal	Elite	247x330	Barley Scored	Line up with floor tiling
Bathrooms 1 and 2	Floor	Johnson or equal	Minima 3	330x330	Mocha	Cut around floor wastes to get falls if necessary.
Kitchen	Wall	Johnson or equal	Waringah	100x100	Mimosa Goldcrest Pistachio Kiwi Victorian Blue	Fix to pattern shown on the drawings
Sills (inside and outside doors)	Floor	Johnson or equal	Minima 3	330x330	Mocha	Place an aluminium angle twist internal and external sills

11.3 WATERPROOFING WET AREAS

Standard

General: To AS 3740-2004 (*Waterproofing of wet areas within residential buildings*).

Membrane

Provide a proprietary liquid applied or sheet membrane system which

- has a current Australian Building Products and Systems Certification Scheme certificate; or
- has a current appraisal report issued by the CSIRO Building Products and Systems Appraisals stating that the system is suitable for use as a waterproofing system for use in wet areas, shower recess bases and associated floors and wall/floor junctions which are to be tiled.

Type- Wetseal Pty Ltd.

Installation

Floor wastes: Turn membrane down onto the floor waste puddle flanges, and adhere.

Hobs: Extend membrane over the hob and into the room at least 50 mm. For hobless showers extend 1800 mm into the room.

External tiling: Provide a waterproof membrane under external floor tiling, to balconies and over habitable rooms, which forms a drained tank suitable for continuous immersion. Do not run under bounding walls.

Curing: Allow membrane to cure fully before tiling.

11.4 TILING

Cutting and laying

Cut tiles neatly to fit around fixtures and fittings, and at margins where necessary. Drill holes without damaging tile faces. Rub edges smooth without chipping. Return tiles into sills, reveals and openings. Butt up to returns, frames, fittings, and other finishes.

Variations

Distribute variations in hue, colour, or pattern uniformly, by mixing tiles or tile batches before laying.

Protection

Protect tiles until the bedding has set and attained its working strength.

Setting out

General: Set out tiles to give uniform joint widths within the following limits:

- Ceramic tiles: 3 – 5 mm.

Joint alignment: Set out tiling with joints accurately aligned in both directions and wall tiling joints level and plumb.

Joint position: Set out tiles from the centre of the wall to be tiled and, if possible, ensure cut tiles are a half tile or larger.

Fixtures: If possible, position tiles so that holes for fixtures and other penetrations occur at the intersection of horizontal and vertical joints or in the centre of tiles.

Preparation of tiles

Adhesive bedding: Fix tiles dry.

Mortar bedding: Soak porous tiles in water for half an hour and then drain until the surface water has disappeared.

Sealed joints

Fill joints with silicone sealant and finish flush with the tile surface where tiling joins fixtures.

12 FLOOR COATINGS AND COVERINGS

GENERAL**Cross reference**

Refer to the *Specification*.

MATERIALS AND COMPONENTS**SUBSTRATE****Substrate preparation**

Prepare the substrate including the following:

Stripping and cleaning: Remove deleterious and loose material, including existing any surface treatment which could adversely affect adhesion.

Repairs: Make good to the surface finish as necessary. Fill depressions with a suitable filler, and remove high spots and projections. If necessary lay a steel-trowelled underlay to concrete substrate.

Fixtures and fittings: Remove door stops and other fixtures, and refix in position undamaged on completion of the installation.

Basic sanding: Produce an even plane sanded surface on strip flooring to be covered with carpet or resilient sheet or tile. Lightly sand the junctions of sheet flooring.

Fine sanding: If flooring is to be clear finished, stop with matching filler and produce a smooth sanded surface free from irregularities and suitable to receive the finish.

TIMBER FLOORING

Refer to Timber and Steel section of the specification.

Flooring set out

Set out the flooring in a pleasant staggered pattern with no two joints lining up for a minimum of 4 boards.

Joints

End fit timber joins.

Edge strip

Provide a proprietary edge strip at exposed edges of tile and timber flooring. If edge strips occur at doorways, make the junction underneath the closed door. Provide urethane finished cork at hard abutments.

Junctions

Scribe neatly up to returns, edges, fixtures and fittings. Finish flush with adjoining surfaces. Cover joins with walls with skirtings.

Cleaning and protection

Keep traffic off floors until bonding has set or for 24 hours after laying, whichever period is the longer. Do not allow water in contact with the finish. Sanded and clear finished floors are to have

Locations

Refer to the drawings for locations of flooring.

13 PAINTING**13.1 GENERAL****Standards**

Follow the guidance given in AS/NZS 2311-2000 (*Guide to the painting of buildings*) and AS/NZS 2312-1994 (*Guide to the protection of iron and steel against exterior atmospheric corrosion*).

13.2 MATERIALS AND COMPONENTS**Combinations**

Do not combine paints from different manufacturers in a paint system. Paints by Dulux unless otherwise specified.

Delivery

Deliver paints to the site in the manufacturers' labelled containers. Ensure containers are marked with the APAS (Australian Paint Approvals Scheme) specification number.

13.3 PAINTING**Order of work**

Complete clear timber finishes before commencing opaque paint finishes in the same area.

Protection

Remove door furniture, switch plates, light fittings and other fixtures before starting to paint, and refix in position on completion of painting.

Restoration

Clean off marks, paint spots and stains progressively. Touch up damaged decorative paintwork or misses with the paint batch used in the original application.

Substrate preparation

Provide a filler tinted to match the substrate if the finish is transparent.

Paint application

Apply the first coat immediately after substrate preparation and before contamination of the substrate can occur. Ensure each coat of paint or clear finish is uniform in colour, gloss, thickness and texture, and free of runs, sags, blisters, or other discontinuities.

Priming before fixing

Timber: Apply a first coat (two coats to end grain) to exposed roof trim, timber doors and window frames, tops and bottoms of doors, associated trims and glazing beads before fixing in position.

Steel: Apply a priming coat of zinc-rich organic binder to APAS 2916-2001 (*Organic zinc rich coating for protection of steel*). Note: All exposed steel is to be hot dipped galvanized and not painted.

Repair of galvanizing

If galvanized or zinc-coated surfaces have been cut or welded after galvanizing, prime the affected area with a zinc-rich organic binder to APAS 2916-2001 (*Organic zinc rich coating for protection of steel*).

Paint system description

If a system is referred to only by its final coat (for example by the manufacturer's brand name, the APAS specification code or the generic name) provide stains, primers, sealers and undercoats which are suitable for the substrate and are compatible with the finish coat and each other.

Paint final coat table

Provide paints as follows. Paints by Dulux:

Final coat	Use paint to APAS specification
Interior	
Full gloss solvent-borne	APAS-0015/2-2001 (<i>Full gloss alkyd enamel for interior use only (buildings)</i>)
Flat latex	APAS-0260/4-2001 (<i>Washable flat finish for interior use (buildings)</i>)
Low gloss latex	APAS-0260/3-2001 (<i>Low gloss interior latex paint in MCR (buildings)</i>)
Semi-gloss latex	APAS-0260/2-2001 (<i>Semi gloss interior latex paint in MCR (buildings)</i>)
Gloss latex	APAS-0260/1-2001 (<i>Interior gloss latex paint (buildings)</i>)
Exterior	
Full gloss solvent-borne	APAS-0015/1-2001 (<i>Full gloss alkyd enamel for exterior and interior use (buildings)</i>)

Final coat	Use paint to APAS specification
Flat latex	APAS-0280/3-2001 (<i>Flat or low gloss exterior latex finish in MCR (buildings)</i>)
Low gloss latex	APAS-0280/3-2001 (<i>Flat or low gloss exterior latex finish in MCR (buildings)</i>)
Gloss latex	APAS-0280/1-2001 (<i>Gloss exterior latex paint in MCR (buildings)</i>)
Stain, lightly pigmented	APAS-0115-2001 (<i>Lightly pigmented solvent borne ranch finish for exterior timber</i>)
Latex stain, opaque	APAS-0280/5-2001 (<i>Heavily pigmented low gloss latex ranch finish for exterior timber</i>)
Semi-gloss latex	APAS-0280/2-2001 (<i>Semi gloss latex paint, exterior (buildings)</i>)
Paving	
Semi gloss	APAS-0200/1-2001 (<i>One pack semi gloss pigmented solvent borne paving paint for concrete</i>)

Exterior painting schedule

All external surfaces to be painted with Dulux unless otherwise specified.

Item	Paint Use the required sealers, primers and undercoats to suit the finish coat where specified.	Colour Allow for all paint bases including white base, mid base and deep base.
Fascias and Barges, Wall cladding, awning frames, clothes line, cladding cover trims, external architraves, exposed rafters and beams. Timber doors for opaque finish	Weathershield full gloss	As selected
NG Rosewood timber window frames and windows, door frames and doors for clear finish	Sikkens Cetol (one coat to be applied in the joinery shop before transportation to the site)	Clear
Aluminium framed windows	No paint. Natural clear anodized	Clear anodized
Guttering	Colorbond	Windspray
Compressed sheet awnings (all sides)	Weathershield full gloss	Colorbond Windspray
Downpipes	Weathershield full gloss	To match wall in one colour only (and no change in colour at the fascia line) painted over colorbond
Soffits and fibrecement eaves where specified	Weathershield semi gloss	As selected
Verandah posts	Stainless steel	Natural polished finish
Modwood	No paint	Natural

Interior painting schedule

Paints by Dulux unless otherwise specified.

Completely clean off all loose flaking paint before recoating.

Item	Finish Coat and system	Colour
Wall and Ceiling Linings	Washnwear	As selected
Architraves, skirtings, and sill boards	Full gloss enamel	As selected
Plasterboard ceilings	Ceiling Acrylic	Ceiling White
NG rosewood windows and doors	Sikkens Cetol	Clear
Kitchen and Bathroom Cupboard doors, exposed surfaces and drawer fronts (ply)	Sikkens Clear Polyurethane to the cupboard fronts	Clear
Kitchen Cupboard mdf exposed surfaces between ply	2 pack polyurethane	White
Timber Floors	Prefinished	Clear and suede stain colour

14 TIMBER FIXTURES**14.1 GENERAL****Cross references**

Refer to the following worksections:

- *Specification.*

14.2 MATERIALS AND COMPONENTS**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; and
- with no more than 3% difference between any 2 pieces in any one group.

Finished sizes

Provide milled timbers with actual dimensions which are at least the required dimensions, except for dimensions qualified by a term such as “nominal” or “out of” to which industry standards for finished sizes apply.

Timber

Standard: To AS/NZS 1684.

Ply: Select grade veneer grade plywood securely fixed to its substrate.

Hardware

Cupboard handles: Lincoln Sentry Satin chrome plated knobs: 30mm x 24mm, code: **1-556-013**.

Cupboard hinges: Hafele flap hinges in nickel plated brass. **342.63.600**

Drawer runners: Blum soft close drawer runners.

Catches: SCP brass roller catches to doors.

14.3 CONSTRUCTION GENERALLY**General**

Construction: Build components square and install plumb.

Joints: Provide materials in single lengths whenever possible. If joints are necessary, make them over supports.

Fasteners and adhesives

General: Provide fasteners, adhesives or both to transmit the loads imposed and ensure the rigidity of the assembly. Do not split, discolour or otherwise damage timber or sheets.

Visibility: Do not provide visible fixings except in the following locations:

- Inside cupboards and drawer units.
- Inside open units, in which case provide proprietary caps to conceal fixings.

Finishing

Junctions with structure: Scribe plinths, benchtops, splashbacks, ends of cupboards, kickboards and returns to follow the line of floors or walls.

14.4 CUPBOARD AND DRAWER UNITS**Kitchen**

Location: Kitchen

Kickboard: Stainless steel laminate by Formica or equal

Exposed door and drawer fronts: Select grade hardwood plywood for clear finish

Exposed framing and fronts support for doors and drawer fronts:

MDF board with coloured polyurethane paint finish

Back to drawers,

shelves &

cupboard : White melamine

Internal divisions: White melamine

Installation:	Seal to walls with Selleys No More Gaps and paint sealant to match walls. Secure cabinets to substrate. (No gaps to permit vermin entry to sides, backs, or internals of cupboards)
Benchtop:	Stainless Steel benchtops with mdf stiffening and ss front edge. Raised front edge to bench to sink area. Ensure the bench drains to the sink.
High Cupboards:	MDF board with coloured polyurethane paint finish to detail and select grade ply backing.

Bathrooms

Location:	Bathrooms 1 and 2
Kickboard:	Select grade ply over 16mm mdf board
Exposed door and Drawer fronts:	Select grade plywood over 16mm mdf board for clear finish
Exposed framing and fronts support for doors and drawer fronts:	Select grade plywood over 16mm mdf board for clear finish
Back to drawers	
And cupboard :	Select grade plywood
Installation:	Secure to walls
Benchtop:	20 thick Caesarstone. Nimbus colour



Example of ply over mdf board joinery but should have Caesarstone tops and different configuration.

Linen Cupboard

Location:	Corridor 1
Shelf and Division:	Shelves out of spaced solid Modwood decking (Redwood solid smooth). Fit onto 45x30 ledgers for paint finish. Modwood upright panel for shelves to detail. Space for brooms to the side.
Hooks:	Fix scp hooks under the Modwood shelf.

External Cupboard

Location:	Next to Bathroom 1
Shelf and Division:	Shelves out of spaced solid Modwood decking (Redwood solid smooth). Fit onto matching Modwood ledgers for removal to access the hot water cylinder. Sit shelves on brass shelf adjustable brackets approx 10x10mm. Modwood upright panel for shelves to detail. Space for brooms to the side.

