Folio No.	Referred to	Date	Clearing Officer's Initials	Folio No.	Referred to	Date	Clearing Officer's Initials	Folio No.	Referred to	Date	Clearing Officer's Initials
6	P&E DC.	17.2.95	DC								
7	I. BROWN	13-11-96	B								

SHIRE OF FLINDERS

PROPERTY FILE

OTHER RELEVANT FILES:

PROPERTY SITUATE

POINT NEPEAN ROAD 617
4 LP11038 P/WANNAEUE

11W632

7.25224

Application by Owner or Occupier for Enrolment on Voters' Roll

Council	Mornington Peninsula
Ward[1]	Nepean

18/8

Local Government Act 1989, sections 12, regulation 6(2)

Please use BLOCK LETTERS when completing this form

Name	RYAN (Surname) JAMES THOMAS (Christian or given names)
Residential address[2]	Irrelevant / Sensitive ... Postcode. Irrelevant / Sensitive
Telephone number[3]	(Home) (03) 9853-9631 (Bus.) (03) 9853-9631
Date of Birth[3]	29/01/1974

617 Nepean Hwy, McCrae 3938

Reason for application for enrolment (please ✓)

Joint owner	☐	Where more than one person owns a property and only the first-named owner has been automatically enrolled. Any other owner may enrol using this form.
Joint occupier	☐	Where more than one person occupies a property and only the first-named occupier has been automatically enrolled. Any other occupier may enrol using this form.
Other (please specify)	☐	A person who is not an Australian citizen but who owns his/her own home or who otherwise resides in the ward or municipality.

Note: Persons who are the **first-named** owners or occupiers, or who are the **sole** owners or occupiers, will automatically be enrolled on the voters' roll and do **not** need to apply a second time.

I, apply under section 12[4] of the *Local Government Act* 1989 to be enrolled on the voters' roll.

I declare that

- I am not enrolled or entitled to be enrolled on the voters' roll under section 11[5] of the *Local Government Act* 1989;
- I am not less than 18 years of age; and
- I am the owner or occupier of the rateable land identified above.

Irrelevant / Sensitive		14/3/1997

Please Note:

(1) Insert if known.
(2) "Residential address" means the place where you live
(3) Telephone number and date of birth are confidential and will not appear on the voters' roll
(4) The relevant sub-sections of section 12 appear on the reverse page.
(5) The relevant sub-sections of section 11 appear on the reverse page.

51987.93 RQN LHMP110038

EXTRACT FROM THE *Local Government Act* 1989

11. Persons entitled to be enrolled

(1) A person who on the entitlement date would be an elector in respect of an address in a ward if a roll of electors for the Legislative Assembly was prepared, is entitled without application to be enrolled on the voters' roll in respect of that address.

(2) A person who on the entitlement date -

(a) is not a person referred to in sub-section (1); and

(b) is not less than 18 years of age; and

(c) is the owner of any rateable land in a ward whether solely or jointly with any other person or persons; and

(d) is not a resident of the ward in which that rateable land is located -

is entitled without application to be enrolled on the voters' roll in respect of that rateable land.

(3) For the purposes of sub-section (2) only 1 joint owner is entitled to be enrolled in respect of any 1 property which is rateable land.

(4) A person who on the entitlement date -

(a) is not a person referred to in sub-section (1) or (2); and

(b) is not less than 18 years of age; and

(c) is the occupier of any rateable land, whether solely or jointly with any other person or persons; and

(d) is not a resident of the ward in which that rateable land is located -

is entitled without application to be enrolled on the voters' roll in respect of that rateable land.

12. Persons entitled to apply to be enrolled

A person who on the entitlement date -

(a) is not a person referred to in section 11; and

(b) is not less than 18 years of age; and

(c) is a person whose principal place of residence has been in Australia for at least 6 months continuously and in Victoria for at least 3 months continuously and in the ward for at least 1 month continuously immediately preceding the date of application for enrolment -

is entitled to apply to be enrolled on the voters' roll in respect of his or her principal place of residence.

13 May 1997

Manager
Morialta Pty Ltd
C/- J T Ryan
Box 2119 MDC
KEW 3101

Dear Sir/Madam

PROPERTY: 617 POINT NEPEAN ROAD, McCRAE

As a result of the successful objection against the valuation of your property, you are in credit to the amount of $23.15.

The new rating year commences 1 July 1997 and this credit will be reflected on your new rate notice unless you notify us differently.

Yours faithfully

Irrelevant / Sensitive

Ros Humphrey (Mrs)
REVENUE MANAGEMENT CO-ORDINATOR

(Reference: AF:JO 114632 : Ann Frater - Direct Dial (03) 59 86 0252)

P/N 114632

Form 6

NOTICE OF CONFIRMATION BY VALUER-GENERAL OF RECOMMENDED ADJUSTMENT TO A VALUATION
(Pursuant to Section 39(4) of the Valuation of Land Act 1960)

After considering the recommendation received by me on 4th of March 1997 from Mr. Ian Brown Valuer to Shire of Mornington Peninsula in respect of the property described below, I now confirm the recommended adjustment, viz.:

N.A.V.	C.I.V.	SITE VALUE
Irrelevant / Sensitive	Irrelevant / Sensitive	Irrelevant / Sensitive

A copy of this notice has been sent to:

Morialta Pty. Ltd.	Objector
Shire of Mornington Peninsula	Rating Authority
Ian Brown	Valuer

Dated at Melbourne this 24th **day of April, 1997**

Irrelevant / Sensitive

(Signature of Valuer-General)

Description of Land, Street, District or Parish	**Area or Dimensions**
617 Point Nepean Road, McCrae	

(**Note:- Section 39(5)** of the Valuation of Land Act provides that, subject to the succeeding provisions of the Act, the decision of the Valuer-General is final and shall be given effect to by the rating authority. If, however, you are dissatisfied with the decision you may, within 30 days of service upon you of this notice, lodge with the rating authority notice in writing requiring it to treat the objection as an appeal and to refer it, subject to the provisions of section 40 of the Valuation of Land Act, to the Supreme Court or to a Land Division of the Administrative Appeals Tribunal. A copy of the notice should be sent to the Deputy Registrar, Land Valuation Division of the Administrative Appeals Tribunal, 55 King Street, Melbourne 3000.

Where the values as adjusted are less than $12,500 in the case of net annual value, $250,000 in the case of capital improved value and $100,000 in the case of site value, the appeal will be heard by the Land Valuation Division of the Administrative Appeals Tribunal unless the Supreme Court, on application made to it by a party to the dispute, directs that it be heard by the Court.

Where the values objected to are not less than the respective amounts stated above, you have one month within which to notify the rating authority in writing whether you choose the Tribunal or the Court to hear the appeal. If you fail to make this choice, the rating authority may then do so.
If you wish to include in an appeal a ground other than the ground or grounds set out in your notice of objection, you should give written notice of the additional ground to the rating authority not later than when you give your notice requiring your objection to be treated as an appeal.

File No. f6mp4m5

(9)

MORNINGTON PENINSULA
Shire Council

Private Bag 1000
Besgrove Street
Rosebud 3939
Tel (059) 86 0111
Fax (059) 86 6696
DX 30059

January 14, 1997

Mr. J.T. Ryan,
Morialta Pty. Ltd.,
Box 2119 MDC,
KEW. 3101.

Dear Mr. Ryan,

RE: OBJECTION TO VALUATION
PROPERTY: 617 POINT NEPEAN ROAD, McCRAE

Further to our conversation of January 10, 1997, please find enclosed a Form 5, recommending an adjustment in valuation to the Valuer General. You will be notified of his decision in due course.

You are further advised that the rates as originally assessed are still due and payable on April 10, 1997, unless an amended rate notice is received by you before that time. If the Valuer General approves of the adjustment after the rates have been paid, you will receive a refund of the overpayment.

Yours faithfully,

Irrelevant / Sensitive

Ian Brown,
Shire Valuer,
Hastings Office.

(Reference: IB:kb 114632 Direct Dial (03) 5986 0872)

NOTICE BY VALUER OF RECOMMENDATION TO VALUER-GENERAL OF ADJUSTMENT TO A VALUATION

(Pursuant to section 39(2)(b) of the Valuation of Land Act)

MUNICIPALITY : MORNINGTON PENINSULA SHIRE COUNCIL

VALUER

Name : Ian L.C. Brown
Postal address : P.O. Box 1000,
ROSEBUD. 3939.

OBJECTOR

Name(s) : Morialta Pty. Ltd.
Postal address : P.O. Box 2119 MDC,
KEW. 3101.

ADJUSTMENTS TO PARTICULARS FOLLOWING CONSIDERATION OF OBJECTION

Property Description	Area or Dimensions
Lot 4, L.P. 11038 617 Point Nepean Road, McCrae	

Irrelevant / Sensitive Irrelevant / Sensitive Irrelevant / Sensitive

Reasons for adjustment(s) :

Internal inspection of the dwelling revealed insufficient depreciation allowed in original valuation.

PARTICULARS GIVEN ON THE ORIGINAL NOTICE OF VALUATION

Property Description (If different to above)	Area or Dimensions
As above	

Irrelevant / Sensitive Irrelevant / Sensitive Irrelevant / Sensitive

A copy of this notice has been sent to the :- (a) Objector - Morialta Pty. Ltd.
(b) Rating Authority
(c) Owner / Occupier

Dated the 14th day of January 1997

Irrelevant / Sensitive

.....

(Signature of Valuer)

(Note : Under section 39 of the Valuation of Land Act, the Valuer-General is required to consider the recommendation and is empowered to disallow it in whole or in part if in his opinion the general uniformity or the general trueness and correctness of the valuation will be substantially affected thereby; otherwise he must confirm the recommended adjustment. The objector will be notified of this determination, and has the right to have the objection treated as an appeal to the Supreme Court or the Land Valuation Division of the Administrative Appeals Tribunal.)

(8)

MORNINGTON PENINSULA
Shire Council

Private Bag 1000
Besgrove Street
Rosebud 3939
Tel (059) 86 0111
Fax (059) 86 6696
DX 30059

November 28, 1996

Mr. J.T. Ryan,
Moriala PtyLtd.,
Box 2119 MDC,
KEW. 3101.

Dear Mr. Ryan,

RE: OBJECTION TO VALUATION
PROPERTY: 617 POINT NEPEAN ROAD, McCRAE

I acknowledge receipt of your objection to valuation on the abovenamed property.

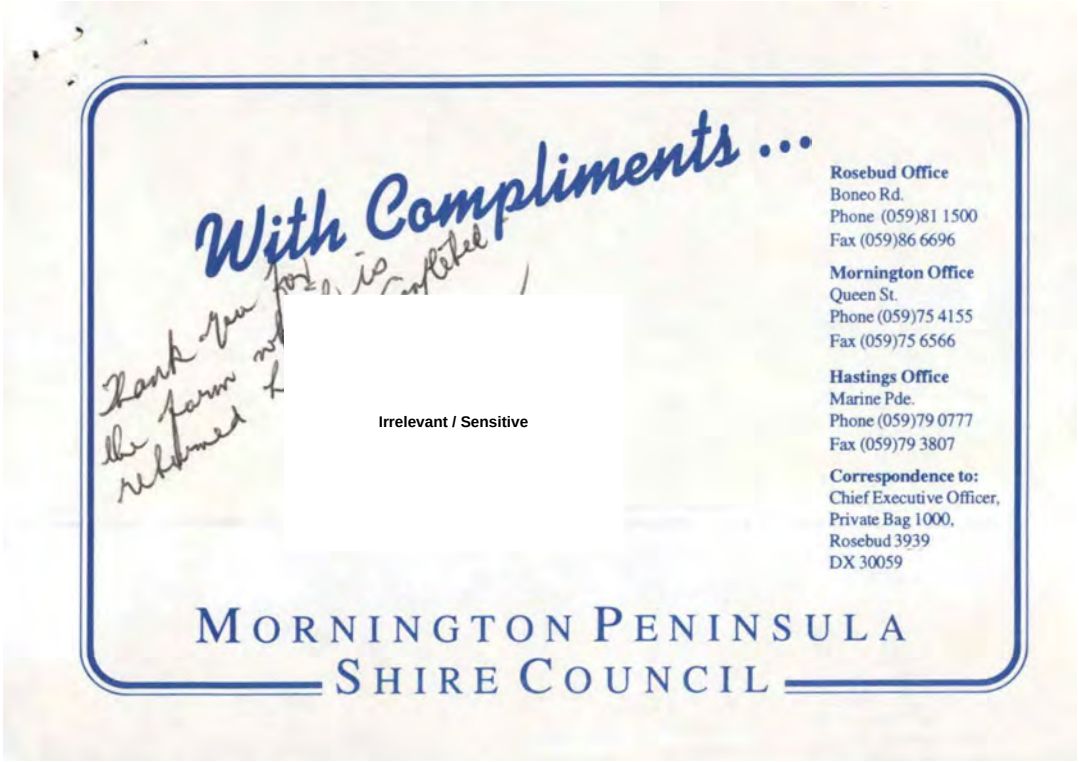
You will be contacted again before the end of January 1997 to arrange a suitable time to discuss the objection.

Yours faithfully,

Irrelevant / Sensitive

Ian Brown,
Senior Valuer,
Hastings Office.

(Reference: IB:kb 114632 Direct Dial (03) 5986 0872)



With Compliments ...

Thank you for the form which is completed and returned to us.

Irrelevant / Sensitive

Rosebud Office
Boneo Rd.
Phone (059)81 1500
Fax (059)86 6696

Mornington Office
Queen St.
Phone (059)75 4155
Fax (059)75 6566

Hastings Office
Marine Pde.
Phone (059)79 0777
Fax (059)79 3807

Correspondence to:
Chief Executive Officer,
Private Bag 1000,
Rosebud 3939
DX 30059

MORNINGTON PENINSULA
SHIRE COUNCIL

44976

FORM 1

NOTICE OF OBJECTION

1

73049

I. BROWN

(To be used pursuant to Sections 36, 37 and 48 of the Valuation of Land Act 1960 when lodging an objection against a valuation made by a Council and any rating authority other than the Commissioner of Land Tax.)

To the Municipal Clerk or to the Chief Executive Officer of the Mornington Peninsula Shire Council, Private Bag 1000, Rosebud, 3939.

I hereby give notice that I object to the assessment of the -

* Net Annual Value
* Capital Improved Value
* Site Value

of the land shown in the notice received by me on the ..... from the Mornington Peninsula Shire Council, on such of the grounds set out below as are marked thus ☐ ✓

(a) ☑ That the value assigned is *too high *~~too low;~~
(b) ☐ That the interests held by various persons in the land have not been correctly apportioned;
(c) ☐ That the apportionment of the valuation is not correct;
(d) ☐ That the lands which should be included in one valuation have been valued separately;
(e) ☐ That lands which should be valued separately have been included in one valuation;
(f) ☐ That the person named in the assessment notice or other document is not liable to be so named;
(g) ☐ That the area, dimensions or description of land are not correctly stated in the assessment notice or other document.

****

Particulars given in the original notice of valuation are:

Description of Land Street and District or Parish	Area or Dimensions	Amount of		
		Net Annual Value	Capital Improved Value	Site Value
Dwelling known as 617 Nepean Hwy, McCrae. 3938 4 LP 11038 P/Wannaeue Assessment No 7.25224	—	Irrelevant / Sensitive	It was also too high in last valuation but I was not able to object.	

P.T.O.

To be completed where an objection is on grounds (a) or (g):

I believe that the particulars of the valuation should be as shown hereunder:

Description of Land Street and District or Parish	Area or Dimensions	Amount of		
		Net Annual Value	Capital Improved Value	Site Value
617 Nepean Highway McCrae 3938 4 LP 11038 Parish of Nepean 1	shallow depth.		The house is only 11 squares i.e. 100 sq m.	

Irrelevant / Sensitive

To be completed where an objection is on grounds (b), (c), (d), (e) or (f).

My reasons for objecting on the particular grounds marked are as follows:

.....

.....

.....

.....

.....

.....

Irrelevant / Sensitive

S

Irrelevant / Sensitive

Date: 11/11/96

Name and Address for Service of Letters: C/- T.T. Ryan
Box 2119
KEW Vic 3101

Phone: (03) 9853-9631

* Cross out whichever is not applicable

1

(6)

JAMES T. RYAN

Barrister and Solicitor

REGISTERED TAX AGENT

Commissioner of the Supreme Court of Victoria for taking Affidavits

11 ST ANTHONYS PLACE
KEW, 3101
PLEASE REPLY TO
BOX 2119 MDC KEW 3101
PHONE & FAX 853 - 9631

YOUR REF.....

OUR REF. JTR:MT

15th February 1995

The Shire Chief Executive
Shire of Flinders
Private Bag 1000
ROSEBUD 3939

Dear Sir,

re: Morialta Pty.Ltd.

Please note the correct address of Morialta Pty.Ltd. regarding property at 617 Nepean Highway McCrae is c/- J.T.Ryan Box 2119 KEW 3101.

You appear to have the correct address on the rate notice but on the notice received regarding the Garbage Collection Service, a very old address was shown but fortunately it was still forwarded on.

Yours faithfully,

Irrelevant / Sensitive

JAMES T. RYAN

114632 (5)

JAMES T. RYAN

Barrister and Solicitor

REGISTERED TAX AGENT

Commissioner of the Supreme Court of Victoria for taking Affidavits

11 ST ANTHONYS PLACE
KEW, 3101
PLEASE REPLY TO
BOX 2119 MDC KEW 3101
PHONE & FAX 853 - 9631

YOUR REF.....

OUR REF. JTR:MT

14th September 1994

The Secretary
Shire of Flinders
Boneo Road
ROSEBUD 3939

Dear Sir,

re: Morialta Pty.Ltd.
Property: 617 Nepean Highway McCrae.

Will you please note that the correct address for Morialta Pty.Ltd. is Morialta Pty.Ltd. c/- J.T. Ryan, Box 2119 KEW 3101. note also rate file.

Please amend your records accordingly as we have been having considerable troubles with the mail.

Yours faithfully,

Irrelevant / Sensitive

JAMES T. RYAN

57987
64450

RECEIVED
16 SEP 1994
Ans'd .....

(4)

25 January 1994

Mr P Natoli
A B Natoli Pty
DX 32409 KEW

Dear Mr Natoli

STORMWATER DRAINAGE -
PROPERTY: 617 POINT NEPEAN ROAD, MCCRAE

We acknowledge your letter of 17 January 1994 requesting information on drainage works that may have been undertaken on the property at 18-20 Viewpoint Road, McCrae.

To our knowledge no applications have been received for connection to Council's drainage system and upon inspection, there is no evidence of works being done on our system. The only outlet available to the Viewpoint Road property is Point Nepean Road where no new connections have been made.

The drainage problem across property boundaries is the responsibility of the two owners and in your clients situation, Penny Lane is an unmade private street which is also the responsibility of the abutting property owners.

Unfortunately, there is no further action we can take unless the owners request the street and drainage to be formally constructed in which case the full costs would be recovered from the benefiting owners by way of a special charge scheme.

Yours faithfully

Irrelevant / Sensitive

Keith Welsh
SENIOR DESIGN ENGINEER -
ENGINEERING SERVICES

(Reference: KEW:JM 210/01, 114632, 116770 : Direct Dial 86 0219)

A.B.Natoli Pty

ABN

barristers & solicitors

John F. Natoli
Angelo J. Natoli
Paul M. Natoli

Consultant:
Angelo B. Natoli

Associate:
Bernard Horsley

A.C.N. 007 162 110

24 Cotham Road,
Kew, Victoria 3101
Telephone: (03) 853 3222
Facsimile: (03) 853 3679

P.O. Box 121, Kew
DX 32409 Kew

C- 114632.
C- 116770
C- 10424.

Our Ref: PMN:ST

Your Ref:

17th January 1994

[redacted]re of Flinders
Dx 30059
ROSEBUD

Dear Sir,

Re; 18-20 Viewpoint Road, McCrae

We write to advise that we act on behalf of Morialta Pty Ltd, the owner of 617 Nepean Highway, McCrae. We understand Sue Brown owns the property at 18-20 Viewpoint Road. Our client has become increasingly concerned at water flowing from Ms Brown's property on to its property causing flooding and damage to the road. It seems that the problem may have been alleviated to some degree more recently by way of some form of drainage work. However, our client is uncertain of this and if so seeks to ensure that it has been property carried out and into the appropriate drains. Accordingly, it requests that a Council Officer inspects the property with a view to ascertaining that any drainage problem have been properly rectified, or if they have not then to issue such appropriate notices so as to enable rectification to take place.

Yours faithfully
A.B. NATOLI PTY

Per:-

Irrelevant / Sensitive

SHIRE OF FLINDERS

BUILDING APPLICATION

FILE SUBJECT: Garage.

LOCATION LOT 4. 617 Nepean Hwy Rosebud.

FILE NUMBER: 12155 BA4755A

OWNER	ADDRESS
MORIALTA P/L	10 Highfield Cve Kew
BUILDER	ADDRESS
Self.	2815/555

ENTERED

FOLIO No.	REFERRED TO	DATE	CLEARING OFFICE'S INITIALS

FOLIO No.	REFERRED TO	DATE	CLEARING OFFICER'S INITIALS

SHIRE OF FLINDERS

Uniform Building Regulations, Victoria

AND COUNCIL'S BUILDING BY-LAWS

PLANNING APPROVAL
15 MAY 1978
SHIRE ENGINEER

ZONING

APPLICATION FOR BUILDING PERMIT

RATE ASSESS No. 2/815/555

To the Building Surveyor, RES. "A"

Office Use
Permit No.: 12155

I HEREBY APPLY FOR A PERMIT TO: *CONSTRUCT/REMOVE/DEMOLISH A BUILDING/BUILDINGS ON LOT(S) 4 (No617) ESTATE ..... SUBDIVISION No. .....

STREET NEPEAN HIGHWAY SECTION ..... PARISH .....

CROWN ALLOTMENT(S) ..... TOWNSHIP OF MCCRAE.

*New Building, Alteration, Addition, Repair, Re-erection.

NOTICE OF CONSTRUCTION

Owner of Land: (BLOCK LETTERS)
NAME MORIALTA Pty Ltd.
ADDRESS 10 HIGHFIELD CVE KEW.

Architect or Engineer:
NAME -
ADDRESS .....

Builder:
NAME J.T. McARDLE & Co. Pty Ltd
ADDRESS 80 WHITEHORSE RD DEEPDENE.

PURPOSE FOR WHICH BUILDING IS TO BE USED STORAGE OF CAR, BOAT, ETC.

Estimated cost of the work (to include all labour costs) $ .....

I undertake that the *Construction, Demolition or Removal will be carried out in conformity with the requirements of the Building Regulations and of the By-laws of the Shire of Flinders.

I SUBMIT HEREWITH PLANS, etc., SHOWING:

1. Allotment of land and its dimensions, distance of allotment from nearest side street, positions of buildings erected or to be erected on allotment with dimensions or distances between buildings, and allotment boundaries, and position and description of all drains.
2. Ground Plan and elevations of buildings in duplicate with dimensions and designations or numbers of each room or compartment, position of doors, windows, chimneys, etc. etc.
3. Specifications describing all materials and fittings. A Certified copy of Title.
4. Area Main Building ..... Area Outbuildings ..... Total Area 60 sq m

DATED THIS 12th DAY OF May 1978.

SIGNATURE Irrelevant / Sensitive

*Builder, ~~Owner, Architect~~.

I, MR J. RYAN (MORIALTA) being the owner of the land herein described hereby consent to the lodging of this application.

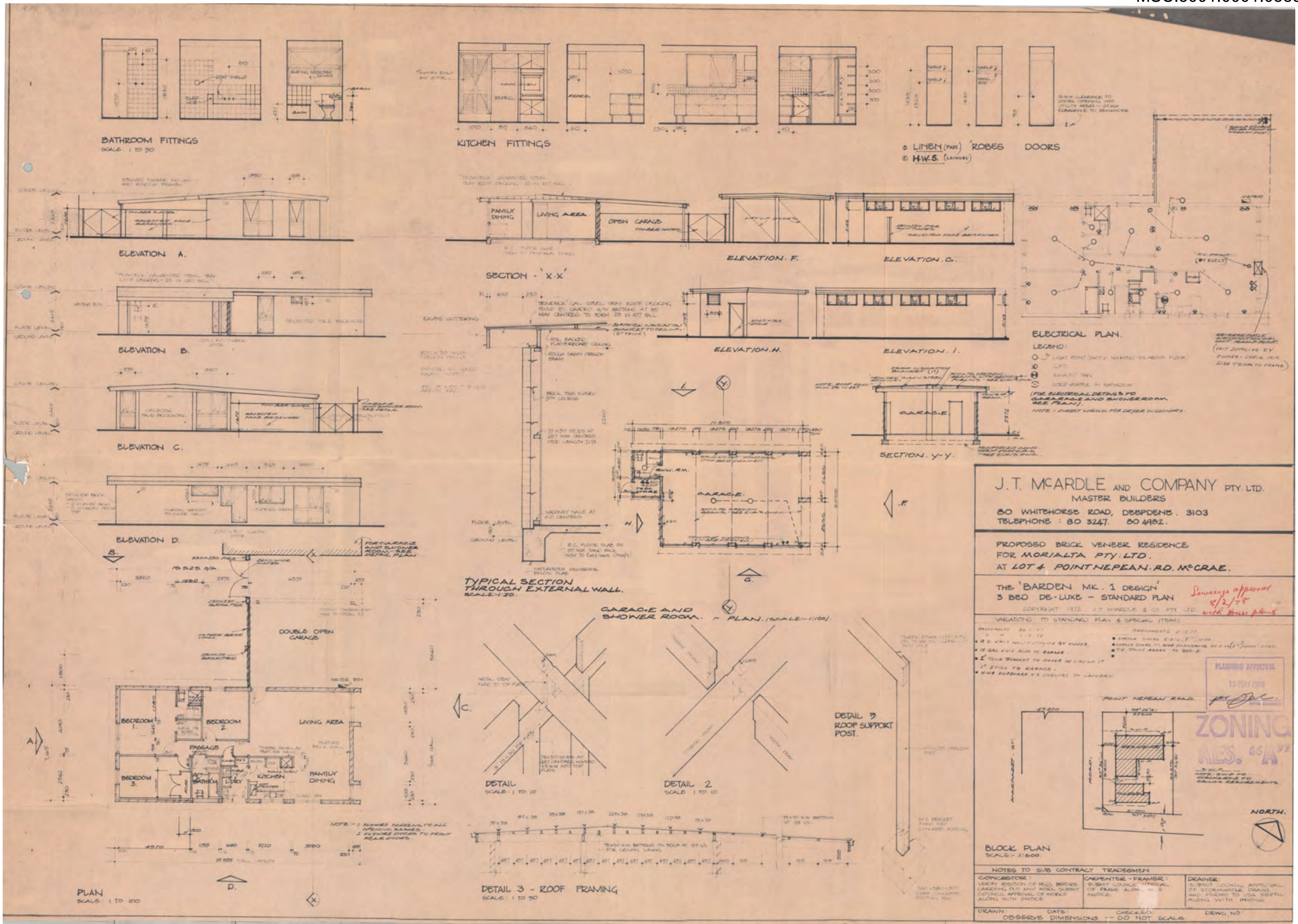
SIGNATURE OF OWNER WHEN NOT THE APPLICANT Irrelevant / Sensitive

Builders' Sanitary Service:
A proper sanitary service must be provided at all new buildings or works. Sanitary Charge $9.00

BUILDING FEE ..... $ 10 :
SCAFFOLDING FEE .... $:
SANITARY FEE ..... $:

$ 10 :-

R.C.M. (P2005)


BATHROOM FITTINGS
SCALE : 1 TO 50
KITCHEN FITTINGS
LINEN (PASS) 'ROBES DOORS
H.W.S. (LAUNDRY)
ELEVATION A.
ELEVATION B.
ELEVATION C.
ELEVATION D.
SECTION - 'X-X'
ELEVATION. F.
ELEVATION. G.
ELEVATION. H.
ELEVATION. I.
ELECTRICAL PLAN.
LEGEND:
SECTION. Y-Y.
TYPICAL SECTION THROUGH EXTERNAL WALL.
SCALE - 1:20.
GARAGE AND SHOWER ROOM. - PLAN. (SCALE - 1:100)
DOUBLE OPEN GARAGE
BEDROOM 1.
BEDROOM 2.
BEDROOM 3.
LIVING AREA
KITCHEN
FAMILY DINING
PASSAGE
PLAN
SCALE 1 TO 100
DETAIL 1
SCALE 1 TO 10
DETAIL 2
SCALE 1 TO 10
DETAIL 3 ROOF SUPPORT POST.
DETAIL 3 - ROOF FRAMING
SCALE 1 TO 50
J.T. McARDLE AND COMPANY PTY. LTD.
MASTER BUILDERS
80 WHITEHORSE ROAD, DEEPDENE. 3103
TELEPHONE : 80 3247. 80 4982.
PROPOSED BRICK VENEER RESIDENCE
FOR MORIALTA PTY: LTD.
AT LOT 4 POINT NEPEAN. RD. McCRAE.
THE 'BARDEN MK. 1 DESIGN'
3 BED DE-LUXE - STANDARD PLAN
Sewerage approval 8/2/78 with House plans
COPYRIGHT 1972 J.T. McARDLE & CO. PTY. LTD.
VARIATIONS TO STANDARD PLAN & SPECIAL ITEMS.
PLANNING APPROVAL
15 MAY 1978
ZONING
RES. "A"
POINT NEPEAN ROAD.
BLOCK PLAN
SCALE - 1:600
NORTH.
NOTES TO SUB CONTRACT TRADESMEN
CONCRETOR:
CARPENTER - FRAMER:
DRAINER:
DRAWN: DATE: CHECKED: DRWG. NO.
OBSERVE DIMENSIONS -- DO NOT SCALE.

SHIRE OF FLINDERS

BUILDING APPLICATION

FILE SUBJECT	FILE NUMBER
4RM DWELLING - OPEN GARAGE	~~B/A 1886~~ (1)
LOCATION NO 617 NEPEAN HWY. McCRAE	11642. BA4242A

OWNER	ADDRESS
MORIALTA PTY LTD	NO 10. HIGHFIELD GROVE KEW.
BUILDER	ADDRESS
J. T McARDLE -CO PTY LTD	NO 80 WHITEHORSE ROAD DEEPDENE 3103

FOLIO No.	REFERRED TO	DATE	CLEARING OFFICE'S INITIALS
	ENTERED		

FOLIO No.	REFERRED TO	DATE	CLEARING OFFICER'S INITIALS
	2815/555		

2.815.555

Street No. 617 NEPEAN HWY. McCRAE.

Lot No. 4 BA-236

Owner MORIALTA P/L

Address Irrelevant / Sensitive

Builder J.T. McARDLE CO P/L Phone No.

Date 8.2.78 Permit No. 11642

Date	
	4rm dwell + olgar 110 m² Irrelevant / Sensitive B.V. Steel
20/3/78	SCABS — can't find Job
21/3/78	" — Pest spray — ok
22/3/78	" — Pest — ok cc (Pestex Services)
27/4/78	FRAME
12/6/78	Lock up (Meadows)
3/7/78	Fire Lite Showers to complete, ok to proceed when ready

NOV 24 1978

SHIRE OF FLINDERS

SCAFFOLDING REGULATIONS

Clause 203(a)

FIRST SCHEDULE

Date	Inspector	Second Schedule No., if any	Remarks

SHIRE OF FLINDERS

EIGHTH SCHEDULE

REGULATIONS 1974
LOCAL GOVERNMENT (HOUSE BUILDERS' LIABILITY) (FORMS)

_____ Nº 1961

CERTIFICATE OF OCCUPANCY

*To Moriatta P/L.
10. Highfield Gve Kew.

THIS IS TO CERTIFY

(a) that † J. T. McArdle Co P/L.
80 Whitehorse Rd
Deepdene 3103 has given notice

that he has completed the construction of a dwelling-house situated at

‡ 617 Nepean Hwy McCrae.

(b) that the dwelling-house has been inspected and is suitable for occupation.

Dated this 5th. day of Oct. 19 71.

Signature [redacted]
(Proper Officer)

*Insert name and address of owner.
† Insert name and address of builder.
‡ Insert address of dwelling-house.

Dromana Print, Ref. 155

SHIRE OF FLINDERS ST OK VE 9/2/78

Uniform Building Regulations, Victoria

AND COUNCIL'S BUILDING BY-LAWS

APPLICATION FOR BUILDING PERMIT

RATE ASSESS No. 2-815-555

Office Use
Permit No.: 11642.

To the Building Surveyor,

I HEREBY APPLY FOR A PERMIT TO: *~~CONSTRUCT~~/~~REMOVE~~/~~DEMOLISH~~ A BUILDING/BUILDINGS

ON LOT(S) ~~(S)~~ 4 ESTATE ..... SUBDIVISION No. 11038

STREET POINT NEPEAN HIGHWAY SECTION ..... PARISH WANNIAENE

No 617 No 617.

