FIXIT®
Schweiz. Suisse. Svizzera.

Second layer with Aerogel Insulating-Plaster

The advantages of a second layer with Aerogel insulating-plaster

✓ Anchor bolt marks disappear

Aerogel insulating plaster completely covers over unsightly anchor bolt marks in the façade. Since the applied layer is only 3 cm thick (instead of 6 cm in the case of conventional insulation) the overall layer thicknesses is reduced.

✓ Improved thermal insulation

Applying even a thin layer of Aerogel insulating plaster of the existing render results in a considerable improvement in thermal insulation, thus adding value to the building being renovated. The layer thickness can be calculated and applied in a carefully controlled manner to give exactly the required U-value.

✓ No visible outlines of underlying panels

The application of aerogel insulating plaster results in a homogeneous layer through which traces of the underlying panel structure are not visible. The facade will not bow in or bulge out, as can occur with sheet insulation.

✓ Use of anchor bolts not necessary

Buildings undergoing renovation and improvement work often remain inhabited during the work. Fitting anchor bolts to secure panels is a noisy process which is made unnecessary when Aerogel insulating plaster is applied over existing render. Using Fixit 222 Aerogel Insulating Plaster means no anchor bolts are necessary.

✓ No surface condensation

The higher mass in weight as with conventional insulation and the absorbency properties of Aerogel insulating plaster reduce the humidity on the surface. This reduce the algaes and fungal infestation on the façade and the maintenance.

✓ No hollow spaces between insulating layers

When applying render over existing insulating façades, adhesive must be applied to the whole of the joint surface, and hollow spaces cannot be entirely avoided. The dew point increases as a result of the application of additional insulation, but the capillary effect of the Aerogel insulating plaster transports humidity to the outdoors. The façade remains intact.

Substrate matrix

Substrate	Layer thickness < 5 cm	Layer thickness < 7 cm	Layer thickness ≥ 7 cm
EPS / Mineral wool	Fixit 439*	Fixit 439 + Welnet 3 cm	Fixit 439 + Welnet 5 cm
Embedded mesh	Fixit 462*	Welnet 3 cm	Welnet 5 cm
Finish coat	Fixit 462*	Welnet 3 cm	Welnet 5 cm

* = apply a 5 mm layer and roughen horizontally with a brush.

Fire block

Fire Safety Standard 1 – 15

Art2, §2 – Applicability

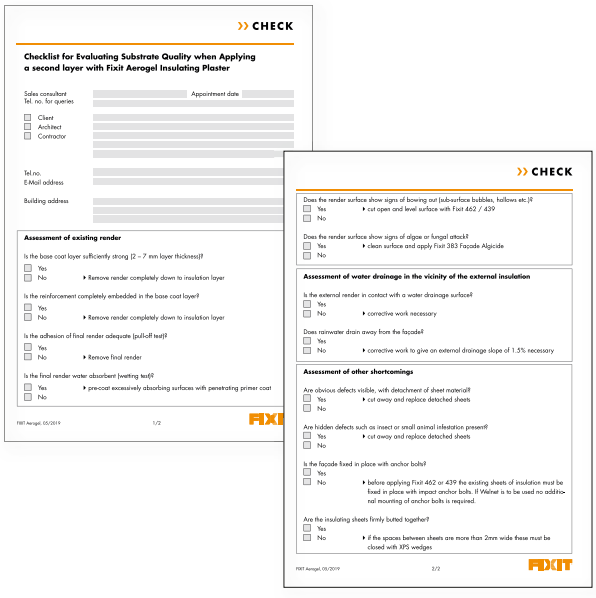
2 Existing buildings and structures must be modified appropriately to meet fire safety standards

a in the case of significant constructional or operational modifications, extensions or change of use.

b if the danger to persons is particularly high.

The decision as to whether fire blocks must be implemented or not is ALWAYS and SOLELY the responsibility of the competent authority.

Checklist for assessing substrate before applying a second layer with Fixit Aerogel insulating plaster



to the checklist

U-value Calculations
using Fixit 222 Aerogel High-Performance Insulating Plaster

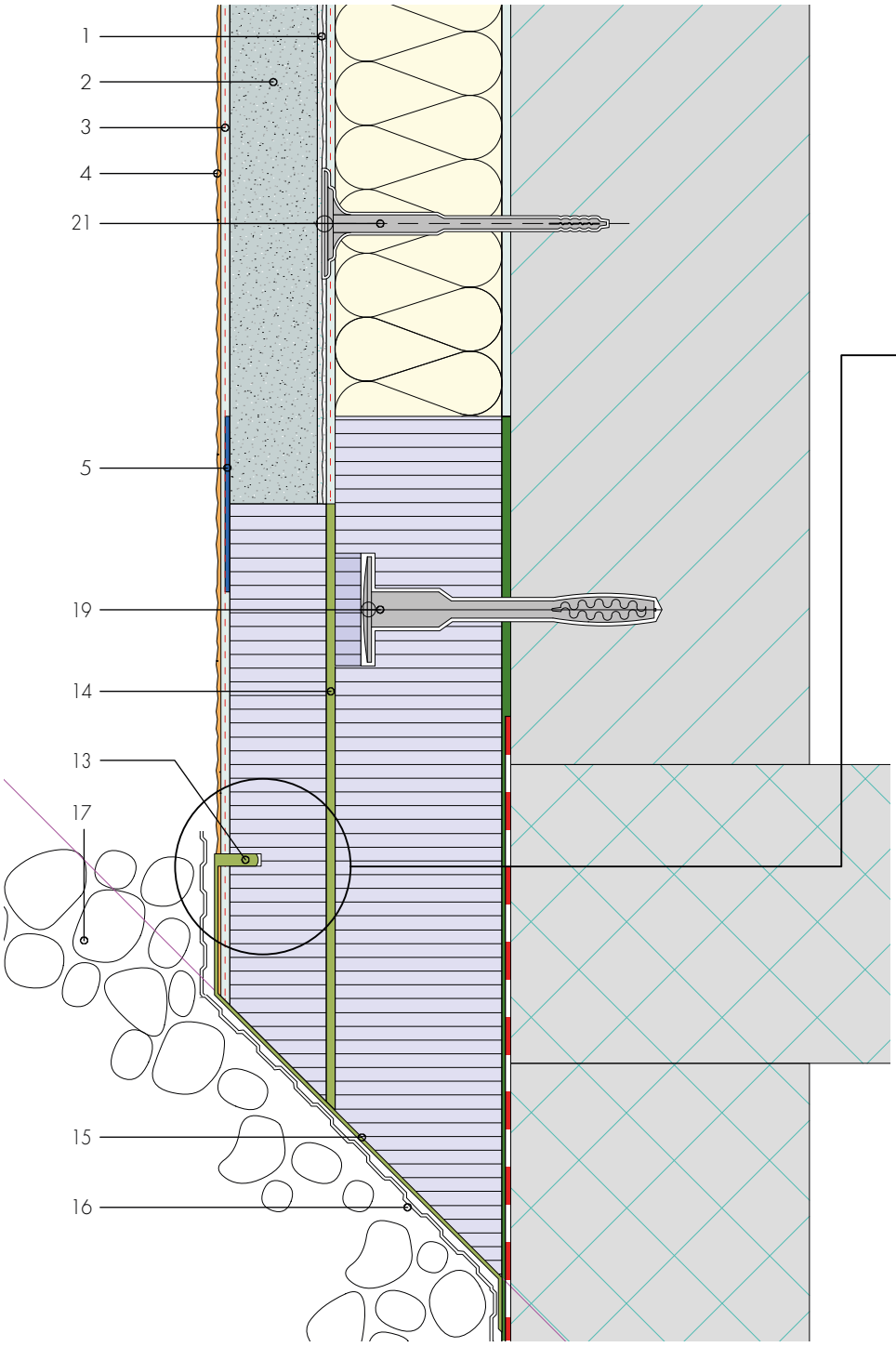
Standing building with standard 17.5 cm brickwork, EPS insulated, not monitored

		New U-value after a second layer	
		0, 25 W/m²K	**0, 20 W/m²K**
Current insulation thickness	**Current U-value**	**Required second layer thickness of Fixit 222 Aerogel insulating plaster**	
EPS 6 cm	0,53 W/m²K	6,0 cm	8,5 cm
EPS 8 cm	0,43 W/m²K	4,5 cm	7,5 cm
EPS 10 cm	0,36 W/m²K	3,5 cm	6,5 cm
EPS 12 cm	0,31 W/m²K	3,0 cm	5,0 cm
EPS 14 cm	0,27 W/m²K	–	3,5 cm
EPS 16 cm	0,24 W/m²K	–	3,0 cm

