

warm|shell

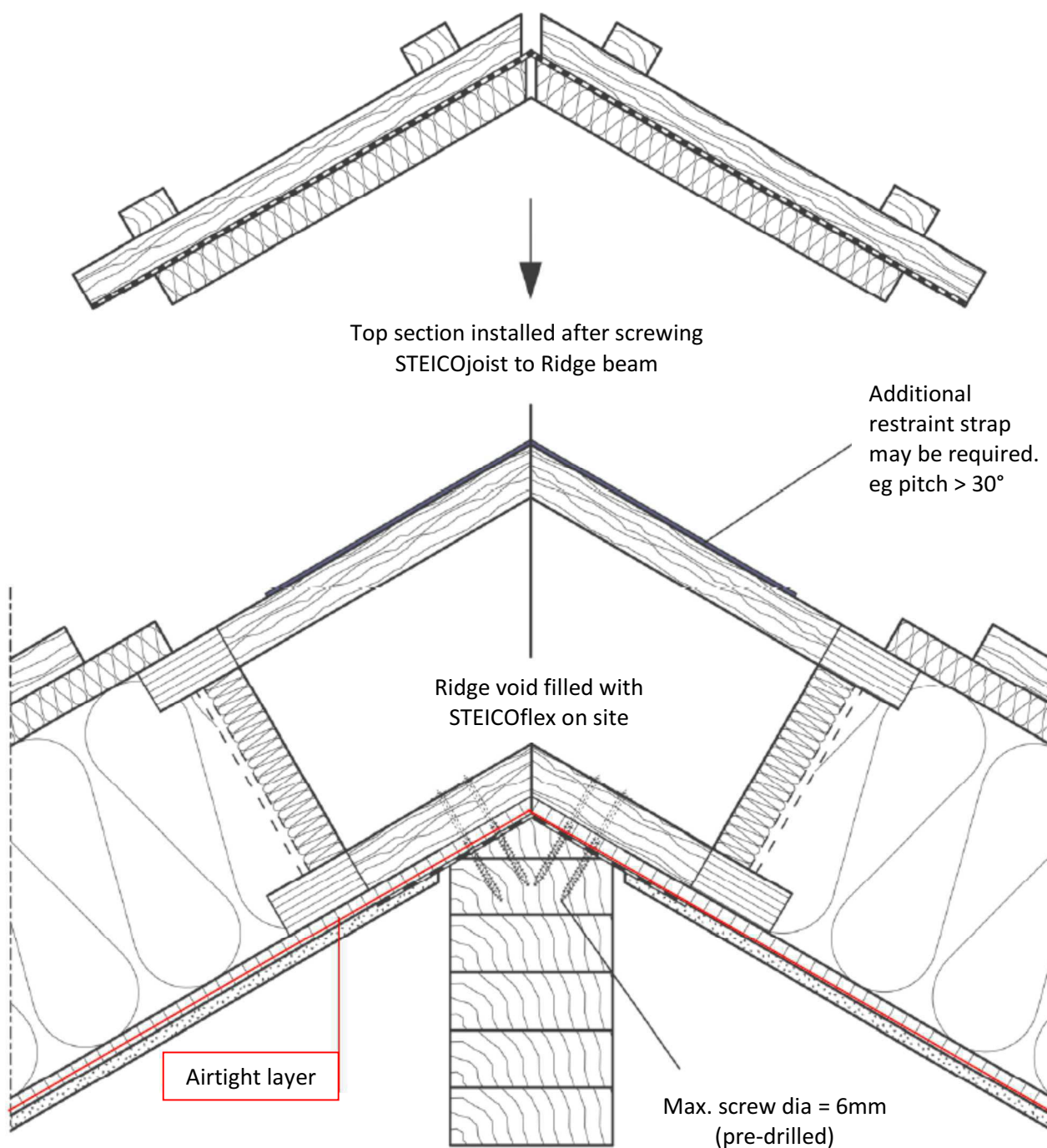
Warmshell

Construction

Details

lime|green

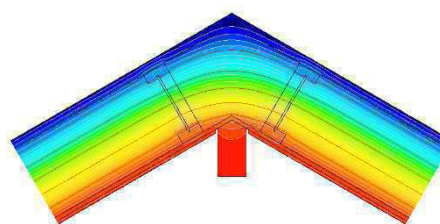
Construction Detail – Vertical Section



• ROOF

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90	-	-
STEICOuniversal	35	0.050	5
Counter batten	40	-	-
Tile batten	30	-	-
Roof covering	-	-	-



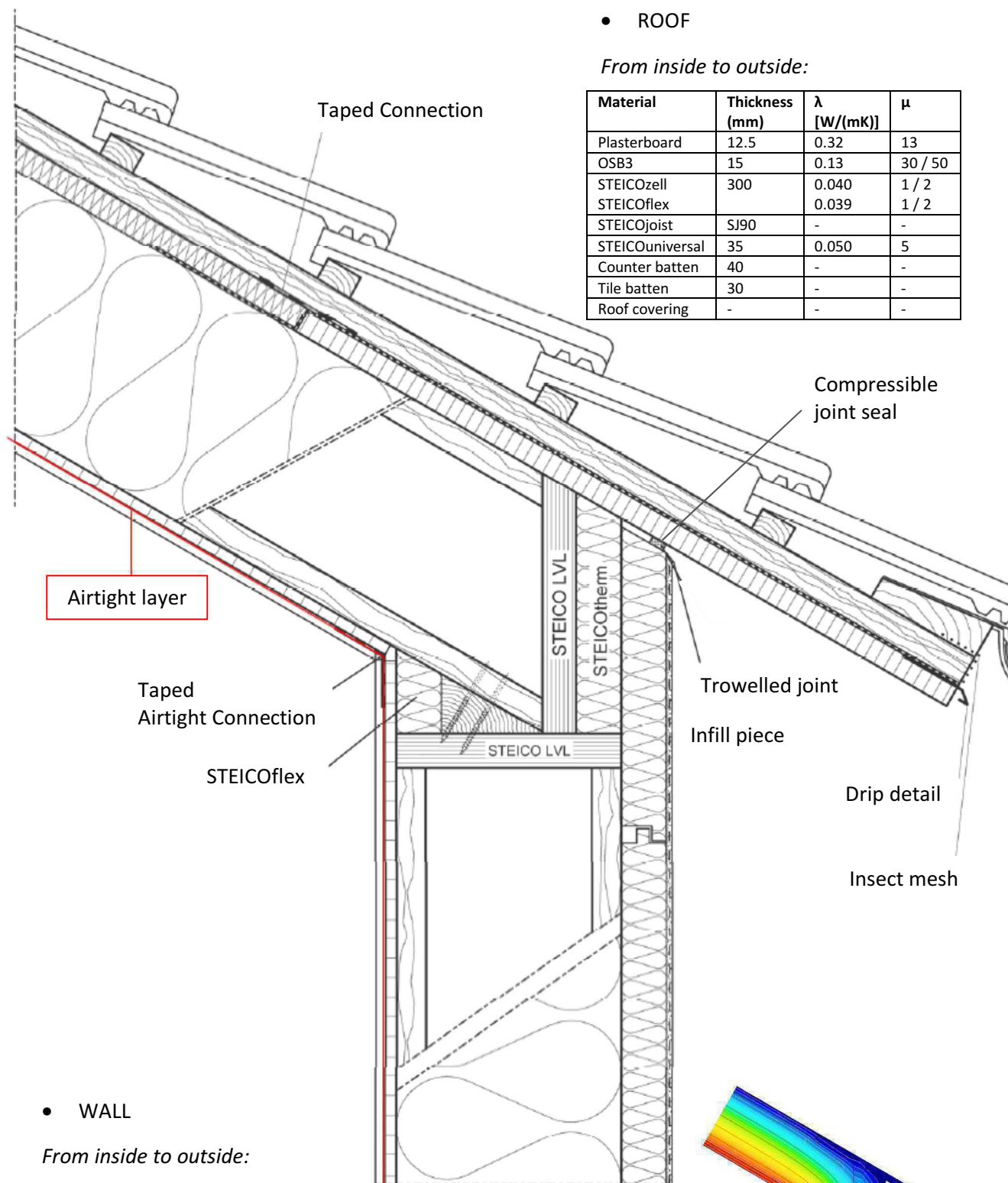
Ψ value -0.027 = Thermal bridge free

Construction Detail – Vertical Section

• ROOF

From inside to outside:

