



6.1 Soil and Water Pipe Acoustic Systems

Soil and waste pipe systems provide sound insulation ratings for water services in a ceiling cavity, bulkhead or a duct. These systems have been designed to comply with National Construction Code (NCC) requirements.

The soil and water pipe systems cover a range of situations including where soil, waste or water supply pipes and ducts pass through ceilings, riser ducts or bulkheads in bathrooms, kitchens, bedrooms and lounge rooms. Certain systems may require the pipes to be lagged but alternative systems exist that include covering the pipes in plasterboard or the use of a double ceiling when wrapping is not practical.

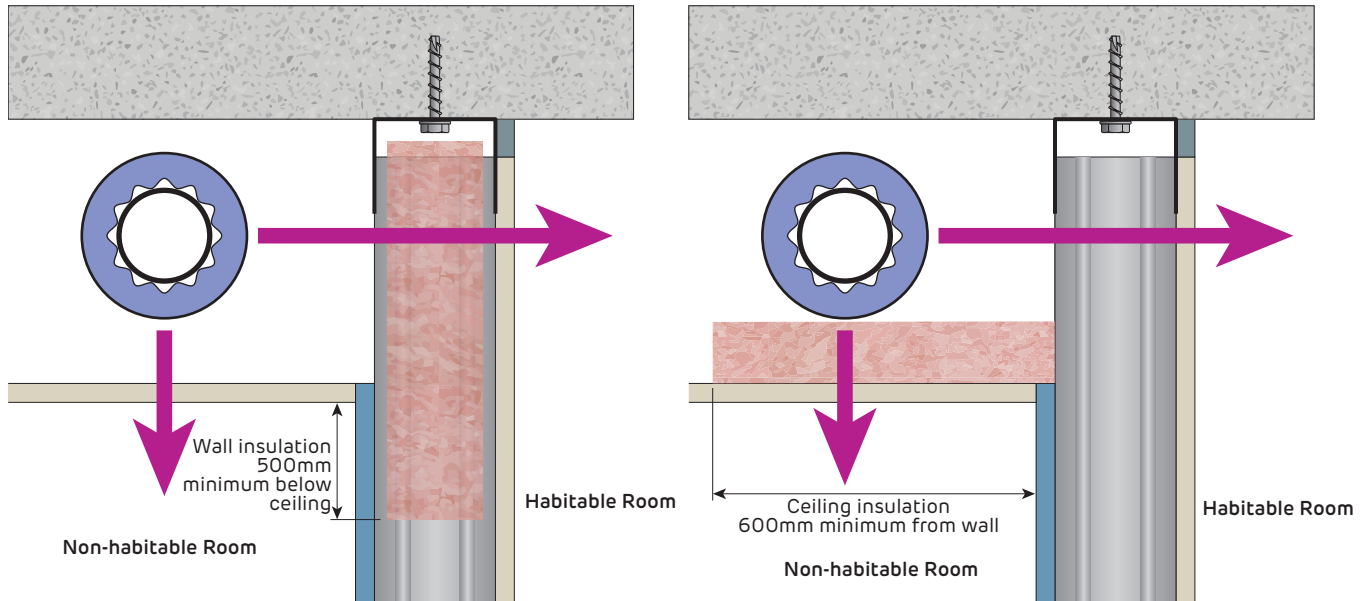
This section includes only the system tables for soil and water pipe acoustic systems. For installation requirements, refer to the relevant wall or ceiling section.



BATHROOM TO WALL AND CEILING JUNCTION 1

- Pipe wrapped with 5 kg/m² mass barrier and foam
- Plasterboard lining as specified in tables

[Pipe wrapping must not be in contact with insulation, stud framing or plasterboard]