Bedroom Cupboards

Location:	To each bedroom (3)
Shelf and Division:	Shelves out of spaced solid Modwood decking (Redwood solid smooth). Fit onto 100x20 Modwood ledgers constructed as one unit. Provide matching kick board/suitcase shelves at the base of the cupboards. Securely fix to the walls.
Clothes Rails:	Lincoln Sentry or equal 20 dia cp rail #1-491-186 with end supports #1-490-194

and intermediate supports at max 600mm centres.

Drawer and door hardware

- Ease, adjust door hardware. Ensure cupboards, doors, drawers, catches, fittings, etc all work smoothly.

External Bench

Location: North of the bedrooms 2 and 3

Bench: Shelves out of spaced solid Modwood decking (Redwood solid smooth).

Framing: F17 DAR hardwood for paint finish

Legs: Stainless steel supports

Note: To match the bench at Partridge Cottage next door.

14.5 GRABRAILS

Refer to the drawings for the details of the grabrails in the different areas.

Grabrail schedule

WC

Proprietary item: Stainless steel grab rails by RBA Group, GS series, http://www.rba.com.au/grab_bars.html or Mobi by Reece or equal.

Fixing: Concealed type. Fix to solid supports.

Size: 32mm.

Location: WCs

Profile & dimensions: 850mm horizontal with vertical extension (similar to GT9956-G and GS30).

Standards: Finish, configuration and fixing to AS1428.1

Shower

Proprietary item: Stainless steel grab rails by RBA Group, GS series, http://www.rba.com.au/grab_bars.html or Mobi by Reece or equal.

Fixing: Concealed type. Fix to solid supports.

Size: 32mm.

Location: WCs

Profile & dimensions: 850mm horizontal with vertical extension (similar to GSH9116 and GS60).

Standards: Finish, configuration and fixing to AS1428.1

15 PLUMBING AND DRAINAGE**15.1 GENERAL****Cross references**

Refer to the following worksections:

- *Specification.*

Standard

Plumbing and drainage products: To SAA MP52-2001 (*Manual of authorization procedures for plumbing and drainage products*).

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.

15.2 MATERIALS AND COMPONENTS**Water supply pipes**

Material: Copper or plastic

Insulation of supply pipes

Hot water: Rubber lagging

Cold water: -

Water heater

Type: Solahart solar hot water heater

Model: Streamline

Model/capacity: 430 litre

Panels: 3 L Series panels (approx 3.6mx2m)

Electric Booster: Electric boost heating element with thermostat control.

Location: Roof mount panels in the centre of the roof in the location shown on the drawings. Provide additional roof support from the walls in the roof space as required. Locate the hot water tank in the services cupboard south side.

Finishes

Finish exposed piping, including fittings and supports as follows:

- Internal locations such as toilet 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.

Sanitaryware and Tapware Schedule

Note: The supply and delivery of the items in this schedule will be part of a PC sum. The contractor is to allow to fit these items in their tender.

Item	Manufacturer	Type	Remarks
Bath (1)	Wetseal and tile	Purpose built tiled bath	Frame up and line with villaboard before wetsealing and tiling
Showerhead (1) Bathroom 2	Mizu	Showerhead R200	Showerhead 2100mm above FFL. Bring pipe through the ceiling
Showerhead (1) Bathroom 1	Posh	Solus Rail Shower 1F	Mount and install in accordance with AS1428.1
Shower/Bath mixer and diverters (1)	Porcher	Saga bath/shower divert Mixer cp finish	
Shower mixer (1)	Porcher	Saga shower mixer	Porcher
Bath spout (1)	Porcher	Bath outlet curved	

Bathroom Basin Mixers (2)	Porcher	cp finish Saga basin mixer cp finish	Place securely in basins. Secure tightly.
Kitchen Mixer (1)	Porcher	Saga sink mixer cp finish	Cut hole in sink right side for new tap. Secure tightly. Replace AC sheet where pipes are installed as required.
Kitchen Sink (2)	Stainless Steel bench manufacturer	Build in to the sink 2 full size kitchen sink bowls	Weld the sink bowls into the sink and grind the welds smooth and polish. Provide plugs and plug holes.
Basins (1) Bathroom 1	450w x 350d Porcher	Alto wall basin (white)	Fit to AS1428.1 for disabled access. CP bottle traps and waste pipes
Basins (1) Bathroom 2	Porcher	Acacia white above Counter Basins	
WCs (1) Bathroom 1	Caroma	Cosmo Sovereign Care Suite (white)	Fit to AS1428.1 for disabled access.
WCs (1) Bathroom 2	Caroma	Profile 5 with integrated hand basin/cistern dual flush	Fit pipes to cistern hand basins.
Outside shower (1)	Enware	VP310 vandal resistant shower rose and brass bib cock Brass hose tap as a foot wash	Mount shower rose 2000 above the FFL, tap 1000mm above the FFL and the foot wash tap 600mm above the FFL. Fall pavers away from the building.
Hose Cocks (2)	Existing	Existing	Fit new supply pipes and refit old taps to new pipework. Replace AC sheet where pipes are installed and if required.
Towel Rails (5)	Mizu	1500 series cp 600mm long	Fit securely to noggings in the walls
Toilet Paper Holders (2)	Mizu	1500 series cp toilet roll holders	Fit securely to noggings in the walls
Metal Shelf with Soap Dish (2)	Mizu	1500 series cp 370mm long	Fit securely to noggings in the walls in the showers in approved locations
Tooth Brush Holders (2)	Mizu	1500 series cp tumbler holder with tooth brush slots	Fit securely to noggings in the walls
Clothes Hooks (4)		1500 series cp Robe Hook	Fit securely to noggings in the walls
Shower Seat (1)	RBA Group	 B817190 Folding Shower Seat	Fit to AS1428.1 for disabled access

15.3 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).

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 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.

15.4 STORMWATER**Standard**

General: To AS/NZS 3500.3.2-1998 (*National Plumbing and Drainage – Stormwater drainage – Acceptable solutions*) or AS/NZS 3500.5 (*National Plumbing and Drainage – Domestic installations*).

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 downpipes to a stormwater in ground grey water holding tank and discharge into a irrigation system with overflow to a stormwater discharge.

Trench width: Minimum 450 mm.

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.

Connection: Connect the subsoil drains to the stormwater drainage system

Stormwater Drains

Location and Type:	Provide an inground lattice water storage tank by Duraplas in the location as shown on the drawings. Connect an overflow to the stormwater drainage system on site. Provide all connections from the downpipes, laundry and showers to the tank and the overflows. Do not disturb the vegetation when installing the watering line and backfilling trenches.
Size:	5000litre
Irrigation:	Connect the tank to the garden watering system with black plastic drippers, pipes, brackets, and accessories. Allow for the installation of 40m of pipe and 30 drippers.
Overflow:	Overflow into the Council stormwater rock drain to the east of the site.
Completion:	Cover tank with fill, topsoil and cooch turf.

15.5 WASTEWATER**Standards**

General: To AS/NZS 3500.2.2-1996 (*National Plumbing and Drainage – Sanitary plumbing and sanitary drainage – Acceptable solutions*) or AS/NZS 3500.5 (*National Plumbing and Drainage – Domestic installations*).

On-site domestic wastewater treatment units: To AS/NZS 1546.3: 2001 (*On-site domestic wastewater treatment units – Aerated wastewater treatment units*).

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.

Vent pipes

Staying to roof: If fixings for stays penetrate the roof covering, seal the penetrations and make watertight.

Terminations: Provide bird-proof vent cowls made of the same material and colour as the vent pipe.

Sanitary Drainage System

Note:	Refer to the engineer's details for the sanitary drainage system required. Install and connect to Council sewer.
Pump Station:	Polyethylene approved dual pump station model KPPS3000DP/D1806/FPC. Size 1600dia x 2200 deep with 600x900 galvanized lid with concrete infill. Weight 165g approx.
Pumps:	Dual kwikflo, or equal, submersible pumps with 240v, 1.2kw, 10 amps, 10m power cable, model D1806 fitted into tank (All Pump P/L or equal Ph 1800631202)
Control Panel:	Weatherproof 316 ss, lockable, isolating switch, DOL control, duty selector switch, off/auto/manual selector switch, auto alternation, lights for power on/pump run/pump fail, high and low level alarm, alarm bell, mute button and wall mounting bracket
Float Switches:	3 fitted into tank
Check Valve:	50mm swing check valve and barrel union on each pump discharge
Discharge Pipe:	50mm PVC fittings, pipe, check valves and isolating gate valve. Provisional amount of 130m of pipe and filled trench to connection at existing toilet block. Allow for connection and fittings. Nominate cost in tender. Landscape clearing by Principal.
Siring:	Site wire and connect to power
Pump Duty:	1 litre per second @ a total head from all causes of 16m. Check head.

15.6 FRESHWATER

Standards

General: To AS/NZS 3500.1.2-1998 (*National Plumbing and Drainage – Water supply – Acceptable solutions*) and AS/NZS 3500.4.2-1997 (*National Plumbing and Drainage – Hot water supply systems – Acceptable solutions*) or AS/NZS 3500.5 (*National Plumbing and Drainage – Domestic installations*).

Tap positions

Locate hot tap to the left of, or above, the cold water tap. Locate new mixers as detailed. Note: No new taps to the laundry.

Accessories

Provide the accessories and fittings necessary for the proper functioning of the plumbing systems, including taps, valves, outlets, pressure and temperature control devices, strainers, gauges and pumps.

Water Heater installation

Note: The Contractor is to allow to connect the hot water system to each plumbing fitting unless otherwise specified (eg not to hose cocks, washing machine, wcs, etc)

Temperature

Provide thermostatic mixing valves to achieve the following temperatures:

Ablution: Maximum temperature at shower and basin outlets is to be 50°C.

Sinks and Tubs: Maximum temperature is to be 60°C

Piping insulation

Hot water supply: Rubber lagging

Cold water supply: -

Isolating valves

Isolation valve to water heater and cold water supply.

Non-return valve

Provide non return valves to the water supply.

Cleaning

On completion, flush the pipelines using water and leave them clean.

16 ELECTRICAL INSTALLATIONS**16.1 GENERAL****Cross references**

Refer to the *Specification*.

Standard

Electrical installation: To AS/NZS 3018-2001 (*Electrical installations – Domestic installations*).

Interpretation

ED S&IR: The Electricity Distributor's Service and Installation Rules.

RCD: Residual Current Device.

16.2 COMPONENTS**Standards**

Circuit breakers: To AS 3947.2-1997 (*Low-voltage switchgear and controlgear – Circuit-breakers*).

Electrical accessories: To AS/NZS 3100-1997 (*Approval and test specification General requirements for electrical equipment*).

Luminaires: To AS 3137-1992 (*Approval and test specification – Luminaires (lighting fittings)*).

Smoke detectors: To AS 3786-1993 (*Smoke alarms*).

Switchboards: To AS 3439.1-1993 (*Low-voltage switchgear and controlgear – Type-tested and partially type-tested assemblies*) or AS 3439.3-1995 (*Low-voltage switchgear and control gear – Particular requirements for low-voltage switchgear and control gear assemblies intended to be installed in places where unskilled persons have access for their use – Distribution Boards*), as appropriate.

Telecommunications accessories: To AS/ACIF S008: 2001 (*Requirements for authorised cabling products*).

Television antenna: To AS 1417.1-1987 (*Receiving antennas for radio and television in the frequency range 30 MHz to 1 GHz – Construction and installation*) and AS 1417.2-1991 (*Receiving antennas for radio and television in the frequency range 30 MHz to 1 GHz – Performance*).

Accessory schedule

Refer to the drawings.

Fittings schedule

Switches:	Provide switches as detailed. NOTE: ALTERNATIVE HERITAGE FITTINGS WILL BE CONSIDERED to match those specified.
Power Outlets:	Provide GPO's at heights as detailed (300 above skirting unless otherwise specified).
TV Outlets:	Provide TV antenna outlets connected to the existing antenna system. Supply a booster to the antenna plug to amplify the system. Locate above the skirting to match other outlets.
Antenna:	Antenna to pick up transmission adequately from each local free to air TV station.
Telephone System:	Telephone not required.
Range Hood:	Wire in the range hood.
Stove and Oven:	Wire in the stove and oven.
Ceiling Fans:	Connect ceiling fans to 3 speed controllers.
Heater/Fan/Light:	Connect heater/fan/light units to separate switches for each of the 3 functions.

Luminaire schedule

Lights:	Allow for the supply and installation of lights as detailed. All lamps are to be yellow/natural toned and not blue.
Switches:	Allow for the supply, delivery and installation of switches as specified. Dimmers on the lights circuits as detailed.

16.3 INSTALLATION**General**

Submit all necessary applications for electricity supply. Liaise with the electricity distributor and comply with the ED S&IR.

Telecommunications installation

Standard: To AS/ACIF S009: 2001 (*Installation Requirements for Customer Cabling (Wiring Rules)*) and the recommendations of SAA HB29-2000 (*Communications Cabling Handbook*).

Submissions: Submit required applications for telecommunications services to the telecommunications services carrier. Liaise with the carrier and submit the Telecommunications Cabling Advice (TCA1) to the Australian Communications Cabling Authority (ACA).

Consumers mains and metering

Provide consumers mains and connect them to the electricity distributor mains. Connect from the existing power pole on the site.

Provide separate costings to:

- 1 Keep pole where is;
- 2 Move the power pole next to the bank and run underground power to Mildenhall Cottage, Partridge Cottage and Imeson Cottage (bore under the water course from the stormwater drain);
- 3 Move the power pole and meter to beside Lighthouse Rd and run underground to Mildenhall Cottage, Partridge Cottage and Imeson Cottage (bore under the water course from the stormwater drain).

Provide consumer mains phases

Electricity distributor's requirements: Provide metering, protection, and control equipment as required by the ED S&IR.

Metering switchboard location: As shown on the drawings.

Switchboards

Distribution switchboard location(s): As shown on the drawings.