CROWN ALLOTMENT(S) PORTION 1 SECT 13 TOWNSHIP OF McCRAE

*New Building, Alteration, Addition, Repair, Re-erection.

NOTICE OF CONSTRUCTION

Owner of Land: (BLOCK LETTERS)
NAME MORIALTA Pty. Ltd.
ADDRESS 10 HIGHFIELD GROVE KEW

Architect or Engineer:
NAME —
ADDRESS —

Builder:
NAME J.T. McARDLE & Co. Pty. Ltd.
ADDRESS 80 WHITEHORSE ROAD DEEPDENE

PURPOSE FOR WHICH BUILDING IS TO BE USED RESIDENCE.

Estimated cost of the work (to include all labour costs) Irrelevant / Sensitive

I undertake that the *Construction, Demolition or Removal will be carried out in conformity with the requirements of the Building Regulations and of the By-laws of the Shire of Flinders.

I SUBMIT HEREWITH PLANS, etc., SHOWING:

1. Allotment of land and its dimensions, distance of allotment from nearest side street, positions of buildings erected or to be erected on allotment with dimensions or distances between buildings, and allotment boundaries, and position and description of all drains.
2. Ground Plan and elevations of buildings in duplicate with dimensions and designations or numbers of each room or compartment, position of doors, windows, chimneys, etc. etc.
3. Specifications describing all materials and fittings. A Certified copy of Title.
4. Area Main Building 107 110 Sqm Area Outbuildings 55 Sq.m Total Area 162

DATED THIS FIRST DAY OF FEBUARY 1978

SIGNATURE Irrelevant / Sensitive

*Builder, ~~Owner, Architect.~~

I, (OWNERS CONSENT FORM ENCLOSED) being the owner of the land herein described hereby consent to the lodging of this application.

SIGNATURE OF OWNER WHEN NOT THE APPLICANT (SEPARATE FORM ENCLOSED)

Builders' Sanitary Service:
A proper sanitary service must be provided at all new buildings or works. Sanitary Charge $9.00.

BUILDING FEE .....
SANITARY FEE .....
SCAFFOLDING FEE .....
SEWERAGE FEE .....

Irrelevant / Sensitive

R.C.M. (P2005)

P/N 11642

TELEPHONE: 83 5547

PESTEX SERVICES EXPERT PEST CONTROL

8 JUNCTION ROAD, SURREY HILLS, 3127

REGIST. No. 2283
DATE REC'D. 30 MAR 1978
FILE No.
OFFICER/S
FINAL ACTION

Termite Proofing Certificate

PESTEX SERVICES of 8 JUNCTION ROAD, SURREY HILLS,3127

hereby certify that the SUB AREA of the Concrete Slab house situated at

LOCATION
Lot 4 Nepean Highway,
McCrae, Vic.

BUILDER
Messrs. J.T. McArdle & Co.,
80 Whitehorse Road,
DEEPDENE, Vic.

DATE: — 21-3-78

NUMBER OF SQUARES: — 108 Square Metres

CHEMICAL USED: —

Has been treated by us for the control of TERMITES in accordance with Australian Standards C.A.43.1966.

Notice as required has been fixed to bearer just inside of trapdoor.

For and on behalf of
PESTEX SERVICES

A. E. Pearce
Irrelevant / Sensitive
Manager.

J.T. McArdle & Co. Pty. Ltd.
Master builders of quality Barden homes.
Member of Master Builders Association of Victoria
and the Housing Industry Association
80 Whitehorse Road, Deepdene, 3103. Phone: 80 3247, 80 4982.

REGIST. No.	740
DATE REC'D.	- 2 FEB 1978
FILE No.	
OFFICER/S	B/Surv
FINAL ACTION	

1st February, 1978.

The Building Surveyor,
Shire of Flinders,
Municipal Offices,
Civic Centre,
Boneo Road,
ROSEBUD.....VIC.....3939

Dear Sir,

Re: Building Permit Application
Lot 4 Point Nepean Road, McCrae

Relative to the above, we enclose the following:-

1) Building Permit application.
2) Scaffold Permit application.
3) Housing Builders Liability form.
4) Certificate of Title.
5) Owners Consent.
6) Three copies architectural plan.
7) Three copies specification.
8) Two copies engineers drawings and computations.

If you have any queries, please contact the undersigned at the above office.

Yours faithfully

Irrelevant / Sensitive

JOHN T. McARDLE
Managing Director

JTMcA/pf

ORIGINAL FORM 7

SEVENTH SCHEDULE — Clause 8
Local Government Act 1958, Section 929 (3A)
Local Government (House Builders' Liability) (Forms) Regulations 1974.

DECLARATION BY APPLICANT FOR PERMIT FOR CONSTRUCTION OF DWELLING-HOUSE

24675

To* SHIRE OF FLINDERS I/We (name) J.T. McARDLE & CO. PTY LTD of

(address) 80 WHITEHORSE ROAD, DEEPDENE

HEREBY DECLARE —

1. I am the applicant for a permit to construct a dwelling-house on land situate at † LOT 4 POINT NEPEAN ROAD, McCRAE

+2. I am a builder who —

+(a) is recognised by **MASTER BUILDERS' HOUSING FUND LTD.** (name of approved guarantor) who is an approved guarantor for the purposes of Division 1 A of Part XLIX. of the Local Government Act 1958;

+(b) holds an approved insurance policy in respect of the dwelling-house for the purposes of Division 1 A of Part XLIX. of the Local Government Act 1958;

+3. I am not a builder to whom clause 2 applies and —

(a) I +do / +do not propose to construct the dwelling-house;

(b) I +have / +have not entered into a contract for the construction of the dwelling-house;

(c) The dwelling house +is / +is not to be constructed for my own occupation; and

(d) I believe I +am / +am not exempt from the operation of Division I A Part XLIX. of the Local Government Act 1958 and my reasons for that belief are

(reasons)

I further declare that the contents of this declaration are true and correct and I understand that it is an offence to include false or misleading matter in this declaration.

Dated this 17TH day of NOV. 1977.

Signature Irrelevant / Sensitive

NAME (BLOCK LETTERS) PAULETTE FRANCIS

+ of and on behalf of J.T. McARDLE & CO. PTY LTD.,

80 WHITEHORSE RD, DEEPDENE JOHN T. McARDLE
(name of principal)

Pursuant to an authority given to me on 17-11-77
(date)

* Insert name of municipality
† Insert location of dwelling-house
† Delete if inapplicable

COMPLETE IN TRIPLICATE —
ORIGINAL TO LOCAL AUTHORITY DUPLICATE TO MASTER BUILDERS' HOUSING FUND LTD., 332 Albert Street, EAST MELBOURNE, 3002
TRIPLICATE FOR BUILDER.

MBHF - D5/3

FOURTH SCHEDULE

LOCAL GOVERNMENT (HOUSE BUILDERS' LIABILITY) (FORMS) - REGULATION 1974
CLAUSE 6

CERTIFICATE OF REGISTRATION OF DWELLING HOUSE

This is to certify that the dwelling house situate at -

LOT 4 POINT NEPEAN ROAD McCRAE

was on 18.11.77 entered in the register

of dwelling-houses kept by **MASTER BUILDERS' HOUSING FUND LTD.**

and is a dwelling-house in relation to the construction of which a guarantee

given by MASTER BUILDERS' HOUSING FUND LIMITED

under Division 1A of PART XLIX of the Local Government Act 1958 is in force.

DATE 18 / 11 /19 77
DWELLING-HOUSE
REGISTER No. 16063

Irrelevant / Sensitive

REGISTRAR

AUTHORITY TO BUILD ON BLOCK OF LAND.

The Building Surveyor

City of. FLINDERS

~~I~~/We, MORIALTA Pty LTD

of 10 HIGHFIELD GROVE KEW

being the owner of land known as Lot No. 4 POINT NEPEAN

ROAD Mc CRAE (Road, Street, Avenue.)

having a frontage of 75' by a depth of 107' 7"

do hereby give my consent to the application of J. T. McArdle & Co. Pty. Ltd., 80 Whitehorse Road, Deepdene 3103., for permission to construct a building on such land according to the attached plans and specifications.

The land is contained in Certificate of Title Volume No. 6780

Folio No. 993 and I attach hereto a certificate copy of such Certificate showing the dimensions and easements.

DATE. 1st Feb. 1978

OWNER

Irrelevant / Sensitive

MORIALTA Pty Ltd

L
R - 2 FEB 1978
FILE
No.
OFFICER/S
FINAL ACTION

Client 1 Your Ref. Stella Pantlin - Morialta

J.T. Ryan of Rec

) CERTIFICATE OF TITLE Whole / Part of the Land

) Entered in the Register Book

) Under the "Transfer of Land Act 1958"

Reg. Proprietor) Vol: 5780 Fol: 993

by Transfer)

No. E 55 3564) MORIALTA PTY LTD of

) 10 HIGHFIELD GROVE, KEW

are

now the ——— proprietor of an estate in fee simple, subject to the encumbrances notified hereunder in ALL th at piece of land, delineated and colored red on the map in the margin containing ——— acres ——— roods ——— perches more or less or thereabouts being Lot 4 on the Plan of Subdivision No: 11038 lodged in the Office of Titles and being part of Crown Allotment 1 Portion ONE Section B Parish of Winnaeut County of Flemington together with a right

Issued under Regulation 12 on the approval of the above Plan of Subdivision.

DATED the 5th day of October 1972.

PARENT Vol. 3680 Fol: 896 Application

ENCUMBRANCES REFERRED TO:

As to any land colored blue :

Any Easements implied under Section of TLA

As to the whole of the land.

NIL

Measurements in Feet and inches/~~Links~~.

Unregistered Dealings: NIL

Caveats and Writs: NIL

New Title: ——Required/Not Required

Searched: 22 / 12 /1977 By: RB

C/T Ref.:

R. H. OGILVIE
Titles Agents
Box 516J, G.P.O., Elizabeth St., Melbourne 3001

Charges: $ 5 : - . Fees: $ 2 : - . Total $ 7 : - .

SCAFFOLDING REGULATIONS

Clause 502

FOURTH SCHEDULE

APPLICATION FOR PERMIT

To the Surveyor,
SHIRE OF FLINDERS:

I hereby apply for a permit to ~~*erect~~ use erect and use scaffolding on *allotment ✓

~~Street~~ No. 4 in POINT NEPEAN HIGHWAY Street

"Cost" of project. (See clause 402.)

Dated this FIRST day of FEBUARY 19 78

Signature Irrelevant / Sensitive

For and on behalf of J.T. McARDLE & Co. Pty. Ltd.
(Company, firm or principal)

Postal Address 80 WHITEHORSE ROAD DEEPDENE
(Company, firm or principal)

Phone No. 803247

The following information is requested to facilitate inspection and is in no way binding on the applicant.

Purpose for which scaffolding is to be used BRICK WALLING.

*Type / Types of scaffolding proposed for use:— *single pole scaffolding, independent pole scaffolding, suspended scaffolding, boatswain's chair, cantilever scaffolding, trestle scaffolding, hanging (on hook rods) scaffolding). ✓

Estimated date of erection 1 / 4 /19 78

Is it intended to use a crane or hoist in close proximity to the scaffolding to which this application relates?

~~*YES~~
NO

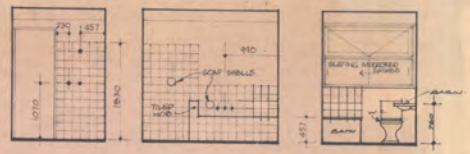
For Office use only:

Fee ..... Number .....

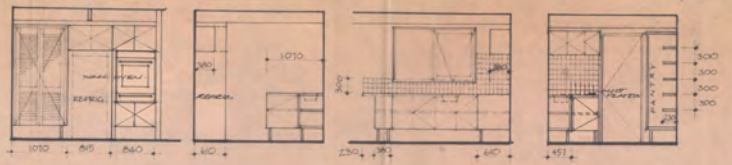
Permit ..... Date Issued .....

*Strike out words which are inapplicable.

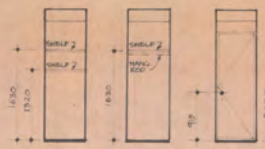
R.C.M. (P2005)



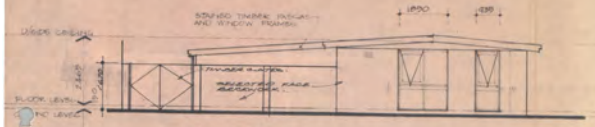
BATHROOM FITTINGS
SCALE: 1 TO 50



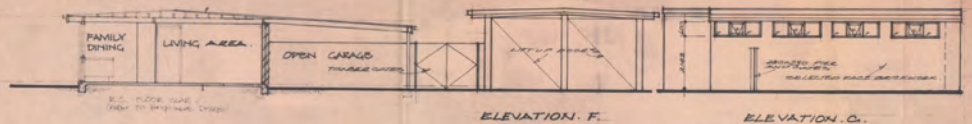
KITCHEN FITTINGS



LINEN ROBES DOORS



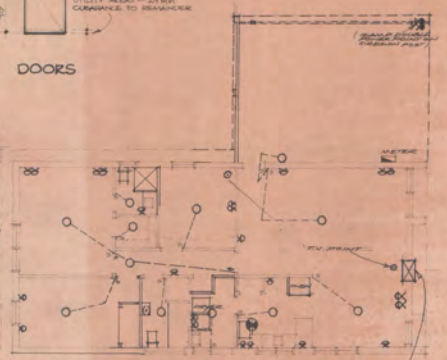
ELEVATION A.



ELEVATION. F.

ELEVATION. G.

SECTION - 'X-X'

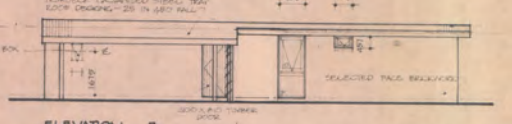


ELECTRICAL PLAN.

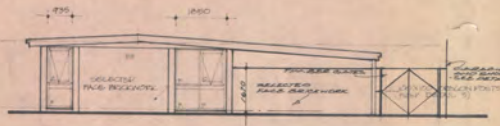
LEGEND:
- LIGHT POINT (SWITCH MOUNTED 1675 ABOVE FLOOR)
- GPO
- EXHAUST FAN
- STRIP HEATER IN BATHROOM

(FOR ELECTRICAL DETAILS TO GARAGE AND SHOWER ROOM SEE PLAN)

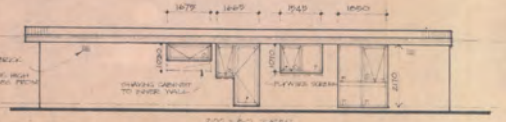
NOTE: - ENERGY MARK (6) FOR DRYER IN LAUNDRY.



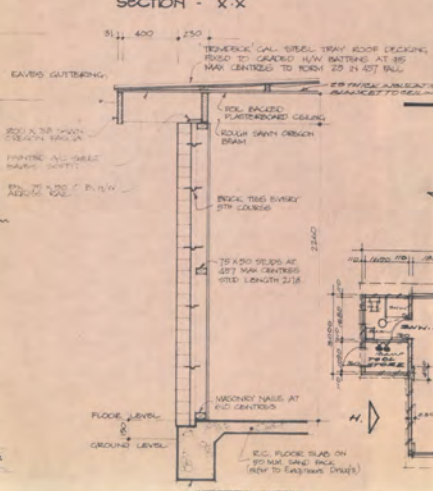
ELEVATION B.



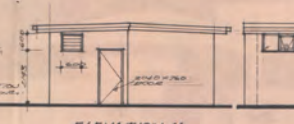
ELEVATION C.



ELEVATION D.

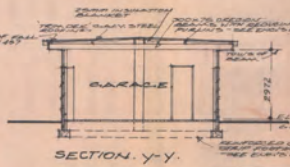


TYPICAL SECTION THROUGH EXTERNAL WALL.
SCALE: 1:20.

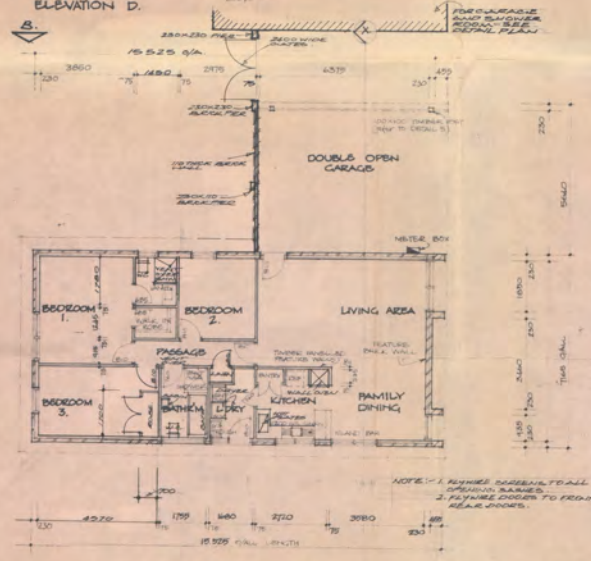


ELEVATION. H.

ELEVATION. I.

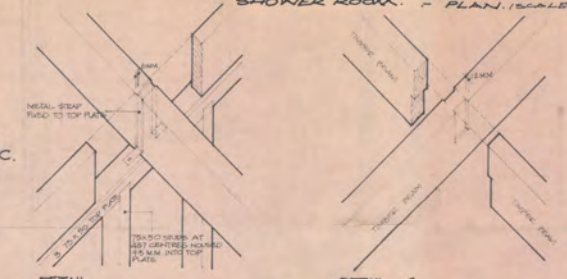


SECTION. Y-Y.



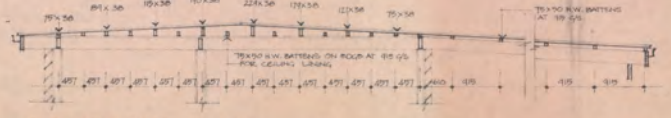
PLAN
SCALE 1 TO 100

NOTE:- 1. FLYWIRE SCREENS TO ALL OPENING SASHES.
2. FLYWIRE DOORS TO FRONT REAR DOORS.



DETAIL
SCALE: 1 TO 10

DETAIL 2
SCALE: 1 TO 10



DETAIL 3 - ROOF FRAMING
SCALE: 1 TO 50

DETAIL 5
ROOF SUPPORT POST.

DROMANA-ROSEBUD SEWERAGE AUTHORITY
Form No. 44

1.) THE HEALTH INSPECTOR SHIRE OF FLINDERS
The attached plan has been checked by the Dromana-Rosebud Sewerage Authority and the following action is required:
1. The drains from the fixtures to the septic tank are to be constructed to the requirements of the Sewerage Authority.

K. L. ANDREW
SENIOR PLUMBING AND DRAINAGE INSPECTOR

DROMANA/ROSEBUD SEWERAGE AUTHORITY
PLAN APPROVED.
28 FEB 1978
Plumbing Inspector

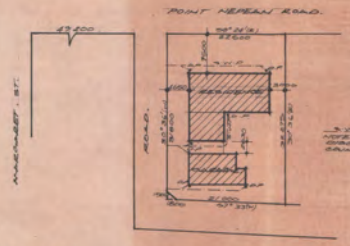
J.T. McARDLE AND COMPANY PTY. LTD.
MASTER BUILDERS
80 WHITEHORSE ROAD, DEEPDENE. 3103
TELEPHONE : 80 3247. 80 4982.

PROPOSED BRICK VENEER RESIDENCE
FOR MORIALTA PTY. LTD. (No 617)
AT LOT 4 POINT NEPEAN. RD. McCRAE.

THE 'BARDEN MK. 1 DESIGN'
3 BED DE-LUXE - STANDARD PLAN

VARIATIONS TO STANDARD PLAN & SPECIAL ITEMS

AMENDMENTS 20.11.77
- GARAGE DOORS 2-4'0 (1.2m) WIDE.
- GARAGE DOORS TO GIVE CLEARANCE 50.2-16(6") UNDER BEAM.
- T.V. POINT MOVED TO 2400 E.



BLOCK PLAN
SCALE:- 1:500.

NOTES TO SUB CONTRACT TRADESMEN

CONCRETOR: VERIFY POSITION OF PEGS BEFORE CARRYING OUT ANY WORKS. SUBMIT COUNCIL APPROVAL OF WORKS ALONG WITH INVOICE.

CARPENTER - FRAMIER: SUBMIT COUNCIL APPROVAL OF FRAME ALONG WITH INVOICE.

DRAINER: SUBMIT COUNCIL APPROVAL OF STORMWATER DRAINS AND PERMIT TO USE SEPTIC ALONG WITH INVOICE.

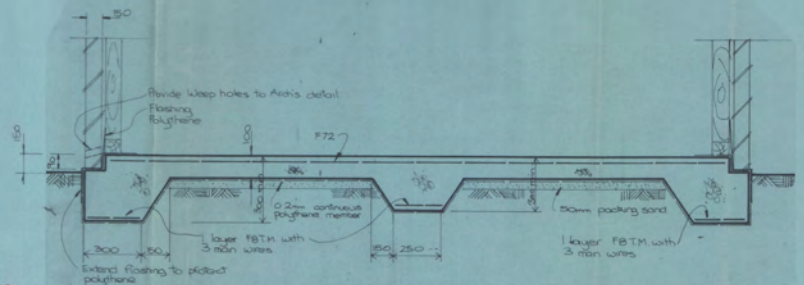
DRAWN: DATE: CHECKED: DRWG NO:
OBSERVE DIMENSIONS — DO NOT SCALE

MSC.5001.0001.0602

Notes
1. Clear and level site, remove all rubbish and vegetable matter from below slab and replace with compacted salamander.
2. Drain site awau from raft.
3. Support reinforcement on bar chairs in ant caps.
4. All joints and penetrations in polythene to be taped.
5. Slab to sit on 0.2mm continuous polythene membrane over 50mm minimum packing sand on 35% A.A.S.H.O. sub-base.

TERMITE PROOF ALL SOIL UNDER BEARERS/FLOORS & footings.

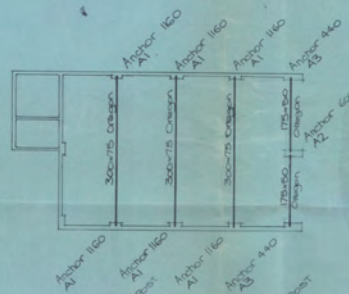
Note: All oregon shall be stress graded F5 min.

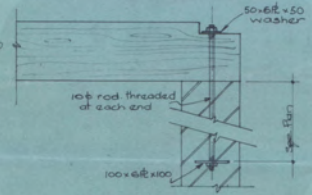


EDGE DETAIL
TYPICAL SECTION
N.T.S.

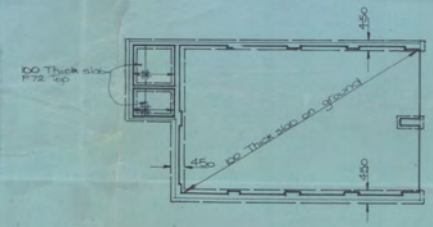
RIB TYPE A

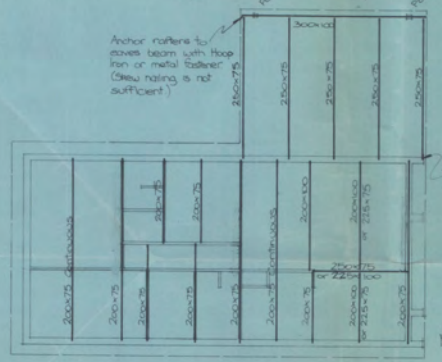
EDGE DETAIL



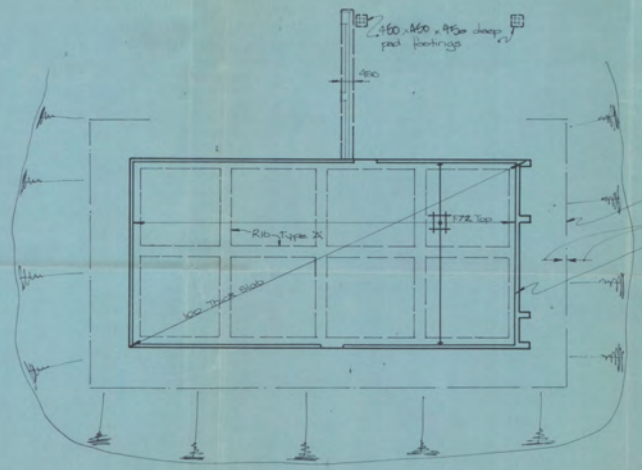


ANCHOR DETAIL





ROOF PLAN



SLAB & FOUNDATIONS PLAN

Contractors must verify all dimensions at the job before commencing any work or making any shop drawings. Use figured dimensions only.

DATE	No	REVISION	BY
9/12/77	A	Garage Relocated	GS

GENERAL NOTES

Read the drawings in conjunction with those of the architect or draftsman and all other written instructions.
All work is to be in accordance with the U.B.R. and all relevant codes of practice.
Contractors are to fully dimension on the job and to ensure that the erection can be achieved without overstress. If any doubt exists please ask.
Refer to the specification for information on joints, mix, slump, non load bearing walls, technique, steel work, bolting, brickwork, ties splices, covers, supervision, etc.
Design LL = 1.5 kPa or as AS1170.
Unless noted, all reo is to be CW 410 bars or fabric, all structural steel to be Fey = 250 MPa, all welds 5 cfw, gusset plates 8 thick, M16 bolts (min.)
Fabricator is responsible to achieve the desired overall architectural and engineering concept and to notify the engineer if any members are missing before the final quote, an include these items in his quote. Shop detail is the fabricator's responsibility.
Concrete strength at F.C. = 25 MPa at 28 days. It is to be well vibrated, without driers, excess water, additives. 100 > slump > 75, 5°C > temp > 32°C, and placed in one continuous pour (beams and slabs together) between joints. Cantilevers are to be poured last.
Cure all slabs by keeping moist for 7 days or seal with cure agent.
Concrete sizes are minimum and exclude finishes; beam depth includes slab and is given first. Champhar beams and cols. 25 x 25.
Do not make unspecified chases and holes, place conduits or pipes in sever concrete, store building materials on unsupported structure, puncture polythene, weld cut flats or bend reo, unless specified.
Place and trowel smooth and flat A 6mm layer of hard mortar on top of load bearing walls (inner skin unless specified). Put 2 layers of method between slab and wall. Separate wall and slab vertically by 12 oiled cartons.
Lap all bars 20 ϕ 1 at mid span, 0 at supports. Otherwise 50 ϕ. Fabric lap. 2 cross wires plus 25.
Reo supplier is responsible to ensure that laps, covers, bar cts. can be achieved (as per AS1480), or notify engineer before delivery.
Clear cover to reinforcement shall be (add 12 if exposed to the weather):-
20 for S, 25 for T slabs. 10 for walls.
30 for beams. 40 for strip footings.
40 for columns.
Cover is to be maintained by the use of bar chairs (20/10 sq. m.) and/or tie wires.
Steelwork is to be thoroughly wire brushed after fabrication and then given one shop coat of Resc primer and one coat of grey enamel.
High strength friction grip bolting (HSFG) requires :-
(i) Hardened washers.
(ii) Clean, scale free surfaces.
(iii) Tightening torque: KNM: 0.5 for M20 ϕ, 0.75 for 24 ϕ, 1.25 for 30 ϕ
Unless otherwise noted formwork shall be left in place for :-
(A) Beam sides, columns 7 days.
(B) Slab soffits (props left) Brickwork removed and slab reprapped), 10 days. Rapraps removed at 21 days.
(C) Beam soffits (props left) 14 days.
(D) Props to beams, 28 days.
Brickwork is not to be built on slabs till all formwork supports are removed.
Mortar is to be 1 : 1 : 6 or 1 : 3 under beam ends.
Unless otherwise noted ground slabs are to be :-
(i) 100 thick with F72 25 down. (v) 50 packing sand
(ii) On 95% AASHO sub base. (vi) Fully drained
(iii) On 0.2 mm polythene.
Strip footings are to be :-
(i) 300 deep with F81M top and bottom. (ii) 300 wide or 200 more than wall.
Adjustments due to unforseen conditions, discrepancies, dimensional error, additives to concrete, material substitutions, etc. are not to be made without approval.

DO NOT SCALE | IF IN DOUBT - ASK!

NORTH

FOUNDATIONS :-
Footings have been designed for an allowable bearing pressure of :-
(A) Strips. 50 kPa
(B) Pads. 50 kPa
This is to be verified by builder, and approved of by local building inspector before pour is commenced. A uniform load has been assumed and all weak areas are to be removed and filled with stable compacted fill in 150 mm layers to 95% AASHO.

CLIENT MORIALTA PTY. LTD.

DESIGN

BUILDER J.T. McARDLE & Co PTY. LTD.

STRUCTURAL DETAILS for
PROPOSED RESIDENCE at
LOT 4 POINT-NEPEAN ROAD
McCRAE

Samuel Engineering (Vic.) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS
Registered Office:
11 Queens Road,
Melbourne, 3004.
Telephone: 267 3788

DESIGN	DRAWN	DATE
J.H.	G.S.	NOV '77
SHEET 1	VERSION A	REF. No 77-2345

Samuel Engineering (Vic.) Pty. Ltd.

CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

COMPUTATION

Office: 11 Queens Road, Melbourne, 3004 • 267 3788

PROJECT [redacted]

CLIENT [redacted]

REF. No.

Samuel Engineering (Vic.) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

COMPUTATION

Office: 11 Queens Road, Melbourne, 3004 • 267 3788

PROJECT Structural Details
Proposed Residence
4 Point-Nepean Rd McRae

CLIENT Marialta P/L
J.T. McArdle

REF. No. 77-2345

Samuel Engineering (Vic.) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 1
REF. No. 2345
BY SR
CHECKED BY

ITEM: LOADING SHEET.

COMPUTATION

1. ROOF LOADS:

	KPa
DECK	= 0.08
" BATTENS	= 0.035
RAFTERS	= 0.055
CEILING	= 0.085
" BATTENS	= 0.045
SERVICES ETC	= 0.02
	0.32 KPa.

LIVE LOAD = $\left(\frac{1.8}{A} + 0.12\right)$ KPa
OR 0.25 KPa MIN.

2 GARAGE ROOF LOADS

	KPa
DECK	= 0.08
RAFTERS	= 0.06
DECK BITTENS	= 0.04
Others (say)	= 0.02
	0.120 KPa.

3. STUD WALLS.

Top & Bl.. Plates	= 10 Kg/m
STUDS	= 20
BRACE	= 3
PLASTER	= 47
	80 = 0.8 KN/m

4. B/V WALL

STUD WALL	= 55 Kg/m
BRICK "	= 485
	540 Kg/m = 5.4 KN/m.

Samuel Engineering (Vic.) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 2
REF. No. 2345
BY
CHECKED BY

ITEM: ROOF BEAMS

COMPUTATION

BEAM SPAN 4.2m CONTINUOUS
" SPACING 1.8 m.

LOADING:

ROOF D.L. $= 0.32 \times 1.8 = 0.58$ kN/m

ROOF L.L. $= \left(\frac{1.8}{1.8 \times 4.2} + 0.12\right) 1.8 = \frac{0.64}{1.22}$ kN/m.

BY CODE AS 1720:
Recommended Def'n limit = 14 mm

$\therefore I_{REQ'D} = \frac{0.58 \times 4.2^4 \times 3 \times 10^6}{185 \times 7900 \times 14}$

$= 26 \times 10^{-6}$ m^4

$\therefore$ USE 200 x 75 $(50 \times 10^{-6}$ m$^4)$

CHECK BENDING:

$M_{max} = 1.22 \times 4.2^2/8 = 2.7$ kNm.

$\therefore f_b = 5.4$ MPa O.K.

Samuel Engineering (Vic.) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 3
REF. No. 2345
BY
CHECKED BY

ITEM | ROOF BEAMS.

COMPUTATION

BEAM SPAN 4.2 m
" SPACING 1.8 m.

LOADING:

ROOF D.L. = 0.32 × 1.8 = 0.58 KN/m

ROOF LL = $\left(\frac{1.8}{1.8 \times 4.2} + 0.12\right)$ = 0.36 KPa

∴ ROOF LL = 0.36 × 1.8 m = 0.64 KN/m.

BY CODE AS 1720:
Recommended D.L. Deflection = SPAN/300 = 14 mm

USE OREGON: E = 7900
K_2 = 3

$$\therefore I_{REQ'D} = \frac{0.58 \times 4.2^4 \times 3 \times 10^6}{76.8 \times 7900 \times 14}$$

$$= 64 \times 10^{-6}\ m^4$$

∴ USE 200 × 100.

CHECK BENDING:
M_f = 1.27 × 4.2²/8 = 2.75 KN m
∴ f_b = 4.1 MPa O.K.

Samuel Engineering (Vic.) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 4
REF. No. 2345
BY
CHECKED BY

ITEM: ROOF BEAMS.

