

ELECTRONIC BLUEPRINT is the principal point of reference and knowledge base for Architects, Engineers and Builders and the only package that fully integrates regulatory & standards requirements with comprehensive, editable specifications, CAD details and approved industry training.

ELECTRONIC BLUEPRINT Update

Dear Specifier

Thank you for receiving the ELECTRONIC BLUEPRINT Update. Bi-monthly issues are emailed (six per year) to keep architects, engineers and builders informed of:

- Changes to the Building Code of Australia and relevant Australian Standards;
- Commentary on the changes and other important design considerations;
- Appropriate specifications and drawing details to comply with those standards; and
- A range of building products that meet the particular requirements.

Our records show that you have previously asked to receive information from ELECTRONIC BLUEPRINT. Since that time, the SPAM laws have tightened, and we must now ask you to re-confirm that you wish to receive ELECTRONIC BLUEPRINT Updates six times per year. We sincerely apologise for this inconvenience. [Please click here to reconfirm.](#)

Changes to the BCA and Australian Standards affect all aspects of the Building Industry. [Click here](#) to obtain the complimentary report "Proposed Changes to Australian Standards and Building Code of Australia", and a complimentary Distance Learning Package (CPD applicable).

Should you require more information of any of the matters raised herein, please refer to our website www.electronicblueprint.com.au or contact us by email info@electronicblueprint.com.au.

Rod Johnston – Principal Author

Karen Bloomfield – Chief Executive Officer

Feature Articles in this Issue

- [Architect](#) - Sustainability Specifications
- [Engineers](#) - Geotextile Filters
- [Builders](#) - Timber Framing and Bushfire Protection

Changes to Australian Standards

New, superseded and amended standards for September & October. [Changes to Australian Standards](#)

Distance Learning Packages

The ELECTRONIC BLUEPRINT [Distance Learning Packages](#) provide Architects, Engineers and Builders with the opportunity to upgrade their Continuing Professional Development and obtain the required CPD points.

Product Directory

The [Product Directory](#) enables specifiers and purchasers to quickly access a list of building products that comply with the specific requirements of the ELECTRONIC BLUEPRINT.

We are conscious that professionals receive large quantities of technical information. To cease receiving these newsletters (six per year) please email us at info@electronicblueprint.com.au. Email addresses are never sold nor used for reasons other than ELECTRONIC BLUEPRINT notification and information.

Architects – Sustainability Specifications

ELECTRONIC BLUEPRINT announces the launch of “Sustainability Specifications”. Architects and Designers are now able to select, free-of-charge from our web site, and use in their contract specifications a series of generic “Sustainability Specifications” for a range of building products.

These permit the designer to:

- Draft generic general requirements for sustainable products and construction;
- Draft detailed sustainability requirements for particular product types; and
- Determine which building products comply with the detailed sustainability requirements.

Principle

A “Sustainability Specification” is one which, through its application, leads to:

- Reduction green-house gas generation, which causes global warming, and/or
- Reduction in the use of non-renewable resources upon which our society depends, and/or
- Reduction in land, water or air pollution or degradation, which alienate the use of these resources.

Fitness for Purpose

If a product fails to achieve fitness for its stated purpose, it may lead to unsafe construction, unserviceable construction or other structural, mechanical or aesthetic failures. This invariably leads to re-construction or repair and the associated waste. Therefore, the purposes of sustainability are served by products that are fit for purpose.

Regulatory Requirements

Fitness for purpose is often defined in regulatory requirements. Therefore, the purposes of sustainability are most often served by products that meet relevant regulatory requirements.

Properties that Promote Sustainability

The following are considered to be properties that promote sustainability. The sustainability requirements shall be selected from the following list:

- have lower embodied energy
- be more easily recycled
- have a longer life
- be more efficient in the use of electricity
- have a higher albedo
- have higher thermal resistance
- have higher thermal mass
- more effectively recycle rainwater
- more effectively reduce soil erosion
- be more easily bi-degradable
- be less toxic and with lower concentrations of volatile organic compounds
- be manufactured by process that produce less air, water or land pollution and less toxic waste
- more effectively trap and treat contaminants rather than allowing them to run off or be dumped
- more effectively reduce soil salinity

Example of Sustainability Specifications

General Sustainability Requirements

When a product or system is claimed to be “Sustainable”, the Supplier shall make available a Sustainability Statement that clearly indicates how its use will lead to one or more of the following:

- Reduction green-house gas generation, which causes global warming; or
- Reduction in the use of non-renewable resources upon which our society depends; or
- Reduction in land, water or air pollution or degradation, which alienate the use of these resources.