Do not locate a switchboard in a position prohibited by AS/NZS 3018-2001 (*Electrical installations – Domestic installations*) or the ED S&IR. Verify that any proposed location complies, and if the location is not compliant, recommend a suitable location to the Architect.

Construction: Enclosed type with a hinged lid. Provide circuit breakers and RCDs.

Maximum demand and spare capacity

Calculate the maximum demand of the installation in accordance with AS/NZS 3018-2001 (*Electrical installations – Domestic installations*) and give the Principal a copy of the calculations.

Spare capacity: Provide

- > 10% spare capacity in mains and submains; and
- > 25% spare capacity in final subcircuits.

Load balancing: Spread electrical load equally across circuits to prevent overloading and inadvertent circuit breaker operation.

Fixed and stationary appliances: Treat socket outlets supplying fixed or stationary appliances likely to cause an RCD to trip due to earth leakage currents in accordance with AS/NZS 3018-2001 (*Electrical installations – Domestic installations*). Do not connect to circuits that supply socket outlets intended for hand held or portable appliances.

Spare spaces: Provide switchboards with ≥ 2 spare positions for future single phase circuit breakers.

Electrical and telecommunications accessories

Provide electrical accessories necessary for a complete installation including but not limited to switches, dimmers, socket outlets, and telecommunications outlets.

Mounting: Flush mount accessories to the wall (or ceiling) unless noted otherwise. Provide proprietary wall boxes in masonry and wall brackets in stud walls.

Wet areas: Position accessories in locations containing baths showers or other fixed water containers to comply with the requirements of AS/NZS 3018-2001 (*Electrical installations – Domestic installations*).

Wiring

Conceal cables and conduits. Provide conduits as necessary to allow wiring replacement without structural work or the removal of cladding, lining, plaster or cement rendering.

Sequence of work: Install conduits and cables before the installation of wall and ceiling linings, and before any external landscaping works.

Installation: Do not penetrate damp-proof courses. Arrange wiring such that it does not bridge the cavity in external masonry.

Conduit sizes: Provide conduits of sufficient internal diameter and arranged so that cables are not subject to undue mechanical stress during installation.

Minimum conduit diameter: 20 mm.

Conduits for future use: Provide a non-metallic drawstring having a breaking strain > 100 kg.

Luminaires

Refer to the drawings.

Dimmers and control devices

Provide a dimmer for the light switches where shown on the drawings.

Testing and certification

Electrical installations: Test to AS/NZS 3017-2001 (*Electrical installations – Testing and inspection guidelines*). Give the Principal a certificate showing test results and certifying compliance with AS/NZS 3018-2001 (*Electrical installations – Domestic installations*).

Television and audio systems: To AS/NZS 1367-2000 (*Coaxial cable systems for the distribution of analogue television and sound signals in single and multiple unit installations*). Test the complete television and audio system. Give the Principal a certificate showing test results and certifying compliance.

17 PAVING AND ROADS**17.1 GENERAL****Cross reference**

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

Footpath crossing

Provide a footpath and kerb crossing to local council requirements and engineers details.

17.2 MATERIALS AND COMPONENTS**Mortar materials**

Sand: Use a fine aggregate with a low clay content selected for grading.

Cement: To AS 3972-1997 (*Portland and blended cements*), type GP.

Mortar

Mix proportions: 1:3 cement:sand.

17.3 CONSTRUCTION GENERALLY**Grading**

General: Grade paving to even falls to drain away from buildings to drainage outlets without ponding.

Minimum fall for drainage: 1:100.

17.4 BASE COURSE**Preparation**

Prepare the subgrade to suit the thickness of the base course and paving. If necessary, loosen the ground to a depth of 200 mm and adjust the moisture content before compaction. Compact the ground to a firm, even surface using at least 2 passes of a vibrating plate compactor or roller. Remove and replace soft areas.

Base course material

Provide well-graded crushed rock or gravel, free of deleterious material, with a maximum particle size of 26.5 mm, uniformly graded and with a maximum clay content of 6% by mass.

Placing

Spread and compact the base course to a firm, tight, close textured surface using at least 3 passes of a vibrating plate compactor or roller. Adjust the moisture content as needed to facilitate compaction.

Base course minimum thickness table

Comply with the following minimum thicknesses:

	Site classification to AS 2870			
	Unit paving		Bituminous paving	
	A	S&M	A	S&M
Foot and bicycle traffic	0	0	50 mm	100 mm
Light domestic traffic occasionally up to 3 tonne gross	0	75 mm	100 mm	150 mm

17.5 ASPHALT PAVING**Hotmix paving**

Place and compact asphaltic concrete paving over the prepared base course.

Mix designation: AC7.

Bitumen binder class: 170.

Minimum thickness: 25 mm.

Tack coating: Bituminous emulsion spray.

17.6 UNIT PAVING**Masonry and segmental pavers**

General: Provide paving units of clay, natural stone or concrete masonry, purpose-made for use as paving, or units made for bonded masonry construction but suitable for paving.

Standard: To AS/NZS 4455-1997 (*Masonry units and segmental pavers*).

Minimum thickness:

- Foot and bicycle traffic: 50 mm.
- Light domestic traffic occasionally up to 3 tonne gross: 50 mm.

Cutting units: Do not cut units.

Type 1

Manufacturer:	Byron LeisureScapes
Size:	600x600mm
Colour:	Exposed Aggregate

Type 2

Manufacturer:	Grasscrete blocks for concrete/grass mix
Size:	600x600x100mm thick
Subbase:	Minimum 150mm.
Colour:	Concrete

Laying unit paving

General: Over the base course, lay the units on bedding metal dust screeded to a uniform thickness not exceeding 30 mm or more as required, and to the required falls and levels. Do not disturb the screeded bedding before the units are laid. Provide a gap as detailed between adjoining units. After laying, tamp the units using a vibrating plate compactor.

Dry joints: Fill the joints flush with white pebbles.

Edge restraint

Provide edge restraint where needed to support the pebbles. Provide H4 140x20 firmly and securely staked edging to pebbles.

17.7 IN SITU CONCRETE PAVING**Concrete**

Standard: To AS 1379-1997 (*Specification and supply of concrete*).

Colour:	Natural
Aggregate:	nom 20 diameter

Minimum thickness

Light domestic traffic occasionally up to 3 tonne gross: 100 mm.

Preparation

Trim the ground to suit the required thickness of concrete and compact to a firm, even surface.

Control joints

Form tooled joints at maximum 2 m spacing.

Expansion joints

Cast-in 10 mm thick bitumen impregnated fibreboard joint filler at maximum 6 m spacing.

Abutment with building

Where concrete paving more than 1.5 m wide abuts the wall of a building, provide a strip of 10 mm thick bitumen impregnated fibreboard between the paving and the wall.

Finishing methods

Exposed aggregate finish: Steel trowel to a smooth surface. After final set use clean water and brushes to remove the surface film of mortar until the aggregate is uniformly exposed without under cutting of the matrix.

Finish type: Exposed aggregate finish to outdoor dining area, pavers and verandah

18 LANDSCAPING

18.1 GENERAL**Cross reference**

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

18.2 MATERIALS AND COMPONENTS

Unless otherwise specified all landscaping is to be provided by the Principals. Turfing by the Contractor.

18.3 TOPSOIL**General**

Provide topsoil which is free from unwanted matter and is suitable for reuse on site as topsoil.

Stockpile topsoil from the area of the excavation for reuse by the Principals in landscaping.

18.4 TURFING**Location and Quantity**

Location: Provide turfing to any damaged areas after construction.

Quantity: Allow for a provisional amount of 120m² of matching turf to go around the new building work.

Turf

Obtain turf from a specialist grower of cultivated turf. Provide turf of even thickness, free from weeds and other foreign matter. Turf to match the existing blue cooch as close as possible.

Supply

Deliver the turf within 24 hours of cutting, and lay it within 36 hours of cutting. Prevent it from drying out between cutting and laying.

Fertilising

Mix fertiliser thoroughly into the topsoil before placing the turf.

Laying

Lay turf

- in “stretcher” pattern with the joints staggered and close butted;
- parallel with the long sides of level areas, and with contours on slopes; and
- to finish flush, after tamping, with adjacent finished surfaces of ground, paving edging, or grass seeded areas.

Tamping

Lightly tamp to an even surface immediately after laying. Do not use a roller.

Watering

Water immediately after laying until the topsoil is moistened to its full depth.

18.5 PLANTING

Planting is to be by the Principals.

18.6 MULCHING

Mulching is to be by the Principals including pebbles.

19 APPLIANCES, FIXTURES, PC SUMS AND PROVISIONAL SUMS**Fixtures**

Shower Screens – Dorma DB double action chrome plated shower and bath screen hinges. Double sided wall connectors where required. Note: Install for disabled shower access in Bathroom 1. Clear glazing to the shower and bath screens. Dorma DB door knobs. Dorma clear edge seals between screens and abutments for a watertight shower screen system.

Mirrors – Polished edge mirrors with cp capped screws. Protect the back of the mirrors from finger print damage.

Prime Cost Sum (PC) Schedule

The sum for the supply and delivery of the PC Sum. The Contractor is to install these items as part of the Contract and not part of the PC Sum. Include these sums in Tender.

Item	Selected by	Supplied by	Installed by	PC Sum amount (excl GST).
Electrical (lights)	Architect	Contractor	Contractor	Included in Electrical Contract
Kitchen Cooktop- Electrolux EHEC65AS Oven – Electrolux EOEM61AS Exhaust Hood - Blanco BRU5GS (concealed duct and take fan through the wall with a waterproof fan) Microwave – Panasonic NN-ST557M Stainless steel Refrigerator – Fisher and Paykel E411TRX s/steel	Principal	Principal	Contractor	By the Principal
Stone Panel in Living Rm	Architect	Contractor	Contractor	\$300

Provisional Sum Schedule

The sum for the supply, delivery and installation of the Provisional Sum items. The installation is part of the Provisional Sum. Include this sum in the Tender.

Item	Selected by	Supplied by	Installed by	Provisional Sum amount (excl GST).
Blinds and curtains	Principal	Principal	Principal	By the Principal
Contingency Sum				\$4,900

20 INTERNAL FINISHES SCHEDULES

20.1 GENERAL**LEGEND**

EX Existing

NAT Natural unfinished

P Paint

FLOOR

RC Reinforced concrete

FLOOR FINISHES

TSF Timber Strip Flooring

CT Ceramic Tile

SKIRTING

CT Ceramic Tile

T Timber

WALLS

HF Hardiflex

PB Plasterboard

R Rock

WALL FINISHES

CT Ceramic Tile

CEILING

PB Plasterboard

CORNICE

SQS Square set plasterboard

20.2 INTERNAL SPACES FINISHES SCHEDULE

Note: The finishes are listed with Lining, Item or Flooring types first followed by a forward slash “/” then the Finish, eg PB/P means Plasterboard with paint Finish

Room	Floor	Skirting	Walls and partitions				Cornice	Ceiling	Notes
			North	East	South	West			
Kitchen	RC/TSF	T/P	-	HF/PB/P/ CT	HF/PB/P/ CT	HF/PB/P/ CT	SQS/P	PB/P	See drawings for details
Living/Dining	RC/TSF	T/P	HF/PB/P/ CT	HF/PB/P/ CT	-	HF/PB/P/ CT	SQS/P	PB/P	See drawings for details
Bed 1	RC/TSF	T/P	PB/P	PB/P	PB/P	PB/P	SQS/P	PB/P	
Bed 2	RC/TSF	T/P	PB/P	PB/P	PB/P	PB/P	SQS/P	PB/P	
Bed 3	RC/TSF	T/P	PB/P	HF/P	PB/P	PB/P	SQS/P	PB/P	
Bathroom 1	RC/CT	CT/P	PB/CT/P	PB/CT/P	R/CT	PB/CT/P	SQS/P	PB/P	
Bathroom 2	RC/CT	CT/P	PB/CT/P	PB/CT/P	PB/CT/P	PB/CT/P	SQS/P	PB/P	
Corridor 1	RC/TSF	T/P	PB/HF/P	PB/P	PB/P	PB/P	SQS/P	PB/P	See drawings for details
Corridor 2	RC/TSF	T/P	PB/P	PB/P	PB/P	PB/P	SQS/P	PB/P	
Service Cpd	RC/CT	CT/P	PB/P	PB/P	PB/P	PB/P	SQS/P	PB/P	
Linen Cpd	RC/TSF	T/P	PB/P	PB/P	PB/P	PB/P	SQS/P	PB/P	

21 REFERENCED DOCUMENTS

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	1996	Methods of test
AS 1366		Rigid cellular plastics sheets for thermal insulation
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 1417		Receiving antennas for radio and television in the frequency range 30 MHz to 1 Ghz
AS 1417.1	1987	Construction and installation
AS 1417.2	1991	Performance
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 1547	2000	On site domestic wastewater management
AS/NZS 1554		Structural steel welding
AS/NZS 1554.1	2000	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	2002	Reconstituted wood-based products
AS/NZS 1604.3	2002	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	1991	Mechanical ventilation for acceptable indoor-air quality
AS 1670		Fire detection, warning, control and intercom systems – System design, installation, and commissioning
AS 1670.1	1995	Fire
AS 1670.6	1997	Smoke alarms
AS 1672		Limes and limestones
AS 1672.1	1997	Limes for building
AS 1677		Refrigerating systems
AS 1677.2	1998	Safety requirements for fixed applications
AS 1684		Residential timber-framed construction
AS 1684.4	1999	Simplified – Non-cyclonic
AS 1691	1985	Domestic oil-fired appliances - Installation
AS 1720		Timber structures
AS 1720.1	1998	Design methods
AS 1789	1984	Electroplated coatings - Zinc on iron or steel
AS/NZS 1859		Reconstituted wood-based panels - Specifications

