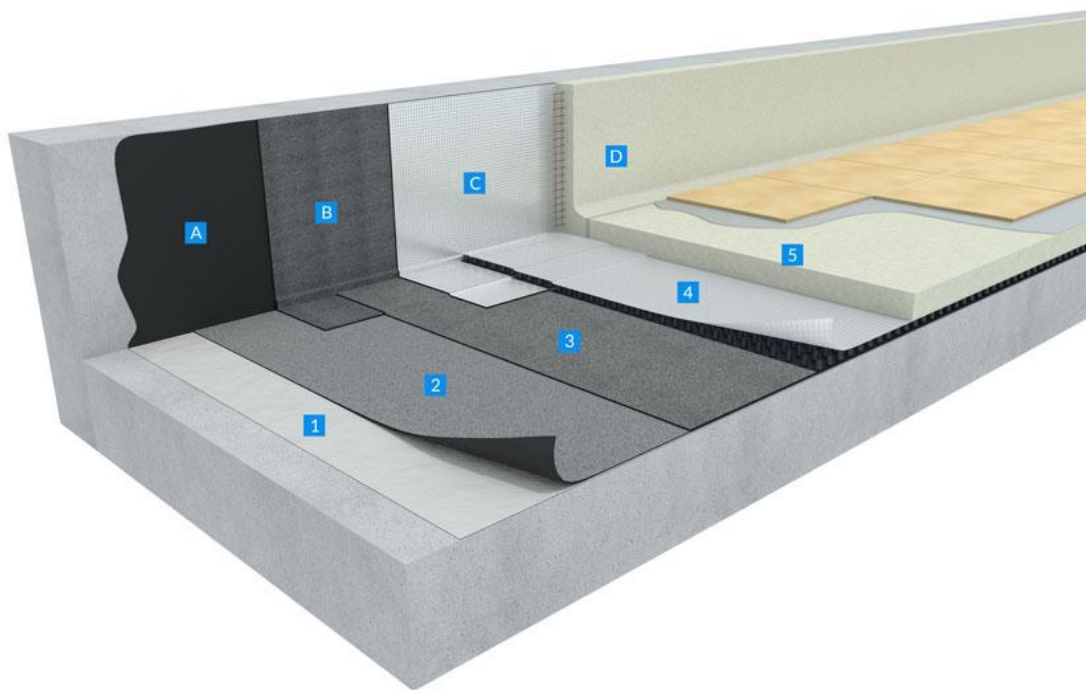


Accessible roofs with paving tiles on cement screed
Double layer SBS bitumen waterproofing system:
PARADIENE JS R4 + PARADIENE BD S

Substrate & Use of roof	Finishing	Standard warm roof /Inverted roof
Concrete Use: Technical roofs with M & E equipment	Paving tiles on cement screed (heavy protection)	Without thermal insulation



- **Substrate**

The load bearing structure (trapezoidal metal sheet, concrete or wooden) must comply with all associated national standards and regulations, ensuring that the load bearing capacity is sufficient for any additional loads imposed upon the construction. It is important to consider the possibility of future deflection of the construction when designing roof drainage.

- **Preparation:** The bearing elements and substrates must comply with local technical standards. After proper cleaning of the roof area, a complete control shall be carried out by the Contractor. Slope and planarity shall be carried out with the following tolerances:

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- **Slope:**
2-5 % on the concrete deck (depending on the type of terrace, please contact the BMI Technical Department).
- Water ponding areas shall be identified clearly.
- **Levels:**
Tolerances for planarity shall be:
- 7 mm with a 2 m straight edge.
- 2 mm with a 200 mm straight edge.
- **Surface:**
Prepare substrate surfaces thoroughly prior to application of new roofing materials. This is particularly important for refurbishment applications. Providing a smooth, even, sound, free of dust, grease and oil, foreign chemicals, curing compound, clean and dry substrate minimises the likelihood that underlying deficiencies will cause premature deterioration or even failure of the new roofing system.

Concrete or masonry:

Masonry bearing elements and substrates in compliance with local technical standards

Are not accepted: slope screeds of lightweight concrete.

- **Upstands/Parapets:**

Siplast Primer: cold-applied, quick drying, universal elastomeric bitumen primer. Approx. coverage 0.15 litre/m² on steel and approx. coverage 0.30 litre/m² on concrete (depending on concrete porosity, please consult the supplier's technical documentation).

Paradiene 35 S R4: Polyester-reinforced modified SBS elastomeric bitumen membrane with thermofusible film faced and sanded underside. Used as a base layer membrane for parapets, fully torched.

Paradial S: 3.7 mm thick, glass fibre-reinforced modified SBS elastomeric bitumen cap sheet protected by embossed thermo-stable aluminium foil. It is used as a cap-sheet layer for vertical upstands waterproofing works and in a double-layer system for non-accessible roofs. Thermofusible film on the underside surface, nominal width 70 mm on the longitudinal selvedge. Fully torched on top of the Paradiene 35 S R4.

Protection of upstands/parapets : Wire meshed cement mortar.

- **Separation layer**

Verecran 100: 100 g/m² glass fibre mat as a separation layer, loosely laid.

