

**#1: External Wall NCC-C1a-LB-R1**

① 8.5mm EasyTex  
② HardieWrap Weather Barrier  
③ 2 x 16mm Multishield  
④ 140mm Framing Cavity with 2 x 70mm Pink Soundbreak R2.0 Framing: Single 140mm Timber Studs at maximum 600mm centres  
⑤ 10mm Opal

Rated from outside only; FRL with contribution of internal lining: 90/90/90; FRL without contribution of internal lining: 60/60/60; FRL3: 90/90/90  
Rw: 50; Rw + Ctr: 42  
Insulation Pathway Total R-Value (note 7): 4.43 m2.K/W

**#2: External Wall NCC-C1a-LB-R2**

① 8.5mm EasyTex  
② HardieWrap Weather Barrier  
③ 2 x 16mm Multishield  
④ 90mm Framing Cavity with 90mm Pink Soundbreak R2.7 Framing: Single 90mm Timber Studs at maximum 450mm centres  
⑤ 10mm Opal

Rated from outside only; FRL From Outside Only: 90/90/90

Rw: 49; Rw + Ctr: 36  
Insulation Pathway Total R-Value (note 7): 3.13 m2.K/W

**#3: External Wall NCC-C1a-LB-R3**

① 8.5mm EasyTex  
② HardieWrap Weather Barrier  
③ 2 x 16mm Multishield  
④ 90mm Framing Cavity with 90mm Pink Batts Wall R2.5 HD Framing: Single 90mm Timber Studs at maximum 450mm centres  
⑤ 10mm Opal

Rated from outside only; FRL From Outside Only: 90/90/90

Rw: 48; Rw + Ctr: 35  
Insulation Pathway Total R-Value (note 7): 2.93 m2.K/W

**#4: External Wall NCC-C1a-LB-A1**

① 8.5mm EasyTex  
② HardieWrap Weather Barrier  
③ 90mm Framing Cavity with 90mm Pink Soundbreak R2.7 Framing: Single 90mm Timber Studs at maximum 450mm centres  
④ 10mm Opal

Rw: 41; Rw + Ctr: 30

Insulation Pathway Total R-Value (note 7): 2.95 m2.K/W

**#5: External Wall NCC-C1a-LB-A2**

① 8.5mm EasyTex  
② HardieWrap Weather Barrier  
③ 90mm Framing Cavity with 90mm Pink Soundbreak R2.7 Framing: Single 90mm MGP10 Timber Studs at maximum 450mm centres  
④ 23mm Framing Cavity Framing: 18mm Siniat Furring Channels on Clips at maximum 450mm centres  
⑤ 10mm Opal

Rw: 50; Rw + Ctr: 38

Insulation Pathway Total R-Value (note 7): 2.95 m2.K/W

**#6: External Wall NCC-C1a-LB-A3-1**

① 8.5mm EasyTex  
② HardieWrap Weather Barrier  
③ 90mm Framing Cavity with 90mm Pink Soundbreak R2.7 Framing: Single 90mm MGP10 Timber Studs at maximum 450mm centres  
④ 23mm Framing Cavity Framing: 18mm Siniat Furring Channels on Clips at maximum 450mm centres  
⑤ 13mm Soundshield

Rw: 52; Rw + Ctr: 42

Insulation Pathway Total R-Value (note 7): 2.96 m2.K/W

**#7: External Wall NCC-C1a-LB-A3-2**

① 8.5mm EasyTex  
② HardieWrap Weather Barrier  
③ 90mm Framing Cavity with 90mm Pink Soundbreak R2.7 Framing: Single 90mm Timber Studs at maximum 450mm centres  
④ 33mm Framing Cavity Framing: 18mm Siniat Furring Channels on Resilient Mounts at maximum 450mm centres  
⑤ 10mm Opal

Rw: 52; Rw + Ctr: 39; Impact Sound Resistant

Insulation Pathway Total R-Value (note 7): 2.95 m2.K/W

**#8: External Wall NCC-C1a-LB-A3-3**

① 8.5mm EasyTex  
② HardieWrap Weather Barrier  
③ 90mm Framing Cavity with 90mm Pink Soundbreak R2.7 Framing: Single 90mm MGP10 Timber Studs at maximum 450mm centres  
④ 23mm Framing Cavity Framing: 18mm Siniat Furring Channels on Clips at maximum 450mm centres  
⑤ 2 x 10mm Mastashield

Rw: 54; Rw + Ctr: 42

Insulation Pathway Total R-Value (note 7): 3 m2.K/W

**#9: Separating Wall NCC-C1a-LB-1**

① 10mm Opal  
② 110mm Discontinuous Framing Cavity with 90mm Pink Batts Wall R2.0 Framing: Single 90mm Timber Studs at maximum 600mm centres  
③ 25mm Shaftliner (Encased in InterHome H-Studs at maximum 600mm centres)  
④ 110mm Discontinuous Framing Cavity with 90mm Pink Batts Wall R2.0 Framing: Single 90mm Timber Studs at maximum 600mm centres  
⑤ 13mm Watershield