COMPUTATION

BEAM SPAN 3.7m.
" SPACING 1.8 m.

LOADING:
ROOF DL = $0.32 \times 1.8^{m} = 0.58$ KN/m

ROOF L.L = $\left(\frac{1.8}{1.8 \times 3.7} + 0.12\right) 1.8 = 0.70$ " "
1.28 KN/m

BY CODE AS 1720:
Recommended D.L. Deflection = SPAN/300 = 12.3mm.

USE OREGON $E = 7900$
$K_2 = 3$

$$\therefore I_{REQ'D} = \frac{0.58 \times 3.7^4 \times 3 \times 10^6}{76.8 \times 7900 \times 12.3}$$
$$= 44 \times 10^{-6}\ m^4$$

∴ USE 200×75.

Check Bending:
$M_{max} = 1.3 \times 3.7^2/8 = 2.2$ KNm
$f_b = 4.4$ MPa O.K.

Samuel Engineering (Vic.) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 5 | REF. No. 2345 | BY | CHECKED BY

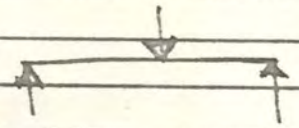
ITEM: ROOF BEAMS.

COMPUTATION

SUPPORT BEAM SPAN 2.7 m.

RAFTER REACTION = 0.58 × 2.5 = 1.45 KN (D.L.)

L.L. " = 0.7 × 2.5 = 1.75 KN (L.L).



Permissible Deflection = 8.3 mm

$$\therefore I_{REQ'D} = \frac{1.45}{48} \times \frac{2.7^3 \times 3}{7900 \times 8.3 \times 10^{-6}}$$

$$= 27.2 \times 10^{-6}\ m^4$$

∴ USE 200 × 75 OREGON.

BENDING: $M = 3.2 \times \frac{2.7}{2} = 2.2$ KNm

$\therefore f_b = 4.3$ MPa O.K.

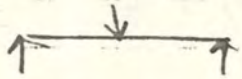
Samuel Engineering (Vic) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 6
REF. No. 2345
BY
CHECKED BY

ITEM

COMPUTATION

SUPPORT BEAM SPAN 3.8m.



LOADING:
RAFTER REACTION = 0.58 × 3.5 = 2.0 KN (D.L)
& 0.64 × " = 2.2 " (L.L).

By Code AS1720:
Permissible D.L. Deflection = $\frac{3800}{300}$ = 12.6
" L.L " = 12 more.

D.L. Deflection critical
FOR OREGON USE E = 7900 & K_2 = 3

$$\therefore I_{REQ'D} = \frac{1}{48} \times \frac{2 \times 3.8^3 \times 3}{7900 \times 12.6 \times 10^{-6}}$$

$$= 75 \times 10^{-6}\ m^4$$

USE 250 × 75 OREGON (98×10^{-6}).
OR 225 × 100 OREGON (95×10^{-6}).

Check bending: M = 4.2 × 3.8/4 = 4.0 KNm
f_b = 5.1 MPa O.K.

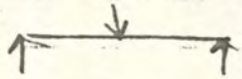
Samuel Engineering [Vic] Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 6
REF. No. 2345
BY
CHECKED BY

ITEM

COMPUTATION

SUPPORT BEAM SPAN 3.8m.



LOADING:
RAFTER REACTION = 0.58 × 3.5 = 2.0 KN (D.L)
& 0.64 × " = 2.2 " (L.L).

By Code AS1720:
Permissible D.L. Deflection = $\frac{3800}{300}$ = 12.6
" L.L " = 12 more.

D.L. Deflection critical
FOR OREGON USE $E = 7900$ & $K_2 = 3$

$$\therefore I_{REQ'D} = \frac{1}{48} \times \frac{2 \times 3.8^3 \times 3}{7900 \times 12.6 \times 10^{-6}}$$

$$= 75 \times 10^{-6}\ m^4$$

USE 250 × 75 OREGON (98×10^{-6}).
OR 225 × 100 OREGON (95×10^{-6}).

Check bending: $M = 4.2 \times 3.8/4 = 4.0$ KNm
$f_b = 5.1$ MPa O.K.

Samuel Engineering (Vic.) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 7 | REF. No. 2345 | BY | CHECKED BY

ITEM

COMPUTATION

CARPORT RAFTERS

SPAN 5.5 m
CRS 1.7 m

LOADING:

Roof Deck : $= 0.15 \times 1.7 = 0.26$ KN/m
S.W. Say 0.12 " "
0.38 " "

Roof L.L. $= \left(\frac{1.8}{1.7 \times 5.5} + 0.12\right) 1.7 = 0.53$ KN/m

By CODE AS 1720:

Permissible D.L. Deflection $= \frac{\text{SPAN}}{300} = 18.3$ mm.
" L.L. " $= \frac{\text{SPAN}}{240} = 12$ (max.)

∴ D.L. CRITICAL.

USE $E = 7900$ FOR OREGON
& $K_2 = 3$.

$$\therefore I_{REQ'D} = \frac{0.38 \times 5.5^4 \times 3}{76.8 \quad 7900 \times 18.3 \times 10^{-6}}$$

$$= 94 \times 10^{-6} \text{ m}^4$$

∴ USE 250 × 75 OREGON. $\left(98 \times 10^{-6}\right)$.

Check Bending:

$M_{max} = 0.91 \times 5.5^2/8 = 3.44$ KNm

$\therefore f_b = 4.4$ MPa O.K

Samuel Engineering (Vic) Pty. Ltd.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

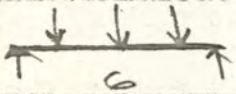
SHEET 8
REF. No. 2345
BY
CHECKED BY

ITEM

COMPUTATION

CARPORT EAVES BEAM

SPAN 6.0 m.



LOADING:

RAFTER LOAD = 0.38 × 2.1 = 0.8 KN. (D.L.)
+ 0.45 × 2.1 = 0.95 KN (L.L.)

S.W. Say 0.1 KN/m.

∴ Permissible D.L. Deflection = 20 mm.

$$I_{REQ'D} = \frac{19}{384} \times \frac{0.8 \times 6^3 \times 3}{7900 \times 20 \times 10^6} + \frac{5}{384} \times \frac{0.1 \times 6^4 \times 3}{7900 \times 10 \times 10^{-6}}$$

$$= 162 + 31 = 194 \times 10^{-6}\ m^4$$

∴ USE 300×100 OREGON.

CHECK WIND UPLIFT

DESIGN DYNAMIC PRESSURE = 0.43 KPa
(BASED ON TERRAIN CATEGORY 3).

∴ UPLIFT = $0.43 \left(\frac{2+0}{2}\right)$ = 0.43 KPa

∴ Net uplift = 0.33 KPa

Uplift at post = 0.33 × 3 × 2.1 = 2 KN
Less S.W. beams = 1.5 KN.

∴ USE 450 SQ. PINE × 450 Deep
Wt. = 2.2 KN

Samuel Engineering (Vic.) Pty. Ltd.

CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 9 | REF. No. 2345 | BY SR | CHECKED BY

ITEM GARAGE BEAMS

COMPUTATION

DESIGN TIMBER BEAMS

SPAN : 5.8 m.

LOADS	DL kN/m	LL kN/m
1. ROOF 2.3m	0.34 "	0.58
2 SELF	0.18	
	0.52 kN/m	0.58 kN/m

DL	LL	
1	1.5	K_1
3	1	K_2

$$I_{REQ'D} = \frac{5}{384} \times \frac{W_{DL} \times L^4 \times K_2}{E \times D}$$

$$I_{x\ REQ'D} = \frac{0.52}{76.8} \times \frac{5.8^4 \times 3}{6900 \times 19.3} = 173 \times 10^{-6}\ m^4$$

TRY 300 x 75 F5 OREGON $Z_x = 1125 \times 10^{-6}\ m^3$

CHECK BENDING

B.M. = $1.10 \times 5.8^2 \div 8 = 4.63$ kNm.

$\therefore f_b = 4.1$ MPA. $\therefore$ OK

SPAN : 5.1 m

LOADS	DL kN/m	LL kN/m
1. ROOF 1.2m	0.18	0.50 "
2 SELF	0.15	
	0.33 kN/m	0.50 kN/m

$$I_{x\ REQ'D} = \frac{0.33}{76.8} \times \frac{5.1^4 \times 3}{6900 \times 17} = 74 \times 10^{-6}\ m^4$$

TRY 225 x 75 F5 OREGON $Z_x = 633 \times 10^{-6}\ m^3$

B.M. = $0.83 \times 5.1^2 \div 8 = 2.70$ kNm

$\therefore f_b = 4.3$ MPA.

$\therefore$ OK

Samuel Engineering (Vic.) Pty. Ltd.

CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 10 | REF. No. 2345 | BY JR | CHECKED BY

ITEM ANCHOR DESIGN GARAGE BEAMS

COMPUTATION

ANCHOR A1

UPLIFT AT BEAM END = 0.44 KPA × 2.9m × 2.8m
= 2.93 KN

DEAD LOAD ROOF = 0.15 KPA × " × "
= 1.0 KN

+ SW BEAM = 0.14 KN/m × 5.8m ÷ 2 = 0.41 KN

RESTRAINT REQ'D = 2.93 × 1.4 − 1.41
= 2.69 KN

TIE TO 110 skin wall brick A1

AREA BRICK REQ'D = 1.35 m² (2.69/2)
TIE DOWN = 1160 mm

CHECK A2

TIE TO WALL AT DOOR OPENING

∴ AREA BRICK REQ'D = 1.35 × 2 = 2.7m²

TIE DOWN 1650 mm

DESIGN A3

UPLIFT = 0.44 KPA × 2.9m × 1.2m = 1.53 KN × 1.4
= 2.14 "

DL = 0.15 KPA × " × " = 0.52 KN
+ SW = 0.10 KN/m × 5.1m ÷ 2 = 0.26 KN

RESTRAINT REQ'D = 1.36 KN

TIE TO PIER & WALL (PIER = 560 × 230mm)
RESTRAINT = 4.0 × 0.56 = 2.24 KN/m

TIE DOWN : 610 mm

Samuel Engineering (Vic.) Pty. Ltd.

CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 9A | REF. No. 2345 | BY SR | CHECKED BY

ITEM GARAGE BEAMS

COMPUTATION

DESIGN TIMBER BEAMS

SPAN : 5.8 m.

LOADS	DL kN/m	LL kN/m
1. ROOF 2.3m	0.34 "	0.58
2 SELF	0.18	
	0.52 kN/m	0.58 kN/m

DL	LL	
1	1.5	K_1
3	1	K_2

$$I_{REQ'D} = \frac{5}{384} \times \frac{W_{DL} \times L^4 \times K_2}{E \times D}$$

$$I_{x\ REQ'D} = \frac{0.52}{76.8} \times \frac{5.8^4 \times 3}{6900 \times 19.3} = 173 \times 10^{-6}\ m^4$$

TRY 300 x 75 F5 Oregon. $Z_x = 1125 \times 10^{-6}\ m^3$

CHECK BENDING:

$B.M. = 1.10 \times 5.8^2 \div 8 = 4.63$ kNm.

$\therefore f_b = 4.1$ MPA. $\therefore$ OK

SPAN : 5.1 m.

~~SUBSTITUTE~~

LOADS	DL kN/m	LL kN/m
1. ROOF 1.2m	0.18	0.50 "
2 SELF	0.15	
	0.33 kN/m	0.50 kN/m

$$I_{x\ REQ'D} = \frac{0.33}{76.8} \times \frac{5.1^4 \times 3}{6900 \times 17} = 74 \times 10^{-6}\ m^4$$

TRY 225 x 75 F5 OREGON $Z_x = 633 \times 10^{-6}\ m^3$

$B.M. = 0.83 \times 5.1^2 \div 8 = 2.70$ kNm

$\therefore f_b = 4.3$ MPA.

$\therefore$ OK

Samuel Engineering (Vic.) Pty. Ltd.

CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 10 A | REF. No. 2345 | BY | CHECKED BY

ITEM GARAGE BEAM.

COMPUTATION

DESIGN TIMBER BEAM

SPAN 2.9 m.

LOADS	DL kN/m	LL kN/m
1. ROOF 1.2m.	0.18	0.76
2 SELF	0.15	
	0.33 kN/m	0.76 kN/m

DL LL

1 1.5 K_1 $I_{REQ'D} = \frac{5}{384} \times W_{DL} \times L^4 \times K_2 \div E \times D$

3 1 K_2

$I_{x\ REQ'D} = \frac{0.33}{76.8} \times \frac{2.9^4 \times 3}{6900 \times 9.7} = 13.6 \times 10^{-6}\ m^4$

TRY 150 x 50 Oregon F5 $Z_x = 187 \times 10^{-6}\ m^3$

CHECK BENDING

B.M. = $1.09 \times 2.9^2 \div 8 =$ 1.15 kNm

$\therefore f_b =$ 6.1 MPa fail!

TRY 175 x 50 Oregon. $f_b =$ 4.5 MPa ok.

Samuel Engineering (Vic.) Pty. Ltd.

CONSULTING, CIVIL AND STRUCTURAL ENGINEERS

SHEET 1/A
REF. No. 2345
BY JR.
CHECKED BY

ITEM | ANCHOR DESIGN GARAGE BEAMS.

COMPUTATION

ANCHOR A1

UPLIFT AT BEAM END = 0.44 KPA × 2.9m × 2.8m.
= 2.93 KN

DEAD LOAD ROOF = 0.15 KPA × " × "
= 1.0 KN

+ SW BEAM = 0.14 KN/m × 5.8m ÷ 2 = 0.41 KN

Re-Straint Req'd = 2.93 × 1.4 − 1.41
= 2.69 KN

TIE TO 110 thin wall

AREA BRICK REQ'D = 1.35 m² (2.69/2)
TIE DOWN 1160 mm.

CHECK A2 AT FRONT OF GARAGE

TIE TO WALL AT DOOR OPENING.

∴ Uplift central pier = 0.44 KPa × 1.2 × 3.0 = 1.58 KN
DL = 0.15 " × " " = 0.5 "
Re-Straint Req'd = 1.58 × 1.4 − 0.5 = 1.67 KN
BRICKWK : 4.0 KPa × 0.71 = 2.84 KN/m ∴ 600 tie down OK.

Check Uplift on Edge Front of Garage 43

Uplift : 0.44 KPa × $\frac{3.0}{2}$ × $\frac{2.4}{2}$ = 0.79 KN
1.0 KN/m

D.L. = 0.15 " × " × " = 0.27 KN

Restraint Req'd = 0.84 KN

TIE TO PIER & WALL : 1.92 KN/m.

TIE DOWN = 440 ok.

(First Edition printed June, 1965)
(Second Edition printed February, 1970)
(Third Edition printed May, 1974)
(This Fourth Edition printed March, 1976)

PROJECT SPECIFICATIONS FOR BRICK VENEER DWELLING

These Project Specifications form part of the Specifications and the Contract. The items detailed shall be of a standard not less than the General Specifications and shall be carried out whether covered or not by relevant clauses in the General Specifications.

The Project Specifications must be fully and accurately completed to suit the particular plan and Owner's specific requirements.

The Project Specifications shall be completed in ink or typing as follows:

(a) Completely fill in the blanks to give the information required.

(b) Rule out the items in the Project Specifications which are not required.

(c) Under Other Special Requirements, Page 11, Item 26, describe clearly and in detail all work not already covered in General or Project Specifications.

(d) Initials of contracting parties shall be provided at the foot of each page of the Project Specifications. Any alterations to working drawings and/or Project Specifications shall also be initialled by both parties.

(e) At the appropriate time signatures of contracting parties, witnesses, and dates shall be provided at the foot of Page 15 of the Project Specifications.

SERVICES

1. WATER SUPPLY

(a) Melbourne and Metropolitan Board of Works or Local Authority's Main.
Available at front of site Yes / ~~No~~

(b) Private pipe service of extension of main to site shall be arranged and paid for by Owner. See Plumbing Clause J3.

NOTE: Builder shall be responsible for giving and receiving all notices, making application and all necessary tapping requirements.

(c) Tank Service ~~Required~~ / Not Required

Number of tanks..... Squat/Standard.

Capacity of each tank.....

2. SANITARY SERVICES

(a) Sewer Available / ~~Not Available~~

(b) Septic Tank installation ~~Required~~ / Not Required

When required, tender price shall provide for a septic tank of ..... litres capacity and

..... metres run of effluent drains.

(c) Pan Closet Required / Not Required See Carpentry Clause F28.

NOTE: Application for either sewer plan or permit for septic tank shall be lodged with the appropriate Authority by the Builder, as soon as possible.

3. ELECTRICITY SUPPLY

Available / ~~Not Available~~ — Connection from Authority Supply — Underground / Overhead.

NOTE: If electricity supply is not available at the site, but is required, the owner shall arrange with the electricity supply authority for the extension of the authority's assets to a point of supply nominated by the supply authority and shall pay the costs of this extension as required by the authority.

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
SERVICES (Cont'd.)

4. GAS SUPPLY

(a) ~~Required~~ / Not Required

(b) Type Mains Gas / Liquid Petroleum Gas

Where mains supply does not pass the site, but is required, the owner shall arrange for the extension of supply main to meter and shall pay the cost of this extension.

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS

Clause Item

1. CLEARING AND GRADING OF SITE

C1

(a) Clearing of Site by ~~Builder~~/Owner.

(b) Grading of Site by ~~Builder~~/Owner.

2. ROCK AND/OR SURPLUS SOIL

C2 & C3

(a) Excavation of rock and removal from site $..... per m^3.

(b) Surplus soil removed from site by ~~Builder~~/Owner.

(c) Surplus soil spread on site by ~~Builder~~/Owner.

3. STUMPS

D6, E8 & F5

~~Concrete/Brick Piers/Timber~~.

4. TERRACES, PORCHES AND FLOORS

D7, F6 & F24

(a) Front Porch/Terrace Concrete/Timber

Special Finish if required.....

(b) Rear Porch/Terrace Concrete/Timber

Special Finish if required.....

(c) Internal Concrete Floors. Location and type of special finishes

SCREED FINISH FOR CARPETS. PRIME COST FOR SLAB TO INCLUDE STANDARD DESIGN, CHEMICAL TREATMENT EDGE PROTECTION, FLASHING, ENGINEERS FEE, SOIL TESTS

5. HEARTH

D9 & E22

Type of Finish.....

6. SHOWER RECESS BASE

D10

Type and Finish... CONCRETE — POURED WITH SLAB

7. DOOR THRESHOLDS

D11, E23 & G2

~~Concrete~~/Brick/~~Timber/Tile/Other~~.....

8. STEPS EXTERNAL

B19, D12, E26 & F24

(a) Front Concrete/Brick/Timber.....

(b) Rear Concrete/Brick/Timber.....

(c) Others Concrete/Brick/Timber.....

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

9. RAMPS

B19,D12 & F24 ~~Concrete/Timber~~

10. HANDRAILS AND BALUSTRADES

B19 F24 ~~Required~~ / Not Required

Type of Materials.....

11. PAVING

D13 ~~Required~~ / Not Required Extent.....

.....

.....

12. BRICKWORK OR CONCRETE MASONRY BLOCKWORK

E2 E6 (a) Base Walling.....

E14 (b) General Walling (above base)..... TO BE SELECTED BY OWNER

(c) Special Walling – Internal..... " " " " "

External.....

Special Jointing

E3 & E5 Colour..... CLEAR Type.....

Termite Barrier

NOTE: The Owner shall ascertain the requirements of the Lending and Local Authorities.

E13 (a) Termite Strips and Termite Caps where bearer clearance is 350mm or more. Required / Not Required

(b) Chemical Barrier Treatment Required / ~~Not Required~~

Window Sills

E25 Brick/~~Tiles~~ Type... ON EDGE OR FLAT

Brick Fence

E28 (a) Length (excluding gates)..... Average Height.....

(b) Type of Brick.....

13. CARPENTRY

F1 Type of Timbers Hardwood/Radiata Pine/Oregon/Other... HARDWOOD FRAME

..... OREGON BEAMS

Metal Frame

F4 Specify in Page 11, Item 26.

Flooring

F6 (a) Internal Floors

Hardwood/Radiata Pine/Other..... Size.....

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

13. CARPENTRY (Cont'd.)

Flooring

F6 (b) Fine Sanded Surfaces

(i) To Rooms.....

(ii) Type of Finish..... No. of Coats.....

F16 **External Wall Cladding** Other than brickwork

Type.....

Internal Linings Other than Plaster, Fibrous Plaster, Plasterboard and Tiles

Type and Extent..... REFER TO PLAN .....

.....

.....

.....

For Fibrous Plaster, Plasterboard and Tiles see Items 19 & 20.

14. JOINERY

G4 **External Doors**

(a) Main Entrance Door

Type and Size..... REFER TO PLAN .....

(b) Rear Entrance Door

Type and Size..... " " " .....

(c) Other External Doors

Type and Size..... " " " .....

G5 (d) Flywire Doors. The Builder shall include in his tender to provide and install flywire doors as required by clause 3106 of Uniform Building Regulations of Victoria unless otherwise specified. Sizes to suit door frames.

(i) Front

Description and Flymesh material.....

.....

(ii) Rear

Description and Flymesh material.....

.....

(iii) Other

Description and Flymesh material.....

.....

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

14. JOINERY (Cont'd.)

G4 (a) & (c) Internal Doors

(1) Location, Type, Size and Finish... REFER TO PLAN .....

.....

.....

.....

.....

.....

.....

.....

.....

.....

G4 (g) (2) Wardrobe/Linen Press/Coat/Broom/Pantry
If other than type, size and finish specified in (1) above.

.....

.....

.....

.....

.....

.....

.....

G4 (a) & (l) (3) Sliding Doors

(i) Location, Type, Size and Finish.....

.....

.....

(ii) Type of Sliding Track.....

.....

Windows

G8, G9 & G11 Timber/Metal

Type and Manufacturer.... TIMBER AWNING - STANDARD SIZES .....

.....

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

14. JOINERY (Cont'd.)

Flyscreens

G13 The Builder shall include in his tender to provide and install flywire screens as required by Clause 3106 of the Uniform Building Regulations of Victoria, unless otherwise specified.

(a) Number and location TWO IN NUMBER - ONE TO KITCHEN ONE TO TOILET

(b) Type and Flymesh material FIBREGLASS

(c) ~~Half Screens~~/Full Screens

G19 **Pelmets**

(a) To Sliding Doors. ~~Required~~ / Not Required

Location.....

(b) To Windows. ~~Required~~ / Not Required

Location.....

Wardrobes and Cupboards Generally

For location refer to drawings.

G22 (a) Wardrobes

(i) Built-in. Location and number of Drawers/Sliding Trays

REFER TO PLAN

G23 (ii) Prefabricated. Manufacturer and Type.....

G22 (b) Overhead Storage Cupboards (including over wardrobes).

Where required.....

G24 **Kitchen Cupboards**

For general layout refer to drawings.

(a) Door Type STANDARD LAMINATE

(b) Sink and Bench Cupboards

(i) Bench height REFER TO PLAN Finish to bench tops and exposed edges WHITE LAMINATE

(ii) Number of drawers REFER TO PLAN

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

14. JOINERY (Cont'd.)

G26 (c) Overhead Kitchen cupboards

(i) Length.....REFER TO PLAN..... Height.....

(ii) Required with ~~plaster bulkhead~~/Open space above.

15. ROOFING

I4 & Terra Cotta Tile/Concrete Tile

I5 Type and finish..... Colour.....

Manufacturer.....

I7 to Sheeted Roofing. Type...GALV. STEEL DECK.....

I10 Material...STEEL..... Thickness.26 GAUGE... Manufacturer.LYSAGHTS.....

..... TRIMDECK.....

I4, I5, I7 & I10 **Sarking Material** other than where already specified
Refer Roofing

Required / Not Required

(a) Extent.....FIXED TO BACK OF PLASTER CEILING.....

(b) Type.....

(c) Manufacturer.....

For **INSULATION**, see Item 23.

16. PLUMBING

J13 **Stove Canopy** (Built-in)

(a) Required / Not Required.

If not required refer to Items 17(h) & (i) and to Schedule of Fittings, Page 14, for Exhaust Fan or Patented Range Hood.

(b) Flue to extend through roof covering.

Required//Not Required

17. ELECTRICAL WORK Wire to:

(a) Light Points. Number required.....REFER TO PLAN.....

(b) Two-way Switches. Number required..... " " "

(c) Single Power Outlets. Number required..... " " "

(d) Double Power Outlets. Number required..... " " "

(e) Colour of accessories.....BROWN AND WHITE.....

(f) Air conditioning. Required / Not Required.....REFER TO PLAN.....

(g) Space Heating. Required / Not Required..... " " "

(h) Exhaust Fan/s. Required / Not Required..... " " "

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

17. ELECTRICAL WORK (cont'd.)

(i) Patented Range Hood. Required / Not Required... REFER TO PLAN

(j) Clothes Drier. Required / Not Required... " " "

(k) Other special outlets... NIL

18. HOT WATER SERVICE INSTALLATION

J7 & N10

Type & Manufacture of Unit... MAINS PRESSURE ELECTRIC

Capacity... 15 GALS

Type, Number & Manufacturer of Fittings and Taps to

(a) Shower... ADJUSTABLE OUTLET

(b) Bath... FIXED OUTLET

(c) Basin... " "

(d) Sink... ADJUSTABLE OUTLET

(e) Troughs... FIXED OUTLET

(f) Washing Machine... TAPS ONLY

(g) Other Fittings... —

... Total Number of Points. REFER TO PLAN

19. FIBROUS PLASTERING AND PLASTERBOARDING

Q2 **Wall Linings**

~~Fibrous Plaster~~/Plasterboard/~~Plaster Glass~~

Q3 **Ceilings**

(a) ~~Fibrous Plaster~~/Plasterboard/~~Plaster Glass~~. Fixed to battens/~~joists~~.

(b) Other types and location... —

Q6 **Cornices** If other than 50mm ceiling projection throughout.

Location and Size... —

Q7 **Baffle Vents** Additional to those specified.

Location and Size... REFER TO PLAN

20. TILE LAYING

Wall Tiling

(a) Method of Fixing. ~~Mortar~~ / Adhesive

Initials of Owner/s... Initials of Builder...

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

20. TILE LAYING (Cont'd.)

Wall Tiling

(b) Extent and Description

(i) Bathroom..... REFER TO PLAN NOTE:- ALL TILEWORKS TO

(ii) Shower Recess..... " " " THE COMPLETE HOUSE.....

..... INCLUDING BATHROOM..

(iii) Basin..... " " " KITCHEN AND LAUNDRY...

..... ARE PRIME COSTED.....

(iv) Kitchen..... " " " SUPPLIED AND FIXED.....

..... INCLUDING A.C. BACKING.

(v) Laundry..... " " " AT $500-00. TILES TO...

..... BE SELECTED AT BUILDER'S

(vi) Elsewhere..... SUPPLIED BY OWNER.....

.....

Floor Tiling

(a) Method of Fixing. Mortar / Adhesive

(b) Extent and Description.....

.....

.....

.....

Vinyl Tiling

Description, Surface Treatment and Extent.....

.....

.....

(d) For floor finishes other than shown above refer Page 4, Item 13.

21. PAINTING AND FINISHING

S5 **Exterior Finishes**

(a) **Timber**

Type of Finish, other than as specified in Painting and Finishing Clause S5.....

.....

.....

.....

(b) **Asbestos Cement & Asbestos Fibre Board**, including eaves linings. Painted / Unpainted.

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

21. PAINTING AND FINISHING (Cont'd.)

Exterior Finishes

(c) **Metalwork**.....

.....

(d) **Brickwork** Painted / Unpainted.....

(e) **Fences**.....

(f) **Other**.....

Type of Finish.....

.....

.....

Interior Finishes

NOTE: Kitchen, Bathroom, Laundry, Toilet and Shower Recess shall be painted with a waterproof paint.

(a) **Timber**. Type of Finish.....

.....

.....

.....

.....

(b) **Walls**. Type of Finish.....

.....

.....

.....

.....

(c) **Ceilings**. Type of Finish.....

.....

.....

.....

(d) **Brickwork**. Painted / Unpainted.....

(e) **Others**.....

.....

T2 **22. GLAZING**

Type of Glass to doors and sidelights.....

Special Glazing.....

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

23. INSULATION

Required / Not Required. Type 1" BLANKET TO CEILING OF HOUSE ONLY

Areas to be covered. ⊠

24. GARAGE/CARPORT

Details. REFER TO PLAN

25. OTHER DETACHED BUILDINGS

Details.

26. OTHER SPECIAL REQUIREMENTS

Details.

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
DETAILED REQUIREMENTS (Cont'd.)

Clause Item

26. OTHER SPECIAL REQUIREMENTS (Cont'd.)

Details (cont'd.).....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

27. FENCING

The Builder shall include full cost of all fencing to be supplied and erected under this contract and the Owner shall recover the proportionate cost of the dividing fence from the Adjoining Owners.

BUILDER IS TO STATE FULL PRICE PER METRE ALLOWED IN TENDER FOR SIDE AND REAR BOUNDARY FENCING **BEFORE SIGNING CONTRACT.**

	Type of Fence	Height	Length	Full Price per metre run
H2	Paling			$
H3	Horizontal Rail			$
H4	Picket			$
	Other			$

H5 Gates .....

H6 & E28 Brick. See Page 3, Item 12.

Material other than red gum or hardwood.....

.....

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
SCHEDULE OF FITTINGS

The following Items shall be included in the Contract Sum and shall be supplied and installed by the Builder. Where any item included in this schedule is to be supplied by the owner it shall be marked "Owner Provides" and shall be fixed by the Builder unless otherwise stated. THE PRIME COST ALLOWANCE THAT THE BUILDER HAS INCLUDED IN HIS TENDER IS INDICATED BESIDE EACH ITEM

ITEM (RULE OUT ITEMS NOT REQUIRED)	FULL DESCRIPTION, NAME, COLOUR, SIZE AND NUMBER OF UNITS TO BE INSTALLED
Bath (with plug and washer)	WHITE PRESSED STEEL PRIME COST ALLOWANCE $50-00
Sink (with plug and washer)	4'0" SINGLE BOWL PRIME COST ALLOWANCE $36-00
Basin/s (with plug and washer)	WHITE ARMITAGE GEM PRIME COST ALLOWANCE $18-00
Wash trough/s (with plug and washer)	SINGLE BOWL AND CABINET PRIME COST ALLOWANCE $35-00
Washing Machine	OWNER PROVIDES NO ALLOWANCE
Toilet Suite/s (complete)	REFER TO PRIME COST ALLOWANCE FOR DRAINAGE
Cooker (Range)	WALL OVEN AND HOT PLATE SUPPLIED AND FIXED PRIME COST ALLOWANCE $320-00
Room Heater	REVERSE CYCLE AIRCONDITIONER TO HOUSE SUPPLIED AND FIXED PRIME COST ALLOWANCE $850-00
Shower Screen and/or Door	STANDARD ALUMINIUM SLIDING DOOR SUPPLIED AND FIXED PRIME COST ALLOWANCE $80-00
Rod for Shower Curtain, Towel Rails, Soap Holders and Toilet Paper Holders	NO ALLOWANCE
Bathroom Cabinet	BUILT IN WITH WINDOW INCLUDED IN BASIC PRICE
Wall Mirror	NIL

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
SCHEDULE OF FITTINGS (Cont'd.)

ITEM (RULE OUT ITEMS NOT REQUIRED)	FULL DESCRIPTION, NAME, COLOUR, SIZE AND NUMBER OF UNITS TO BE INSTALLED
Locks, Pulls, Catches and Furniture (doors, windows, wardrobes and all cupboards)	PRIME COST ALLOWANCE $120-00
Fan (exhaust)	10" SUPPLIED AND FIXED PRIME COST ALLOWANCE $26-00
Patented Range Hood	NO ALLOWANCE
Light Fittings	NO ALLOWANCE
Door Bell	NO ALLOWANCE
Gates ~~Single~~/Double	SUPPLIED AND FIXED PRIME COST ALLOWANCE $120-00
Balustrade and Handrails	NO ALLOWANCE
Garage Door	SUPPLIED AND FIXED PRIME COST ALLOWANCE $500-00
Clothes Line	NO ALLOWANCE
Other Items	

Initials of Owner/s..... Initials of Builder.....

PROJECT SPECIFICATIONS
PRIME COST ITEMS SCHEDULE

The Prime Cost amounts listed are the amounts included in the Builder's tender and shall be normal Trade Prices current in Melbourne and Metropolitan area or nearest regional centre, including Sales Tax where applicable.

Normal Trade Discounts to the Builder, on all P.C. Items shall be allowed in favour of the Owner.

Any other discounts allowed for bulk purchasing, prompt payment or for any other personal reasons shall be allowed in favour of the Builder.

The Builder shall include in his tender price, an amount covering cartage, fixing and profit on all P.C. Items listed. On taking delivery of P.C. Items the Builder shall be responsible for any damage or loss up to the time of handing over the completed works, unless otherwise stated in Conditions of Contract.