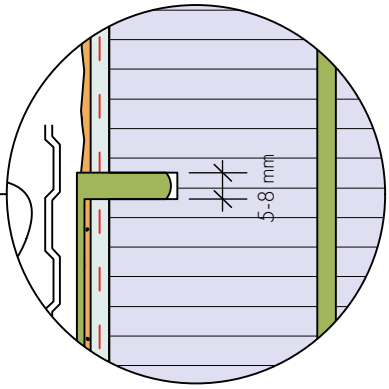
Standing building with standard 17.5 cm brickwork, mineral wool insulated, not monitored

		New U-value after a second layer	
		0, 25 W/m²K	**0, 20 W/m²K**
Current insulation thickness	**Current U-value**	**Required second layer thickness of Fixit 222 Aerogel insulating plaster**	
SW 6 cm	0,60 W/m²K	6,5 cm	9,5 cm
SW 8 cm	0,50 W/m²K	5,5 cm	8,5 cm
SW 10 cm	0,42 W/m²K	4,5 cm	7,5 cm
SW 12 cm	0,36 W/m²K	3,5 cm	6,5 cm
SW 14 cm	0,30 W/m²K	3,0 cm	5,5 cm
SW 16 cm	0,28 W/m²K	–	4,5 cm

Detail second layer – base cladding flush with perimeter insulation

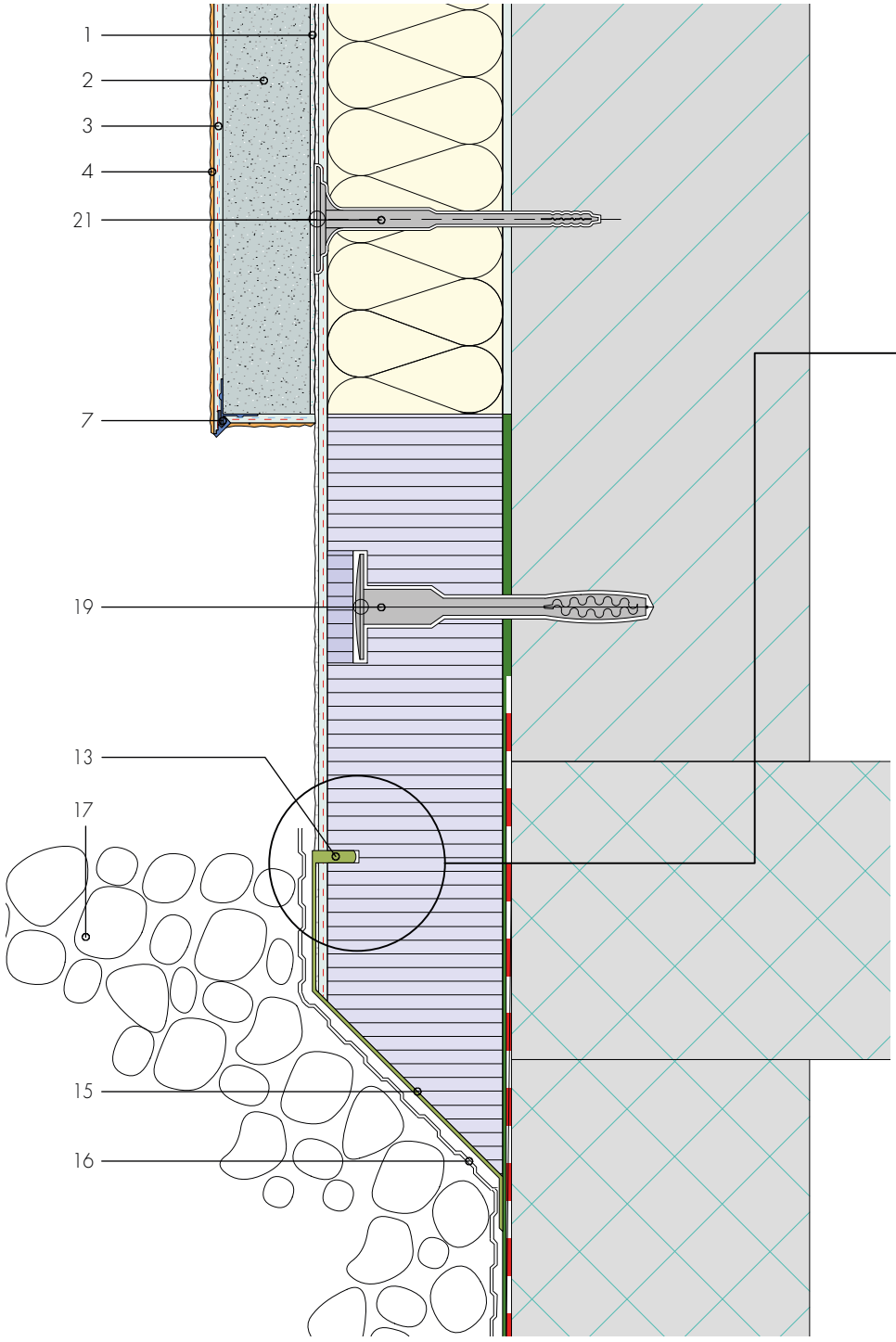


Detail of capillary slot 5 to 8 mm wide.
Fill with Fixit 373 Multiflex

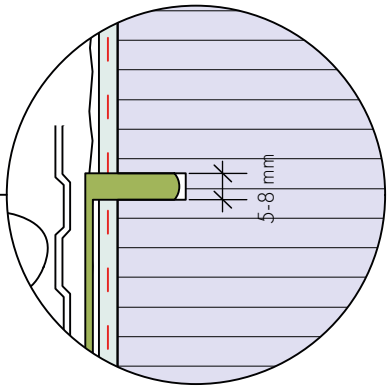


1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
5 Barrier textile
13 Capillary slot
14 Base cladding, outer surface completely covered with Fixit 373 Multiflex
15 Apply a layer of Fixit 373 Multiflex
16 Profiled drainage sheet
17 Rubble fill
19 Mounting anchor bolt
21 Impact anchor bolt H1 eco