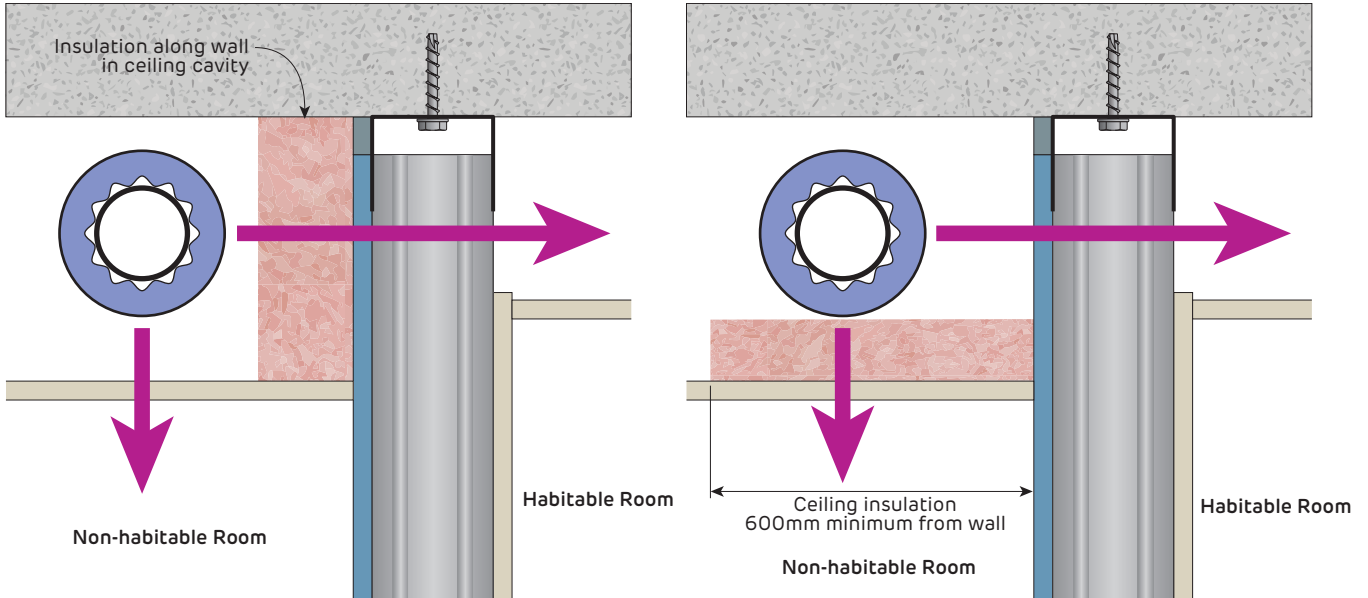
WALL TO HABITABLE ROOM			
System	Habitable Room Wall Lining	Airborne Sound Insulation Rw (Rw + Ctr)	
		Pink® Partition 50mm 11 kg/m ³ R1.2 insulation in wall or along ceiling as shown above	
SWP22	1 layer of 13mm mastashield	48 (40)	Report Day Design 3094-35 3094-38
SWP32	1 layer of 13mm watershield	48 (40)	
SWP34	1 layer of 13mm fireshield	49 (40)	
SWP28	1 layer of 13mm soundshield	49 (41)	
SWP35	1 layer of 16mm fireshield	50 (41)	

CEILING TO NON-HABITABLE ROOM				
System	Ceiling Lining	Airborne Sound Insulation Rw (Rw + Ctr)		
		Pink® Partition 50mm 11 kg/m ³ R1.2 insulation in wall or along ceiling as shown above	Pink® Partition 50mm 11 kg/m ³ R1.2 insulation over entire ceiling	
SWP22	1 layer of 13mm mastashield	45 (35)	48 (40)	Report Day Design 3094-35 3094-38
SWP32	1 layer of 13mm watershield	45 (37)	48 (40)	
SWP34	1 layer of 13mm fireshield	46 (37)	49 (40)	
SWP28	1 layer of 13mm soundshield	46 (38)	49 (41) or 47 (40) with 1 non-acoustic rated downlight per 5m ²	
SWP35	1 layer of 16mm fireshield	46 (38)	50 (41)	

BATHROOM TO WALL AND CEILING JUNCTION 2

- Pipe wrapped with 5 kg/m² mass barrier and foam
- Plasterboard lining as specified in tables

[Pipe wrapping must not be in contact with insulation, stud framing or plasterboard]



WALL TO HABITABLE ROOM			
System	Habitable Room Wall Lining	Airborne Sound Insulation Rw (Rw + Ctr)	
		Pink® Partition 50mm 11 kg/m ³ R1.2 insulation in ceiling cavity as shown above	Report
SWP22	1 layer of 13mm mastashield	48 (40)	Day Design 3094-35 3094-38
SWP32	1 layer of 13mm watershield	48 (40)	

