



Our Ref: C-09-024-1

7 August 2009

The General Manager
Pittwater Council
PO Box 882
MONA VALE NSW 1660

Dear Sir or Madam,

**Re: Construction Certificate (New Garage)
137 Riverview Road, Clareville
Development Consent No. No.071/09**

I refer to our engagement in respect of the above and enclose the Construction Certificate for such in accordance with the provisions of clause 142(2) of the Environmental Planning and Assessment Regulation 2000.

Please find enclosed a cheque for \$30.00 being the regulated registration fee for the above as detailed in Clause 263 of the Environmental Planning and Assessment Further Amendment (Quality of Construction) Regulation 2004. It would be appreciated if a receipt in this regard could be forwarded to our firm as soon as possible.

Should you require any further information please do not hesitate to contact me.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Donohoe'.

Tom Donohoe
Tom Miskovich & Associates Pty Ltd

Encl.

REC 263603.
12/8

accredited building certifiers ~ building regulation consultants ~ fire safety specialists

ABN 93 094 366 873 Pennant Hills BC, Suite 2/380 Pennant Hills Rd, Pennant Hills NSW 2120
PO Box 189 Pennant Hills NSW 1715 Ph 02 9484 6999 Fax 02 9484 3400 Email admin@tm-a.com.au



COPY

Construction Certificate

Mr Roger Jones

**Alterations and Additions
(New Garage)**

**137 Riverview Road,
Clareville**

Reference No: C-09-024-1

Dated: 7 August 2009

accredited building certifiers ~ building regulation consultants ~ fire safety specialists

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PO Box 189 Pennant Hills NSW 1715 Ph 02 9484 6999 Fax 02 9484 3400 Email admin@tm-a.com.au

Construction Certificate C-09-024-1

This certificate is issued by a certifying authority (a council or a private certifier) and verifies that, if the applicant carries out the proposed work in accordance with the plans and specifications that are approved, the work will comply with the environmental planning and assessment regulation 2000 as referred to in section 81a(5) of the environmental planning and assessment act 1979

Applicant

name: Mr Roger Jones
address: 137 Riverview Road CLAREVILLE NSW 2107
phone no: 9918 5455 fax no:
mobile: 0407 189 437 email: rogersuejones@bigpond.com

Owner

name: Mr Roger Jones
address: 137 Riverview Road CLAREVILLE NSW 2107
phone no: 9918 5455 fax no:
mobile: 0407 189 437 email: rogersuejones@bigpond.com

Property details

address: 137 Riverview Road CLAREVILLE NSW 2107
lot, d.p, s.p, vol, fol: Lot 5 DP 19402

Owner builders permit no

name: Suellen Jones licence no: n/a
owner builders permit: 367455P
address: 137 Riverview Road CLAREVILLE NSW 2107
phone no: 9918 5455 fax no:
mobile: email:

Description & value of development

description of works: Alterations and Additions (New Garage)
value of works: \$49,500.00

Building Code of Australia

bca classification: 10a
bca version applicable: 2009
type of construction: N/A

Construction Certificate C-09-024-1

Details of development consent

Consent authority

name: Pittwater Council

Development consent

development consent no: No.071/09 date of determination: 26 May 2009

Determination

determination: *approved*

Certifying authority

name: Tom Donohoe

accreditation no: BPB0096

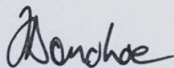
address: PO Box 189 PENNANT HILLS NSW 1715

phone no: 02 9484 6999

project building surveyor
for enquires: Tom Donohoe

certificate: *I certify that the work if completed in accordance with the documentation accompanying the application for the certificate (with such modifications verified by the certifying authority as may be shown on that documentation) will comply with the requirements of this regulation as referred to in section 81a (5) of the environmental planning and assessment act 1979*

signature:



date of determination: 7 August 2009

Attachments

certificate application details	annexure 1
documents that form part of this certificate	annexure 2
other supporting documentation	annexure 3



Annexure 2

Documents that form part of this Certificate

Construction Certificate Documentation
Certificate Number C-09-024-1
Premises 137 Riverview Road, Clareville

Documents that form part of certificate number C-09-024-1
137 Riverview Road, Clareville

Architectural documentation & specification prepared by **Warwick Werner Architect Pty Ltd.**

Drawing No.	Revision	Title	Date
WD-26	A	Site Plan	14 July 2009
WD-27	C	Floor Plans	14 July 2009
WD-28	B	North & South Elevations	14 July 2009
WD-29	B	East & West Elevations Section A-A	14 July 2009
Specification (pg 1)	-	General requirements	14 July 2009
Specification (pg 2)	-	General requirements	14 July 2009
Specification (pg 3)	-	General requirements	14 July 2009
Specification (pg 4)	-	General requirements	14 July 2009
Specification (pg 5)	-	General requirements	14 July 2009
Specification (pg 6)	-	General requirements	14 July 2009

Structural documentation & specification prepared by **D'Ambrosio Consulting.**

Drawing No.	Revision	Title	Date
6.01	A	Lower and Upper Floor Plans and Details	15 July 2009
6.02	A	Lower and Upper Floor Sections Sheet 2	15 July 2009
6.03	A	Lower and Upper Floor Sections Sheet 2	15 July 2009
7.01	A	Roof Plan and Section	15 July 2009

Reports, Design Statements & Other Supporting Documents

Title	Prepared by	Dated
Letter confirming compliance with various DA conditions	Warwick Werner Architect Pty Ltd	15 July 2008
Receipt for Long Service Levy payment	Long Service Payments Corporation	21 July 2009
Certificate of Structural Adequacy	D'Ambrosio Consulting	16 July 2009
Form no. 2 – Geotechnical Risk Management Policy	D'Ambrosio Consulting & Jack Hodgson Consultants	29 July 2009
Consent by Road Authority for work in Road Reserve- Driveway	Pittwater Council	22 July 2009
Owner Builder Permit 367455P	NSW Office of Fair Trading	5 August 2009
Record of site inspection prior to issue of Construction Certificate	Tom Donohoe/Tom Miskovich & Associates	27 July 2009



Annexure 3

Other Supporting Documentation

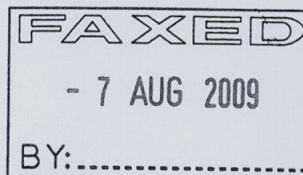
Construction Certificate Documentation

Certificate Number C-09-024-1

Premises 137 Riverview Road, Clareville



tom miskovich
& associates



Facsimile / Email

Attention:		Company:	Pittwater Council
Fax No:	9970 7150	Date:	7 August 2009
From:	Tom Donohoe	Pages:	7 (incl this page)
Our ref:	C-09-024-1		

Re: Notice to Commence Works and Appointment of Principal Certifying Authority form
Premises: 137 Riverview Road, Clareville

This facsimile is confidential and intended for the named addressee (s). It may contain legally privileged information. If you receive this facsimile in error please advise us immediately.

Message:

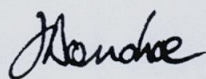
To whom it may concern,

Please find attached the following documents associated with section 81A of the Environmental Planning and Assessment Act 1979:

- Notice to commence works form,
- Copy of application confirming nomination of PCA by person having benefit of development consent; and
- Owner-Builder permit details.

Should you need to discuss anything in this regard please do not hesitate to contact me.

Regards,



ORIGINAL IN POST:

☒ YES

☐ NO

accredited building certifiers ~ building regulation consultants ~ fire safety specialists

ABN 93 094 366 873 Pennant Hills BC, Suite 2/380 Pennant Hills Rd, Pennant Hills NSW 2120
PO Box 189 Pennant Hills NSW 1715 Ph 02 9484 6999 Fax 02 9484 3400 Email admin@tm-a.com.au

Notice to commence building work and appointment of a principal certifying authority

Applicant

name: Mr Roger Jones
address: 137 Riverview Road CLAREVILLE NSW 2107
phone no: 9918 5455 fax no:
mobile: 0407 189 437 email: rogersuejones@bigpond.com

Owner

name: Mr Roger Jones
address: 137 Riverview Road CLAREVILLE NSW 2107
phone no: 9918 5455 fax no:
mobile: 0407 189 437 email: rogersuejones@bigpond.com

Property details

address: 137 Riverview Road CLAREVILLE NSW 2107
lot, d.p, s.p, vol, fol: Lot 5 DP 19402

Description of works proposed

type of work proposed: Building
description of works: Alterations and Additions (New Garage)

Details of approvals

development consent no:	No.071/09	date of consent:	26 May 2009	consent authority:	Pittwater Council
construction certificate no:	C-09-024-1	date of certificate:	7 August 2009	accredited certifier :	Tom Donohoe

Owner builders permit no

name: Suellen Jones licence no: n/a
owner builders permit: 367455P
address: 137 Riverview Road CLAREVILLE NSW 2107
phone no: 9918 5455 fax no:
mobile: email:

Notice to commence building work and appointment of a principal certifying authority

Have you attached to this notice evidence that the licensed person is insured to carry out this type of work

- yes ☐
- no ☒ building works are to be undertaken by a person with an owner-builders permit?
- no ☐ then have you attached to this notice a declaration (signed by each owner of the land) that the reasonable market cost of the labour and materials to be used is less than \$12,000?
- n/a ☐ proposed building contains a rise in stories of more than 3 and contains 2 or more separate dwellings.
- n/a ☐ proposed works are commercial/industrial.

Date the work will commence

on or after: 10 August 2009

Principal certifying authority

I acknowledge

- ~~that I have seen evidence that the builder is licensed and insured, or,~~
- that I have seen evidence that the building works are to be undertaken by a person with an owner-builders permit, or,
- ~~that the proposal is not "residential building work" and does not require the builder to be licensed under the home building act 1989, or,~~
- ~~the proposed building contains a rise in stories of more than 3 and contains 2 or more separate dwellings and are exempt from howi under the provisions of the home building amendment (insurance exemptions) regulation 2003, and that I have seen evidence that the builder is licensed.~~
- In accordance with section 81a of the ep & a act 1979 that I have been appointed by the applicant to carry out the role of the principal certifying authority for this development (copy of application form attached).

name: Tom Donohoe

accreditation no: BPB 0096

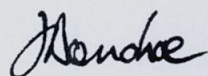
address: po box 189 pennant hills nsw 1715

phone no: 02 9484 6999

project building surveyor for enquires: Tom Donohoe

date of determination: 7 August 2009

Signature



Privacy policy

The information in this notice is required under the environmental planning and assessment act 1979 if a person is going to erect a building or carry out subdivision work. The information will be held by us and by the council.

WARWICK WERNER ARCHITECT
T

PTY. LIMITED ACN 077 722 779

4 WANAWONG RD. AVALON BEACH
NSW AUSTRALIA 2107
Telephone: 02 9918 5455
Facsimile: 02 9918 5462
Mobile Phone: 0402 038 109
Email: wernerdesign@avalonbeach.nsw.au

15 July 2008
Ref: TM-RSJ-10-LTR.wpd

Tom Miscovich & associates
P.O.Box 189
PENNANT HILLS NSW 2120

Attention: Tom Donohoe

Dear Tom,

Re: **PROPOSED NEW GARAGE 137 RIVERVIEW RD CLAREVILLE**

Please find enclosed 3 hard copies of the following architectural drawings and specification ISSUED FOR CONSTRUCTION CERTIFICATE. Pdf copies of all documents are contained on the separate enclosed disk.

WD-26-A	Site Plan
WD-27-C	Floor Plans
WD-28-B	North & South elevations
WD-29-B	East & West Elevations, Section A-A
A3 Specification	Pages 1-6

The issues contained in your email 2nd July 2009, to which I am responding, are addressed below.

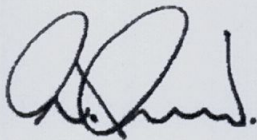
Condition	Issue	Method of Compliance
DA Conditions		
B3	Verification that proposed screen planting will screen 50% of built form from street	Requirement for compliance is contained in Specification 15 LANDSCAPING: 15.6 Planting - Required Planting. The plants proposed are listed in 16 SCHEDULES: 16.2 Planting Schedule - Schedule of screen planting. Evidence as to the suitability of the planting is given by the mature height verified in the Pdf document Plant List is on the enclosed disk.
B6	Proposed Native Tree canopy	Requirement for compliance is contained in Specification 15 LANDSCAPING: 15.6 Planting - Required Planting. The plants proposed are listed in 16 SCHEDULES: 16.2 Planting Schedule - Schedule of screen planting. Evidence as to the suitability of the planting is given by the mature height verified in the Pdf document Plant List is on the enclosed disk
B11	Verification that any new fencing will be passable by native wild life	No new fencing was included in the Development Application or proposed as part of this application for Construction Certificate.
B13	Verification that no white or light coloured roof materials will be used	Compliance with this condition is contained in Specification 16 SCHEDULES: 16.1 Schedule of External Finishes. These are as submitted with Development application and approved. Refer Pdf document Impact Statement is on the enclosed disk.