The selection of the Prime Cost Items as listed is the prerogative of the Owner. THE BUILDER SHALL ADVISE THE OWNER OR HIS AGENT AT THE APPROPRIATE STAGE FOR THE FINAL SELECTION OF FITTINGS.

A mutual adjustment in cost shall be made in writing between both parties, and the Lending Authority shall be advised.

Where any Prime Cost Item specified to be supplied by the Builder is supplied by the Owner, or deleted from the Contract, the P.C. Amount stated shall be deducted in full on the adjustment of the P.C. amounts.

ITEM	P.C. AMOUNT
SEWERAGE SYSTEM FULLY INSTALLED INCLUDING TOILET SUITES, WATER SUPPLY AND PERMITS, AND ALL STORMWATER AND SULLAGE DRAINS	$1,500-00
BRICKS PER 1,000 SUPPLIED AND DELIVERED	$ 150-00
CONCRETE SLAB COMPLETE	HOUSE $2,400-00 GARAGE $1,000-00

These are the specifications Pages numbered 1 to 58 referred to in the Building Contract

Dated the.....day of.....19.....

SIGNATURES:

..... Owner/s	..... Builder
..... Witness	..... Witness
..... Date	..... Date

NOTE: ITEM 27 ON PAGE 12 MUST BE FILLED IN PRIOR TO SIGNING OF CONTRACT.

GENERAL SPECIFICATIONS FOR BRICK VENEER DWELLING

A. INTRODUCTION

A 1 These are the Specifications of work to be done and materials to be used in the erection of a Brick Veneer Dwelling in accordance with accompanying Working Drawings and the Requirements of the Lending Authority.

A 2 UNDER NO CIRCUMSTANCES SHALL THE GENERAL SPECIFICATIONS BE CROSSED OUT, ADDED TO, REMOVED FROM, WRITTEN ON OR ALTERED IN ANY WAY.
The Project Specifications lay down the particular requirements of the contract and these shall take precedence over the General Specifications and Working Drawings. The Particular Requirements of the Lending Authority shall take precedence over both the General Specifications and Project Specifications.

A 3 These General Specifications provide a minimum standard for conventional types of construction, but homes embracing other than conventional types of construction, components, methods and materials may be considered by the Lending Authority, subject to approval by the Local Municipal Authority and specified in Page 11 Item 26 Other Special Requirements.

B. GENERAL CLAUSES

B 1 **GENERALLY** These specifications cover work necessary for the erection of a Brick Veneer Dwelling. The specifications shall be taken as being generally applicable to the design as indicated on the accompanying Working Drawings and Project Specifications forming part of the Contract.

B 2 **DEFINITIONS** Where the word Owner/s is mentioned throughout these specifications, it shall also mean Applicant/s, Borrower/s or Proprietor/s.
Where the word Builder is mentioned throughout these specifications, it shall also mean Contractor.
Where the word Council is mentioned it shall mean the Local Municipal Authority.

B 3 **NOTICES AND FEES** The Builder shall give and receive all notices except fencing notices but including notice in writing to the Building Surveyor for issue of Certificate of Occupancy, pay all fees legally required in connection with the works, comply with the Uniform Building Regulations of Victoria and the By-laws and Regulations of Municipal and Other Authorities having jurisdiction over the works.

B 4 **PLANT AND LABOUR** The Builder shall supply materials, scaffolding, tools, and plant and do works in all trades necessary to carry out the true intent of the working drawings and specifications, to a satisfactory completion of the Contract in all respects.

B 5 **MATERIALS** Unless otherwise specified, materials used throughout these works shall be new, of good quality and subject to the approval of the Lending and other Governing Authorities and be in general conformity with the most recent Specifications and Codes of Practice laid down by the Standards Association of Australia, where such exist or any amendments thereto. Defective materials shall be immediately removed from the site or otherwise treated as directed by the Lending and/or Governing Authority.

B 6 **PROGRESS PAYMENTS** Progress payments shall be made in accordance with the requirements of the Lending Authority.

B 7 **DEFECTS LIABILITY RETENTION PERIOD** The period of liability and the amount, if any, to be retained shall be in accordance with the requirements of the Lending Authority.

B 8 **PRIME COST AMOUNTS** The Prime Cost amounts included in this Contract shall be those listed in the Project Specifications and shall be normal trade prices in Melbourne Metropolitan Area or Nearest Regional Centre, including Sales Tax where applicable. In the normal trade prices mentioned, the normal trade discounts shall be allowed in favour of the Owner.
Any other discounts allowed for bulk purchasing, prompt payment or other reasons shall be allowed in favour of Builder.
The Builder shall take delivery of P.C. Items, allow for cartage, fixing and profit on all items and shall be responsible for any damage or loss up to the time of handing over the completed works, unless otherwise stated in the Conditions of Contract. Any variation of the amounts as agreed by the contracting parties shall be adjusted on the completion of the Contract, see Project Specifications, P.C. Items.

B. GENERAL CLAUSES (Cont'd.)

B 9 INSURANCE Insurance shall be in accordance with the requirements of the Lending Authority. The Builder shall insure his employees under the Worker's Compensation Act and insure the building as required by Lending Authority against a claim for Fire and other prescribed risks and shall pay all costs involved.

B 10 MAKE GOOD All roads, pavements and adjoining property damaged by the Builder during the execution of this Contract shall be made good by the Builder, at his expense to the satisfaction of the person(s) and/or Authorities concerned.

B 11 SITE NOTICE The Builder shall display a suitable notice on the site indicating the name of Builder, Lot and/or Street Number.

B 12 SANITARY ACCOMMODATION Prior to the commencement of any works the Builder shall provide a sanitary convenience to the satisfaction of the Local Council, for the workmen employed on the site and shall keep the convenience clean and disinfected at all times. On completion the Builder shall remove the convenience and disinfect the ground.

B 13 WATER The Builder shall make his own arrangements for the water required for the execution of these works, and shall pay all charges and fees in respect thereof.

B 14 DOCUMENTS FOR INSPECTION A copy of the Working Drawings and Specifications supplied in connection with the contract shall be available on the site for inspection at all times.

B 15 SITE LEVELS Before submitting his tender, the Builder shall inspect the site and satisfy himself as to the extent of the work to be done. Should actual site levels vary from levels shown on drawings, the Builder shall be responsible that buildings suit levels and grades and make due allowance in his tender.

B 16 DIMENSIONS Dimensions figured on the drawings shall be given preference to scaled dimensions. Internal dimensions shall be taken between plates. External dimensions shall be taken over brickwork. Ceiling heights shall be taken between finished floor level and underside of finished ceiling.

B 17 SITE IDENTIFICATION, COMMENCEMENT OF WORK It is the responsibility of the Proprietor to supply to the Builder a Certified Extract of Title and if necessary a Survey by a Licensed Surveyor to enable the site to be determined. The Builder shall then be responsible for the positioning of the dwelling on the site in accordance with the Block Plan, and/or Working Drawings and for the correct setting-out of the buildings.

B 18 FLOOR CLEARANCE On level or approximately level sites, 200mm minimum clearance shall be allowed from the ground to the underside of the bearers and on sloping sites a minimum clearance of 150mm under the bearers at the highest point of the ground. For slab on ground construction the top of the slab shall finish a minimum of 150mm above the adjacent perimeter ground surface.
For the purpose of this clause a sloping site shall be a site having a fall in excess of 1 in 40 in any direction of the site covered by the building. Where filling is to be provided, floor level shall be raised to allow the required minimum clearance under bearers.
NOTE: See Brickwork and Concrete Masonry Blockwork Clause E13 for minimum clearance in termite infested areas.

B 19 STEPS, RAMPS, LANDINGS AND HANDRAILS See Concrete and Brickwork and Concrete Masonry Blockwork and Carpentry, Clauses D12, E26 and F24, and Project Specifications Items 8, 9 & 10 and Schedule of Fittings. To all external doorways, provide steps, ramps, landings and handrails to comply with the following conditions necessary to give access to the dwelling.

(a) where the floor height exceeds 190mm above the ground, provide to door openings, steps of minimum length of 900mm.

(b) where floor height at doorway is more than 400mm above the ground provide a landing of at least 900mm x 900mm and steps or ramp to suit. Ramps shall be of a gradient not more than 1 in 8.

(c) provide handrails to exposed sides of steps, ramps, landings, elevated floors, verandahs, terraces and porches where these are in excess of 600mm above adjacent ground or floor. Handrails shall be continuous for the full length of the exposed side.

B 20 STREET LEVELS Where required, the Builder shall obtain in writing from the Governing Authority the proposed finished street levels and lodge same with the Lending Authority's representative, or advise him in writing that such are not available.
Lay paths, drains and erect fences in conformity with these levels. Should it be found impracticable to work to the levels, the Builder shall advise the Owner or his Agent in writing.

B. GENERAL CLAUSES (Cont'd.)

B 21 FINAL NOTE The Builder shall remove all builder's equipment and debris from the site and shall remove paint spots from windows, floors, and other parts of the building.
He shall clean windows, kitchen, bathroom, toilet and laundry fittings and all cupboards, clear gutters and downpipes and leave the premises clean and ready for occupation.

C. EXCAVATION

C 1 CLEARING AND GRADING OF SITE See Item 1. The site covered by the dwelling and an area at least 1.2m wide around the dwelling shall be cleared and/or graded as indicated on Working Drawings unless otherwise specified in Item 26. Grub out all roots and consolidate the filling to all excavations so caused. All cleared materials shall be burnt or removed from the site.

C 2 EXCAVATIONS

(a) Excavate for concrete strip footings which shall be of sizes indicated on Working Drawings or as specified in Concrete, Clause D4. Excavations shall be taken down to a minimum depth of 400mm with level bottoms, approved by the Local Building Surveyor and to the requirements of the Lending Authority. Concrete footings shall be given a minimum earth cover of 150mm.
Trenches shall be properly trimmed, levelled on bed and stepped where necessary.
Steel pegs to indicate depth of concrete shall be placed in side or bottom of trenches.
Steps shall not exceed three courses of metric modular brickwork (300mm) in height and shall be pegged to show a minimum of 400mm lap in concrete footings.

(b) Holes for bases to brick piers, stumps and posts shall be excavated to a minimum depth of 450mm or greater depth as necessary to reach an approved bottom. The foundations under every sole plate or base shall have a minimum area of 45000mm^2, at a depth below the level of the natural surface of the ground equal to one quarter of the length of the stump, but in no case shall the bottom of the excavation under any sole plate or base be at a depth less than 450mm.

(c) Excavate as shown on Working Drawings and/or Engineer's Details for concrete floors, or where living, garage, storage, etc., areas are shown below the existing ground level. Where a concrete floor is on filling, excavate to an approved bottom for footings and piers to external walls and load bearing partitions. Top soil shall be cut to a depth sufficient to remove all vegetable matter.

(d) Excavate for sewerage drains which are to be laid in accordance with the Sewerage Authority's requirements.

(e) Excavate for sullage and stormwater drains, gas and water pipes to a depth sufficient to give 150mm cover over pipes where possible and to the requirements of Building Surveyor.

(f) Excavate for septic tank and effluent drains to depths and falls as directed by the Local Council Authority.

(g) Excavate or grade as necessary for gates, fencing and concrete paving where indicated.

Should additional excavation, concrete, or any removal of rock be required, the Builder shall submit his claim for the cost involved and obtain written approval from the Owner before proceeding with the work. See Project Specifications Item 2 for rate for excavation of rock and removal from site. The Builder may claim for the cost of additional work including concrete, brickwork and stumps where the depth of excavation is in excess of 450mm below existing ground surface or in excess of the levels indicated on the drawings.

C 3 BACK FILLING Back fill all trenches, stump holes and other excavations with earth well rammed. Surplus soil, rock, etc., shall be removed from the site or otherwise placed as directed. See Project Specifications Page 2, Item 2.

C 4 FILLING under concrete porch, terrace or verandah floors shall be clean earth, rock, broken brick, tile or similar mineral material. Empty containers, timber or plaster offcuts and other building debris shall not be used.

D. CONCRETE

D 1 INSPECTION Concrete strip footings shall not be poured until the trenches, formwork and other excavations, with the reinforcement placed in position, have been approved by the Local Council and Lending Authority. This also applies to concrete raft footings and suspended concrete slabs which exceed 10m^2 in area or are load bearing.

D. CONCRETE (Cont'd.)

D 1 (cont.) Lending Authority shall be advised at least 2 clear working days prior to the intended day of pouring the concrete. See Requirements of Lending Authority.
NOTE: All concrete shall be in accordance with Australian Standard 1480, Code for Concrete in Buildings.

D 2 **MATERIALS** Portland cement shall be fresh.
Sand shall be clean, coarse, sharp, free from loam, clay, organic or other impurities.
Coarse aggregate shall consist of 20mm bluestone or granite screenings free from dust, loam, clay or organic matter. Water shall be clean and fresh.

D 3 **CONCRETE PROPORTIONS AND MIXING** All concrete shall be mechanically mixed. Where pre-mixed concrete is delivered to site it shall be to Australian Standard 1379–1973 Ready Mixed Concrete and shall have a characteristic strength of 15MPa unless otherwise specified.
Where concrete is mixed on the site it shall consist of ingredients proportioned by volume as follows:-

1 Part Portland Cement
2 Parts sand
4 Parts coarse aggregate.

Sufficient water shall be added to give a mix with a slump not exceeding 100mm.

D 4 **CONCRETE FOOTINGS** Concrete strip footings shall be continuous under all brick walls and attached chimneys throughout the dwelling, stepped and levelled. Steps shall not exceed 300mm of brickwork in height and shall have a minimum of 400mm lap of concrete.
Concrete strip footings under external walls of buildings shall have a minimum cross-section of 375mm wide x 250mm deep and reinforced as Page 19 Clause D5.
Concrete footings for porches, terraces, flower boxes, sleeper-fender walls and steps shall be poured continuous with the footings for the dwelling and shall be of a minimum cross section 300mm wide x 150mm deep and reinforced with one layer of 200mm width welded steel trench mesh No. F8 TM placed 65mm from bottom.
Where supporting brickwork, concrete footings shall be at least 100mm wider than the brickwork supported.
Concrete pads under 230mm x 230mm brick piers shall be 300mm x 300mm x 150mm, and under concrete stumps a 150mm deep concrete pad of 45 000mm^2 in area, cast in situ, shall be provided.
Provide a 250mm deep reinforced rectangular slab to free standing chimneys, projecting 100mm beyond brickwork at back and sides.
Depths of concrete strip footings, steps and laps shall be marked with steel pegs placed in the bottom or sides of trenches.
Concrete shall be lapped at least 400mm at steps.
Concrete footings shall not project beyond street alignment unless below depth required by Uniform Building Regulations, Clause 1943. After placing, all concrete footings fully set in ground shall be left undisturbed for at least 2 days before being built on.
For brick fence see Brickwork and Concrete Masonry Blockwork Clause E28.

D 5 **REINFORCEMENT OF CONCRETE FOOTINGS** Reinforcement shall conform to Australian Standards 1302, 1303, 1304 and placed in accordance with A.S. 1480 Code for Concrete in Buildings.
Reinforce concrete strip footings with two layers of welded steel trench mesh No. F8 TM or similar mesh, in accordance with Australian Standard 1304–1973 one layer placed 65mm from bottom of trench and one layer 65mm from top of concrete.
For 375mm wide concrete strip footings, trench mesh shall have 3 longitudinal rods and shall be 200mm wide overall.
Mesh shall be lapped at least 400mm at each joint and full width at all angles.
Alternatively, concrete strip footings shall be reinforced with 10mm diameter MS rods wired to 6mm diameter ligatures every 900mm. Rod reinforcements shall have 3 rods laid 65mm from the bottom of trench and 2 rods 65mm from top of concrete.
Reinforcement in concrete strip footings shall have not less than 65mm cover.

D 6 **CONCRETE STUMPS** See Project Specifications Page 2 Item 3.
Precast stumps shall be of reinforced vibrated concrete having a characteristic strength of 20 MPa.
Stumps shall be spaced at a maximum of 1200mm centres under the run of the bearers, and sunk not more than 25mm into a 150mm thick concrete base of 45 000mm^2 in area, cast in situ, sunk at least 450mm into the ground in accordance with Uniform Building Regulations Clause 2502.
For stumps up to 1800mm long the bottom of the base shall be a minimum of 450mm, and 2400mm to 3000mm long a minimum of 600mm to 750mm respectively below existing ground surface.
For height of stumps above ground, see General Clauses, Clause B18.
Concrete stumps shall be of sizes and description given in the following schedule and shall be branded on one face with Manufacturer's name in such a position that it is visible when set in ground.

D. CONCRETE (Cont'd.)

D 6 (cont.)

Lengths of Concrete Stump mm	Cross Section mm	Description
Under 1400	100 x 100	Reinforced full length with one 5mm diameter hard drawn wire reinforcing fixing rod, bent at bottom within the stump
1400 to 1800	100 x 100	Reinforced full length with two 5mm diameter hard drawn wires, formed with hairpin bend at top, arc welded to a M.S. fixing bolt, projecting a minimum of 150mm through top of stump. Rods shall be placed diagonally and protrude 25mm through bottom of stump, all to have 25mm cover of concrete from external faces.
Over 1800 and up to 3000	125 x 125	

Reinforcing rods and/or welded bolts shall protrude beyond the top of the stump and shall be threaded to take a nut and washer for firm fixing of bearers, or alternatively rods shall protrude for clenching over bearers. No cracked stumps shall be used.

D 7 TERRACES, PORCHES AND FLOORS

All concrete slabs other than those supported on solid ground shall be constructed as suspended slabs of thickness and with reinforcement as shown in the following tables.

All slabs are to be poured on formwork so made that cement grout cannot be lost between joints and capable of being removed after the specified minimum period, or where the underside of the slab is not more than 450mm above the ground, the slab may be poured on a filled surface covered by a completely sealed water and vapour proof polyethylene membrane not less than 0.2mm thick, and such filling or membrane is not required to be removed. The membrane is to extend between the slab and the supporting walls.

All slabs covered in this clause shall be supported on walls continuous on two opposite sides at least and shall have at least 90mm bearing over walls. The slab is to be poured over a slip-joint (such as bituminous-felt, or similar material) laid full width over each wall.

Concrete shall have a characteristic strength of 20MPa and shall have a minimum thickness as given in the tables.

Reinforcing fabric shall comply with AS 1304 1973 and reinforcing bars shall comply with AS 1302 1973.

All reinforcement shall be placed on accurately made chairs or supports to maintain a concrete cover of not less than 20mm from the bottom of the slab to the closer spaced reinforcement. Reinforcement shall extend beyond the face of the supporting walls for a distance not less than 50mm.

The Main reinforcement (i.e. the larger diameter bars or wires where sizes differ) shall be laid in the direction of the shorter span;

Slabs not covered by Tables 1 and 2 (e.g. multiple span slabs, cantilever slabs, slabs supported by concrete or steel beams or by isolated columns of any type) are to be designed in accordance with AS 1480 by an Engineer competent in the design of concrete structures who shall prepare structural drawings showing in particular concrete thicknesses, and characteristic strength in accordance with Rule 4.1 and reinforcement details in accordance with Rule 6.2 of A.S. 1480.

Such drawings shall be submitted to the Lending Authority after approval by the local Building Authority.

D. CONCRETE (Cont'd.)

D 7 (cont.) TABLE 1. CONCRETE SLABS INSIDE DWELLINGS. CONCRETE F'c = 20 MPa (LIVE LOAD 2kPa IN ACCORDANCE WITH AS 1170 – PART 1)

Internal Distance Between Walls up to –	Slab thickness	Reinforcement				
		Fabric to AS 1304	Reinforcing Bars to AS 1302–1973			
			Main Bars		Tie Bars	
			Size	Spacing	Size	Spacing
mm	mm	Ref. No.	mm	mm	mm	mm
4200	150	F 918	S 16	150	S 12	250
3900	150	F 818	S 12	125	S 12	250
3600	150	F 718	S 12	150	S 12	250
3300	125	F 718	S 12	150	S 12	350
3000	125	F 928	S 12	175	S 12	350
2700	100	F 718	S 12	125	S 12	400
2400	100	F 828	S 12	225	S 12	400
2100	100	F 72	R 10	200	R 10	300
1800 & less	100	F 62	R 10	300	R 10	300

TABLE 2. CONCRETE PATIOS, BALCONIES, ETC. OUTSIDE DWELLINGS CONCRETE F'c = 20 MPa (LIVE LOAD 4 kPa IN ACCORDANCE WITH AS 1170 – PART 1)

Internal Distance Between Walls up to –	Slab thickness	Reinforcement				
		Fabric to AS 1304	Reinforcing Bars to AS 1302–1973			
			Main Bars		Tie Bars	
			Size	Spacing	Size	Spacing
mm	mm	Ref. No.	mm	mm	mm	mm
3900	150	F1018	S 16	125	S 16	400
3600	150	F 818	S 16	200	S 16	400
3300	125	F 918	S 16	175	S 16	400
3000	125	F 718	S 16	250	S 16	400
2700	125	F 928	S 16	300	S 16	400
2400	100	F 718	S 12	125	S 12	400
2100	100	F 828	S 12	200	S 12	400
1800 & less	100	F 72	S 12	300	S 12	400

Note to Tables:

1. The slab thickness and reinforcement sizes and spacing comply with the strength and servicability requirements of AS 1480. A slab thinner than shown with more reinforcement is not a satisfactory substitute.
2. Both tables apply only to single-span slabs supported on continuous load-bearing walls.
3. The slabs will NOT support walls placed above the slab.

Where specified to be reinforced, slabs such as garage or carport floors supported on cut or solid ground shall have reinforcement placed 20mm from the top of the slab.

D. CONCRETE (Cont'd.)

D 8 CONCRETE FOOTINGS COMBINED WITH FLOOR SLAB For chemical barrier treatment against termites see Brickwork and Concrete Masonry Blockwork Clause E13(b).
The top of slab shall finish a minimum of 150mm above the adjacent perimeter ground surface.
Concrete shall be mechanically vibrated and have a characteristic strength of 20MPa.
After placing, all concrete footings fully set in ground shall be left undisturbed for at least 2 days before being built on. Also exposed concrete footings, beams and slabs shall be left covered and undisturbed for a period of 7 days before being built on. Concrete shall be kept continuously damp during the above specified periods. Formwork to the vertical surfaces of exposed beams and slabs shall not be stripped sooner than 2 days after placing of concrete.
Where constructed on filled ground, or ground which is of low bearing capacity or subject to seasonal movement, concrete footings combined with floor slabs shall comprise a structural beam and slab with the design prepared by a qualified Engineer, Architect or Reinforcement Supplier, approved and stamped by the Council Building Surveyor before being submitted to the Lending Authority.
Where constructed on natural, cut or consolidated ground, form beams combined with floor slab around the perimeter and under load bearing walls.
Perimeter beams shall be a minimum 375mm wide by 250mm deep from the bottom of rebate, reinforced with one layer of No. F8 TM or similar mesh placed 65mm from bottom of concrete. Form a rebate in slab at formwork stage a minimum 50mm deep by width of brick plus 25mm to take veneer walling and cavity.
Beams under load bearing walls shall be a minimum 250mm wide by 250mm deep from top of slab, reinforced with one layer of No. F8 TM or similar mesh placed 65mm from bottom of beam.
Reinforcement in the above beams shall have minimum lap of 400mm. Floor shall be a minimum thickness of 100mm, reinforced with F62 fabric placed 25mm from top of slab and bent to continue 25mm below rebate to form top reinforcement for perimeter beams. Finish with a steel trowel to a smooth surface unless otherwise specified in Project Specifications Item 4.
Reinforcement in the floor shall have minimum end and side laps of 225mm.
Before placing concrete, lay 50mm bed of coarse consolidated concrete sand over the area to be covered by the floor, then place a water-vapour proof material of 200 micro-metres minimum thickness over the whole area, turned up the outside of perimeter beams, with all joints lapped and sealed with sealing tape. All damaged areas shall be similarly sealed.
Build in 10mm holding down bolts at 900mm centres or alternatively fix framing with power driven fasteners.
Build in waste pipes, copper tubing and ducting as required by Plumber. Provide a minimum of 250mm of concrete under pipes where concrete is supporting brick walling.
For flashings see Plumbing Page 49, Clause J12.
WHERE AN INSPECTION IS REQUIRED BY THE LENDING AUTHORITY BEFORE POURING, FORMING WITH REINFORCEMENT IN POSITION MUST BE INSPECTED AND APPROVED BY THE LENDING AUTHORITY AFTER IT IS PASSED BY THE COUNCIL.

D 9 HEARTHS For hearths to Fuel Burning Appliances See Brickwork Concrete Masonry Blockwork Clause E24.
For hearths finish see Project Specifications, Page 2 Item 5.
Every open fireplace shall have an inner and outer hearth of incombustible material not less than 100mm thick. Where hearths are finished with bricks, tiles or other incombustible material not less than 25mm thick, the base slab supporting them shall be of a minimum thickness of 75mm reinforced concrete as specified for concrete floors Page 20 Clause D7.
Hearths shall project not less than 350mm from the front of fire place and extend not less than 150mm beyond each end of fireplace opening and be supported on dwarf walls or corbelled brickwork.
The inner hearth shall be laid with a 25mm fall to the back and the outer hearth shall finish 25mm above finished floor level. All timber formwork used to support the hearth slab in its construction shall be removed before completion of the contract.

D 10 SHOWER RECESS FLOOR For type and finish see Project Specifications Page 2 Item 6.
Provide and fix in position a shower base complete with shower waste outlet, conforming to the regulations of the Sewerage Authority.
NOTE: In concrete slab floor construction shower recess floors shall be:-

(a) cast in-situ with floor slab.

(b) later formed up to surround previously positioned shower waste outlet.

(c) if pre-cast, correctly positioned and connected to the shower waste pipe prior to the pouring of the concrete slab floor.

D 11 THRESHOLDS For type, see Project Specifications, Item 7. Concrete thresholds shall extend to the inside face of doors, finished 15mm above the floor level at the front and rear doors.
Finish with smooth even surfaces with non-slip grooves.

D 12 STEPS, RAMPS AND LANDINGS See General Clauses, Clause B19 and Project Specifications, Pages 2 & 3 Items 8 & 9.
Form steps, ramps and landing of concrete composed of concrete as specified Clause D3.
Steps shall be formed on a sloping concrete slab of a minimum thickness of 100mm, carried on 100mm offsets in base wall brickwork and 100mm brick spandril walls, and shall be reinforced as specified Page 20, Clause D7.

D. CONCRETE WORK (Cont'd.)

D 12 STEPS, RAMPS AND LANDINGS

(cont.) Ramps shall be 100mm thick reinforced as for steps slab and finished with non-slip surface.
Ramps shall be of a gradient not more than 1 in 8.
Where steps, ramps or landings are free standing, submit to the Lending Authority, Engineer's, Architect's or Reinforcement Supplier's technical details approved and stamped by the Council Building Surveyor.
Steps shall have treads of a minimum 250mm going finished with non-slip grooves or finished to take brick on edge treads,
Risers shall be of a maximum height of 190mm and be uniform.
Where only one or two steps are provided, treads shall be of a minimum 300mm.
Pre-cast concrete steps may be used.

D 13 CONCRETE PAVING Where indicated on the Block Plan, Working Drawings and/or specified in the Project Specifications Item 11, the Builder shall lay concrete paving to suit street footpath levels. See General Clauses Clause B20.
Paving shall be laid to even gradients. Unless otherwise stated in Project Specifications Page 3, Item 11, paths shall be 75mm thick and 750mm wide finished to a true line and block jointed at approximately 900mm spacings.
Paving abutting buildings shall be graded to fall away from buildings.
Double concrete tracks to driveway shall each be 100mm thick and a minimum of 600mm wide. Lay tracks 750mm apart and provide 100mm thick concrete apron at garage, car port and gate openings 1800mm wide by the width of the opening. For concrete floor to Garage or Car Port See Page 20, Clause D7. Set in position a suitable galvanised iron pipe socket for gate bolt, flush with surface of paving.
Where a garage is intended to accommodate more than one vehicle, then the concrete apron shall be suitably increased in dimensions to provide adequate paved access.

D 14 PAN CLOSET FLOOR Form concrete floor slab to the pan closet, 100mm thick, level under the pan, dished and graded to 75mm thick at the doorway. The slab shall finish 50mm above the ground at the front and be trowelled to a smooth finish. Set in 10mm diam. bolts 2 to each wall for fixing wall frames where not secured by power driven fasteners. See Carpentry Page 41, Clause F28.

E. BRICKWORK AND CONCRETE MASONRY BLOCKWORK

E 1 GENERALLY For type of bricks or concrete masonry blocks in base structure and general walling above, see Project Specifications Item 12. Brickwork shall not be commenced until the concrete footings have been allowed to set for a minimum of 48 hours.
Veneer walling shall not be commenced until the wall and roof framing is erected and shall at all times be adequately protected to prevent staining.
Clay bricks and concrete masonry blocks shall be used in accordance with Australian Standards 1640 Brickwork Code and CA 32- 1967 Concrete Masonry Blocks Code of Practice.
In these specifications where the word "brickwork" appears it shall mean the construction in all types of bricks, concrete masonry blocks or other form of masonry.
All walls shall be taken up plumb and straight and all angles shall be kept true and plumb.
Work shall be solidly bonded, laid on a full bed of mortar with all joints filled.
Courses shall be kept horizontal with joints of even thickness, perpends plumb and true and laid to a gauge corresponding with the following table.

Type of masonry unit	Dimensions			Gauge
	Length mm	Width mm	Height mm	
Modular brick	290 190	90 90	90 90	6 courses to 600mm 6 courses to 600mm
Standard brick	230	110	76	7 courses to 600mm
Concrete block	390 290 190 90	290 190 140 90	190 190 90 90	3 courses to 600mm 3 courses to 600mm 6 courses to 600mm 6 courses to 600mm

Concrete masonry blocks and sand-lime bricks shall be stacked on site clear of the ground, and protected from rain before laying.
Movement joints of 10mm shall be provided in straight unbroken run of brickwork exceeding 10 000mm and shall be placed each end within 3000mm but not less than 600mm from the corners.
Joints shall be kept entirely clear and mortar bridging must be avoided during building. On completion fill the joint from the outside to a depth of 25mm, with a waterproof mastic.

E. BRICKWORK AND CONCRETE MASONRY BLOCKWORK (Cont'd.)

E 1 GENERALLY (cont.)

Brickwork shall be kept 10mm clear of timbers or more where necessary to allow for settlement and/or shrinkage.

Timber stains shall be removed from finished brickwork by the use of a solution recommended by the brick manufacturer.

E 2 BRICKS AND CONCRETE MASONRY BLOCKS

FIREPLACES Only hard burnt pressed solid clay bricks or fire bricks shall be used in the inner hearth and lining of fireplaces or similar areas subject to heat. Bricks to exposed surfaces shall have clean sharp arrises.

CLAY BRICKS shall conform with Australian Standard 1225 Burnt Clay and Shale Building Bricks. Bricks shall be well burnt, first quality machine made, picked for colour where exposed, and wetted before being laid or as recommended by the Manufacturer. Mortar for base structures shall be 1:1:6 mix, and for general walling 1:2:9 mix. See Page 24, Clause E3. Clean exposed faces of brickwork by wetting the wall and then cleaning with spirits of salts diluted to no stronger than 1:10, and afterwards washing with clean water.

CONCRETE MASONRY BRICKS AND BLOCKS shall conform with Australian Standard 1346 Concrete Masonry Blocks.

Where hollow concrete masonry bricks or blocks are used in the base of a 2 storey dwelling, load bearing piers shall be capped with solid bricks or blocks of a minimum depth of 90mm.

Blocks shall be stacked on site clear of ground, protected from rain before laying and laid in a dry state. As the work progresses the top of the walls shall be covered as necessary to prevent the wall becoming excessively wet.

Mortar for base structures shall be 1:1:6 and for general walling 1:2:9 mix. See Page 24, Clause E3. During the progress of work, walls to be left exposed shall be kept clean.

Mortar smears shall be allowed to dry for a short period and then removed by trowel, stiff broom or both, but spirits of salts shall not be used for cleaning.

SAND-LIME (CALCIUM SILICATE) BRICKS shall conform with Australian Standard A91–1967 Sand-Lime (Calcium Silicate) Bricks. Bricks shall be of first quality, of not less than B Grade compressive strength as in Clause 6 of Australian Standards of even colour where exposed and with sharp arrises. All exposed bricks shall be Facing Brick quality. Bricks shall be stacked on site clear of the ground, protected from rain before laying and laid in a dry state. Mortar for base structures shall be 1:1:6 mix and for general walling 1:2:9 mix. See Page 24, Clause E3, During the progress of the work, walls to be exposed shall be kept clean. Mortar droppings on the face of exposed brickwork shall be removed by scraping and mortar stains removed with garnet paper or with a weak solution of spirits of salts.