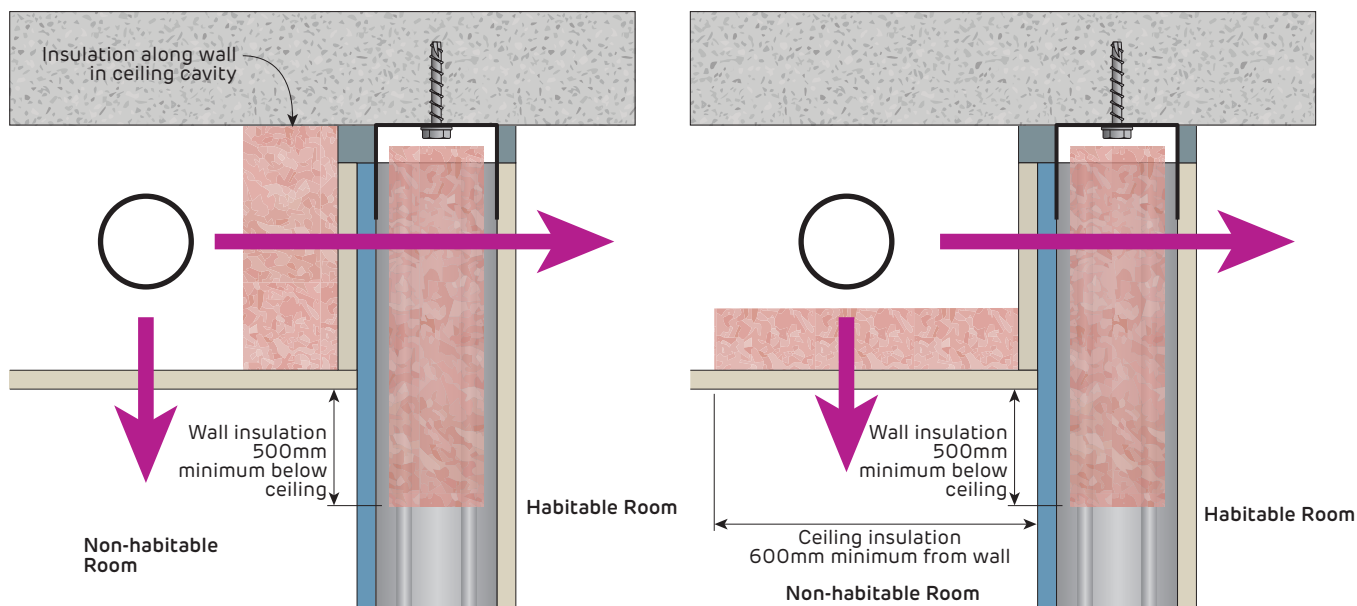
CEILING TO NON-HABITABLE ROOM				
System	Ceiling Lining	Airborne Sound Insulation Rw (Rw + Ctr)		
		Pink® Partition 50mm 11 kg/m ³ R1.2 insulation in wall or along ceiling as shown above	Pink® Partition 50mm 11 kg/m ³ R1.2 insulation over entire ceiling	Report Day Design 3094-35 3094-38
SWP22	1 layer of 13mm mastashield	45 (35)	48 (40)	
SWP32	1 layer of 13mm watershield	45 (37)	48 (40)	
SWP34	1 layer of 13mm fireshield	46 (37)	49 (40)	
SWP28	1 layer of 13mm soundshield	46 (38)	49 (41) or 47 (40) with 1 non-acoustic rated downlight per 5m ²	



BATHROOM TO WALL AND CEILING JUNCTION 3

- Plasterboard lining as specified in tables

[Pipe wrapping must not be in contact with insulation, stud framing or plasterboard]



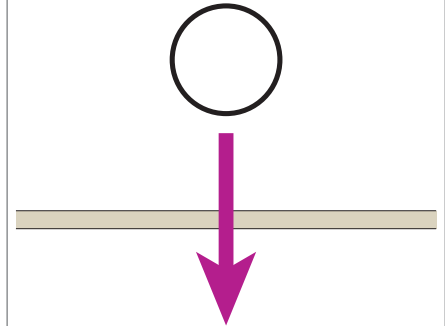
WALL TO HABITABLE ROOM						
System	Additional Plasterboard Strip Along Wall in Ceiling Cavity	Non-Habitable Room Wall Lining	Habitable Room Wall Lining	Airborne Sound Insulation Rw (Rw + Ctr)		
				Pink® Partition 50mm 11 kg/m ³ R1.2 insulation in wall and ceiling as shown above		Report Day Design 5008-1 5008-23
				64mm stud	92mm stud	
SWP111	2 layers of 10mm watershield	10mm watershield	10mm mastashield	50 (40)	-	
SWP108	1 layer of 13mm soundshield	10mm watershield	10mm mastashield	49 (39)	(40)	
SWP114	1 layer of 13mm fireshield	10mm watershield	10mm mastashield	48 (38)	(40)	
SWP210	1 layer of 16mm fireshield	10mm watershield	13mm mastashield	50 (40)	-	
SWP212	1 layer of 16mm fireshield	13mm watershield	10mm mastashield	50 (40)	-	