Sustainability Specification			
Paints shall be less toxic and have lower concentrations of volatile organic compounds than commonly used alternatives. This criterion is deemed to be achieved, if the particular paint complies with the Australian Paint Approval Scheme (APAS) specifications and has less than 80% of the VOCs permissible under the APAS requirements listed below.			
Sustainability Requirements Regarding the Volatile Organic Compounds (VOCs) in Paints			
APAS Spec	Paint Type	VOC content of wet paint (grams per litre)	
High Volume Architectural Products		Average	Maximum
0134	Latex primer for galvanised iron & Zinalume	45	50
0163/1	Exterior latex undercoat	55	65
0163/2	Interior latex undercoat	60	65
0172	Interior sealer	50	60
0183	Exterior timber primer	50	60
0260/1	Interior gloss	75	90
0260/2	Interior semi gloss	60	80
0260/3	Interior low sheen	50	75
0260/4	Interior flat – washable	60	70
0260/5	Interior flat – ceilings	50	60
0280/1	Exterior gloss	60	85
0280/2	Exterior semi gloss	60	80
0280/3	Exterior flat & low sheen	45	70
0280/4	Exterior gloss	65	80
0280/5	Exterior low sheen	50	80
Other Architectural Products		Maximum	
0011	Solvent borne roof paint for galvanised steel	450	
0012	Latex roof paint	100	
0015	Exterior/interior alkyd, gloss & semi gloss	450	
0016	Interior & exterior undercoat	450	
0024	Exterior oil & petrol resistant enamel	450	
0029	Undercoat (oil & petrol resistant)	450	
0032	Metal primer Buildings – excluding lead & chromates)	550	
0055	One pack exterior varnish (general purpose)	550	
0070/1	Chalkboard paint – solvent based	450	
0070/3	Chalkboard paint – water based	100	
0114	One pack interior varnish (general purpose)	500	
0115	Lightly pigmented ranch finish – exterior timber	450	
0162	Zinc phosphate metal primer	550	
0171	Interior solvent-based sealer	450	
0181	Primer	450	
0200	One pack pigmented solvent borne paving paint	550	
0202	One pack pigmented latex paving paint	80	
0215	Low odour/low environmental impact	5	
Industrial & Protective Coatings Products		Maximum	
0006	Army Olive Drab enamel	550	
0009	Undercoat for Army Olive Drab enamel	550	
0041/2	Roadmaking paint – solvent borne	450	
0041/5	Roadmaking paint – white water borne	60	
2901	Protective coatings for steel – latex	100	
2920	Polysiloxane coating	400	
2921	Protective coatings for steel – primers	450	
2922	Protective coatings for steel – modified alkyd finish	450	
2930	Single pack moisture cure urethane for steel	400	
2940	MIO or aluminium coating subject to continuous condensation	350	
2971	Epoxy primers, 2 pack	400	
2972	Low build epoxy GP enamel, 2 pack	350	
2973	Solvent borne epoxy to 400 µm, 2 pack	350	
2974	Solventless epoxy to 400 µm, 2 pack	120	
2975	Ultra high build epoxy, immersion, 2 pack	350	

2976	Solvent borne epoxy mastic	180
2977	Solvent borne epoxy mastic, slow drying, high volume solids > 400 µm	180
Notes		
1. These specifications are summaries of APAS (Australian Paint Approval Scheme) Document D181, Tables 1, 2 and 3, applying in the period 1 st January 2007 to 31 st December 2001.		

Sustainable products are:			###
Specified requirements		Complying product reference	Contact for further details
APA S	AS/NZS 2311	Latex primer for galvanised iron & Zincalume	Resene Paints (Aust) Ltd PO Box 785 Ashmore City, QLD, 4214 p: 1800 738 383 f: 1800 064 960 e: advice@resene.com.au w: www.resene.com.au
0134	12A		
0163/1	17A	Exterior latex undercoat	
0163/2	17A	Interior latex undercoat	
0167		Waterborne two epoxy gloss enamel (See note 4)	
0172	16	Interior sealer	
		Resene Broadwall AWS (VOC 7)	
		Resene Decorator Acrylic Sealer Undercoat (VOC 7)	
0183	10A	Exterior timber primer	
		Resene Decorator Easy Sand (VOC <1)	
0183	10A	Exterior timber primer	
0260/1	09	Interior gloss	
0260/2	08	Interior semi gloss	
0260/3	07	Interior low sheen	
		Resene Contractor (VOC 39)	
		Resene Decorator Acrylic Low Sheen (VOC 52)	
		Resene Decorator Acrylic Ultra Low Sheen (VOC 52)	
0260/3	07	Interior low sheen	
0260/4	09	Interior flat – washable	
0260/5	06	Interior flat – ceilings	
		Resene Lumbersider (VOC 35)	
0280/1	09	Exterior gloss	
		Resene Contractor (VOC 39)	
		Resene Decorator 100% Acrylic Gloss (VOC 71)	
0280/1	09	Exterior gloss	
		Resene Enamacryl Metallic Waterborne Enamel (VOC 63)	
		Resene Hi-Glo Gloss Acrylic (VOC 62)	
0280/2	08	Exterior semi gloss	
		Resene Lustacryl Semi-Gloss Waterborne Enamel (VOC 63)	
		Resene Sonyx 101 Semi-Gloss Acrylic (VOC 59)	
0280/2	08	Exterior semi gloss	
		Resene Lumbersider (VOC 35)	
		Resene Lumbersider (VOC 35)	
0280/3	07	Exterior flat & low sheen	
		Resene SpaceCote Low Sheen Water Borne Enamel (VOC 55)	
		Resene Contractor (VOC 39)	
0280/3	07	Exterior flat & low sheen	
		Resene Decorator Actylic In/Ex Flat (VOC 7)	