Detail second layer – base cladding with perimeter insulation

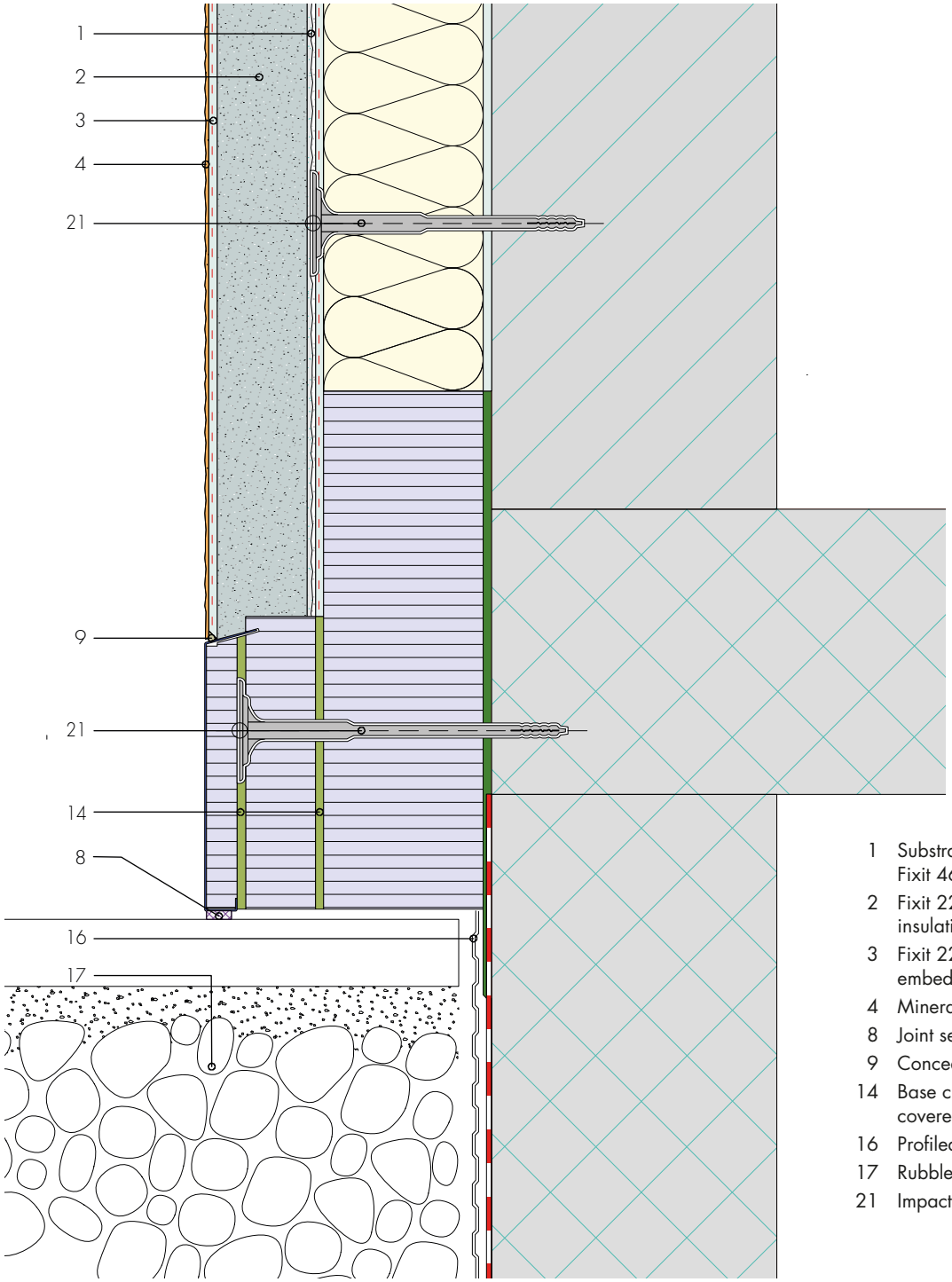


Detail of capillary slot 5 to 8 mm wide.
Fill with Fixit 373 Multiflex



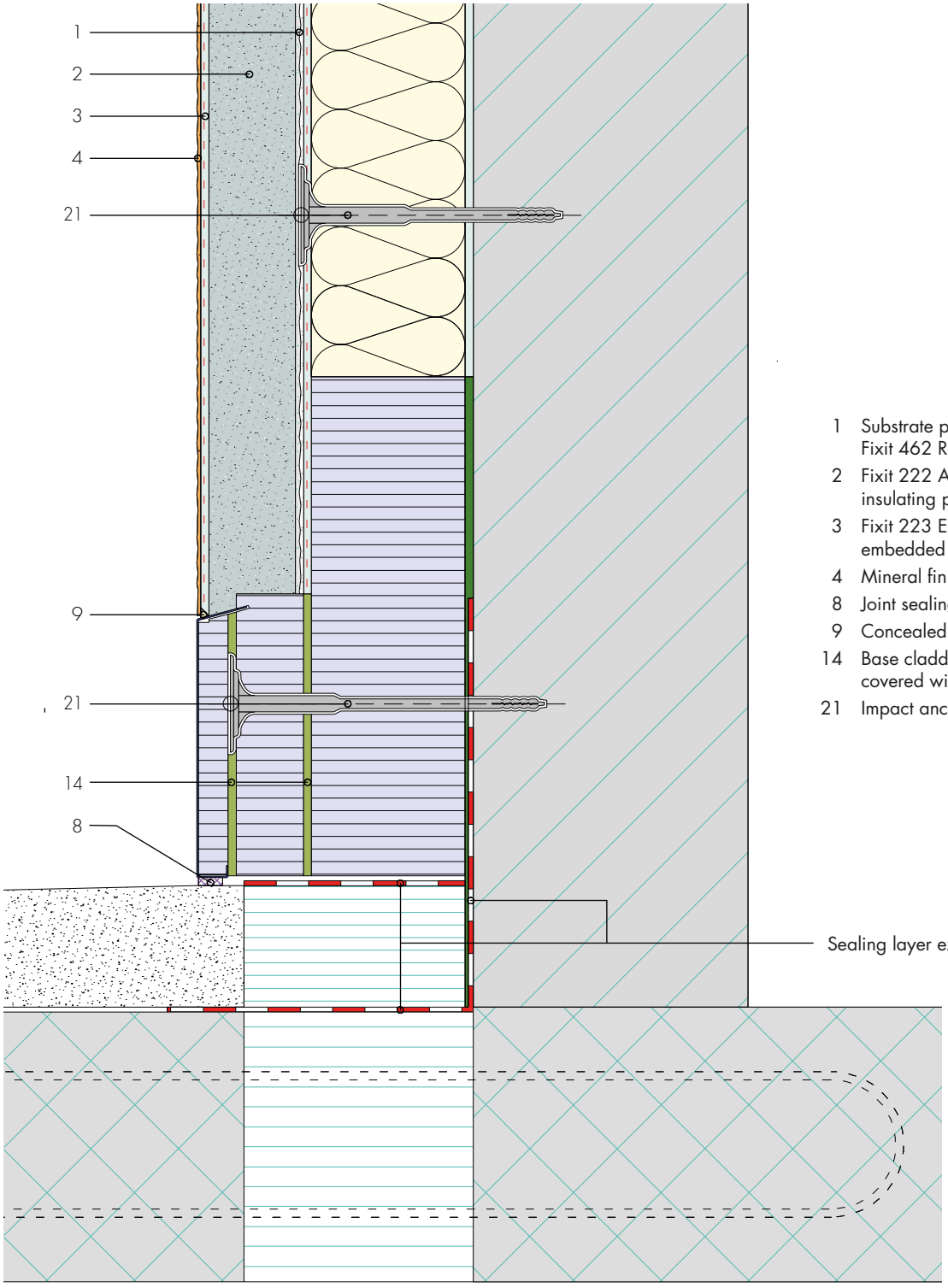
1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
7 Edged drip profile with textile inlay
13 Capillary slot
15 Apply a layer of Fixit 373 Multiflex
16 Profiled drainage sheet
17 Rubble fill
19 Mounting anchor bolt
21 Impact anchor bolt H1 eco

Detail second layer – base cladding of sheet metal over existing surface



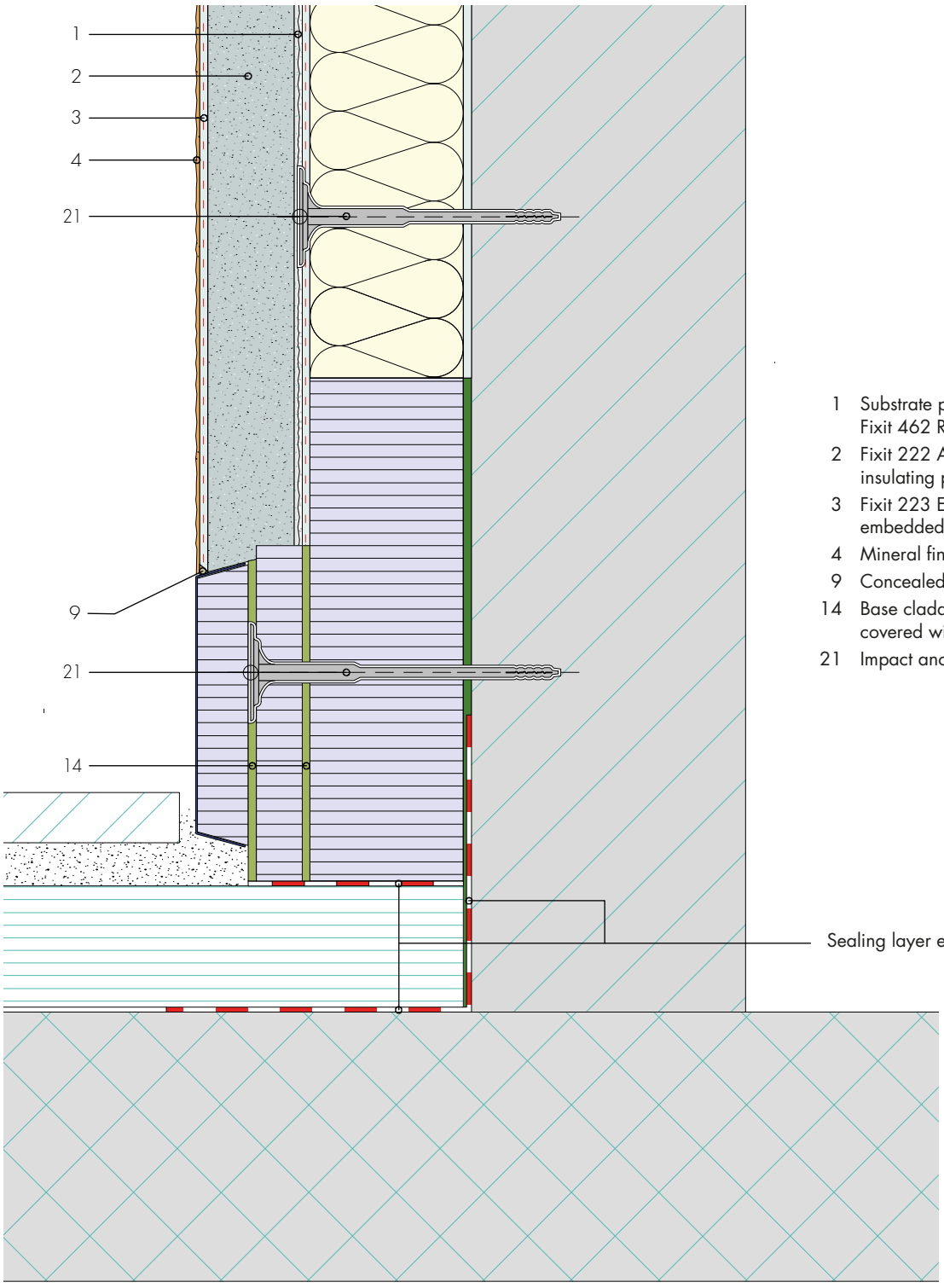
1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
8 Joint sealing tape BG1
9 Concealed sealant joint
14 Base cladding, outer surface completely covered with Fixit 373 Multiflex
16 Profiled drainage sheet
17 Rubble fill
21 Impact anchor bolt H1 eco