CEILING TO NON-HABITABLE ROOM				
System	Ceiling Lining	Airborne Sound Insulation Rw (Rw + Ctr)		
		Pink® Partition 50mm 11 kg/m ³ R1.2 insulation in ceiling cavity as shown above	Pink® Partition 50mm 11 kg/m ³ R1.2 insulation over entire ceiling	
SWP3	1 layer of 13mm mastashield	29 (25)	32 (28) or 26 (25) with 3 non-acoustic rated downlight per 5m ²	
SWP13	1 layer of 13mm watershield	29 (26)	32 (29) or 26 (26) with 3 non-acoustic rated downlight per 5m ²	
SWP15	1 layer of 13mm fireshield	30 (26)	33 (29) or 25 (25) with 4 non-acoustic rated downlight per 5m ²	
SWP9	1 layer of 13mm soundshield	30 (27)	33 (30) or 25 (25) with 4 non-acoustic rated downlight per 5m ²	



SWP2-SWP15

- Plasterboard wall, ceiling, bulkhead or duct lining as specified in the table

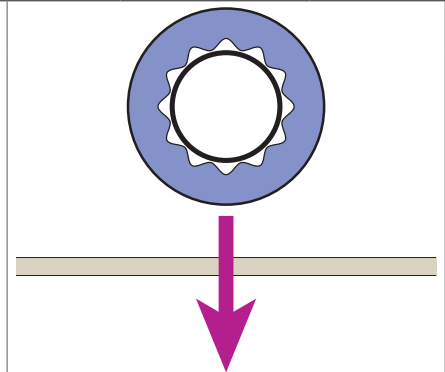


[Number of non-acoustic rated downlights for every 5m² area]
 [Downlights should be evenly distributed and no closer than 900mm apart]

System	Plasterboard Wall, Ceiling or Duct Lining	Airborne Sound Insulation Rw (Rw + Ctr)				Report Day Design 3094-35 Pipes must not be in contact with insulation or plasterboard
		No insulation		Pink® Partition 50mm 11 kg/m ³ R1.2		
SWP2	2 layer of 10mm mastashield	32 (27)	28 (25) with 2 downlights	35 (30)	27 (26) with 4 downlights	
SWP3	1 layer of 13mm mastashield	29 (25)	-	32 (28)	26 (25) with 3 downlights	
SWP5	1 layer of 10mm spanshield	28 (24)	-	31 (27)	27 (25) with 2 downlights	
SWP6	2 layers of 10mm spanshield	32 (28)	26 (25) with 3 downlights	35 (31)	27 (27) with 4 downlights	
SWP8	2 layers of 10mm soundshield or opal	33 (30)	25 (25) with 4 downlights	36 (33)	28 (28) with 4 downlights	
SWP9	1 layer of 13mm soundshield	30 (27)	26 (25) with 2 downlights	33 (30)	25 (25) with 4 downlights	
SWP12	2 layers of 10mm watershield	32 (28)	26 (25) with 3 downlights	35 (31)	27 (27) with 4 downlights	
SWP13	1 layer of 13mm watershield	29 (26)	27 (25) with 1 downlight	32 (29)	26 (26) with 3 downlight	
SWP15	1 layer of 13mm fireshield	30 (26)	28 (25) with 1 downlight	33 (29)	25 (25) with 4 downlight	

SWP20-SWP35

- Pipe wrapped with 5 kg/m² mass barrier and foam
- Plasterboard wall, ceiling, bulkhead or duct lining as specified in the table