			Resene Decorator Acrylic Low Sheen (VOC 52)	
			Resene Decorator Acrylic Ultra Low Sheen (VOC 52)	
			Resene AquaShield (VOC 7)	
0280/4	09	Exterior opaque gloss for timber		
0280/5	07	Exterior opaque low sheen for timber		
Other Architectural Products				
0011	26	Solvent borne roof paint for galvanised steel		
0012	25	Latex roof paint		
0015	03	Exterior/interior alkyd, gloss & semi gloss (See note 2)	Resene Lusta-Glo White & MCR (VOC 332)	Resene Paints (Aust) Ltd PO Box 785 Ashmore City, QLD, 4214 p: 1800 738 383 f: 1800 064 960 e: advice@resene.com.au w: www.resene.com.au
	05	Exterior/interior alkyd, gloss & semi gloss (See note 2)	Resene Decorator Alkyd Gloss White (VOC 71)	
0016	17	Interior & exterior undercoat	Resene Enamel Undercoat White & MCR (VOC 320)	
0024	03; 05	Exterior oil & petrol resistant enamel (See note 2)		
0029	17	Undercoat (oil & petrol resistant)		
0032	11	Metal primer Buildings – excluding lead & chromates)	Resene Galvo One (VOC 464)	Resene Paints (Aust) Ltd PO Box 785 Ashmore City, QLD, 4214 p: 1800 738 383 f: 1800 064 960 e: advice@resene.com.au w: www.resene.com.au
0072		Rough finish non-skid deck paint (See note 4)	Resene Blacktop Black (VOC 2-5) Resene Blacktop Green (VOC 2-5) Resene Blacktop Red (VOC 2-5)	
0055	19	One pack exterior varnish (general purpose)		
0070/1		Chalkboard paint – solvent based		
0070/3		Chalkboard paint – water based		
0114	19A	One pack interior varnish (general purpose)	Resene Aquaclear Gloss (VOC 95) Resene Aquaclear Semi-Gloss (VOC 95)	Resene Paints (Aust) Ltd PO Box 785 Ashmore City, QLD, 4214 p: 1800 738 383 f: 1800 064 960 e: advice@resene.com.au w: www.resene.com.au
0115	23	Lightly pigmented ranch finish – exterior timber	Resene Waterborne Woodsman Wood Stain (VOC 81)	
0117/2		Long life texture coating for exterior concrete & masonry – med-high build latex smooth (See note 4)	Resene Multisheild + Flat (VOC 37)	Resene Paints (Aust) Ltd PO Box 785 Ashmore City, QLD, 4214 p: 1800 738 383 f: 1800 064 960 e: advice@resene.com.au w: www.resene.com.au
			Resene Multisheild + Gloss (VOC 95)	
			Resene Multisheild + Satin (VOC 88)	

0117/3		Long life texture coating for exterior concrete & masonry – medium build latex low profile (See note 4)	Resene Sandtex White & MCR (VOC 8)	
			Resene X-200 MCR (VOC 62)	
0117/4		Long life texture coating for exterior concrete & masonry – high build high profile (See note 4)	Resene Flexicover E (VOC 10)	
			Resene Resitex Coarse (VOC 1-2)	
			Resene Resitex Standard (VOC 1-2)	
			Resene Thixalon 5 (VOC 16)	
		Resene Resitex Medium (VOC 1-2)		
0162	11	Zinc phosphate metal primer		
0171	15	Interior solvent-based sealer	Resene Sureseal (VOC 498)	
0181	10	Primer	Resene Wood Primer (VOC 357)	
0200	24	One pack pigmented solvent borne paving paint		
0202	24A	One pack pigmented latex paving paint	Resene Non-Skid Deck & Path (VOC 13)	
0205		One pack clear moisture cured finish for timber	Resene Polythane Gloss (VOC 600)	
0215		Low odour/low environmental impact		

NOTES:

1. Left hand column contains both APAS and AS/NZS 2311 reference numbers. Either or both may be used in painting schedules.
2. Equivalencies: AS/NZS 2311-03 is equivalent to 0015/3 & 0024/2
AS/NZS 2311-05 is equivalent to 0015/1 & 0024/1
3. Products in cells shaded white comply with the APAS requirement but are not less than the 80% VOC requirement.
4. APAS does not specify a maximum VOC requirement. Notwithstanding, products shaded green are considered to have a relatively low VOC.

For further information on this topic, or for relevant Continuing Professional Development Distance Learning Packages, please contact ELECTRONIC BLUEPRINT at info@electronicblueprint.com.au
More product information about Resene Paints are available on <http://www.electronicblueprint.com.au/suppliers/resene.htm>

[Return to top](#)

Engineers – Geotextile Filters

This article considers the application of geotextiles to drainage and filtration. The important geotextile properties for the principal applications are:

Geotextile Properties and Applications			
Application	Drainage and Filtration	Separation	Soil Reinforcement
Permeability	Maximise the amount of water passing through	Pass moderate quantities of ground-water	Pass moderate quantities of ground-water
Pore Size	Keep the pores small enough to block fine material from entering the drainage system	Keep the pores small enough to block fine material	Not applicable
Strength, Toughness, Abrasion Resistance	Resist construction abrasion	Resist construction abrasion	Provide tensile strength to soil & resist construction damage
Roughness	Not applicable	Not applicable	Must not slip out of soil when subject to tension