AS/NZS 1859.1 (Int)	2001	Particleboard
AS/NZS 1859.2 (Int)	2001	Dry-processed fibreboard
AS/NZS 1859.3	1996	Decorative overlaid wood panels
AS/NZS 1859.4 (Int)	2001	Wet-processed fibreboard
AS 1860	1998	Installation of particleboard flooring
AS 1884	1985	Floor coverings - Resilient sheet and tiles - Laying and maintenance practices
AS 1909	1984	Installation of timber doorsets
AS 2047	1999	Windows in buildings - Selection and installation
AS 2049	1992	Roof tiles
AS 2050	1995	Installation of roofing tiles
AS 2159	1995	Piling - Design and installation
AS/NZS 2179		Specification for rainwater goods, accessories and fasteners
AS/NZS 2179.2 (Int)	1998	PVC rainwater goods and accessories
AS 2185	1978	Fibrous plaster products
AS/NZS 2269	1994	Plywood - Structural
AS/NZS 2311	2000	Guide to the painting of buildings
AS/NZS 2312	1994	Guide to the protection of iron and steel against exterior atmospheric corrosion
AS 2358	1990	Adhesives - For fixing ceramic tiles
AS/NZS 2455		Textile floor coverings - Installation practice
AS/NZS 2455.1	1995	General
AS 2461	1981	Mineral wool thermal insulation - Loose fill
AS 2462	1981	Cellulosic fibre thermal insulation
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 2688	1984	Timber doors
AS 2689	1984	Timber doorsets
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 2728	1997	Prefinished/prepainted sheet metal products for interior/exterior building applications - Performance requirements
AS 2734	1984	Asphalt (hot-mixed) paving - Guide to good practice
AS/NZS 2803		Doors - Security Screen
AS/NZS 2803.1	1994	Hinged
AS/NZS 2803.2	1995	Sliding
AS/NZS 2804		Installation of security screen doors
AS/NZS 2804.1	1995	Hinged
AS/NZS 2804.2	1996	Sliding
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 2913	2000	Evaporative airconditioning equipment
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 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/NZS 3100	1997	Approval and test specification - General requirements for electrical equipment
AS 3137	1992	Approval and test specification - Luminaires (lighting fittings)
AS 3439		Low-voltage switchgear and controlgear
AS 3439.1	1993	Type-tested and partially type-tested assemblies
AS 3439.3	1995	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		National Plumbing and Drainage
AS/NZS 3500.1.2	1998	Water supply – Acceptable solutions
AS/NZS 3500.2.2	1996	Sanitary plumbing and sanitary drainage - Acceptable solutions
AS/NZS 3500.3.2	1998	Stormwater drainage - Acceptable solutions
AS/NZS 3500.4.2	1997	Hot water supply systems - Acceptable solutions
AS/NZS 3500.5	2000	Domestic installation
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	2000	Concrete structures
AS 3623	1993	Domestic metal framing
AS 3660		Termite management
AS 3660.1	2000	New buildings
AS 3666		Air-handling and water systems of buildings - Microbial control
AS 3666.1	2002	Design, installation and commissioning
AS 3700	2001	Masonry structures
AS 3715	1989	Metal finishing - Thermoset powder coatings for architectural applications
AS 3740	1994	Waterproofing of wet areas within residential buildings
AS 3742	1990	Mineral wool thermal insulation - Batt and blanket
AS 3786	1993	Smoke alarms
AS/NZS 3823		Performance of electrical appliances – Room airconditioners
AS/NZS 3823.1.1	1998	Testing and rating for performance
AS/NZS 3823.1.2	2001	Ducted airconditioners and air-to-air heat pumps - Testing and rating for performance
AS 3947		Low voltage switchgear and controlgear
AS 3947.2	1997	Circuit-breakers
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 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 4256.3	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	1997	Installation of nailplated timber trusses
AS/NZS 4455	1997	Masonry units and segmental pavers
AS/NZS 4456		Masonry units and segmental pavers – Method of test
AS/NZS 4456.10	1997	Method 10: Determining resistance to salt attack
AS/NZS 4505	1998	Domestic garage doors
AS 4508	1999	Thermal resistance of insulation for ductwork used in building airconditioning
AS/NZS 4680	1999	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
AS 5601	2002	Gas installation code
SAA HB29	1998	Telecommunications Cabling Handbook
SAA HB33	1992	Domestic open fireplaces
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 MP52	2001	Manual of authorization procedures for plumbing and drainage products
AS/ACIF S008	2001	Requirements for authorised cabling products
AS/ACIF S009	2001	Installation Requirements for Customer Cabling (Wiring Rules)
APAS-0015/1	2001	Full gloss alkyd enamel for exterior and interior use (buildings)
APAS-0015/2	2001	Full gloss alkyd enamel for interior use only (buildings)
APAS-0115	2001	Lightly pigmented solvent borne ranch finish for exterior timber
APAS-0200/1	2001	One pack semi gloss pigmented solvent borne paving paint for concrete
APAS-0200/2	2001	One pack full gloss pigmented solvent borne paving paint for concrete
APAS-0205	2001	One pack clear moisture cured finish for timber
APAS-0260/1	2001	Interior gloss latex paint (buildings)
APAS-0260/2	2001	Semi gloss interior latex paint in MCR (buildings)
APAS-0260/3	2001	Low gloss interior latex paint in MCR (buildings)
APAS-0260/4	2001	Washable flat finish for interior use (buildings)
APAS-0280/1	2001	Gloss exterior latex paint in MCR (buildings)
APAS-0280/2	2001	Semi gloss latex paint, exterior (buildings)
APAS-0280/3	2001	Flat or low gloss exterior latex finish in MCR (buildings)
APAS-0280/5	2001	Heavily pigmented low gloss latex ranch finish for exterior timber
APAS-2916	2001	Organic zinc rich coating for protection of steel
ASTM C534	2001	Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form
AWRAP/A 202	1993	Mandatory Woolmark Specifications for building insulation material
BCA 3.1.3.2(b)		Acceptable construction – Site preparation – Termite risk management – Installation of termite barriers
BCA 3.3.3.5		Acceptable construction – Masonry – Masonry accessories – Lintels supporting roofs and masonry walls
BCA 3.4.2.2		Acceptable construction - Framing - Steel framing - General
BCA 3.4.4.4		Acceptable construction - Structural steel members - Corrosion protection
CBPI TN 21A	1985	The Design of Freestanding Clay-Brick Walls
CBPI TN 21B	1985	Brick Beam Garden Fences

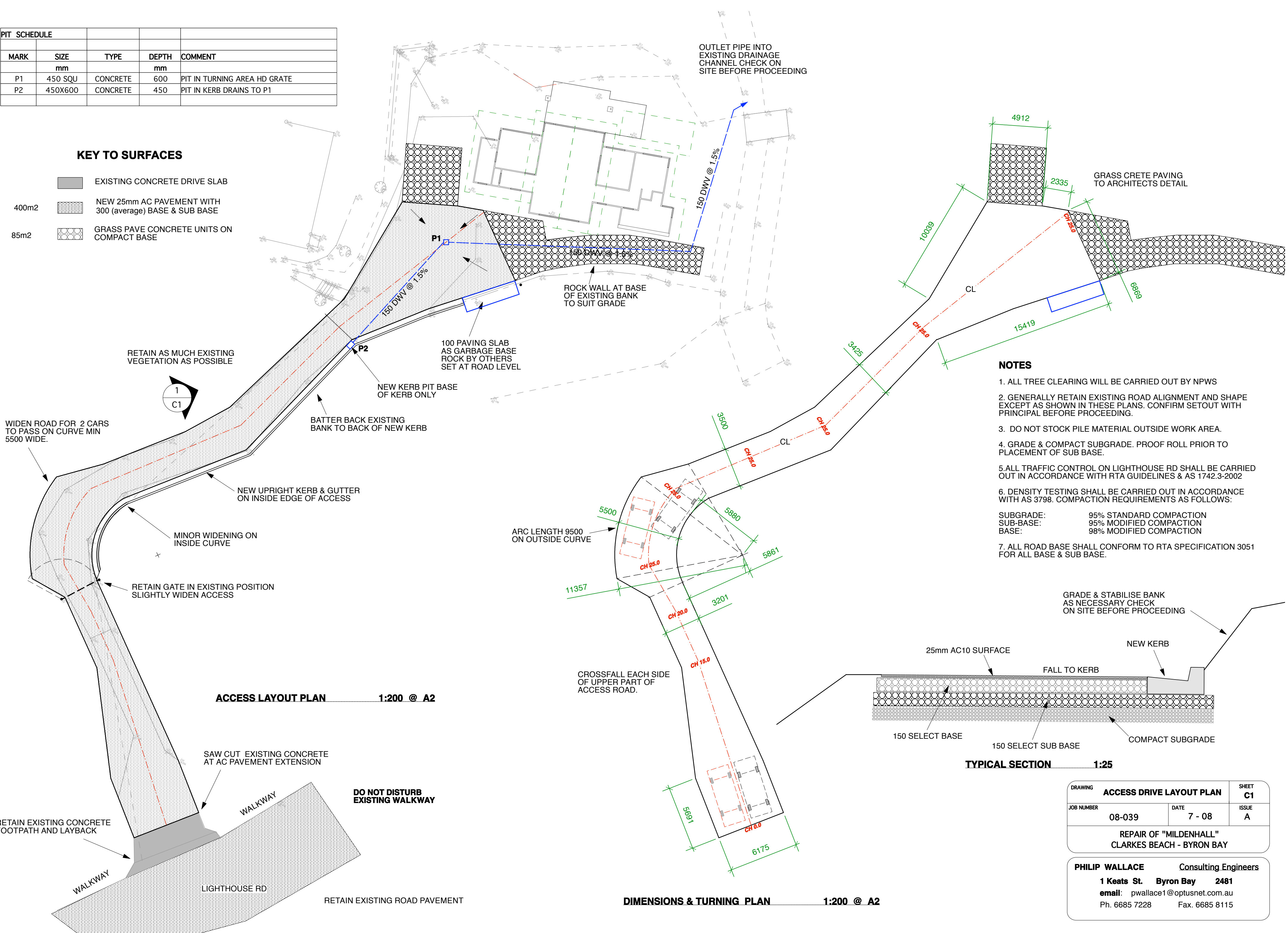
PIT SCHEDULE				
MARK	SIZE	TYPE	DEPTH	COMMENT
	mm		mm	
P1	450 SQU	CONCRETE	600	PIT IN TURNING AREA HD GRATE
P2	450X600	CONCRETE	450	PIT IN KERB DRAINS TO P1

KEY TO SURFACES

- EXISTING CONCRETE DRIVE SLAB
- 400m2

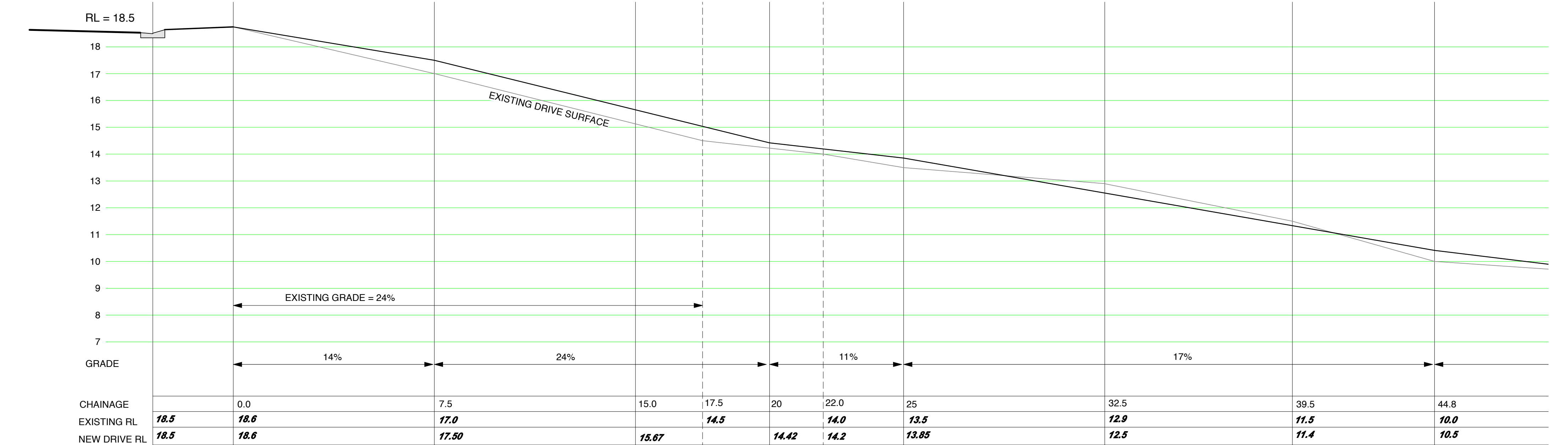
NEW 25mm AC PAVEMENT WITH 300 (average) BASE & SUB BASE
- 85m2

