



Hot Melt Waterproofing System

Standard Detail Drawings



Issue 6 – September 2017

Technical Services

Prospect Quarry
Grangemill, Matlock
Derbyshire
DE4 4BW

Tel: 01257 256888

Email: technical@ikogroup.co.uk

Web: www.ikogroup.co.uk



Standard Details List

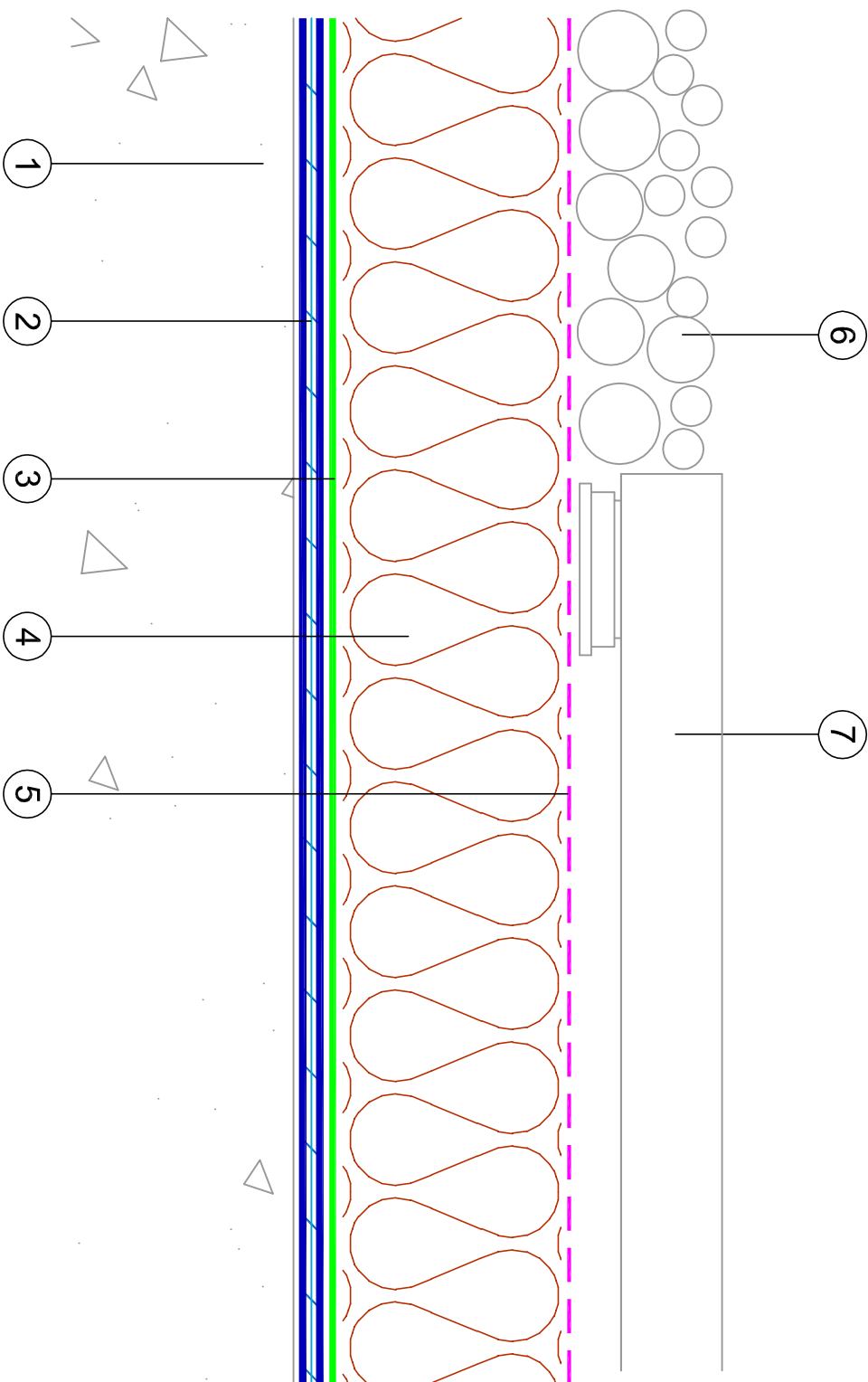
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PT.1B	Uninsulated Podium Deck Section
PT.1B(A)	Insulated Podium Deck Section
PT.1C	Inverted Roof Metal Deck Section
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Section Key

1. Concrete deck primed with PermaTEC Primer
2. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
3. PermaGUARD-F protection layer
4. IKO enertherm XPS/EPS Inverted roof insulation board.
5. IKO enertherm WCL (Water Control Layer)
6. Minimum 50mm layer of 16-32mm rounded washed aggregate
7. Minimum 50mm thick paving slabs on propiateart supports



Notes

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Wind Uplift

For buildings in sheltered regions or less than 10 storeys. A minimum load of 80Kg/m² to resist wind uplift is required.

This can be achieved with 50mm depth of 16 - 32mm rounded ballast (80Kg/m²) or 50mm thick concrete slabs (120Kg/M²).

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.ikogroup.co.uk
Email: technical@ikogroup.co.uk

Drawing Title:

TYPICAL INVERTED DECK

Date:

August 2017

Scale:

NTS

Drawn by:

ME

Revision:

Sheet No:

PT.1A

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- ## Notes

- a. The deck
- b. Bedding screed for the final finish.



TYPICAL UNINSULATED PODIUM DECK

NTS

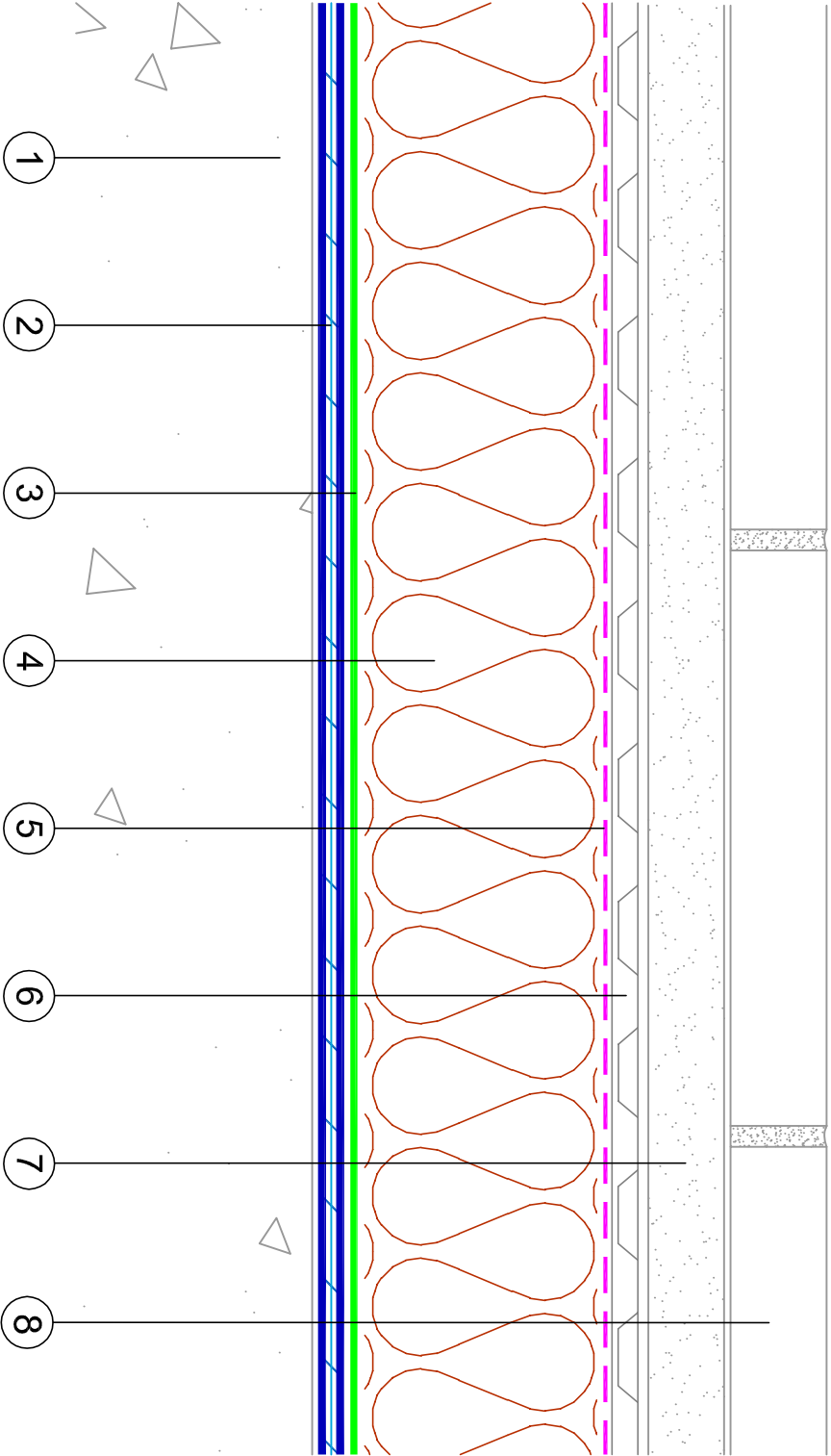
Sheet No:

PT.1B

Section Key

- 1. Concrete deck primed with PermaTEC Primer
- 2. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
- 3. PermaGUARD-F protection layer
- 4. IKO enerthem XPS/EPS Inverted roof insulation board.
- 5. IKO enerthem WCL (Water Control Layer)
- 6. IKO Plasdrain drainage layer (as specification)
- 7. Sand/cement sub-base (specified & designed by others)
- 8. Block pavours/concrete slabs (specified & designed by others)

To avoid surface ponding falls of at least 1 in 80 should be provided in either:
a. The deck
b. Bedding screed for the final finish.



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TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.ikogroup.co.uk
Email: technical@ikogroup.co.uk

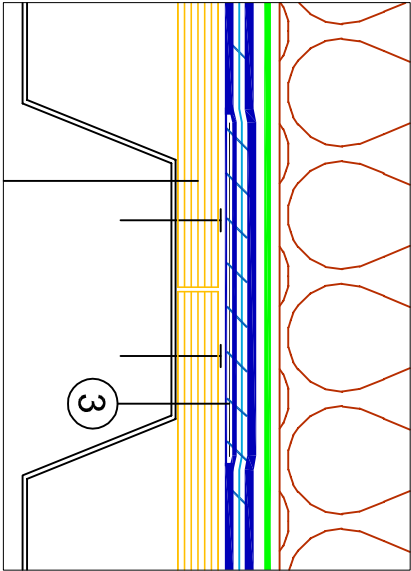
Drawing Title:
TYPICAL INSULATED PODIUM DECK

Date:	Scale:
April 2017	NTS

Drawn by:	Revision:	Sheet No:
ME		PT.1B(A)

Section Key

1. Structural metal deck
2. 18mm Plywood or moisture resistant Cement Bonded Particle Board mechanically fixed to metal deck
3. PermaFLASH-D150 bonded in PermaTEC ECOWRAP
4. 2 layers of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
5. PermaGUARD-F protection layer
6. IKO enertech XPS/EPS Inverted roof insulation board
7. IKO enertech WCL (Water Control Layer)
8. Minimum 50mm thick paving slabs on proprietary supports
9. Minimum layer of 16-32mm rounded washed aggregate