Permeability, Permittivity and Flow

The permeability properties of geotextiles are determined in accordance with AS 3706.9. This test measures the water flow through a sample of the subject geotextile under constant head

- Thickness of the sample t
- Head during test $h = 100 \text{ mm}$
- Flow rate under 100 mm of head Q_{100}
- Permittivity $\psi = Q_{100} / h$
- Permeability $k = \psi t$

Flow may be unidirectional (only perpendicular to the geotextile) or may be multidirectional. This specification deals only with unidirectional flow and does not deal with problem soils. Several authors (Calhoun, Ogink, McKeand, Giroud, Schober and Teinol) provide recommendations for specifying the permeability, k , of a filter, ranging from 0.1 to 10 times the permeability of the soil. This will depend in part, on whether the soil is particularly coarse or particularly fine. In this specification, a value permeability, k , of the geotextile not less than 1 times the permeability of the soil has been adopted. In the case of important structures, or those where the permeability of the geotextile is critical, more precise methods and different specifications should be employed. This specification is not suitable for fine clay, and may not match the flow of water through coarse sands and gravels. The designer must consider variations to this specification in these circumstances.

Opening Size

Several authors provide recommendations for determining the maximum opening size of a filter. To prevent piping (drawing of fine soil particles into the filter), Calhoun recommends that the O_{95} of the geotextile filter should be not more than the D_{15} of coarse soils and not more than 200 μm of cohesive soils. The general limits adopted in this specification are as follows:

- For cohesive soil ($D_{20} \text{ soil} \leq 75 \mu\text{m}$), O_{95} geotextile should be between 150 μm and 250 μm .
- For non-cohesive soil ($D_{20} \text{ soil} > 75 \mu\text{m}$), O_{95} geotextile should be between 80 μm and 250 μm .

To minimise clogging of a geotextile filter, the O_{95} opening size should be not less than 3 times the D_{15} of the soil.

An alternative specification to minimise clogging is to require the Austroads G Rating (if available) to be less than 3.

Design software available www.electronicblueprint.com.au/software.html

[Return to top](#)

Suggested Specification

Geotextiles for Filters and Drains		
Function	Filter and drainage	
Typical location	Drain soil behind retaining walls and structures	
Protection to geotextile	The geotextile shall be protected against tear or puncture. ^{Note 2}	
Soil Type ^{Note 1}	Cohesive and other fine grained soils such as silts and some clays ^{Note 3}	Cohesionless soils such as some sands ^{Note 3}
Minimum Wide Strip Tensile Strength, in accordance with AS 3706.2, shall be as high as practical, but not less than ^{Note 2}	7.5 kN/m	7.5 kN/m
Minimum Trapezoidal Tear Strength, in accordance with AS 3706.3, shall be as high as practical, but not less than ^{Note 2}	210 N	210 N
Minimum CBR Burst Strength, in accordance with AS 3706.4, shall be as high as practical, but not less than ^{Note 2}	1,500 N	1,500 N
Pore Size O ₉₅ by dry sieving, in accordance with AS 3706.7, shall be in the range	150 µm to 250 µm	80 µm to 250 µm
Permittivity, in accordance with AS 3706.9, shall be as high as practical, but not less than	2.0 sec ⁻¹	0.7 sec ⁻¹
Flow Rate under 100 mm Head, in accordance with AS 3706.9, shall be as high as practical, but not less than	100 l/m ² /sec	70 l/m ² /sec
Coefficient of Permeability, in accordance with AS 3706.9, shall be as high as practical, but not less than ^{Note 3}	0.00001 m/sec (1 x 10 ⁻⁵ m/sec)	0.003 m/sec (3 x 10 ⁻⁴ m/sec)
<p>Notes</p> <p>1. This specification does not apply to “problem soils”, defined as exhibiting one or more of the following:</p> <ul style="list-style-type: none"> • Silty soils with hydraulic gradients greater than 3 • Widely graded or gap graded particle size distribution • Dispersive clays and silts • Uniform silts and sands with a coefficient of uniformity under 3 <p>2. The geotextile shall be protected against tear or puncture by either :</p> <ul style="list-style-type: none"> • Avoiding fill with sharp angular aggregate, heavy compaction (over 95% standard) and fill depths over 3.0 m, or • Providing a protective layer of drainage aggregate not less than 50 mm thick <p>If these criteria are not met, the specified strength properties must be at least doubled.</p> <p>3. In this specification, a value permeability, k, of the geotextile not less than 1 times the permeability of the soil has been adopted. In the case of important structures, or those where the permeability of the geotextile is critical, more precise methods and different specifications should be employed. This specification is not suitable for fine clay, and may not match the flow of water through coarse sands and gravels. The designer must consider variations to this specification in these circumstances.</p>		

Particular applications of geotextiles used for filtration and drainage are available on <http://www.electronicblueprint.com.au/suppliers/ausdrain.html>

For further information on this topic, or for relevant Continuing Professional Development Distance Learning Packages, please contact ELECTRONIC BLUEPRINT by email info@electronicblueprint.com.au.