Detail second layer – junction to base with base skirting of sheet metal



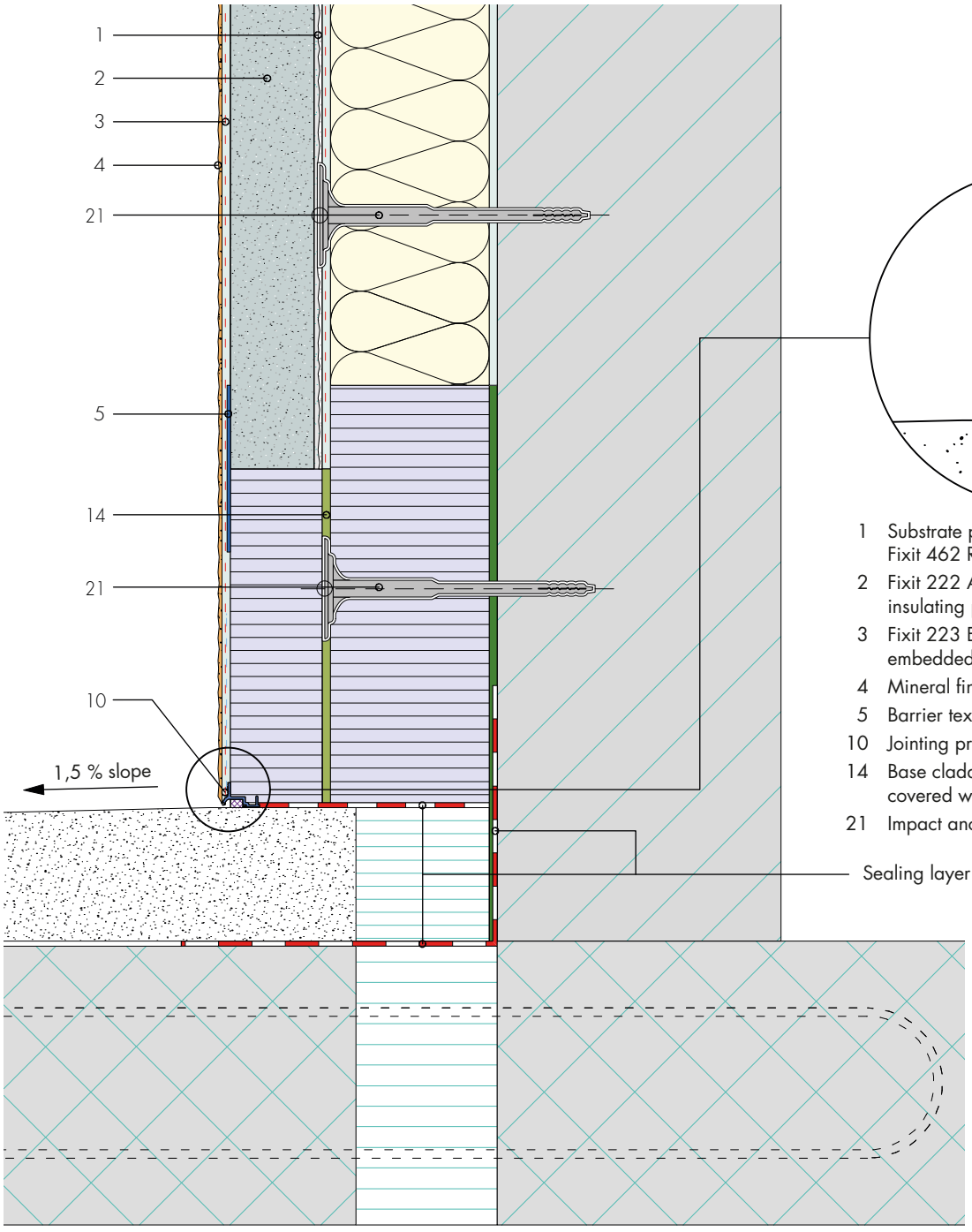
1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
8 Joint sealing tape BG1
9 Concealed sealant joint
14 Base cladding, outer surface completely covered with Fixit 373 Multiflex
21 Impact anchor bolt H1 eco

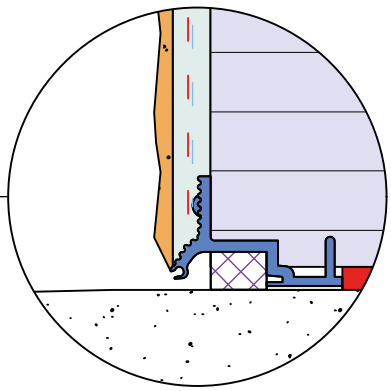
Detail second layer – junction to base with insulated sheet metal base



1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
9 Concealed sealant joint
14 Base cladding, outer surface completely covered with Fixit 373 Multiflex
21 Impact anchor bolt H1 eco

Detail second layer – junction to base with jointing profile

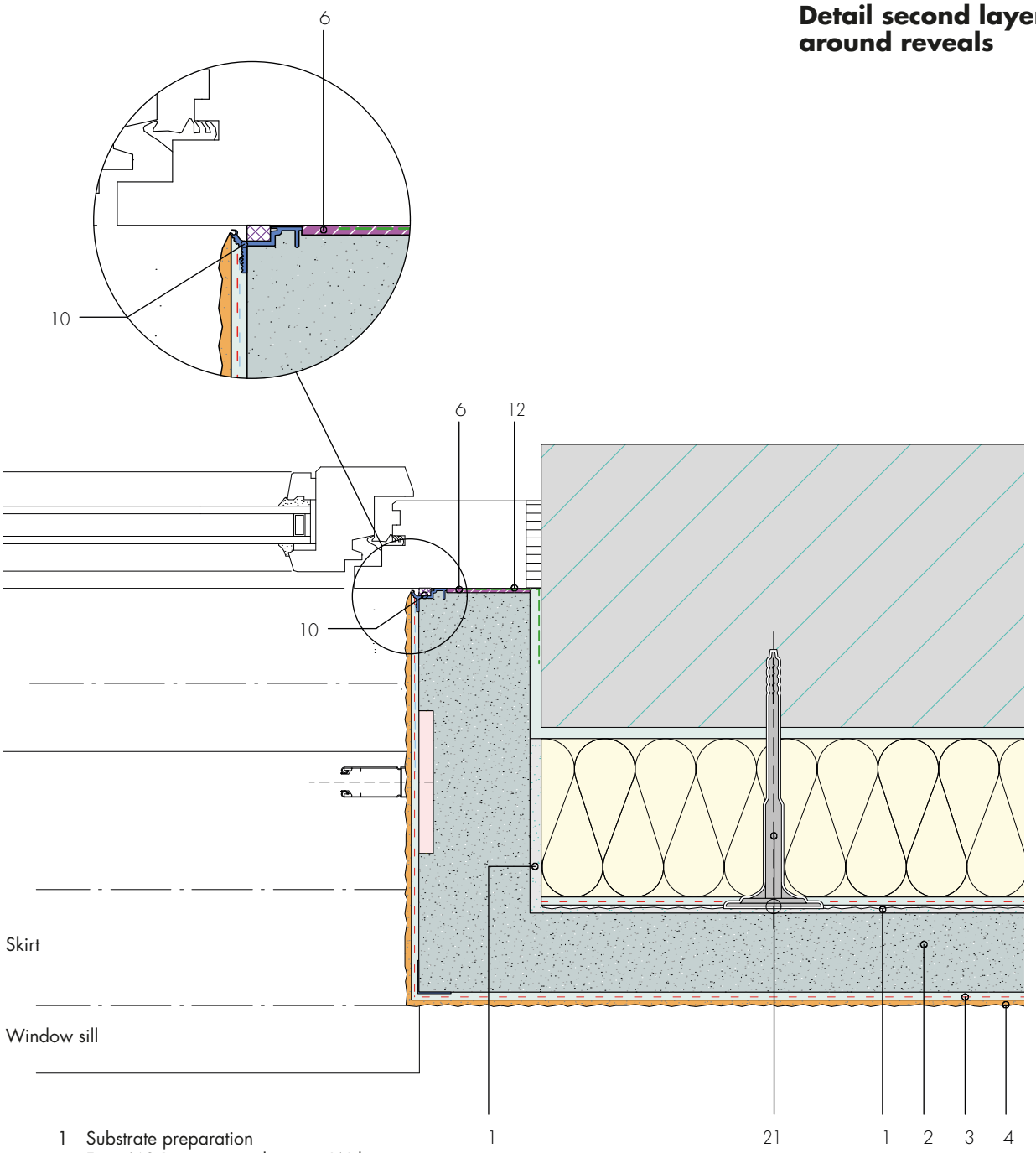




1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
5 Barrier textile
10 Jointing profile with fabric inlay, 3D Profi
14 Base cladding, outer surface completely covered with Fixit 373 Multiflex
21 Impact anchor bolt H1 eco