General BCA requirements

3.1.3	Termite Treatment	Refer Specification 1 GENERAL REQUIREMENTS: 1.4 Termite Protection
3.4.3	Timber Framing	Refer Specification 4 TIMBER AND STEEL CONSTRUCTION: 4.1 General - Standards
3.5.1	Roof Cladding	Refer Specification 7 ROOFING: 7.3 Metal Roofing - Design and installation
3.5.2	Gutters and Downpipes	Refer Specification 7 ROOFING: 7.4 Roof Plumbing - Selection and installation of rainwater goods
3.5.3	Wall Cladding	Refer Specification 10 CLADDING :10.3 Moisture Protection - General
3.6	Glazing	Refer Specification 9 DOORS & WINDOWS: 9.2 Materials & Components - Glass
3.9.1	Stair Construction	Refer Specification 4 TIMBER & STEEL CONSTRUCTION : 4.8 Timber & Steel Stairs - General
3.9.2	Balustrades	Refer Specification 4 TIMBER & STEEL CONSTRUCTION : 4.7 Handrails & Balustrades - General & Standards

Yours faithfully,

WARWICK WERNER ARCHITECT PTY. LIMITED



WARWICK WERNER

RECEIVED
24 JUL 2009

BY: _____

4. SHALE SLOPES (SS)

These are usually steep slopes which either occur below the Hawkesbury Sandstones, or have Narrabeen Shales and sandstones as the parent material. They generally support open forest communities

SCANNED

A. Tall Open Forests and Open Forests:

Trees

COMMON NAME	SCIENTIFIC NAME	CHARACTERISTIC
Black She-oak	<i>Allocasuarina littoralis</i>	Good screen tree. Deep fissured bark and cones cylindrical with flat apex.
Forest Oak	<i>Allocasuarina torulosa</i>	Good screen tree. Deep fissured bark and cones ball-like.
Sydney Red Gum/ Smooth-barked Apple	<i>Angophora costata</i>	Orange to salmon coloured smooth bark. Branches contort and twist.
Roughbarked Apple	<i>Angophora floribunda</i>	Bark is brown and fibrous on all limbs with contorted upper limbs.
NSW Christmas Bush	<i>Ceratopetalum gummiferum</i>	Flowers small and white. Fruits swell to an attractive bright red in summer.
Bangalay Gum	<i>Eucalyptus botryoides</i>	Rough reddish bark with salt resistant leaves.
Spotted Gum	<i>Eucalyptus maculata</i>	Tall tree with smooth spotted-skin bark.
Blueberry Ash	<i>Elaeocarpus reticulatus</i>	Small tree with attractive fringed and bell shaped white flowers.
Grey Gum	<i>Eucalyptus punctata</i>	Grey bark with large cream patches. Favoured koala food tree.
Bastard Mahogany	<i>Eucalyptus umbra</i>	Deep fibrous bark with leaves thick and tough.
Turpentine	<i>Syncarpia glomulifera</i>	Straight trunk with deep fibrous bark and flowers cream to white in clusters
Native Peach	<i>Trema aspera</i>	Leaves are an elegantly shaped like peach tree leaves with bisexual flowers.

Shrubs :

Hairpin Banksia	<i>Banksia spinulosa</i>	Banksia flower being a major food source for birds and possums.
Narrow-leafed Bottle Brush	<i>Callistemon linearifolium</i>	Bright red flowers providing nectar for birds.
Long-leafed Cassinia	<i>Cassinia longifolia</i>	Leaves flat and long with flower heads within white bracts.
Matchheads	<i>Comesperma ericinum</i>	Slender shrub with bright pink to purple clusters of matchhead-like flowers.
Hop Bush	<i>Dodonaea triquetra</i>	Soft leafy shrub with thin textured leaves.
Pink Spider Flower	<i>Grevillea sericea</i>	Flowers are pink to purple tolerating dry, open areas.
White Spider Flower	<i>Grevillea linearifolia</i>	Graceful slender shrub with flowers a variety of white/red/pink in colour.
Dogwood	<i>Jacksonia scoparia</i>	Grey to green leafless shrub. Flowers are yellow with red markings.
Paperbark Tea-tree	<i>Leptospermum trinervium</i> (formerly <i>L.attenuatum</i>)	Stout trunk and papery-flaky bark with white flowers.
Burrawang Palm	<i>Macrozamia communis</i>	Large tufted fern-like shrub with long spiky leaves and fleshy red seeds.
Mock Olive	<i>Notelaea longifolia</i>	Leaves are olive green and fruits black olive-like.

Bleeding Heart	<i>Omalanthus populifolius</i>	Large heart-shaped leaves turning red before falling.
Native Holly	<i>Oxylobium ilicifolium</i>	Erect spikey shrub, flowers yellow with red markings.
Flat-pea	<i>Platylobium formosum</i>	Scrambling pea-shrub with leaves heart-shaped and flowers yellow with red markings.
Carrot Tops	<i>Platysace linearifolia</i>	White flowers in dense clusters and soft thread-like foliage.
Elderberry Panax	<i>Polyscias sambucifolia</i>	Flowers green to yellow in clusters with purple fruits.
Pultenaea	<i>Pultenaea elliptica</i>	Small erect shrub with flowers rich yellow with dark red markings.
Rapanea	<i>Rapanea variabilis</i>	Tiny pale-yellow flowers clustered on old wood.
Wikstroemia	<i>Wikstroemia indica</i>	Leaves hairless and soft with shiny red fruiting berries.
Wilkiea	<i>Wilkiea huegeliana</i>	Stiff leathery leaves with yellow flowers.
Grass Tree	<i>Xanthorrhoea spp.</i>	Long grass-like leaves with a tall flower spike. The rich nectar is food for birds and insects.
Zieria	<i>Zieria smithii</i>	Strong fragrant foliage with tiny pink flowers.

Herbs, Climbers and Scramblers

Appleberry	<i>Billardiera scandens</i>	Slender climber or scrambler with edible purple fruits.
Desmodium	<i>Desmodium rhytidophyllum</i>	Scrambler with rusty felt all over leaves and tiny pink flowers.
Kangaroo Grape	<i>Cissus antarctica</i>	Robust woody climber with glossy black edible fruit.
False Sarsparilla/ Sweet Tea	<i>Hardenbergia violacea</i>	Attractive twiner with rich purple pea flowers. Leaves boil to a tea.
Twining Guinea Flower	<i>Hibbertia dentata</i>	Scrambling vine with toothed leaves and yellow flowers.
Dusky Coral Pea	<i>Kennedia rubicunda</i>	Robust twiner with large red pea-flowers with black markings.
Jasmine Morinda	<i>Morinda jasminoides</i>	Scrambling climber. Flowers cream with orange-blossom fragrance.
Wonga-Wonga Vine	<i>Pandorea pandorana</i>	Tall woody climber with white cascades of flowers in Spring
Snake Vine	<i>Stephania japonica</i>	Climber with leaves heart-shaped and fruit shiny yellow to orange or red.

Ferns

Blechnum	<i>Blechnum spp.</i>	Fern with leathery fronds.
Rasp Fern	<i>Doodia aspera</i>	Small erect fern with rough fronds.
Common Maidenhair	<i>Adiantum aethiopicum</i>	Delicate fern found in dense colonies.
Umbrella Fern	<i>Sticherus flabellatus</i>	Erect fern to 1m high with fronds finely toothed.

B. Coastal Heaths (on Shale slopes):

Trees:

Lillypilly	<i>Acmena smithii</i>	Dense dark glossy foliage with fruit succulent and edible.
Coastal Banksia	<i>Banksia integrifolia</i>	Leaves are a stiff, leathery dark-green above with white hairs below.

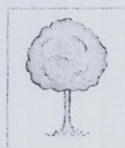
BLUEBERRY ASH

Elaeocarpus reticulatus

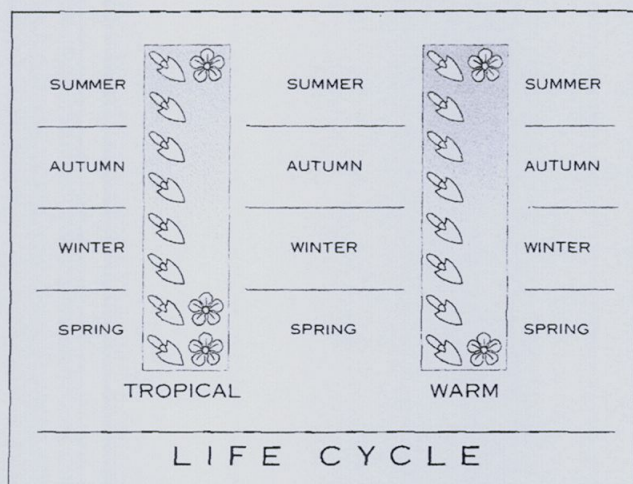


UPRIGHT AND SLENDER, this young tree will broaden as it matures, although the crown never becomes massive.

FEATURES



This pretty evergreen tree is native to the sheltered coastal gullies of eastern Australia, from Tasmania north to southern Queensland. This is a good specimen tree for smaller gardens but also makes a suitable park tree, either alone or in mixed plantings. It can grow in the open and is also well suited to sheltered, shady situations. It is also adaptable to growing in large tubs.



THE DAINTY FRINGED flowers of blueberry ash come in either pale pink or white. They are reason enough for growing this small tree.

Features

In tubs blueberry ash can be kept to a height of about 3 m. It rarely grows more than 8–10 m high planted in the ground except in its natural habitat where it can reach 15 m. The crown spreads to no more than 5 m wide. The foliage is reddish when young, ageing to a dark green with a somewhat leathery texture. The bell-shaped flowers are white in the species but the palest pink in some of the cultivars. Some of the pink-flowered forms are outstanding, especially 'Prima Donna'. The flowers are reminiscent of lily-of-the-valley.

CONDITIONS

Climate

Grows best in warm to tropical climates but will tolerate a temperature as low as freezing.

Aspect

Tolerates full sun, but for the best results find a sheltered spot in partial shade.

Soil

Soil should be heavily enriched with organic matter and well drained.

GROWING METHOD

Propagation

Grows from seed, but cultivars are grown from semi-hardwood cuttings taken through summer into early autumn.

Watering

Keep soil moist through spring and summer and water regularly if there is no rain.

Fertilising

A slow release fertiliser or blood and bone can be applied in early spring.

Problems

No specific pest or disease problems known.

Pruning

See page 14.

FLOWERING/FRUITING

Season

Sprays of delicate fringed flowers, which are occasionally used in wedding bouquets, appear from mid-spring through to early summer. After the flowers fall, small berries form. The berries ripen to a rich deep blue.

Leaves leathery, blunt-toothed edges, dark green on upper surface, paler underneath, to 20 cm (8 in) long. Orange-brown cylindrical flower spikes, to 18 cm (7 in) long, in spring. Zones 9–10.

Banksia speciosa

SHOWY BANKSIA

→ 3–5 m (10–17 ft) 13–6 m (10–20 ft)
☉ 🌿 🌸

Shrub from Eyre district of southern Western Australia. Leaves long, narrow, toothed to midrib, creating zig-zag effect. Flower spikes to 15 cm (6 in) long, conical, woolly, pale green to light yellow, in summer–autumn. Zones 9–10.

Banksia sphaerocarpa

FOX BANKSIA

→ 2 m (7 ft) 12 m (7 ft) ☉ 🌿 🌸

Widespread in southwest Western Australia. Low branching shrub, fine pine-like foliage. Unusual globular flowerheads, pinkish in bud turning bronze-yellow on maturity, year round but main flush in spring–summer. Large rounded follicles. Best suited to winter-rainfall areas. Zones 9–10.

Banksia spinulosa

HAIRPIN BANKSIA

→ 0.9–2 m (3–7 ft) 10.9–3 m (3–10 ft)
☉ 🌿 🌸

Shrub from east coast of Australia. Leaves linear, 5–8 cm (2–3 in) long, white undersides. Flower spikes cylindrical, to 12 cm (5 in) long, golden yellow with gold, red, or blackish hooked styles, in autumn–winter. Fire tolerant. Under cultivation tolerates pruning. *B. s. var. collina* (syn. *B. collina*), serrated leaf margins, paler yellow flowers. *B. s. var. cunninghamii*, tall plant, large yellow spikes; 'Lemon Glow', pale yellow-flowered form. *B. s. 'Birthday Candles'*, 50 cm (20 in) high, 90 cm (36 in) wide; 'Coastal Cushion', coastal form of species, 50 cm (20 in) high, 150 cm (60 in) wide; 'Golden Candles', amber flower spikes; 'Honeypots', open-branched shrub, flowers golden, red styles, in summer–winter. Zones 9–11.

BAUERA

Bauera is an eastern Australian genus of just 4 species. Named by English botanist Sir Joseph Banks in honor of 2 German botanical artists, this was among the first genera of Australian plants to be described. Once included in the saxifrage (Saxifragaceae) family, these evergreen wiry-stemmed shrubs are now regarded as better placed in the family Cunyaceae. The small



Banksia spinulosa



Banksia speciosa



Banksia speciosa, in the wild, Esperance, Western Australia

leaves, borne in opposite pairs, are trifoliate but stalkless, their leaflets appearing like a whorl of 6 small leaves at each node. Bowl-shaped flowers arise from the leaf axils in spring and early summer.

CULTIVATION: *Bauera* plants are easily grown and their requirements are undemanding. They do best in well-drained, light, sandy soil with added humus for moisture retention. They do not tolerate frost and

cold, so some shade from the hottest afternoon sun is appreciated, as is shelter during winter. Occasional trimming will keep the bushes compact. Propagate from seed or half-hardened cuttings.

HOP BUSH

Dodonaea species

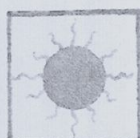


IN SUMMER, fruits of *Dodonaea viscosa* are a rich red-brown. This species has a wide geographical range, adapting to most climates.



THE INFLATED winged fruits of *Dodonaea triquetra* are far more decorative than its flowers, which are very insignificant.