[Return to top](#)

Builders – Timber Framing and Bushfire Protection

Australian Standard AS 3959 spells out the requirements for construction that is resistant to bushfires. This article provides a general specification for timber framing, and a particular specification for the use of hardwoods with enhanced fire resistance. Particular applications of hardwoods are available on <http://www.electronicblueprint.com.au/suppliers/FordTimbers.htm>

SPECIFICATION – TIMBER FRAMING

Timber framing for domestic housing shall comply with, AS 1684 and the standards referred to therein. Where the structure is beyond the scope of AS 1684, the design and construction shall comply with AS 1720.1.

Stress Grade

Timber shall comply with the stress grade specified on the drawings for the particular application. Unless stated otherwise, timber shall comply with the following:

- Softwoods for general purposes framing (without enhanced performance) shall be seasoned, and shall be not less than MGP10 stress grade.
- Douglas Fir (Oregon) shall be not less than F7 stress grade.
- Hardwoods for general purposes framing (without enhanced performance) shall be seasoned, and shall be not less than F11 stress grade.

Durability

Timber shall comply with the durability requirements specified on the drawings for the particular application and AS 1684.2, AS 1684.3 and AS 1720 as appropriate. Unless stated otherwise, timber shall comply with the following:

Durability Requirements	
In-ground contact	Durability Class 1 or 2 timbers, with sapwood removed or preservative treated to H5 Softwood preservative treated to H5
External, above-ground, exposed	Durability Class 1 or 2 timbers, with sapwood removed or preservative treated to H3 Softwood preservative treated to H3 (Note: AS 1684 makes provision for the use of some Durability Class 3 and 4 timbers in some applications. These shall only be used with the express approval of the designer)
External, above-ground, protected	Durability Class 1, 2, 3 or 4 timbers
Internal, fully protected and ventilated	Durability Class 1, 2, 3 or 4 timbers (any timber)

Preservative Treatment

Where required to achieve particular resistance to termite and/or borer attack, the species listed herein shall be treated to achieve the Hazard levels listed in AS 1684.2, & 3 Table C1. Where appropriate, particular state regulations shall apply. Note: There are particular limitations regarding the use of CCA (Copper chrome arsenic)

Common Species

Unless specified otherwise on the drawings, timber species shall comply with the following schedule:

[Return to top](#)

Acceptable Timber Species	
In-ground	Grey Coast Box, Grey Gum, Grey Ironbark, Jarrah, Caribbean Pine (preserved), Hoop Pine (preserved), Radiata Pine (preserved), Slash Pine (preserved), Tallowwood
Framing above ground, exposed	Blackbutt, Grey Gum, Spotted Gum, Grey Ironbark, Jarrah, Karri, Caribbean Pine (preserved), White Cypress Pine, Hoop Pine (preserved), Radiata Pine (preserved), Slash Pine (preserved), Tallowwood, Mixed Hardwood (Qld/N NSW)
Framing above ground, protected	Alpine Ash (seasoned), Blackbutt, Blackwood, Brush Box, Douglas Fir (Oregon), Sydney Blue Gum, Shining Gum, Spotted Gum, Grey Ironbark, Jarrah, Karri, Messmate, Caribbean Pine (seasoned), White Cypress Pine, Hoop Pine (seasoned), Radiata Pine (seasoned), Slash Pine (seasoned), Tallowwood, Taun, Victorian Ash, Australian Oak, Tasmanian Oak, Qld/Nth NSW Mixed Hardwoods, Hemfir, Softwoods-imported (unidentified), Mixed Australian grown pinus spp Softwoods, Spruce pine fir (SPF)
<p>Notes:</p> <ol style="list-style-type: none"> 1. This table is based on AS 1684.2, & 3 Table H1 for species listed as readily available. 2. Species used for Decking, Cladding, Internal flooring, Panelling, External joinery, Internal joinery are listed in Specification 9 <i>Carpentry, Joinery, Cladding, & Flooring</i> 3. Where required to achieve particular resistance to termite and/or borer attack, the species listed herein shall be treated to achieve the Hazard levels listed in AS 1684.2, & 3 Table C1. Where appropriate, particular state regulations shall apply. 	