- **Waterproofing***

Paradiene JS R4: 2.5 mm thick, modified SBS elastomeric bitumen membrane with polyester reinforcement, self-adhesive overlaps that protects the insulation from the torch flame, as an

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underlayer of a loose-laid two layer system under heavy protection. Thermo-fusible film on the underside, sanded on the upper surface. Loose-laid, self-adhesive overlaps.

Paradiene BD S: 2.5 mm thick, glass-reinforced, torch-applied modified SBS elastomeric bitumen membrane for use as a base layer or cap sheet with additional protection. Thermo-fusible film on the underside, sanded on the upper surface. Fully torched on top of the Paradiene JS R4.

For multi-usage terraces with planted areas, the Paradiene JS R4 + Paradiene BDS membrane system is replaced by the **Preflex + Graviflex.*

- **Separation & Protection layers**

Draina G10: Composite drainage and separation layer with embossed form made from polypropylene and covered with a permeable non woven polyester filter layer. It is used as a separating layer between the waterproofing and the heavy ballast made of concrete screed, prefabricated slabs of concrete or hard stone.

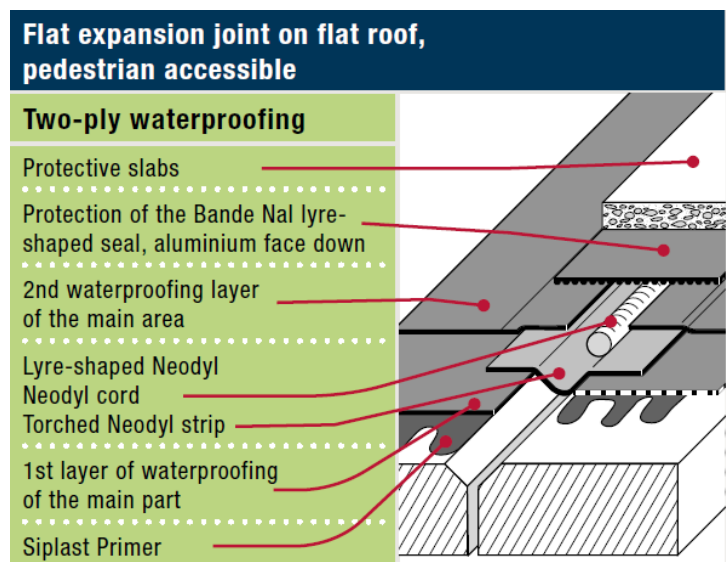
The use of Draina G10 sheets also allows for impact noise reduction. $\Delta Lw = 15 \text{ dB}$ when used alone, $\Delta Lw = 18 \text{ dB}$ with the bituminous waterproofing system.

Paving tiles on cement screed: complying with local technical standards and scope of application.

- **Expansion joints:**

Expansion joints have especially to be planned by the architects and are project specific.

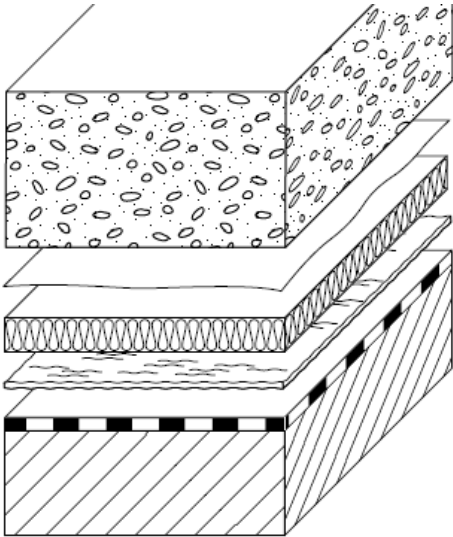
Recommendation: The expansion joints will be prepared in compliance with the **Neodyl System** technical assessment. The Neodyl System comprises **Cordon Neodyl**, **Joint Neodyl (Bande Neodyl)** lyred-shaped waterproofing strips and a protection system (metallic surfaced Paradiel S torched or Supradial GS; or protective slabs). It will have a kerb, raised flat, flat, with upstands-in certain cases.



The Neodyl System is used for structural expansion joints on pedestrian accessible roofs, roof gardens and non-accessible exposed roofs. Suitable for all roof substrates.

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- **Protection of roof perimeter walkways for facade access & maintenance devices:**



Reinforced concrete paving:

Mixed with a water-reducing plasticizer

Separation layer:

- Synthetic film 100 μ .
- 0.02 m thick, Class F expanded polystyrene panels (EPS)
- Non-woven separation layer: **Canopia Filter.**

Splitting the paving:

Minimum 20 mm joints at every 5 m maximum in line with reliefs and emergencies.

Joint filler with rot-proof and suitable against deformation alternate.

Note: These protection works are out of the waterproofing company's scope.

- **Details**

All details shall be finalised before roofing works start:

Rainwater drains shall be well located, in sufficient numbers and ready to receive waterproofing membranes.

Expansion joints shall be located at the highest roof points, on reinforced concrete curbs chamfered as shown on drawings.

All pipes, cables and other penetrations shall be in place. Provision for proper waterproofing of roof equipment and machinery shall be made.

All parapets shall be in place, with provision for groove or counter flashing at an acceptable height (150 mm above finished roof level).

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