



MATERIAL ANALYSIS



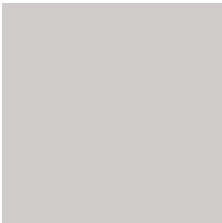


5X4 HAYES LANE PROJECT

MAY 2013 (ISSUE 02)

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1.10 WALL LININGS

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IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	WALL LINING OPTION 01 Plywood AC Interior Grade Structural	Thickness: 9 or 12.5mm Material Size: 1200 x 2400 / 2700 mm Finish / Colour: Natural Cost:	Material Origin: Queensland, Australia Glue Type: Formaldehyde (see below) VOC details: Note: Emissions Class: Super E0 (Lowest emission rating obtainable)	Manufacturer: Supplier: Austral Ply	
	WALL LINING OPTION 02 Eco-Cert Certified Veneer - Tasmanian Oak AFS certified timber	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier: Briggs Veneers http://www.briggs.com.au/	
	WALL LINING OPTION 03) EC08 Gyprock Plasterboard Green Building Council approved	Thickness: 10mm Material Size: varies Finish / Colour: NA Cost: varies	Material Origin: Recycled materials Glue Type: VOC details:	Manufacturer: Supplier: Gyprock http://www.gyprock.com.au/	
	WALL LINING OPTION 03 (feature walls) CHH Wood ECOply	Thickness: 7mm / 12mm Material Size: 1200 x 2400 / 2700 mm Finish / Colour: Natural Cost:	Material Origin: Glue Type: Formaldehyde (see below) VOC details: Note: Emissions Class: Super E0 (Lowest emission rating obtainable)	Manufacturer: Supplier: CHH Wood Products www.chhwoodproducts.com.au	
	WALL LINING OPTION 04 Cork Linoleum Recycled cork material	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details: Note:	Manufacturer: FORBO www.forbo-flooring.com.au Supplier:	

1.10 WALL LININGS

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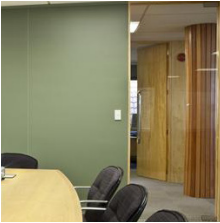




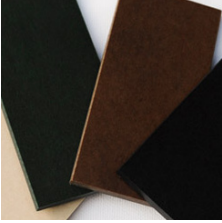

IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	WALL LINING OPTION 05 ShadowClad FSC certified Timber panel system	Thickness: 12mm Material Size: 1200mm x 2440mm Finish / Colour: Varies Cost:	Material Origin: Glue Type: see note below VOC details: Note: Manufactured using an 'A' Bond with less than 0.3mg/l Formaldehyde emissions from the final product.	Manufacturer: CHH Timber Supplier:	
	WALL LINING OPTION 06 Powerscape Recycled paper product 95% of the raw materials in Powerscape Fiberock are from recycled external waste streams.	Thickness: 10mm Material Size: 1200mm x 2440mm Finish / Colour: NA Cost: \$10.50 + GST per m²	Material Origin: Glue Type: No formaldehyde VOC details:	Manufacturer: USG Powerscape Supplier:	
	WALL LINING OPTION 07 Climateline by Climate Surfaces Powdercoated Fibre Cement Sheet	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details: No VOC	Manufacturer: Climate Surfaces Supplier:	

IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>WET AREA LINING OPTION 01</u> Mirror	Thickness: 6mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier: Pilkington	
	<u>WET AREA LINING OPTION 02</u> Tiles	Thickness: 6mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier: Classic Ceramics	

● 1.30 ACOUSTIC FLOOR LAYER

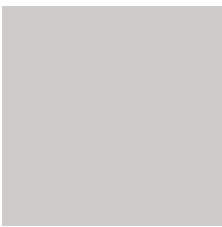
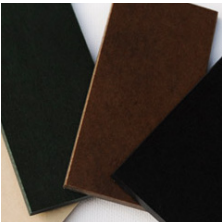
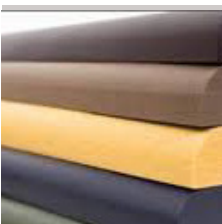
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IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>ACOUSTIC FLOOR LAYER</u> OPTION 01 Impacta Mat	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Embeltons Supplier:	
	<u>ACOUSTIC FLOOR LAYER</u> OPTION 02 Profloor Acoustic Mat System	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: www.proctorgroup.com.au Supplier:	