FEATURES

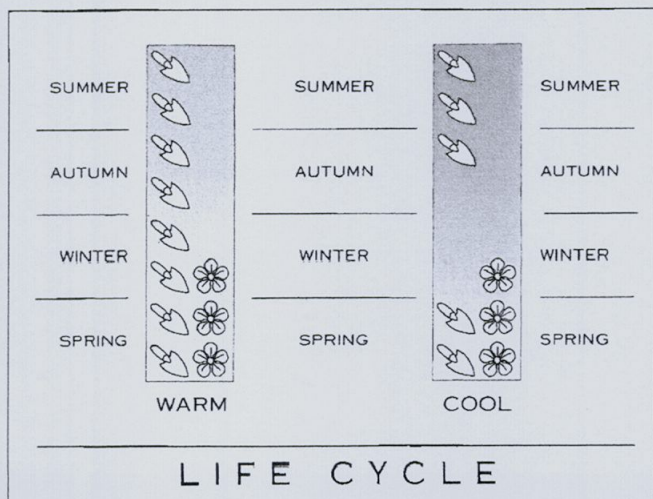


Sun



Partial
Shade

The inflated winged capsules of the hop bush were used in brewing by early European settlers, thus accounting for the common name. Most species are shrubs from 1 to 3 m high. Although many species exist, few are common in cultivation. *Dodonaea viscosa* and its purple-leaved form, var. *purpurea*, make good screening or background plants, growing 1.5–3 m high. Leaves are generally linear, shiny and sticky to the touch, but their shape can be variable. Flowers are insignificant but the winged capsules are most decorative. *D. triquetra*, 1–3 m high, is a species that rapidly colonises bare ground after bushfires.



CONDITIONS

Climate	Hop bush is adaptable to almost any climate and will tolerate some frost.
Aspect	Grows in full sun or partial shade.
Soil	Adapts to any reasonably well-drained soil.

GROWING METHOD

Propagation	Grows from seed or from firm tip cuttings taken from late spring through summer.
Watering	Give regular deep waterings until well established; then it tolerates drought well.
Fertilising	Responds well to light applications of blood and bone or slow release fertiliser in spring.
Problems	Scale insects are an occasional problem, especially on <i>D. triquetra</i> .

FLOWERING

Season	Insignificant flowers with no petals appear in late winter through spring. The winged capsules that form after flowering become gold to reddish pink in the sun.
---------------	--

PRUNING

General	Prune regularly to keep plants compact. In frost-free areas cut back at any time.
----------------	---

BLEEDING HEART

Omalthus populifolius

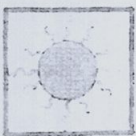


BLEEDING HEART is ideal for planting as a nurse tree while you establish slower growing plants. It quickly provides shelter.

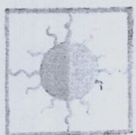


THE BRIGHT RED of ageing leaves adds light to this fast-growing shrub, which is mainly grown for its foliage.

FEATURES

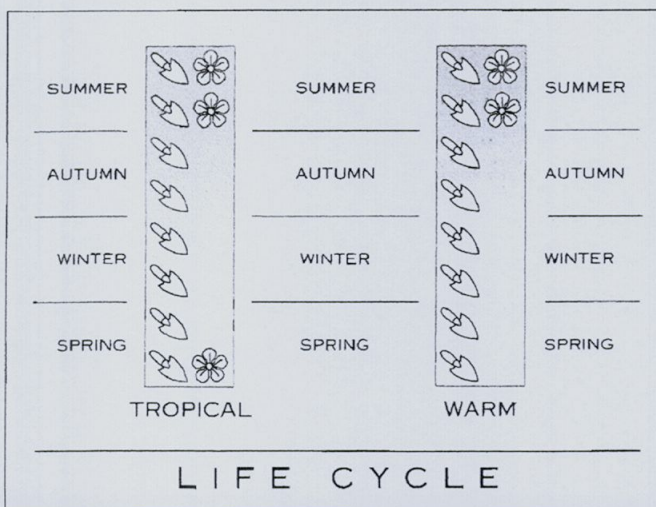


Shade



Partial
Shade

Sometimes called native poplar, this fast-growing shrub or small tree often appears as a seedling in gardens. It is very attractive to birds that eat the seeds and deposit them in their droppings. Although scorned by some gardeners, it is an attractive and useful plant for its own sake and it can also be used as a nurse plant to protect other, slower growing species. It will grow from 2.5 to 5 m in height and its heart-shaped leaves have long, reddish stems or petioles. The older leaves turn a brilliant red before falling, adding a bright touch. The greenish yellow, tassel-like flowers are obvious but not very decorative. Young plants make attractive pot specimens.



CONDITIONS

Climate	Grows easily in any frost-free region.
Aspect	Does well in shade or filtered sunlight.
Soil	Although tolerant of poor soil, this plant must have good drainage and does best in soils enriched with organic matter.

GROWING METHOD

Propagation	Grows easily from ripe seed that matures during summer to early autumn. It can also be grown from firm tip cuttings taken from late spring through summer.
Watering	Regular water during the warm months will produce a better looking plant but this is a great survivor that tolerates neglect.
Fertilising	Feeding is generally not necessary if the plant is mulched and grown in humus-rich soil.
Problems	Not usually troubled by pests or disease.

FLOWERING/FRUITING

Season	Flowers appear during summer. The fruits that follow ripen during autumn.
---------------	---

PRUNING

General	Pruning is not usually needed. Tip prune after flowering to avoid fruit set.
----------------	--

LILLY PILLY

Syzygium species



A YOUNG TREE of *Syzygium wilsonii* thrives in a warm sheltered corner of this lovely bush garden.



RICH SALMON PINK colour on the new leaf growth is as decorative as any flower. New pink growth is a feature of this tree group.

FEATURES



There are about five hundred species of lilly pilly, but few are cultivated as ornamental trees. These evergreens have glossy, dark green foliage, usually a bright pinky-red colour when young. The fluffy flowers are cream coloured in most species. After flowers fall, small, edible and decorative fleshy fruits form. They are round- or pear-shaped and grow in a range of colours, mostly pink, red or mauve. Lilly pillies create fairly heavy shade and because of their flowers and fruits are unsuitable for planting near swimming pools or along paths as droppings can be hazardous for pedestrians.

Varieties

Small-leaved lilly pilly, *S. luebmannii*, grows 6–8 m high with a rounded crown about 6 m across, but may be larger in ideal conditions. Its small, pear-shaped fruits are bright coral red when ripe. *S. paniculatum*, also known as brush cherry, has round, cerise-pink fruits and grows 15 m or more high and 10 m wide. A very large species, *S. francisii*, grows over 20 m high and wide. It is a magnificent tree for large gardens and parks and its fruit are small, round, violet berries. Small forms, such as 'Lilliput' and 'Bush Christmas', grow in tubs.

CONDITIONS

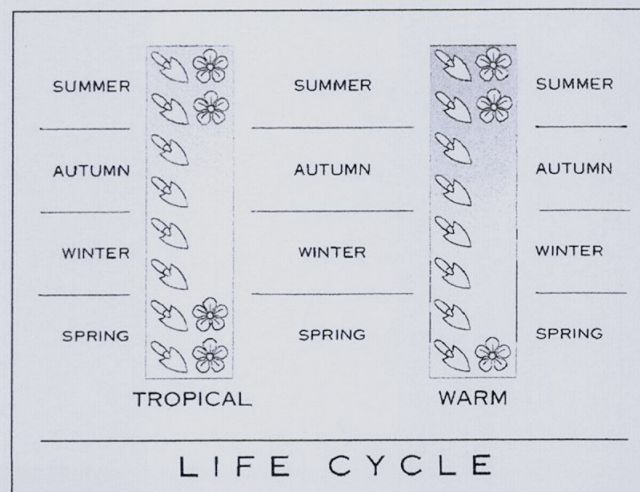
Climate Prefers a warm subtropical to tropical climate.
Aspect Needs sheltered spot in full sun or light shade.
Soil Soil must be deep, rich in organic matter and free draining.

GROWING METHOD

Propagation Grows from seed removed from ripe fruits as they fall, usually in autumn.
Watering Needs regular, deep watering through dry spells in spring and summer.
Fertilising A slow release fertiliser may be applied to young trees in spring. Manure or compost mulches supply most nutrients required.
Problems Some are attacked by wax scales, which secrete honeydew that allows sooty mould to grow. Spray with white oil while trees are young. New growth may be attacked by sap-sucking psyllids, which cause pimple-like blisters. Control is difficult without systemic sprays. *S. luebmannii* seems fairly resistant to attack.
Pruning See page 14.

FLOWERING/FRUITING

Season Most flower during spring or summer. The fruits ripen in late summer to autumn.



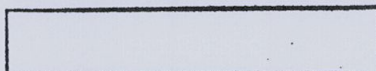
C-09-024-TD

LONG SERVICE
BUILDING & CONSTRUCTION



21 July 2009

SCANNED



RECEIVED
24 JUL 2009

ROGER JONES
137
RIVERVIEW RD
CLAREVILLE NSW 2107

Building and Construction Industry
Long Service Payments Corporation
Level 1
19-21 Watt Street
Gosford NSW 2250
Locked Bag 3000
Central Coast MC NSW 2252
Tel: 13 14 41
Fax: (02) 9287 5685
Email: info@lspc.nsw.gov.au
www.lspc.nsw.gov.au
ABN 93 646 090 808

As per your request for a copy of your receipt no. 00070957 dated 21 July 2009, the following information is provided:

Received from: (Name of person or organisation paying for levy) the amount of

ROGER JONES

\$173.00

Payment details:

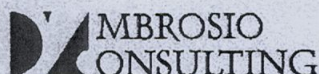
Online 00571269886 \$173.00

being payment for Long Service Levy as detailed below

Levy Payment Form number	5000765
Council/Department/Authority	PITTWATER COUNCIL
C.C. Number	CC-09-024
Work address	137 RIVERVIEW RD CLAREVILLE NSW 2107
Estimated value of work	\$49,650.00
Levy payable (No exemption)	\$173.00
Total levy paid	\$173.00

Signed: _____

Date 21/7/09



D'Ambrosio Consulting Pty Ltd
ACN 058 635 822 Structural Engineers
Suite 4/153 Victoria Road Gladesville
PO Box 251 Gladesville NSW 1675
Tel (02) 9879 5577 Fax (02) 9879 5588
Email: dambrosioconsulting@bigpond.com

Ref: S4443

16 July, 2009

The General Manager
Pittwater Council
Administrative Offices
Vuko Place
Warriewood NSW 2102

Dear Sir / Madam,

Re: 137 Riverview Rd, Clareville - Certificate Of Structural Adequacy (New Garage & Driveway).

This letter is to certify to council that the structural details shown on the accompanying structural drawings S4443 – 6.01, 6.02, 6.03 & 7.01 have been designed in accordance with the structural requirements of The Building Code Of Australia and will be safe for the maximum anticipated loadings as outlined in AS1170.0, 1,2 & 4. The new structural elements will be framed out of structural steel and timber, supported off reinforced concrete piers, founded to sandstone bedrock. The structural system for the new garage is a combination of braced structural steel and portal frame action. The concrete floor and access driveway have been designed for an applied live-load of 750 kg/m² (to allow for truck loading and storage), and the building designed for a terrain category 2.5 wind exposure (from the south). The new timber framing is to be constructed in accordance with the requirements of AS1684 – Residential Timber Framing Code, and structural steelwork is to comply with the requirements of AS4100 – Steel Structures Code.

The new driveway has been designed to comply with Pittwater Council's 21DCP Control B6.1, where the front of the garage is within 3.5 metres of the front property boundary (896mm). The access driveway crosses over "public land" and is proposed to be 4500mm in this part. The code stipulates that the driveway width can be as wide as the garage (which is 6000mm), so the driveway crossing complies in this regard. The ramp over angles and gradient of the new driveway also comply with the requirements of the standards.

It is recommended that engineers from this office make periodic inspections of the structural elements associated with this project to ensure compliance with the design intent. The concrete piers must be socketed into sandstone bedrock, and engineers from this office as well as the geotechnical engineer are to certify that the bearing under the piers is structurally sound and acceptable.

This office carries professional indemnity insurance with Lloyd Insurances, and is current to June, 2010. If council has any questions, or requires any additional information, please do not hesitate to contact me.

Yours faithfully

A handwritten signature in dark ink, appearing to read 'Angelo D'Ambrosio'.