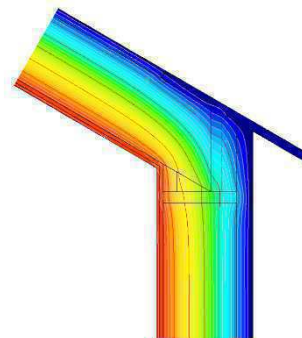
Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90	-	-
STEICOuniversal	35	0.050	5
Counter batten	40	-	-
Tile batten	30	-	-
Roof covering	-	-	-



• WALL

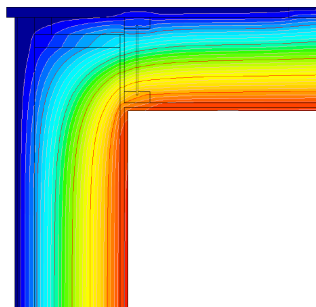
From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10



Ψ value -0.018 = Thermal bridge free

Construction Detail – Vertical Section

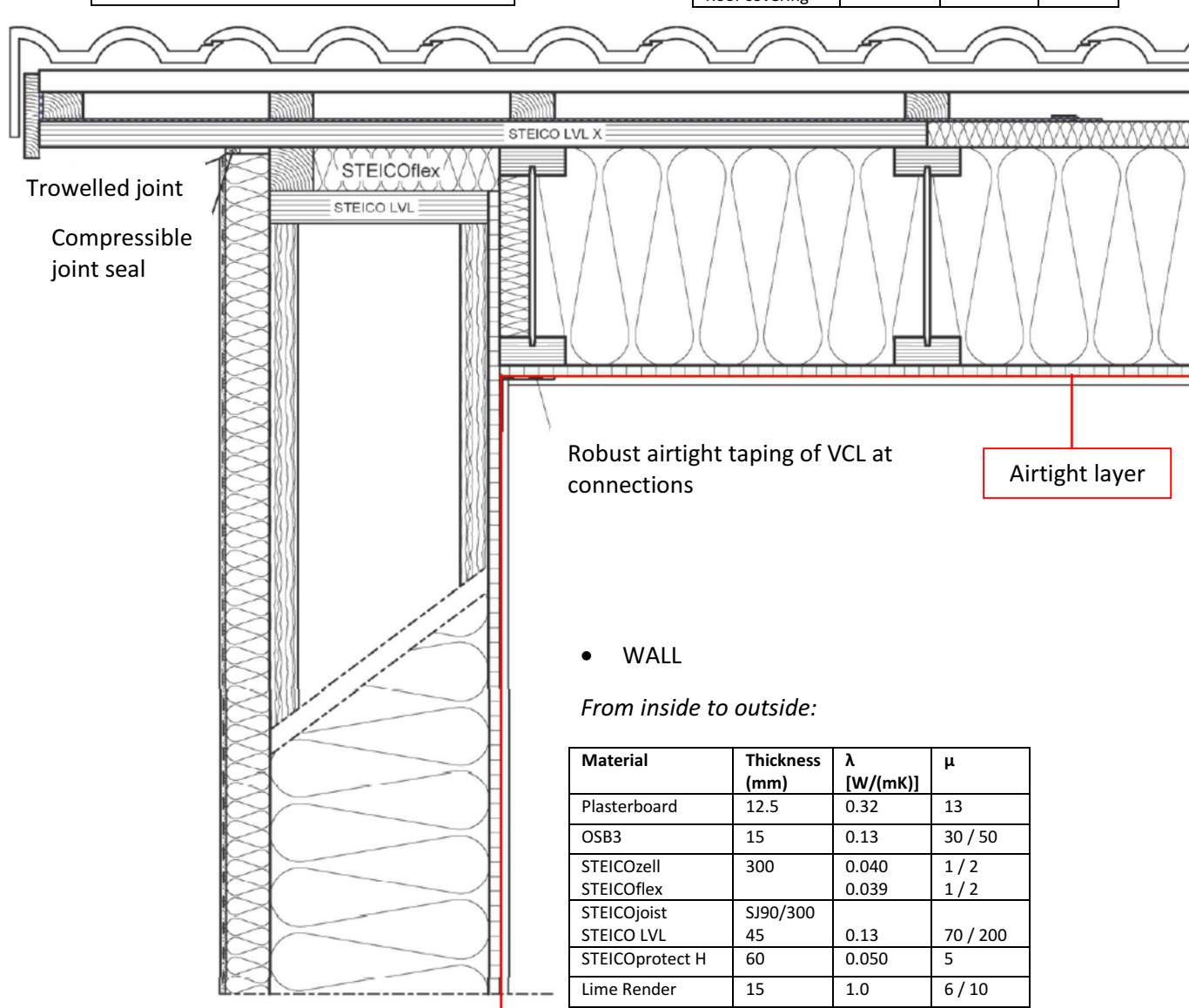


Ψ value -0.050 = Thermal bridge free

• ROOF

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90	-	-
STEICOuniversal	35	0.050	5
Counter batten	40	-	-
Tile batten	30	-	-
Roof covering	-	-	-