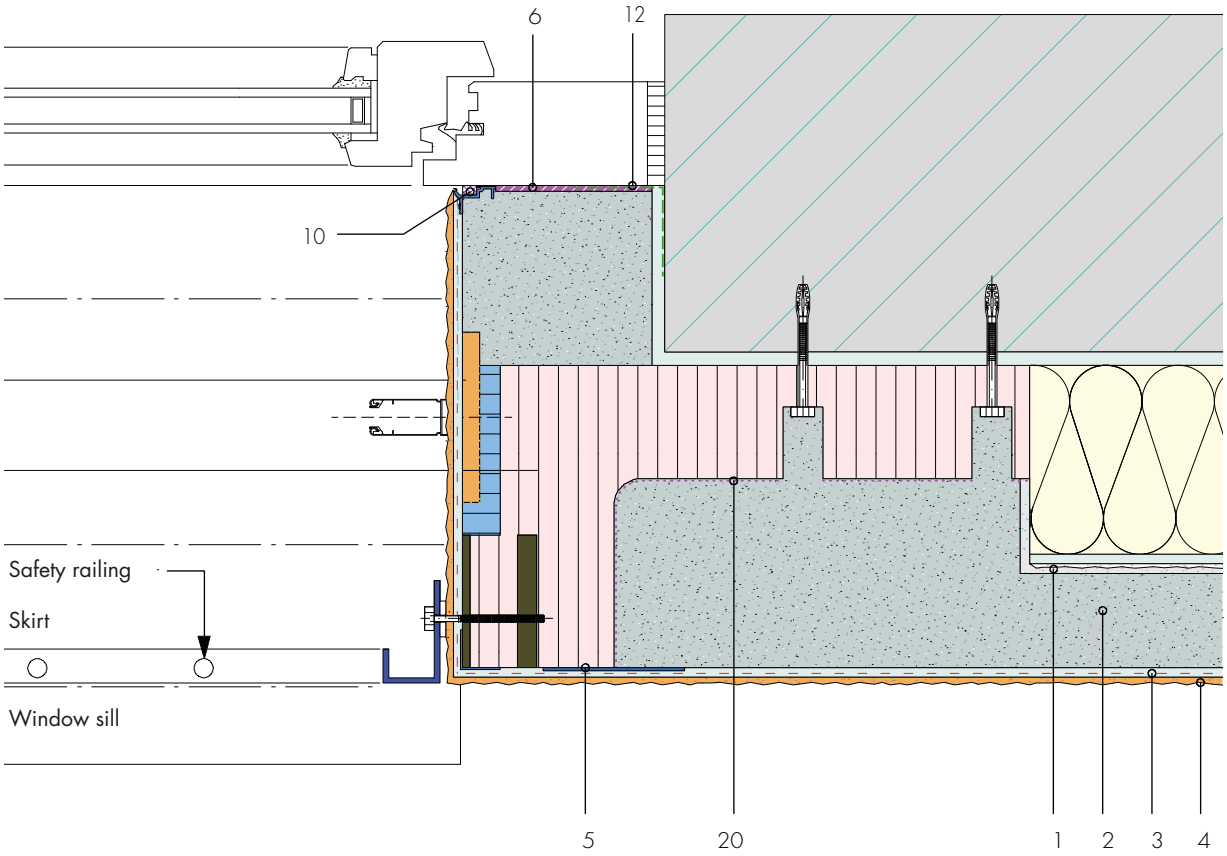
Sealing layer executed by building contractor

Detail second layer – around reveals



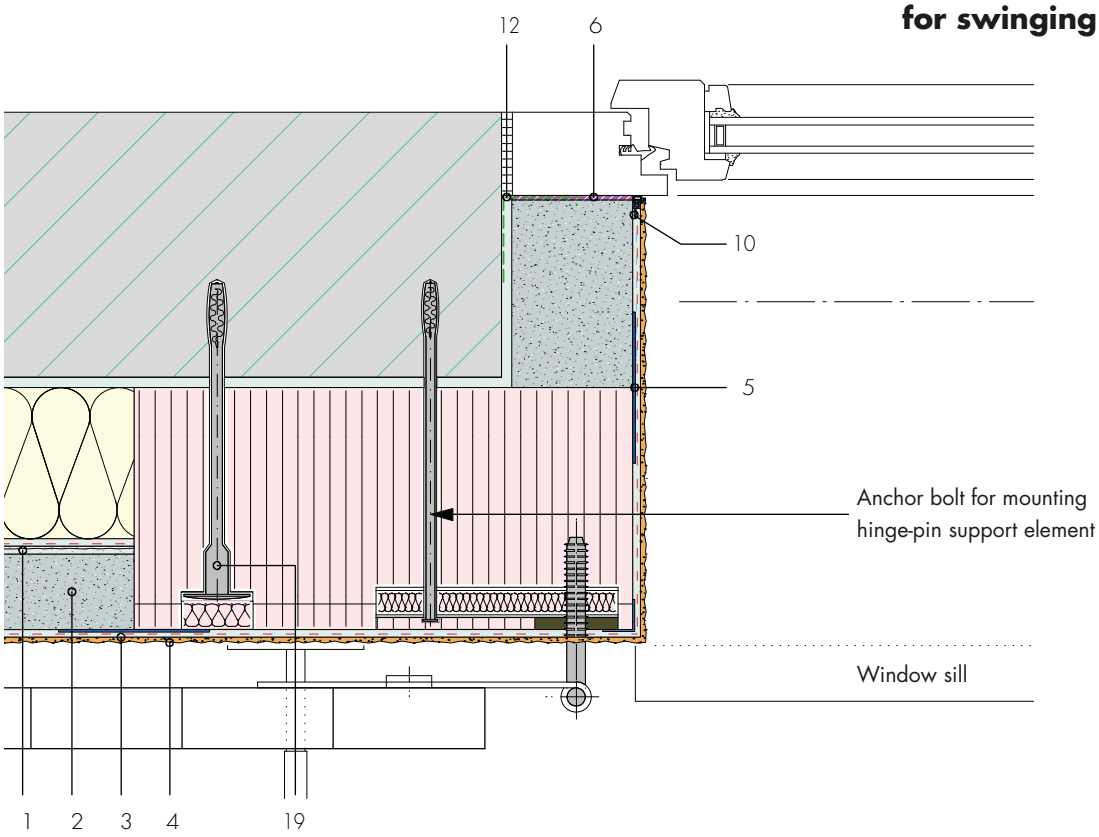
1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
6 Thermal barrier tape
10 Jointing profile with fabric inlay, 3D Profi
12 Air-tight membrane (fitted by building contractor)
21 Impact anchor bolt H1 eco

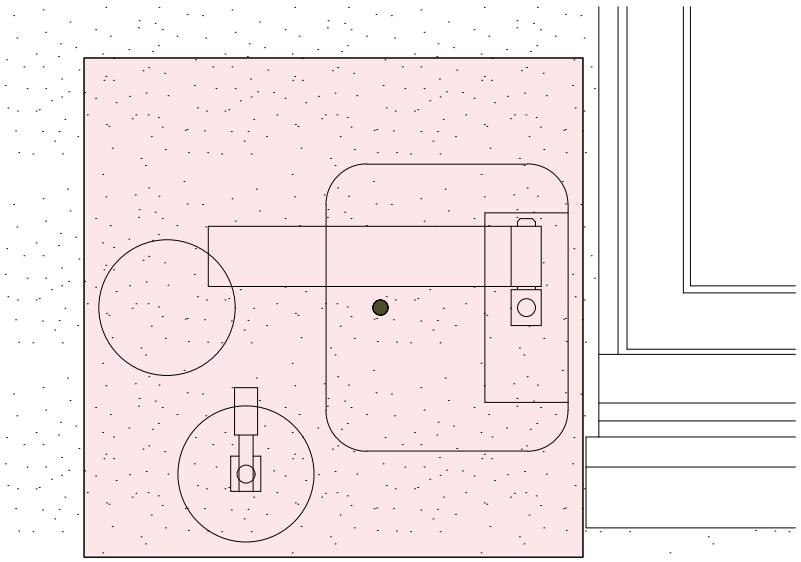
Detail second layer – around a French balcony



1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
5 Barrier textile
6 Thermal barrier tape
10 Jointing profile with fabric inlay, 3D Profi
12 Air-tight membrane
(fitted by building contractor)
20 Fixit 346 quartz special adhesive bridge