Angelo D'Ambrosio B.E.(Hons) MIEAust NPER3 (Structural)
D'AMBROSIO CONSULTING P/L

GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 2 – To be submitted with detailed design for construction certificate

Development Application for ROGER JONES
Name of Applicant

Address of site 137 RIVERVIEW ROAD, CLAREVILLE

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

I, ANGELO DAMBROSIO on behalf of DAMBROSIO CONSULTING P/L (Structural Engineers)
(insert name) (trading or company name)

on this the 29TH JULY, 2009

(date)

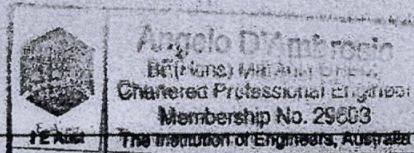
certify that I am a Structural or Civil Engineer as defined by the Geotechnical Risk Management Policy for Pittwater. I am authorised by the above organization/company to issue this document and to certify that the organization/company has a current professional indemnity policy of at least \$2million.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

Geotechnical Report Details :

Report Title : **RISK ANALYSIS & RISK MANAGEMENT FOR PROPOSED HOUSE AT 137 RIVERVIEW ROAD, CLAREVILLE**

Report Date: **2ND OCTOBER, 2003**

Author: **JACK HODGSON**



Structural Documents list:

S4443-6-01, 6-02, 6-03, & 7-01

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

ANGELO DAMBROSIO
(name)

Angelo D'Ambrosio
(signature)

Declaration made by Geotechnical Engineer or Engineering Geologist in relation to Structural Drawings

I prepared and/or technically verified the abovementioned Geotechnical Report as per Form 1 dated 2ND OCTOBER, 2003 and now certify that I have viewed the above listed structural documents prepared for the same development. I am satisfied that the recommendations given in the Geotechnical Report have been appropriately taken into account by the structural engineer in the preparation of these structural documents. I am aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature

Name J HODGSON

Chartered Professional Status

MEngSc FIEAust

Membership No. 149 788

Company

Jack Hodgson Consultants Pty Ltd





PITTWATER COUNCIL

C-09-024-TD

Form No UI 203

Consent by Road Authority for Work in Road Reserve - DRIVEWAY
Section 139 – Roads Act 1993

1 July 2009 - 30 June 2010

RECEIVED
24 JUL 2009

PLEASE PRINT

Applicant: RH & SJ JONES BY: _____

Postal Address: 137 RIVERVIEW RD AVALON Postcode: 2107

Phone (W): 9918 9437 (M): 9918 9437

Property Address: 137 RIVERVIEW RD AVALON

Subject to the payment of the appropriate fee, the Applicant is hereby permitted to construct the driveway (and/or associated work) as detailed below, in strict accordance with the **CONDITIONS** overleaf.

I/We the undersigned agree to abide by the said conditions.

Applicant's Signature: [Signature] Date: 22.7.09

SCANNED

FEES (includes GST)

Consent for access driveway construction only (includes 2 site inspections) per allotment for RESIDENTIAL SINGLE/ DUAL OCCUPANCY .	\$155.00
Consent for access driveway construction only (includes 2 site inspections) per allotment for RESIDENTIAL SINGLE/ DUAL OCCUPANCY which <i>includes any of: major retaining structures, stairs or special landscape treatment</i> .	\$385.00
Consent for access driveway construction only (includes 2 site inspections) per allotment for OTHER THAN RESIDENTIAL SINGLE/DUAL OCCUPANCY .	\$180.00
Consent for access driveway construction only (includes 2 site inspections) per allotment for OTHER THAN RESIDENTIAL SINGLE/DUAL OCCUPANCY which <i>includes any of: retaining structures, stairs or special landscape treatment</i> .	\$510.00
Fee per additional site inspection as required	\$140.00

Office Use Only:

Inspected by: _____ Date: _____

Approved: _____

Not approved: _____

Comment: _____

CODE: ESTR 1.7.09 - 30.6.10 Late Fee: \$650 when work commenced prior to issue of Consent Form No: UI 203

FEE PAID: \$ 155 RECEIPT NO: 262232 ISSUED BY: [Signature] DATE: 22.7.09

NOTE TO CUSTOMER SERVICE: PHOTOCOPY APPLICATION FORM AND STAPLE WITH RECEIPT FOR CUSTOMER'S RECORD

Pittwater Council

OFFICIAL RECEIPT

22/07/2009 Receipt No: 262252

To RH & SJ JONES

137 RIVERVIEW ROAD
AVALON 2107

Applic.	Reference	Amount
GL Recei	ESTR-Eng Strt	\$155.00
	1 X ROAD RESERVE APP	

Total: \$155.00

Amounts Tendered

Cash	\$0.00
Cheque	\$155.00
Db/Cr Card	\$0.00
Money Order	\$0.00
Agency Rec	\$0.00
Total	\$155.00
Rounding	\$0.00
Change	\$0.00
Nett	\$155.00

Printed 22/07/2009 2:22:43 PM

Cashier: ASherry



Suellen Jones
137 Riverview Rd
AVALON NSW 2107

HOME BUILDING ACT 1989

OWNER BUILDER PERMIT

Permit : 367455P
Receipt: 1-324358528

Issued : 5/8/2009
Amount: \$148.00*

BUILDING SITE

137 Riverview Rd, AVALON, NSW 2107 AUSTRALIA

AUTHORISED BUILDING WORK

Construction of garage. 38.5 sq-m steel frame.

Authority No : DA-N0071/09
Council Area : PITTWATER (S) COUNCIL

Should the property be sold within 6 years of completion of the work it will be necessary to obtain home warranty building insurance from approved insurers if the value of the work was greater than \$12,000. A certificate of insurance must be attached to any contract of sale.

You should obtain professional advice from general insurers regarding public liability and property damage cover, etc.

Note: This permit is only valid when an official receipt has been imprinted.
If payment is made by cheque, the permit is conditional on the cheque being met on presentation. *GST amount included in total fee: \$0.00

Issuing officer

***** END OF PERMIT *****

Statutory Matters – Prior to issue of Construction Certificate – to be undertaken by tm-a certifier
Annexure 1 - mandatory inspection (cl143C EP&A Regs 2000)

premises address:
certificate number:

137 Riverview Road, Clareville (Garage)

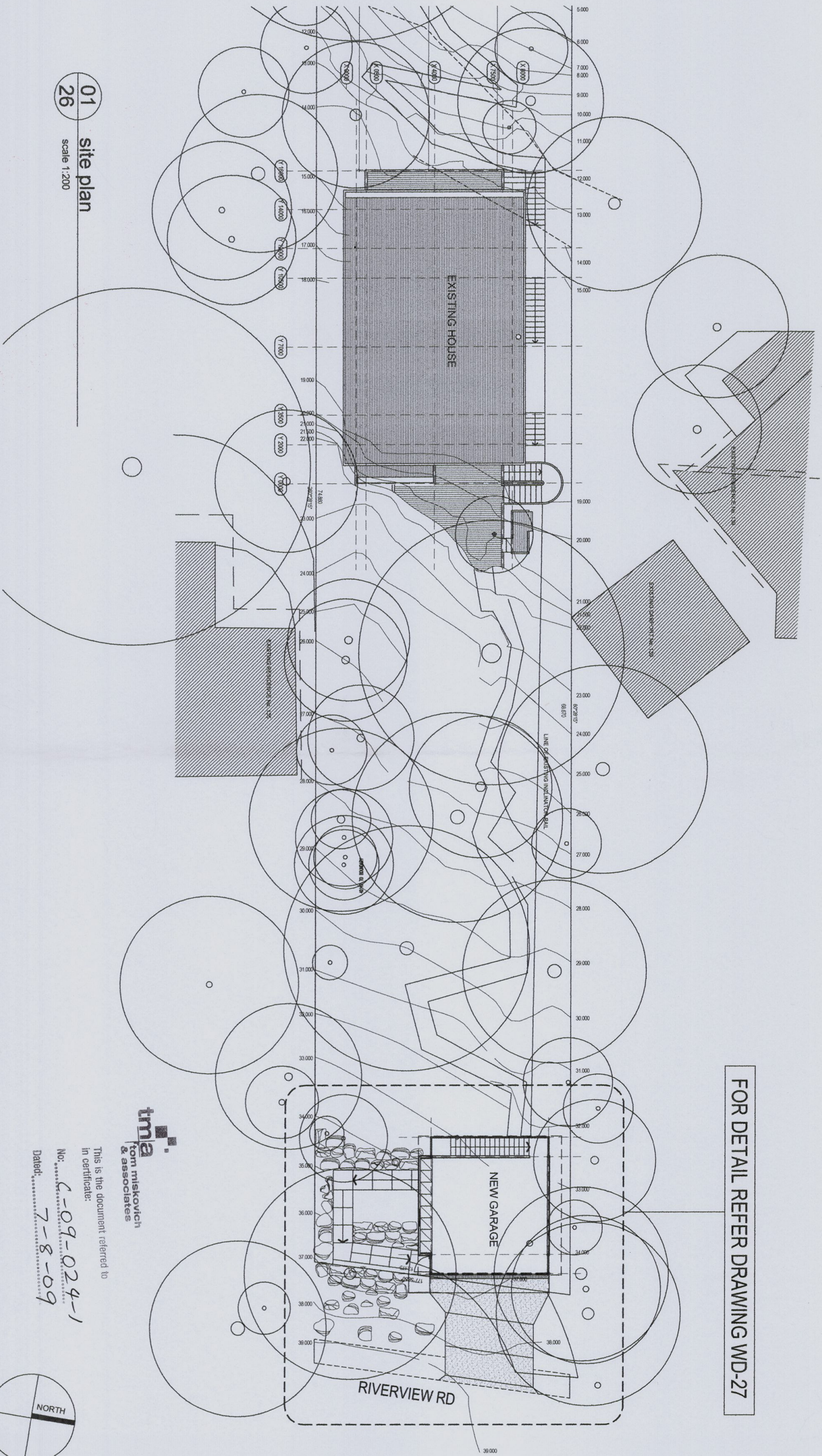
C-09-024

development consent number:

N0071/09

Mandatory inspection as required by cl 143C EP&A Regs2000		
Inspection undertaken by: Tom Donohoe	Accreditation number: BPB0096	Date: 27/7/09
issue		(office use only) when / how issue rectified
Do plans and specification provided accompanying application adequately and accurately depict the condition of the existing building the subject of the inspection (cl143C EP& A Regs 2000)		Yes
Has the building work authorised by the relevant development consent commenced on the site (cl143C EP& A Regs 2000)		No

FOR DETAIL REFER DRAWING WD-27



All work to comply with the requirements of the Building Code of Australia and relevant Australian Standards
Verify all dimensions on site and notify Architect of any discrepancies prior to proceeding with construction.
Do not scale drawings.

WARWICK WERNER ARCHITECT PTY LTD
Warwick Werner Architect Pty Ltd is the owner of the copyright subsisting in these drawings, plans, designs and specifications. They must not be used, reproduced or copied, in whole or in part, nor may the information, ideas and concepts therein contained be disclosed to any person without the prior written consent of that company.

drawing status
CONSTRUCTION CERTIFICATE

issue	amendment	date
ORIG.	ISSUED FOR DEVELOPMENT APPLICATION	14.07.09
A	AMENDED TO COMPLY COUNCIL LETTER 28.04.09	13.03.09
A	ISSUED TO PITTWATER COUNCIL	04.05.09
A	ISSUED FOR CONSTRUCTION CERTIFICATE	14.05.09
A		14.07.09

WARWICK WERNER ARCHITECT
CHARTERED ARCHITECTS • LANDSCAPE ARCHITECTS

project
PROPOSED NEW GARAGE
137 RIVERVIEW RD CLAREVILLE
for R. & S. JONES

4 Warawong Road
Avalon Beach NSW 2107
T (61 2) 9918 5455
F (61 2) 9918 5462
wernedesign@avalonbeach.net.au

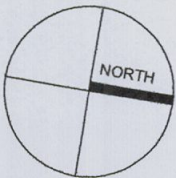
Warwick Werner Architect Pty. Ltd
ABN 43 077 722 779
NSW Architect Reg. No. 3507

drawing no. **WD-26** issue **A**

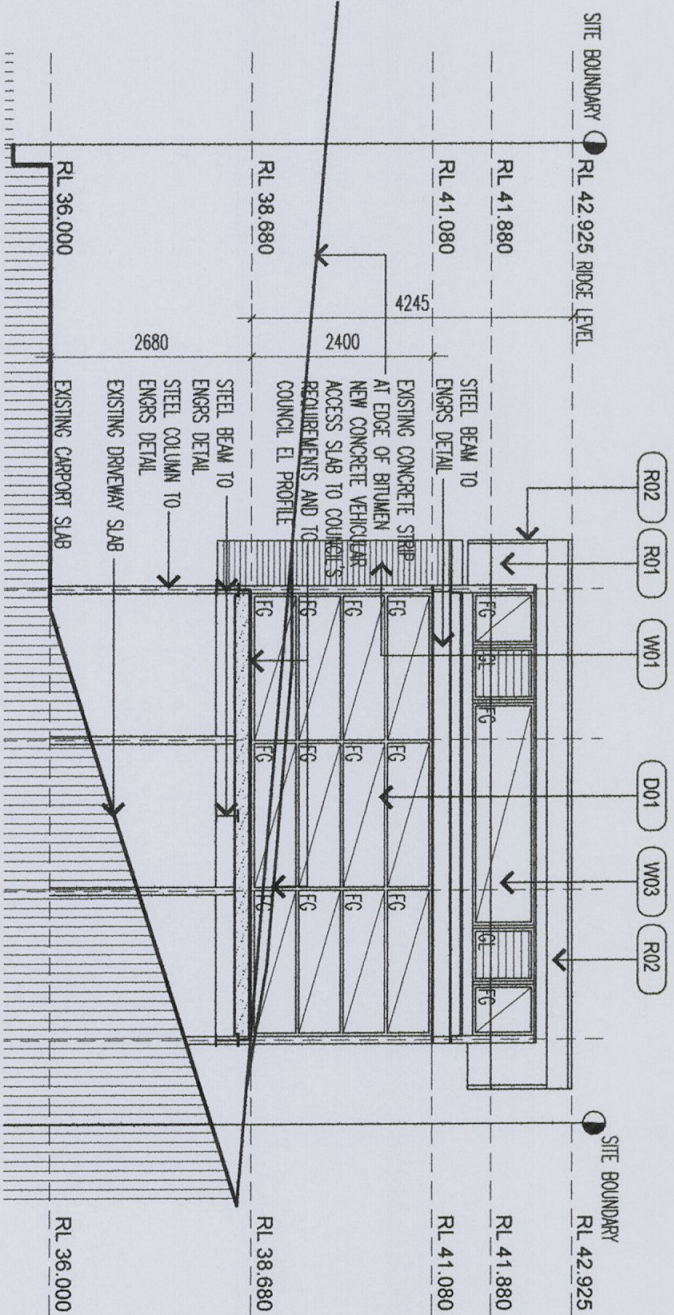
date **may 2009** scale **1 : 200 @ A3**