Notes

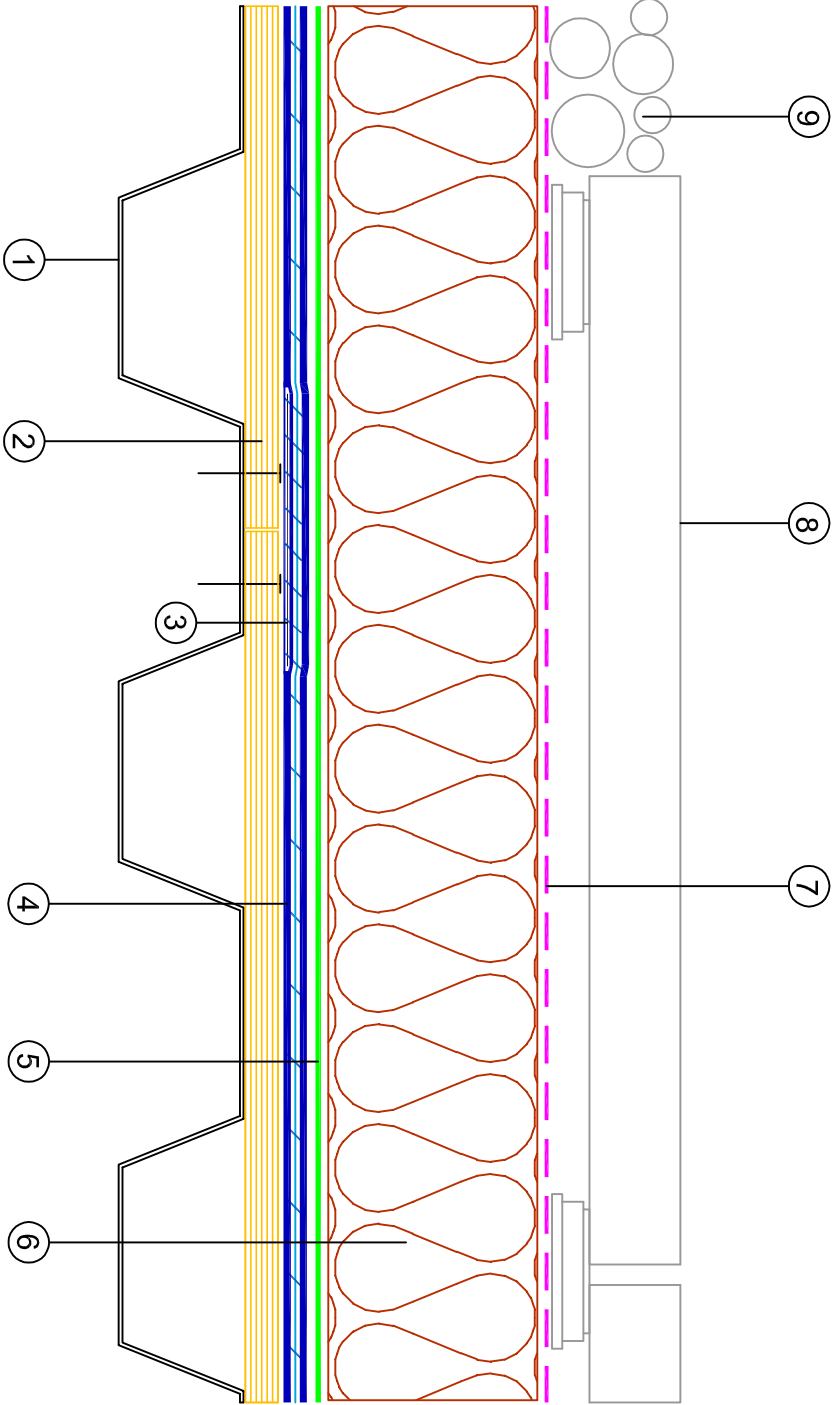
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Wind Uplift

For buildings in sheltered regions or less than 10 storeys.
A minimum load of 80Kg/m² to resist wind uplift is required.

This can be achieved with 50mm depth of 16 - 32mm rounded ballast (80Kg/m²) or 50mm thick concrete slabs (120Kg/M²).

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



Drawing Title:

**TYPICAL INVERTED ROOF
ASSEMBLY METAL DECK**

April 2017

Scale:

NTS

Drawn by:

ME

Revision:

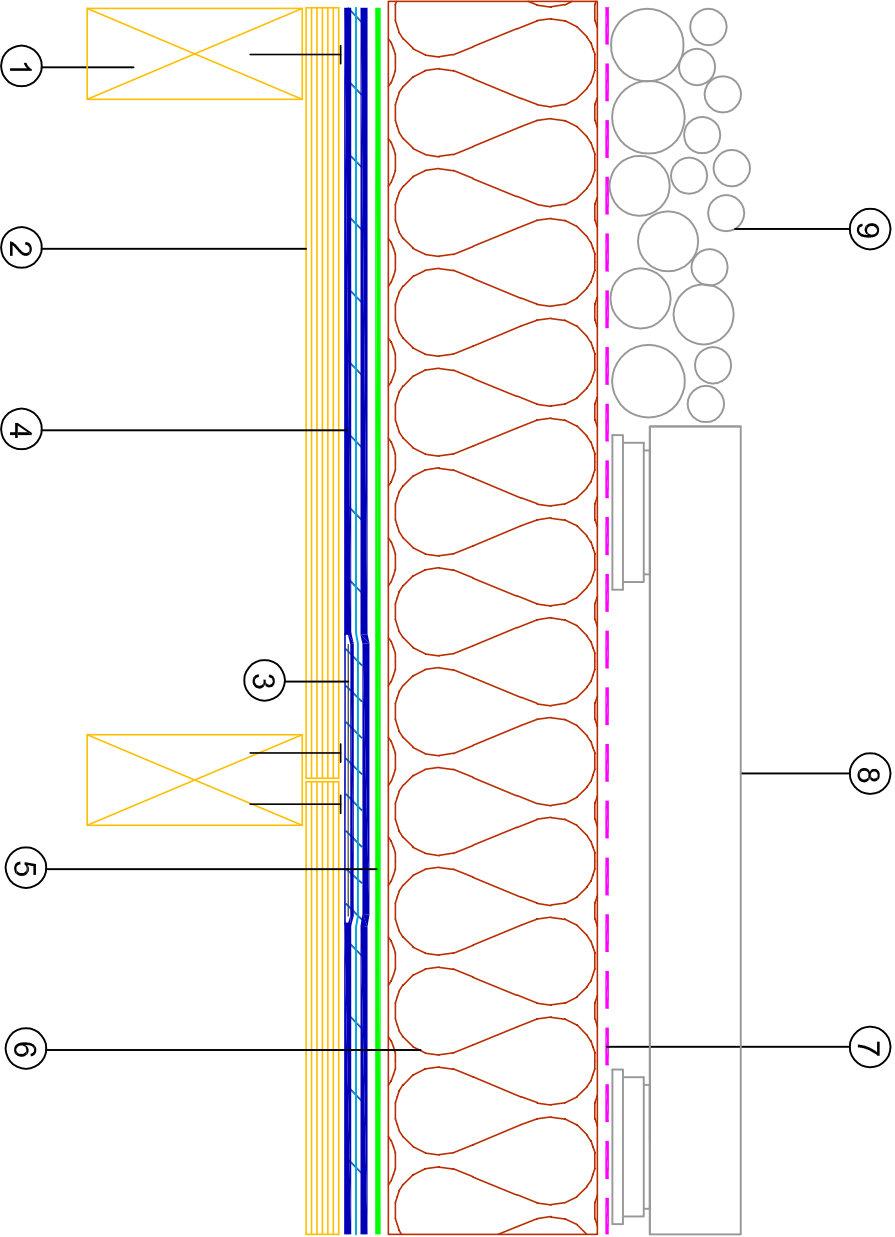
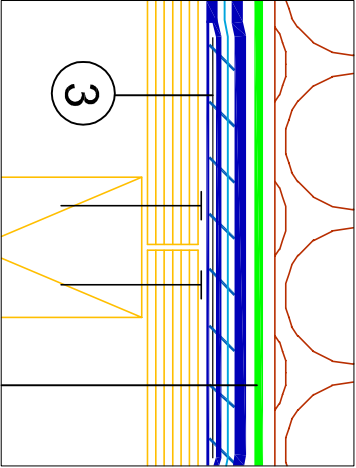
Sheet No:

PT.1C



Section Key

- 1. Timber joist
- 2. 18mm Plywood mechanically fixed to timber joists
- 3. PermaFLASH-D150 bonded in PermaTEC ECOWRAP
- 4. 2 layers of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
- 5. PermaGUARD-F protection layer
- 6. IKO enertherm XPS/EPS Inverted roof insulation board
- 7. IKO enertherm WCL (Water Control Layer)
- 8. Minimum 50mm thick paving slabs on proprietary supports
- 9. Minimum layer of 16-32mm rounded washed aggregate



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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load of 80Kg/m² to resist wind uplift is required.

This can be achieved with 50mm depth of 16 - 32mm rounded ballast (80Kg/m²) or 50mm thick concrete slabs (120Kg/M²).

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.ikogroup.co.uk T
Email: technical@ikogroup.co.uk

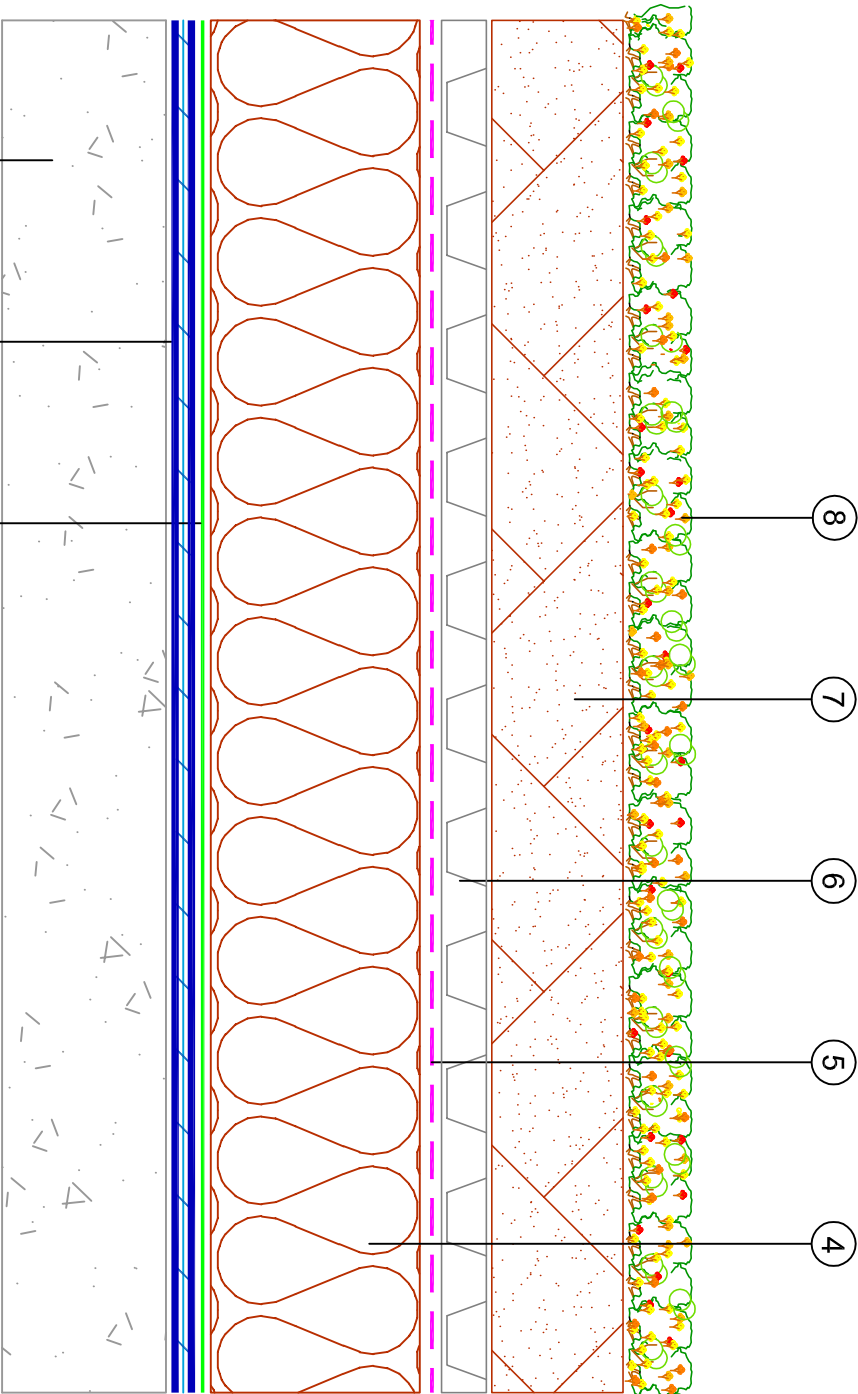
Drawing Title:
**TYPICAL INVERTED ROOF
ASSEMBLY PLYWOOD DECK**

April 2017	Scale: NTS
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Drawn by: ME	Revision:	Sheet No: PT.1D
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Section Key

- 1. Concrete deck primed with PermaTEC Primer
- 2. 2 coats of PermaTEC AntiRoot incorporating PermaFLASH-R reinforcement
- 3. PermaGUARD - F protection layer
- 4. IKO enertherm XPS/EPS Inverted roof insulation board
- 5. IKO enertherm WCL (Water Control Layer)
- 6. IKO Plasfeed drainage/moisture retention layer (as specification)
- 7. IKO Extensive Growing Medium
- 8. IKO Sedum blanket/ Plug plant



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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load over the insulation of 80Kg/m² to resist wind uplift is required.