GRASS PAVE CONCRETE UNITS ON COMPACT BASE



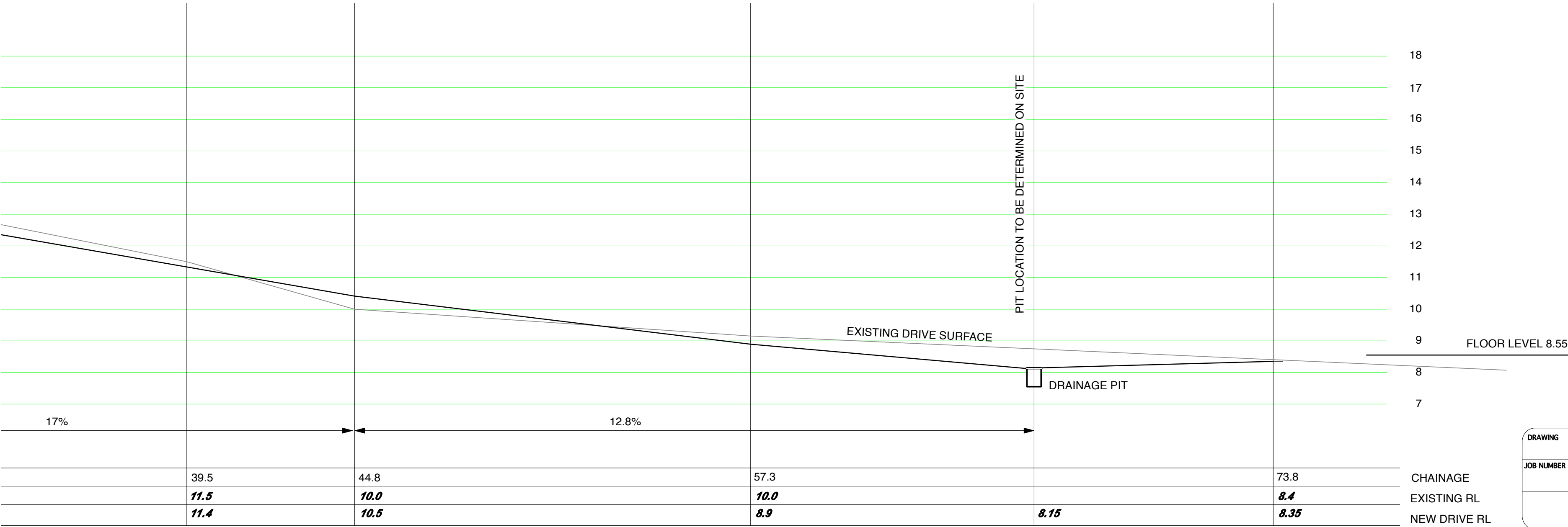
DRAWING	ACCESS DRIVE LAYOUT PLAN		SHEET
JOB NUMBER	08-039	DATE	7 - 08
		ISSUE	A
REPAIR OF "MILDENHALL" CLARKES BEACH - BYRON BAY			

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FULL DRIVE LONG SECTION PART A 1:100

ALL LEVELS SHALL BE CHECKED ON SITE BEFORE PROCEEDING

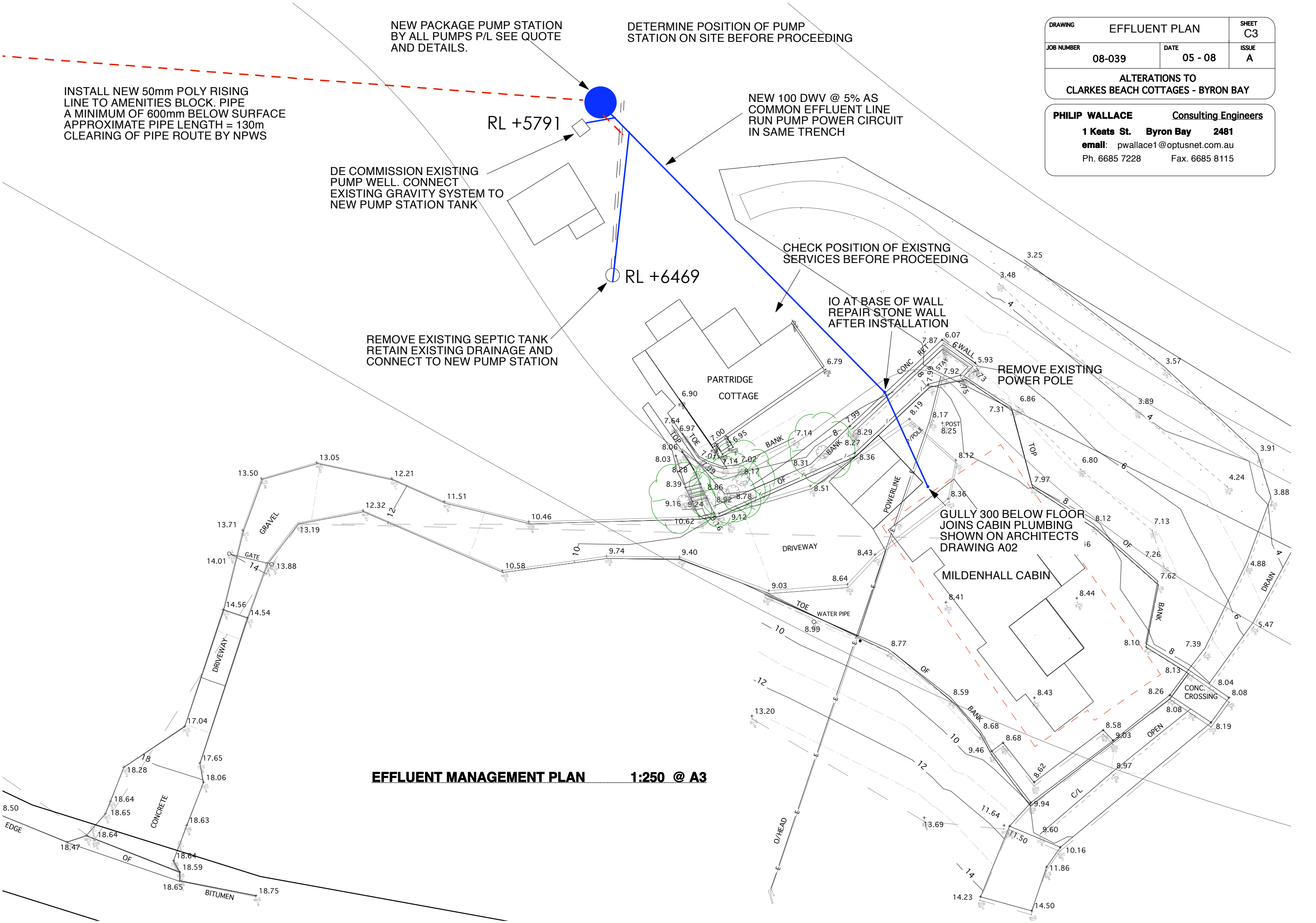


FULL DRIVE LONG SECTION - PART B 1:100

DRAWING	DRIVE LONG SECTION		SHEET C2
JOB NUMBER	08-039	DATE	7 - 08
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DRAWING		EFFLUENT PLAN		SHEET	
				C3	
JOB NUMBER		DATE		ISSUE	
08-039		05 - 08		A	
ALTERATIONS TO CLARKES BEACH COTTAGES - BYRON BAY					
PHILIP WALLACE Consulting Engineers					
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STRUCTURAL NOTES

GENERAL NOTES.

- 1. These drawings shall be read in conjunction with architectural drawings and instructions. DO NOT SCALE DIMENSIONS! Refer to Architects drawings for dimensional setout.
- 2. Site is classified as **N3**, based on AS 4055-2006.Design Gust Wind Speed. = 50 m/s (Ultimate Limit State)
- 3. Internal floors designed for 1.5KPa live load. Balconies designed for 3KPa live load. Roof designed for 0.25 KPa live load.
- 4. Check on position of all services before excavation commences.

REINFORCED CONCRETE

- 1. Concrete shall be placed in accordance with AS 3600 & AS 2870.
- 2. Concrete strengths as follows:
Footings & piers: **25 MPa**
Slabs on ground: **32 MPa**
Paving slab: 25 MPa
- 3. Cover to reinforcing steel shall be as follows:
Footings: 50 mm
Slabs - external: 35 mm
Slabs - Internal: 25 mm
- 4. All fill supporting slabs shall be granular free draining material compacted in 150 layers to a 95% dry density ratio, standard compaction. Undertake general compaction if site prior to setout for new slab. Compact with vibrating roller to improve surface bearing capacity.
- 5. Chemical anchors to be installed in accordance with manufacturers specifications. Minimum embedment 110mm or as shown. Use only stainless steel bolts externally.
- 6. Slab system designed as monolithic slab in accordance with AS 3660.1. A minimum 75mm of slab edge must remain exposed for visual inspections. Refer to Architects detail and code inspection requirements.
- 7. This site is classified as a **Class P** site as part of AS 2870. Footings designed for 80 KPa bearing in natural material. Piers shall be inspected prior to placement of concrete.
- 8. All reinforcement shall be inspected prior to concrete placement .
- 9. Concrete shall be moist cured for a minimum of 7 days after placement. This may include ponding with fresh water or covering with suitable damp material.
- 10. See architects detail for all surface finishes.

MASONRY WALLS.

- 1. All masonry walls shall be installed in accordance with AS 3700, as well as Architects details and specification.
- 2. Mortar shall be 1:1:6 (cement:lime:sand)
- 3. All mortar droppings shall be moved from the cavity which must be clear at completion of the work.
- 4. Strap top plate down wall by a minimum of 900mm at 900mm c/c. Use only stainless steel straps.

TIMBER FRAMING

- 1. All framing installed in accordance with AS 1684 & AS1720 and local codes and ordinances.
- 2. All wall frames shall be bolted to steel columns with M12 bolts @ 1200 c/c. Chemset bottom plates to slab M12 @ 1200 c/c
- 3. Primary holddown shall be effected with M12 gal threaded rods to top plate level and anchored to floor.
- 4. Ply bracing shall be affected using 4.5 mm F14 bracing ply as shown on the drawings and fixed in accordance with the relevant sections of the NSW Tradac manual

STRUCTURAL STEELWORK

- 1. All steelwork shall be executed in accordance with AS 4100 and AS 1554.
- 2. Unless other wise noted all fillet welds shall be 6mm min. throat thickness executed in accordance with AS 1554.1
- 3. All bolts shall be galvanised M12 grade 4.6 conforming to AS1111 unless noted otherwise. All external bolts and fixings shall be stainless steel grade 316.
- 4. All base plates and gusset plates shall be 10mm unless noted otherwise.
- 5. The Builder shall be responsible for the dimension control of all steelwork. **CHECK BEFORE PROCEEDING!**
- 6. Splices in members are only to be made where shown on the drawings unless approval is obtained beforehand.
- 7. All external steelwork shall be stainless steel grade 316 including base plates & cleats.
- 8. Site welding shall be kept to a minimum and shall be carried out in such a fashion as to maintain the integrity of the structure. Site welds shall be cleaned ground smooth & painted to maintain the integrity of the surface finish or the members. see paint specification.
- 9. All holding down rods, bolts and washers shall be hot dipped galvanised.

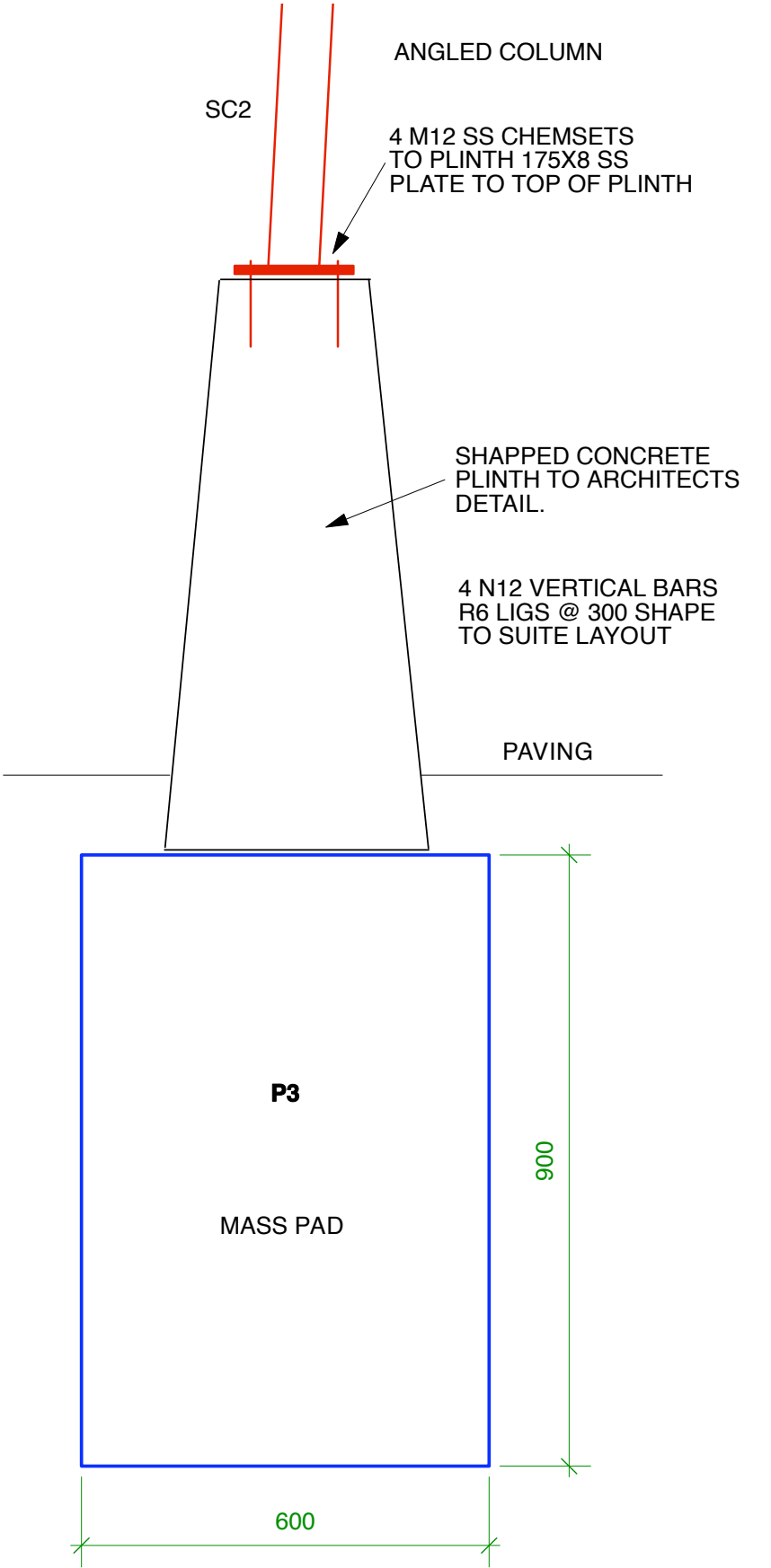
DESIGN CERTIFICATE

I Philip John Wallace certify that I have undertaken the structural design for the new work as shown in these plans S1 - S5.