Afterwards thoroughly wash with clean water.

E 3 MORTARS

Mortar nominated in these specifications as 1:1:6, and 1:2:9 shall consist of a mix by volume as follows:

(a) 1:1:6 Mortar
- 1 part Portland cement
- 1 part hydrated lime
- 6 parts washed mortar sand

(b) 1:2:9 Mortar
- 1 part Portland cement
- 2 parts hydrated lime
- 9 parts washed mortar sand

Mortar shall be mixed with clean water and used within one hour of mixing and shall comply with Australian Standard A123–1963 Mortar for Masonry Constructions.

Where colour additive is required see Project Specifications Page 3, Item 12.

E 4 FIXINGS

Build in bolts, lugs and fixings as required.

E 5 JOINTING

Unless otherwise specified in Project Specifications Page 3, Item 12. exposed face joints shall be finished with a jointing tool.

E 6 BASE STRUCTURES

Build up base walling from concrete footings in 90mm brickwork with 190mm by 100mm piers tied to walls and spaced at a maximum of 1800mm centres and/or spaced to adequately support bearers.

Where the underside of bearers exceeds 1400mm in height above the top of concrete footings, the base walling shall be built to within 1400mm of the underside of bearers in 190mm brickwork, and thereafter in 90mm brickwork with 190mm x 100mm piers as before specified in this Clause.

Concrete floors and concrete slabs to porches and terraces shall be supported on 190mm x 100mm piers from concrete strip footings, tied to base brickwork at not more than 1600mm centres.

Where base brickwork is in excess of 350mm below the ground surface, it shall be built to within 350mm of the ground surface in 190mm brickwork and where it is acting as a retaining wall it shall be built to ground surface in 190mm brickwork.

Masonry units of other sizes may be used in compliance with the Uniform Building Regulations of Victoria.

On a sloping site, weep holes shall be left in the first course of brickwork above footings in the wall or walls on the lower sides of the site.

E. BRICKWORK AND CONCRETE MASONRY BLOCKWORK (Cont'd.)

E 7 DWARF AND FENDER WALLS Brick dwarf and fender walls under porches, terraces, hearths and other concrete slabs shall be in 90mm brickwork, with 190mm x 100mm piers spaced at not more than 1600mm centres.
Where the underside of concrete slabs for porches, terraces or hearths exceeds 1400mm in height above the top of concrete footings, the walling shall be built to within 1400mm of the underside of such slabs in 190mm brickwork, and thereafter in 90mm brickwork with 190mm x 100mm piers as before specified in this Clause.
Provide Ventilation as in Page 25, Clause E10.

E 8 BRICK PIERS Where required, see Project Specifications, Page 2, Item 3, build 190mm x 190mm brick piers for bearers at not more than 1400mm centres, carried up from concrete pads 300mm x 300mm x 150mm deep.
Build in 5mm diameter M.S. rod, bedded and turned at right angles in concrete, carried up through centre of brickwork and left for securing to bearers. See Carpentry, Page 29, Clause F5.

E 9 SUB-FLOOR ACCESS OPENING Form an opening for sub-floor access in a position where indicated and as high as practicable and approximately 900mm wide, with brickwork carried on 70mm x 10mm M.S. bar, with end bearing of 110mm each end and with brick threshold. See Joinery, Page 43, Clause G6 for sub-floor door frame to be built-in.

E 10 SUB-FLOOR VENTILATION Build in stock pattern vent faces, or other vents giving 11 000mm^2 of free air space in each 1500mm run of external wall to ventilate under floor areas.
Vents shall be placed between damp proof courses in external walls including dwarf walls under porches and terraces. End vents shall be placed not more than 700mm from corners.
Carry ventilation under floors of terraces or porches where floors are laid on filling, with 100mm diameter earthenware pipes running from back of vent faces to the clear space under timber floors, or alternatively vent this area with single course vents in the main wall of area abutting.
Vent openings shall be kept clear of mortar and wall insulation.

E 11 DAMP-PROOF COURSES Through the full thickness of base brickwork, chimney base, piers and dwarf walls to hearths, lay two continuous damp-proof courses using any of the following methods.

(a) Mortar consisting of 1 part of cement to 2 parts clean sand, to which is to be added an integral water proofer in the proportion recommended by the manufacturer and distinctly coloured.

(b) Embossed Opaque polyethylene film not less than 0.25mm thick prior to embossing, lapped 150mm at joins.

(c) Non-ferrous metal strip complying with the requirements of Australian Interim Standard 326, Bituminous Damp Proof Courses with Metal Centre, lapped 150mm.

(d) Any other durable material impervious to moisture which is approved by the Local Governing Authority. Unless otherwise directed, lay one damp-proof course at underside of bearer and one damp-proof course two courses above.

Lay approved damp-proof course in parapet walls, one course above flashings.
Walls of rooms, other habitable spaces and garages below ground level shall be made waterproof.

Where brick walls are specified to be painted then further provision shall be made to damp proof the wall to be painted.

E 12 WEEP HOLES Where brick base walling retains earth, above openings in exposed walls, or elsewhere as required, an adequate number of perpends shall be left open to form weep holes.
Where retaining walls are within 3m of a street, omit weep holes and provide a 75mm diameter agricultural drain, as specified in Drainage Clause L7 (c).

E 13 TERMITE PROOFING In all areas where the Lending Authority and/or Local Building Authority deem a Termite Barrier necessary, build in termite strips and caps in accordance with the Uniform Building Regulations Clause 3140 and/or provide Chemical Barrier Treatment. See Project Specifications, Page 3, Item 12.
For concrete raft or slab on ground construction see Chemical Barrier Treatment Sub-clause (b) of this clause.

(a) **TERMITE STRIPS AND CAPS** Where clearance below bearer is 350mm or more form Termite Barrier as outlined in Australian Standard CA 50-1968 Code for Physical Barriers used in the Protection of Buildings against Subterranean Termites.
Termite strips shall be built into walls on inside faces of base walling, chimneys, piers and dwarf walls immediately below floor framing and shall be continuous 0.5mm galvanised steel, set at least 25mm into brickwork, projecting horizontally from the inner face of the wall for at least 10mm and turned down at gradient of 1:1 for 50mm, lapped 75mm tightly seamed or soldered together at joints.
All surplus mortar shall be raked from underside of termite strip.
Termite caps shall be galvanised flat steel or stamped galvanised steel projecting at least 10mm around the stumps, turned down at gradient of 1:1 for 50mm.
Termite caps shall be fitted on top of brick piers, timber and concrete stumps. Fit a tight fitting washer over rod and check underside of bearer over washer.
Stump bracing shall be kept below termite caps and/or termite strips and 150mm clear of ground.

(b) **CHEMICAL BARRIER TREATMENT** In the case of either concrete raft or slab on ground construction or where clearance below bearer is less than 350mm treat in accordance with Australian Standard CA43-1966 Code of Recommended Practice for Soil Treatment for Protection of Buildings against Subterranean Termites.

E. BRICKWORK AND CONCRETE MASONRY BLOCKWORK (Cont'd.)

E 14 WALLING Carry up brick veneer wall providing a clear space of not less than 25mm and not more than 50mm between brickwork and wall framing.
Cavity shall be kept free of mortar.
To brickwork above concrete slab floors, or suspended slabs, build in continuous flashing fixed to outer face of studding at bottom plate level, turned down into rebate of slab, across cavity and laid under the first course of bricks. Provide ventilation at 1800mm centres at least one brick in height to base of cavity. Provide weep holes to perpends at 900mm centres in the first course of walling immediately above flashing. Thoroughly clean out all mortar droppings from this flashing before fixing internal linings.
Build in 3mm galvanised wire ties, placed not further apart than 450mm horizontally and 600mm vertically or alternatively not further apart than 600mm horizontally and 450mm vertically sloping downwards to the outside and secured to sides of wall studs.
Ties shall be kept free of mortar in cavity.
Gable brickwork shall have 3mm ties built in as for walls.
Projecting brickwork of gables at eaves shall be carried on 76mm x 51mm x 6.3mm M.S. angles, given one coat of anti-rust compound and tailed into brickwork not less than extent of overhang.
Build into each gable 75mm diameter agricultural pipe vents or other vents as shown on drawings, birdproofed and water-proofed.
Provide a raking course of bricks at the verges or finish with neatly cut bricks.

E 15 FLASHINGS Rake out brickwork joints to a depth of 40mm to take flashings where required.
Build in all flashings as required. See Plumbing Clause J12.

E 16 ANGLE LINTELS Brickwork over external openings shall be carried on M.S. angles of sizes and with end bearings as scheduled below.

SPAN mm	MINIMUM END BEARING mm	4 COURSES mm	FULL WALL OR GABLE mm
Up to 2000	115	76 x 76 x 5	76 x 76 x 5
Over 2000 to 3000	130	76 x 76 x 6.5	102 x 76 x 6.5
Over 3000 to 4000	150	152 x 102 x 10	152 x 102 x 10

Before building in, steel angles shall be painted with one coat of anti-rust compound.
Angles shall be placed with longer side vertically.

In the case of roof or floor beams being supported by a lintel and carrying loads other than those imposed due to normal spacings and loadings the lintel shall be designed by a qualified Engineer or Architect.

E 17 CORNER WINDOWS Where brickwork is carried over corner windows, provide M.S. angles over openings, welded at junctions and supported at corner by 4mm thick steel tube column, extending at least two courses below sill, welded to 150mm x 150mm x 10mm steel plates top and bottom.
Where no brickwork is carried over the openings, top and bottom plates shall be 100mm x 100mm x 6mm steel.
Alternatively a 75mm x 75mm timber post may be used in timber window frames in lieu of a steel tube column.
Steel columns up to 1600mm high shall be a minimum 42mm external diameter and over 1600mm high shall be a minimum 48mm external diameter.
All steel sections shall be primed with an anti-rust compound before being fixed in position.

E 18 METER RECESS Where indicated on the Working Drawings and approved by the Electricity Supply Authority, form recess in brickwork to take electric supply meter enclosure with brickwork above carried on mild steel lintel.
Where approved by the Gas Authority, form recess for gas meter enclosure where indicated on Working Drawings.

E 19 ROOM VENTS – EXTERNAL WALLS Provide where necessary vent openings to each room including laundry, bathroom and toilet, all in accordance with Uniform Building Regulations Chapter 11 and as required by the Local Council Authority.
Exposed vents shall be of hooded type.

E 20 CHIMNEYS Chimney base brickwork shall be in 190mm work with 90mm brickwork above.
Build chimneys with separate flues having 230mm x 230mm inside dimensions from each fireplace, properly gathered over, with easy bends of a gradient not less than 1:1 to the horizontal plane to obscure daylight, properly cored and parged in 1:3 lime mortar.

E. BRICKWORK AND CONCRETE MASONRY BLOCKWORK (Cont'd.)

E 20 CHIMNEYS (cont.)

Stacks shall be carried up at least 300mm higher than any portion of the finished roof within a horizontal distance of 3600mm.
Tops of stacks shall be weathered in waterproof cement mortar to fall outwards.
Where a slow combustion heater is installed, the fireplace flue shall be constructed without bends and 125mm internal diameter slow combustion asbestos cement flue liner shall be installed. The space between the liner and the flue shall be sealed at the base and top of the flue or otherwise fitted to manufacturer's recommendations.

E 21 OPEN FIREPLACE

Construct the fireplace opening approximately 600mm high by 900mm wide, having an inner hearth minimum of 450mm deep, sloping 25mm to the rear. Actual sizes shall be as shown on the drawing or as directed.
The outer hearth shall finish 25mm above the floor and shall extend at least 350mm in front of the opening and 150mm each side of the opening.
Inner hearth, back and sides shall be built in solid hard burnt brick or firebricks.
The back of the fireplace shall be a minimum of 190mm thick at the base, and shall be built with a gradual sweep forward to form a 90mm throat for the full width of the opening at a minimum height of 150mm above the head of the fireplace opening. Fill the cavities behind the fireplace sides and back with 1:3 lime mortar and provide water trap behind the throat at the base of the flue.
The brickwork over fireplace openings shall be supported on 70mm x 10mm M.S. bars.
Construct the fireplace front and return with well-bonded brickwork with exposed faces in selected bricks.
NOTE: All face work shall be securely fixed to main brickwork. The open fireplace finish may be varied from above specification.
For other type of finish and dimensions see Project Specifications, Item 26.

E 22 HEARTH FINISH

Inner and outer hearths to fireplaces and/or gas heater recesses shall be selected hard burnt solid clay bricks set on edge unless otherwise specified. See Project Specifications, Item 5.
Protect face of hearth from staining and other damage.

E 23 DOOR THRESHOLDS

Where brick thresholds are required brickwork below all external door openings shall be built up in 190mm work, see Project Specifications, Item 7.
Thresholds shall be at least 300mm wide brick on edge, extending to the inside face of door raised 15mm above the floor at all external doors.
For finished brick thresholds, only hard burnt solid clay or solid concrete masonry blocks shall be used.
See also Clause D11.

E 24 FUEL BURNING APPLIANCES – INSTALLATION

NOTE: Where specified in Project Specifications, Schedule of Fittings, a Fuel Burning Appliance shall be built into recess as specified below or as shown on drawings.

SOLID FUEL

(a) **COOKERS:** (Not fully packed)
Recess for solid fuel burning cooker shall be built in 190mm brickwork to a height of the cooker, and 3 courses higher at the back. The brickwork shall be carried up to take 230mm x 230mm brick flue supported on a 100mm thick reinforced concrete slab with opening provided for flue. The base and hearth slab supported on brick dwarf walls shall be 100mm thick reinforced concrete with steel trowel finish. Hearth shall be finished flush with floor extending 350mm at front of the cooker and 150mm at the sides.
Where cooker is designed for use with flue pipe, brick flue shall be built to cooker manufacturer's requirements.

(b) **SLOW COMBUSTION COOKERS:** (Fully Packed)
Cooker may be installed within a recess as specified above or alternatively on a 100mm reinforced concrete base with steel trowel finish. The base, supported on brick walls shall project 225mm at front of the unit and 100mm at the sides and back. See Dwarf and Fender Walls, Clause E 7.

(c) **LIGHT WEIGHT UNITS:** Including briquette hot water units, console heating appliances but not gas quick recovery storage Hot Water Units.
Unit shall be set on a 50mm thick reinforced concrete slab of the same dimensions as stated in the previous paragraph. The underside of slab to be no nearer than 15mm from any combustible materials, in accordance with the requirements of the Uniform Building Regulations, Clause 2322(b).

(d) **ROOM HEATING APPLIANCES:**
Construct brick recess for built-in type of room heater to manufacturer's requirements. Room heater provided with insulated box shall be installed in accordance with the manufacturer's requirements.
For flue installation, see Plumbing, Page 50, Clause J14.

GAS FIRES: See Project Specifications, Schedule of Fittings.
Where a gas fire is to be fitted on a floor of combustible materials, lay flush with or upon the floor a hearth or slab constructed of incombustible material. Combustible material in close proximity of a gas fire shall be protected to the satisfaction of a Gas Authority Officer.
The above applies to fully radiant fires only, other gas space heaters do not require a hearth.

E. BRICKWORK AND CONCRETE MASONRY BLOCKWORK (Cont'd.)

E 24 (cont.) FUEL BURNING APPLIANCES – INSTALLATION

OIL BURNING:

Oil burning and other fuel burning appliances shall be installed to the requirements of the Uniform Building Regulations Clauses 2322 and 2323, Fire Underwriters Regulations and Australian Standards CB5 -1969 Rules for the Design, Construction and Operation of Oil Fuel Installations and CB21 Rules for Installations in Buildings of Oil Heating Appliances.

E 25 WINDOW SILLS Window Sills shall be set to slope down to the outside.
Bricks for sills shall be selected for uniform size and colour. Selected sill tiles may be used. Flash as specified. See Plumbing, Page 50, Clause J12 (g).
For type of sill see Project Specifications, Page 3 Item 12.

NOTE: Brick or tile sills shall be kept minimum 15mm clear below under side of window sills to allow for settlement and/or shrinkage. This space shall be filled with a mastic joint or a plastic strip fixed to the under side of window sill.

E 26 STEPS See General Clauses, Clause B19 and Project Specifications, Page 2 Item 8.
Build brick steps on concrete footings where shown and as specified under Concrete, Page 19 Clause D4.
Where flights are comprised of 3 risers or less, build steps solidly in brickwork with treads 300mm wide and risers 2 courses high maximum 190mm.
Flights comprising more than 3 risers shall be built on concrete slab formed as specified in Concrete Clause D12.
Spandrils shall be built in solid brickwork.
Only hard burnt clay bricks or solid concrete masonry blocks shall be used for steps. For type of finish see Project Specifications, Page 2, Item 8.

E 27 FLOWER BOXES Construct flower boxes as indicated on drawings, on reinforced concrete footings as specified under Concrete, Page 19, Clause D4. Walls not exceeding 1000mm in height shall be a minimum thickness of 90mm work. Provide weep holes at base in vertical joints at approximately 900mm spacings. Render flower boxes internally with 1:3 waterproofed cement mortar.

E 28 BRICK FENCE Where shown on Block Plan and/or specified in Project Specifications, Page 3, Item 12 construct 90mm brick fence with 190mm x 100mm piers, at maximum of 2700mm centres and 390mm x 390mm gate and corner piers. Construct fence and piers on concrete footings 150mm deep and 100mm wider than brickwork above and reinforced with one layer of welded steel trench mesh No. F 8TM placed 65mm from the bottom.
Where any brick fence is on or within 3 metres of street line and acts as a retaining wall refer Page 25, Clause E12. Concrete footings shall not project beyond street alignment unless below depth required by Uniform Building Regulations, Clause 1943.
Build in necessary fixings and fastenings for gates.
Form letter box 350mm high and 230mm wide by full thickness of the gate pier, set letter box faces and door in position and render smooth inside. Build into the other gate pier a 100mm earthenware pipe or paper holder, set to a slope.

E 29 POINTING AND CLEANING Point up pipes, flashings, putlog holes, and other areas as required, neatly with mortar to match existing. Polyvinyl Chloride (P.V.C.) pipes shall be lagged or pointed up with flexible material in accordance with the regulations and not with mortar.
Clean down exposed faces in accordance with directions previously specified for the type of brick or masonry used. See Page 24 Clause E2.

F. CARPENTRY

F 1 TIMBER shall comply with the appropriate current Specifications issued by the Standards Association of Australia. The type of timber to be used in the structure shall be specified in the appropriate space provided in Page 3 Item 13 of the Project Specifications.
All fixing timber including pressure treated timber shall have a moisture content of not less than 10% and not more than 15% at the time of fixing.

Where used externally, radiata pine shall be pressure treated in accordance with Australian Standard 1604 and shall be branded accordingly.

All timbers on delivery to site shall be stacked to prevent twisting and warping. Seasoned timber shall be stacked clear of ground.

F 2 PROTECTION OF WORK Provide and fix protective boarding over or otherwise protect all brickwork or finished work to hearths, sills and treads, timber sills, joinery etc., and all fittings liable to become damaged during construction of the building. Door and window frames, fascias, barges, moulds and other finished woodwork to be used externally shall be primed or oiled all round prior to or immediately on delivery to the site. Seasoned timber and joinery shall be stacked and covered or adequately protected from the weather.

F. CARPENTRY (Cont'd.)

F 3 SETTING OUT AND WORKMANSHIP The builder shall be responsible for correctly positioning and setting out the building on the site, in accordance with the Block Plan and Drawings, see General Clauses, Page 17 Clause B17.
In setting out, due allowance shall be made for the type of construction and materials to be used and provision shall be made for other tradesmen to carry out their work without interruption.
Do all framing, furring, housing, rebating and mitring to or for carpentry and fix all joinery as necessary and as directed.
The work shall be finished in a tradesmanlike manner and shall be in accordance with recognised good trade practices.

F 4 FRAMEWORK Refer Project Specifications Items 13; and 26. The sizes of timber members and the framework shall comply with the requirements of the Uniform Building Regulations of Victoria.
The building framework shall be plumb, level and square to true lines, properly fitted, blocked and securely fixed together.
Timbers shall be kept 50mm clear from the outer face of chimney and from the lower face of any hearth.
Metal framing approved by the Local Authority and the Lending Authority if applicable shall be constructed in accordance with the manufacturer's requirements.

Tolerances:
Hardwood sizes must not be more than 3mm under those stated.
Unseasoned softwood sizes must not be more than 4mm under those stated.
Seasoned softwood sizes must not be under those stated (no negative tolerance).

F 5 FLOOR FRAMING Concrete stumps, brick piers or timber stumps shall be placed under all load bearing internal walls and under all wall intersections.
See requirements of Lending Authority or Project Specifications, Item 3.

Stumps more than 1000mm above the ground level shall be securely braced with 75mm x 38mm timber. Bracing shall extend for at least three stump bays and be securely fixed at each stump. No timber bracing shall be within 150mm of ground and shall be kept a minimum of 40mm clear of termite caps and strips.

Members	Maximum Spacings	Description
Stumps	1200mm centre to centre under run of bearers	Reinforced concrete, size, length and reinforcement as described under Concrete, Clause D6. 100mm x 100mm Red Gum or pressure treated timber set on 300mm x 150mm x 38mm sole plates of similar material
Bearers	See Floor Joist Table on next page for spacing.	100mm x 75mm hardwood on edge where floor joists span up to 2400mm shall be placed under load bearing walls, running parellel to same. Bearers shall be seated on damp-proof strip. Joints shall be made over stumps or piers.

F 5 (cont.) FLOOR JOIST TABLE

Spacing mm	Spans mm	Floor Joist Sizes mm		
		Hardwood	Unseasoned Softwood	Seasoned Softwood
450	up to 1800	100 x 38	125 x 38 or 100 x 50	120 x 35
	up to 2100	125 x 38 or 100 x 50	125 x 38 or 125 x 50	120 x 35
	up to 2400	125 x 38 or 125 x 50	150 x 38 or 125 x 50	140 x 35 or 120 x 45
	up to 2700	150 x 38 or 150 x 50	175 x 38 or 150 x 50	190 x 35
	up to 3000	175 x 38 or 150 x 50	175 x 38 or 175 x 50	190 x 35
	up to 3600	175 x 50 or 200 x 38	200 x 38 or 200 x 50	
	up to 4200	(250 x 50)	250 x 50	
	up to 4800	(250 x 50)	275 x 50	
525	up to 1800	100 x 38	125 x 38 or 125 x 50	120 x 35
	up to 2100	125 x 38 or 100 x 50	125 x 38 or 125 x 50	120 x 35
	up to 2400	125 x 38 or 125 x 50	150 x 38 or 125 x 50	140 x 35 or 140 x 45
	up to 2700	150 x 38 or 150 x 50	175 x 38 or 150 x 50	190 x 35
	up to 3000	175 x 38 or 150 x 50	200 x 38 or 175 x 50	190 x 35
	up to 3600	200 x 38 or 175 x 50	200 x 50	
	up to 4200		250 x 50	
	up to 4800		300 x 50	
600	up to 1800	100 x 38	125 x 38 or 125 x 50	120 x 35
	up to 2100	125 x 38 or 125 x 50	125 x 38 or 125 x 50	120 x 35
	up to 2400	125 x 38 or 125 x 50	150 x 38 or 125 x 50	140 x 35 or 140 x 45
	up to 2700	150 x 38 or 150 x 50	175 x 38 or 150 x 50	190 x 35
	up to 3000	175 x 38 or 150 x 50	200 x 38 or 175 x 50	190 x 35
	up to 3600	200 x 38	200 x 50	
	up to 4200	(250 x 50)	250 x 50	
	up to 4800		300 x 50	

NOTE: Spans up to 2400mm are for joists continuous over two or more spans and above 2400mm are for joists supported at two points only

( ) Sizes in brackets are permissable but not recommended in green timber due to excessive shrinkage.

F. CARPENTRY (Cont'd.)

F 5 FLOOR FRAMING (cont.)

All floor joists shall be fixed to a level and true line by gauging and checking over bearers where necessary. Maximum check out for 100mm joists shall be 10mm.

Provide double joists under walls running parallel with joists, except where floors are laid prior to the erection of non-load-bearing walls, and where trussed roofs are used. Joists spanning more than 2400mm to 3600mm shall have one row of solid blocking or herringbone strutting.

Joists spanning more than 3600mm shall have solid blocking or herringbone strutting at not more than 1800mm centres.

F 6 FLOORING

Remove all debris and building rubbish from under building before laying floors.

Flooring shall not be laid prior to Frame Inspection and not until the roof covering is completed, walls veneered externally and the building is in a waterproof condition or adequately protected.

Flooring shall be Standard Grade 19mm thick T & G Kiln Dried and Reconditioned Hardwood branded with trade mark registered by the producer with the Timber Producers' Council of South Eastern Australia, graded in accordance with Australian Standard 062, Flooring Milled from South Eastern Australia Hardwoods, or Standard Grade 19mm thick T & G Kiln Dried and Reconditioned Radiata Pine in accordance with AS1492–1973 Flooring Milled from Radiata Pine or Softwood, similarly trade and colour marked showing grade. Chipboard and plywood flooring approved by the Local Authority may be used in accordance with the manufacturer's instructions.

Indicate type, and size in Project specifications, Page 3 Item 13.

At least 50% of the flooring shall be in long lengths, butt jointed over floor joists, and properly cramped. Where in excess of 75mm in width, double nail at each joist with 50mm bullet head nails, narrower boards shall be single nailed. End matched and finger-jointed flooring delivered in lengths of not less than 900mm will be accepted. Staggered end matched joints other than over joists are acceptable.

Flooring to external porches or verandahs shall be a minimum 19mm thick T & G Kiln Dried and Reconditioned red gum, jarrah, hardwood or pressure treated radiata pine, no wider than 90mm. See Project Specifications, Page 2 Item 4.

Hardwood flooring shall be oiled or weatherproofed all around before fixing. Exterior flooring boards shall be laid in the direction of outward fall, which shall be not less than 1 in 20.

Floors shall have nails punched below surface, shall be given a basic machine sanding to provide even surface and shall be left clean throughout. Fine sand floors for polishing where polished floors are specified. See Project Specifications, Page 3 Item 13.

NOTE: Floors to be polished shall be filled and finished in two coat floor plastic or as specified in Project Specifications, Page 3 Item 13.

F 7 WALL FRAMING

Timber for framing walls shall be of the following sizes:-

ITEM	HARDWOOD size mm	SOFTWOOD size mm	DESCRIPTION
Plates	100 x 50 or 75 x 50	90 x 45	In long lengths, bottom plates butt joined, top plates halved or fixed with metal connectors. Where checked or thicknessed, minimum thickness to be 40mm.
Studs	100 x 38 or 75 x 50	90 x 35 or 90 x 45	Up to 600mm centres. Solidly block corner studs together with two blocks 400mm long equally spaced.
Jamb Studs	100 x 50 or 75 x 50	90 x 45	To openings more than 900mm wide.
Studs for non-load bearing walls	75 x 38	70 x 35	Up to 600mm centres.
Braces	50 x 25	42 x 19	Diagonal braces checked in flush and stop checked to one plate.

Frame and trim as necessary for wardrobes and cupboards. In buildings where fireplaces occur, set one stud centrally above fireplace opening.

Trimmers to Openings

Trimmers to external wall openings to be checked in on the outside of studs and fixed to same.

Provide 100mm x 38mm fixing trimmers at head of openings except where special strengthened frames are fitted. Head trimmers to steel or aluminium window frames to be kept 20mm clear of frame.

F. CARPENTRY (Cont'd.)

F 7 TRIMMERS, HEADERS AND BRESSUMMERS

NOTE: In each table the first figure shown under sizes shall be the depth of the trimmers.

Wall plate shall be continuous over the trimmers.

LAMINATED BEAMS approved by the Local Authority may also be used.

SUPPORTING A ROOF CONSTRUCTED WITH RAFTERS

Trimmers may support up to 2400mm of roof measured along rafter plus 600mm of overhang.

TRIMMERS FOR SHEET ROOFS

Rafter Spacing up to 1200mm centres.

SPAN OF TRIMMER mm	TRIMMER SIZE – mm		
	HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD
1500	100 x 38	125 x 38	120 x 45 or 90 x 70
1800	125 x 38	150 x 38 or 125 x 50	140 x 45 or 120 x 70
2100	150 x 38 or 125 x 75	175 x 38 or 150 x 50	170 x 35 or 120 x 70
2400	175 x 38 or 150 x 75	200 x 38 or 175 x 50	170 x 45 or 140 x 70
2700	200 x 38 or 175 x 50	200 x 50	170 x 45 or 190 x 35
3000	200 x 50	250 x 50 or 200 x 75	190 x 45 or 170 x 70
3300	200 x 75	250 x 50	240 x 35 or 190 x 70
3900	(300 x 75)	300 x 75	240 x 70

TRIMMERS FOR TILED ROOFS

Rafter up to 600mm spacing.

SPAN OF TRIMMER mm	TRIMMER SIZE – mm		
	HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD
1500	125 x 38	150 x 38 or 125 x 75	120 x 35
1800	175 x 38 or 150 x 50	200 x 38 or 175 x 50	140 x 35
2100	200 x 38 or 175 x 50	200 x 50 or 175 x 75	170 x 45 or 190 x 35
2400	200 x 50	250 x 50 or 200 x 75	240 x 35 or 190 x 45
2700	200 x 75	250 x 50	240 x 35
3000	(250 x 75)	300 x 50 or 250 x 75	240 x 70

SUPPORTING A ROOF CONSTRUCTED WITH TRUSSES

Truss Span is exclusive of overhang

TRIMMERS FOR SHEET ROOFS

Trusses Spanning up to 6000mm spaced 1200mm.

SPAN OF TRIMMER mm	TRIMMER SIZE – mm		
	HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD
1500	125 x 38	150 x 50 or 175 x 38	140 x 45 or 170 x 35
1800	150 x 38	175 x 38 or 150 x 50	170 x 45 or 190 x 35
2100	175 x 38	200 x 38	190 x 45 or 240 x 35
2400	200 x 50	250 x 50	190 x 45 or 240 x 35
2700	200 x 75	250 x 50	240 x 35
3000	(250 x 75)	300 x 50	240 x 45

( ) Sizes in brackets are permissable but not recommended in green timber due to excessive shrinkage.

F. CARPENTRY (Cont'd.)

F 7
(cont.)

TRIMMERS FOR SHEET ROOFS

Trusses Spanning up to 12 000mm

SPAN OF TRIMMER mm	TRIMMER SIZE – mm		
	HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD
1500	150 x 50 or 175 x 38	175 x 50 or 200 x 38	190 x 45
1800	175 x 50 or 200 x 38	200 x 50	240 x 35
2100	200 x 50	250 x 50	240 x 45
2400	200 x 75	300 x 50	240 x 45
2700	(250 x 75)	300 x 50	240 x 70

TRIMMERS FOR TILED ROOFS

Trusses Spanning up to 6000mm.

SPAN OF TRIMMER mm	TRIMMER SIZE – mm		
	HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD
900	100 x 50	125 x 50 or 150 x 38	140 x 45
1200	150 x 38	175 x 38 or 150 x 50	170 x 45
1500	175 x 38	200 x 38	190 x 45
1800	200 x 38	250 x 50	240 x 35
2100	200 x 75	250 x 50	240 x 45
2400	(250 x 75)	300 x 50	240 x 45
2700	(250 x 75)	300 x 75	240 x 70

TRIMMERS FOR TILED ROOFS

Trusses Spanning up to 12 000mm

SPAN OF TRIMMER mm	TRIMMER SIZE – mm		
	HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD
900	150 x 38	175 x 50 or 200 x 38	190 x 45 or 240 x 35
1200	175 x 50 or 200 x 38	250 x 50	240 x 45
1500	200 x 50	250 x 50	240 x 70
1800	200 x 75	300 x 50	240 x 70
2100	(250 x 75)	300 x 50	240 x 70

( ) Sizes in brackets are permissable but not recommended in green timber due to excessive shrinkage.

Where the depths of the trimmers etc. are not suitable, beams designed by a Structural Engineer may be used subject to the approval of the Local Authority.

NOGGINGS shall be a minimum of 35mm thick by width of studs for Fibrous Plaster linings or where Plasterboard linings are used, the noggings may be up to 25mm less than the stud width trimmed to studs and shall be located in the following positions.

a. For Fibrous Plaster lining with 2400mm high ceiling one row centrally between plates. Over 2400mm high ceilings, 2 rows evenly spaced between plates near joints in sheets.

b. For Plaster Board, one row between plates kept at least 150mm away from horizontal joints of boards.

c. Skirting Blocks at least 225mm long shall be fixed on flat between studs. Where wall sheets are fixed to the bottom plates and skirtings do not exceed 70mm in height skirting blocks are not required.

d. For vertical timber cladding and sheet materials other than those previously specified, noggings shall be a maximum of 600mm apart unless otherwise stated by the manufacturer's fixing instructions.