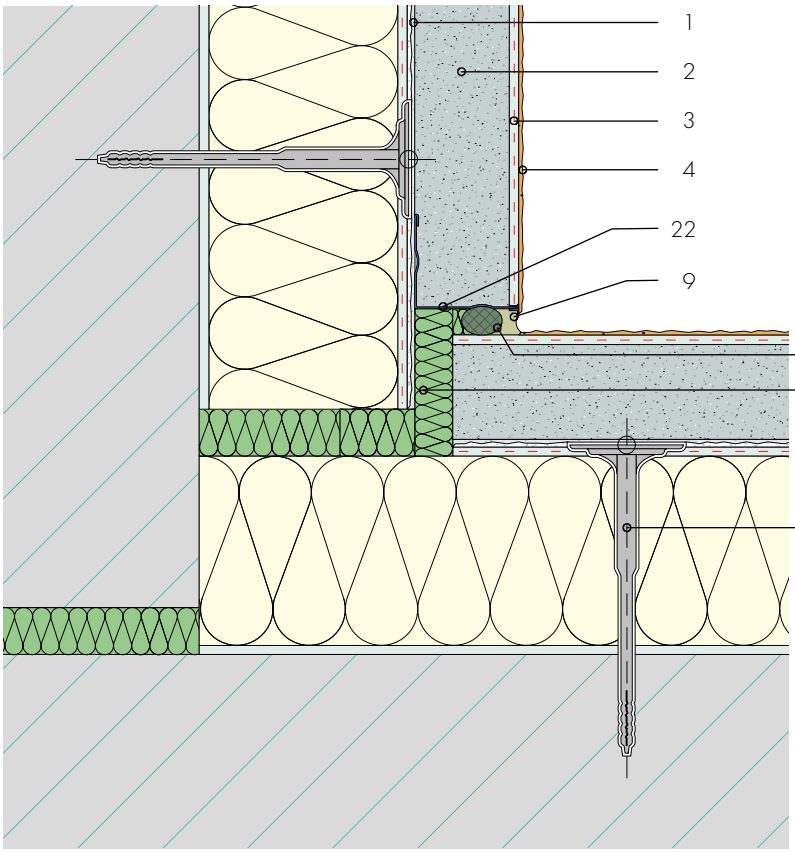
Detail second layer – around a hinge-pin support for swinging shutters



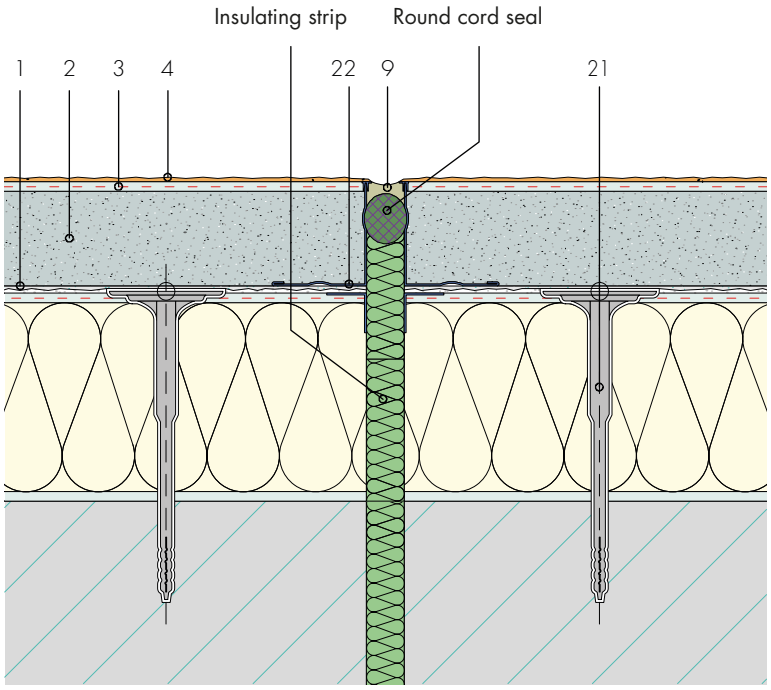


1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
5 Barrier textile
6 Thermal barrier tape
10 Jointing profile with fabric inlay, 3D Profi
12 Air-tight membrane
(fitted by building contractor)
19 Mounting anchor bolt

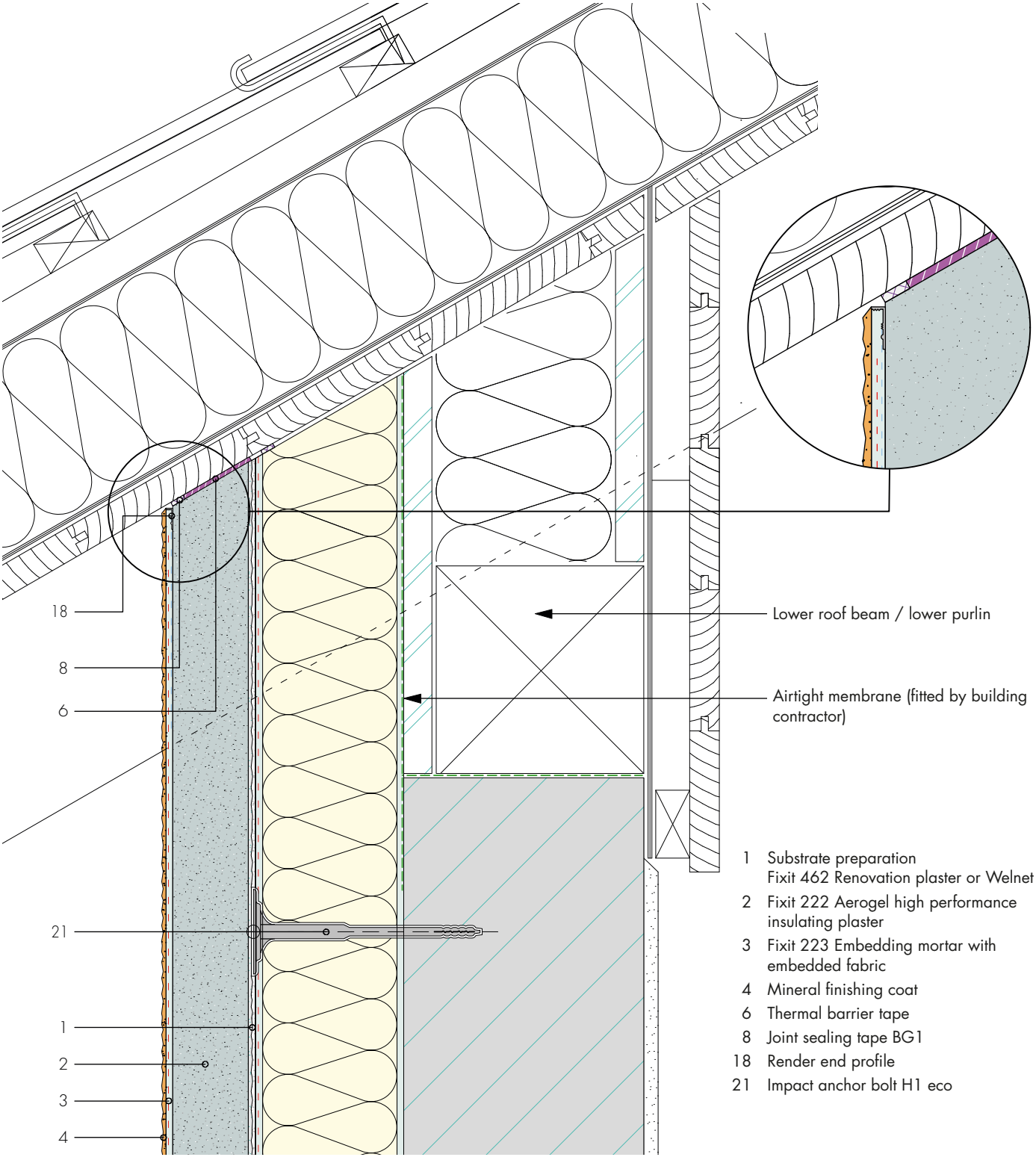
Detail second layer – around expansion joints



1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
9 Concealed sealant joint
21 Impact anchor bolt H1 eco
22 Insulating render end profile