Hardwoods with Enhanced Performance	
Required Performance	Specification
Enhanced straightness and finish	Timber shall be kiln dried hardwood within the following dimensional tolerances. Maximum deviation from straightness of any surface not more than 1 mm in a length of 1,000 mm. Edges shall be pencil round.
Enhanced durability and resistance to shrinkage	Timber shall be kiln dried hardwood with Class 1 durability in accordance with AS 1684. Ends shall be trimmed and sealed.
Enhanced strength	Timber shall be kiln dried hardwood complying with Stress Grade F14 (unless specified otherwise). Note: Stress Grade F17 shall be provided when specified by the engineer for highly stressed applications.
Enhanced fire resistance	For construction in areas that are prone to bushfire, all materials and construction shall comply with AS 3959 and the specific requirements of the BCA Vol 2 Part 3.7.4. Timber for AS 3959 Construction Levels 2 or 3 shall be high density hardwood of the following species: Spotted gum, Blackbutt or Merbau ^{See Notes 1 and 2} . Timber sections shall be not less than 18 mm thick.
Enhanced resistance to decay (rot), lyctus borer attack and termite attack	Timber shall be kiln dried hardwood treated to resist Hazard Level H5 in accordance with AS 1684.
<p>Notes:</p> <ol style="list-style-type: none"> 1. AS 3959 - Category of Bushfire Attack - Level 1: Low, Level 2: Medium, Level 3: High 2. National Timber development Council Bulletin No 1 2000 (Amended May 2004) lists the following high-density hardwoods as having suitable fire resistance: Blackbutt, Mebau (Kwila), Iron Bark, Silver Top Ash, Spotted Gum, River Red Gum and Turpentine. 3. When appropriately treated, the following species provide improved termite resistance: Red Bloodwood, Grey Box, Forest Gum, Ironbark (All species), White Mahogany, Red Mahogany, Gympie Messmate, Tallowwood, Blackbutt, Spotted Gum, White Stringybark. 4. To minimise surface checking in the case of delayed use, apply an oil-based primer and store the timber flat in an elevated, ventilated position, protected from rain and sun. 5. Prime all timber <u>and joints</u> before and during construction. 6. For high quality finishes, apply at least two coats of acrylic or oil-based enamel paint. 	

For further information on this topic, or for relevant Continuing Professional Development Distance Learning Packages (suitable for CPD points), please contact ELECTRONIC BLUEPRINT by email info@electronicblueprint.com.au.

[Return to top](#)

Changes to Australian Standards

New Standard	Superseded Standard
AS/NZS 3499 – 2006 Water supply – Flexible hose assemblies	
AS/NZS 1748 – 2006 Timber – Mechanically stress-graded for structural purposes	

Amended Standards
AS 7240 Fire detection and alarm systems
AS/NZS 4401 – 2006 Plastics piping systems for soil and waste discharge (low and high temperatures) inside buildings – Polyethylene (PE)
AS 1684.3 C2 Supplement 9 -2006
AS 1720.2 – 2006 Timber properties
AS 1859.2 – 2006 Dry-processed fibreboard
AS/NZS 2269 – 2004 Plywood – Structural
AS/NZS 2271 – 2004 Plywood and blockboard for external use
AS/NZS 3500.5 – 2000 Domestic installations
AS/NZS 4791 Hot-dip galvanised (zinc) coatings on ferrous open sections, applied by an in-line process
AS/NZS 4792 Hot-dip galvanised (zinc) coatings on ferrous hollow sections, applied a continuous or specialised process
AS/NZS 4680 Hot-dip galvanised (zinc) coatings on fabricated ferrous articles
AS/NZS 4534 Zinc and zinc/aluminium-alloy coatings on steel wire

These changes are reflected in the updated version of the ELECTRONIC BLUEPRINT, which will be available at www.electronicblueprint.com.au. For more information on changes to Australian Standards, visit SAI Global at www.standards.com.au.

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Individual information about the modules may be obtained from the website at;
<http://www.electronicblueprint.com.au/distancelp.html>

OFT Approval Code	Section	Type Code	Module Content
	0 – General Design Considerations	A4	Standard Specifications and Details
		A4	Occupational Health & Safety
		A4	Quality Assurance
		A4	Construction Programme
		A4	Maintenance
		E4	Bush Fire Design
		E4	Acoustics
		E4	Fire Resistance
Rpa5f197		E4	Sustainability: Energy Efficiency & Greenhouse Gas
		E4	Sustainability: Indoor Air Quality

		E4	Sustainability: Water Efficiency
		E4	Sustainability: Salinity
Rpa5wh73		E4	Slip Resistance
	1 – Site Establishment	B2	Building: Materials, Construction & Inspection of Site Establishment
		D4	Design: Design, Specification & Detailing of Site Establishment
	2 – Earthworks & Drainage	B2	Building: Materials, Construction & Inspection of Earthworks & Drainage
		D4	Design: Design, Specification & Detailing of Earthworks & Drainage
		E4	Engineering: Engineering Considerations of Earthworks & Drainage
	3 – Concrete	B2	Building: Materials, Construction & Inspection of Concrete
		D4	Design: Design, Specification & Detailing of Concrete
		E4	Engineering: Engineering Considerations of Concrete
Rpa5zy99	4 – Retaining Walls	B2	Building: Materials, Construction & Inspection of Retaining Walls
		D4	Design: Design, Specification & Detailing of Retaining Walls
		E4	Engineering: Engineering Considerations of Retaining Walls
	5 – Drainage & Plumbing	B2	Building: Materials, Construction & Inspection of Drainage & Plumbing
		D4	Design: Design, Specification & Detailing of Drainage & Plumbing
		E4	Engineering: Engineering Considerations of Drainage & Plumbing
	6 – Windows, Doors & Glazing	B2	Building: Materials, Construction & Inspection of Windows, Doors & Glazing
		D4	Design: Design, Specification & Detailing of Windows, Doors & Glazing
	7 – Structural Steel Work	B2	Building: Materials, Construction & Inspection of Structural Steel Work
		D4	Design: Design, Specification & Detailing of Structural Steel Work
		E4	Engineering: Engineering Considerations of Structural Steel Work
	8 – Wall, Roof & Floor Framing	B2	Building: Materials, Construction & Inspection of Wall, Roof & Floor Framing
		D4	Design: Design, Specification & Detailing of Wall, Roof & Floor Framing
		E4	Engineering: Engineering Considerations of Wall, Roof & Floor Framing
	9 – Carpentry, Joinery, Cladding & Flooring	B2	Building: Materials, Construction & Inspection of Carpentry, Joinery, Cladding & Flooring
		D4	Design: Design, Specification & Detailing of Carpentry, Joinery, Cladding & Flooring
	10 – Roof Cladding	B2	Building: Materials, Construction & Inspection of Roof Cladding
		D4	Design: Design, Specification & Detailing of Roof Cladding
		E4	Engineering: Engineering Considerations of Roof Cladding
	11 – Roof Plumbing	B2	Building: Materials, Construction & Inspection of Roof Plumbing
		D4	Design: Design, Specification & Detailing of Roof Plumbing
Rpa5zy99	12 - Masonry	B2	Building: Materials, Construction & Inspection of Masonry
		D4	Design: Design, Specification & Detailing of Masonry