F. CARPENTRY (Cont'd.)

F 8 ROOF FRAMING

Roofs shall not be strutted from hangers, ceiling joists or above spans over wall openings, unless the structural members have been designed to carry both roof and ceiling loads.
Rafters shall be birdsmouthed over plates and the birdsmouth shall not exceed 1/3 of the rafter depth. Roof Trusses at 1200mm maximum centres, strictly to C.S.I.R.O. and the Commonwealth Experimental Building Station Specifications and approved by Local Authority, may be used with double top plates, or the truss placed over a stud and/or mullion, fixed to top plate with framing anchors.
Trusses shall be branded with Manufacturer's name for identification.

Sheeted Roofs.
Roof framing shall be securely fixed to external wall studs with straps or bolts spaced at max. 1200mm centres. Similarly fix roof framing to brick cavity walls.
Battens shall be strapped to all rafters at external edges of roof.

Timber shall be of the following sizes and spacings:-

MEMBER	MEMBER SIZE – mm			CENTRE TO CENTRE SPACING – mm
	HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD	
Ceiling Joists continuous over two or more spans.	100 x 38	100 x 38	90 x 35	Up to 600 for spans to 1800. Up to 450 for spans to 2400. Up to 600 for spans to 2300.
Hanging beam span – mm.				Max. 2400mm
Up to 1500	100 x 38	100 x 38	120 x 35	
Up to 1800	125 x 38	125 x 38	120 x 35	
Up to 2100	150 x 38	150 x 38	140 x 35	
Up to 2400	150 x 38	175 x 38	140 x 35	
Up to 2700	175 x 38	200 x 38	170 x 35	
Up to 3000	200 x 38	250 x 38	190 x 35	
Up to 3600	250 x 38	250 x 38	240 x 35	
Up to 3900	250 x 38	300 x 38	240 x 35	
Up to 4200	300 x 38	300 x 50	240 x 35	
Up to 4800	300 x 38	300 x 50	— —	
Ridges. In long lengths properly scarfed together.	175 x 25	175 x 25	170 x 19	
Hips and Valleys. In Continuous lengths. Support hips and valleys with min. 90mm x 70mm struts at or near centre of span and higher end.	175 x 38	175 x 38	190 x 35	

Ceiling joists shall be Double fixed to top plate and feet of rafters, and shall be secured to hangers with metal straps or 38mm x 38mm hanging pieces. Where insertion of hanger is not possible provide counter beams of approved size. Hangers to be blocked off wall plate clear of joists.

F. CARPENTRY (Cont'd.)

F 8 ROOF FRAMING (Cont.)

In rafter tables the rafter span shown is measured up the length of rafter.

RAFTERS OR UNDERPURLINS FOR TILED ROOFS (60kg/m^2)

Minimum gradient of rafters to be 1 in 3.7 where the rafter length does not exceed 4500mm. For unsarked roofs gradient shall be not less than 1 in 2.5 for Terra Cotta or 1 in 3.3 for concrete tiles with min. 100mm end laps. All roofs over 1 in 1.4 shall be double battened.

For the type of roof construction in which a ceiling is directly attached to rafters carrying tiles or the like, the rafter spans shall be 90% of those given in this table.

	MAX. SPAN BETWEEN SUPPORTS mm	HARDWOOD sizes mm	UNSEASONED SOFTWOOD sizes mm	SEASONED SOFTWOOD sizes mm	SPACINGS mm
Spans up to 3000mm are for continuous spans.	1500	75 x 38	75 x 38	70 x 35	450
	1800	75 x 38	100 x 38	90 x 35	
	2100	100 x 38	100 x 38	90 x 35	
	2400	100 x 38	125 x 38	120 x 35	
	2700	125 x 38	125 x 38	120 x 35 X	
	3000	125 x 38	150 x 38 *	120 x 35 X	
	1800	75 x 50 or 100 x 38	100 x 50 or 100 x 38 X	90 x 35	600
	2400	100 x 50 or 125 x 38 X	125 x 50 or 125 x 38 X	120 x 45 or 120 x 35 X	
	3000	125 x 50 or 150 x 38 X	150 x 50 or 150 x 38 X	140 x 45 or 140 x 35 X	
	3000 #	200 x 50	200 x 50 X	190 x 45 X	
Spans above 3000mm are for rafters supported at two points only.	3600	200 x 50	250 x 50 X	190 x 45 X	
	4200	--	250 x 50 X	--	
	4800	--	--	--	
	5400	--	--	--	

\# Supported at two points only.

X Used as rafters with restraint of 75mm x 25mm timber bracing set diagonally at each end of roof plane from ridge to eaves, and fastened at each intersection to the underside of the rafters or with restraint *. These restraints may be omitted in hip and valley construction that provides equivalent restraint.

* Used as rafters with herringbone bracing or solid blocking fitted between adjacent members at mid span.

Timbers in excess of 175mm in depth up to and including 225mm in depth shall be minimum 50mm thick and timbers in excess of 225mm in depth shall be minimum 75mm thick when used as underpurlins.

F. CARPENTRY (Cont'd.)

F 8 (cont.)

RAFTERS OR UNDERPURLINS FOR SHEET ROOFS WITH CEILINGS FIXED TO RAFTERS (40kg/m²)

	MAX. SPAN BETWEEN SUPPORTS mm	HARDWOOD sizes mm	UNSEASONED SOFTWOOD sizes mm	SEASONED SOFTWOOD sizes mm	SPACINGS mm
Spans up to 3000mm are continuous over two or more spans.	1800	75 x 38	75 x 50 or 100 x 38	90 x 35 or 70 x 45	600
	2400	100 x 38	100 x 50 or 125 x 38 X	90 x 45 or 120 x 35 X	
	3000	125 x 38 X	125 x 50 or 150 x 38 *	120 x 35 X	
Spans over 3000mm are supported at two points only.	3000 #	150 x 38 X	150 x 50	140 x 35 *	
	3600	200 x 50	200 x 50 X	190 x 45 X	
	4200	200 x 50	250 x 50 X	190 x 45 X	
	4800	(250 x 50) X	250 x 50 X	240 x 45 X	
	5400	(300 x 50) *	300 x 50 *	240 x 45 *	

RAFTERS OR UNDERPURLINS FOR SHEET ROOFS WITH CEILING FIXED TO RAFTERS (40kg/m²)

	MAX. SPAN BETWEEN SUPPORTS mm	RAFTER OR UNDERPURLIN SIZE – mm			CENTRE TO CENTRE SPACINGS mm
		HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD	
Spans up to 3000mm are continuous over two or more spans.	1800	75 x 50 or 100 x 38 X	100 x 38 X or 100 x 50	90 x 45 or 120 x 35 X	900
	2400	100 x 50 or 125 x 38 X	125 x 38 X or 125 x 50	120 x 45 or 140 x 35 X	
	3000	125 x 50 or 150 x 38 X	150 x 38 X or 150 x 50	120 x 45 or 140 x 35 X	
Spans over 3000mm are supported at two points only.	3000 #	200 x 50	200 x 50	190 x 45	
	3600	200 x 50 X	250 x 50 X	190 x 45	
	4200	(250 x 50 X)	250 x 50 X	240 x 45 *	
	4800	(250 x 75)	300 x 50 *	240 x 45 *	
	5400	(300 x 75)	300 x 75		

Supported at two points only.

X Used as rafters with restraint of 75mm x 25mm timber bracing set diagonally at each end of roof plane from ridge to eaves, and fastened at each intersection to the underside of the rafter or with restraint *. These restraints may be omitted in hip and valley construction that provides equivalent restraint.

* Used as rafters with herringbone bracing or solid blocking fitted between adjacent members at mid span.

Timbers in excess of 175mm in depth up to and including 225mm in depth shall be minimum 50mm thick and timbers in excess of 225mm in depth shall be minimum 75mm thick when used as underpurlins.

( ) Sizes in brackets are permissable but not recommended in green timber due to excessive shrinkage.

F. CARPENTRY (Cont'd.)

F 8 (cont.)

RAFTERS OR UNDERPURLINS FOR SHEET ROOFS WITH CEILINGS FIXED TO RAFTERS (40kg/m^2)

	MAX. SPAN BETWEEN SUPPORTS mm	RAFTER OR UNDERPURLIN SIZE –mm			CENTRE TO CENTRE SPACINGS mm
		HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD	
Spans up to 3000mm are continuous over two or more spans.	1800	100 x 50 or 100 x 38 X	100 x 50 or 125 x 38 X	120 x 35 X	1200
	2400	125 x 50 or 125 x 38 X	125 x 50 or 150 x 38 X	120 x 45 or 140 x 35 X	
	3000	150 x 50 or 150 x 38 *	150 x 50	140 x 45	
	3000 #	200 x 50	200 x 50 X	190 x 45	
Spans over 3000mm are supported at two points only.	3600	(250 x 50) X	250 x 50 X	240 x 45 X	
	4200	(250 x 50) X	300 x 50 *	240 x 45 *	
	4800	(250 x 75)	300 x 50 **		
	5400	(300 x 75) X	300 x 75 **		

\# Supported at two points only.

X Used as rafters with restraint of 75mm x 25mm timber bracing set diagonally at each end of roof plane from ridge to eaves, and fastened at each intersection to the underside of the rafter or with restraint *. These restraints may be omitted in hip and valley construction that provides equivalent restraint.

* Used as rafters with herringbone bracing or solid blocking fitted between adjacent members at mid span.

** Used as rafters with herringbone or solid bracing fitted at 1500mm intervals.

Timbers in excess of 175mm in depth up to and including 225mm in depth shall be minimum 50mm thick and timbers in excess of 225mm in depth shall be minimum 75mm thick when used as underpurlins.

( ) Sizes in brackets are permissable but not recommended in green timber due to excessive shrinkage.

RAFTERS OR UNDERPURLINS FOR SHEET ROOFS (20kg/m^2)

These tables are based on non-trafficable roofs.
Refer floor joist tables for trafficable roofs.

MAX. SPAN BETWEEN SUPPORTS mm	RAFTER SIZE – mm			CENTRE TO CENTRE SPACINGS mm
	HARDWOOD	UNSEASONED SOFTWOOD	SEASONED SOFTWOOD	
1500	75 x 38	75 x 38	70 x 35	600
1800	75 x 38	75 x 38	90 x 35	
2100	75 x 38	100 x 38	90 x 35	
2400	100 x 38	100 x 38	90 x 35	
2700	100 x 38	100 x 38	120 x 35	
3000	100 x 38	125 x 38	120 x 35	
1500	75 x 38	75 x 38	90 x 35	900
1800	75 x 38	100 x 38	90 x 35	
2100	100 x 38	100 x 38	120 x 35	
2400	100 x 38	125 x 38	120 x 35	
2700	100 x 38	125 x 38	120 x 35	
3000	125 x 38	125 x 38	120 x 35	
1500	75 x 38	100 x 38	90 x 35	1200
1800	75 x 38	100 x 38	120 x 35	
2100	100 x 38	125 x 38	120 x 35	
2400	100 x 38	125 x 38	120 x 35	
2700	125 x 38	125 x 38	140 x 35	
3000	125 x 38	150 x 38	140 x 35	

F. CARPENTRY (Cont'd.)

F 8 (cont.)

MEMBER	HARDWOOD sizes mm	SOFTWOOD sizes mm	CENTRE TO CENTRE SPACINGS mm	DETAILS OF CONSTRUCTIONS
Collar Ties	75 x 38	90 x 35	Max. 1200	Fixed to rafters. Where no purlins, provide collar ties to each pair of rafters.
Under purlins	100 x 75	90 x 70	To suit rafters	Purlins shall be provided where possible in long lengths and halved together.
Struts	100 x 75	90 x 70	Tile & AC sheet roof 2100 under ridges 1800 under purlins. Other sheet roofs 3600 under ridges 2400 under purlins	Struts shall be placed under run of ridges and purlins and under joints. Struts supporting purlins shall be placed plumb or perpendicular to roof slope or at any angle between the above. Alternatively, install strutting beams or tie bolt trusses.
Wind Bracing	100 x 50	90 x 45		Fix bracing to each gable at a gradient of 1 in 1. Fix to ridge and wall plate.
Valley Boards	150 x 25 and 75 x 25			225mm each side of valley.
Chimney Lear Board	150 x 25			Fix board behind chimney as base for chimney gutter.
Fascias		190 x 30		Radiata pine shall be pressure treated.
Barge		30 thick		Fix 20mm above top of rafters with mould under verge tiles. Radiata Pine shall be pressure treated.
Soffit Trimmer Joists	50 x 38	42 x 35	Max. 600	To support eaves lining.

F. CARPENTRY (Cont'd.)

F 9 STRUTTING AND BRACING Where strutting as specified in Clause F8 cannot be satisfactorily carried out from wall plates, install propping beams, timber trusses or tie bolt trusses.

F 10 PARAPET, INTERNAL BOXED AND CONCEALED EAVES GUTTERS Construct parapet and internal boxed gutters with 75mm x 38mm gutter bearers fixed to each rafter and sheeted with 25mm boarding and where required cleated to 75mm x 50mm wall pieces, set to give a fall of not less than 1 in 80 and left to take the gutter. Nails shall be punched below the surface of boarding. See Plumbing Page 49, Clause J9 for gutter construction. Concealed eaves gutters with splayed fascia may be supported directly on to cut-out splayed ends of rafters, set to give a similar fall as specified above.
Other approved methods of construction may be used.

F 11 MANHOLE Trim in ceiling for manhole at least 600mm x 400mm in a convenient position, to permit access to roof space. Fit a cover to manhole.

F 12 SERVICE TANK PLATFORMS

(a) Where a hot water storage tank is to be installed within a conventionally constructed pitched roof space, construct the platform with 100mm x 50mm joists at 450mm centres raised 25mm above top plate and decked with 25mm boarding. Platform shall not be supported on wall framework over door openings nor on ceiling joists or roof trusses unless provision is made to take the added load. Where roof trusses are used, hot water tank platform shall be of 75mm x 38mm timber supported by bottom chord of trusses. Securely fix a 75mm x 38mm timber dropper from apex of truss to the centre of bottom chord with three 75mm nails at each end or provide 100mm x 75mm bearers resting on bottom chords of four trusses at a distance not more than 300mm from any panel or dropper point.

(b) Construct a solidly supported platform to carry the cold water tank. Provide a similar platform for toilet cistern supply tank where required.

F 13 VENTILATION TO ROOF SPACE

Provide continuous or evenly distributed ventilation openings as specified below.

(a) To flat roofs or roofs covered with sheet material in the proportion of $1m^2$ of clear ventilation opening to every $150m^2$ of floor area.

(b) To sarked roofs, which are to be covered with other than sheet materials, in the proportion of $0.5m^2$ of clear ventilation opening to every $150m^2$ of floor area.

F 14 EAVES Unless otherwise specified in Project Specifications Item 26, eaves shall be constructed as shown on drawings and as specified below:

(a) **FLAT SOFFITS** Trim from rafter ends to wall at maximum 600mm centres with 50mm x 38mm soffit trimmer joists secured to 50mm x 38mm wall plate or studding. Line underside with 4.5mm asbestos fibre board sheeting. Provide cover straps or jointing strips. Fix mould against fascia if not grooved.

(b) **SLOPING SOFFITS** Line on underside of rafters with asbestos fibre board sheeting.

F 15 CEILING LININGS TO VERANDAHS, PORCHES AND GARAGES

Unless otherwise stated in Project Specifications, Page 11, Item 26, ceilings of verandahs and porches whether horizontal or sloping under skillion roofs, shall be lined with 4.5mm asbestos fibre board sheeting in regular panels. Fix 19mm moulds in all angles. Attached garages, and garages in sub-floor space, where timber joists are provided to carry floors above, shall have ceilings of not less than one hour fire resistance rating materials. Refer Project Specifications, Page 11, Item 24. The framed ceilings and walls of garages constructed beneath, attached to or that part within 1.2m of dwellings, shall be lined with a one hour fire resistance rating material, conforming with the Uniform Building Regulations of Victoria Clause 3132, and acceptable to the Fire Underwriters' Association of Victoria. Insert details in Project Specifications, Page 11, Item 24.

F 16 EXTERNAL CLADDING Refer Project Specifications, Page 4 Item 13.

(a) **Vertical Timber Cladding**
Provide a waterproof sarking behind all external vertical timber cladding, loosely fixed to studs and carried down beyond lower plates.
Boards shall be primed or treated with a penetrating wood preservative or oil finish on front face, edges and at back where lapped, and bottom trimmed ends before being fixed. Lower ends of boards shall be undercut. Boards shall be nailed clear of laps. Boards shall be minimum of 14mm thick End of boards shall be trimmed 10mm clear of bottom flashing or plinth.

(b) **Asbestos Cement and Fibre Board**
Cladding shall be asbestos fibre board sheeting or contoured asbestos cement sheeting. Sheets shall be securely fixed in accordance with manufacturer's recommendations.

F 17 INSULATION For provision of insulation, See Project Specifications, Page 11, Item 23.

F. CARPENTRY (Cont'd.)

F 18 SUPPORTS FOR CAR PORTS, VERANDAHS AND PORCHES Posts to carport, verandahs and porches shall be dressed 90mm x 90mm timber, supported on galvanised metal and kept a minimum of 25mm clear of concrete. Posts shall be shouldered and bolted to bressummers. Prefabricated Wrought Iron supports may be used or galvanised steel columns set into concrete bases with an angle bracket welded to top of column where required and coach screwed to bressummers.
Fill in spandrel ends with vertical boarding or as shown on drawings.

F 19 STOVE RECESS Frame up for stove recess, overhead cupboards, and canopy as shown on drawings. See Plumbing, Page 50, Clause J14.

F 20 BATH shall be fixed with flange checked into studs in accordance with the requirements of Local Authority. Frame up bath riser and sheet with materials impervious to water, set back 5mm from edge of the bath. Unless otherwise specified, prepare for one row of 150mm x 150mm tiles around and over top flange of bath. Flash to all walls above bath in accordance with Local Authority.
FIBROUS PLASTER OR PLASTERBOARD SHALL NOT BE FIXED WITHIN 150mm ABOVE TOP OF BATH, OR USED IN SHOWER AREA.

F 21 SHOWER RECESS For type and finish of floor and walls, See Project Specifications, Items 6, 20 & 26. Where pre-fabricated shower screen is not provided frame up for shower recess where indicated, to a minimum height of 1800mm above floor of shower base. Build in shower base, set on floor joists.
Walls shall be sheeted with material impervious to water and approved by the Governing Authority, on battens checked into studs, or noggings at 450mm centres, with bottom of lining material set in caulking compound, or finished with tiling as specified.
Unless otherwise specified finish at top with 19mm dressed capping, with 19mm mould under, primed all faces before fixing.
Trim for soap holders, where directed.

F 22 INTERNAL LININGS TO BATHROOM Where referred to in Project Specifications, Page 4, Item 13, line walls of bathroom with fibrous plaster, plasterboard, tempered hardboard, decorative asbestos fibre board sheeting or similar material and where shower is fitted over the bath allow impervious wall sheeting to carry up to a height of 1800mm above floor of the bath at shower end for a distance of 900mm along return walls.
Trim between studs for fixing of soap holders in Shower Recess and over bath.

F 23 PREPARATION FOR TILING For method of fixing tiles see Project Specifications, Page 8, Item 20. Where ceramic tiles are to be fixed with adhesive, wall shall be prepared by fixing asbestos fibre board 4.5mm minimum thickness to studs spaced up to 450mm centres, and 9mm thickness to studs spaced up to 600mm centres, or other material approved by the Local Authority.
Fix metal angles to corners behind sheeting in shower recesses, above baths and other areas where directed by the Sewerage Authority.
Carry sheeting and metal angles over up-stand incorporated in the fitting which acts as a base for tiling.
Timber floors shall be prepared by fixing 4.5mm minimum thickness asbestos fibre board sheeting over the flooring after flooring has been sanded or by fixing 20mm minimum thickness double faced fully compressed asbestos cement board direct to joists where this method is permitted by the Local Authority.
Where ceramic wall tiles are to be fixed with a bed of mortar, studs shall be lined with building paper then sheeted with expanded metal well secured with galvanised staples and kept 5mm clear of studs.
Provide pricking up coat of render composed of 1 part cement, 1 part hydrated lime, 6 parts sand.

F 24 TIMBER STEPS, RAMPS, LANDINGS AND HANDRAILS See General Clauses Clause B19.
Timber sizes stated in this clause are minimum sizes. Provide timber steps, ramps, landings and handrails where indicated on drawings or where referred to in Project Specifications Items 4, 8, 9 & 10. Red gum, jarrah or pressure treated timber shall be used. All timbers unless pressure treated shall be treated as specified in Painting and Finishing, Clause S5(b).

STEPS shall be constructed with 85mm x 85mm newel posts let 450mm into the ground and set on 300mm x 150mm x 38mm timber sole plates or 75mm thick concrete pads.
Posts over 1000mm out of the ground shall be braced with 63mm x 30mm braces. Treads shall be 240mm x 30mm minimum or two equal widths spaced 5mm apart to give minimum tread width of 240mm exclusive of nosing housed into 220mm x 30mm strings fixed to newel posts with two 10mm diameter galvanised bolts at each fixing, set to provide a maximum rise of 190mm.
For steps comprising four risers or more, provide 10mm diameter galvanised tie rods with threaded ends for nut and washer, fixed under top and bottom treads and under every fourth tread. Steps in excess of 1200mm in width shall have 100mm x 50mm carriage pieces spaced so that spans do not exceed 900mm.

RAMPS shall be constructed at a gradient not more than 1 in 8 with 85mm x 85mm newel posts let into ground and set on 300mm x 150mm x 38mm timber sole plates or 75mm thick concrete pads. Posts over 1000mm out of the ground shall be braced with 63mm x 30mm. Strings shall be 220mm x 30mm fixed to newel posts with two 10mm diameter galvanised bolts at each fixing. Deck across strings with 63mm x 30mm timber spaced 5mm apart. Ramps in excess of 1200mm in width shall have 100mm x 50mm carriage pieces spaced so that spans do not exceed 900mm.

F. CARPENTRY (Cont'd.)

F 24 TIMBER STEPS' RAMPS, LANDINGS AND HANDRAILS (cont.)

LANDINGS shall be constructed with 85mm x 85mm newel posts, let 450mm into ground and set on 300mm x 150mm x 38mm timber sole plates or 75mm thick concrete pads.
Posts over 1000mm out of the ground shall be braced with 63mm x 30mm. Bearers shall be 100mm x 50mm fixed to newel posts with one 10mm diameter galvanised bolt at each fixing.
Joists shall be 100mm x 38mm fixed at 450mm centres. Floor shall be 63mm x 19mm dressed timber set 5mm apart, with edges rounded.

HANDRAILS Newel posts shall be extended up and checked to take 85mm x 40mm handrails rounded on top and 63mm x 40mm intermediate rails.
Where the length of strings is in excess of 1800mm, 85mm x 40mm intermediate posts bolted to strings shall be provided so that spans of handrails shall not exceed 1800mm. Height of handrails shall be not less than 850mm above tread nosings and ramp decking, and not less than 900mm above floors of landings and verandahs. Handrails to verandahs shall be checked into posts and supported by 85mm x 40mm posts so that spans of handrails shall not exceed 1800mm or be constructed as specified in Project Specifications, Page 11 Item 26.

F 25 RAINWATER TANK STAND FOR 9000 LITRE SQUAT TANK Stumps shall be of red gum, pressure treated round radiata pine or prestressed reinforced concrete to heights indicated, and shall be 100mm x 100mm up to 1200mm above ground, and 125mm x 125mm where over 1200mm sunk minimum 600mm into ground, resting on 200mm x 50mm continuous sole plates for timber stumps or 600mm x 600mm x 150mm concrete pads for precast concrete stumps.
Single stand shall have nine stumps, double stand fifteen stumps. Bearers shall be 100mm x 75mm set on stumps. Joists 100mm x 50mm at not more than 400mm centres, lined on top with 75mm x 38mm decking set 25mm apart.
Stand components shall be solidly fixed together.
Stumps shall be braced both ways with 100mm x 38mm diagonal bracing bolted to stumps with 10mm diameter galvanised M.S. bolts, washers and nuts.
Alternatively a steel tank stand of nominated manufacture may be provided, see Project Specifications, Page 11 Item 26.

F 26 METER AND FUSE ENCLOSURES Trim between studs for meter and fuse enclosures where indicated. Sides, head, bottom and back, out of 19mm timber. Radiata Pine when used shall be pressure treated. To each enclosure fix top hung door, fix stop, suitable catch and stay. Enclosures shall be of sizes required, lined and finished to suit the requirements of the Supply Authority.
See Plumbing, Page 50, Clause J12(j) for flashing over meter and fuse enclosures.

F 27 WINDOW WALL CONSTRUCTION Details for window walls shall be submitted to Lending Authority for approval. Window walls carried from floor joists to continuous top plate shall have heads which together with top plates shall be sufficient to carry the roof load. Otherwise a separate head beam to suit the span shall be provided. Mullions where used structurally shall be in one length of sectional area sufficient to support the loads imposed.

F 28 PAN CLOSET BUILDING See Project Specifications, Page 1, Item 2.
In all unsewered areas, unless septic tank installation is specified the Builder shall provide a Pan Closet building in accordance with the General Sanitary Regulations made under the Health Act and other Governing Authorities.
Internal size shall be 1650mm x 1000mm, 2250mm high at front and 2100mm at rear.
Lay 100mm thick concrete floor. See Concrete, Clause D14. Wall and roof framing shall be 75mm x 50mm suitably braced. Cover roof with corrugated asbestos cement or other roof sheeting, set to fall to rear and secured to 75mm x 38mm roof battens. Roof shall project 150mm at front and rear. Fix suitable barge moulds.
Line externally with asbestos cement or other sheeting complete with similar cover straps and angle moulds. Provide and fix ledged and braced door sheeted with 19mm T & G boarding, hung with one pair of 250mm tee hinges. Doors shall be 150mm short at top and 75mm at bottom for ventilation. Install pan door at the side or rear if required. Provide and install fly proof pan enclosure and seat. The Owner shall arrange with Local Authority for supply of pan service.

G. JOINERY

G 1 GENERALLY Sizes specified in this section (Joinery) are finished sizes. Timbers used in door and window frames and jamb linings shall be of width to suit wall thickness.

TIMBER All timber used shall comply with the appropriate current Specifications issued by the Standards Association of Australia, where these apply.
All timber including pressure treated timber but excluding recognized sill species, shall have a moisture content of not less than 10% and not more than 15% at the time of fixing.

G. JOINERY (Cont'd.)

G 1 TIMBER (cont.)

Oregon, when used as a finishing timber or exposed structural member, shall be of "select merchantable" grade.

Timber for windows, doors, floorings, architraves, skirtings, window boards, moulds, mantel shelf and cupboards shall be kiln dried and reconditioned.

Where used externally Radiata Pine shall be pressure treated complying with the Australian Standard 1604 Preservation of Building Timber and Plywood. Finger jointed material shall comply with the Australian Standards 098–1966 Size Matched Framing for South Eastern Australian Hardwoods and 1491–1973 Finger Jointed and/or Laminated Radiata Pine Scantlings.

Any timber containing live borers, insects or other pests shall immediately be removed from the building site.

PROTECTION OF WORK Provide and fix protective boarding over or otherwise protect work, timber sills, joinery, etc., and all fittings liable to become damaged during construction of the building.

Seasoned timber and joinery shall be stacked under cover at all times and adequately protected from the weather, unless same have been oiled or primed prior to delivery to job.

WORKMANSHIP Do all framing, furring, housing, rebating and mitring of joinery components and fix all joinery as necessary. The work shall be finished in a tradesmanlike manner and shall be in accordance with recognised good trade practices.

Exposed timbers shall be brought to a good smooth surface before being fixed and shall be left free from hammer and buzzer marks, bruises or other blemishes.

Prime paint or oil external door and window frames, doors and sashes on all faces including backs, also glazing rebates, fascias and other finished timbers before or immediately they are delivered to the job. Priming shall be pink primer or oil according to the finish required. Backs of external mouldings, tops of frames and underside of sills shall be similarly primed. See Project Specifications, Page 9 Item 21.

Punch all nails prior to priming.

G 2 EXTERNAL DOOR FRAMES ETC. External door frames shall have solid jambs and heads 40mm thick, rebated not less than 10mm deep by a width to suit the thickness of doors and flywire doors. Where side lights are indicated, mullions shall be in one length 40mm thick with 10mm deep double rebates. Where fanlights are indicated, transoms shall be 40mm thick double rebated and weathered with drip groove. Timber thresholds where required shall be durable timber with drip groove.

Frames shall be secured with steel dowels where timber thresholds are not required. For type of threshold see Project Specifications, Page 2, Item 7.

G 3 JAMB LININGS AND HEADS Quality shall be in accordance with Australian Standard, 076–1967 Wooden Door Frame and Door Jamb Linings. Jamb Linings and heads to internal doors shall be 20mm thick, tongued together and with 30mm x 10mm stops planted on.

Provide and fix similar jamb and head linings to wardrobes, linen, coat, broom, pantry and other cupboards.

G 4 DOORS Timber doors shall conform with Australian Standard 099–1971 Wooden Doors. For location, type and size, see Project Specifications, Page 4, Item 14. For finish see Project Specifications, Page 9, Item 21.

(a) **SIZES** Unless otherwise specified in Project Specifications Item 14. Doors to all rooms shall be 2040mm high by 820mm wide excepting that doors to bathrooms shall be a minimum of 720mm wide and doors to toilet compartments shall be a minimum of 620mm wide. Sliding doors shall have effective opening widths as for hung doors with ample cover at each side of opening. Doors to wardrobe, linen, coat, broom, storage cupboard and pantry, shall be of width shown on drawings or to suit openings. Flush panel doors shall have a minimum thickness of 32mm. Framed glazed doors and louvred doors shall have a minimum thickness of 30mm. Cupboard and pantry doors shall have a minimum thickness of 28mm.

(b) **EXTERNAL FLUSH PANEL DOORS** shall be semi solid sheeted externally with waterproof sheeting branded as such, bonded to the frame with waterproof glue.

(c) **INTERNAL FLUSH PANEL DOORS** shall be semi solid stock pattern sheeted with 3mm thick plywood or hardboard or as specified in Project Specifications, Page 5, Item 14.

(d) **GLAZED DOORS** shall be framed with 105mm top rails and stiles and 190mm bottom rails properly morticed, tenoned and glued together, rebated to take glass and where glazing bars are required, these shall be 30mm x 20mm thick. Provide beads for fixing glass. For priming of doors see Painting and Finishing Clause S5(d) and for glazing see Glazing Clause T2.

(e) **LOUVRED DOORS** shall be framed with 105mm top rails, stiles and lock rails and 190mm bottom rails properly morticed tenoned and glued together with 5mm thick louvre blades set at a gradient of approximately 1 in 1 spaced a minimum of 12mm.

(f) **EXTERNAL DOORS OF SPECIAL DESIGN** shall be to sizes, material and design as indicated in Project Specifications, Page 4, Item 14.

(g) **CUPBOARD DOORS** shall match other internal doors for type, unless otherwise specified in Project Specifications, Page 5, Item 14.

(h) **WEATHER SEALING** External doorways exposed to weather which have doors opening inwards, shall be fitted with a weather seal at the threshold. Where doors open outwards, provide a rebated sill or threshold.

G. JOINERY (Cont'd.)

G 4 DOORS (cont.)

(i) **MUSHROOM STOPS** Where meeting stiles of double doors are not rebated, fix mushroom stops.

(j) **EDGE STRIPS** shall be 10mm thick fixed to the striking edge of all plywood sheeted flush panel doors.

(k) **HINGES** shall be 90mm steel butts. Hang internal doors over 2100mm in height and all external doors with three hinges. All other internal doors shall be hung with two loose pin butts. Internal double doors shall be hung with broad butt loose pin hinges to allow doors to open flat against walls.

(l) **SLIDING DOOR TRACKS** Fix sliding door tracks or pre-assembled sliding door units where shown on drawings or specified in Project Specifications Item 14.

(m) **DOOR FURNITURE** Fit all door furniture, provided or listed in Project Specifications, Schedule of Fittings.

G 5 FLYWIRE DOORS shall be fitted to the doorway of the kitchen where this forms an external door, and to the external door of any toilet compartment as required by the Uniform Building Regulations Clause 3106. For other flywire doors see Project Specifications, Item 14.
Flywire doors shall be 20mm thick constructed with 140mm bottom rails, 65mm stiles and top rails, and where required 90mm lock rails and 30mm intermediate rails.
Front doors shall be covered for their entire height with flywire and rear doors shall have at least the upper half covered with flywire and the bottom panel sheeted with waterproof sheeting. Hang doors with two 75mm steel butt hinges and fit door catch. Fit self closing devices to kitchen and toilet flywire doors. Where sliding flywire doors are used, a self closing device may be omitted in accordance with Uniform Building Regulations Clause 3106.