● 1.40 CUPBOARD DOOR LININGS					P7
IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	CUPBOARD DOORS OPTION 01 Plywood AC Interior Grade Structural Plywood	Thickness: 9mm or 12.5mm Material Size: 1200 x 2400mm / 2700mm Finish / Colour: Natural Cost:	Material Origin: Queensland, Australia Glue Type: Formaldehyde (see below) VOC details: Note: Emissions Class: Super E0 (Lowest emission rating obtainable)	Manufacturer: Supplier: Austral Ply	
	CUPBOARD DOORS OPTION 02 MOSO Bamboo Tambour Faced Panel	Thickness: 20mm / 3.5mm or 7mm bamboo Material Size: Finish / Colour: Natural finish Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Eco Core Supplier: Designer Laminates	
	CUPBOARD DOORS OPTION 03 Plastic Plaspanel The Plaspanel manufacturing plant recycles polyethylene (HDPE) plastic scrap from both post-consumer domestic and industrial waste to produce flat sheet plastic panels	Thickness: 10mm Material Size: 2420 x 1220mm Finish / Colour: Various colours Cost: \$167 + GST per sheet	Material Origin: America Glue Type: VOC details:	Manufacturer: Unknown located in America Supplier: Plas Panel 41 Parer Road Airport West Victoria 3042 03 9310 5257 http://www.plaspanel.com.au/	
	CUPBOARD DOORS OPTION 04 PaperRock compressed paper composite	Thickness: 3mm / 6mm / 18mm Material Size: 1220 x 2440 mm Finish / Colour: sand / green / brown / black Cost: \$180 / \$300 / \$780	Material Origin: Australia Glue Type: Phenolic resin VOC details:	Manufacturer: Paperock 21 Hill Street, Leichardt NSW 02 9564 5454 / 0407945820 Supplier:	
	CUPBOARD DOORS OPTION 05 Amerind Premio Laminates FSC certified laminate	Thickness: 3mm / 6mm / 18mm Material Size: 1220 x 2440 mm Finish / Colour: sand / green / brown / black Cost: \$180 / \$300 / \$780	Material Origin: Australia Glue Type: Phenolic resin VOC details:	Manufacturer: Supplier: Amarind	

● 1.50 KITCHEN BENCHTOPS

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IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>KITCHEN BENCHTOP FINISH OPTION 01</u> Natural stone - Quartz ?	Thickness: 12mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	
	<u>KITCHEN BENCHTOP FINISH OPTION 02</u> PaperRock compressed paper composite	Thickness: 18mm Material Size: 1220 x 2440 mm Finish / Colour: sand / green / brown / black Cost: \$780	Material Origin: Australia Glue Type: Phenolic resin VOC details:	Manufacturer: Paperock 21 Hill Street, Leichardt NSW 02 9564 5454 / 0407945820 Supplier:	
	<u>KITCHEN BENCHTOP FINISH OPTION 03</u> Recycled EcoTop benchtop EcoTop is an FSC certified product, comprised of a 50/50 fiber blend of 100% post consumer recycled fiber and rapidly renewable bamboo fiber, then bound with a clear 100% water-based system.	Thickness: Material Size: Finish / Colour: various Cost:	Material Origin: America Glue Type: Non-toxic VOC details:	Manufacturer: KlipTech Supplier: www.baresque.com.au	

2.10 WALL INSULATION

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IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>WALL INSULATION</u> OPTION 01 25mm Foilboard	Thickness: 25mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	
	<u>WALL INSULATION</u> OPTION 02 R2.5 Polyester	Thickness: 90mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Tontine Supplier: Tontine	Green Tag Certified Uses a minimum of 83% recycled fibres
	<u>WALL INSULATION</u> OPTION 03 R2.5 Wool / Poly blend	Thickness: 90mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	70% virgin wool 30% polyester blend
	<u>WALL INSULATION</u> OPTION 04 Spacetherm	Thickness: 5/10mm (or multiples of) Material Size: Finish / Colour: Cost: \$90p/sheet 1.2m x 1.2m	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	Thermal Conductivity: 0.014 w/m-k
	<u>WALL INSULATION</u> OPTION 05 Spacetherm	Thickness: 5/10mm (or multiples of) Material Size: Finish / Colour: Cost: \$90p/sheet 1.2m x 1.2m	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	Thermal Conductivity: 0.021 w/m-k
	<u>WALL INSULATION</u> OPTION 06 Vaccum Insulated Panels	Thickness: 50mm = R6 Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: www.nanopore.eu www.panasonic.com www.thermocorvip.com Supplier:	
	<u>WALL INSULATION</u> OPTION 07 Phase Change Material	Thickness: Material Size: Finish / Colour: Cost: varies approx 5m2 \$215-\$250	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier: phasechange.com.au	