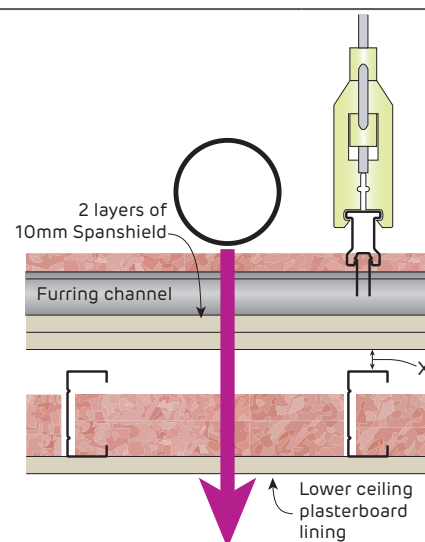
[Number of non-acoustic rated downlights for every 5m² area]
 [Downlights should be evenly distributed and no closer than 900mm apart]

System	Plasterboard Wall, Ceiling or Duct Lining	Airborne Sound Insulation Rw (Rw + Ctr)			Report Day Design 3094-35 3094-38
		No insulation		Pink® Partition 50mm 11 kg/m ³ R1.2	
SWP21	2 layers of 10mm mastashield	48 (38)	51 (41)	49 (40) with 1 downlight	
SWP22	1 layer of 13mm mastashield	45 (35)	48 (40)	-	
SWP25	2 layers of 10mm spanshield	48 (39)	51 (42)	47 (40) with 2 downlights	
SWP28	1 layer of 13mm soundshield	46 (38)	49 (41)	47 (40) with 1 downlight	
SWP31	2 layers of 10mm watershield	48 (39)	51 (42)	47 (40) with 2 downlights	
SWP32	1 layer of 13mm watershield	45 (37)	48 (40)	-	
SWP34	1 layer of 13mm fireshield	46 (37)	49 (40)	-	
SWP35	1 layer of 16mm fireshield	46 (38)	50 (41)	-	



SWP143-SWP151

- Upper lining of 2 layer of 10mm **spanshield** attached to a suspended or direct fix ceiling frame
- Minimum gap as specified in table
- Minimum 64mm steel studs used as ceiling joists (Refer to Section 5.3)
- Pink® Partition 50mm 11 kg/m³ R1.2 insulation in both ceiling cavities



[Number of non-acoustic rated downlights for every 5m² area]

[Downlights should be evenly distributed and no closer than 900mm apart]

System	Lower Ceiling Plasterboard Lining	Airborne Sound Insulation Rw (Rw + Ctr)		
		X = 0mm	X = 10mm minimum	Report
SWP143	2 layer of 13mm mastashield	54 (41) with 4 downlights	55 (42) with 4 downlights	Day Design 5008-1
SWP145	2 layers of 10mm spanshield	54 (40)	55 (40) with 4 downlights	
SWP148	1 layer of 13mm soundshield	51 (39)	54 (40)	Pipes must not be in contact with insulation or plasterboard
SWP151	2 layers of 10mm watershield	54 (40)	55 (40) with 4 downlights	

SWP163-SWP174

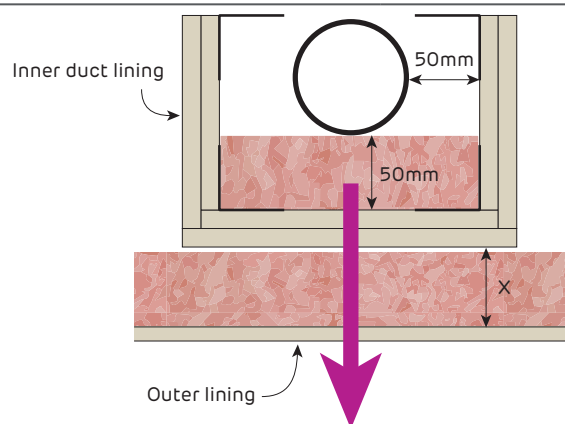
- Inner Duct Lining around pipe as specified in table
- Pink® Partition 50mm 11 kg/m³ R1.2 insulation in both cavities
- Outer plasterboard wall, ceiling, bulkhead or duct lining as specified in table

[Soil and water pipe systems can be a wall, ceiling, bulkhead or duct]

[Number of non-acoustic rated downlights for every 5m² area]

[Insulation to 1200mm minimum on both sides of pipe]

[Downlights should be evenly distributed and no closer than 900mm apart]