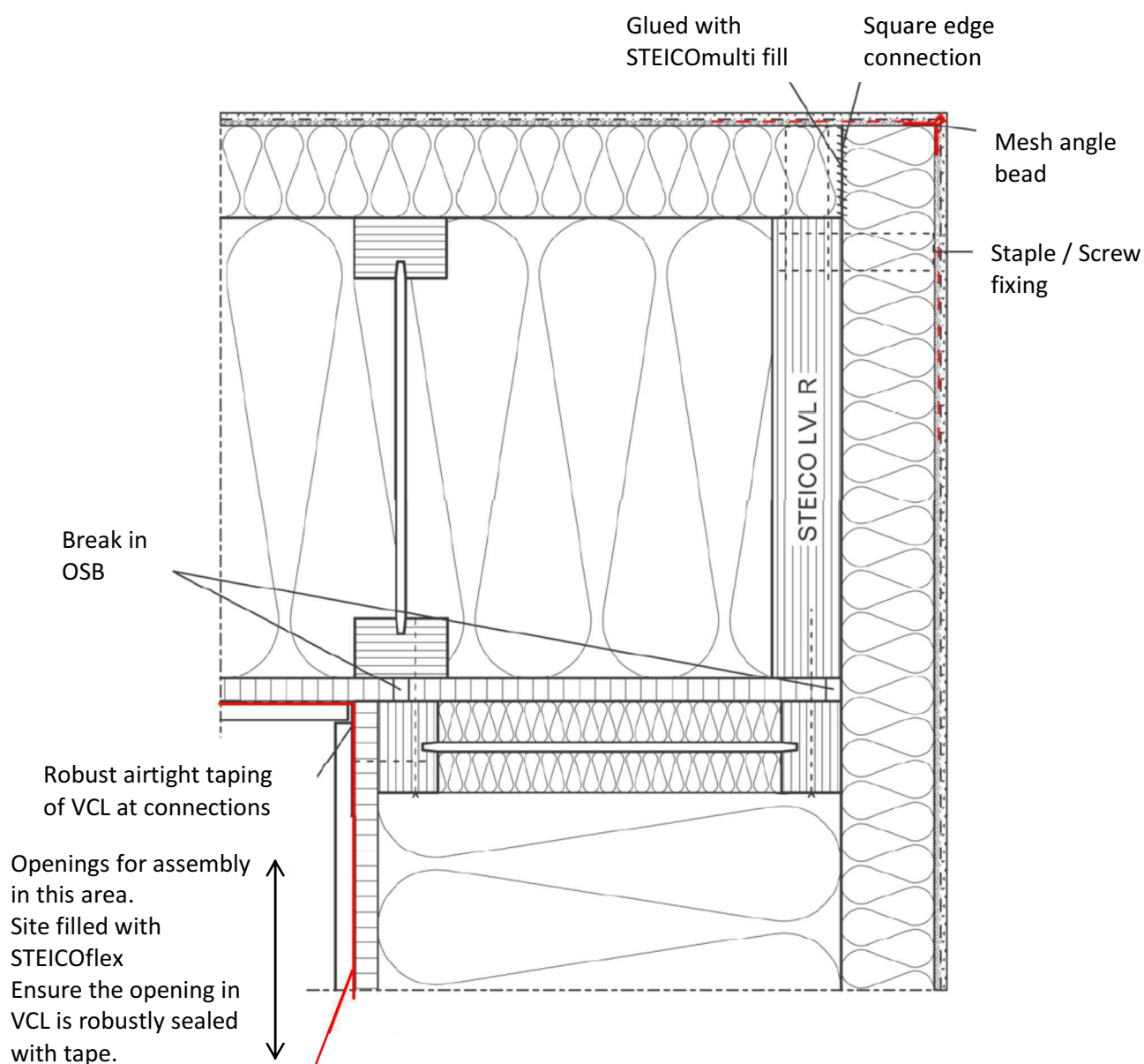
• WALL

From inside to outside:

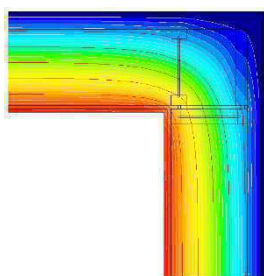
Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10

Detailing in line with structural requirements

Construction Detail – Horizontal Section



Airtight layer



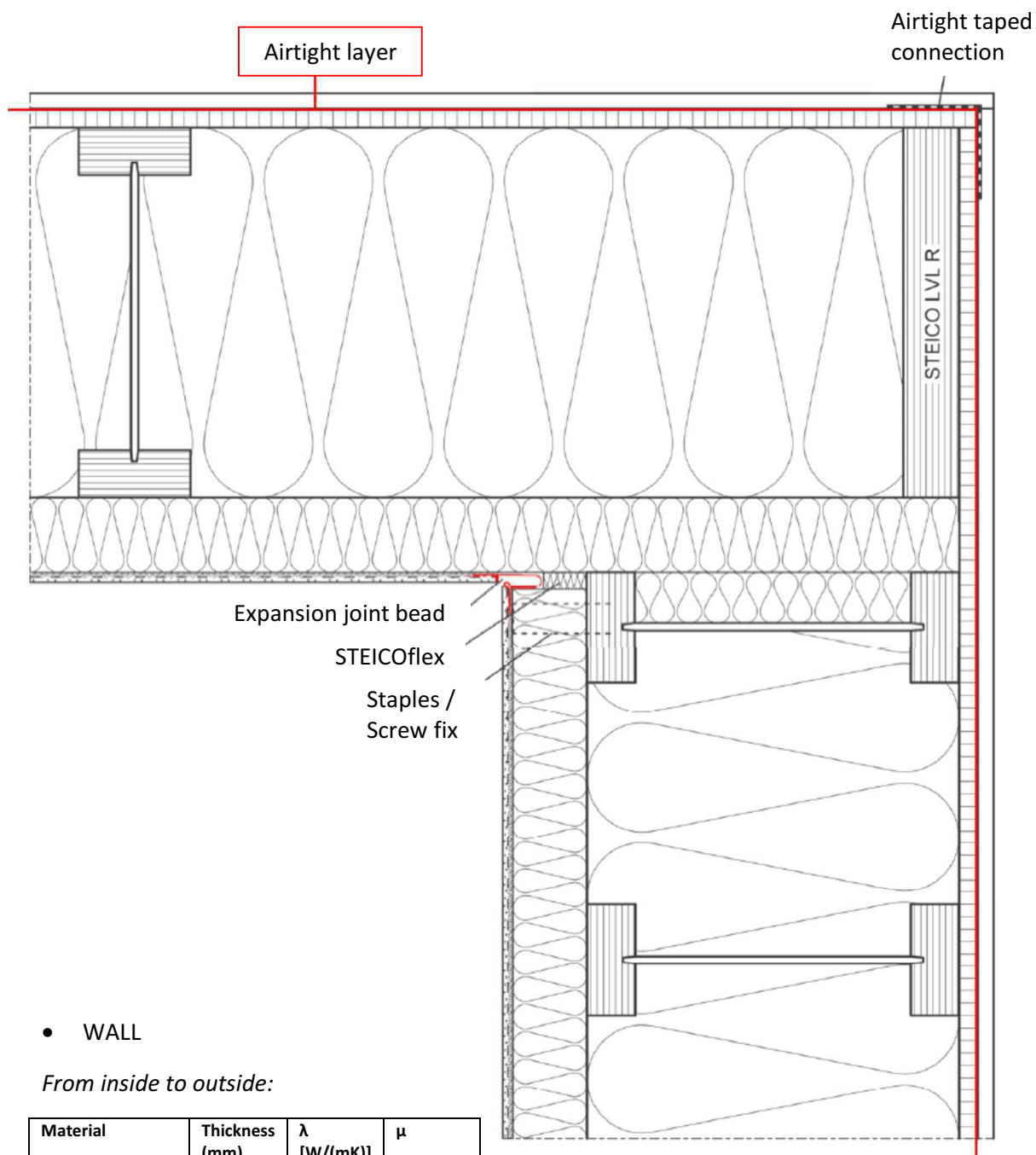
Ψ value -0.041 = Thermal bridge free

• WALL

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10

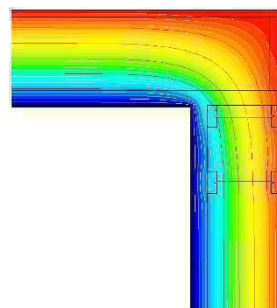
Construction Detail – Horizontal Section



• WALL

From inside to outside:

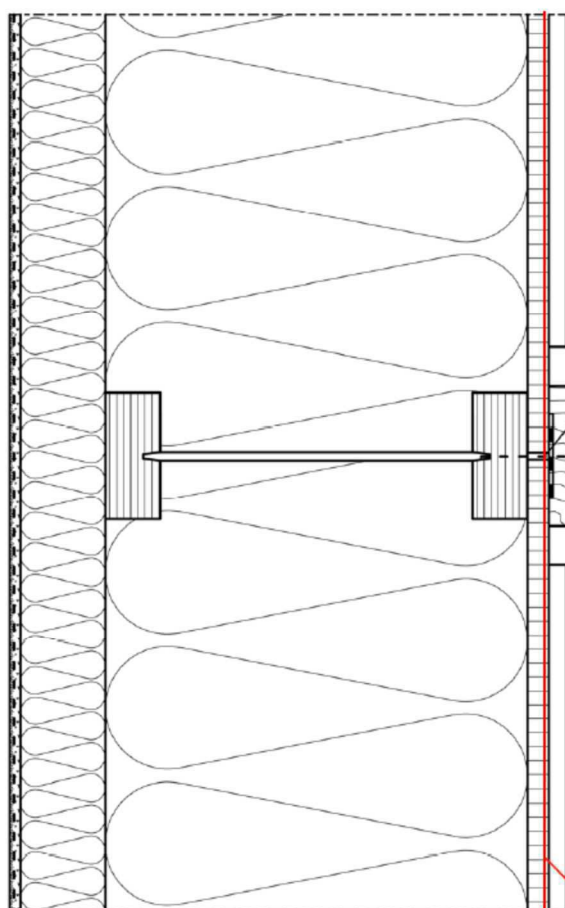
Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10



Ψ value 0.039

Construction Detail – Horizontal Section

• INTERNAL WALL



Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOflex	80	0.039	1 / 2
Softwood or STEICO LVL R	45 x 80	0.13	20 / 50
OSB3	15	0.13	30 / 50
Plasterboard	12.5	0.32	13

5mm gap in OSB3

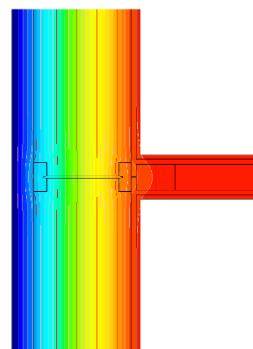
Screw fixed

Airtight layer

• EXTERNAL WALL

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SI90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10

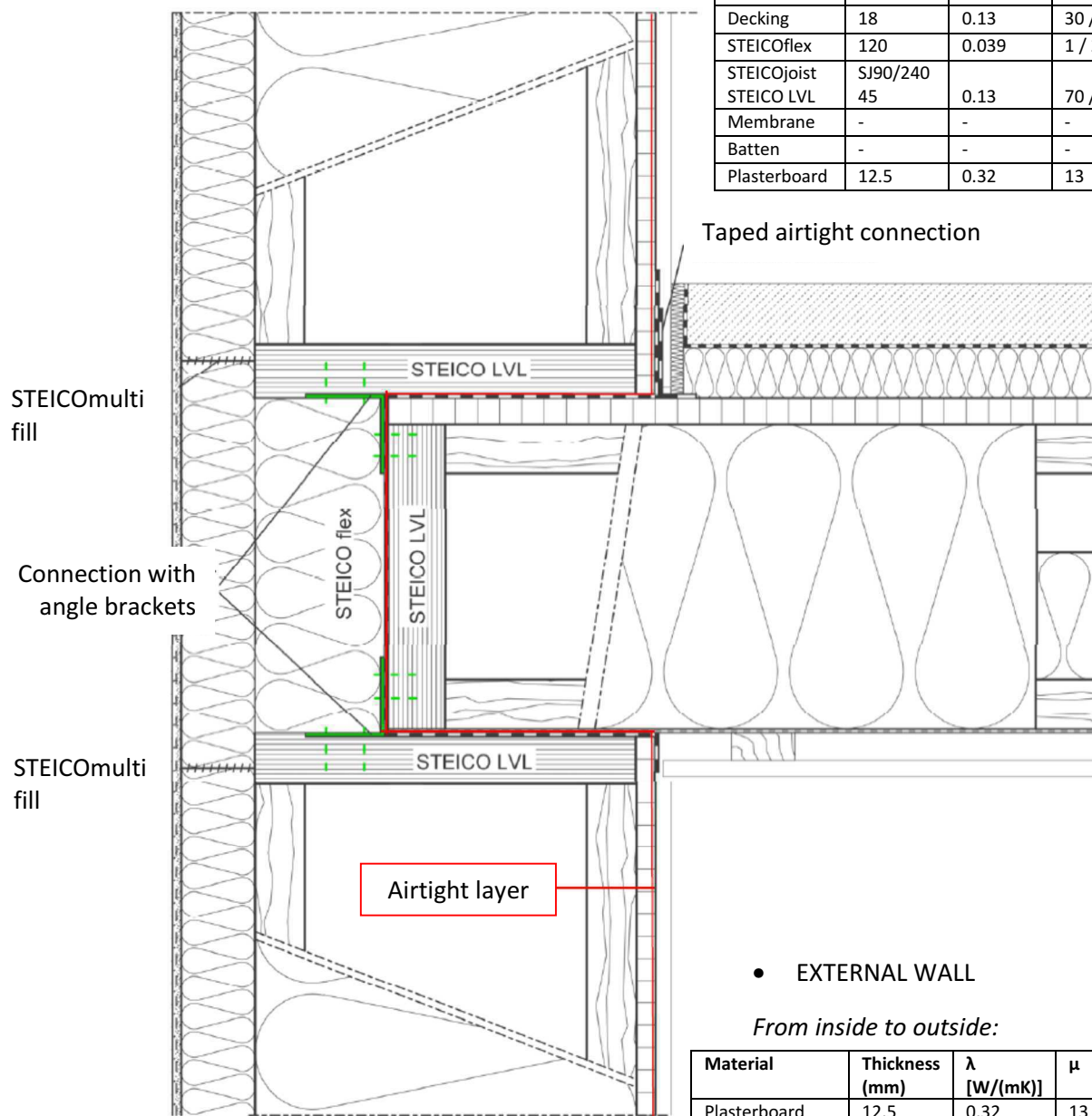


Ψ value 0.004 = Thermal bridge free

Construction Detail – Vertical Section

• INTERMEDIATE FLOOR

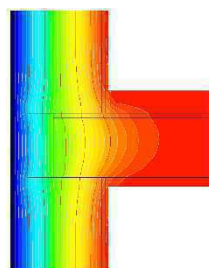
Material	Thickness (mm)	λ [W/(mK)]	μ
Screed	50	1.35	60 / 100
Membrane	-	-	-
STEICOtherm	40	0.041	5
Decking	18	0.13	30 / 50
STEICOflex	120	0.039	1 / 2
STEICOjoist	SJ90/240		
STEICO LVL	45	0.13	70 / 200
Membrane	-	-	-
Batten	-	-	-
Plasterboard	12.5	0.32	13