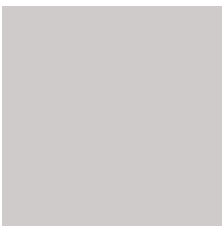
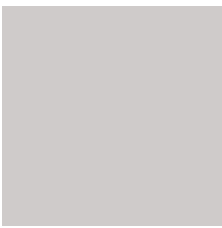
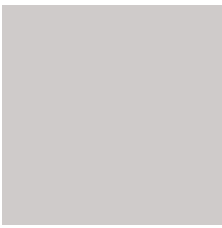


MATERIAL ANALYSIS
2.00 INSULATION

5xARKit

2.20 ROOF INSULATION

P10

IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>ROOF INSULATION</u> OPTION 01 R2.5 Polyester	Thickness: 90mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Tontine Supplier: Tontine	Green Tag Certified Uses a minimum of 83% recycled fibres
	<u>ROOF INSULATION</u> OPTION 02 R2.5 Wool / Poly blend	Thickness: 90mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	70% virgin wool 30% polyester blend
	<u>ROOF INSULATION</u> OPTION 03 Air Cell	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Glareshield Supplier:	Thermal Resistance: R0.14

● 3.10 FLOORING STRUCTURE

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IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	FLOOR STRUCTURE OPTION 01 Particleboard	Thickness: 22mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	
	FLOOR STRUCTURE OPTION 02 Strandboard Oriented Strand Board (OSB) is an engineered wood product formed by layering strands of wood in specific orientations. It is suitable for internal use only.	Thickness: Material Size: 1220 x 2440 mm Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	
	FLOOR SYSTEMS OPTION 04 Reinforced Concrete Slab with Cement base	Thickness: 120mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	
	FLOOR SYSTEMS OPTION 05 Reinforced Concrete Slab with 20-30% Fly Ash for cement	Thickness: 120mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	
	FLOOR SYSTEMS OPTION 05 Reinforced Concrete Slab with Geopolymer replacement for cement as the binder in concrete. ie. ZeoBond	Thickness: 120mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	

IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<p><u>FLOOR SYSTEMS</u> OPTION 01</p> <p>Timber Cassette Units</p> <p>Timber framing cladd with flooring substrate assembled as a pre-fabricated module.</p>	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	<p>Manufacturer:</p> <p>Supplier:</p>	Applied floor finish to top with aesthetic underside
	<p><u>FLOOR SYSTEMS</u> OPTION 02</p> <p>Hume Slab</p> <p>Erect and prop wall panels</p>	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	<p>Manufacturer:</p> <p>Supplier:</p>	
	<p><u>FLOOR SYSTEMS</u> OPTION 03</p> <p>Hollowcore</p>	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	<p>Manufacturer:</p> <p>Supplier:</p>	

● 3.30 BRACING

P13

IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>BRACING</u> OPTION 01 6mm OSB	Thickness: 6mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	
	<u>BRACING</u> OPTION 02 7mm C/D Bracing Plywood F11	Thickness: 7mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	
	<u>BRACING</u> OPTION 03 4mm Plywood F27	Thickness: 4mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	

● 3.40 FIRE RATED WALL SYSTEMS

P14



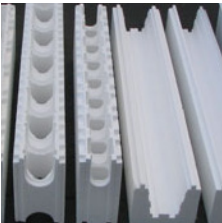

IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>FIRE RATED WALL</u> OPTION 01 Precast concrete panel + bulk Insulation Pre-cast concrete panel, potentially with additional lightweight timber framed insulated wall adjoining.	Thickness: 150 - 180mm Material Size: NA Finish / Colour: Natural Raw Concrete or applied finish Cost:	Material Origin: Glue Type: VOC details: 2-4 hour fire rating	Manufacturer: Supplier: Composite Global 6A Monomeath Avenue, Toorak VIC 03 9824 8211	May add complexity to project in terms of building
	<u>FIRE RATED WALL</u> OPTION 02 ThermoMass Pre-cast concrete 2 component system sandwich panel system. Outer layer of concrete is non load-bearing, inner layer is load bearing	Thickness: 150 - 180mm Material Size: NA Finish / Colour: Natural raw concrete or applied finish Cost: \$350 per m blocks only (estimate)	Material Origin: Glue Type: VOC details: 2-4 hour fire rating	Manufacturer: Supplier: Composite Global 6A Monomeath Avenue, Toorak VIC 03 9824 8211	May add complexity to project in terms of building
	<u>FIRE RATED WALL</u> OPTION 03 Concrete Blockwork				
	<u>FIRE RATED WALL</u> OPTION 04 Lightweight timber framing with fire-rated plasterboard cladding				