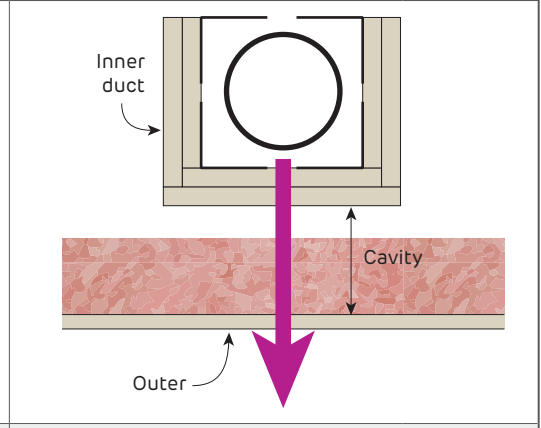
System	Inner Duct Lining	Outer Plasterboard Lining	Airborne Sound Insulation Rw (Rw + Ctr)	
			X = 100mm	Report
SWP163	1 layer of 13mm mastashield	2 layers of 13mm mastashield	54 (41) with 4 downlights	Day Design 5008-1
SWP165	1 layer of 13mm mastashield	2 layers of 10mm spanshield	54 (40)	
SWP168	1 layer of 13mm soundshield , watershield or fireshield	1 layer of 13mm soundshield	53 (40)	Pipes must not be in contact with insulation or plasterboard
SWP174	1 layer of 13mm soundshield , watershield or fireshield	1 layer of 13mm fireshield	51 (40)	



SWP83-SWP95

- Inner duct lining of 2 layers of 13mm **soundshield**, **watershield** or **fireshield**
- Insulation as specified in table
- Outer plasterboard wall, ceiling, bulkhead or duct lining as specified in table

[Soil and water pipe systems can be a wall, ceiling, bulkhead or duct]
 [Number of non-acoustic rated downlights for every 5m² area]
 [Insulation to 1200mm minimum on both sides of pipe]
 [Downlights should be evenly distributed and no closer than 900mm apart]

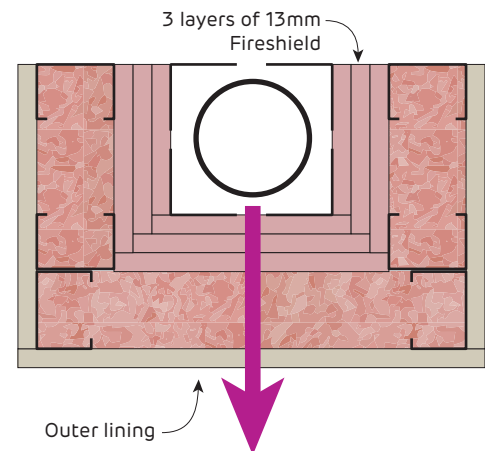


System	Outer Plasterboard Lining	Minimum Cavity (mm)	Airborne Sound Insulation Rw (Rw + Ctr)		Report Day Design 3094-35 5008-1 Pipes must not be in contact with plasterboard
			With Pink® Partition 50mm 11 kg/m ³ R1.2		
SWP82	2 layers of 13mm mastashield	75	55 (43)	49 (40) with 3 downlights	
SWP85	2 layers of 10mm spanshield	75	53 (42)	49 (40) with 2 downlights	
SWP88	1 layer of 13mm soundshield	75	52 (40)	-	
SWP88	1 layer of 13mm soundshield	100	55 (45)	53 (43) with 4 downlights	
SWP91	1 layer of 10mm watershield	100	51 (40)	49 (40) with 1 downlights	
SWP95	1 layer of 13mm fireshield	100	52 (41)	50 (40) with 4 downlights	

SWP182-SWP194

- Inner duct lining of 3 layers of 13mm **fireshield**
- Minimum 51mm steel stud framing
- Insulation as specified in table
- Outer plasterboard wall, ceiling or duct lining as specified in table

[Soil and water pipe systems can be a wall, ceiling, bulkhead or duct]
 [Number of non-acoustic rated downlights for every 5m² area]
 [Downlights should be evenly distributed and no closer than 900mm apart]



System	Outer Plasterboard Lining	Airborne Sound Insulation Rw (Rw + Ctr)		Report Day Design 5008-1 Pipes must not be in contact with plasterboard
		With Pink® Partition 50mm 11 kg/m ³ R1.2		
SWP182	1 layer of 13mm mastashield	49 (40)	47 (39) with 4 downlights	
SWP194	1 layer of 13mm fireshield	50 (41)	48 (40) with 4 downlights	