• EXTERNAL WALL

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10



Ψ value 0.0099 = Thermal bridge free

Construction Detail – Vertical Section

- EXTERNAL WALL

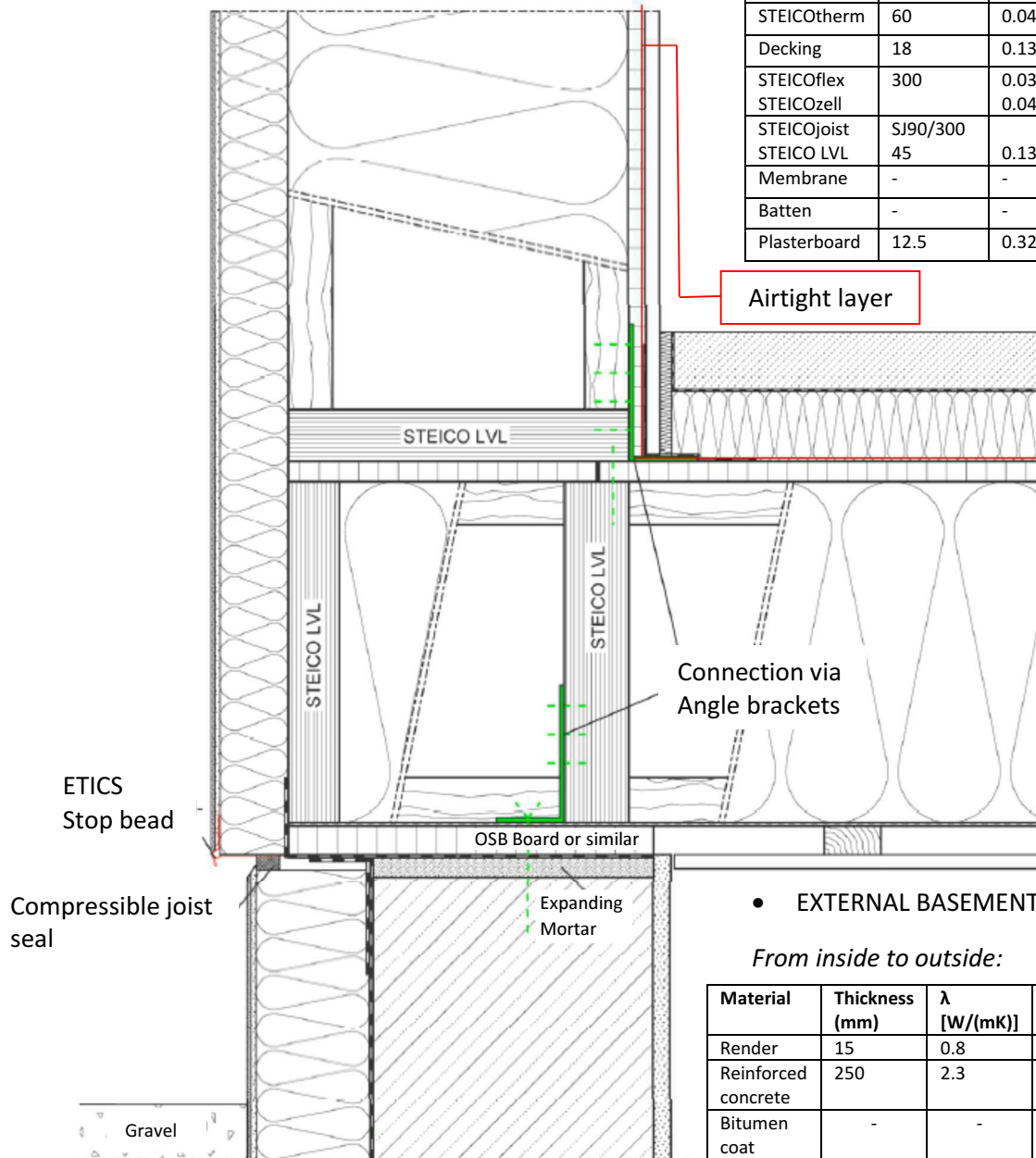
From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10

- Ground Floor

From top to bottom

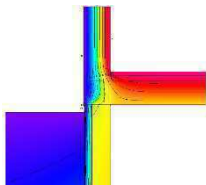
Material	Thickness (mm)	λ [W/(mK)]	μ
Screed	50	1.35	60 / 100
Membrane	-	-	-
STEICOtherm	60	0.041	5
Decking	18	0.13	30 / 50
STEICOflex	300	0.039	1 / 2
STEICOzell		0.040	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
Membrane	-	-	-
Batten	-	-	-
Plasterboard	12.5	0.32	13



- EXTERNAL BASEMENT WALL

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Render	15	0.8	6 / 10
Reinforced concrete	250	2.3	80 / 130
Bitumen coat	-	-	-
Perimeter Insulation	100	0.035	150
Render System	8	1.0	6 / 10



Ψ value -0.066 = Thermal bridge free

Construction Detail – Vertical Section

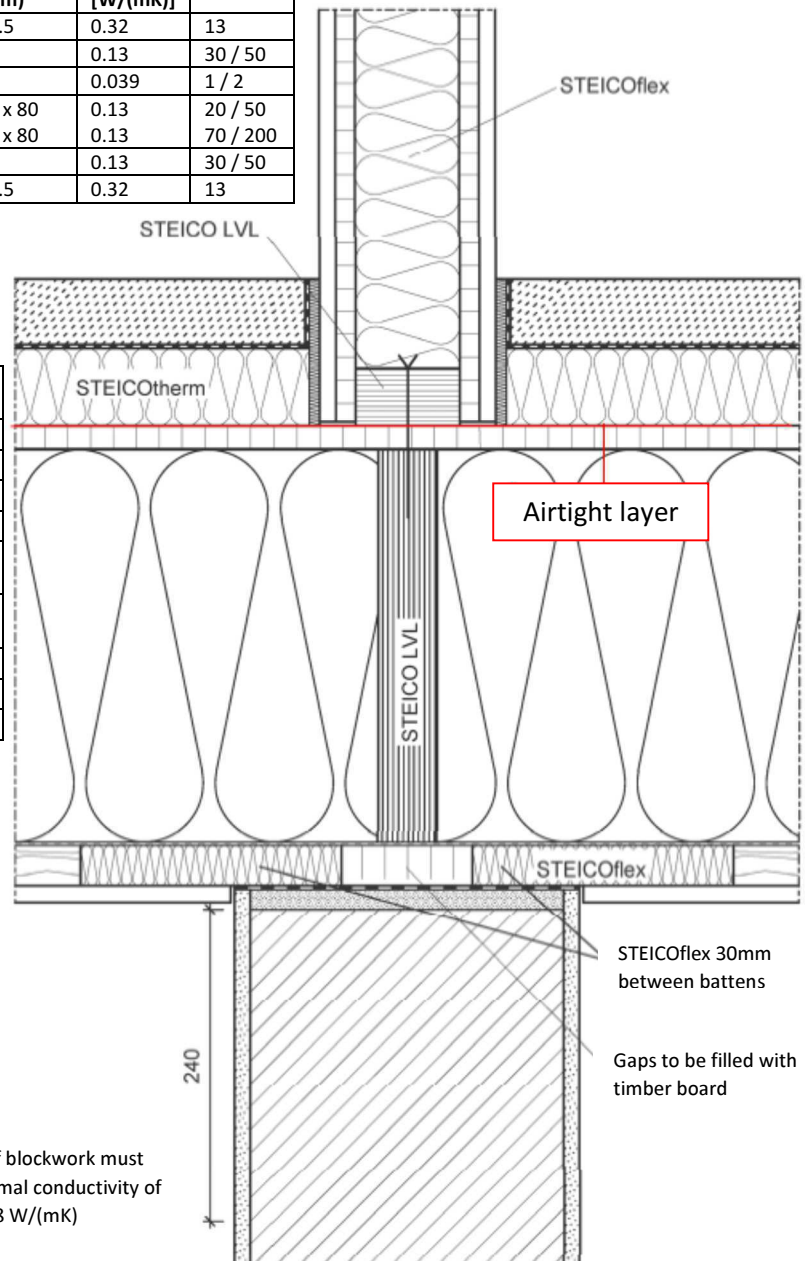
• INTERNAL WALL

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB	15	0.13	30 / 50
STEICOflex	80	0.039	1 / 2
Solid Timber or STEICO LVL R	45 x 80	0.13	20 / 50
OSB	15	0.13	30 / 50
Plasterboard	12.5	0.32	13