G 6 SUB-FLOOR ACCESS DOOR shall be ledged, braced and sheeted with 19mm T & G boarding and shall be approximately 900mm wide and as high as practicable. See Brickwork and Concrete Masonry Blockwork Clause E9.
Door shall be hung with 300mm galv. tee hinges to 75mm x 38mm solid frame. Fit 150mm galv. pad bolt. Where not practicable to fit a sub-floor access door, an internal trap door shall be provided in the floor, placed to provide easy access to sub-floor area.

G 7 WINDOWS GENERALLY See Project Specifications, Page 5, Item 14.
Windows may be stock pattern of approved manufacture and of the nearest overall stock sizes to those indicated.
Where stock pattern windows are not specified, construct windows as specified in the following clauses. All dimensions are finished sizes except where otherwise stated, and can only be used where frames are not required to carry structural load. Prime paint or oil all rebates in sashes and frames before glazing. See Painting and Finishing Clause S5(d).
Corner windows shall have pipe columns, or timber supports, see Brickwork, Page 26, Clause E17.
For fittings, sash lifts and fastenings, see Project Specifications, Schedule of Fittings.

G 8 DOUBLE HUNG WINDOWS Sills shall be set or machined on slope, finished not less than 40mm thick weathered, rebated, throated and with an effective drip groove under.
Jambs and heads shall be finished 20mm and mullions 30mm, linings 20mm thick planted on, complete with 10mm parting beads and 10mm staff beads.
Sash stiles and top rails shall be 60mm x 30mm thick, machined and rebated with 30mm meeting rails. Bottom rails 90mm x 30mm. Double hung windows, unless otherwise specified, shall have sashes hung with spiral balances or other method, fitted strictly in accordance with manufacturer's directions and to their scheduled sizes.

G 9 CASEMENT AND AWNING TYPE WINDOWS Sills shall be a minimum of 40mm thick weathered, rebated, throated and drip grooved under, as for double hung windows.
Jambs and heads shall be solid rebated, finished 30mm thick with mullions and transoms finished 40mm thick except where mullions and transoms are required to be double rebated, then the rebated section shall finish 40mm thick. In lieu of solid rebating, other methods may be used.
Sashes as for double hung windows.
Provide additional internal beads wherever necessary to cover checking for patent stays.
Casement or top hung sashes shall be hung with approved fittings.

G 10 GLAZING BARS Where glazing bars are indicated to windows they shall not be less than 30mm thick, plain or moulded.

G 11 METAL FRAMES shall be fixed to manufacturer's directions with weather mould externally and 20mm thick kiln dried hardwood internal linings. Leave 15mm space between brick sills and underside of sills to metal frames and 20mm between head of window frame and trimmer.

G 12 LOUVRE WINDOWS AND VENTS Sills shall be 40mm thick sloping. Frames shall have heads and stiles 30mm thick, grooved to take blades, set at 1.5 in 1 overlapping at least 25mm and finished with all necessary moulds.

G. JOINERY (Cont'd.)

G 13 FLYWIRE SCREENS Where specified in Project Specifications, Page 6, Item 14.

(a) Openable windows shall be covered with removable flywire screens.

(b) One openable window of the kitchen and the toilet compartment shall be fitted with a flyproof screen as required by the Uniform Building Regulations, Clause 3106.

G 14 WIND MOULDS Finish in angles between timber door frames and brickwork and between timber window frames and brickwork with 15mm thick wind moulds of width to give ample cover.

G 15 WINDOW BOARDS Provide and fix window boards of a minimum thickness of 20mm with mould under. Where no window board is required fix architrave around the frame.

G 16 ARCHITRAVES Provide and fix architraves to all door and window openings. Architraves shall be minimum overall finished size 40mm splayed, bull-nosed or plain moulded finish or other special moulding, mitred at angles and securely fixed.

G 17 ANGLE MOULDS Finish as necessary to all internal angles with quads or other suitable moulds.

G 18 SKIRTINGS AND FLOOR MOULDS Provide and fix 40mm x 15mm minimum splayed, bull-nosed or plain moulded skirting throughout, including the laundry, toilet, inside all wardrobes, linen presses, pantries and coat cupboards.
Finish between floor and hearths with 20mm moulds.

G 19 PELMETS Where pelmets are required to doors or windows, see Project Specifications, Page 6, Item 14, provide pelmet out of 150mm x 15mm top, front and stop ends, well secured.

G 20 MANTEL SHELF Provide and fix mantel shelf where shown on drawings. Where details are not indicated, shelf shall be 175mm x 30mm. Finish at top and underside of shelf against wall with timber mould.

G 21 BATHROOM CABINET Build in prefabricated bathroom cabinet, including mirror. See Project Specifications, Schedule of Fittings.

G 22 BUILT-IN WARDROBES AND CUPBOARDS – GENERALLY See Project Specifications, Page 6, Item 14. Wardrobes, linen, coat, broom, pantry and all other cupboards where indicated to be built-in shall be framed and lined as for walls and ceilings and shall be fitted with jambs, stops and architraves as for doors generally and finished with all necessary moulds and covers. Frame up where overhead storage cupboards are indicated. Form cupboard floors at required heights, with 19mm T & G flooring or 10mm particle board on suitable joists. Carry fascia across at ceiling to take cornice moulds, and finish with jambs, stops, architraves, and moulds as before specified.
Shelves shall be 19mm T & G or solid timber, or 10mm particle board.
For tray and drawer fitments to wardrobes, see Project Specifications, Page 6, Item 14.
Wardrobes and coat cupboards shall be fitted with a full depth shelf, supported on cleats 300mm below cupboard door head. Fit a full width 20mm diameter chrome plated hanging rod under, supported at approximately 900mm centres.
Linen cupboards shall be fitted with four full depth shelves, one at 600mm above the floor and the remaining equally spaced. Broom cupboard shall have a shelf fixed 1600mm above the floor and fitted with broom hangers. Provide and hang doors to all built-in wardrobes, cupboards and pantry with steel butt hinges as for internal doors generally. Fit all doors with catches and furniture. See Project Specifications, Schedule of Fittings.

G 23 PRE-FABRICATED WARDROBES AND CUPBOARDS For requirements see Project Specifications, Page 6, Item 14. Prefabricated wardrobes, linen, coat, broom, pantry and other cupboards, as shown, shall be set in position, securely fixed, and finished around in angles and at abutments, with all necessary moulds to match the general trim.

G 24 KITCHEN CUPBOARDS – GENERALLY Provide and fix kitchen cupboards in the manner and to the extent shown on the drawings, and/or specified in the Project Specifications, Page 6, Item 14. Kitchen cupboards may be constructed by the Builder or supplied by a joinery manufacturer.
Cupboards constructed on site shall be framed with dressed timber of a minimum 40mm x 20mm, or 15mm particle board properly framed and fitted together. Each cupboard, including overhead cupboards, shall have doors approximately 450mm wide.
Frame for and provide drawers as indicated. Where not specifically indicated drawers shall be 100mm deep.
Cupboards shall be fitted with 15mm solid or framed floors, shelves and bench tops. Sheet cupboards externally with hardboard, three-ply, or particle board and similarly line one side of cupboard partitions.
Unless otherwise stated in Project Specifications, Page 6, Item 14, cupboard doors shall have rebated frames sheeted on face to match external cupboard lining, with outer edges of sheeting rounded.
Doors shall be hung with good quality hinges and fitted with catches and furniture.

G. JOINERY (Cont'd.)

G 25 SINK AND BENCH CUPBOARDS shall have a minimum depth of 450mm or as shown on drawings, to suit sink and shall have false floor, kick board and toe space. Fit cupboards with one shelf and drawers as indicated. Bench tops shall be covered with materials as indicated or specified in the Project Specifications, Page 6, Item 14 and finished with edging strips and beads.

G 26 OVERHEAD KITCHEN CUPBOARDS shall have a minimum depth of 300mm overall fixed approximately 1300mm above floor and carried to the ceiling joists, solidly fixed to joists and to walls. Cupboards shall have top rail of suitable depth to take cornice and give matching margins all around.
Where overhead cupboards do not extend to the ceilings, free ends of cupboards shall be supported with chromium plated stanchion fitted with flanged ends or fixed with wrought iron support, screwed to bench tops and to underside of cupboards above, or hung from ceiling.
Fit to each cupboard full depth shelves. Where stove flue passes through overhead cupboards, the fixture shall be boxed in and shelf depth reduced to suit. For flue, see Plumbing Clause J14 and Project Specifications, Page 7, Item 16.

G 27 FOOD CUPBOARD Where indicated on the drawings, construct food cupboard of an overall minimum size of 450mm x 450mm extending from floor to door head height or as shown, having vents top and bottom to allow effective through ventilation. Vents to external air are to be flyproof. Hang flush door and complete around opening with mouldings.
Form false floor 100mm above main floor and fit four heavy gauge removable wire or open batten shelves on suitable cleats, first shelf 380mm above false floor and remainder evenly spaced to door head height.

G 28 PANTRY Where indicated on the drawings, construct pantry having vents at top and bottom to allow effective through ventilation. Vents to external air are to be flyproofed. Provide four shelves with returns as shown. Lower shelf shall be fixed at 600mm above floor.
Unless otherwise specified in Project Specifications, Page 5, Item 14 hang louvred door, and finish around opening with mouldings.

H. FENCING

H 1 GENERALLY Fencing shall be constructed as specified in the following clauses.
For type and extent of fencing to be erected, see Block Plan and/or Project Specifications Page 12, Item 27.
Where fencing to adjoining properties is required to form part of this contract, **the Builder shall include the full cost of all fencing in his tender and state the price per metre run** he has allowed for dividing fencing to adjoining properties. Any adjustments to the extent of fencing finally erected shall be made at the rate stated in Project Specifications, Page 12, Item 27.
Boundary and dividing fences to adjoining properties shall not be commenced until approval in writing has been given by the Owner or his Agent to proceed. Approval shall be withheld until the Owner has made satisfactory arrangements with the adjoining owners. **It is the Owners responsibility to serve the required fencing notices on the adjoining owners and recover the proportionate costs from them.**
In addition the Builder shall allow in his tender full cost for all other fences specified in Project Specifications, Item 27.
Builder shall obtain footpath levels in writing where necessary from Local Council and erect fences in conformity with these levels and to heights indicated. Where these levels are not available, advice in writing to this effect shall be lodged with Owner or his representative. See General Clauses, Clause B20, Street Levels.
Height of fences shall comply with the requirements of the Municipal Authority.
Posts shall be spaced at a maximum of 2700mm centres, sunk 600mm in the ground for paling fence and 450mm for horizontal rail and picket fences. Timber posts shall be fitted with 75mm x 50mm red gum sole plates 600mm long and with 75mm x 50mm red gum struts 400mm long. Angle and gate posts shall be strutted four ways and other posts two ways. Alternatively posts shall be set in a hole of minimum 200mm diameter and back filled with stabilised soil consisting of 1 part cement to 6 parts soil well compacted.
Posts shall be checked to allow 5mm projection of rails. Rails shall be securely fixed to posts.
Where concrete paving is laid between gate posts, build in galvanised iron pipe to receive bolt for double gates.
Where no concrete paving is specified, provide 100mm x 100mm rebated red gum stop block set 450mm into ground.
Fencing shall be erected plumb and to a true line. Posts and plinths of prestressed concrete or of pressure treated radiata pine may be used if specified in Project Specifications Item 27.

H 2 PALING FENCE shall be 1650mm high and of materials as stated below unless otherwise specified in Project Specifications Item 27.

Gate Posts	125mm x 125mm Red Gum	
Corner and Intermediate Posts	125mm x 75mm Red Gum	Weathered on Top
Plinths	150mm x 25mm Hardwood	
Rails – Top and Bottom	75mm x 50mm Hardwood	Extending over two panel lengths

H. FENCING (Cont'd.)

H 2 PALING FENCE
(cont.) Rails shall be spaced at 900mm centres.
Bottom rails 230mm above plinths.
Cover fence with sawn Hardwood paling 1500mm long, double lapped 25mm each side, cut to true line at top and securely nailed to each rail.
Dividing fences shall be reduced to approximate height of front fence for two panels back from front boundary.
Where side boundary forms rear boundary of an adjoining lot, then the fence is not to be reduced in height unless agreed in writing by the Owner and adjoining owner.

H 3 HORIZONTAL RAIL FENCE shall be 750mm high and of materials as stated below, unless otherwise specified in Project Specifications, Page 12, Item 27.

Gate Posts	100mm x 100mm Red Gum	Weathered on top and chamfered on all edges.
Corner and Intermediate Posts	100mm x 75mm Red Gum	
Stiffeners, one to each panel	75mm x 38mm K.D.H.W.	
Rails	25mm thick K.D.H.W.	Spaced 40mm apart extending over two panels

H 4 PICKET FENCE shall be 750mm high of materials stated below, unless otherwise specified in Project Specifications, Page 12, Item 27.

Gate Posts	100mm x 100mm Red Gum	Weathered on top and chamfered on all edges
Corner and Intermediate Posts	100mm x 75mm Red Gum	
Plinths	125mm x 38mm K.D.H.W.	Shall extend over two panels.
Top and bottom rails	75mm x 50mm K.D.H.W.	
Pickets	20mm thick K.D.H.W.	Pickets shall be spaced not more than 50mm apart and fixed 5mm clear of plinth.

H 5 GATES For type of gates see Project Specifications, Page 12, Item 27 and Schedule of Fittings.
Where timber gates are to be installed in paling fences they shall be set at the same height as fencing, framed with 100mm x 38mm K.D.H.W. having one intermediate ledge with two braces, all properly framed and fitted together, and sheeted with palings to match fence.
Single gates shall be 900mm wide, hung with three 300mm scotch tee hinges, with 50mm x 20mm stops planted on to posts, and fitted with 200mm galvanised pad bolt. Double gates shall have each leaf 1350mm wide, hung with three 450mm scotch tee hinges and fitted with two galvanised pad bolts.

H 6 BRICK FENCE See Brickwork, and Concrete Masonry Blockwork Clause E28 and Project Specifications, Page 3, Item 12.

I. ROOFING

I1 GENERALLY Roof covering materials shall be manufactured and fixed in accordance with the latest Standards Association of Australia Code of Recommended Practice and the Uniform Building Regulations, Chapter 22. Where there is no relevant Standards Association of Australia Code, roofing shall be fixed in accordance with the manufacturer's recommendations.
All fixing over fire walls shall be in accordance with Uniform Building Regulations, Clause 2044.
For type of roof covering materials, see Project Specifications, Page 7, Item 15.
Sarking materials and fixing shall be in accordance with Australian Standard CA22–1965, Pliable Roof Sarking.

I2 GUARANTEE Roofing guarantees and warranties shall be obtained and/or provided in accordance with the requirements of Lending Authority.

I3 BATTENS for tiled roofs shall comply with the following tables.

RAFTER OR TRUSS SPACING mm	MINIMUM SIZES OF BATTENS ON FLAT. mm			
	STRESS GRADES			
	UNSEASONED F4	UNSEASONED F5	UNSEASONED F8	SEASONED SOFTWOODS F5
450	–	25 x 50	25 x 38	–
600	38 x 38	38 x 38	25 x 50	–
900	38 x 75	38 x 75	38 x 38	35 x 42
1200	50 x 75	50 x 75	50 x 75	–

I. ROOFING (Cont'd.)

I 3 BATTENS (cont.) NOTE: Actual size must not be more than 4mm under that stated for unseasoned timber of stress grades F4 and F5 and not more than 3mm under that stated for unseasoned timber stress grade F8.
For seasoned softwood stress grade F5 the size must not be under that stated. (No negative tolerance).

I 4 TERRA COTTA TILED ROOF shall comply with Australian Standards Specification A13–1963 Terra Cotta Roofing Tiles and CA5 Code for the Fixing of Terra Cotta Roofing Tiles.
For rafter lengths up to 4500mm, minimum gradient shall be 1 in 3.7. For longer length rafters, the gradient shall be increased in accordance with Australian Standard CA5, Code for Fixing of Terra Cotta Roofing Tiles.
Minimum requirement for sarking is as follows:

GRADIENT OF RAFTER	SARKING
Below 1 in 2.5 1 in 2.5 or steeper	Required Not required

Sark with double sided re-inforced aluminium foil, fixed under battens and extended into guttering.
Every alternate tile at least in each course shall be securely tied to the batten with galvanised wire in accordance with Australian Standard CA5.
Verge tiles shall project 20mm beyond the face of the barge board or face brickwork. Half tiles to verges shall be fixed with galvanised spring head nails.
Where the rafter gradient is 1 in 1.4 or steeper, tiles shall be laid on battens as previously scheduled and tied to additional wiring battens.
Shell ends, ridges, hip cappings and apex pieces shall match roof tiles and together with gables and valleys shall be bedded in lime mortar and pointed up in coloured cement mortar.

I 5 CONCRETE TILED ROOF shall comply with Australian Standards A158–1968 Concrete Interlocking Roofing Tiles (without Weathering Check) and CA46 Code for fixing Concrete Interlocking Roofing Tiles (without Weathering Check).
Minimum requirement for end laps and sarking is as follows, in terms of Uniform Building Regulations Clause 2203(c)(i).

(a) Concrete roofing tiles without underchecks.

Gradient of Rafter	End Lap mm	Sarking
Over 1 in 3	75	Not Required
Over 1 in 3.3 to 1 in 3	100	Not Required
1 in 3.7 to 1 in 3.3	100	Required

(b) Concrete roofing tiles with underchecks.

Gradient of Rafter	End Lap mm	Sarking
Over 1 in 3.3	75	Not Required
1 in 3.7 to 1 in 3.3	100	Required

Sark with double sided reinforced aluminium foil, fixed under battens and extended into guttering.
Every full tile in each third course shall be wired, nailed or clipped to battens in accordance with Australian Standard CA46 (without weathering check). Not withstanding the recommendation in both these Standards, **no concrete tiled roof shall be constructed with a gradient of less than 1 in 3.7.**

I 6 SPARE TILES Provide and store in sub-floor or where directed twelve (12) sound spare roofing tiles to match those used on the roof of the dwelling.

I 7 CORRUGATED GALVANISED STEEL ROOF The minimum gradient for corrugated steel roofs shall be 1 in 8 for sheets fixed with spring head nails, and 1 in 12 for sheets fixed with roofing screws.
The roof shall be covered with 0.5mm corrugated galvanised sheet steel, side lapped against the direction of prevailing winds with 1-1/2 corrugations side laps and shall finish over barge boards with rolled edge.
Where possible, sheets shall be one continuous length for the full length of the rafters. Where this is not practicable sheets shall have a minimum end lap of 225mm.
Sheets shall be secured at all battens with either 50mm galvanised spring head nails or 45mm galvanised roofing screws, five fixings to each sheet at its end and three fixings at each intermediate batten.
Fixing shall be through the crest of corrugations.
Corrugation valleys shall be turned up under ridge cappings, parapet wall flashings and turned down into gutters. Hips and ridges shall be covered with 0.5mm galvanised sheet steel 450mm wide and lapped 150mm.

I. ROOFING (Cont'd.)

I 7 (cont.) CORRUGATED GALVANISED STEEL ROOF Sark under sheets with double sided reinforced aluminium sarking material fixed under battens with sag between rafters and extended to discharge into guttering.
Provide scribed galvanised sheet steel bird mould or other acceptable bird proofing where required.

I 8 CORRUGATED ASBESTOS CEMENT ROOF shall be covered with sheets in accordance with Australian Standard 1639, Design and Installation of A.C. Roofing. The Minimum gradient for corrugated asbestos cement sheet shall be 1 in 12.
Ridges shall be variable pitch fluted ridging and top sheets of roof kept well up under same. Barges and capping shall be stock pattern sections to match.
Install fluted bird proofing to gutters and scribed or fluted bird proofing where else required. Provide and fix stop ends to barges.

I 9 FLAT STEEL ROOFING Roof covering shall be in 0.5mm plain galvanised steel in bays not more than 850mm wide, with end laps securely rivetted and sweat soldered. Sides of bays shall be turned up vertically 40mm against 50mm timber fillets and capped over with 0.5mm plain galvanised steel. Ends shall be turned up vertically 50mm against abutting walls and down 25mm into gutters. Fall shall be not less than 1 in 60.

I 10 PATENT METAL ROOF SHEETING shall be in accordance with Australian Standard 1562–1973, Design and Installation of Self-Supporting Metal Roofing without Transverse Laps.
Sark with double sided reinforced aluminium foil to collect and discharge condensation.
Patent metal roof sheeting shall be fixed in accordance with the manufacturer's recommendations, to a gradient of not less than that guaranteed by the manufacturers.

I 11 ROOF FLASHING Roofs shall be flashed as specified under Plumbing, Page 49, Clause J12.

I 12 COMPLETION Clean out gutters and downpipes and leave the roof clean and water tight.

J. PLUMBING

J 1 GENERALLY Plumbing works shall be carried out by Plumbers who are licensed and/or registered in the classification appropriate to the work being carried out, and shall be to the Rules and Regulations of the Melbourne and Metropolitan Board of Works or Governing Local Authorities and in terms of the Uniform Building Regulations Chapters 38 to 42 inclusive, and any amendment thereto and in accordance with the Hot Water and Roof Plumbing Codes of the Plumbers and Gasfitters Board.

J 2 WATER SUPPLY See Project Specifications, Page 1, Item 1. The Contractor shall arrange for the main to be tapped and connected by the Water Supply Authority and shall pay all charges in connection therewith.

J 3 CONNECTION OF PRIVATE WATER SERVICE Where water main of Melbourne and Metropolitan Board of Works or other Authority cannot be extended the Owner shall arrange at his own expense for extension of water service to the front boundary line of block and arrange for installation of meter and provide stop tap, unless otherwise stated in Project Specifications, Page 11, Item 26.
Permission of Melbourne and Metropblitan Board of Works or other Governing Local Authority shall be obtained before work is commenced.

J 4 WATER SERVICE Lay house mains from water meter in 20mm tested galvanised steel tubing or other approved materials and connect to all fittings. Rising branches and inaccessible tubing shall be in copper. All tubing shall be securely fixed with clips or saddled.
Where exposed internally, tubing shall be chrome plated and secured with chrome clips. Where bib taps or pillar taps are to be used, the service shall terminate at a position suitable for connection to taps provided by the hot water plumber.
In unsewered areas provide plugged water outlet to future cistern to W.C.
Branches in excess of 6000mm in length and the supply tubing to storage tanks for internal toilets shall be 20mm diameter, the remainder in 15mm.
Provide branches from house mains to front and rear stand pipes which shall be in 15mm galvanised steel tubing.
Water from standpipes shall be diverted clear of the building.

J 5 COLD WATER SUPPLY TO HOT WATER SERVICE Provide 15mm diameter copper tubing to cold water supply tank of hot water service and terminate with a stop tap. Install another stop tap on risin branch within reaching distance, to the satisfaction of the Governing Authority.

J. PLUMBING (Cont'd.)

J 6 TAPS AND FITTINGS See Project Specifications, Page 8, Item 18.
Provide and fix taps and fittings as follows:

Stand pipes shall have 15mm brass taps with screwed nozzles.
Interior taps shall be chrome-plated and of an easy clean type.
Where a hot water service is to be installed, matching taps including Hot and Cold, shall be supplied and fitted by the Hot Water Plumber. See Clause J7 below.
Where Hot and Cold water taps for a washing machine are specified these taps shall have screwed nozzles.

J 7 HOT WATER SERVICE INSTALLATION Hot water service shall be installed by a Registered Plumber in accordance with Australian Standard CA51–1968 Installation of Domestic Type Hot Water Supply Systems, and shall be of type, manufacture, capacity and to points specified. See Project Specifications, Page 8, Item 18.
NOTE: Matching 15mm chrome plated Hot and Cold taps shall be installed by the Hot Water Plumber. See Clause J6 above.
Tubing shall be of drawn copper and wherever possible concealed, but where exposed under floor or externally and in external cavity walls it shall be lagged for effective insulation.
Exposed tubing internally shall be chrome plated copper and secured with chrome-plated clips.
Cold water supply tanks and hot water cylinders shall be constructed of copper, or other approved materials.
For tank stands, see Carpentry, Page 39, Clause F12.
Install galvanised sheet steel safe trays under hot water cylinder and cold water tank installed in roof space, with outlets carried to discharge beneath eaves and clear of door and window openings.
For overflows refer Plumbing, Page 50, Clause J15.
With briquette hot water services, pressure reducing valves shall not be used unless valves are used in conjunction with a vent pipe on the hot water service.
The whole installation shall comply with the requirements of the Standards Association of Australia and the Code of Practice of the Plumbers and Gasfitters Board.

J 8 EAVES GUTTERS shall be minimum 100mm section 0.5mm galvanised sheet steel, lapped 20mm, rivetted and sweat soldered, mitred,at angles, with stop ends where required, set to falls and secured with 1.62mm galvanised steel standard brackets at 900mm centres, well secured with galvanised clouts not less than 38mm long.
Concealed gutters may be used.
Eaves to hoods and roofs to porches shall have similar gutters of appropriate size.
Provide pops for connection to downpipes.
Openings shall be cut for downpipes in such a manner that recessing of pop provides for adequate soldering strength and complete draining of water from eaves gutter outlets.

J 9 BOX AND PARAPET GUTTERS Where so indicated gutters shall be formed with 0.5mm galvanised sheet steel or other approved sheet material, with minimum depth of 75mm, the roof side shall be turned inwards 25mm on the top edge, away from the roof and at right angles to the upstand. The floor of the gutter shall be not less than 110mm wide.
Where a lear gutter is used, it shall be similar, only carried up the roof slope 175mm and turned over or beaded on the edge.

J 10 VALLEYS shall be 0.5mm galvanised sheet steel or other approved material, turned up 225mm along roof slope and bent back at edges.

J 11 DOWNPIPES shall be a minimum 75mm diameter or 100mm x 50mm rectangular section 0.5mm galvanised sheet steel or other approved material, secured to walls with galvanised steel straps at 1800mm spacings, but not less than two to each downpipe.
Connect and seal downpipes to stormwater drains.
Number and position of downpipes shall be as shown on working drawings.

J 12 FLASHINGS shall not be less than 1.30mm sheet lead or not less than 0.5mm galvanised sheet steel unless otherwise specified.

(a) Flash around chimney stacks with lead dressed a minimum of 75mm up vertical facings, 150mm over roof coverings and extended up under end of roof coverings on highest side, supported where necessary to prevent sagging.
Flash over turn-up with lead or galvanised sheet steel, stepped where necessary and turned 25mm into bed joint of brickwork, wedged with lead plugs and pointed up in mortar to match brickwork.

(b) Where concentrated water discharges on to tile roof, provide lead over-flashing at point of discharge or provide spreader pipes holed and fitted to discharge into the channels.

(c) For tiled roofs where there is a change in the roof pitch or where valleys discharge over roofs, a lead overflashing shall be moulded over the tiles to render joints water tight.

J. PLUMBING (Cont'd.)

J 12 FLASHINGS (cont.)

(d) (i) Where the roof covering abuts a brick wall or other verticals along its highest side, provide an overflashing of lead or galvanised sheet steel carried down the slope of the roof for a minimum of 150mm dressed or moulded into the contours of the roofing material and turned up the wall or parapet a minimum of 75mm

(ii) Where the roof covering abuts a brick wall or other verticals along its sloping side provide an overflashing of lead giving a minimum covering of 150mm over roof covering, dressed into the contours of roofing material and turned up the wall a minimum of 75mm. Alternatively provide soaker out of galvanised sheet steel with lipped edge, carried 225mm under roof covering and turned up wall a minimum of 75mm.
Where the abutting wall is of clad timber framing, the overflashing or soaker shall be carried up a minimum of 40mm behind external cladding.

(iii) Where the roof abuts a wall or other vertical on its lowest side provide a box gutter, see Page 49, Clause J9.

(iv) All turn ups of box gutters, over-flashings and soakers at brick walls shall be apron flashed with lead or galvanised sheet steel, stepped where necessary, turned 25mm into bed joint of brickwork, wedged with lead plugs and neatly pointed up in mortar to match brickwork and shall cover the upstand by a minimum of 40mm.

(e) Flash around galvanised steel and asbestos cement flues and pipes, with lead turned up around to a height of at least 50mm, dressed at least 150mm over roof covering all around, carried under the end lap of the tiles and asbestos cement sheets and soldered over metal roofing. Secure a lead over-flashing around asbestos cement flues with bolted galvanised hoop iron clamps, sealed with waterproofed asbestos cement compound.
Similar over-flashings to metal flues and pipes shall be soldered.

(f) Provide for Bricklayer to build in across cavity of walling above concrete slab floors, a continuous flashing, see Brickwork and Concrete Masonry Blockwork, Clauses E14 and E15.

(g) Unless windows have incorporated self-flashing, windows shall be flashed under their sills for their full length using galvanised sheet steel, other metal flashing, or sheet polythene of not less than 0.25mm thickness. Polythene flashing shall be in one continuous length. Metal flashing shall be in one continuous length or lapped 40mm and soldered at joints. Flashing shall be turned up a minimum of 15mm at back, turned down into cavity and turned up at the end of sills to cover the joint of stile and sill.

(h) Flash the cavity over exposed external door and window heads extended 110mm past each side of opening.

(i) Sills and heads to gable louvres shall be flashed in similar manner to window head and sills as specified in sub-clauses (g) and (h) hereof, with galvanised steel or other strip metal flashing in one continuous piece extending from front of frame across cavity and up against studs at least 100mm.

(j) Flash the meter enclosure to requirements of the electricity supply authority.

J 13 STOVE CANOPY Where indicated on drawings or Project Specifications Page 7, Item 16, provide and fix a canopy of fire retardent material. The canopy shall have a 400mm x 150mm rectangular section flue which shall be carried up through the ceiling to at least 300mm above joists, or extended through the roof covering to external air with 150mm diameter flue fitted with a cowl.
Alternatively, an exhaust fan or patented range hood shall be installed.

J 14 FLUES FOR SLOW COMBUSTION STOVES, SOLID FUEL HEATERS, HOT WATER UNITS AND OIL BURNING UNITS For installation see Clause E24.
Provide a flue of 0.91mm steel pipe, or asbestos cement pipe with a minimum wall thickness of 9mm or other material approved by the Authorities concerned, to all solid fuel and oil burning appliances. Diameter of the flue shall suit the smoke outlet, and joints shall be sealed.
Extend the flue through to the external atmosphere to a minimum height of 450mm above the roof covering and to the appliance manufacturer's recommendations.
Where the flue passes through the ceiling and/or roof, provide and fix a continuous outer casing of 0.6mm galvanised steel, to provide a minimum of 25mm space between the outer casing and flue. Extend the outer casing from underside of the ceiling to approximately 150mm below the top of the flue, where the opening between the pipes is to be sealed. Provide and fix a perforated steel collar at the ceiling line over the opening between the outer casing and flue.
Secure flues in a steadfast position at least 225mm clear of timbers or combustible material with 0.6mm steel brackets.
Seal the roof with 1.30mm lead flashings around the opening made for the flue.
Where recommended by the manufacturer of the appliance fix a cowl over the outlet of the flue in accordance with their recommendations.

J 15 HOT WATER SERVICE OVERFLOW Provide and install 0.5mm galvanised sheet steel safe trays and overflows under the storage cylinder and cold water tank in accordance with requirements of Hot Water Code and Plumbers and Gasfitters Board. See Hot Water Service Installation, Page 49, Clause J7.

J. PLUMBING (Cont'd.)

J 16 RAINWATER TANKS Where required, see Project Specifications, Page 1, Item 1, provide and fix in position 0.6mm galvanised corrugated steel rainwater tanks, having covered tops with manhole or removable conical tops. Install strainer and insect proofing at inlet to tanks, 20mm brass low pressure draw off taps, and 75mm diameter galvanised overflow pipe connected to drains.
Connect tanks to each other with 20mm flexible tubing at level directed to maintain even water level in tanks and fit plug type fullway stop taps on this connecting pipe to isolate tanks. Connect tanks to all house plumbing fixtures with 20mm diameter tubing as before specified, reducing to 15mm at each fitting.
Connect tubing to tanks with flexible connection.
Provide 15mm low pressure bib taps to all points and stop taps where indicated.
All internal taps, exposed tubing inside house and shower rose shall be chromium plated.
For tank stands, see Carpentry, Page 41, Clause F25, and Project Specifications, Page 11, Item 26.
Design of brick and concrete tanks must be approved by the Governing Authority.

J 17 COMPLETION Leave the whole of the plumbing work watertight at completion of the works.

K. SANITARY PLUMBING

K 1 SEWERAGE All sewerage work shall be carried out by a Licensed Sanitary Plumber in accordance with the most recent By-Laws and Regulations or amendments thereto of the Melbourne and Metropolitan Board of Works or other Governing Sewerage Authority.
Where sewerage is available or will be available before completion of the contract, Builder shall give all notices, pay all fees to the appropriate Sewerage or Water Supply Authority.
Supply and connect up sanitary fittings with materials approved by the Governing Authority.
See Drainage, Page 52, Clause L2.