Rated from both sides; Load Bearing FRL: 60/60/60

Rw: 66; Rw + Ctr: 52; Discontinuous Construction

Insulation Pathway Total R-Value (note 7): 4.44 m2.K/W

**#10: Separating Wall NCC-C1a-LB-2**

① 10mm Opal  
② 110mm Discontinuous Framing Cavity with 90mm Pink Batts Wall R2.0 Framing: Single 90mm Timber Studs at maximum 600mm centres  
③ 25mm Shaftliner (Encased in InterHome H-Studs at maximum 600mm centres)  
④ 110mm Discontinuous Framing Cavity with 90mm Pink Batts Wall R2.0 Framing: Single 90mm Timber Studs at maximum 600mm centres  
⑤ 10mm Opal

Rated from both sides; Load Bearing FRL: 60/60/60

Rw: 64; Rw + Ctr: 50; Discontinuous Construction

Insulation Pathway Total R-Value (note 7): 4.42 m2.K/W

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Updated by	Siniat Technical Services	16/09/2021	
Reviewed by			
Approved by			
Siniat standard wall and ceiling systems recommended for Class 1a timber framed duplex or townhouses to meet the acceptable construction provisions of the NCC.			
<p>1. Siniat SELECT Project is a proposal only and is subject to the project/builder's approval as many aspects of construction are not comprehensively covered.</p> <p>2. It is the responsibility of project certifier to determine if the specified products and performance properties including FRL, RISF, Rw, Rw + Ctr, Lnw and Total R-Value, etc. ratings are suitable for the intended applications.</p> <p>3. For dimensions and performance properties of systems in this document that use products not manufactured or supplied by Etex Australia and branded Siniat, refer to the relevant product manufacturer.</p> <p>4. In wet areas, replace Mastashield with Watershield, Soundshield with Trurock, and Fireshield with Trurock or Multishield of same thickness, and replace 10mm Opal with 13mm Watershield.</p> <p>5. For enhanced impact resistance, replace any plasterboard with Trurock of same thickness.</p> <p>6. For framing design of internal steel walls and ceilings, refer to the framing tables in the Siniat Blueprint. For framing design of external steel walls and ceilings, please contact Siniat Engineering Services.</p> <p>7. The Insulation Pathway Total R-Value of a system provided in this document is a sum of the thermal resistances (R-Values) of the individual component layers in a composite element including any building material, insulating material, airspace and associated surface resistances. It is an estimate only, calculated along the insulation pathway without taking into account the thermal bridging effects of framing components and may not comply to the Section J of Building Code of Australia, NCC 2019 Volume One. It is also only valid for summer heat flow (mean temperature of 23°C).</p>			

**#11: Separating Wall NCC-C1a-LB-3**

① 13mm Watershield  
 ② 110mm Discontinuous Framing Cavity with 90mm Pink Batts Wall R2.0  
 Framing: Single 90mm Timber Studs at maximum 600mm centres  
 ③ 25mm Shaftliner (Encased in InterHome H-Studs at maximum 600mm centres)  
 ④ 110mm Discontinuous Framing Cavity with 90mm Pink Batts Wall R2.0  
 Framing: Single 90mm Timber Studs at maximum 600mm centres  
 ⑤ 13mm Watershield

Rated from both sides; Load Bearing FRL: 60/60/60  
 Rw: 61; Rw + Ctr: 51; Discontinuous Construction  
 Insulation Pathway Total R-Value (note 7): 4.46 m2.K/W

**#12: Separating Wall NCC-C1a-LB-M-1**

① 13mm Watershield (fixed to furring channels)  
 ② 30mm Framing Cavity with 25mm Pink Partition 24 kg/m3 R0.7  
 Framing: 28mm Siniat Furring Channels on Clips at maximum 600mm centres  
 ③ 190mm Core-Filled Concrete Block (Minimum laid weight 380 kg/m2)  
 ④ 30mm Framing Cavity with 25mm Pink Partition 24 kg/m3 R0.7  
 Framing: 28mm Siniat Furring Channels on Clips at maximum 600mm centres  
 ⑤ 13mm Watershield (fixed to furring channels)

Rated from both sides; FRL from Both Sides: Masonry FRL  
 Rw: 59; Rw + Ctr: 48  
 Insulation Pathway Total R-Value (note 7): 1.86 m2.K/W

**#13: Garages Separating Wall NCC-C1a-LB-1**

ILLUSTRATION ONLY, components shown are just representative, NOT TO SCALE!