		E4	Engineering: Engineering Considerations of Masonry
	13 – Ceiling & Wall Lining	B2	Building: Materials, Construction & Inspection of Ceiling & Wall Lining
		D4	Design: Design, Specification & Detailing of Ceiling & Wall Lining
Rpa5fl97	14 – Insulation	B2	Building: Materials, Construction & Inspection of Insulation
		D4	Design: Design, Specification & Detailing of Insulation
		E4	Engineering: Engineering Considerations of Insulation
Rpa5wh73	15 – Floor & Wall Tiling	B2	Building: Materials, Construction & Inspection of Floor & Wall Tiling
		D4	Design: Design, Specification & Detailing of Floor & Wall Tiling
	16 – Electrical Installation	B2	Building: Materials, Construction & Inspection of Electrical Installation
		D4	Design: Design, Specification & Detailing of Electrical Installation
	17 – Kitchen	B2	Building: Materials, Construction & Inspection of Kitchen
		D4	Design: Design, Specification & Detailing of Kitchen
	18 – Vehicular Doors	B2	Building: Materials, Construction & Inspection of Vehicular Doors
		D4	Design: Design, Specification & Detailing of Vehicular Doors
	19 - Painting	B2	Building: Materials, Construction & Inspection of Painting
		D4	Design: Design, Specification & Detailing of Painting
	20 – Resilient Floor Coverings	B2	Building: Materials, Construction & Inspection of Resilient Floor Coverings
		D4	Design: Design, Specification & Detailing of Resilient Floor Coverings
	21 – Carpets & Soft Furnishings	B2	Building: Materials, Construction & Inspection of Carpets & Soft Furnishings
		D4	Design: Design, Specification & Detailing of Carpets & Soft Furnishings
	22 – Windows & Door Shutters	B2	Building: Materials, Construction & Inspection of Windows & Door Shutters
		D4	Design: Design, Specification & Detailing of Windows & Door Shutters
	23 – Mechanical Ventilation & Services	B2	Building: Materials, Construction & Inspection of Mechanical Ventilation & Services
		D4	Design: Design, Specification & Detailing of Mechanical Ventilation & Services
Rpa5zy99	24 – Cleaning	B2	Building: Materials, Construction & Inspection of Cleaning
		D4	Design: Design, Specification & Detailing of Cleaning
	25 - Landscaping	B2	Building: Materials, Construction & Inspection of Landscaping
		D4	Design: Design, Specification & Detailing of Landscaping
	26 - Fencing	B2	Building: Materials, Construction & Inspection of Fencing
		D4	Design: Design, Specification & Detailing of Fencing
Rpa5wh73	27 - Paving	B2	Building: Materials, Construction & Inspection of Paving
		D4	Design: Design, Specification & Detailing of Paving
		E4	Engineering: Engineering Considerations of Paving
	28 – Metalwork & Balustrades	B2	Building: Materials, Construction & Inspection of Metalwork & Balustrades
		D4	Design: Design, Specification & Detailing of Metalwork & Balustrades

To obtain an order form [click here](#).

[Return to top](#)

PRODUCT DIRECTORY

Enabling specifiers fast access a list of building products that comply with the specific requirements of the ELECTRONIC BLUEPRINT.