drawn **WW** project no **02.09.01**

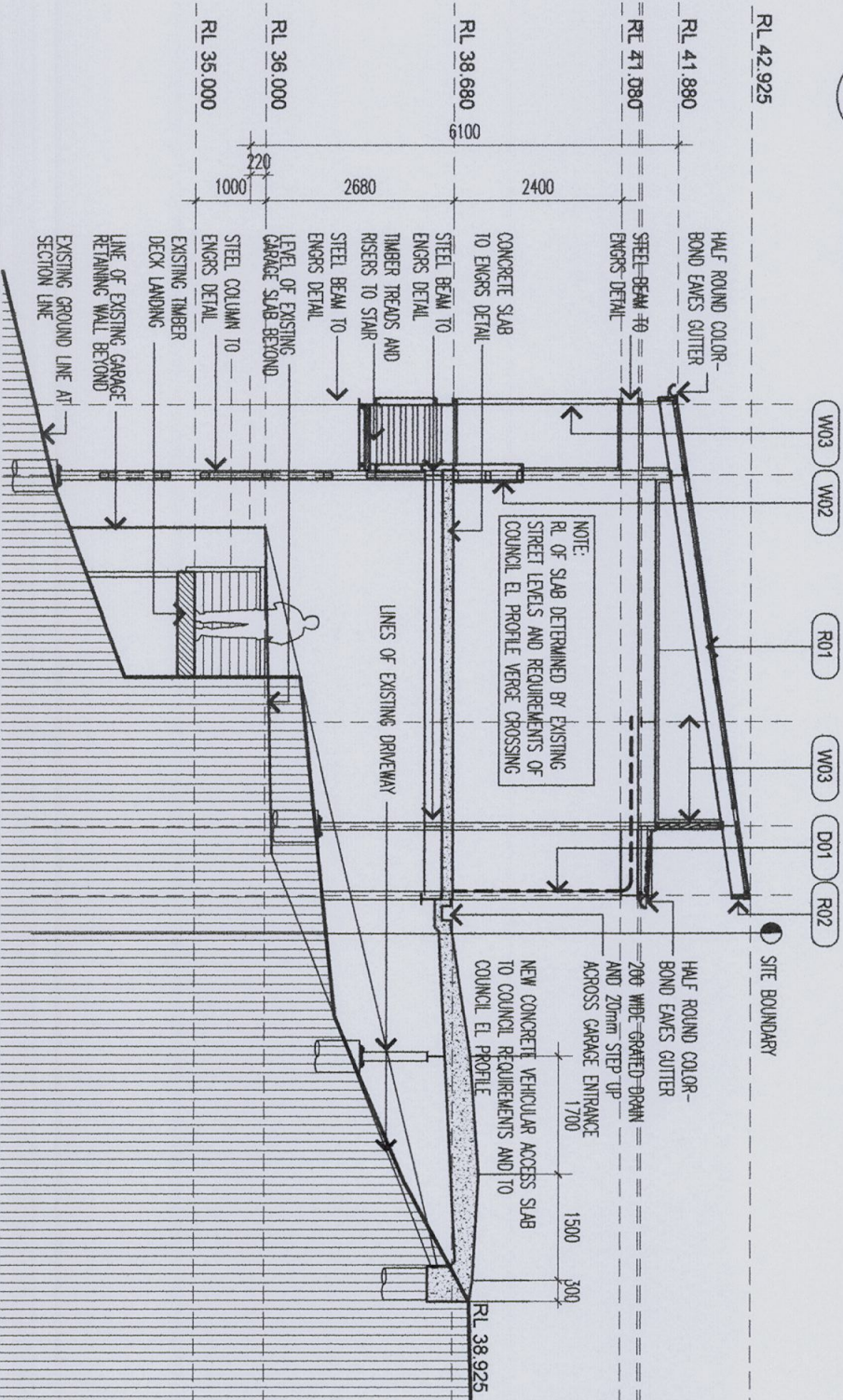
This is the document referred to in certificate:
No. **6-09-024-1**
Dated: **7-8-09**



tma
tom miskovich & associates



01 east elevation
scale 1:100



03 section A-A
scale 1:100

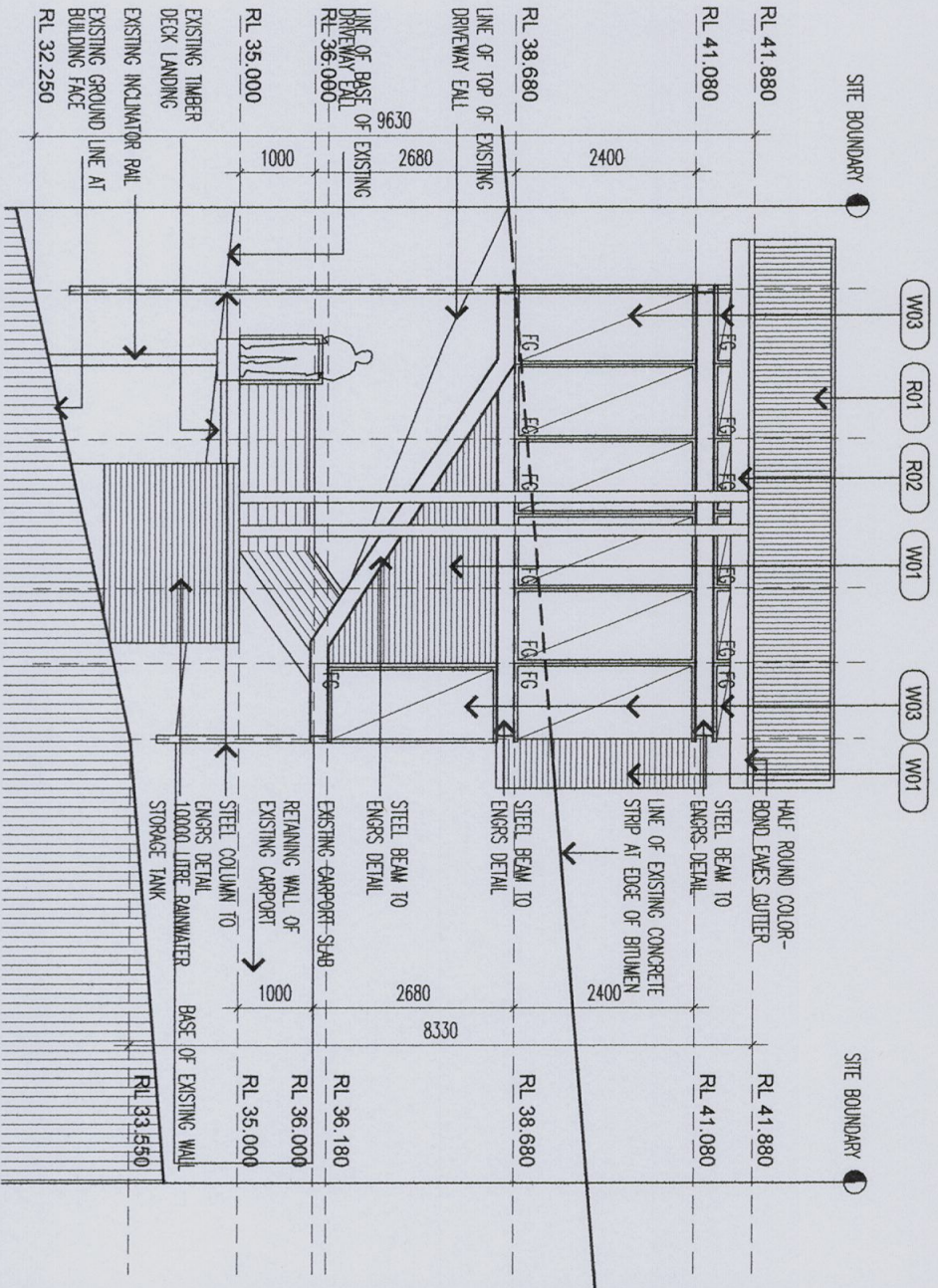
All work to comply with the requirements of the Building Code of Australia and relevant Australian Standards
Verify all dimensions on site and notify Architect of any discrepancies prior to proceeding with construction.
Do not scale drawings.

WARWICK WERNER ARCHITECT PTY LTD
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drawing status
CONSTRUCTION CERTIFICATE

issue	amendment	date
ORIG.	ISSUED FOR DEVELOPMENT APPLICATION	13.03.09
A	AMENDED TO COMPLY COUNCIL LETTER 28.04.09	04.05.09
A	ISSUED TO STRUCTURAL ENGINEER	11.05.09
A	ISSUED TO PITTWATER COUNCIL	14.05.09
B	COORDINATED WITH STRUCT. ENGINEERS DRAWINGS	14.07.09
B	ISSUED FOR CONSTRUCTION CERTIFICATE	14.07.09

WARWICK WERNER ARCHITECT
CHARTERED ARCHITECTS • LANDSCAPE ARCHITECTS



03 west elevation
scale 1:100

- 03
29
scale 1:100
- tma
tom miskovich
& associates
- This is the document referred to in certificate:
No. C-09-024-1
Dated, 7-8-09
- W01 92mm steel stud framing lined externally with Custom Orb colorbond steel sheathing laid horizontally and internally with 13mm plasterboard Fully sark walls and provide R2 insulation Custom Orb colour: Bushland
- W02 1000mm high 92mm steel stud framed lined both sides with 13mm plasterboard jointed glass - clear glazed
- W03 Aluminium framing powdercoat finish Colour: Dulux Woodland
- W04 Aluminium framed window Clear glazed
- W05 Aluminium framing powdercoat finish Colour: Dulux Woodland Clear glazed
- D01 2400 high B&D "Design-a-door" garage door with clear glazed polycarbonate panels Colour: Dulux Bushland
- R01 Custom Orb colorbond steel sheathing fully sarked and with R3 insulation Steel roof beams and timber rafters Lined internally with 6mm fibre cement sheet
- R02 Custom Orb colour: Woodland Colorbond steel sheet fascia with 6mm fibre cement eaves lining Custom Orb colour: Woodland

project
137 RIVERVIEW RD CLAREVILLE
for R. & S. JONES

PROPOSED NEW GARAGE
section A-A
east & west elevations

drawing no.	issue
WD-29	B
date	scale
july 2009	1 : 100 @ A3
drawn	project no
WW	02.09.01

1 GENERAL REQUIREMENTS

1.1 GENERAL

Interpretation

Owner: Means the same as "principal" or "proprietor".
Builder: Means the same as "contractor".
Supply: Means "supply only" - do not install.
Provide: Means "supply and install".
Required: Means required by the contract documents or by the local council or statutory authorities.
Proprietary: Means identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.

Standards

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

Manufacturers' or suppliers' recommendations

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

Bushfire protection

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

1.2 AUTHORITIES AND ESTABLISHMENT

Prior applications and approvals

Development Approval 26 MAY 2009

Existing services

Attend to existing services as follows:

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

Temporary services and works

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

Use of existing services

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

Signs

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

1.3 EXECUTION AND COMPLETION

Survey marks

Preserve and maintain the owners survey marks in their true positions.
Rectification: If the proprietor's survey marks are disturbed or obliterated, immediately give notice and rectify the disturbance or obliteration.

Hours of work

In accordance with the current requirements of Pittwater Council.

Removal of temporary work, services and plant

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

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

Final cleaning

Remove rubbish and surplus material from the site and clean the work throughout.

Warranties

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

Instruction manuals

Give the owner manufacturers' instruction manuals.

Operation

Ensure moving parts operate safely and smoothly.

Surveyor's certificate

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

Services layout

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

Authorities' approvals

Give the owner evidence of approval of the local council and statutory authorities whose requirements apply to the work.

Keys

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

1.4 TERMITE PROTECTION

General

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

Extent

Form a complete and continuous barrier under the whole of the extended building footprint and extending 300mm beyond the perimeter of slabs on ground comprising the following:

Graded stone barriers

Graded stone termite barrier system installed around building perimeter, in all footings and across subfloor areas with less than 400mm clearance in accordance with manufacturer's instructions.

Proprietary item: Granitgard

Application: by Granitgard Ply Ltd licensed installer

Termite barrier notice

Provide a durable notice permanently fixed in a prominent location to BCA Volume 2 clause 3.1.3.2 (b) and AS 3660.1 - 2000 (Termite management - New buildings) Appendix A.

1.5 TIMBER GENERALLY

Unseasoned timber

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

Durability

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

Natural durability classification: To AS 1604.1-2000 (Specification for preservative treatment - Sawn and round timber) Table F2.

Minimum requirements:

- Class 1: Timbers in contact with the ground.
- Class 2: Timbers above ground, not in continuous contact with moisture, well ventilated, protected from moisture but exposed to the weather.
- Class 3: Timbers above ground, not in continuous contact with moisture, well ventilated.
- Class 4: Timbers fully protected from moisture, indoors, above ground, and well ventilated.

Preservative treatment

Plywood: To AS/NZS 1604.3-2002 (Specification for preservative treatment - Plywood).

End use hazard classification: To Table A1.

Reconstituted wood based products: To AS/NZS 1604.2-2002 (Specification for preservative treatment - Reconstituted wood-based products).

End use hazard classification: To Table A1.

Sawn and round: To AS 1604.1-2000 (Specification for preservative treatment - Sawn and round timber).