K 2 CONCRETE FLOORS Prior to pouring the concrete floor slab, place in position waste pipes to shower, bath, basin and other sanitary fixtures and obtain approval from the Governing Sewerage Authority.

K 3 UNSEWERED AREAS In unsewered areas, internal plumbing, wastes, grease traps, soilstacks, vents and water supply shall be carried out in accordance with Uniform Building Regulations, Chapters 38 to 42 inclusive and in strict accordance with the requirements of the Local Governing Authority.
Inspection by the Authority of all such work shall be arranged and carried out where such service is available.
Connect all fittings and discharge all wastes as directed by Local Council. Waste Pipes shall be of a sufficient length for connection to future sewerage drains. All fittings, wastes and traps, shall be approved and stamped by the Local Governing Authority.
Waste water from the sink shall pass through a grease trap before entering pipe drains. For specification of grease traps, see Drainage, Page 52, Clause L5.

K 4 SEPTIC TANK The completed installation of the septic tank and effluent drains shall be in accordance with Australian Standard Recommended Code of Practice 1547 Small Septic Tanks and approved by the Local Health Authority.
The connection from pan to drain shall be made as in a sewered area. Drains to septic tank and distribution pit shall be laid with 100mm diameter tested earthenware or cast iron pipes. The installation shall be completed by a system of agricultural effluent pipes laid to falls with fittings and inspection openings or connected to soakage pit all as required by Local Health Authority.
For Septic Tank installation refer to the Project Specifications, Page 1, Item 2.

K 5 CERTIFICATES Where required the following certificates shall be lodged with the Lending Authority before the dwelling is handed over at the time of practical completion.

Sewered Areas
(a) The Certificate of Completion for the plumbing work by Melbourne and Metropolitan Board of Works or the Local Sewerage Authority.

Unsewered Areas
(a) Local Health Authority's approval of the Septic Tank installation.
(b) Sewerage Authority's Certificate for Plumbing only, where applicable.

L. DRAINAGE

L 1 STORMWATER DRAINS Lay and connect stormwater drains to discharge into the street channel, right of way or drainage easement as shown on Block Plan and as required by the Local Council regulations. See General Clauses, Street Levels, Clause B20.

L. DRAINAGE (Cont'd.)

L 1 STORMWATER DRAINS (cont.)

Drains shall be laid in minimum 90mm diameter pipes, approved by the Governing Authority set to lines with even falls to outlets. Where possible, drains shall have a minimum earth cover of 150mm.
Provide I.O.'s at all angles, change of direction and at every 9000mm maximum, along straight runs.
Drains shall be approved by the Governing Authority before filling in.
Wherever possible drains shall be laid clear of paving.

L 2 SEWERAGE DRAINS Lay drains in materials acceptable to Governing Authority and in position indicated on Authority's Sewerage Plan and connect to wastes. Where sewer plan is not available, indicate an amount allowed for this work in Project Specifications P.C. Items Schedule.

L 3 UNSEWERED AREAS In unsewered areas all sanitary plumbing shall be carried out by a Licensed Plumber. Where permitted by Local Authority waste pipes from all fittings except toilet pan shall be connected to stormwater drain.
In areas where it is not permissible to discharge sullage as above or into an easement or street drain, it shall be disposed of by a system of drain pipes installed within the boundaries of the allotment, or other method as directed by the Municipal Health Authority.

L 4 GULLY BASIN Where specified in Project Specifications Item 26, provide a gully basin with a tap fixed above.

L 5 GREASE TRAP Install a three compartment pre-cast concrete grease trap, placed not more than 3000mm away from kitchen sink, or as required by the Local Authority. Connect waste pipe from kitchen sink only to the grease trap and discharge into sullage drains. Drain between sink waste pipe and grease trap shall be glazed earthenware pipes.

L 6 SOAKAGE PIT Provide Soakage Pit as and if required by Local Authority.

L 7 AGRICULTURAL DRAINS For septic tank effluent drains See Sanitary Plumbing, Clause K4 and Project Specifications Item 2.
For length of other agricultural drains see Working Drawings. Pipes shall be laid with 5mm open joints covered with tarred building paper, bituminous felt or other approved material.
Alternatively perforated plastic pipe intended for this purpose may be used.

(a) Drains laid for the purpose of discharging sullage or other water shall be laid 450mm clear of the footings of all buildings, to a minimum depth of 300mm, bedded on 75mm thickness of 20mm screenings.
Fill around the sides and for 75mm above the pipes with 20mm screenings. Cover screenings with tarred building paper or other similar material and then back fill with soil.

(b) Drains laid for the purpose of collecting and transporting sub-surface water shall be laid in the clay or impervious strata, with a fall to discharge into stormwater drains, street drains, right of way, easement or well clear of the building and to the satisfaction of the Governing Authority.
Fill around sides and for 150mm above pipes with 20mm screenings. Cover screenings with tarred building paper or other similar material and then back fill with soil.

(c) Where the site is excavated to provide accommodation for living, garage, storage, etc., an agricultural drain shall be provided at the foot of the bank or cut, laid below the level of the top of the concrete footing, with fall to discharge as in (b) above. Where the cut is to be back filled, place coarse rubble against the wall from top of pipes to within 225mm of the ground surface and then back fill with soil. Provide vertical damp proof course where necessary.

M. GAS FITTING

M 1 GENERALLY For gas requirement See Project Specifications Item 4. The whole of the gas installation shall be carried out by a Registered Gas Fitter in accordance with the Gas Regulations, and any amendment thereto and to the requirements of the Supply Authority.
The Registered Gas Fitter shall furnish the required gas fitting notices to the Supply Authority prior to the commencement of this work.

M 2 MAINS GAS CONNECTION Connect gas from meter or terminal of Supply Authority's line with a minimum 25mm diameter steel tubing. Main service and branches to all appliances shall be of sizes to conform with requirements of the Gas Authority. Where required by the Gas Authority provide a suitable box properly constructed to protect meter.

M 3 LIQUID PETROLEUM GAS INSTALLATION The whole of the installation including appliances, flues, piping location and installation of the containers shall conform to the requirements of the current Liquified Petroleum Gas Regulations.
The owner shall make arrangements and pay for the installation of gas containers.

M. GAS FITTING (Cont'd.)

M 4 APPLIANCES Connect all gas appliances listed in Project Specifications, Schedule of Fittings. Fit gas stopcock adjacent to gas hot water service heater and gas space heater.

M 5 FLUES shall comply with Uniform Building Regulations Chapter 23 and any amendments thereto and Gas Regulations requirements.

N. ELECTRICAL

N 1 GENERALLY The whole of the electrical installation shall be carried out by the Builder through a qualified registered Electrical Sub-Contractor, in a manner and using materials in compliance with the regulations of the Fire Underwriter's Association of Victoria and in accordance with the current wiring regulations of the State Electricity Commission of Victoria and the requirements of the particular Supply Authority.
The Electrical Sub-Contractor shall give notices required in connection with the work and shall arrange for the inspection and approval for the whole installation as required by the Supply Authority.
The Builder shall advise the Owner when the consumer's application for supply may be forwarded to the Supply Authority.

N 2 METERING The Builder shall ensure that adequate space and weatherproofing is provided for metering equipment in accordance with the requirements of the Supply Authority.

N 3 SYSTEM OF WIRING

(a) Except where otherwise required by the current wiring regulations of the State Electricity Commission of Victoria, the system of wiring to be installed generally shall be thermoplastic insulated and sheathed cables (T.P.S.) or other approved material. Except where agreed to by owner all wiring shall be concealed.

(b) Wiring necessary between the domestic premises and out buildings shall be carried out by an approved system of P.V.C. underground cable and concrete protective slabs, T.P.S. sheathed cables enclosed in galvanised water pipe or P.V.C. cables installed in non-metallic (P.V.C.) enclosures manufactured in accordance with the requirements of Australian Standard C183–1970 Cat. A Non-Metallic Underground Enclosures for electrical conductors.

N 4 CONSUMER'S MAIN CABLES Install consumer's mains of adequate capacity from the point of supply to the switchboard to carry the loading of the equipment scheduled with a minimum capacity of 70 amps single phase. Where the loading of the installation may warrant special consideration or the diversified loading may exceed 70 amps single phase, the supply authority must be consulted and in any case multi-phase consumer mains shall not be less than 50 amps per phase.

N 5 MAIN SWITCHBOARD The main switchboard shall be installed inside the house, or as otherwise specified. Space shall be provided on this board for the addition of two further fuses or circuit breakers as appropriate, and the main switch and neutral bar shall be adequate to accommodate two additional 15 amps circuits.

N 6 LIGHTING AND GENERAL PURPOSE OUTLETS The total number of lighting and general purpose outlets shall be set out in the Project Specifications, Page 7, Item 17.
Allowance shall be made for a rating of lighting outlets at an average of 100 watts each.
Light and power outlets, switches, including multiway switches for controlling the lighting outlets, shall be installed in the position shown on the drawings.
Provide direct wiring to all fixed appliances, as required by regulations.
Switches for controlling lighting outlets shall be mounted at a height of 1350mm from the floor, unless otherwise specified.
General purpose outlets shall be mounted a minimum of 300mm above floor and/or 150mm above bench top.
General purpose outlets in kitchen shall be divided between two or more circuits.

N 7 ACCESSORIES All lampholders, switches, ceiling roses and general purpose outlets shall be of the all-insulated type. Flush type silent switches and power outlets shall be used, having white flush cover plates and recessed switch button unless otherwise specified. See Project Specifications, Page 7, Item 17.

N 8 APPLIANCES AND LIGHT FITTINGS Install all appliances, and light fittings, as listed in Project Specifications, Schedule of Fittings.
Builder shall supply one lamp at least 60 watts to each light or fitting.
An exhaust fan of 250mm minimum diameter shall be installed in kitchen where range canopy or patented range hood is not required.
See Project Specifications, Page 7, Item 17 and Schedule of Fittings.

N 9 BELLS AND BELL CIRCUITS Where indicated provide and install bell circuits complete with transformer, bell pushes, with bells, buzzers or chimes in positions as shown or directed.
See Project Specification, Schedule of Fittings.

N. ELECTRICAL (Cont'd.)

N 10 HOT WATER AND/OR STORAGE HEATING SERVICE INSTALLATION Where Storage Space Heating and/or Hot Water Service is specified, See Project Specifications, Page 8, Items 17 and 18 provide for additional metering and time switch control for the off-peak tariff within the metering enclosure together with the appropriate additional control and protection on the main switchboard for both the off-peak and booster circuits.

P. PLASTERING

P 1 GENERALLY

(a) Where indicated on drawings or specified, render internal brickwork in two coat work, first coat comprised of 2 parts cement, 1 part hydrated lime, 12 parts clean sharp sand with finishing coat comprised of 1 part cement, 1 part hydrated lime and 3 parts clean sharp sand unless otherwise specified in Project Specifications, Other Special Requirements, Page 11, Item 26.

(b) Render inside of flower boxes with mortar composed of 1 part cement, 3 parts washed sand with waterproof admixture.

Q. FIBROUS PLASTERING AND PLASTERBOARDING

Q 1 GENERALLY For type of wall and ceiling material See Project Specifications, Page 8, Item 19.
Fibrous plaster sheeting, cornices moulds and vent faces shall be manufactured in accordance with Australian Standards A44 Specification for Fibrous Plaster Products, shall contain a sodium methyl siliconate or similar additive and shall be fixed in accordance with Australian Standards CA20–1960 Erection and Fixing of Fibrous Plaster Products.
Plasterboard shall be manufactured and fixed in accordance with the latest Standards Association of Australia Codes.
All materials when stacked on site shall be protected from the weather. Plasterboard sheets shall be stacked flat.
All sheets shall be of lengths and widths to ensure the least amount of jointing.
Where plasterboard sheets are joined clear of framing timbers, butt joints shall be back blocked.
All fixing shall be carried out by competent tradesmen in accordance with recognised good trade practice and to manufacturer's recommendations.
Nails used in fixing sheets shall be of sufficient length to allow at least 20mm penetration into solid timber.
Where plasterboard is used, nails shall be driven in with the heads slightly below the surface of plasterboard without fracturing liner board facing.
Adhesives used for fixing shall be of a type recommended by the manufacturers to be used for the particular material and location.

Q 2 WALLS Before fixing wall sheets the Builder shall straighten and rectify all walls.
For fibrous plaster and plaster glass sheets in all internal angles the corner studs shall be reinforced with 38mm x 38mm x 0.45mm galvanised steel angles running the full length of the angle, but not necessarily in one piece, securely fixed to both studs with galvanised clouts.
Alternatively for fibrous plaster and plaster glass sheets and in all cases for plasterboard the angles shall be reinforced with jointing tape trowelled evenly on to the face of both sheets.
External angles shall be reinforced with metal corner beads fixed in accordance with manufacturer's recommendations.
Provide and fix plaster or other type of vent faces in accordance with Uniform Building Regulations Chapter II.

FIBROUS PLASTER AND PLASTERGLASS sheets shall be a minimum of 10mm and 7mm thickness respectively when fixed to framework spaced at up to 600mm centres.
Sheets shall bear not less than 25mm on the top plate and shall be securely fixed at all bearings with 2.64mm galvanised clouts, an adhesive, or scrimming at not more than 500mm centres in the body of the sheets and at 150mm centres along the edges of the sheets at flush joints and vertical angles.

PLASTERBOARD SHEETS shall be a minimum 10mm thickness when fixed to framework spaced at up to 600mm centres.
Sheets shall bear not less than 25mm on the top plate, be kept 5mm clear of floor surface, be placed with butt joints staggered and to give the minimum of jointing and shall be securely fixed at all bearings with galvanised nails or clouts approved by the plasterboard manufacturer, at not more than 225mm centres when single nailed, or 300mm centres when double nailed in the body of the sheets, and at 150mm centres at angles.

Q. FIBROUS PLASTERING AND PLASTERBOARDING (Cont'd.)

Q 2 WALLS (Cont.)

At internal angles, sheets shall be cut neatly and fixed in such a position that one sheet overlaps the other forming the angle. The overlapping sheet only shall be fixed to the corner stud.
Alternatively sheets may be fixed at 225mm centres with an adhesive.

Q 3 CEILINGS

Battens Where battens are specified, see Project Specifications, Page 8, Item 19.
These shall be kiln dried hardwood, oregon or seasoned radiata pine spaced at up to 450mm centres fixed to a true line. For flush work in Fibrous Plaster the battens parallel with the joint shall be double at the joint. The space between the double battens shall be not more than 225mm.
Where plasterboard is to be fixed to battens running parallel to the long edge of the sheet, battens shall be spaced at a maximum of 300mm centres.
Battens spanning up to 450mm shall be not less than 35mm x 19mm. Battens spanning over 450mm up to 600mm shall be not less than 42mm x 19mm.
Battens spanning over 600mm up to 900mm shall be not less than 42mm x 35mm.

Fibrous Plaster and Plasterglass sheets shall be a minimum of 10mm thick and 7mm thick respectively securely fixed at all bearings with galvanised clouts or scrimming at 450mm centres in the body of the sheets and at 225mm centres along the edges of the sheets which are to be flush jointed.

Plasterboard sheets shall be a minimum 10mm thickness when fixed to framework at up to 450mm centres and a minimum 13mm thickness when fixed to framework at up to 600mm centres, placed at right angles to fixing timber, with butt joints staggered and securely fixed at all bearings with galvanised nails or clouts approved by the plasterboard manufacturer, or fixed with nails or clouts and adhesive at not more than 175mm centres.

Q 4 BACK BLOCKING of plasterboard butt joints in walls and ceilings shall be carried out with plasterboard strips of a minimum width of 250mm adhered to the backs of sheets.

Q 5 JOINTING – Fibrous Plaster and Plasterglass All mitres, flush joints, butt joints and angles shall be reinforced with scrimming and then filled with stopping consisting of plaster or a mixture of one part lime putty and not less than three parts plaster. Nail heads and blemishes shall be similarly filled.
Where rebated sheets are used, the rebate shall be partially filled with plaster, the joint taped with jointing tape and then filled with plaster.
All jointing shall be trowelled to leave a flush surface in true relationship to the adjacent surfaces.

Plasterboard Bed jointing tape over all joints including internal angles using jointing compound; allow to set, then apply second coat of jointing compound.
Apply finishing coat of topping compound and trowel off with edges feathered and when dry sand over with an abrasive taking care not to scuff the surface of plasterboard.
Stop up nail heads and blemishes in three coat work. Materials used for taping, stopping, finishing and sanding are to be those recommended by the plasterboard manufacturer for these purposes.

Q 6 CORNICES Finish around junctions of walls and ceilings throughout with 50mm ceiling projection fibrous plaster or plasterboard cornice or as specified in Project Specifications, Page 8, Item 19. Cornices shall be fixed with a cornice adhesive strictly in accordance with the manufacturer's recommendations.

Q 7 BAFFLE VENTS Where exhaust fans are not specified, see Project Specifications, Page 7, Item 17, provide and fix 450mm x 450mm plaster or other baffle vents to finish flush with the underside of ceiling in shower recess, bathroom, kitchen and toilet air lock. Where baffle vents are provided in joisted roof construction they shall discharge to the open air. For additional baffle vents see Project Specifications, Page 8, Item 19.

Q 8 COMPLETION Leave all surfaces flush and even, remove blemishes and leave in a satisfactory condition ready for painter. Clean all floors of waste material and plaster droppings. Plaster off-cuts shall not be left under areas to be covered by floors, porches, terraces, etc.

R. TILE LAYING

R 1 GENERALLY for type, extent and price per square metre of tiles see Project Specifications, Page 8, Item 20, and Schedule of Fittings.
Tiles shall be set to true lines and even surfaces.

R 2 CERAMIC TILING For preparation of walls and floors for tiling see Carpentry, Clause F23.

Wall Tiles – shall be fixed with a waterproof adhesive or to the rendered surfaces with mortar consisting of 1 part cement to 5 parts sand.
Finish tiled areas with round edge and round edge return tiles where required.
Unless otherwise specified, fix one row of 150mm x 150mm tiles above the bath.

R. TILE LAYING (Cont'd.)

R 2 CERAMIC TILING (cont.)

Floor Tiles – shall be fixed with a waterproof adhesive or to concrete slab with mortar consisting of 1 part cement to 5 parts sand.

Jointing – Joints shall be filled with a mortar of 1 part white cement and 4 parts whiting or pre-mixed tiling grout. Clean down tiles on completion.

R 3 VINYL TILING After timber floor has been sanded fix 5mm thick hardboard underlay in 1200mm x 900mm sheets laid rough side up with staggered joints gapped approximately 1mm and fastened to flooring with 20mm machine staples or ring groove nails at 100mm centres around the perimeter and 150mm centres through the body of sheets.
Lay tiles with tight joints and close cut to abutting surfaces fixed with a latex based adhesive.
Where laid over concrete slab, fix direct to the slab with an adhesive suited to resist any moisture which may be evident in or become present in the slab.
Finish at door and wall openings with metal or plastic bars as required.

S. PAINTING AND FINISHING

S 1 MATERIALS Sealing preparations, primers, oil paints, washable cold water paints, enamels, stains and varnishes shall be ready prepared, conforming to the relevant specifications laid down by the Standards Association of Australia and shall be brought on to the job in their original sealed containers.

S 2 SAMPLES At no expense to the Applicant or the Lending Authority, small samples of the paint being used on the job may be taken by the Lending Authority at its discretion for testing purposes.

S 3 COLOURS AND FINISHING Finishing colours and tints to woodwork, metalwork and to coverings to walls and ceilings shall be to Owners selection.

S 4 PREPARATION AND WORKMANSHIP Remove all hardware before painting is commenced and replace on completion.
Painting shall be done by skilled tradesmen, as rapidly as the satisfactory completion of any single section of the work will permit and under conditions which will not jeopardise the appearance or quality of the job in any way.
Where surfaces show any evidence of stain, they shall be sealed with a sealing preparation before being coloured.
Work to be painted shall be prepared by scraping or rubbing down, priming, stopping up and brought to a smooth even surface before the paint is applied. Stopping shall be done after priming coat. For exterior work allow a minimum of 24 hours between coats to ensure that each coat is thoroughly dry before the succeeding coat is applied.

S 5 FINISHING AND LOCATIONS For type of finish see Project Specifications, Page 9, Item 21. Finish shall have satisfactory cover free from brush marks and blemishes.

EXTERIOR FINISHES. Fascias and barges shall be primed or oiled all round before fixing.

(a) Where so indicated in Project Specifications or Drawings, Redwood, Western Red Cedar and pressure treated Pinus Radiata may be left untreated and unpainted.
Unless otherwise stated in the Project Specifications, Item 21, the usually painted external timber work shall be given one coat of weatherproof primer, one undercoat and one gloss finishing coat.

(b) **Stained Timber** shall be first treated with penetrating wood preservative.
Timber door sills, steps, ramps, landings, handrails, and hardwood external floors shall be oiled or weatherproofed all round before fixing. Stained work shall be two coat work unless otherwise specified in Project Specifications, Item 21.

(c) **Resin Knots** in timber cladding and trims shall be carefully heated with a blow lamp, the extruded resin scraped off, the knots sanded, then finished as Project Specifications, Item 21. All loose or dead knots shall be secured or removed and the space filled and prepared for painting.

(d) **Priming** Door and window frames and sashes including glazing rebates in sashes and glazed doors, fascias, mouldings and other exposed timber shall be primed all round.
Particular attention shall be paid to priming of end grain before fixing and whilst being fixed.

(e) **Asbestos Fibre Board** sheeting, moulds and cover straps to eaves soffits and wherever else used externally shall be given two coats of plastic or latex paint. See Project Specifications, Page 9, Item 21.

(f) **Exterior Metalwork** Exposed metalwork except aluminium windows, brass taps, roof coverings and flashings shall be painted.
All shall be cleaned down, primed with anti-corrosive primer and painted with one undercoat and one gloss enamel finishing coat. New galvanised steel shall be washed down with metal cleaning fluid to remove grease before applying priming coat. Aluminium frames shall be cleaned down to manufacturers recommendations.

S. PAINTING AND FINISHING (Cont'd.)

S 5 FINISHING AND LOCATIONS (cont.)

(g) **Brickwork** Where specified to be painted in Project Specifications, Page 10, Item 21, Brickwork shall be given two coats of paint.

(h) **Outbuildings and Fences** Outbuildings shall be prepared and painted as specified for the main building. Sawn paling fences may be left unpainted. Where required to be painted or stained see Project Specifications, Page 10, Item 21. All other fences including gates, front and return fences, framed and/or sheeted with dressed timber shall be prepared and painted or stained as specified for the main building.

INTERIOR FINISHES

(a) **Painted Woodwork** shall be given one coat primer, one undercoat and one finishing coat.

(b) **Stained and Waxed Finish Timber** shall be prepared and given one coat stain, stopped as necessary with matching wood filler, then lightly rubbed down and given one coat of clear finish or wax.

(c) **Fibrous Plaster, Plasterboard, Hardboard and Asbestos Cement**

(i) **Oil Paint** – To properly prepared surfaces apply three coats consisting of one coat sealer, one undercoat and one finishing coat.

(ii) **Plastic Paint** – To properly prepared surfaces apply two coats.

(d) **Metalwork** For interior metalwork finishes see Clause S5 Exterior Finishes sub-clause (f).

(e) **Wallpaper and Vinyl Fabrics** Wall papering shall be carried out by a skilled tradesman. Walls to be papered shall be sealed. Wallpaper shall be hung vertically with vertical joints butted and patterns set to match. For location of areas see Project Specifications, Page 10, Item 21.

(f) **Cupboards** The whole of the inside of wardrobes, coat and linen cupboards where lined with wall sheeting shall be finished as for remainder of walls. The whole of the inside of overhead kitchen cupboards shall be painted or stained to match the general finish. The backs and edges of all doors and front edges of shelves shall be painted or stained to match the general finish.

S 6 COMPLETION Touch up painting where required to make good after all trades, clean off all marks, paint spots and stains throughout including all hardware fittings and leave job in a clean and tidy condition.

T. GLAZING

T 1 GENERALLY Lights to sashes, doors and partitions shall be glazed with the best quality glass.
Rebates to timber doors and sashes shall be primed before glazing.
All glazing shall be carried out in accordance with Australian Standard 1288–1973 Installation of Glass in Buildings.
For type of glass see Project Specifications, Page 10, Item 22.

T 2 GLASS Windows, doors, and internal partitions shall be fitted with glass in accordance with the following tables.

WINDOWS						
Maximum glass area m^2	0.9	1.3	2.0	2.8	4.0	7.1
Glass thickness mm	3	4	5	6	8	10

DOORS						
Maximum glass area m^2	0.4	0.5	0.7	1.1	2.0	3.0
Glass thickness mm	3	4	5	6	8	10

T. GLAZING (Cont'd.)

T 2 (cont.) **INTERNAL PARTITIONS**

This table applies where the sill is a minimum 450mm above the floor. Where the sill is less than 450mm above the floor, the table for "Doors" shall apply excepting where patterned glass is used when this table shall apply.

Maximum glass area m^2	0.8	1.4	2.2	3.3	4.5	6.0
Glass thickness mm	3	4	5	6	8	10

LOUVRE BLADES

Glass Thickness mm	Maximum Blade Length mm	
	Up to 100mm wide	Up to 150mm wide
4	500	600
5	600	750
6	750	900

The above tables refer to maximum glass area using ordinary glass.
Where sand blasted or wired glass is used, the maximum areas are to be multiplied by 0.4 and 0.5 respectively.
Where patterned glass is used the thickness is measured at its minimum thickness and the above tables apply.
Unless otherwise specified Project Specifications Item 22, glaze bathroom and toilet windows in obscure glass.

T 3 **GLAZING** shall be carried out using the appropriate compound as indicated in the following table, spaced, back puttied, sprigged, beaded and finished in accordance with A.S.1288.

TYPE OF FRAME	SIZE OF LIGHT	GLAZING COMPOUND
Timber	All Sizes	Linseed oil putty
Steel	All Sizes	Steel frame glazing compound
Aluminium	Up to $1m^2$	Aluminium frame glazing compound
	Up to $1.5m^2$	Non hardening glazing compound
	All sizes	Elastomeric sealant or Non resilient preformed tape or Resilient preformed tape

U. FINAL NOTE

U 1 For cleaning of building and site refer General Clauses Clause B21.

NO. 617 STREET NEPEAN HGIHWAY MC CRAE

Property No. 2/~~8~~15/555 Lot 4 L.P. 11038

Permit No. 16527 Date 14/3/78

Plumber

Drainer J. T. MC ARDLE PTY.LTD

House Lock up. ST n/s.

1.9.78

Fd Rein ✓ 3.10.78

ST. approved subject to pump.

"The sanitary drains between each fixture and the all purpose septic tank shall be constructed vitrified clay pipes tested by the Melbo... Metropolitan Board of Works in accordance the requirements of the Dromana Sewerage Authority By-laws and Regulations, and be inspected and tested by the Authority's Inspector."

Dromana Print, Ref. 172

114632.

Application For Permission To Install / Alter A Septic Tank System

HEALTH (SEPTIC TANK) REGULATIONS 1977

To The Council of the SHIRE OF FLINDERS

RATE NO. 2-815-565

Lot No. 4 L.P. 11038

Street No. 617

Street ~~POINT~~ NEPEAN HIGHWAY

TOWN MT CRAG

NOTE: Details are available on rate notice.

I hereby apply for permission to install / alter a septic tank system and supply the following information: MORIALTA

16527

Surname: (Owner) ~~MORIALTA~~ P/L Given Names

Current Address: 10 HIGHFIELD GROVE ~~EAST~~ KEW 3101

Address of site of existing or proposed installation: LOT 4 POINT Nepean Rd.

Municipality where site is situated: Shire Of Flinders

Name and Adress of Applicant: J.T. McARDLE & Co Pty Ltd.

Name and address of (a) Contractor: ~~T.B.N.~~

(b) Plumber:

Name of Manufacturer of prefabricated Units: —

Internal dimensions, sizes and construction details of cast-in-situ units: —

Liquid capacity of tank (s) or chambers: 3200 Lt.

Type of system and/or process:

Number of fixtures to be connected (water closets, sinks, baths basins, &c): 9

Number of persons expected to use the system: ?

Method of effluent disposal:

Plans and Specifications.

I enclose three copies of the undermentioned plans and specifications -

(a) A block plan (scale - not less than 1 : 500) showing

(i) The location of the premises including the street number or lot number;

(ii) The dimensions of all boundaries and the location of all other streets and laneways which abut the property (show names if applicable);

(iii) The location and dimensions of all buildings or proposed buildings, streams, water tanks, swimming pools excavations, driveways, stormwater drains, water pipes and existing septic tank systems.

(b) A detailed plan and Sections (scale - not less than 1 : 50) of all parts of the proposed septic tank system showing dimensions and grades.

(c) Specifications describing materials to be used in the construction and where required by the Council or Inspector, other additional information necessary to show that the septic tank system will, if constructed in accordance with such specifications, comply with the provisions of these Regulations.

Signature of applicant Irrelevant / Sensitive Date 8.2.77

Cash

$30. Fee Received Cheque

NAT 07847a.

Signe Irrelevant / Sensitive

Dromana · Rosebud Sewerage Authority
Plan of Drainage

Owner: Mercalta P/L
Location: 617 Nepean H/Way McCrae

Drainage Plan No. E4/617
Detail Plan No.
Reference No. 480

28-2-78.

1. 3200 LITRE SEPTIC TANK.
2. PUMP + PUMP PIT
3. 37 METRES OF RELN.
4. DISTRIBUTION PIT.

LEGEND:

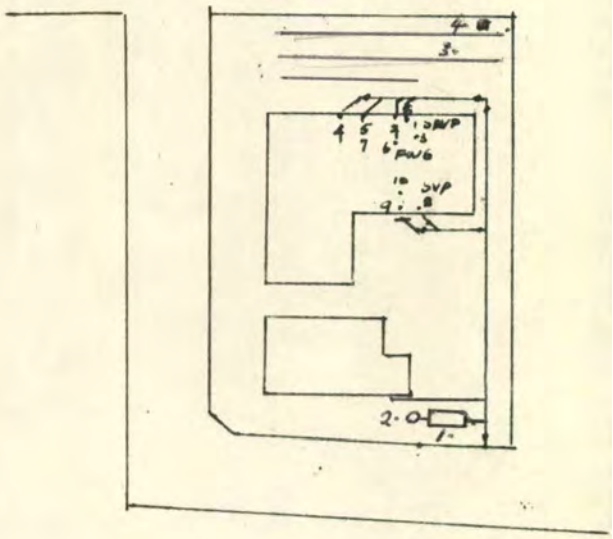
1 FIXTURES

Closet Internal	1 - 8
Closet External	
Urinal Internal	
Urinal External	
Bath	2
Basin	3 - 10
Sink	4
Trough	5
Shower	6 - 9
Washing Machine	7 to 5

2 DRAINAGE DETAILS

C I P	Cast Iron Pipe
E. V.	Educt Vent
*G T.	Gully Trap
G D T.	Gully Disconnector Trap
G.I.T.	Grease Interceptor Trap
I C.	Inspection Chamber
R V.	Relief Vent
S T.	Silt Trap
S V P.	Soil Vent Pipe
S E.V.P.	Soil Educt Vent Pipe
T I T.	Triple Interceptor Trap
V C P.	Vitrified Clay Pipe
———	Authority's Sewer
———|	Disconnector Trap
———o———	Inspection Openings
———	Proposed Drain
- - - - - -	Existing Dysin
———	Cast Iron Pipe
△ △ △	Trees

Pt Nepean H/Way



Scale: 1 : 500

Designed.. Date.. Checked Date.. ...neer..... Date..... Revisions.....

Conditions

1. All sewerage installations shall be constructed in accordance with the requirements of the Uniform Building Regulations, the Authority and its by-laws, and special conditions endorsed hereon.
2. Where drains are liable to be affected by tree roots, such drains shall be constructed as directed by the proper officer.
3. No drainage work shall be commenced until the Authority's House Connection Branch is constructed and made available (except in cases where special interim approval is granted).
4. The Authority accepts no liability for any alterations necessary due to any variation in the location and / or level of the connection point.
5. Where extensions from existing sewerage installations are shown on this plan the owner is entirely responsible for the existing drains lying in the positions shown and at a suitable level for the connection thereto of the proposed extensions and that the existing drains are in a satisfactory condition.
6. Notwithstanding the consent given to the owner to connect to the Authority's sewers upon issue of this plan of drainage, it is necessary for the owner to obtain the approval of the Shire of Flinders for the construction of new buildings and alterations, additions, repairs and changes of use or occupancy in existing buildings.
7. All drains shall be nominal 100 mm diameter pipe laid to a minimum grade of 1 in 40 unless otherwise shown.
8. The drainer is required to confirm that the chainage from the downstream manhole and the tie to the fence agree before commencing excavation.