Supplier	Product Details	ELECTRONIC BLUEPRINT SECTION(S)
Abey Australia Pty Ltd	Wall ties for all environments, including stainless steel cavity ties for use in Marine (R3) and Severe Marine (R4) environments	12
Action Tanks (NSW)	Rotational moulded polyethylene rainwater tanks, polyethylene above ground and underground rainwater management systems; stormwater Detention-Retention	5
Ausdrain	Drainage cells for horizontal and vertical applications ; Geotextiles; Protection Boards; Underground rainwater storage & re-use; Stormwater infiltration & filtration; Retention tanks; Septic leach drainage.	2,4,5
Blockout Industries Pty Ltd	Roller shutters for thermal & sound insulation, and the protection of windows from bush fire.	22
Breezeway Australia Pty Ltd	Energy and cyclone rated louvre windows made from non-corrosive materials complying with AS 2047; Skylights manufactured in accordance with AS2485 and AS1288 and energy rated according to WERS Scheme; Solid timber loft ladders with a high load capacity of 160kg; insulated and dust retardant trap doors	6, 9
Brunswick Sales	Vertical control joint ties to AS 2699 Part 1. Available fully galvanised or grade 316 stainless steel.	12
Canterbury Windows & Doors	Timber framed windows and doors.	6
Complete Leafscreener Services	Gutter protection suitable for bushfire prone areas.	11
Concrete Colour Systems	Pigments and systems for resurfacing, colouring and stencilling existing and new concrete surfaces	3
Connolly Key Joint Pty Ltd	Preformed concrete control joints and ancillary products	3
C&M Brick	Retaining wall systems to meet the requirements of AS 4678; Water-repellent masonry blocks; Concrete block systems, including insulated blocks and acoustic block systems, to meet the BCA requirements; Segmental pavers for roadways, driveways, gardens and pool surrounds to meet AS 3727 Residential pavements	4, 12
CVC Centravac	Built –In Vacuum Systems	23
Easy Living Home Elevators	Home & commercial elevators, dumbwaiters and limited mobility lifts to AS 1735	23
Electronic Blueprint	Steel mullions for brickwork and blockwork to provide wind and earthquake resistance to the new AS/NZS 1170.2 and AS 1170.4. Resilient ties to comply with BCA Vol 1&2 for the separation of leaves of cavity walls to eliminate the transmission of impact sound	7, 12
Ensystem Australasia	Termite barriers complying with the requirements of AS 3660.1 Non-toxic, in-ground or above-ground, termite colony elimination and protection system complying with AS3660.2.	3,8,12
Everbreeze Ventilation	Design, supply, installation and maintenance of quality ventilation systems complying with BCA and AS 1668.2	23, 6, 8
Fibercon	Steel fibre reinforcement used for enhancing toughness and impact resistance of concrete	3, 27
Ensystem Australasia Pty Ltd	Non-toxic, in-ground or above-ground, termite colony elimination and protection system complying with AS3660.2	3, 7
Erosion Control Systems	Retaining wall systems up to and over 1500mm for both domestic and commercial applications in accordance with AS 4678 (Including Amendment 1)	4
Fibercon	Steel fibre reinforcement used for enhancing toughness and impact resistance of concrete	3, 27
Ford Timbers Pty Ltd	Hardwoods with enhanced performance.	8,9,10,26, 28
Hanson Building Products	Retaining wall systems to meet the requirements of AS 4678; Water-repellent masonry blocks; Concrete block systems, including insulated blocks and acoustic block systems, to meet the BCA requirements; Segmental pavers for roadways, driveways, gardens and pool surrounds to meet AS 3727 Residential pavements Energy Efficient Masonry Housing Systems	4,12
Helifix (Australia) Pty Ltd	Products to repair cracked or damaged brickwork	12

[Return to top](#)

Master Builders Association	Construction area safety signage.	1
Nofire Technologies Australia	A one part non-flammable water based intumescent coating similar in appearance to ordinary latex base paint which immediately foams and swells (intumesces) upon exposure to flame or heat, providing an effective insulation and heat shield to protect the subsurface.	7, 19
Nu-lok Roofing Systems	Interlocking Roofing systems	10
Ozaquasaver.com Pty Ltd	Water Saving Devices	5
Raven Product Pty Ltd	Sealing Systems, for doors and windows, which are frequently multi-purpose, sealing against a combination of intrusions and leakages including sound (AS 1191), fire (intumescent) & smoke (to AS 1530.4 & AS/NZS 1905.1), rain, draughts, dust, embers, light insects, vermin, and energy inc. heating & air conditioning (to AS 4420.4, AS 4420.5, AS 2047, AS 1939, AS 1530.7)..	6, 18
Resene Paints (Aust) Ltd	Environmentally friendly (low VOC) paints complying to APAS requirements and Electronic Blueprint Sustainability Specification.	19
Robert Bosch (Australia) Pty. Ltd.	Commercial and domestic continuous flow gas hot water systems-Hydropower, Pilot & Electronic ignition, available in natural gas & LPG. All gas hot water systems compliant with AS 4552.	5
Specialised Saftey Solutions	Retractable door jamb system allowing conventional doors to be opened in opposite direction as a safety mechanism when the door is locked from the inside.	6
Stramit Building Products	Cold-rolled galvanised steel products complying with AS 4600 Permanent formwork of cold-rolled steel complying with AS 1538 and AS 1397 Sheet steel metal roof and wall cladding complying with AS 1397 Metal rainwater goods complying with AS 2179.1	3, 7, 8, 10, 11
Sunplus CPC Solar	Commercial and domestic evacuated tube solar hot water system complying with AS 2712 Solar and heat pump water heaters – Design and construction.	5
Tankmasta	Underground rainwater tanks and fittings for the purpose of domestic, commercial, or industrial rainwater harvesting	5
TERMseal	Non-toxic termite resistant waterproofing system complying with AS 3660.1 and AS 3740.	3,4,5,12, 15,19
Tripstop Pty Ltd	Concrete construction joints for misalignment and trip hazard control	27

[Return to top](#)