I further certify that the design complies with current Australian Standards Codes & Ordinances including AS1170, AS1684,AS2870, AS3600,AS3700 & AS4100.

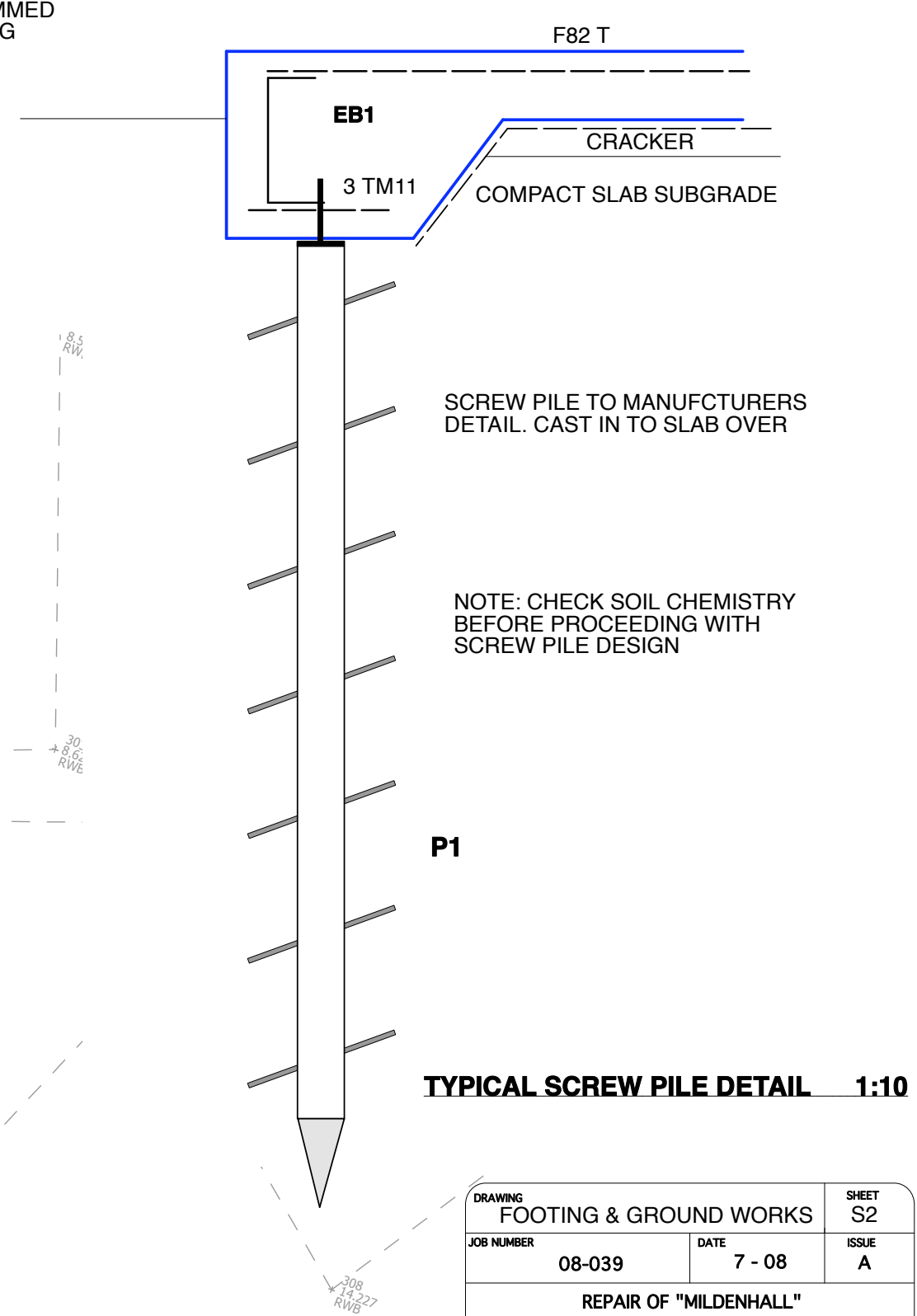
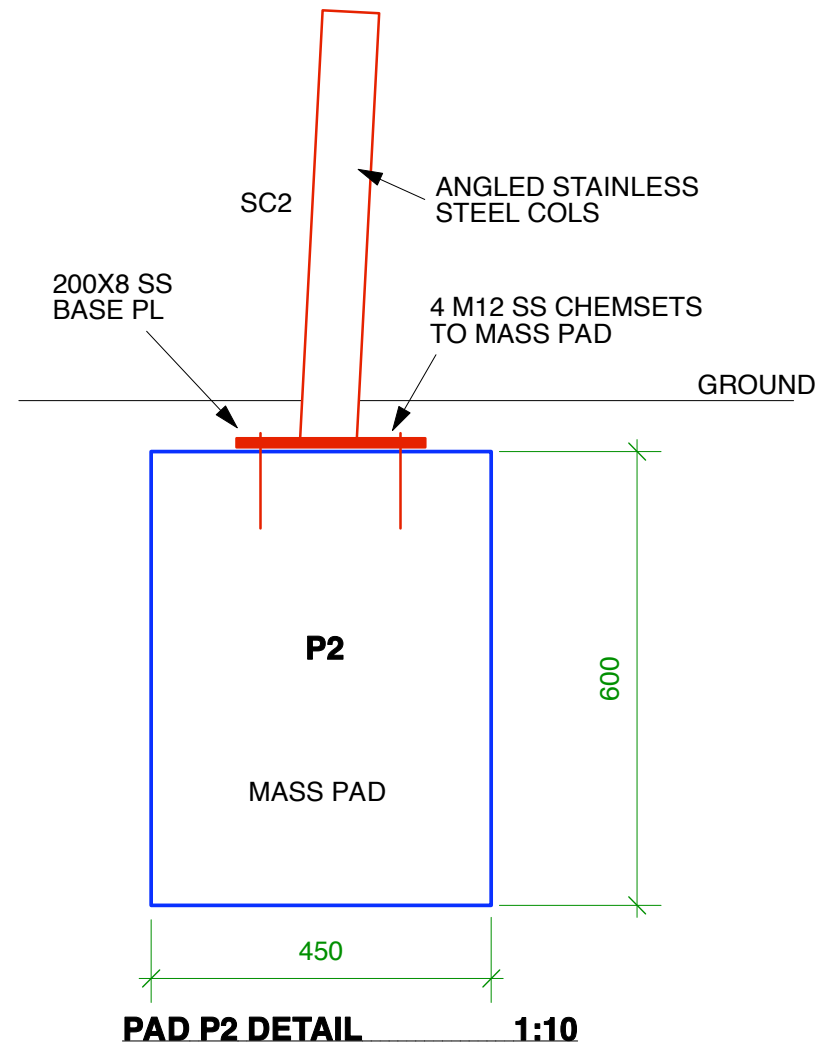
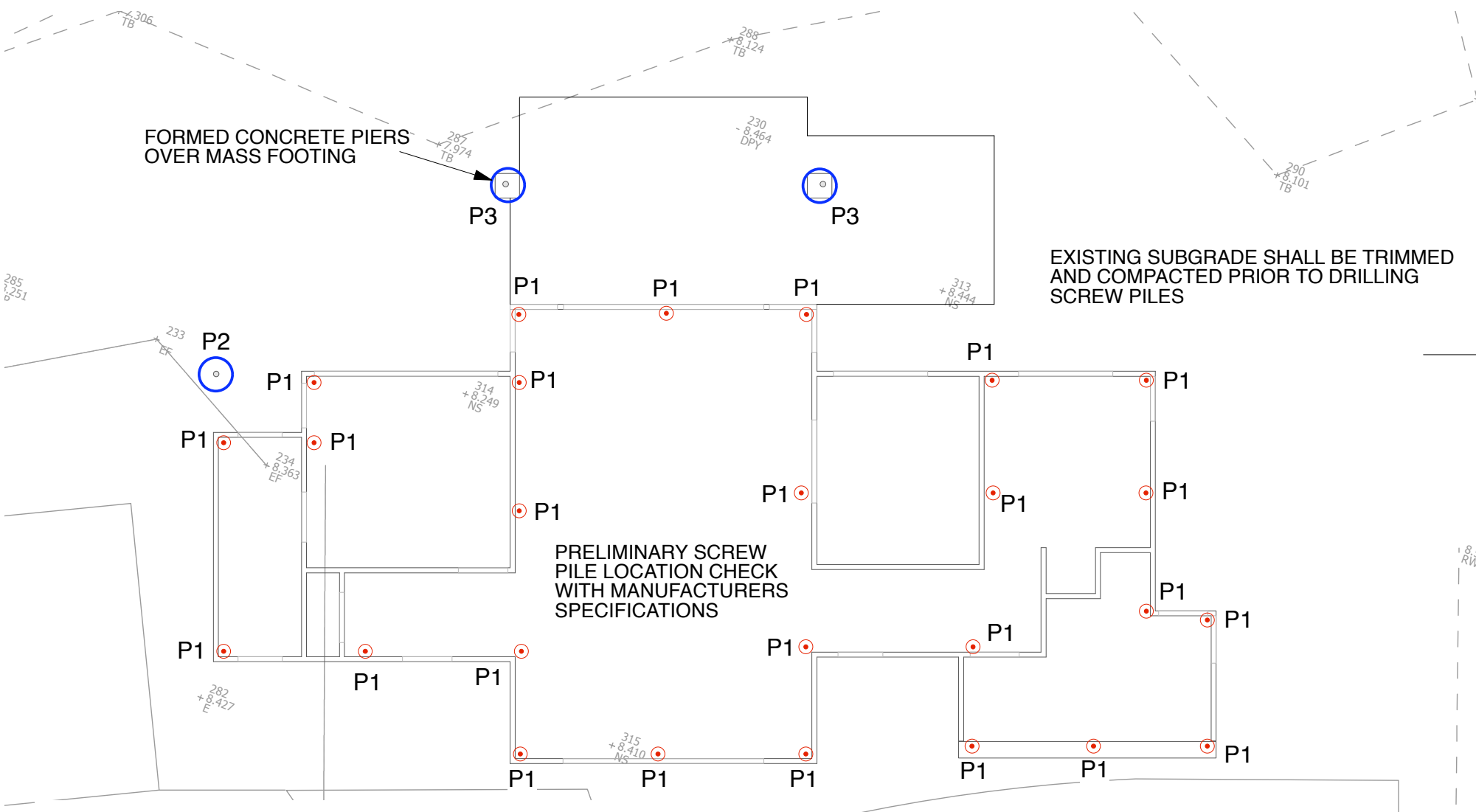
Philip Wallace

Philip Wallace
M.I.E.Aust. C P Eng.