End use hazard classification: To AS 1604.1-2000 (Specification for preservative treatment - Sawn and round timber) Table D1.

2 SITE PREPARATION

2.1 GENERAL

Standard

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

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

Structural Engineer's drawings

All demolition and excavation work is to be executed in accordance with the Structural Engineer's drawings and the Specification notes contained therein. Where there is a variance with this Specification

the Structural Engineer's Specification shall take precedence.

Interpretation

Rock: Monolithic material with volume greater than 0.5 m3 which cannot be removed until broken up by mechanical means such as

pipers or percussion tools.

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

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

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

Immediate notice

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

Explosives

Do not use explosives.

2.2 DEMOLITION

Standard

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

Records

Prior to commencement of the works make a detailed record of conditions existing within adjoining buildings, especially structural damage or other defacement. Submit copy of report including drawings, written descriptions and photographs to Superintendent before commencement of demolition works.

Demolition items

As indicated on the Drawings.

Site investigation

Inspect the site and determine and confirm the full extent of the existing site, in-ground, building and building services requiring disconnection and / or relocation.

Demolished materials

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

Protection of existing items

Take all necessary care to protect existing water and gas meters.

Damage

Restore and make good to match existing to the approval of the Superintendent damage and defacement caused to adjoining buildings by the demolition works.

2.3 TREES TO BE RETAINED

Marking

Mark trees which are required to be retained using suitable non-injurious, easily visible and removable means of identification. Remove the identification on completion.

Protection

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

Excavation

If excavating near trees required to be retained, use hand methods to locate, expose and cleanly remove the roots on the line of excavation.

2.4 ENVIRONMENTAL PROTECTION

Erosion control

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

Dewatering

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

2.5 SITE CLEARING

Extent

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

Cleaning operations

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

Grubbing

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

Removal of topsoil

General: Remove the topsoil layer of the natural ground

contains substantial organic matter over the areas to be occupied by construction and paving.

Maximum depth: 100 mm.

Topsoil stockpiles

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

Surplus material

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

2.6 EXCAVATION

Extent

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

Foundations

After excavation, confirm that the bearing capacity is adequate.

Bearing surfaces

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

Reinstatement

If excavation exceeds the required depth, or deteriorates, reinstatement appropriate courses if supporting masonry.

Grading

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

2.7 SURFACE PREPARATION

General

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

Placing fill

Place fill in layers and compact each layer to achieve the required density.

Moisture content

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

2.8 SERVICE TRENCHES

Excavation

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

Trench widths

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

Backfilling

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

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

Next to services: Do not place any particles greater in size than 25 mm within 150 mm of services.

Under paved areas: Coarse sand, controlled low strength material or fine crushed rock.

In reactive clay sites classified M, H or E to AS 2870-1996 (Residential slabs and footings - Construction). Impervious material.

3 CONCRETE CONSTRUCTION

3.1 GENERAL

Cross reference

Refer to the General Requirements section for termite protection.

Standards

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

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

Structural Engineer's drawings

All concrete work is to be executed in accordance with the Structural Engineer's drawings and the Specification notes contained therein.

Where there is a variance with this Specification the Structural Engineer's Specification shall take precedence.

3.2 GROUND SLAB VAPOUR BARRIER

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

Installation
Lay over the base. Lap joints not less than 200 mm. Face the laps away from the direction of concrete pour. Seal laps with adhesive tape not inferior to double sided butyl adhesive tape. Similarly seal around unavoidable penetrations such as service pipes. Take the underlay up vertical faces as far as the damp proof course where applicable, and fix at the top by tape sealing. Arrange to have vertical laps only on vertical or inclined surfaces. Patch or seal any punctures or tears before pouring concrete

3.3 REINFORCEMENT

Minimum lap
Splice as follows:

- Mesh generally: 225 mm.
- Trench mesh: 500 mm.
- Bars: Greater of either 500 mm or 25 x bar diameter.
- Strip footing intersections and corners: For full width of intersecting reinforcement.

Minimum cover
Unprotected by membrane on ground or external surfaces: 40 mm. Protected by membrane on ground: 30 mm. Internal surfaces: 20 mm. Aggressive soil or salty environment: 65 mm.

3.4 CONCRETE

Ready mixed supply
Standard: To AS 1379-1997 (Specification and supply of concrete). Maximum slump: 100 mm.

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

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

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

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

Method: Cure concrete by

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

Formwork removal
Remove timber formwork.

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

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

3.5 JOINTS

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

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

4. TIMBER AND STEEL CONSTRUCTION

4.1 GENERAL

Cross references
Refer to the following Sections:

- General requirements, for termite protection and timber durability.
- Concrete construction, for concrete bearer supports.
- Brick and block construction, for clearance for timber frame shrinkage.

- Waterproofing, for waterproofing of wet areas.
- Painting, for priming of steel and timber before fixing, and repair of zinc-coated steel after cutting and welding.

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

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

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

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

Structural Engineer's drawings
All structural timber and steel work is to be executed in accordance with the Structural Engineer's drawings and the Specification notes contained therein. Where there is a variance with this Specification the Structural Engineer's Specification shall take precedence.

4.2 MATERIALS AND COMPONENTS

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

Corrosion protection: To BCA Volume 2 clause 3.4.2.2.

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

Corrosion resistance: Class 2 to AS 3566.2-2002 (Self-drilling screws for the building and construction industries -Corrosion resistance requirements), Table 1.

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

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

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

Galvanizing
Galvanize mild steel components (including fasteners) to AS 1214-1983 (Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)) or AS/NZS 4680-1999 (Hot-dip galvanized (zinc) coatings on fabricated ferrous articles), as appropriate, if

- exposed to weather;
- embedded in masonry; or
- in contact with chemically treated timber.

4.3 CONSTRUCTION GENERALLY

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

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

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

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

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

Priming steel
Before fixing, prime steel which is not galvanized or zinc-coated.

4.4 FLOORS

General
Standard: To AS 1684.4-1999 (Residential timber-framed construction - Simplified - Non-cyclonic).

4.5 WALL FRAMING

Proprietary system
Use proprietary framing system comprising cold-formed steel sections for wall construction.

Standard
Design: To AS 3623

MATERIAL AND COMPONENTS

Cold-formed steel sections
Sections cold-formed from zinc-coated or aluminium/zinc-coated steel: To AS 1397/Z200 or AZ150 (minimum), as appropriate.

Steel hollow sections
To AS 1163. Galvanized to AS 1650.

Screws
To AS 3566, corrosion resistance class 2.

CONSTRUCTION

Wall studs
Provide studs in single lengths without splices. Place a stud under or not more than 40 mm from each structural load point from roof or ceiling (except for openings). Provide multiple studs at points of concentrated load.

Nominal frame dimension (stud width): 92mm and 150mm where shown on the drawings.

Maximum stud spacing: 600 mm.

Heads to openings
Use lintels consisting of either a stiffened top plate or a truss built up from frame members, depending on load and span.

Bracing
Adequately brace the frame to resist wind loads, by diagonal nogging or by tensioned straps.

Splicing
Splice plates at ends to maintain continuity and alignment.

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

Maximum spacing of noggings: 1350 mm centres.

4.6 ROOF AND CEILING FRAMING

Wall plates
Fixing: Fix timber wall plates to masonry, with either straps or bolts. Steel zinc-coated straps: In cavities. Build bottom end 75 mm into brickwork, 1200 mm below plate. Bend top end over plate and fix with galvanized fastenings.

- Coating class: Z275.
- Size: 25 x 1 mm or 30 x 0.8 mm.

Bolts: 10 mm diameter hot dip galvanized steel, embedded at least 150 mm into the wall structure of solid masonry external walling or the top bond beam of load-bearing hollow block external walling.

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

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

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

Blocking: Where the depth of rafters or purlins is at least 4 x width, provide solid blocking between them at the support points and at 1.8 mm maximum intervals between supports.

Ridge straps: Butt ends of rafters together at ridge, and strap each pair together with 900 mm long steel strap passing over the ridge, triple-nailed to each rafter.

Additional support
Provide a frame member behind every joint in fibre cement sheeting or lining.

Anti-ponding boards

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

4.7 HANDRAILS AND BALUSTRADES

General
Balustrades and handrails to comply with Building Code of Australia Clause 3.9.2

Standards
Loading forces: To AS 1170.1

Horizontal wire balustrading: To BCA Table 3.9.2.1

Balustrades
48 x 8 galvanized mild steel plate uprights at centres as shown on the drawings with stainless steel wire intermediate rails spaced as indicated

apart at maximum 125mm centres. Fix wires to uprights at ends of runs with shackles and turnbuckles. Splay and profile top of upright as detailed to accept 100mm long x 50mm wide galvanised mild steel plate handrail connector welded to upright.

Handrail
100 x 50mm dia. round edged solid Tallowood top rail in sections rebated to fit onto flat steel plate connectors at uprights. Fix handrail sections onto connectors with two countersunk screws at each end on the underside of connectors.

Fixing
Bolt bottom of baluster to steel beam top flanges to structural engineer's detail.

Finish
Painted galvanised steel uprights

Finished height
All balustrades and handrails to finish minimum 1000mm above adjacent finished floor level or a minimum 865mm above stair nosings where applicable.

4.8 TIMBER AND STEEL STAIRS

Standard
Balustrade loading forces: AS 1170.1

General
Stair configuration and construction comply with the requirements of Building Code of Australia Clause 3.9.1.

Balustrades and handrails are to comply with the requirements of Building Code of Australia Clause 3.9.2.

Timber treads
Provide timber treads:

Timber type: Spotted Gum

Finished size: 275 x 70mm (min.) with 2mm pencil round edges and with bottom face rebated to accommodate steel tread fixing plate as detailed. Fix 60(t) x 25(t)mm solid timber upstand to back of tread to project 15mm above top of tread.

Dress nosings to a pencil-round. Return nosings at cut strings. Groove for riser tongue in closed riser stair. Set riser 19 mm back from nosing.

Provide non-slip finish comprising 25mm dia. Latham Asbramall adhesive slip resistant studs into predrilled holes spaced 50mm apart and centred 50mm from leading edge of tread.

5 BRICK AND BLOCK CONSTRUCTION

5.1 GENERAL

Cross references
Refer to the following Sections:

- General requirements, for termite protection.
- Timber and steel construction, for structural steelwork.

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

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

Structural Engineer's drawings
All structural brick and block work is to be executed in accordance with the Structural Engineer's drawings and the Specification notes contained therein. Where there is a variance with this Specification the Structural Engineer's Specification shall take precedence.

5.2 MATERIALS AND COMPONENTS

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

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

Masonry units

Type: To approval

Load bearing: To AS 4455

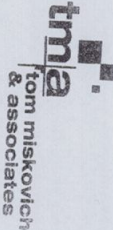
Size: 400(l) x 200(h) x as shown on the drawings(w)

Clay bricks durability
Below damp-proof course: Use exposure category to AS/NZS 4456.10-1997 (Masonry units and segmental pavers - Method of test - Method 10: Determining resistance to salt attack) Appendix A (Salt attack resistance categories)