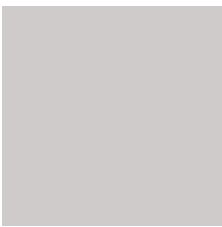
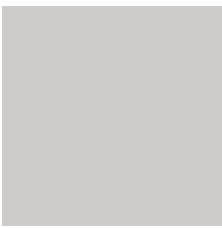
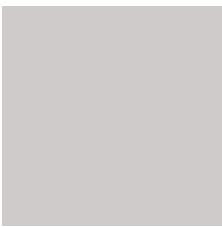
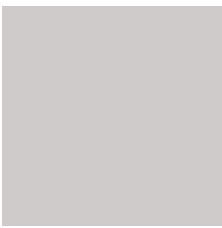
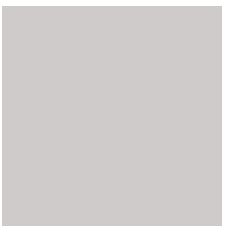
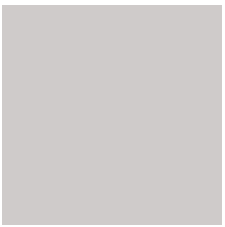
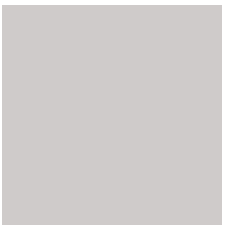
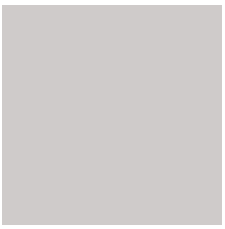
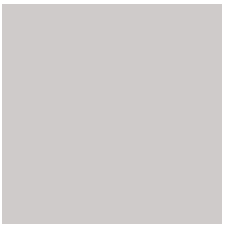

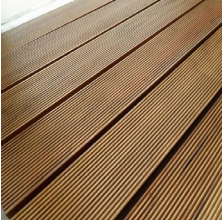

IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	Shadowclad				
	8-9mm Compressed Sheet	Thickness: 4mm Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Hardies CSR Express Wall Supplier:	

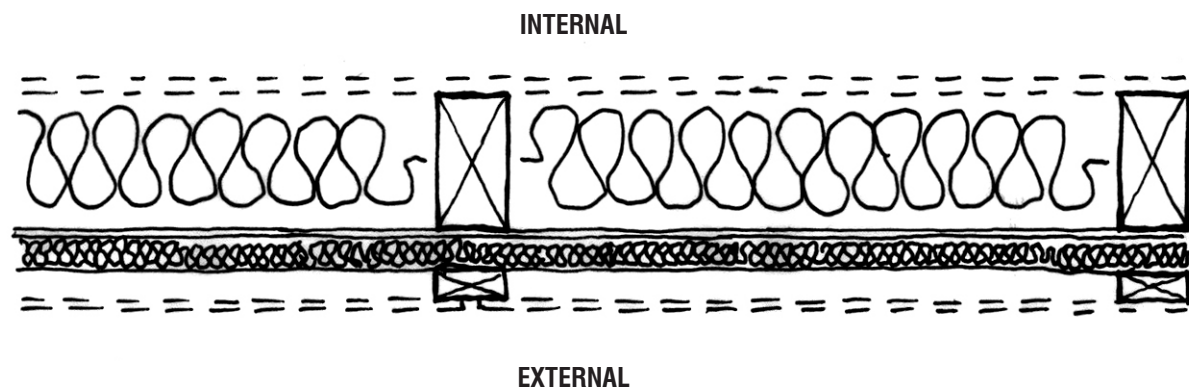
IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>GLAZING 01</u> Pilkington Double Glazing / Pilkington Triple Glazing	Thickness: Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Pilkington Supplier: Dulux	
					