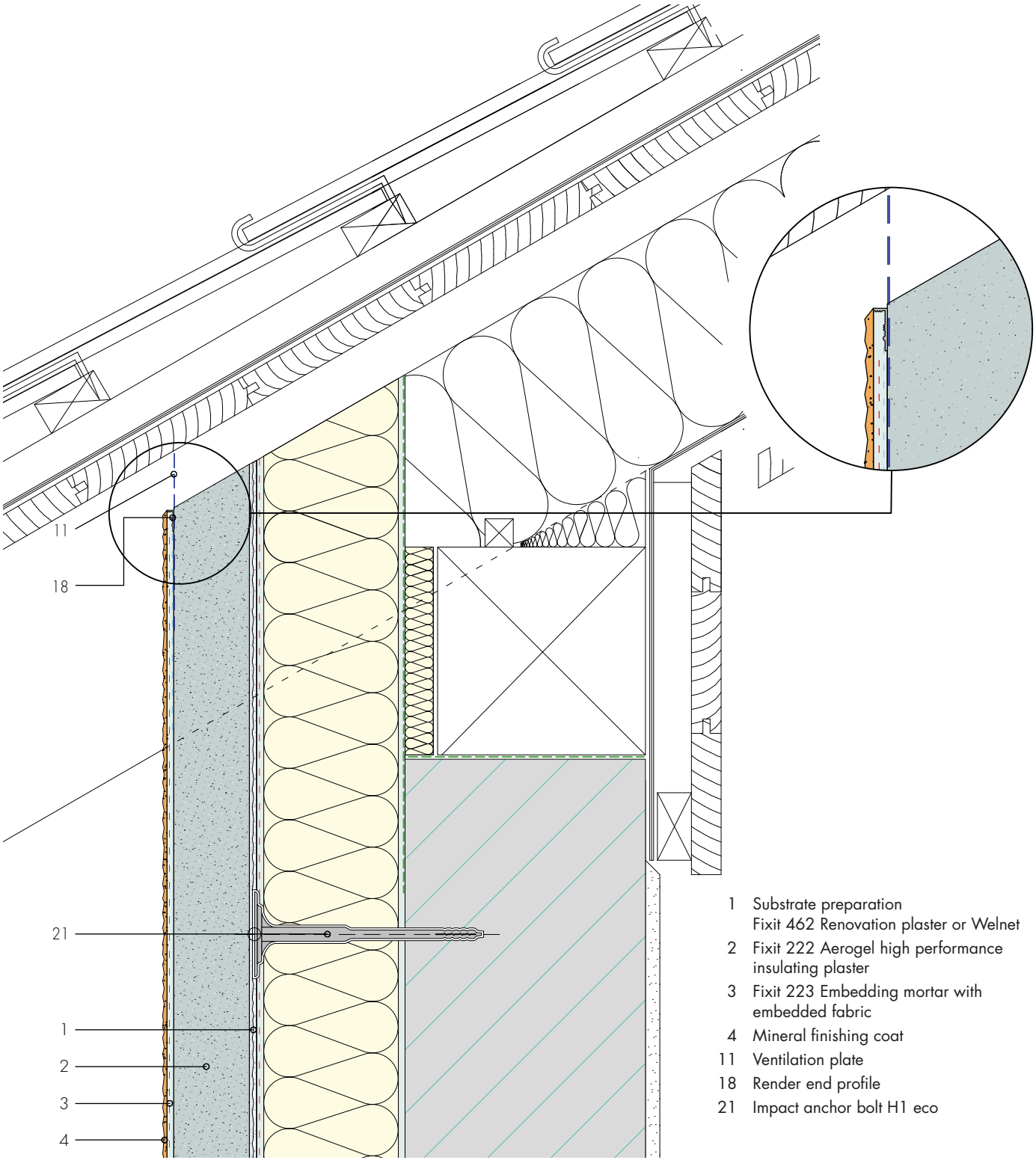


Detail second layer – single-skin unventilated roof (warm roof)



1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
6 Thermal barrier tape
8 Joint sealing tape BG1
18 Render end profile
21 Impact anchor bolt H1 eco

Detail second layer – twin-skin ventilated roof (cold roof)

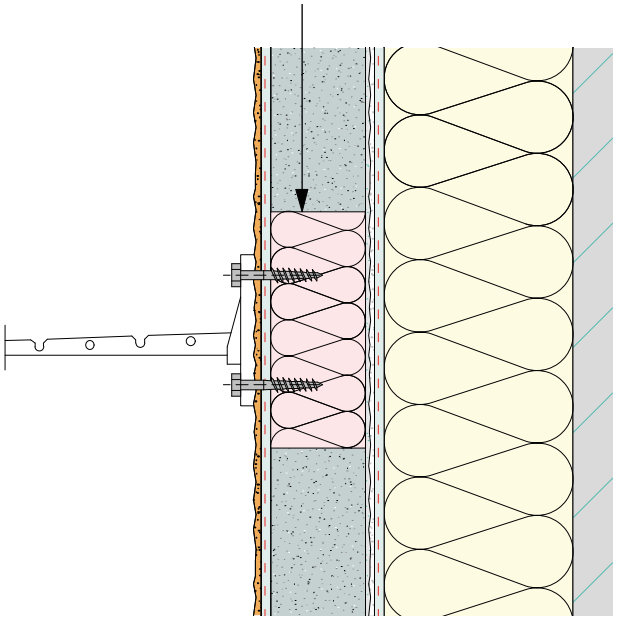


1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
11 Ventilation plate
18 Render end profile
21 Impact anchor bolt H1 eco