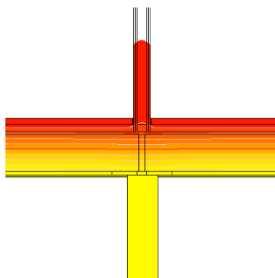
• Ground Floor

From top to bottom

Material	Thickness (mm)	λ [W/(mK)]	μ
Screed	50	1.35	60 / 100
Membrane	-	-	-
STEICOtherm	60	0.041	5
Decking	18	0.13	30 / 50
STEICOflex	300	0.039	1 / 2
STEICOzell		0.041	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
Membrane	-	-	-
Batten	-	-	-
Plasterboard	12.5	0.32	13



Top layer of blockwork must have a thermal conductivity of at least 0.18 W/(mK)



Ψ value 0.009 = Thermal bridge free

• INTERNAL BASEMENT WALL

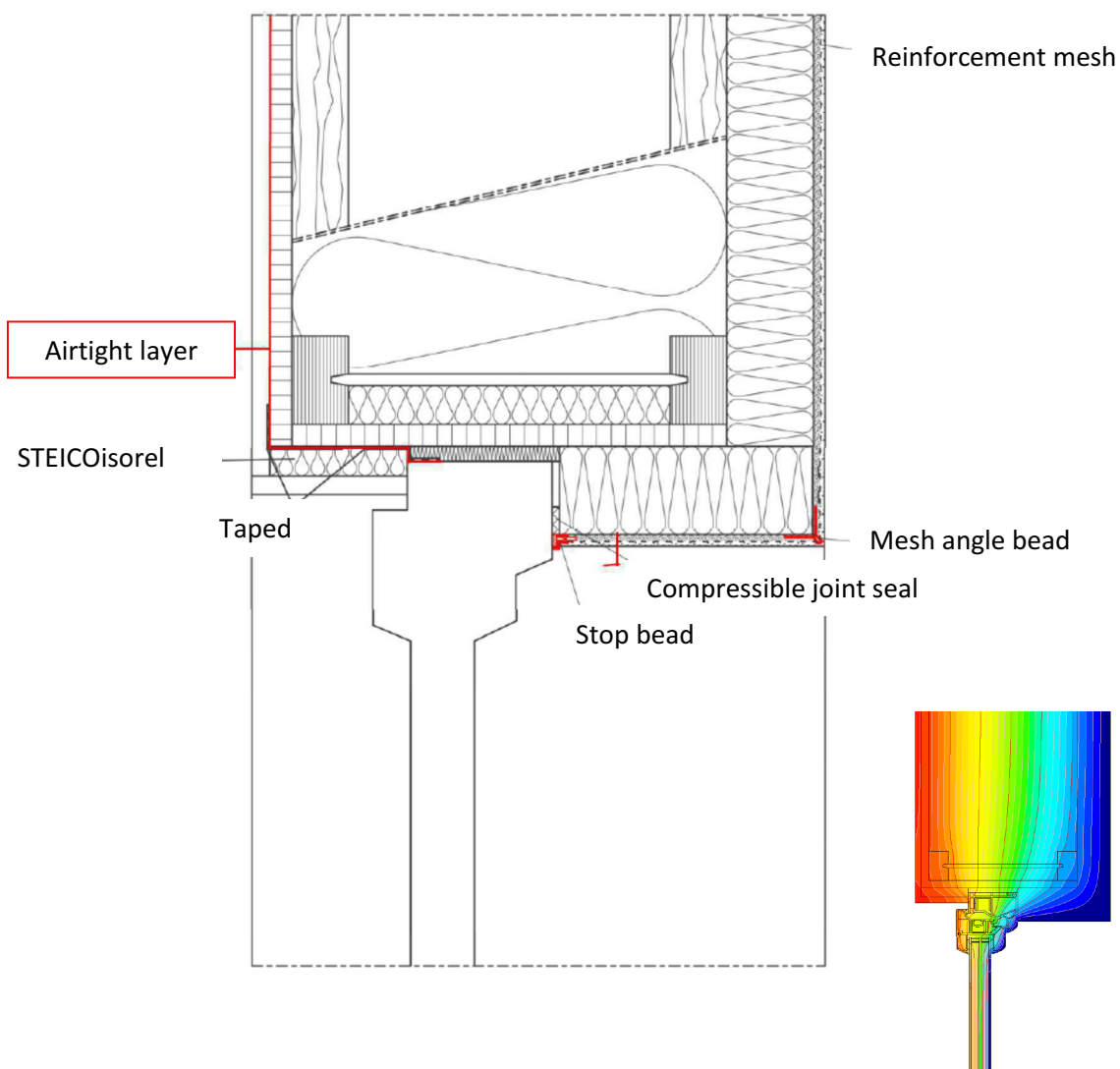
Material	Thickness (mm)	λ [W/(mK)]	μ
Render	15	0.8	6 / 10
Blockwork	240	0.18	-
Render	15	0.8	6 / 10

Construction Detail – Vertical Section

• EXTERNAL WALL

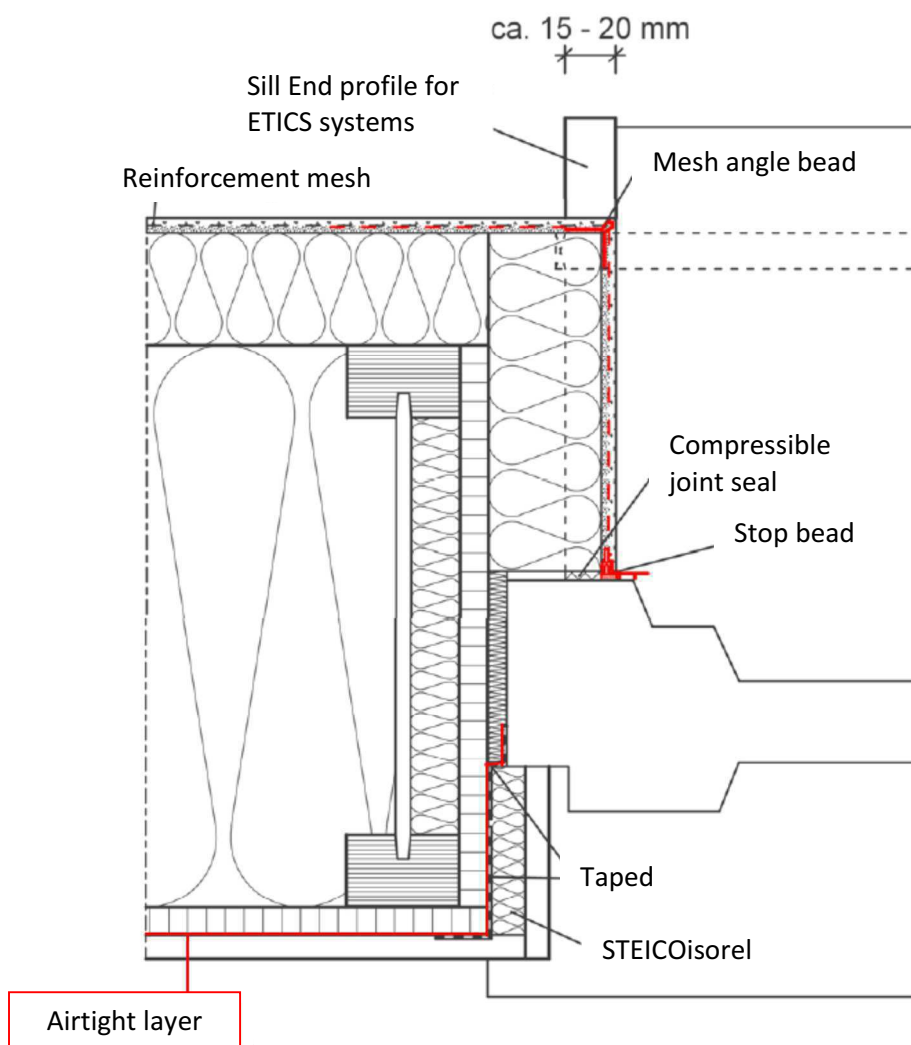
From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10