For a green roof the growing medium dry weight must be used in order to achieve the minimum 80Kg/m² load.

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEHILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01297 256888
Internet: www.ikogroup.co.uk
Email: technical@ikogroup.co.uk

Drawing Title:

TYPICAL EXTENSIVE GREEN ROOF

April 2015

Scale: NTS

Drawn by:

ME

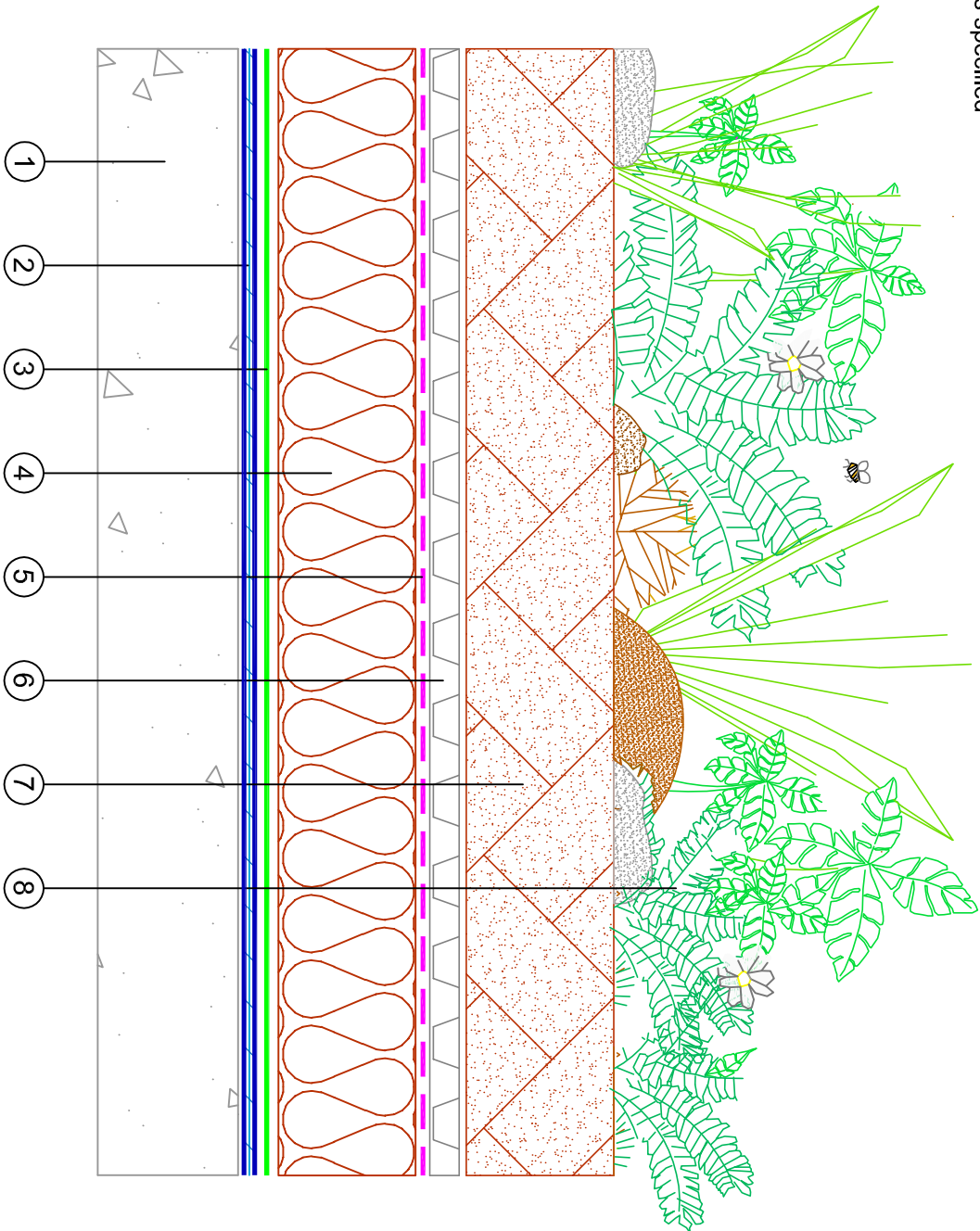
Revision:

Sheet No:

PT.1E

Section Key

1. Concrete deck primed with PermaTEC Primer
2. 2 coats of PermaTEC AntiRoot incorporating PermaFLASH-R reinforcement
3. PermaGUARD - F protection layer
4. IKO enerthem XPS/EPS Inverted roof insulation board.
5. IKO enerthem WCL (Water Control Layer)
6. IKO Plasfeed drainage/moisture retention layer (as specification)
7. IKO Intensive Growing Medium
8. Vegetation as specified



Notes

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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load over the insulation of 80Kg/m² to resist wind uplift is required.

For a green roof the growing medium dry weight must be used in order to achieve the minimum 80Kg/m² load.

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



Drawing Title:

**TYPICAL INTENSIVE GREEN ROOF
BUILD UP**

April 2017

Scale: NTS

Drawn by:

ME

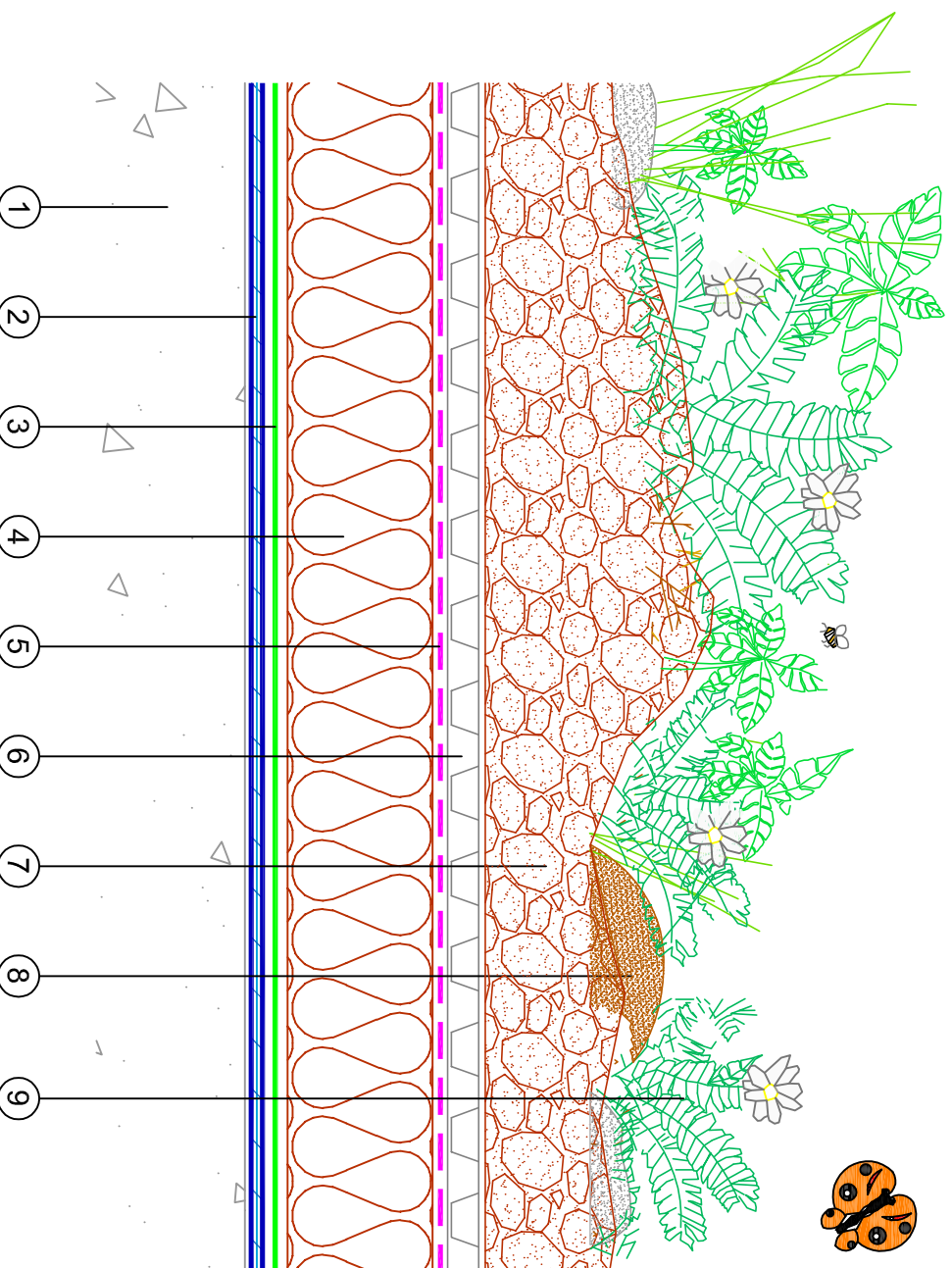
Revision:

PT.1F

Sheet No:

Section Key

1. Concrete deck primed with PermaTEC Primer
2. 2 coats of PermaTEC AntiRoot incorporating PermaFLASH-R reinforcement
3. PermaGUARD - F protection layer
4. IKO enertherm XPS/EPS Inverted roof insulation board.
5. IKO enertherm WCL (Water Control Layer)
6. IKO Plasteed drainage/moisture retention layer (as specification)
7. IKO Biodiverse Growing Medium, mounded between minimum 70mm up to about 200mm.
8. Optional logs and Insect Houses
9. Vegetation as specified, to enhance the pre-development habitat & attract specific wildlife



Notes

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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load over the insulation of 80Kg/m² to resist wind uplift is required.

For a green roof the growing medium dry weight must be used in order to achieve the minimum 80Kg/m² load.

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.

IKO PermaTEC
Hot Melt Waterproofing System

TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01297 236988
Internet: www.iko-group.co.uk
Email: technical@iko-group.co.uk

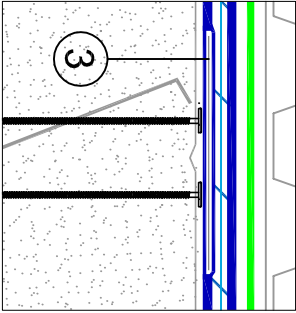
Drawing Title:
**TYPICAL BIODIVERSE GREEN ROOF
BUILD UP**

July 2017 Scale: NTS

Drawn by: ME Revision: PT, 1(F/A) Sheet No:

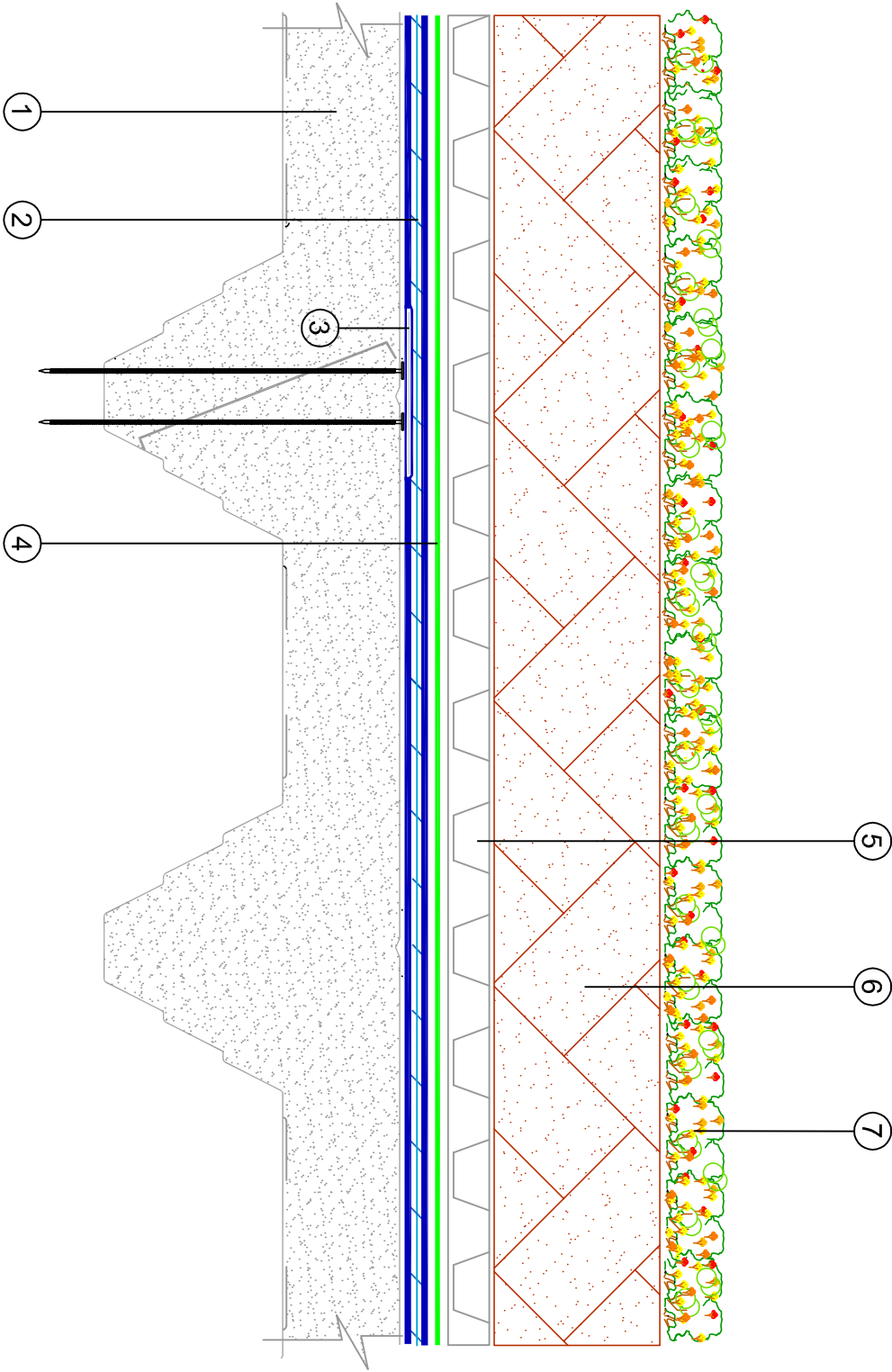
Section Key

1. Compatible composite insulated roof deck
2. 2 coats of PermaTEC AntiRoot incorporating PermaFLASH-R reinforcement
3. 150mm wide PermaFLASH-D150 bonded in PermaTEC AntiRoot
4. PermaGuard-F protection layer
5. IKO Plasfeed drainage/moisture retention layer (as specification)
6. IKO Extensive Growing Medium
7. IKO Sedum blanket/ Plug plant



Notes

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TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256688
Internet: www.iko-group.co.uk
Email: technical@iko-group.co.uk

Drawing Title:
**TYPICAL EXTENSIVE GREEN ROOF
SECTION ON COMPOSITE INSULATED
ROOF DECK**

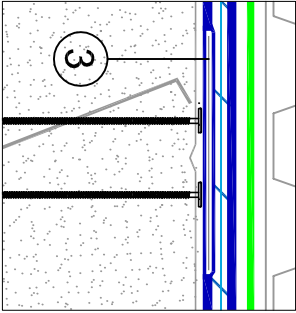
April 2015

Scale: NTS

Drawn by:	Revision:	Sheet No:
ME		PT.1G

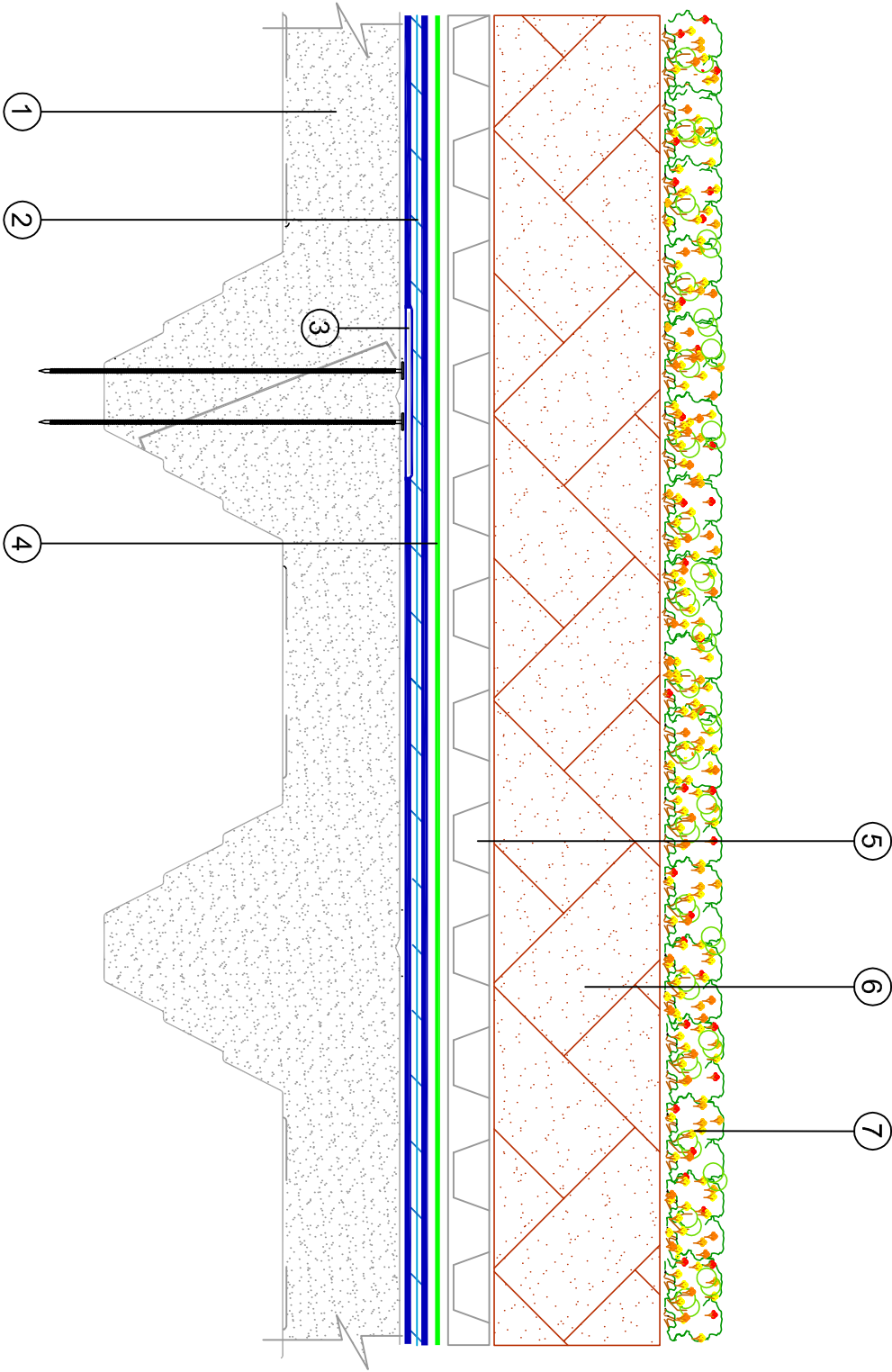
Section Key

1. Compatible composite insulated roof deck
2. 2 coats of PermaTEC AntiRoot incorporating PermaFLASH-R reinforcement
3. 150mm wide PermaFLASH-D150 bonded in PermaTEC AntiRoot
4. PermaGuard-F protection layer
5. IKO Plasfeed drainage/moisture retention layer (as specification)
6. IKO Extensive Growing Medium
7. IKO Sedum blanket/ Plug plant



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TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256688
Internet: www.iko-group.co.uk
Email: technical@iko-group.co.uk

Drawing Title:
**TYPICAL EXTENSIVE GREEN ROOF
SECTION ON COMPOSITE INSULATED
ROOF DECK**

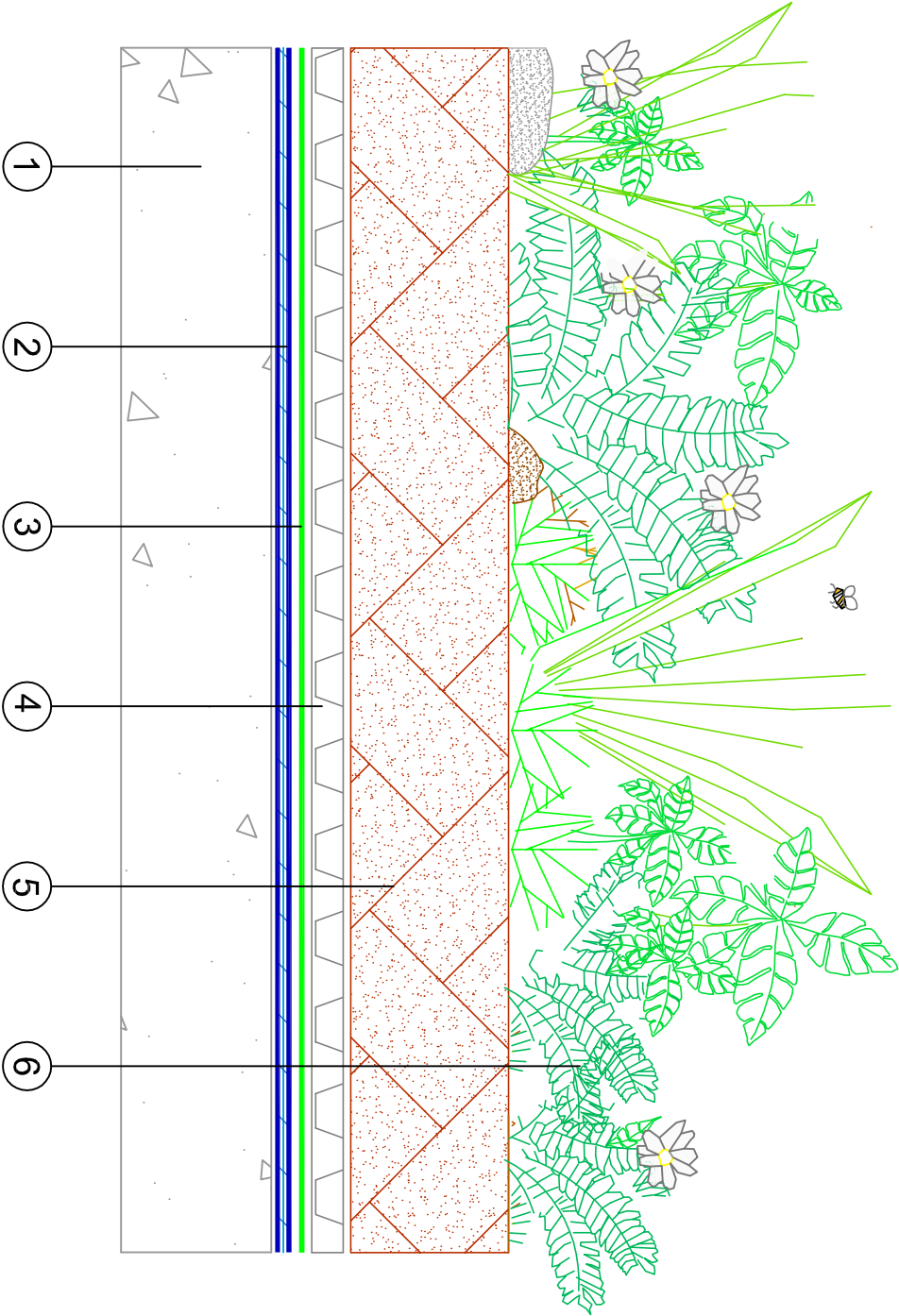
April 2015

Scale:
NTS

Drawn by:	Revision:	Sheet No:
ME		PT.1G

Section Key

- 1. Concrete deck primed with PermaTEC Primer
- 2. 2 coats of PermaTEC AntiRoot incorporating PermaFLASH-R reinforcement
- 3. PermaGUARD-F protection layer
- 4. IKO Plasfeed drainage/moisture retention layer (as specification)
- 5. IKO Intensive Growing Medium
- 6. Vegetation as specified



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TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01297 250588
Internet: www.iko-group.co.uk T
Email: technical@iko-group.co.uk

Drawing Title:

**TYPICAL UNINSULATED
INTENSIVE GREEN ROOF - BUILD UP**

Date:

April 2017

Scale:

NTS

Drawn by:

ME

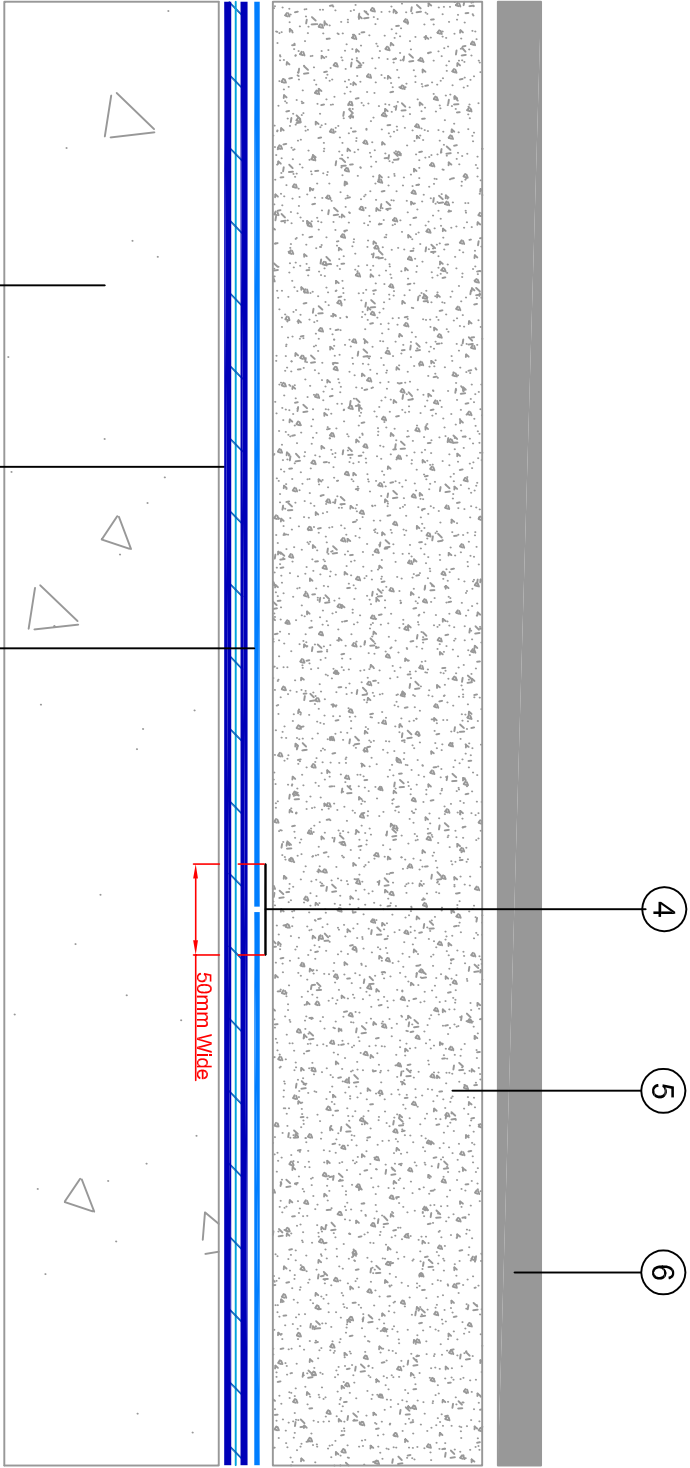
Revision:

Sheet No:

PT.1H

Section Key

1. Concrete deck primed with PermaTEC Primer
2. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
3. PermaGUARD HDPB (Heavy Duty Protection Board)
4. 50mm wide tape over joints
5. Macadam Base Course
6. Macadam Wearing Course



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Drawing Title:

**TYPICAL FLEXIBLE PAVEMENT
OVER PERMATEC**

Date:

April 2017

Scale:

NTS

Drawn by:

ME

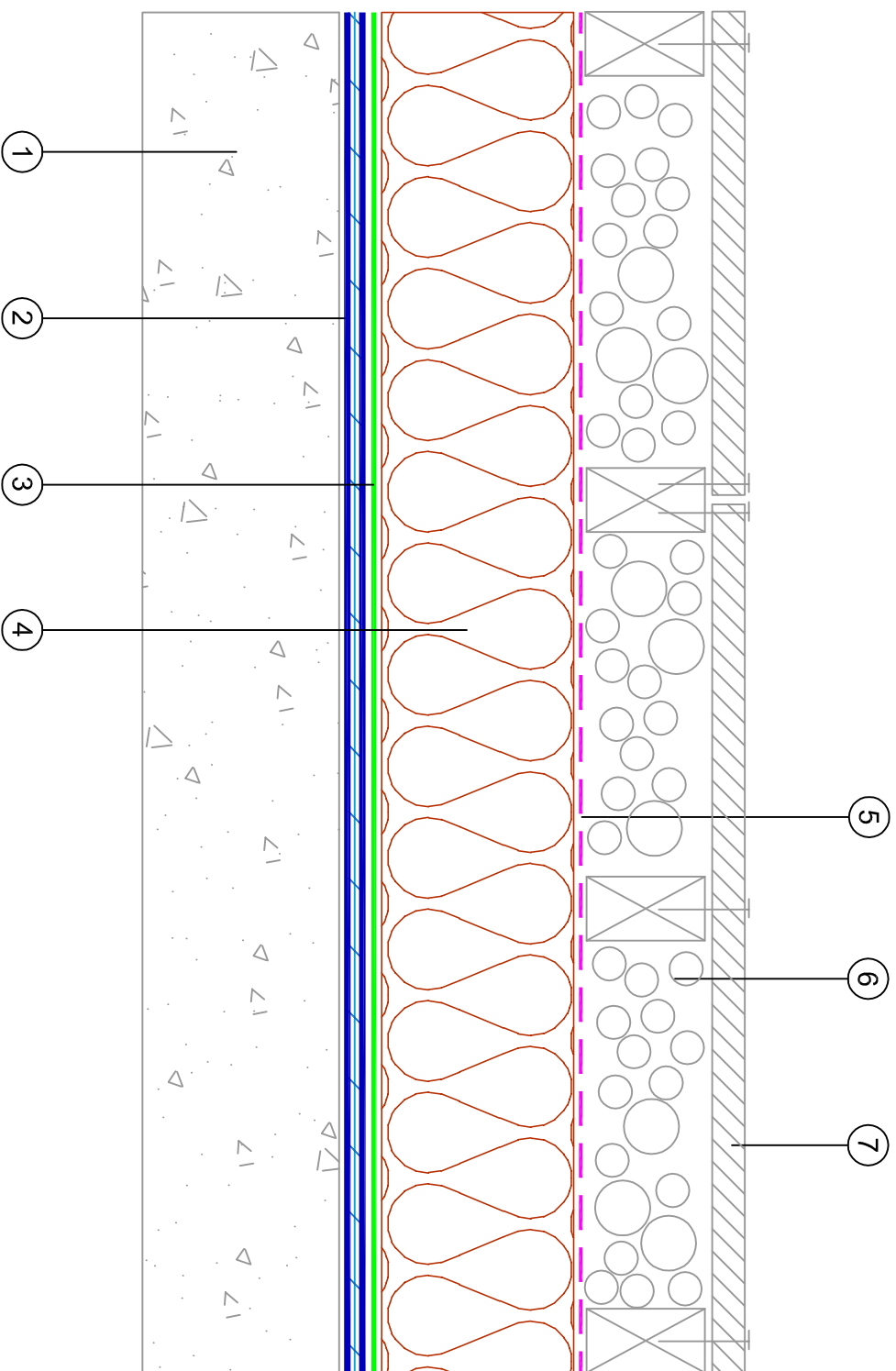
Revision:

PT.1J

Sheet No:

Section Key

1. Concrete deck primed with PermaTEC Primer
2. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
3. PermaGUARD-F protection layer
4. IKO enerthem XPS/EPS Inverted roof insulation board
5. IKO enerthem WCL (Water Control Layer)
6. Minimum 50mm layer of 20 - 40mm rounded washed aggregate
7. Timber deck on timber joists (Specified and designed by others)



Notes

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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load of 80Kg/m² to resist wind uplift is required.

For timber decking it is usual to specify 50mm deep rounded ballast between the supports, in order to achieve the minimum 80kg/m² load.

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.ikogroup.co.uk
Email: technical@ikogroup.co.uk

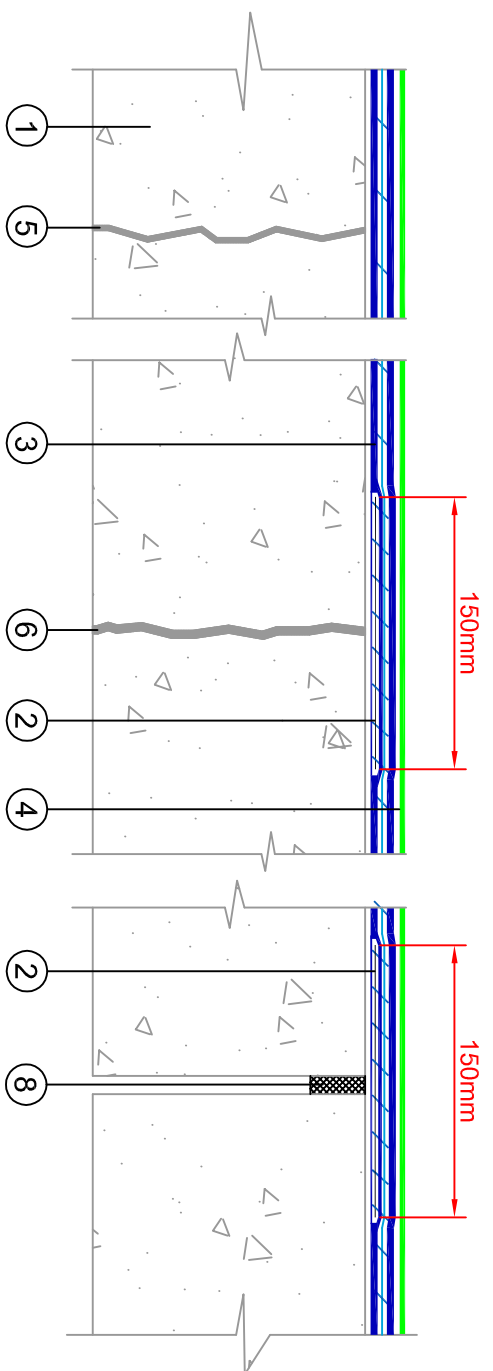
Drawing Title:
**TYPICAL INVERTED ROOF WITH
TIMBER DECKING**

April 2017	Scale: NTS
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Drawn by: ME	Revision:	Sheet No: PT.1K
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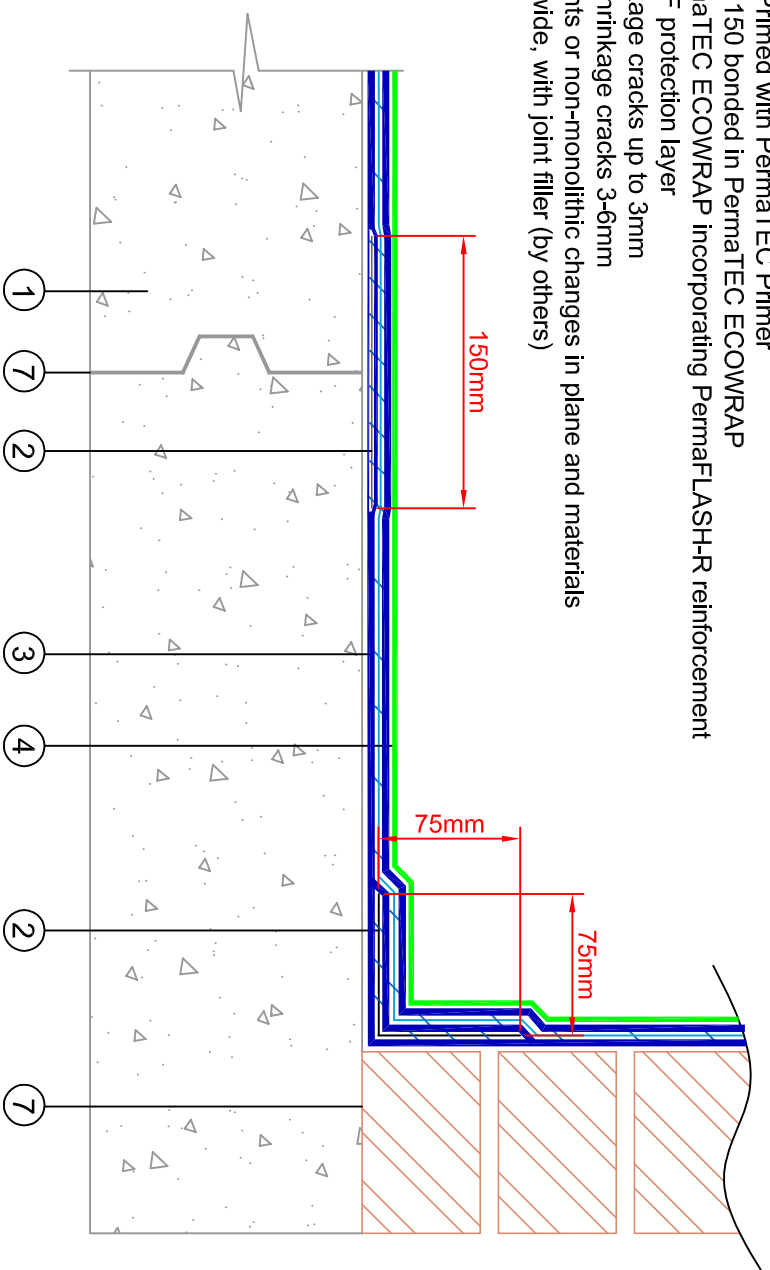
Section Key