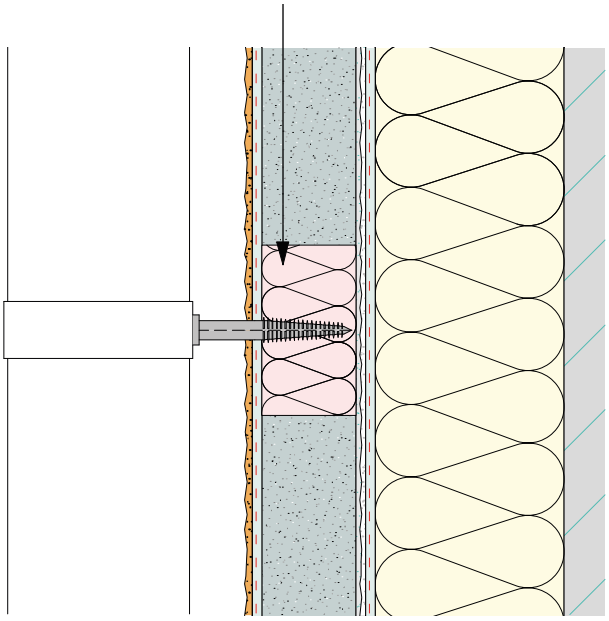
Mounting other objects

for EPS

Mounting cylinder VARIZ Ø 125 mm

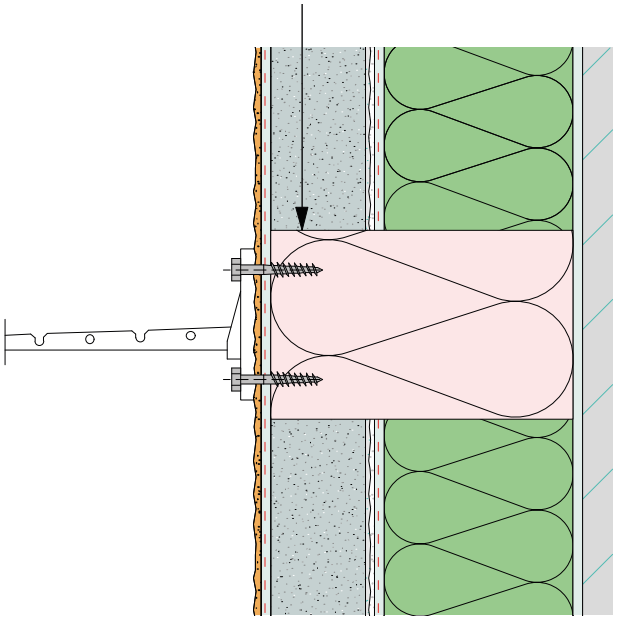


Mounting cylinder VARIZ Ø 90 mm

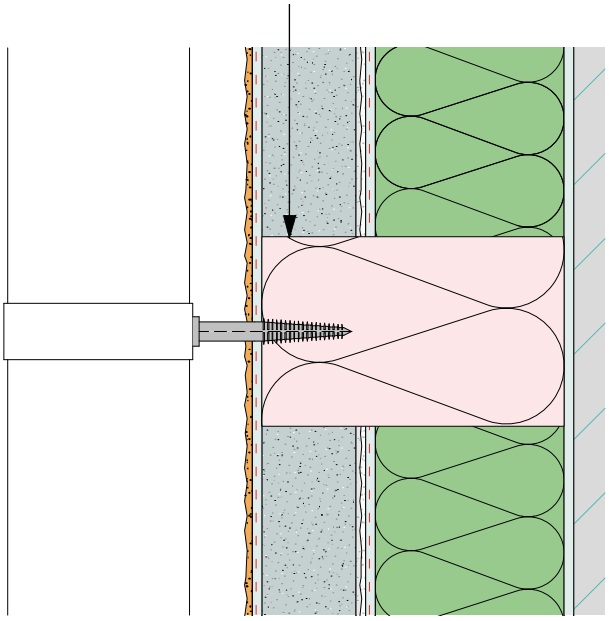


for mineral wool

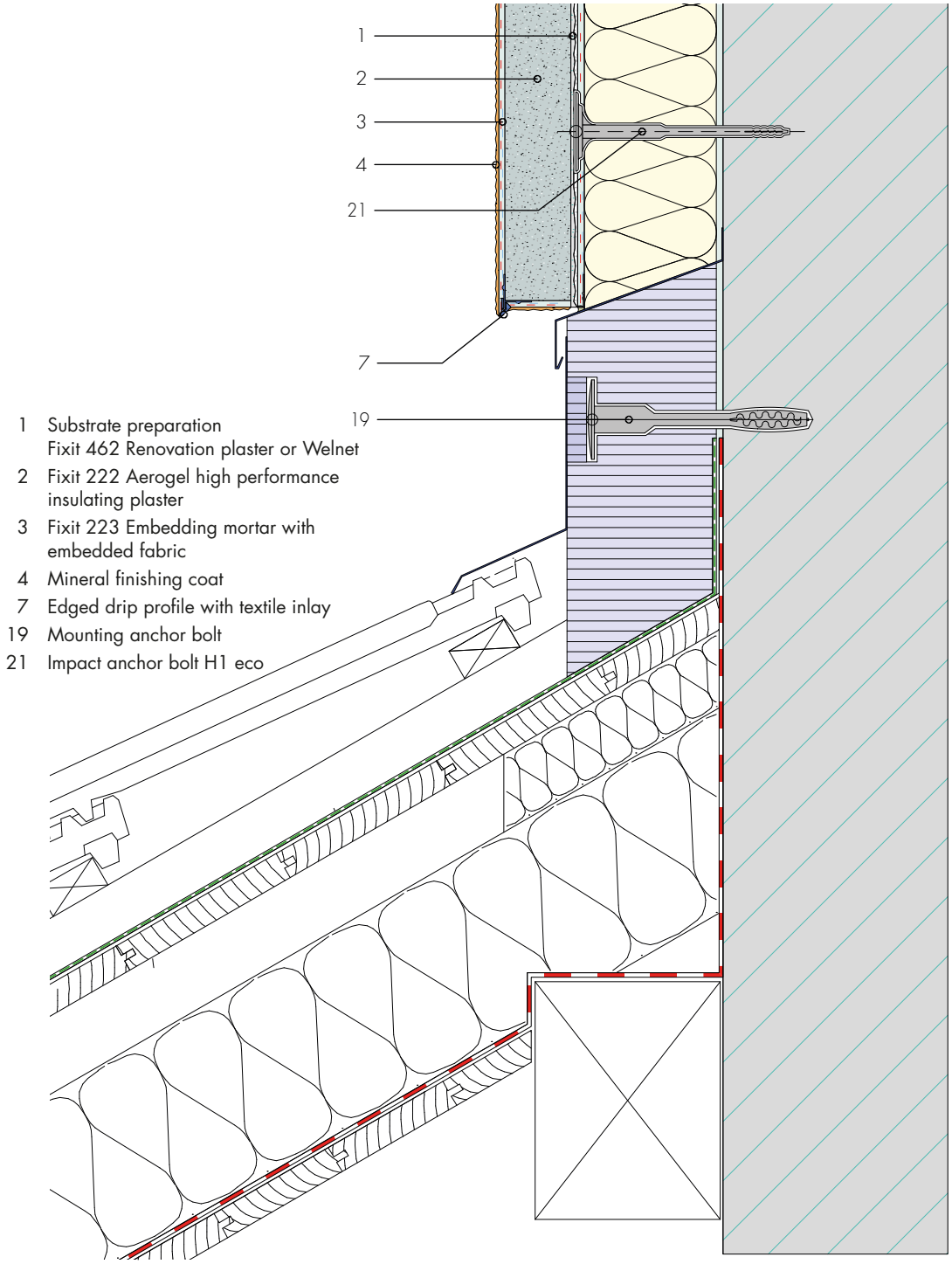
Mounting block VARIR 100 x 150 mm



Mounting block VARIR 100 x 100 mm

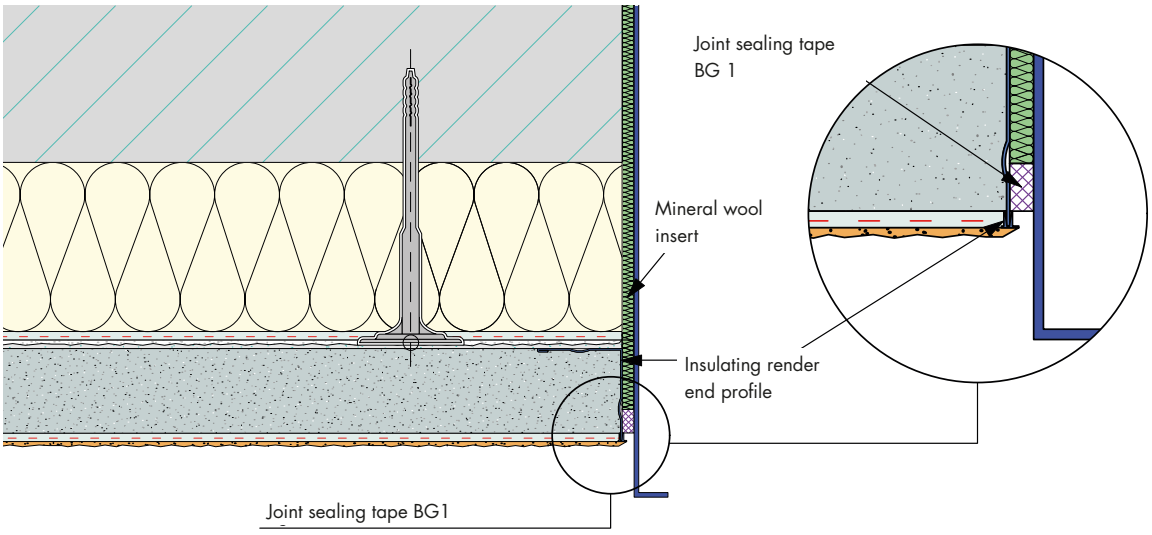


Detail second layer – joint with sloping roof

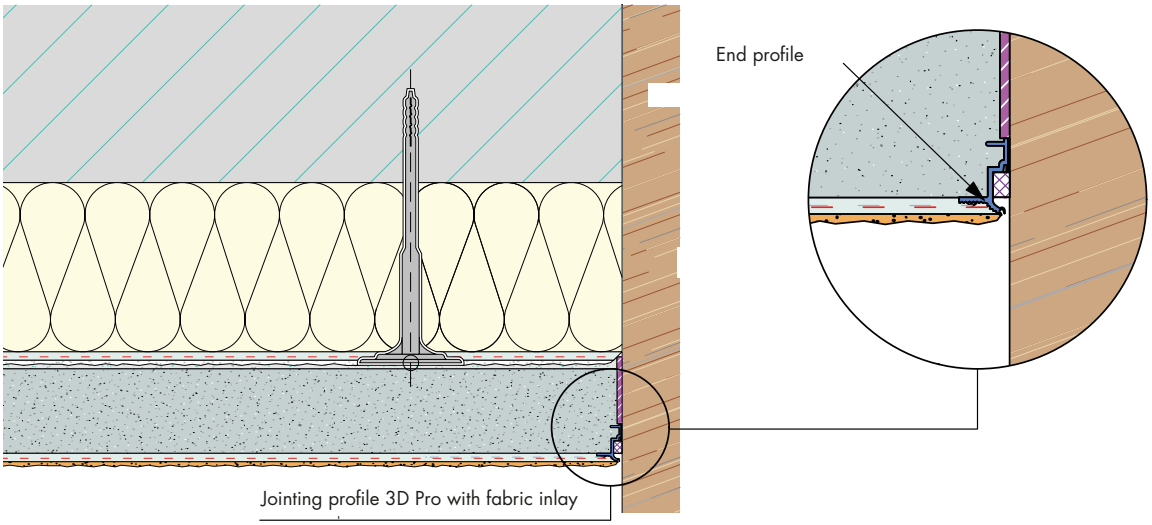


1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
7 Edged drip profile with textile inlay
19 Mounting anchor bolt
21 Impact anchor bolt H1 eco

Separating cut with pre-compressed joint sealing tape (metal door-frame)



Joint with end profile (wood)



Isokalk AS ble etablert i 2015 som Fixit AG sin representant i Norge.

Fixit AG er etablert i 1908 da de 8 største kalkgruvene i Sveits slo seg sammen. Fixit AG er morselskapet i The Fixit group, som har 2600 ansatte i 18 land.

Isokalk er superisolerende kalkmørtel med Aerogel – Det originale navnet er Fixit 222. Dette ble det viktigste resultatet av et fireårig forskninsgprosjekt i EU som het «Sustianable Renovation of Historical Buildings». Fixit 222 kom på markedet i 2012 og er i ferd med å bli et foretrukket alternativ blant antikvarer og utbyggere som skal bevare, transformere og isolere eksisterende bygningsmasse innen tegl, stein og betong.

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