Ψ value 0.008 = Thermal bridge free

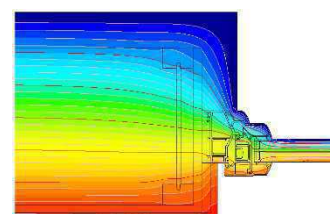
Construction Detail – Vertical Section



• EXTERNAL WALL

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10



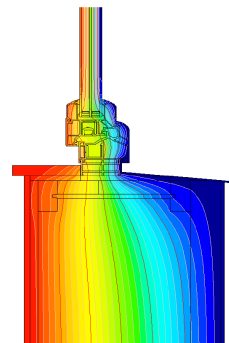
Ψ value 0.008 = Thermal bridge free

Construction Detail – Vertical Section

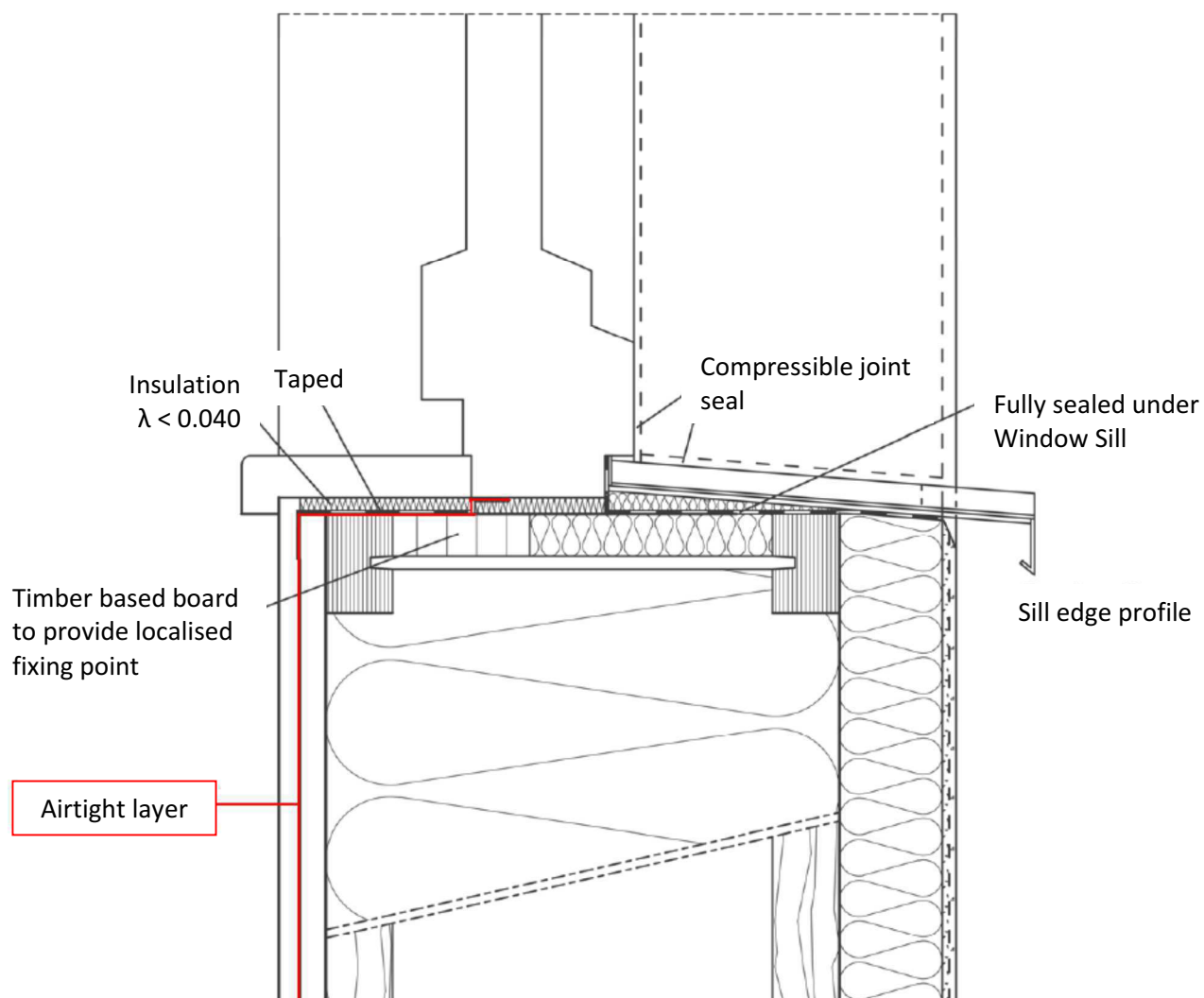
• EXTERNAL WALL

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10



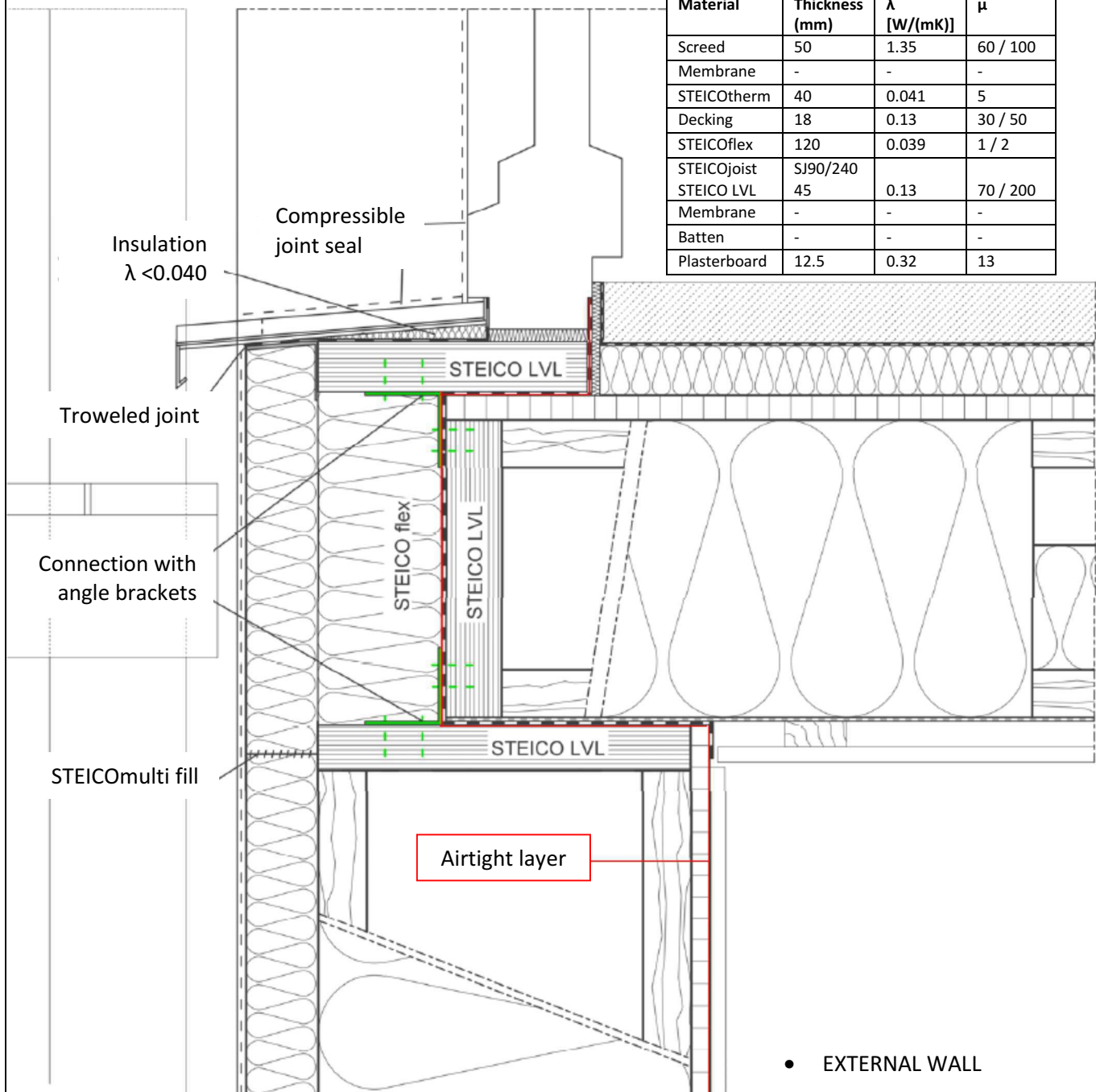
Ψ value 0.022



Construction Detail – Vertical Section

• INTERMEDIATE FLOOR

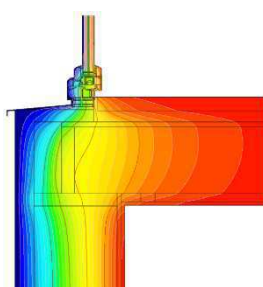
Material	Thickness (mm)	λ [W/(mK)]	μ
Screed	50	1.35	60 / 100
Membrane	-	-	-
STEICOtherm	40	0.041	5
Decking	18	0.13	30 / 50
STEICOflex	120	0.039	1 / 2
STEICOjoist	SJ90/240	0.13	70 / 200
STEICO LVL	45	0.13	70 / 200
Membrane	-	-	-
Batten	-	-	-
Plasterboard	12.5	0.32	13



• EXTERNAL WALL

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICOflex		0.039	1 / 2
STEICOjoist	SJ90/300	0.13	70 / 200
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10