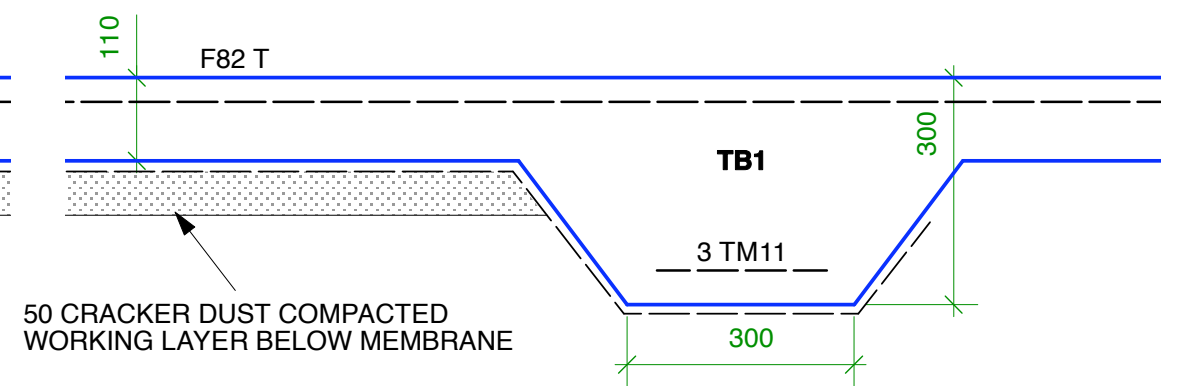
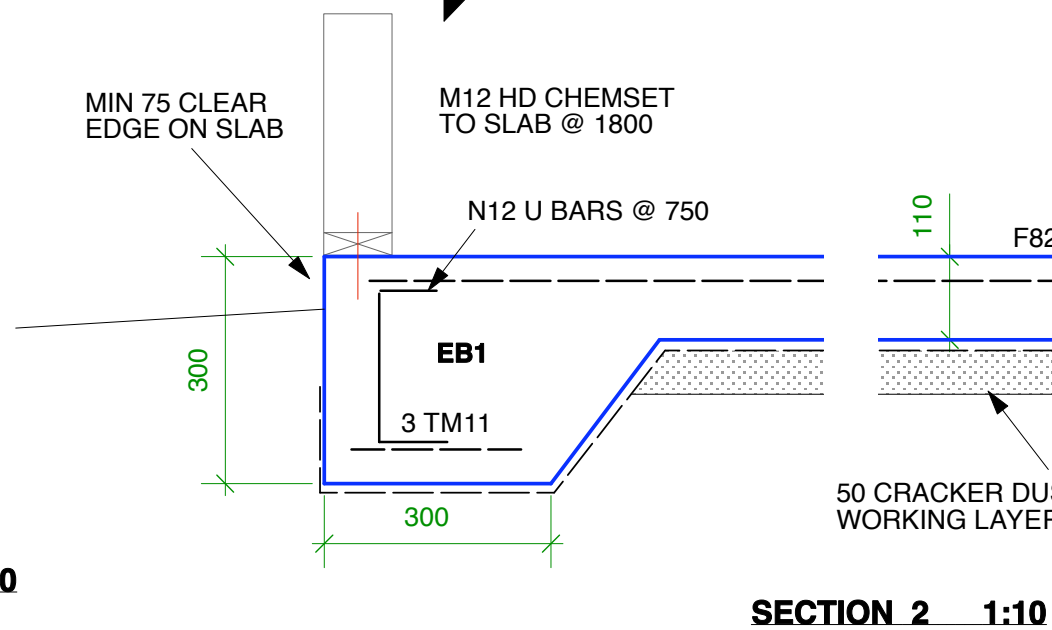
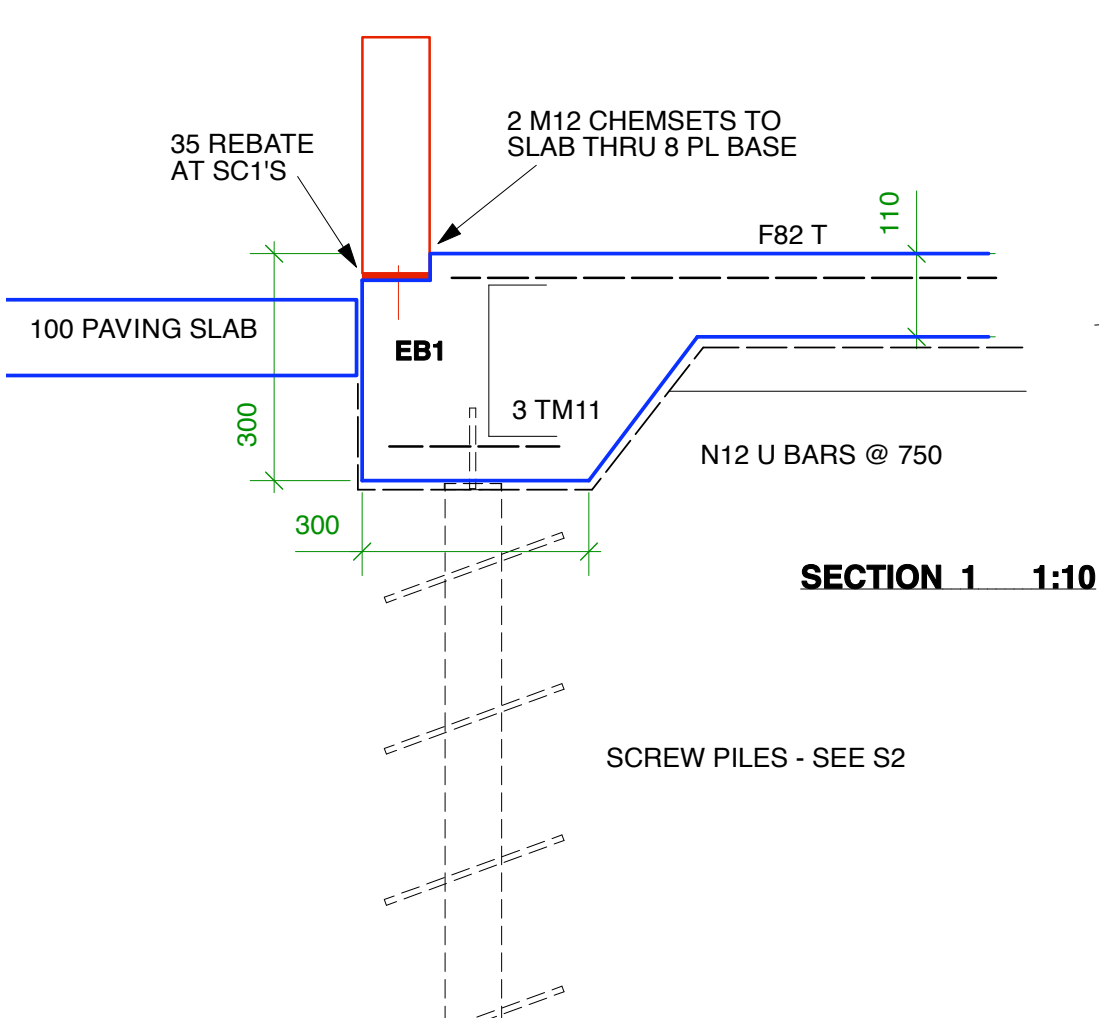
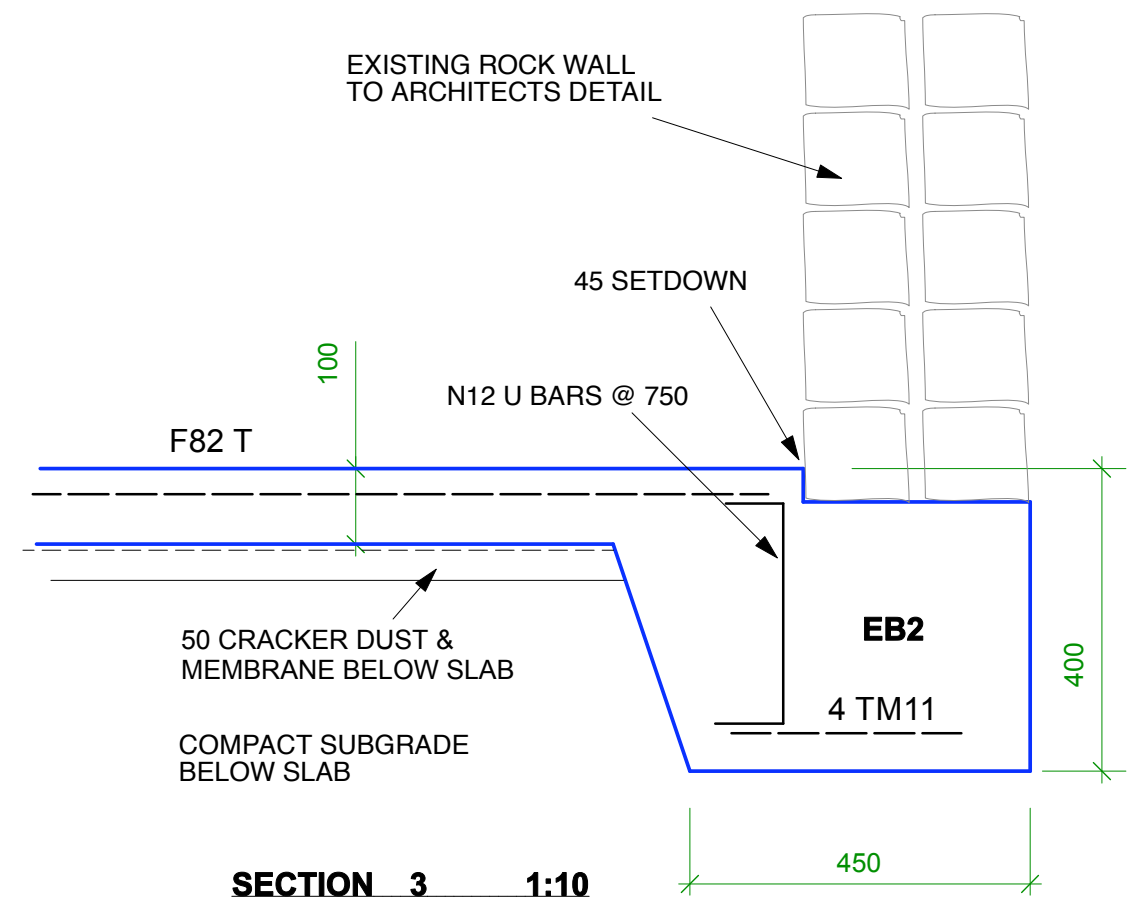
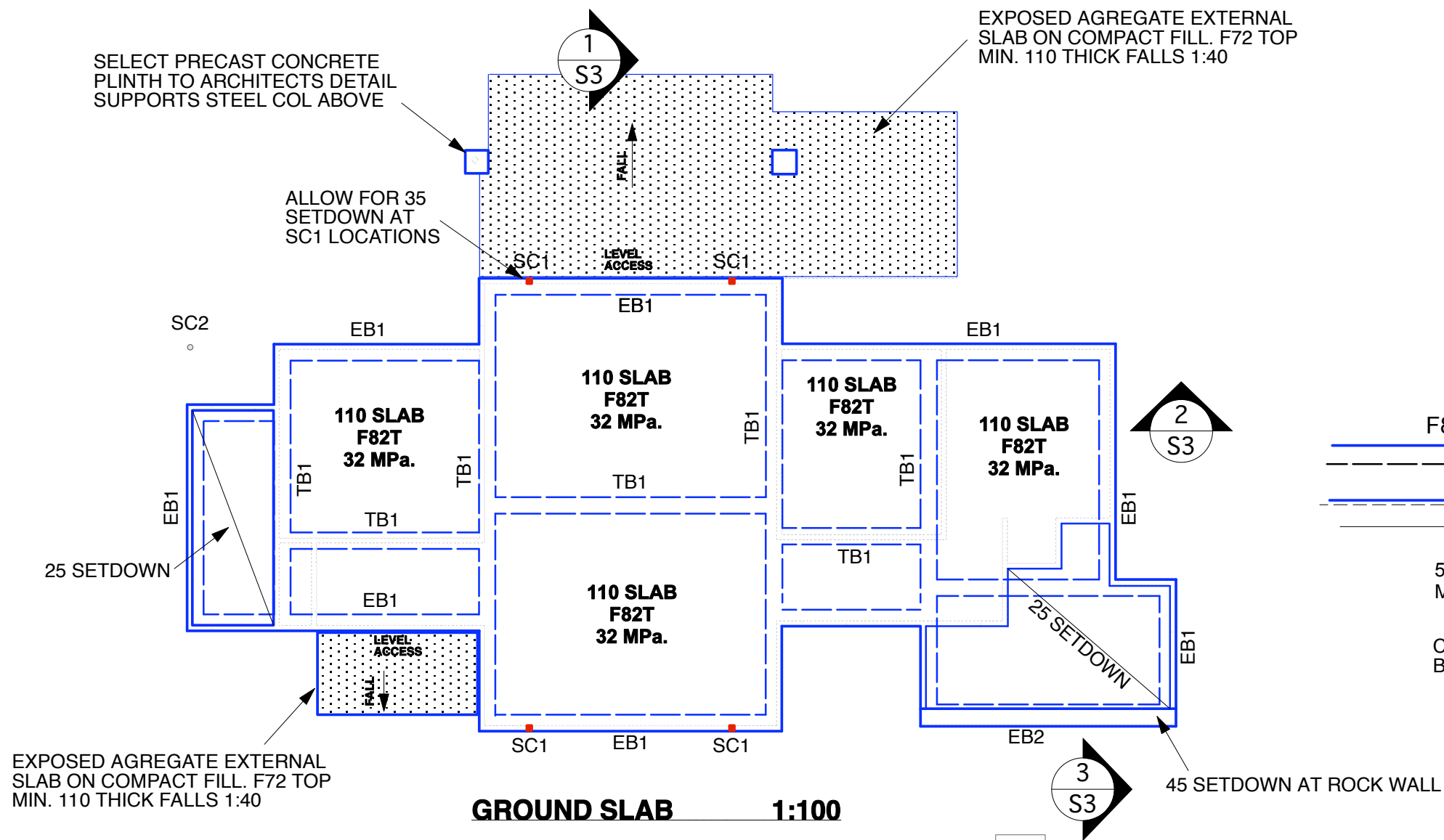