① 6mm Villaboard  
 ② 16mm Multishield  
 ③ 23mm Framing Cavity  
 Framing: 18mm Siniat Furring Channels on Clips at maximum 450mm centres  
 ④ 90mm Framing Cavity with 90mm Pink Batts Wall R2.0  
 Framing: Single 90mm Timber Studs at maximum 450mm centres  
 ⑤ 23mm Framing Cavity  
 Framing: 18mm Siniat Furring Channels on Clips at maximum 450mm centres  
 ⑥ 16mm Multishield  
 ⑦ 6mm Villaboard

Rated from both sides; FRL: 60/60/60  
 Rw: 58; Rw + Ctr: 51  
 Insulation Pathway Total R-Value (note 7): 2.37 m2.K/W

**#14: Partition Wall NCC-C1a-LB-A1**

ILLUSTRATION ONLY, components shown are just representative, NOT TO SCALE!

① 2 x 13mm Soundshield  
 ② 90mm Framing Cavity with 90mm Pink Batts Wall R2.0  
 Framing: Single 90mm Timber Studs at maximum 600mm centres  
 ③ 23mm Framing Cavity  
 Framing: 18mm Siniat Furring Channels on Clips at maximum 600mm centres  
 ④ 2 x 13mm Soundshield

Rw: 57; Rw + Ctr: 51  
 Insulation Pathway Total R-Value (note 7): 2.47 m2.K/W

**#15: Partition Wall NCC-C1a-LB-A2-1**

ILLUSTRATION ONLY, components shown are just representative, NOT TO SCALE!

① 13mm Soundshield  
 ② 90mm Framing Cavity with 90mm Pink Batts Wall R2.0  
 Framing: Single 90mm MGP10 Timber Studs at maximum 600mm centres  
 ③ 33mm Framing Cavity  
 Framing: 18mm Siniat Furring Channels on Resilient Mounts at maximum 600mm centres  
 ④ 13mm Soundshield

Rw: 51; Rw + Ctr: 42; Impact Sound Resistant  
 Insulation Pathway Total R-Value (note 7): 2.31 m2.K/W

**#16: Partition Wall NCC-C1a-LB-A2-2**

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① 2 x 10mm Opal  
 ② 90mm Framing Cavity with 90mm Pink Batts Wall R2.0  
 Framing: Single 90mm Timber Studs at maximum 600mm centres  
 ③ 23mm Framing Cavity  
 Framing: 18mm Siniat Furring Channels on Clips at maximum 600mm centres  
 ④ 10mm Opal

Rw: 50; Rw + Ctr: 39  
 Insulation Pathway Total R-Value (note 7): 2.34 m2.K/W

**#17: Partition Wall NCC-C1a-LB-A3**

TSW210

① 10mm Opal  
 ② 90mm Framing Cavity with 90mm Pink Batts Wall R2.0  
 Framing: Single 90mm Timber Studs at maximum 600mm centres  
 ③ 10mm Opal

Rw: 43; Rw + Ctr: 33  
 Insulation Pathway Total R-Value (note 7): 2.28 m2.K/W

**#18: Partition Wall NCC-C1a-LB-A4**

TSW10

① 10mm Mastashield  
 ② 90mm Framing Cavity  
 Framing: Single 90mm Timber Studs at maximum 600mm centres  
 ③ 10mm Mastashield

Rw: 34; Rw + Ctr: 25  
 Insulation Pathway Total R-Value (note 7): 0.44 m2.K/W

**#19: Separating Wall NCC-C1a-C10a-LB-1**

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Class 10a private garage not associated with the Class 1a house

① 6mm Villaboard  
 ② 2 x 16mm Multishield  
 ③ 90mm Framing Cavity with 90mm Pink Batts Wall R2.0  
 Framing: Single 90mm Timber Studs at maximum 450mm centres  
 ④ 23mm Framing Cavity  
 Framing: 18mm Siniat Furring Channels on Clips at maximum 450mm centres  
 ⑤ 2 x 10mm Mastashield

Rated from the non-associated private garage side; FRL with contribution of internal wall lining: 90/90/90; FRL without contribution of internal wall lining: 60/60/60  
 Rw: 60; Rw + Ctr: 50  
 Insulation Pathway Total R-Value (note 7): 2.48 m2.K/W

**#20: Separating Wall NCC-C1a-C10a-LB-2**

ILLUSTRATION ONLY, components shown are just representative, NOT TO SCALE!

Class 10a private garage not associated with the Class 1a house

① 6mm Villaboard  
 ② 2 x 16mm Multishield  
 ③ 90mm Framing Cavity with 90mm Pink Batts Wall R2.0  
 Framing: Single 90mm Timber Studs at maximum 450mm centres  
 ④ 33mm Framing Cavity  
 Framing: 18mm Siniat Furring Channels on Resilient Mounts at maximum 450mm centres  
 ⑤ 13mm Soundshield

Rated from the non-associated private garage side; FRL with contribution of internal wall lining: 90/90/90; FRL without contribution of internal wall lining: 60/60/60  
 Rw: 61; Rw + Ctr: 51; Impact Sound Resistant  
 Insulation Pathway Total R-Value (note 7): 2.44 m2.K/W

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