Up To 3mm Cracks

3-6mm Cracks

6-12mm Joint

1. Concrete Deck Primed with PermaTEC Primer
2. PermaFLASH-D150 bonded in PermaTEC ECOWRAP
3. 2 layers of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
4. PermaGUARD-F protection layer
5. Structural/shrinkage cracks up to 3mm
6. Structural and shrinkage cracks 3-6mm
7. Construction joints or non-monolithic changes in plane and materials
8. Joints 6-12mm wide, with joint filler (by others)



TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, NATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.ikogroup.co.uk
Email: technical@ikogroup.co.uk

Drawing Title:

**CRACK AND JOINT
REINFORCEMENT DETAILS**

Date:

April 2017

Scale:

NTS

Drawn by:

ME

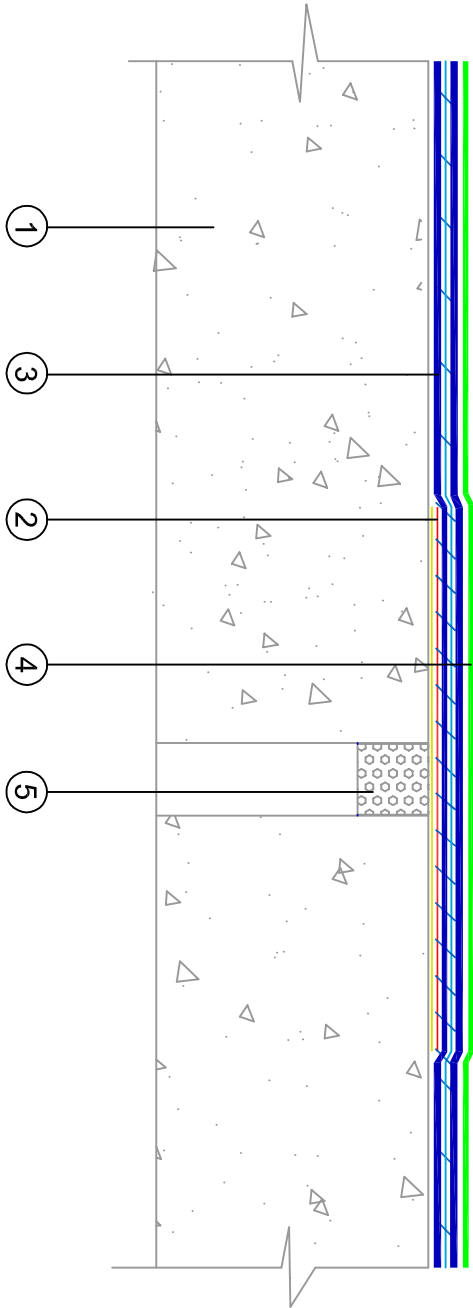
Revision:

PT 2A

Sheet No:

Section Key

- 1. Concrete deck primed with PermaTEC Primer
- 2. Proprietary expansion joint membrane installed in accordance with manufacturer's instructions (by others)
- 3. 2 layers of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
- 4. PermaGUARD-F protection layer
- 5. Joint filler board (by others)



NB: 12 - 50MM GAP. MAXIMUM 50% TOTAL MOVEMENT

Notes

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IKO PermaTEC
Hot Melt Waterproofing System

TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEWILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 290808
Internet: www.iko-group.co.uk
Email: technical@iko-group.co.uk

Drawing Title:

TYPICAL EXPANSION JOINT DETAIL

Date:

April 2017

Scale:

NTS

Drawn by:

ME

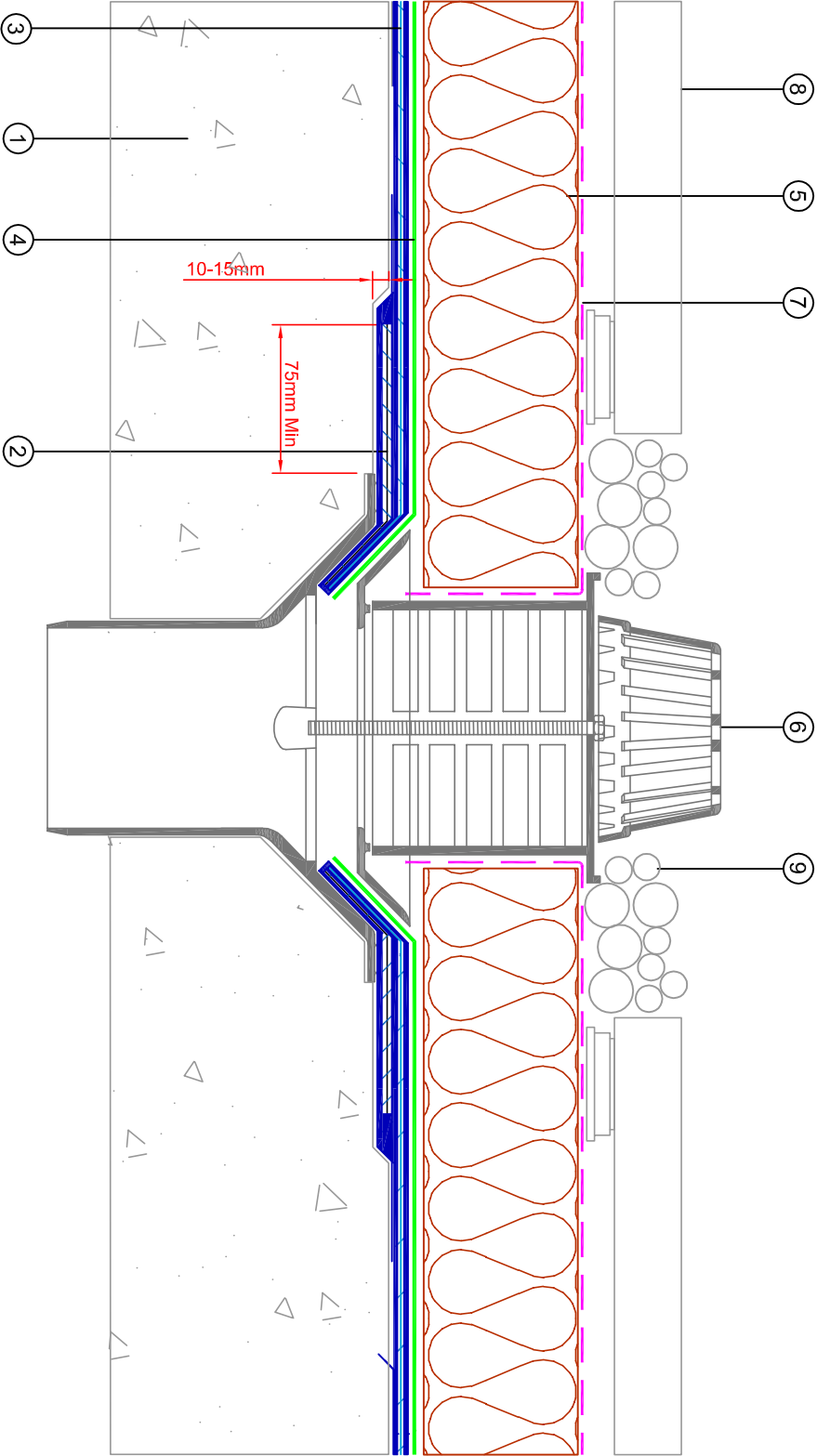
Revision:

PT.2B

Sheet No:

Section Key

1. Concrete slab primed with PermaTEC Primer
2. PermaFLASH-D500 bonded in PermaTEC ECOWRAP
3. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
4. PermaGUARD-F protection layer
5. IKO enertherm XPS/EPS Inverted roof insulation board
6. IKO Vertical Spigot Roof Outlet with Extension Ring & Domed Grate. Sealed to downpipe
7. IKO enertherm WCL (Water Control Layer)
8. Minimum 50mm thick paving slabs on proprietary supports
9. Minimum 50mm layer of 16-32mm rounded washed aggregate



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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load of 80Kg/m² to resist wind uplift is required.

This can be achieved with 50mm depth of 16 - 32mm rounded ballast (80Kg/m²) or 50mm thick concrete slabs (120Kg/m²).

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



Drawing Title:

**TYPICAL RAINWATER OUTLET
INVERTED ROOF**

Date:

April 2017

Scale:

NTS

Drawn by:

ME

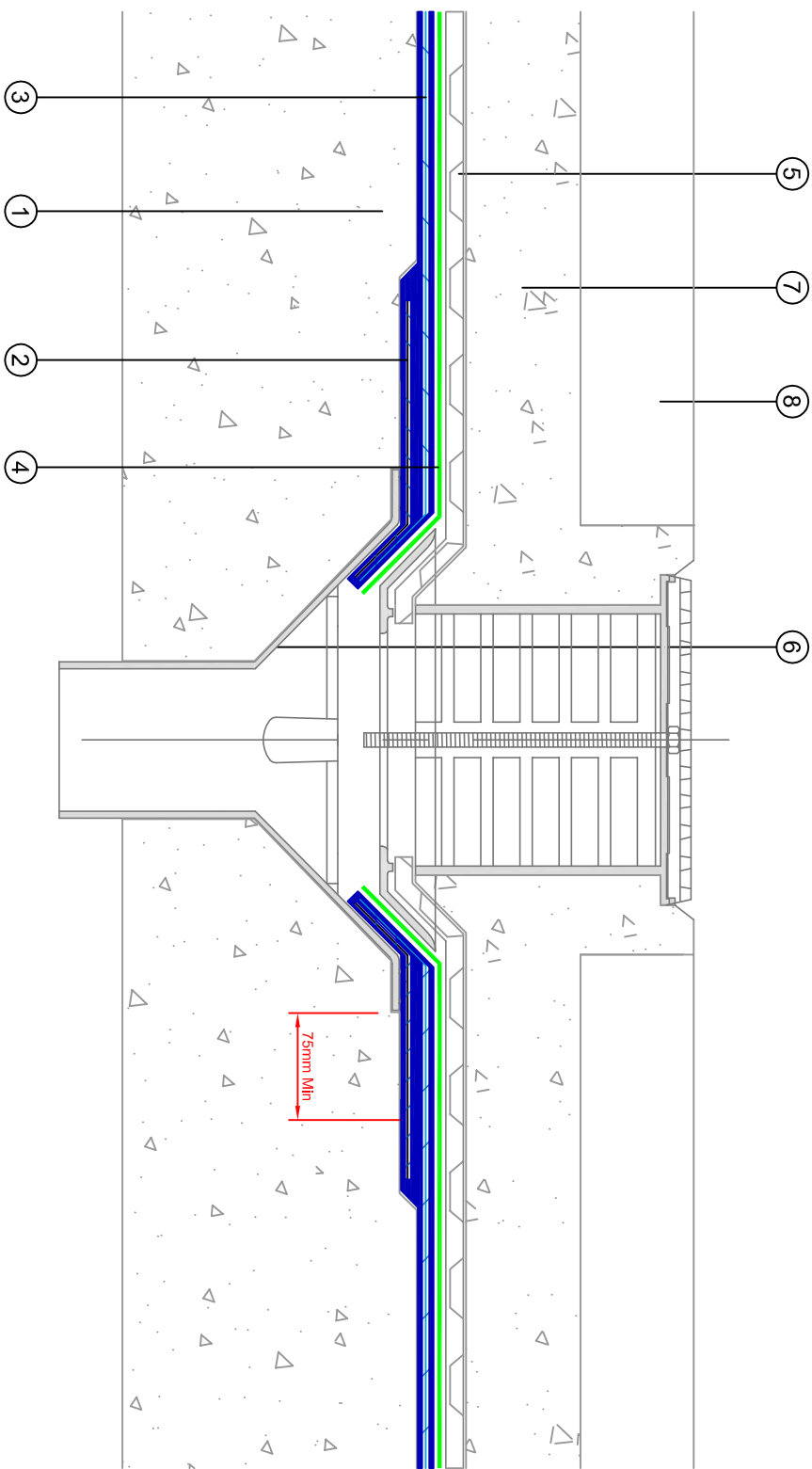
Revision:

PT.3A

Sheet No:

Section Key

1. Concrete slab primed with PermaTEC Primer
2. 500mm wide PermaFLASH-D500 bedded in PermaTEC ECOWRAP
3. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
4. PermaGUARD-F protection layer
5. IKO Plasdrain drainage layer (as specification)
6. IKO Vertical Spigot Roof Outlet with Extension Ring & Flat Grate. Sealed to down pipe
7. Bedding material (by others)
8. Paving material (by others)



Notes

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TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.ikogroup.co.uk
Email: technical@ikogroup.co.uk

Drawing Title:

**TYPICAL RAINWATER OUTLET –
UNINSULATED PODIUM DECK**

Date:

April 2017

Scale:

NTS

Drawn by:

ME

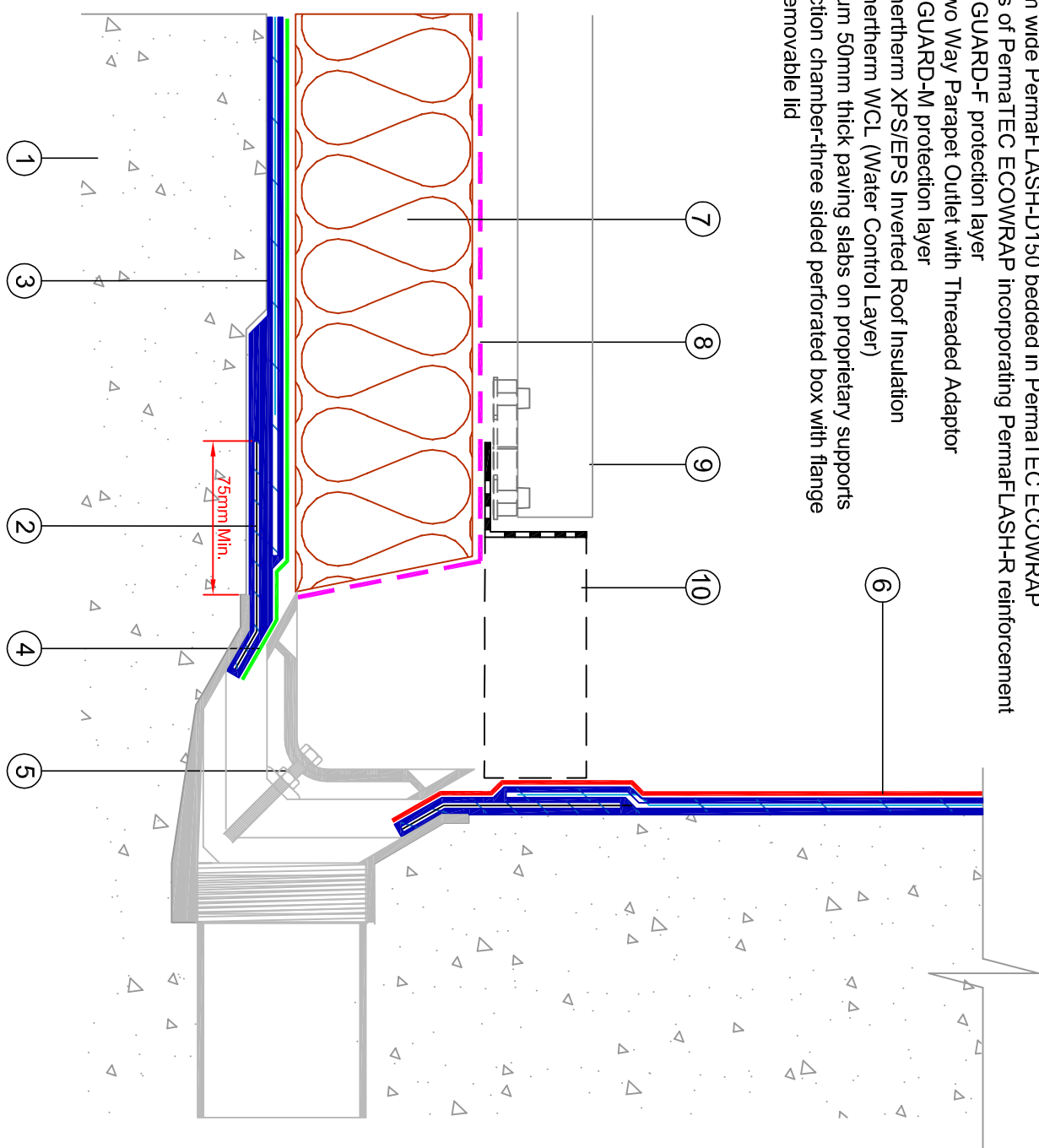
Revision:

PT.3B

Sheet No:

Section Key

1. Concrete deck primed with PermaTEC Primer
2. 150mm wide PermaFLASH-D150 bedded in PermaTEC ECOWRAP
3. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
4. PermaGUARD-F protection layer
5. IKO Two Way Parapet Outlet with Threaded Adaptor
6. PermaGUARD-M protection layer
7. IKO enertherm XPS/EPS Inverted Roof Insulation
8. IKO enertherm WCL (Water Control Layer)
9. Minimum 50mm thick paving slabs on proprietary supports
10. Inspection chamber-three sided perforated box with flange with removable lid



Notes

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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load of 80Kg/m² to resist wind uplift is required.

This can be achieved with 50mm depth of 16 - 32mm rounded ballast (80Kg/m²) or 50mm thick concrete slabs (120Kg/M²).

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.iko-group.co.uk
Email: technical@iko-group.co.uk

Drawing Title:

**TYPICAL RAINWATER OUTLET
PARAPET - BALCONY**

Date:

April 2017

Scale:

NTS

Drawn by:

ME

Revision:

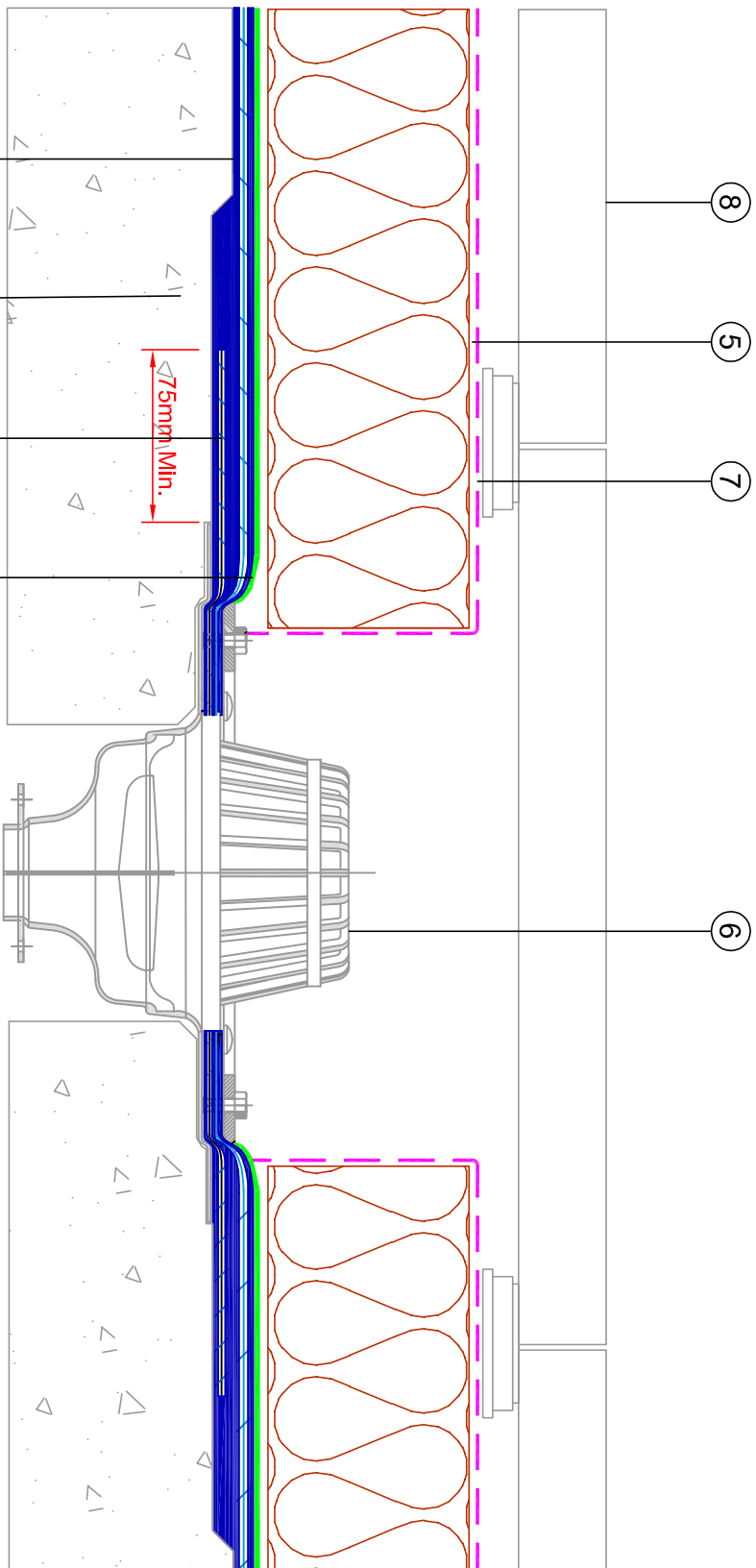
1

Sheet No:

PT.3C

Section Key

1. Concrete deck primed with PermaTEC Primer
2. 500mm wide PermaFLASH-D500 bonded in PermaTEC ECOWRAP
3. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
4. PermaGUARD-F protection layer
5. IKO enertherm XPS/EPS Inverted roof insulation board
6. Clamp Ring Syphonic Rainwater Outlet
7. IKO enertherm WCL (Water Control Layer)
8. Minimum 50mm thick paving slabs on proprietary supports
9. Minimum 50mm layer of 20-40mm rounded washed aggregate



Notes

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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load of 80Kg/m² to resist wind uplift is required.

This can be achieved with 50mm depth of 16 - 32mm rounded ballast (80Kg/m²) or 50mm thick concrete slabs (120Kg/M²).

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



Drawing Title:

**TYPICAL SYPHONIC RAINWATER
OUTLET INVERTED ROOF**

Date:

April 2017

Scale:

NTS

Drawn by:

ME

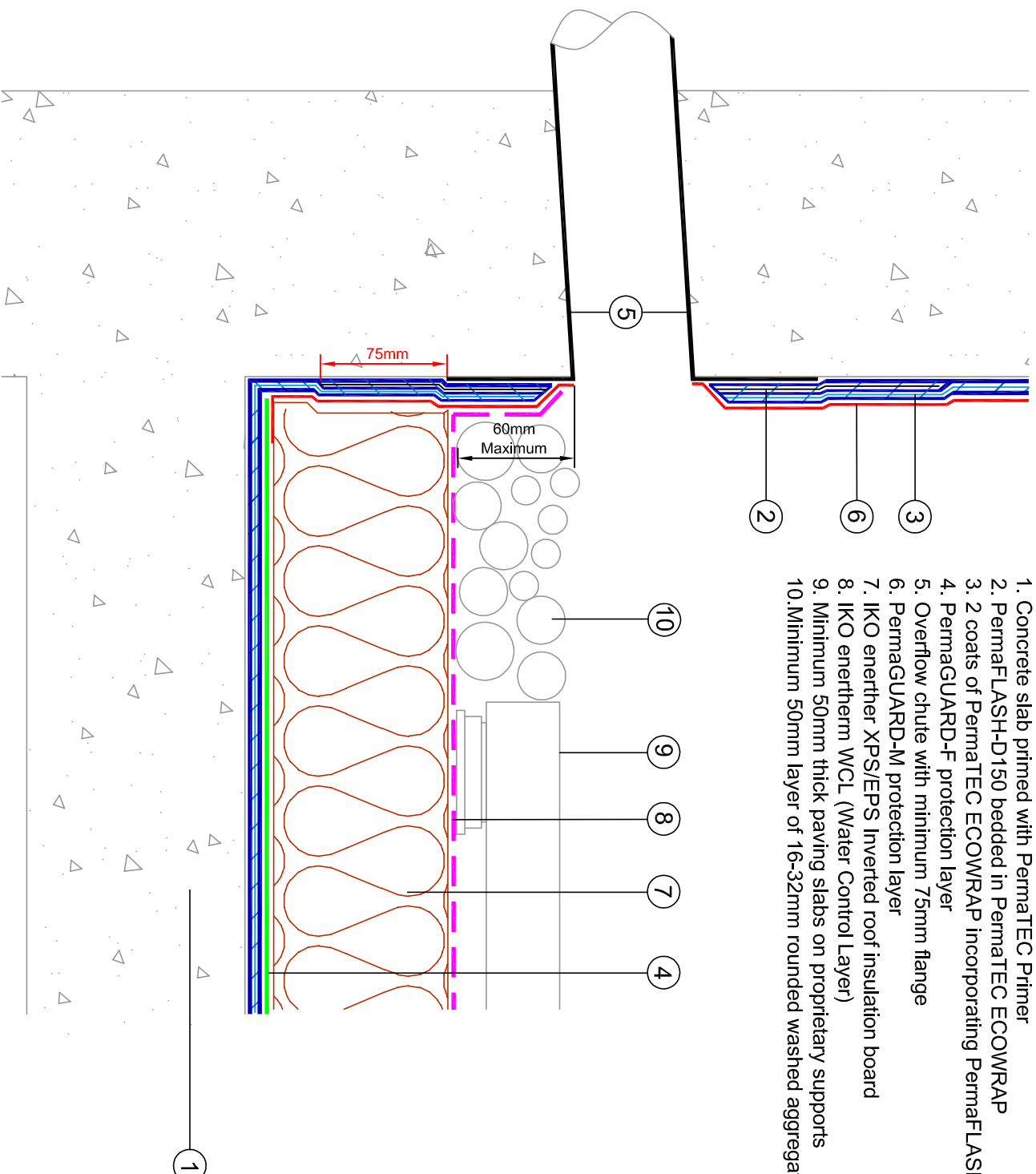
Revision:

PT.3D

Sheet No:

Section Key

1. Concrete slab primed with PermaTEC Primer
2. PermaFLASH-D150 bedded in PermaTEC ECOWRAP
3. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
4. PermaGUARD-F protection layer
5. Overflow chute with minimum 75mm flange
6. PermaGUARD-M protection layer
7. IKO enerther XPS/EPS Inverted roof insulation board
8. IKO enerther WCL (Water Control Layer)
9. Minimum 50mm thick paving slabs on proprietary supports
10. Minimum 50mm layer of 16-32mm rounded washed aggregate



Notes

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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load of 80Kg/m² to resist wind uplift is required.

This can be achieved with 50mm depth of 16 - 32mm rounded ballast (80Kg/m²) or 50mm thick concrete slabs (120Kg/M²).

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



TECHNICAL SERVICES
PROSPECT QUARRY, GRANGE MILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.ikogroup.co.uk
Email: technical@ikogroup.co.uk

Drawing Title:
**TYPICAL RAINWATER OVERFLOW
CHUTE THROUGH UPSTAND**

April 2017

Scale:
NTS

Drawn by:

ME

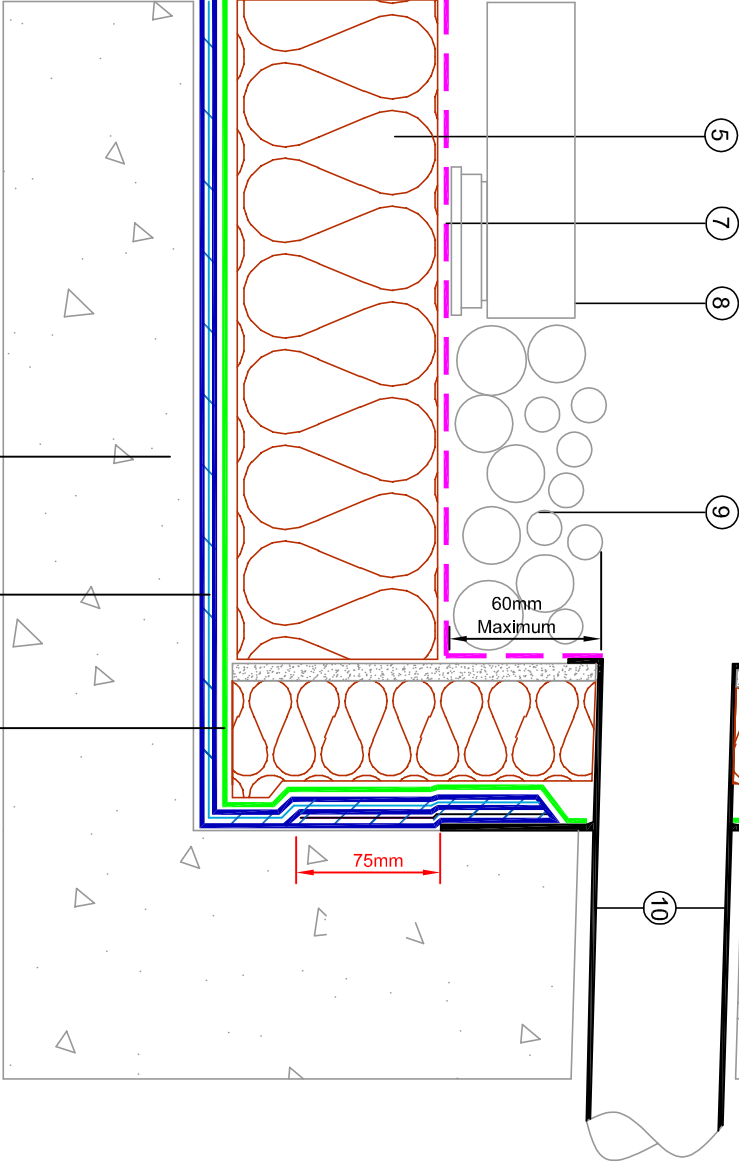
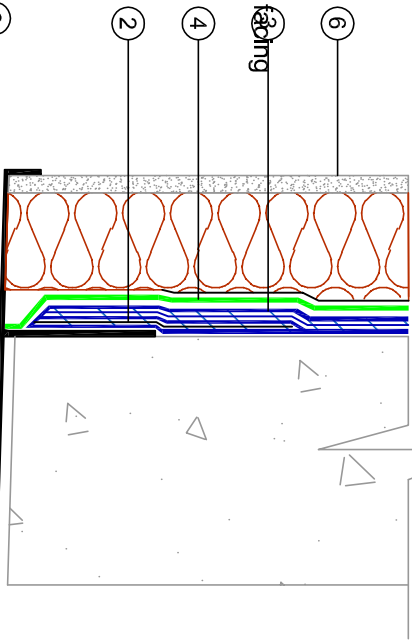
Revision:

Sheet No:

PT.3E

Section Key

1. Concrete deck primed with PermaTEC Primer
2. PermaFLASH-D150 detailing sheet bedded in PermaTEC ECOWRAP
3. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
4. PermaGUARD-F protection layer
5. IKO enerthem XPS/EPS Inverted roof insulation board
6. IKO enerthem Upstand Board Inverted roof insulation board with cement bedding
7. IKO enerthem WCL (Water Control Layer)
8. Minimum 50mm paving slabs on proprietary supports
9. Minimum 50mm layer of 16-32mm rounded washed aggregate
10. Overflow chute with minimum 75mm flange



Notes

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Wind Uplift

For buildings in sheltered regions or less than 10 storeys, a minimum load of 80Kg/m² to resist wind uplift is required.

This can be achieved with 50mm depth of 16 - 32mm rounded ballast (80Kg/m²) or 50mm thick concrete slabs (120Kg/M²).

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



TECHNICAL SERVICES
PROSPECT QUARRY, GRANGEMILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.ikogroup.co.uk
Email: technical@ikogroup.co.uk

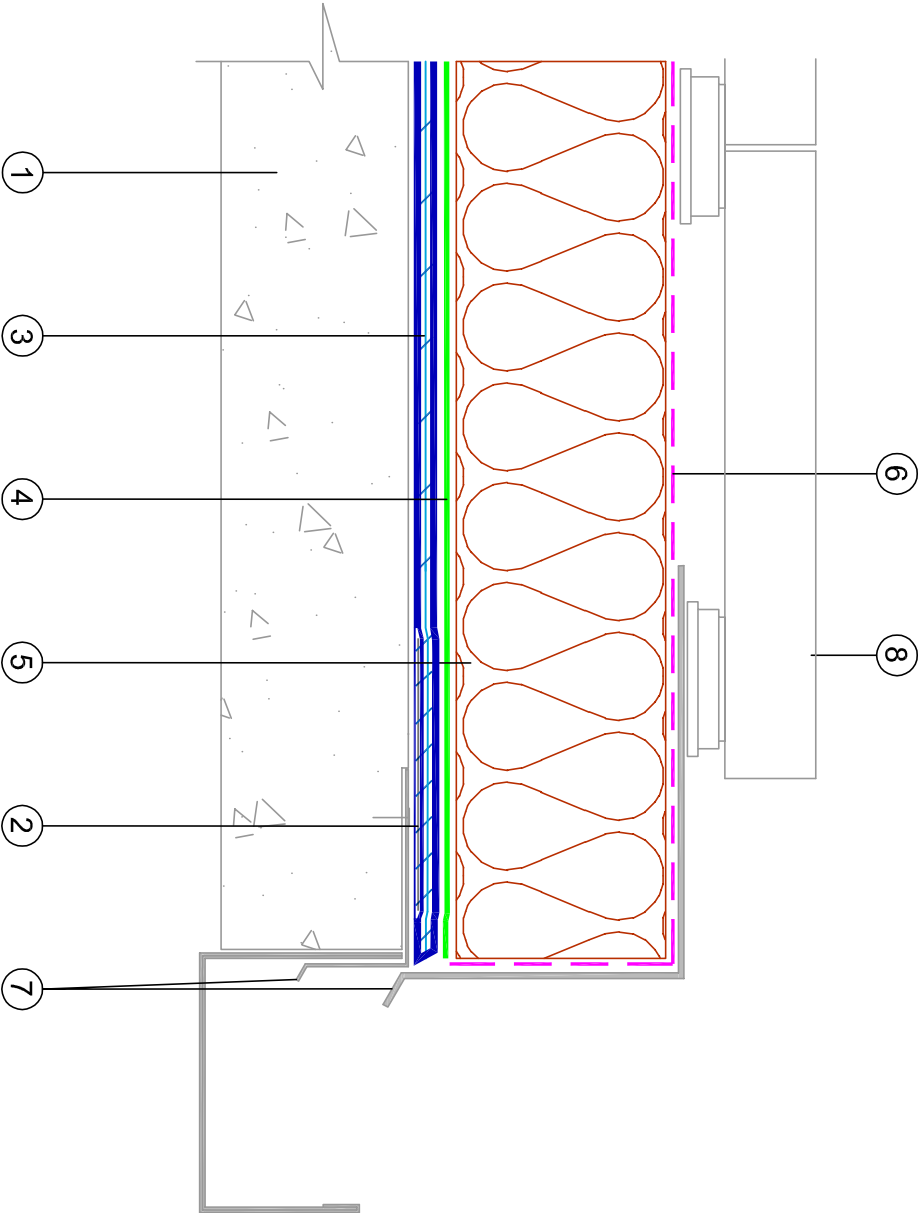
Drawing Title:
**TYPICAL OVERFLOW CHUTE THROUGH
INSULATED UPSTAND**

Date: August 2017 Scale: NTS

Drawn by: ME Revision: PT.3F Sheet No:

Section Key

1. Concrete deck primed with PermaTEC Primer
2. PermaFLASH-D150 bonded in PermaTEC ECOWRAP
3. 2 coats of PermaTEC ECOWRAP incorporating PermaFLASH-R reinforcement
4. PermaGUARD-F protection layer
5. IKO enertherm XPS/EPS Inverted roof insulation board
6. IKO enertherm WCL (Water Control Layer)
7. Metal cover flashing (by others)
8. Minimum 50mm thick paving slabs on proprietary supports



Notes

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Wind Uplift

For buildings in sheltered regions or less than 10 storeys.
You need a minimum load of 80Kg/m² to resist wind uplift.

This can be achieved with 50mm depth of 16 - 32mm rounded ballast (80Kg/m²) or 50mm thick concrete slabs (120Kg/M²).

On buildings up to 15 storeys, the build-up above can still be used, but the perimeter must be loaded with paving slabs determined by reference to BS EN 1991-1-2: 2002. For other exposure conditions or tall buildings, specialist advice should be sought.



TECHNICAL SERVICES
PROSPECT QUARRY, GRANGE MILL, MATLOCK,
DERBYSHIRE, DE4 4BW
Tel: 01257 256888
Internet: www.ikogroup.co.uk
Email: technical@ikogroup.co.uk

Drawing Title:

TYPICAL DRIP TO GUTTER DETAIL

August 2017	Scale:	NTS
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Drawn by:	Revision:	Sheet No:
ME		PT.3G