● 5.10 PAINT FINISHES

P17

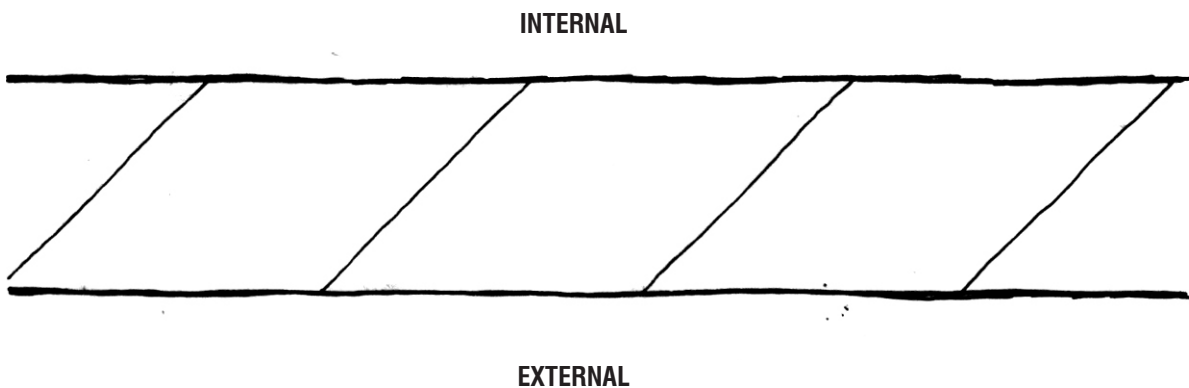
IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>INTERNAL PAINT OPTION 01</u> Resene Zylone SpaceCote GECA certified low and zero-VOC paints	Thickness: NA Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Resene www.resene.co.nz Supplier: Resene	
	<u>INTERNAL PAINT OPTION 02</u> Dulux Eco Choice Range Low VOC paint	Thickness: NA Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details: 5g/litre of VOC	Manufacturer: Dulux Supplier: Dulux	
	<u>EXTERNAL WOOD STAIN OPTION 01</u> Cutek Green Oil	Thickness: NA Material Size: Finish / Colour: Cost:	Material Origin: Queensland Glue Type: VOC details: 173g/litre of VOC	Manufacturer: Chemisys Supplier: Timber Coatings	
	<u>EXTERNAL WOOD STAIN OPTION 02</u> Resene Woodsman Wood Oil Stain Penetrating oil stain - exterior - solventborne	Thickness: NA Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details: 557g/litre of VOC	Manufacturer: Resene Supplier: Resene	
	<u>EXTERNAL PAINT OPTION 01</u> Resene Exterior Paint Low VOC	Thickness: NA Material Size: Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: Resene Supplier: Resene	

OTHER					P18
IMAGE	MATERIAL	DESCRIPTION	DETAILS	SUPPLY / MANUFACTURE	NOTES
	<u>DECK</u> Modwood ModWood is manufactured mainly from recycled products, including plastics and wood flour	Thickness: 23mm Material Size: W137 mm / W88mm x L5400mm Finish / Colour: various Cost:	Material Origin: Melbourne, Australia Glue Type: VOC details:	Manufacturer: Modwood Supplier: Modwood	
	<u>DECK</u> Silvertop Ash	Thickness: Material Size: Finish / Colour: Cost: \$60-60p/m2	Material Origin: Glue Type: VOC details:	Manufacturer: Supplier:	
	<u>EXTERNAL SCREEN FABRIC</u> Helio Screen The fabric makes a significant contribution to building's heat management by cutting out up to 86% of the sun's rays, whilst still providing visibility to the outside.	Thickness: Material Size: W 2670mm Finish / Colour: Cost:	Material Origin: Glue Type: VOC details:	Manufacturer: www.helioscreen.com.au Supplier:	