Wall ties
Standard: To AS/NZS 2699.1 (Built-in components for masonry

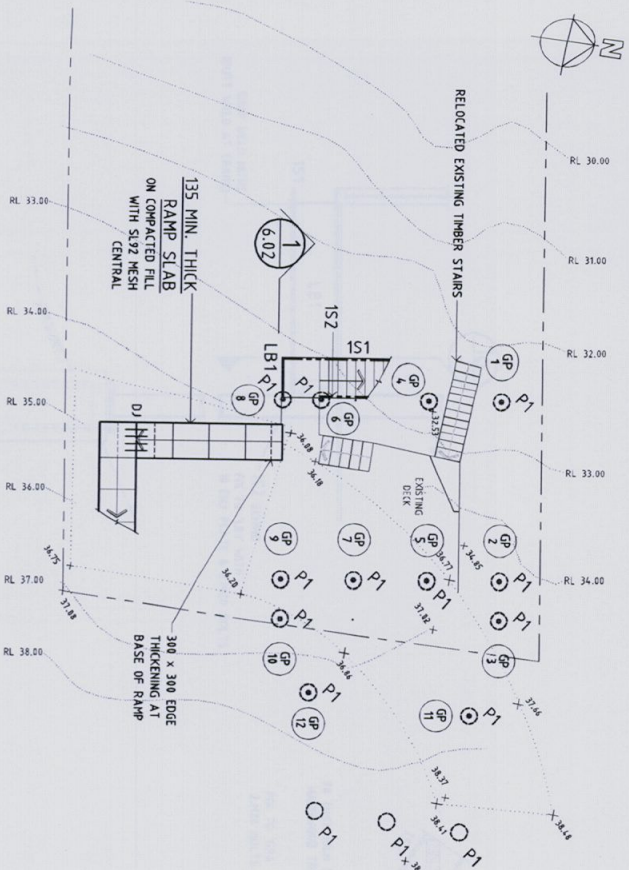
17 REFERENCED DOCUMENTS

AS 1214 1983	Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)	AS/NZS 1859.2 (Int) 2001	Dry-processed fibreboard	AS/NZS 3100 1997	Approval and test specification - General requirements for electrical equipment	AS 4440 1997	Installation of nailplated timber trusses
AS 1231 2000	Aluminium and aluminium alloys - Anodic oxidation coatings	AS/NZS 1859.3 1996	Decorative overlaid wood panels	AS 3137 1992	Approval and test specification - Luminares (lighting fittings)	AS/NZS 4455 1997	Masonry units and segmental pavers
AS 1288 1994	Glass in buildings - Selection and installation	AS 1860 1998	Installation of particleboard flooring	AS 3439	Low-voltage switchgear and controlgear	AS/NZS 4456	Masonry units and segmental pavers - Method of test
AS 1324	Air filters for use in general ventilation and airconditioning	AS 1884 1985	Floor coverings - Resilient sheet and tiles - Laying and maintenance practices	AS 3439.1 1993	Type-tested and partially type-tested assemblies	AS/NZS 4456:10 1997	Method 10: Determining resistance to salt attack
AS 1324.2 1996	Methods of test	AS 1909 1984	Installation of timber doorsets	AS 3439.3 1995	Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use - Distribution	AS/NZS 4505 1998	Thermal resistance of insulation for ductwork used in building airconditioning
AS 1366	Rigid cellular plastics sheets for thermal insulation	AS 2047 1999	Windows in buildings - Selection and installation		AS/NZS 4600 1996	AS 4508 1999	Cold-formed steel structures
AS 1366.4 1989	Rigid cellular polystyrene - Extruded (RC/PS-E)	AS 2050 1995	Roof tiles	AS/NZS 3500	National Plumbing and Drainage	AS/NZS 4680 1999	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
AS/NZS 1367 2000	Coaxial cable systems for the distribution of analogue television and sound signals in single and multiple unit installations	AS 2159 1995	Piling - Design and installation	AS/NZS 3500.1.2 1998	Water supply - Acceptable solutions	AS 5601 2002	Gas installation code
AS 1379 1997	Specification and supply of concrete	AS/NZS 2179	Specification for rainwater goods, accessories and fasteners	AS/NZS 3500.2.2 1996	Sanitary plumbing and sanitary drainage - Acceptable solutions	SAA HB29 1998	Telecommunications Cabling Handbook
AS 1397 2001	Steel sheet and strip - Hot-dipped zinc-coated or aluminium/zinc-coated	AS/NZS 2179.2(Int) 1998	PVC rainwater goods and accessories	AS/NZS 3500.4.2 1997	Stormwater drainage - Acceptable solutions	SAA HB33 1992	Domestic open fireplaces
AS 1417	Receiving antennas for radio and television in the frequency range 30 MHz to 1 GHz	AS 2185 1978	Fibrous plaster products	AS/NZS 3500.5 2000	Hot water supply systems - Acceptable solutions	SAA HB40	The Australian Refrigeration and Air Conditioning
AS 1417.1 1987	Performance	AS 2358 1990	Guide to the painting of buildings	AS 3566	Self-drilling screws for the building and construction industries	SAA HB40.1 2001	Code of Good Practice
AS 1417.2 1991	On-site domestic wastewater treatment units	AS/NZS 2455	Adhesives - For fixing ceramic tiles	AS 3566.1 2002	General requirements and mechanical properties	SAA HB40.2 2001	Reduction of Emissions of Fluorocarbon Refrigerants in Commercial and Industrial Refrigeration and Airconditioning Applications
AS/NZS 1546	Septic tanks	AS/NZS 2269 1994	Textile floor coverings - Installation practice	AS 3566.2 2002	Corrosion resistance requirements	SAA MP52 2001	Reduction of Emissions of Fluorocarbons in Residential Airconditioning Applications
AS/NZS 1546.1 1998	Waterless composting toilets	AS 2461 1981	Mineral wool thermal insulation - Loose fill	AS 3600 2000	Concrete structures	AS 3666	Manual of authorization procedures for plumbing and drainage products
AS/NZS 1546.2 2001	Aerated wastewater treatment units	AS 2462 1981	Cellulosic fibre thermal insulation	AS 3623 1993	Domestic metal framing	AS 3666.1 2000	Requirements for authorised cabling products
AS 1547 2000	On site domestic wastewater management	AS/NZS 2588 1998	Gypsum plasterboard	AS 3660	Termite management	AS 3700 2001	Installation Requirements for Customer Cabling (Wiring Rules)
AS/NZS 1554	Structural steel welding	AS/NZS 2589	Gypsum linings in residential and light commercial construction - Application and finishing	AS 3666.1 2002	New buildings	AS 3715 1989	Fall gloss alkyl'd enamel for exterior and interior use (buildings)
AS/NZS 1554.1 2000	Welding of steel structures	AS/NZS 2589.1 1997	Gypsum plaster for building purposes	AS 3700 2001	Air-handling and water systems of buildings - Microbial control	AS 3742 1990	Full gloss alkyl'd enamel for interior use only (buildings)
AS 1562	Design and installation of sheet roof and wall cladding	AS 2592 1983	The demolition of structures	AS 3786 1993	Masonry structures	AS 3786 1993	Lightly pigmented solvent borne ranch finish for exterior timber
AS 1562.1 1992	Metal	AS 2601 2001	Timber doors	AS/NZS 3823	Metal finishing - Thermoset powder coatings for architectural applications	AS 3823 1993	One pack, full gloss pigmented solvent borne paving paint for concrete
AS/NZS 1562.3 1996	Plastic	AS 2688 1984	Built in components for masonry construction	AS 3742 1990	Waterproofing of wet areas within residential buildings	AS 3823 1993	One pack, full gloss pigmented solvent borne paving paint for concrete
AS/NZS 1571 1995	Copper - Seamless tubes for airconditioning and refrigeration	AS 2689 1984	Wall ties	AS 3742 1990	Mineral wool thermal insulation - Batt and blanket	AS 4020/02 2001	One pack, full gloss pigmented solvent borne paving paint for concrete
AS 1604	Specification for preservative treatment	AS/NZS 2699.1 2000	Connectors and accessories	AS 3786 1993	Smoke alarms	APAS-0205 2001	Interior gloss latex paint (buildings)
AS 1604.1 2000	Sawn and round timber	AS/NZS 2699 2000	Prefinished/prepainted sheet metal products for interior/exterior building applications - Performance requirements	AS/NZS 3823	Performance of electrical appliances - Room airconditioners	APAS-0260/1 2001	Semi gloss interior latex paint in MCR (buildings)
AS/NZS 1604.2 2002	Reconstituted wood-based products	AS/NZS 2728 1997	Asphalt (hot-mixed) paving - Guide to good practice	AS/NZS 3823.1.1 1998	Testing and rating for performance	APAS-0260/2 2001	Low gloss interior latex paint in MCR (buildings)
AS/NZS 1604.3 2002	Plywood			AS/NZS 3823.1.2 2001	Ducted airconditioners and air-to-air heat pumps	APAS-0260/3 2001	Washable flat finish for interior use (buildings)
AS 1627 Various	Metal finishing - Preparation and pretreatment of surfaces	AS 2734 1984	Doors - Security		Low voltage switchgear and controlgear	APAS-0260/4 2001	Gloss exterior latex paint in MCR (buildings)
AS 1668	The use of mechanical ventilation and air-conditioning in buildings	AS/NZS 2803	Hinged	AS 3947	Circuit-breakers	APAS-0280/1 2001	Semi gloss latex paint, exterior (buildings)
AS 1668.2 1991	Mechanical ventilation for acceptable indoor-air quality	AS/NZS 2803.1 1994	Sliding	AS 3947.2 1997	Ceramic tiles	APAS-0280/2 2001	Flat or low gloss exterior latex finish in MCR (buildings)
AS 1670	Fire detection, warning, control and intercom systems - System design, installation, and commissioning	AS/NZS 2803.2 1995	Hinged	AS 3958	Guide to the installation of ceramic tiles	APAS-0280/5 2001	Heavily pigmented low gloss latex ranch finish for exterior timber
AS 1670.1 1995	Fire	AS/NZS 2804	Sliding	AS 3958.1 1991	Guide to the selection of a ceramic tiling system	APAS-2916 2001	Organic zinc rich coating for protection of steel
AS 1670.6 1997	Smoke alarms	AS/NZS 2804.1 1995	Hinged	AS 3958.2 1992	Construction of buildings in bushfire prone areas	ASTM C534 2001	Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form
AS 1672	Limes and limestones	AS/NZS 2804.2 1996	Hinged	AS 3972 1997	Thermal insulation of dwellings - Bulk insulation		Mandatory Woolmark Specifications for building insulation material
AS 1672.1 1997	Refrigerating systems	AS 2870 1996	Sliding	AS 3989 1992	Steel structures	AWRAP/A 202 1993	Acceptable construction - Masonry - Masonry accessories - Unlets supporting roofs and masonry walls
AS 1677	Safety requirements for fixed applications	AS/NZS 2904 1995	Residential slabs and footings - Construction	AS 4100 1998	Pliable building materials and underlays		Acceptable construction - Framing - Steel framing - General
AS 1677.2 1998	Residential timber-framed construction	AS/NZS 2908	Damp-proof courses and flashings	AS/NZS 4200	Materials	BCA 3.1.3.2(b)	Acceptable construction - Corrosion protection members - The Design of Freestanding Clay-Brick Walls
AS 1684	Simplified - Non-cyclonic	AS 2913 2000	Flat sheets	AS/NZS 4200.1 1994	Installation requirements		Brick Beam Garden Fences
AS 1684.4 1999	Domestic oil-fired appliances - Installation	AS/NZS 2918 2001	Evaporative airconditioning equipment	AS/NZS 4200.2 1994	Ductwork for air-handling systems in buildings		
AS 1691 1985	Timber structures	AS/NZS 2924	High pressure decorative laminates - Sheets made from thermosetting resins	AS 4254 2002	Plastic roof and wall cladding materials		
AS 1720.1 1998	Design methods	AS/NZS 2924.1 1998	Classification and specifications	AS/NZS 4256	Glass fibre reinforced polyester (GRP)		
AS 1720.1 1998	Electroplated coatings - Zinc on iron or steel	AS/NZS 3017 2001	Electrical installations - Testing and inspection guidelines	AS/NZS 4256.3 1994	Unplasticized polyvinyl chloride (uPVC) wall cladding boards	BCA 3.3.3.5	
AS 1769 1984	Reconstituted wood-based panels - Specifications	AS/NZS 3018 2001	Telecommunications installations - Integrated communications cabling systems for small office/home office premises	AS/NZS 4256.5 1996	Polycarbonate	BCA 3.4.2.2	
AS/NZS 1859	Particleboard	AS/NZS 3086 1996		AS/NZS 4386	Domestic kitchen assemblies	BCA 3.4.4.4	
				AS/NZS 4386.1 1996	Kitchen units	CBPI TN 21A 1985	
						CBPI TN 21B 1985	

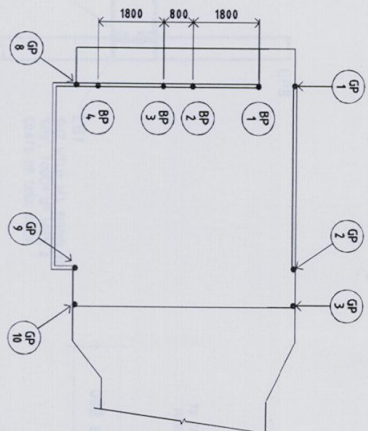


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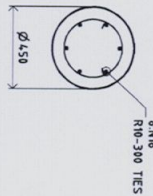
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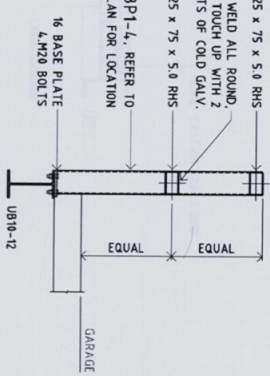
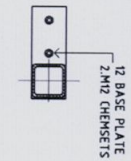
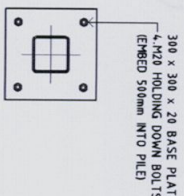
LOWER FLOOR PLAN
D/- REFER TO SECTION 10, DWG 6.03



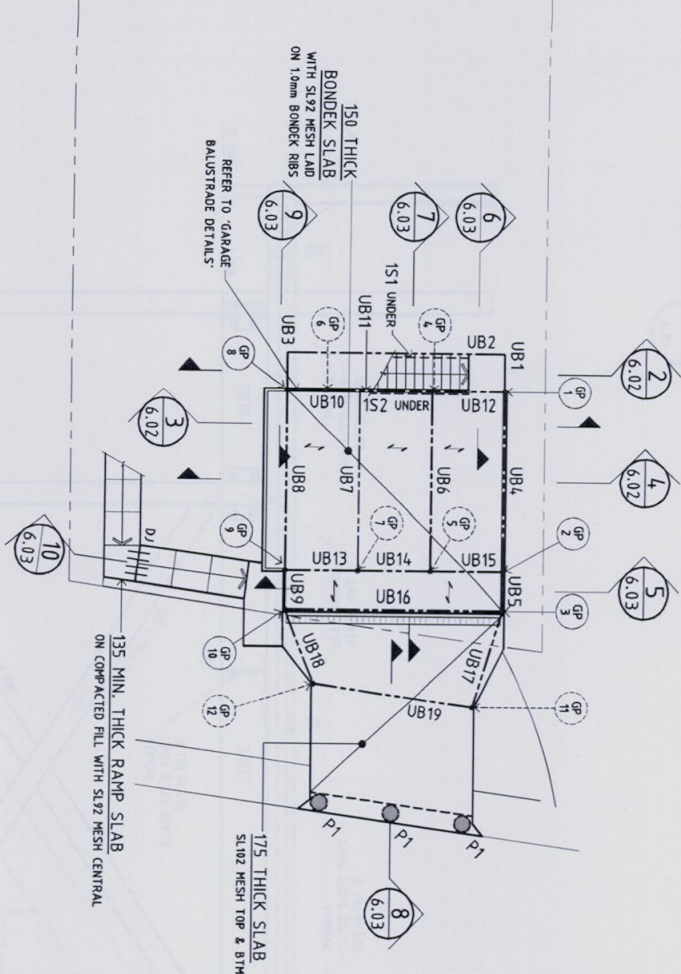
UPPER FLOOR PLAN
GARAGE BALUSTRADE ONLY
BP1-4 - 125 x 75 x 5.0 RHS