DRAWING		NOTES		SHEET
JOB NUMBER		DATE	ISSUE	S1
08-039		7 - 08	A	
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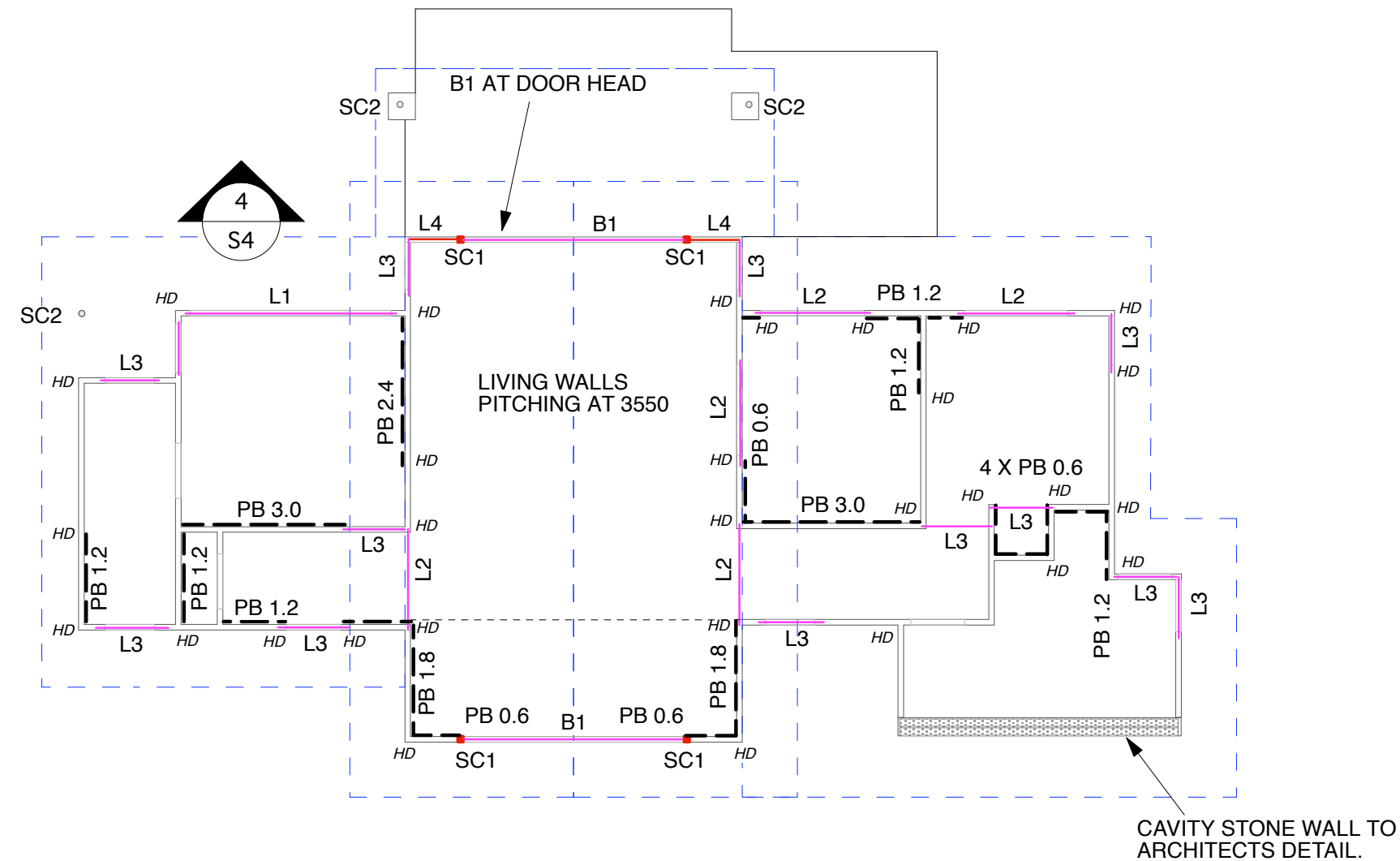
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DRAWING			SHEET	
FOOTING & GROUND WORKS			S2	
JOB NUMBER	08-039	DATE	7 - 08	ISSUE
A				
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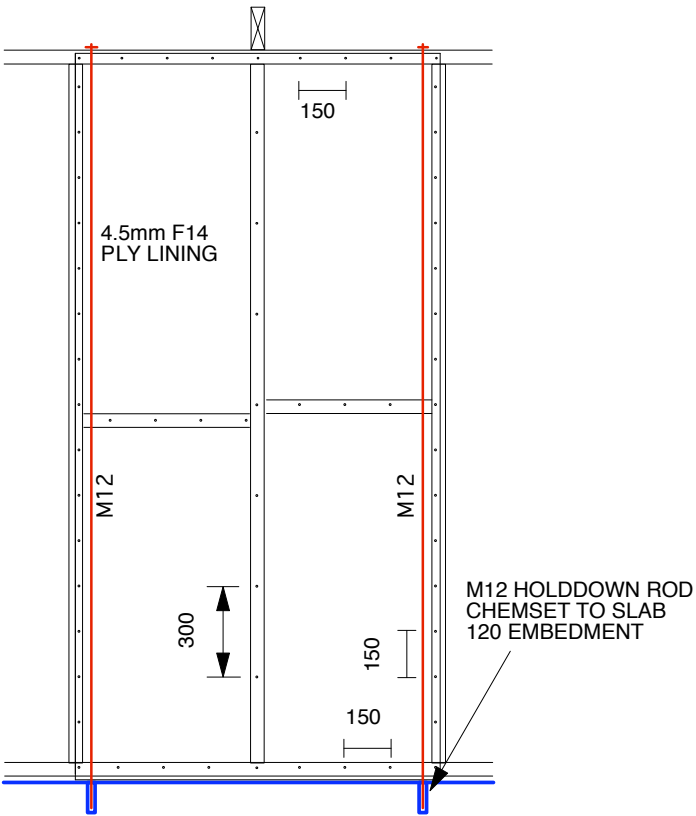
DRAWING	GROUND SLAB		SHEET
JOB NUMBER	08-039	DATE	7 - 08
		ISSUE	A
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WALL FRAMING & BRACING 1:100

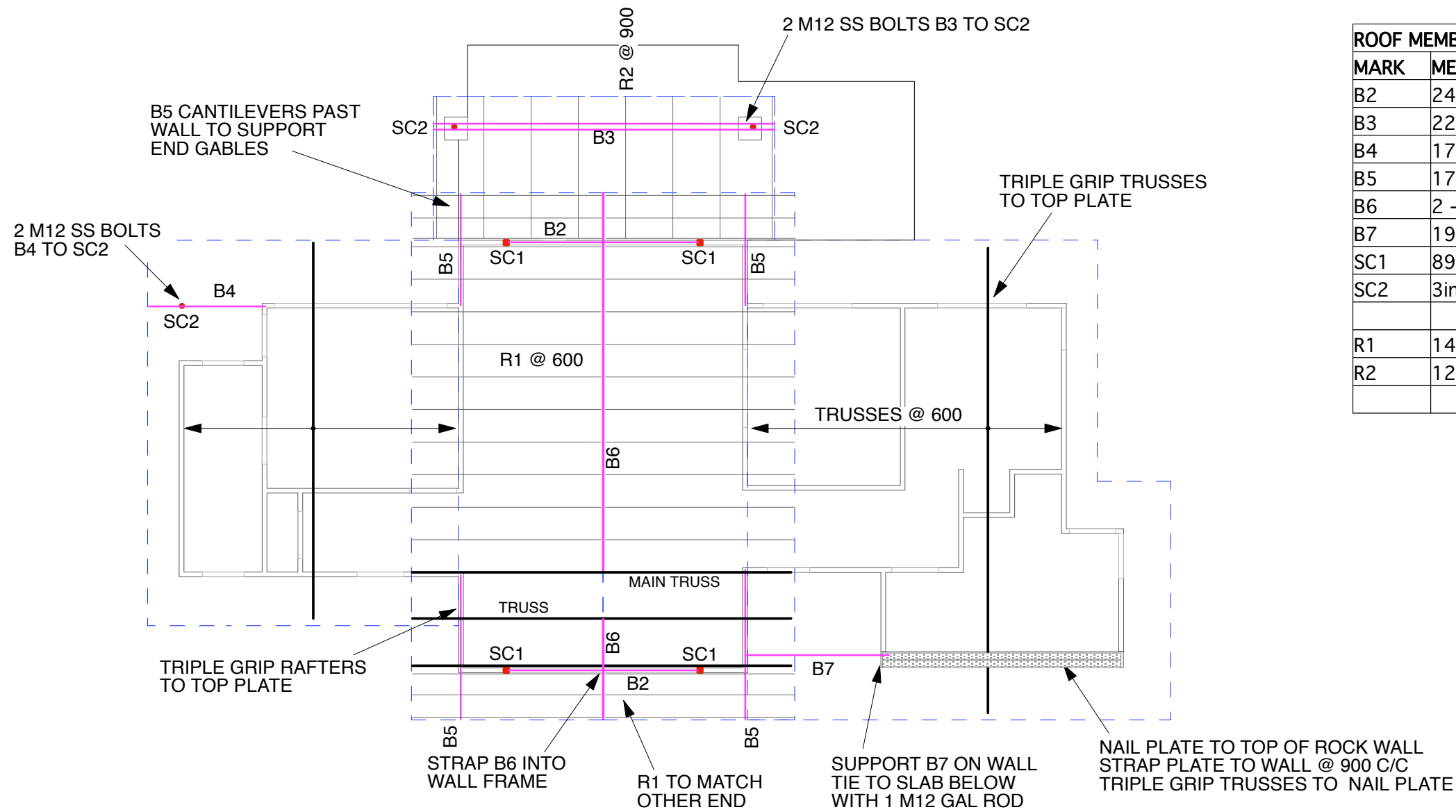
ALL WALL FRAMING 90X45 MGP12 STUDS @ 450C/C

WALL FRAMING MEMBER SCHEDULE		
MARK	MEMBER	COMMENT
B1	220X70 F17 KD HW	BOLT TO SC1 - 2 M12 BOLTS
L1	190X70 F17 KD HW	LINTEL IN WALL FRAME
L2	170X35 F17 KD HW	LINTEL IN WALL FRAME
L3	120X35 F17 KD HW	LINTEL IN WALL FRAME
L4	180 PFC	FULLY WELD TO SC1
SC1	89 X 3.5 SHS	STEEL COLS IN WALL
PB	4.5mm F14 PLY	BRACING PANELS FIX TO FRAME
HD	M12 GAL RODS	HD RODS TOP PLATE TO SLAB



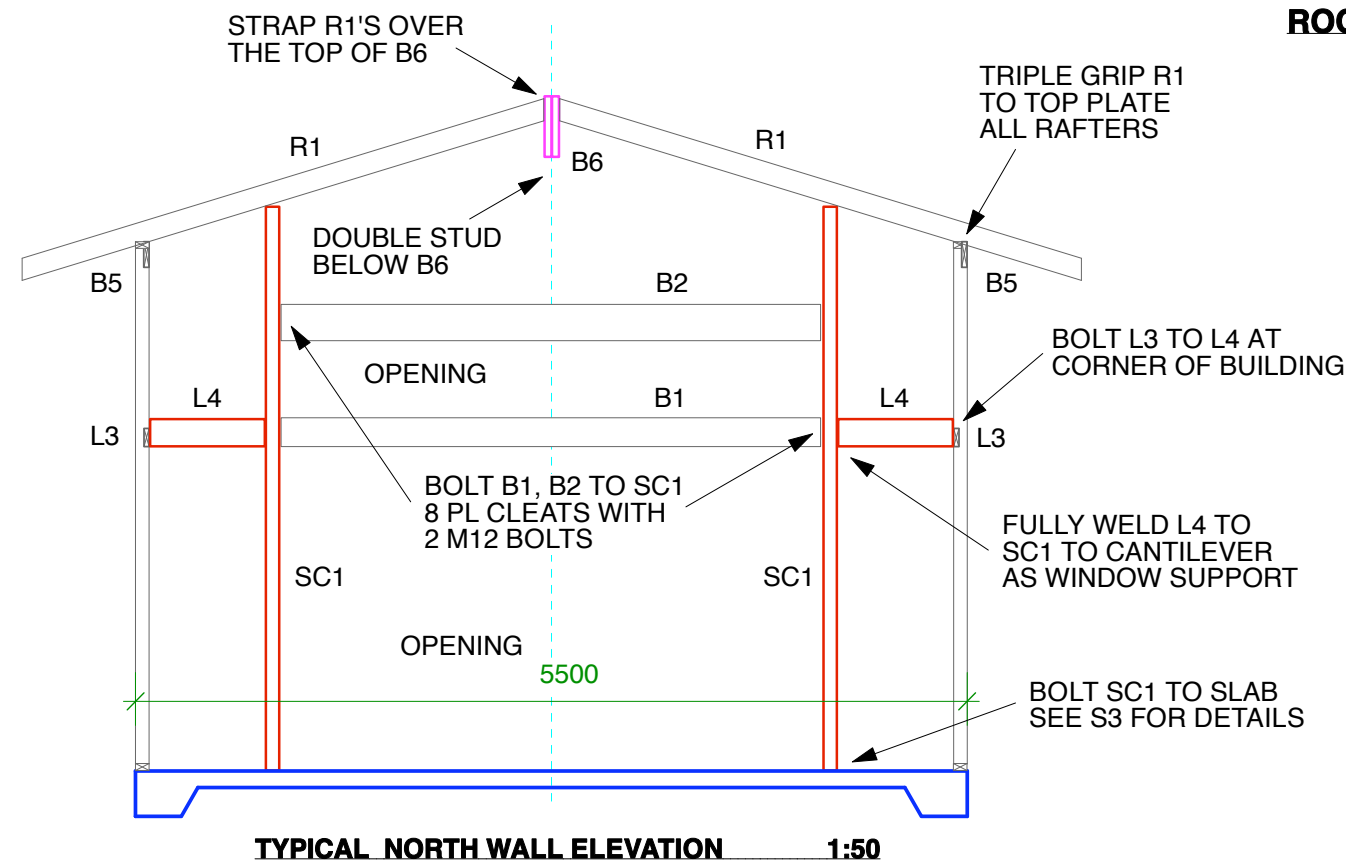
BRACING DETAILS 1:25

DRAWING	BRACING LAYOUT PLAN		SHEET S4
JOB NUMBER	08-039	DATE	7 - 08
ISSUE A			
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ROOF MEMBER SCHEDULE		
MARK	MEMBER	COMMENT
B2	240X45 LVL	LINTEL IN WALL BOLT TO SC1
B3	220X70 F17 KD HW	VERANDAH LINTEL
B4	170X70 F17 KD HW	TRUSS SUPPORT BOLT TO SC2
B5	170X35 F17 KD HW	CANTILEVER ROOF BEAM
B6	2 - 400X45 LVL	MAIN RIDGE BEAM
B7	190X70 F17 KD HW	TRUSS SUPPORT BOLT TO BLOCK
SC1	89X3.5 SHS	COL BUILD INTO WALLS
SC2	3inch SCHED 10 SS TUBE	EXTERNAL SS POSTS
R1	140X45 F7 PINE	MAIN ROOF RAFTERS
R2	125X50 F14 HW	VERANDAH RAFTERS

ROOF FRAME 1:100



TYPICAL NORTH WALL ELEVATION 1:50

DRAWING	ROOF FRAMING		SHEET S5
JOB NUMBER	08-039	DATE	7 - 08
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