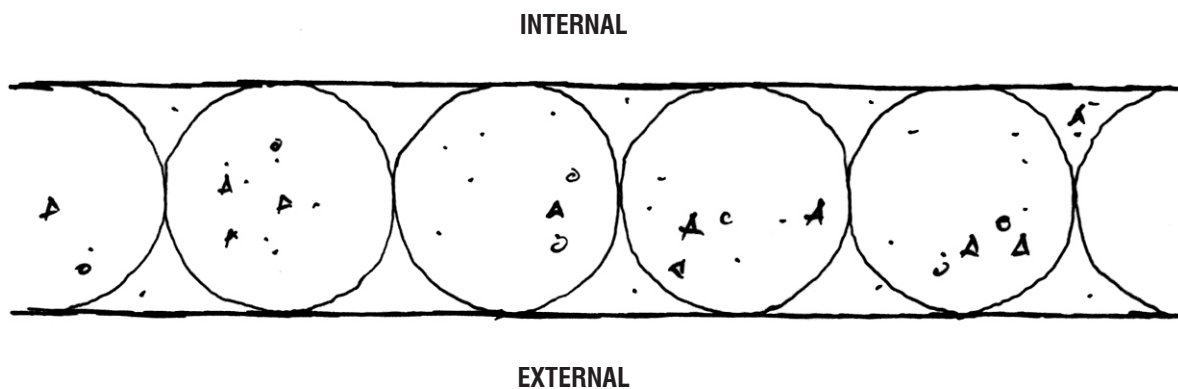
WALL TYPE 01:
LIGHTWEIGHT TIMBER FRAMED WALL WITH PANEL EXTERNAL CLADDING

- **Internal lining**
 - 90mm timber studwork
- **Insulation batts** R: 2.5
- **Structural lining board**
 - Foil breathable sisilation
 - 25Mm thick foil board R:
 - 19mm vented cavity / 42 x 19mm acq treated battens
- **External lining**
- **Applied finish**



WALL TYPE 02:
140MM CONCRETE BLOCKWORK

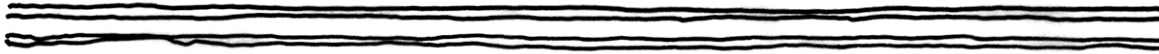
- 140mm core filled concrete blockwork



WALL TYPE 03:
150MM PRE-CAST CONCRETE PANEL

- 150mm steel reinforced pre-cast concrete panel

INTERNAL



EXTERNAL

WALL TYPE 04:
DOUBLE GLAZING

- 6-12-6 double glazing, argon filled

INTERNAL

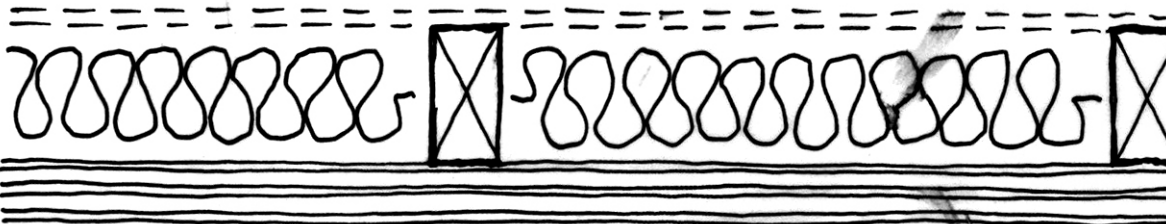


EXTERNAL

WALL TYPE 05:
TRIPLE GLAZING

- 6-12-6-12-6 triple glazing, argon filled

INTERNAL



EXTERNAL

WALL TYPE 06:
SPANDRELL WALL WITH DOUBLE GLAZING

- Internal lining
 - 90mm timber studwork
- Insulation batts R: 2.5
- structural lining board
 - 10mm sealed air gap
 - 6-12-6 double glazing, argon filled

FLOOR

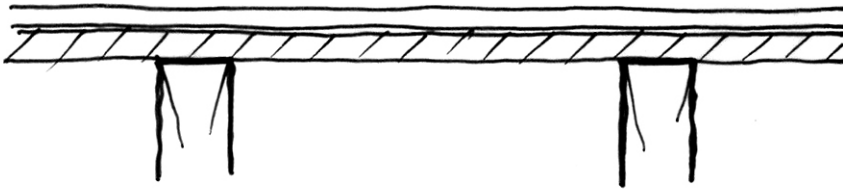


FLOOR TYPE 01:
SISAL OVER PARTICLE-BOARD

- Sisal
- Particleboard

CEILING

FLOOR

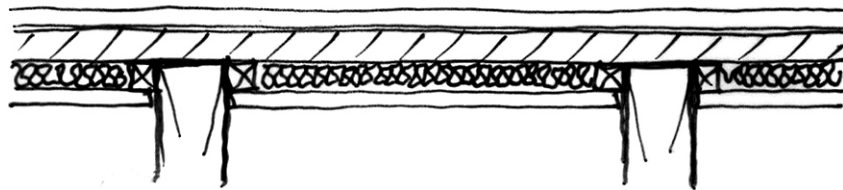


FLOOR TYPE 02:
BAMBOO OVER PARTICLE-BOARD

- Bamboo
- Sound insulation material
- 20mm particle board

CEILING

FLOOR



FLOOR TYPE 03:
BAMBOO OVER PARTICLE-BOARD WITH ADDITIONAL INSULATION

- Bamboo
- Sound insulation material
- 20mm particle board
- Optional:
 - A: foilboard
 - B: phase change material
- Ceiling lining; as per internal cladding options

CEILING

ARKIT

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