PILE 'P1' DETAIL
SOCKET 100mm INTO ROCK



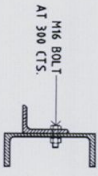
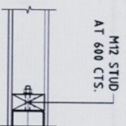
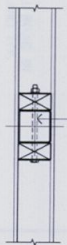
GARAGE
BALUSTRADE DETAIL



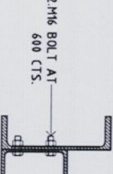
UPPER FLOOR PLAN

TAG	MEMBER SIZE	TYPE
P1	Ø550 PILE	RC PILE
GP-1-12	125 x 125 x 9.0 SHS	STEEL POST
IS1-2	CRANKED 250 PFC	STEEL STRINGER
LB1	250 PFC	STEEL BEAM
UB1-3	250 PFC	STEEL BEAM
UB4-5	250 UB 26	STEEL BEAM
UB6-7	250 UB 37	STEEL BEAM
UB8	250 UB 31	STEEL BEAM
UB9	250 PFC + 150 x 75 x 10 UA	STEEL BEAMS
UB10-12	250 UB 37	STEEL BEAM
UB13-15	250 UB 26	STEEL BEAM
UB16	310 PFC + 180 PFC	STEEL BEAM
UB17-18	250 UB 26	STEEL BEAM
UB19	250 UB 37	STEEL BEAM

TYPICAL STEEL POST
TO STUD FRAMING



'UB9' DETAIL



'UB16' DETAIL
Tom mskovich & associates

NOTE: HOLES IN BASEPLATES TO BE OFFSET WHERE REQUIRED SO THAT ANCHORS ARE NOT CLOSER THAN 70mm TO EDGE OF CONCRETE.

NOTE:
ALL STEELWORK TO BE HOT DIP GALVANISED
INCLUDING NUTS, BOLTS AND WASHERS

Revised	By	Date
A.D.A.	A.A.B.	11/10/2009
11/10/2009	JUNE 2009	6.01
6.01	A	

STRUCTURAL DRAWING

LOWER AND UPPER FLOOR
PLANS AND DETAILS

D'AMBROSIO CONSULTING
137 RIVERVIEW ROAD
CLAREVILLE

WARWICK ARCHITECT PTY. LTD.
137 RIVERVIEW ROAD
CLAREVILLE

Project:
NEW GARAGE
137 RIVERVIEW ROAD
CLAREVILLE

Architect:
WARWICK ARCHITECT PTY. LTD.
137 RIVERVIEW ROAD
CLAREVILLE

ISSUED FOR CONSTRUCTION CERTIFICATE	DATE
15/07/09	15/07/09

Excavation adjacent to existing buildings
Excavation to be carried out in accordance with the relevant standards and specifications.
Excavation to be carried out in accordance with the relevant standards and specifications.

Excavation adjacent to existing buildings
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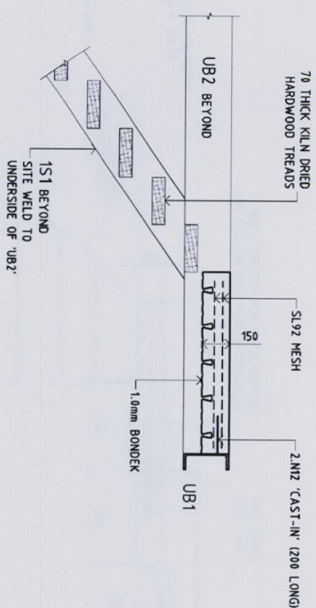
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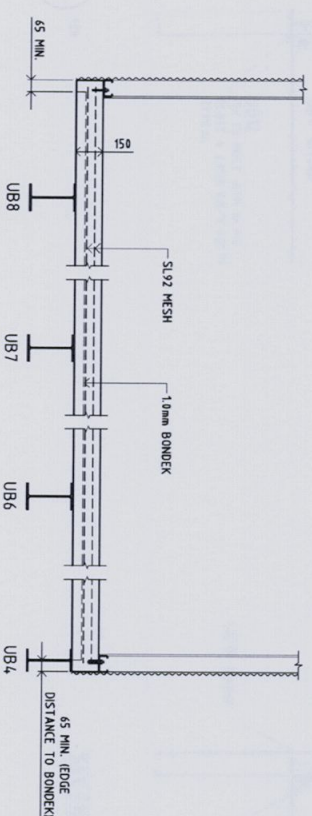
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Excavation to be carried out in accordance with the relevant standards and specifications.



SECTION 2



SECTION 4 1:2
6.01

This is the document referred to
in certificate:

No: C-09-024-1

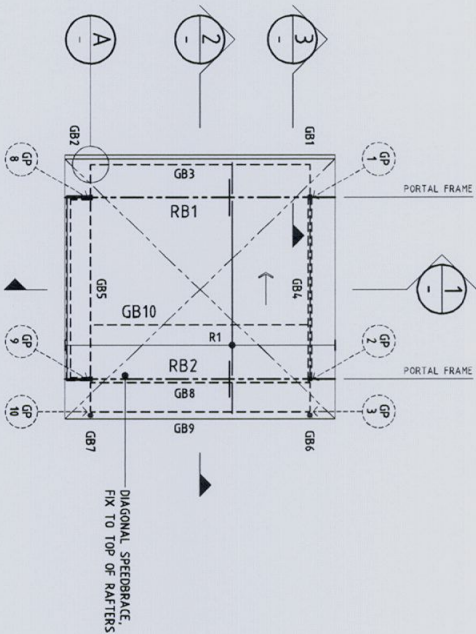
Dated: 7-8-09

**D'AMBROSIO
CONSULTING**
SUIITE 4/153 VICTORIA ROAD
GLADESVILLE NSW 2111
PHONE (02) 9879 5577
FAX (02) 9879 5588
dambrsioconsulting@spand.com

STRUCTURAL DRAWING

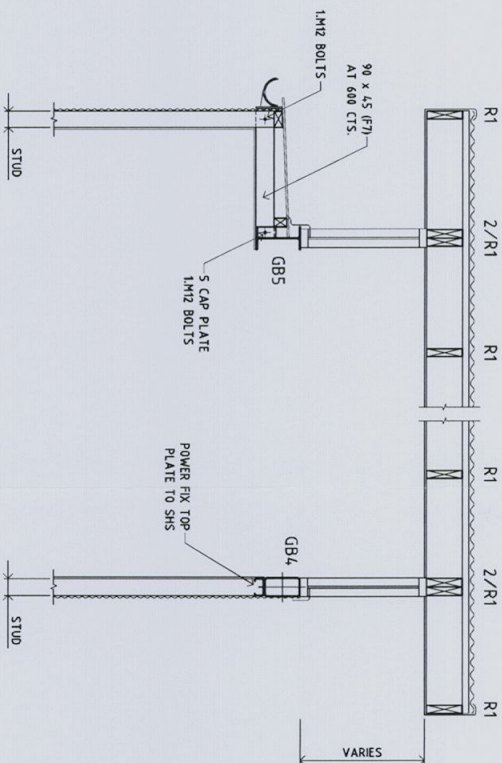
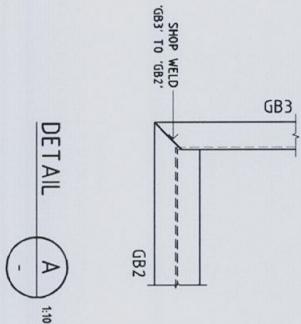
Designed	Drawn	S4443	Proj. No.
A/D A	AAB		
Scale	Proj.	6.02	Issue
1/20 U.N.O.	JUNE 2009		
Calc. File	F./diag./ jobs/		
Certified	B.E. (Hons) M.Engg.-Aust. NEER3 (Structural)		

REFER TO DWG. 1.01 FOR CONSTRUCTION NOTES

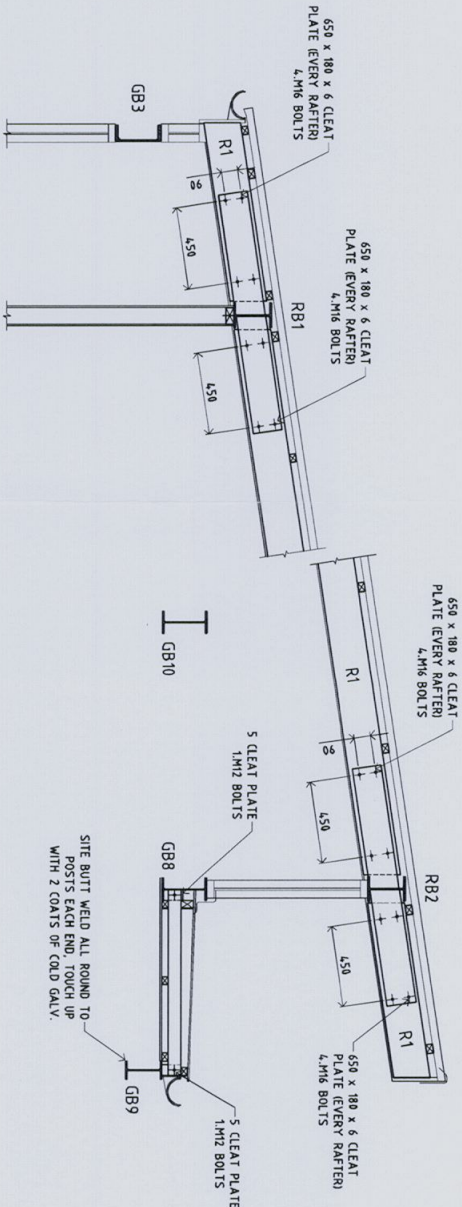


ROOF PLAN

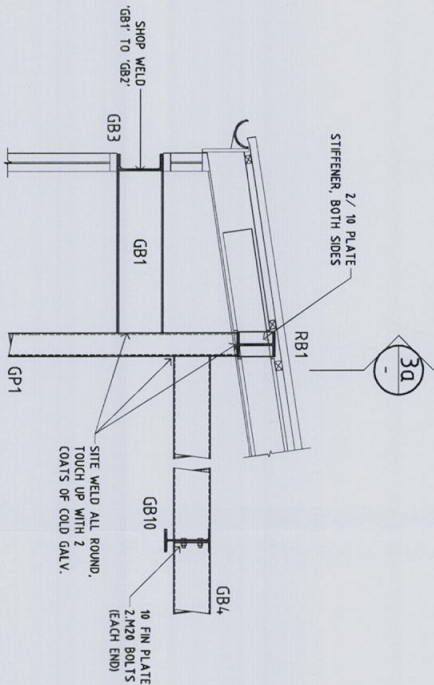
TAG	MEMBER SIZE	TYPE
GP1-3, 8-10	REFER TO 1.01	STEEL POST
RB1, 2	200 UB 30	STEEL BEAM
GB1, 2, 6, 7	250 UB 26	STEEL OUTRIGGER
GB3	253 PFC	STEEL BEAM
GB4	200 x 100 x 5.3 RHS	STEEL BEAM
GB5, 8	250 UB 26	STEEL BEAM
GB9	200 UB 18	STEEL BEAM
GB10	200 UB 30	STEEL BEAM
R1	200 x 45 (F80) HYSPAN LVL AT 600 CTS.	TIMBER RAFTERS



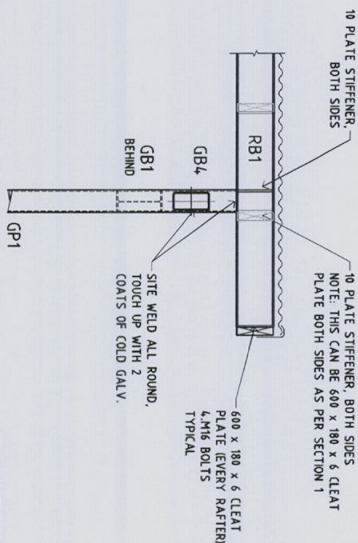
SECTION 1



SECTION 2



SECTION 3



SECTION 3a



This is the document referred to in certificate:

No: C-09-024-1
Dated: 7-8-09

ISSUED FOR CONSTRUCTION CERTIFICATE	15.07.09
DATE	CHECKED

Architect
WARWICK WERNER ARCHITECT PTY. LTD.
4 WANAWONG ROAD,
CAREEL BAY, N.S.W. 2107
TEL: (02) 9918 5455 FAX: (02) 9918 5462

Project:
NEW GARAGE
137 RIVERVIEW ROAD
CLAREVILLE

SITE 6/153 VICTORIA ROAD
CLAREVILLE
D'AMBROSIO CONSULTING
STRUCTURAL ENGINEERS
PHONE: (02) 9879 5517
FAX: (02) 9879 5588
dambrosio@optusnet.com.au

Title:
ROOF PLAN
AND SECTIONS

STRUCTURAL DRAWING

Designed A.D./A.	Drawn A.A.B.	No. Rev. S4443
Scale 1:100 UNO.	Date JUNE 2009	Drawn 7.01
Grid No. F./day/job/		Issue A
Checked B.E. (HKS) M.E. (AUC)		Checked M.E.B. (Structural)