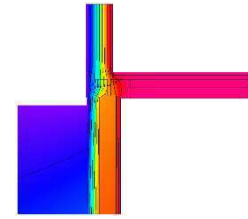
Ψ value 0.024

Construction Detail – Vertical Section

- EXTERNAL WALL

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Plasterboard	12.5	0.32	13
OSB3	15	0.13	30 / 50
STEICOzell	300	0.040	1 / 2
STEICoflex		0.039	1 / 2
STEICOjoist	SJ90/300		
STEICO LVL	45	0.13	70 / 200
STEICOprotect H	60	0.050	5
Lime Render	15	1.0	6 / 10

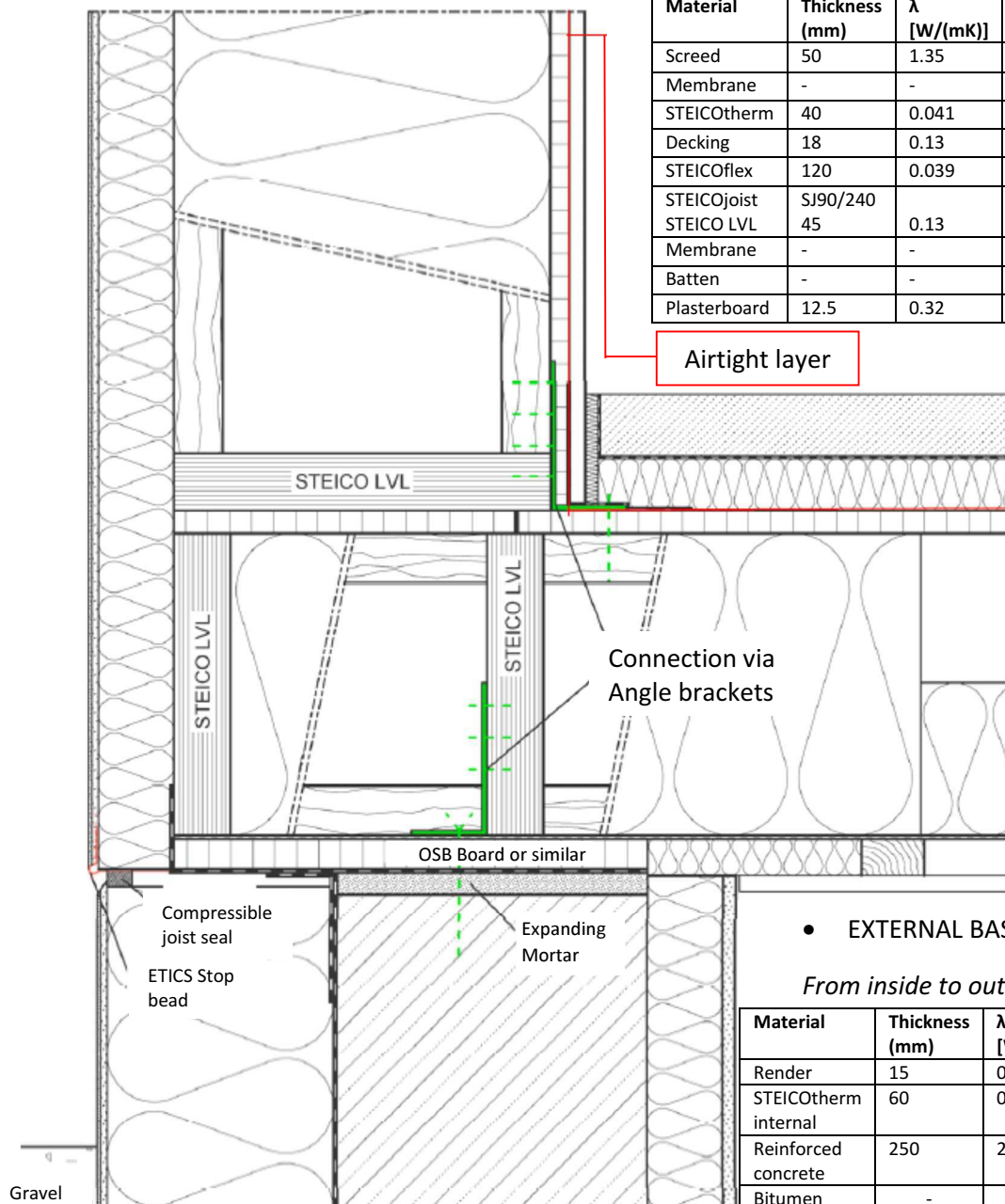


Ψ value -0.024 = Thermal bridge free

- Ground Floor

From top to bottom

Material	Thickness (mm)	λ [W/(mK)]	μ
Screed	50	1.35	60 / 100
Membrane	-	-	-
STEICOtherm	40	0.041	5
Decking	18	0.13	30 / 50
STEICoflex	120	0.039	1 / 2
STEICOjoist	SJ90/240		
STEICO LVL	45	0.13	70 / 200
Membrane	-	-	-
Batten	-	-	-
Plasterboard	12.5	0.32	13



- EXTERNAL BASEMENT WALL

From inside to outside:

Material	Thickness (mm)	λ [W/(mK)]	μ
Render	15	0.8	6 / 10
STEICOtherm internal	60	0.041	5 / 5
Reinforced concrete	250	2.3	80 / 130
Bitumen coat	-	-	-
Perimeter Insulation	180	0.035	150
Render System	8	1.0	6 / 10