



DrainJoint

Technical Information and Case Studies



1. Background to DrainJoint

The development of DrainJoint started in city of Bergen, Netherlands – a place where managing the water system and flow rates is crucial to avoid flooding on an annual basis. They understood the long-standing issues associated with permeable paving – only available in concrete, restricted sizes – normally only 105 x 210, frequent maintenance, blocking of joints affecting the flow rates – and sought out better solution than those currently available to them.

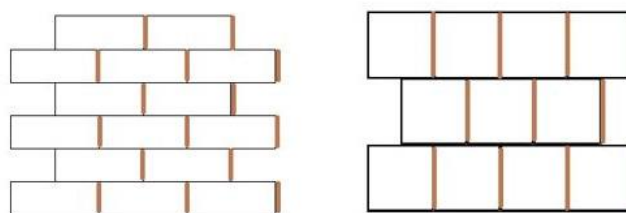
2. What is DrainJoint and what is it made of?

DrainJoint is a permeable infiltration joint designed to drain water away from the surface through the joints of the paving system. The DrainJoint material comprises of Polypropylene and Polyethylene and has a patent worldwide.

3. How does it work?

The DrainJoint infiltration joint is placed in a specified pattern based on the advice and guidance from Hardscape. Depending on the desired flow rate, Hardscape will advise the architect and/or contractor on a laying pattern to use – like in the image below. The orange lines indicate where the DrainJoints are to be placed when laying the material. In a similar way to previous methods of permeable using nibs and aggregate filled joints, the water is drained down through the joints. The other non-DrainJoint joints should be treated as a normal brushed-in sand joint.

Typical laying pattern:



150x400x80mm and 400x400x80 mm

4. Maintenance and Lifetime

Paving systems where DrainJoint has been used can be cleaned using a standard mechanical sweep as any normal paving system would be. The DrainJoint material has a 25-year lifetime.

5. Why use it instead of the current methods of Permeable paving?

- Any type of paving whether it is Natural Stone /Concrete /Kellen can be laid as a permeable paving system provided it is laid flexibly.
- Any size of paving can be made permeable as DrainJoint can be supplied in any length up to 1M.c. Can be supplied in 4 or 8mm widths depending on what is suitable for the project.
- No unsightly nibs
- No aggregate filled joints which continually become blocked and as such reduce the effectiveness of the permeable system. It requires far less cleaning and maintenance – once DrainJoint is installed, the paving can be treated as a normal paving system with occasional mechanical sweeping.

6. Case Studies

There are extensive examples of projects where DrainJoint has been used in the Netherlands. With it being such a new product in the UK we are still in the process of introducing it to projects here. Below are a few case studies:

Juliana Street, Netherlands – 150m²

In the pictures below, you can see the area where DrainJoint has been used – at the top of the picture, and the areas where it wasn't, closer to the camera.

The other image was taken almost 3 years after installation. This road was specified based on normal traffic; however, they soon began building a hotel at the end of this street.

As a result, it has seen a significant level of 28T lorries daily and there has been no sign of that having a detrimental effect.



Further images below show the DrainJoint being used as the material is laid.

Reconstruction Zeiler Boulevard – 350m²

This project involved the use of the traditional clay pavers as seen across the country. However, in this case they wanted to manage the water flow to avoid water draining down the road into the town centre. This road is a main road into the town so is heavily trafficked daily.



Paul Street, Shoreditch – 955m²

This high-profile student development was Hardscape's first DrainJoint scheme in the UK. As you can see from the image below, this area of paving is below street level so managing the water flow was crucial to avoid flooding. However, using current permeable paving styles was never going to satisfy the building aesthetically so the architect needed a solution that would enable them to use the paving materials they like aesthetically but would also manage the surface water.

On this project the DrainJoints were laid along the length of the pavers – the red lines indicate as examples. This was based on the advice we gave to the architect and the contractor.



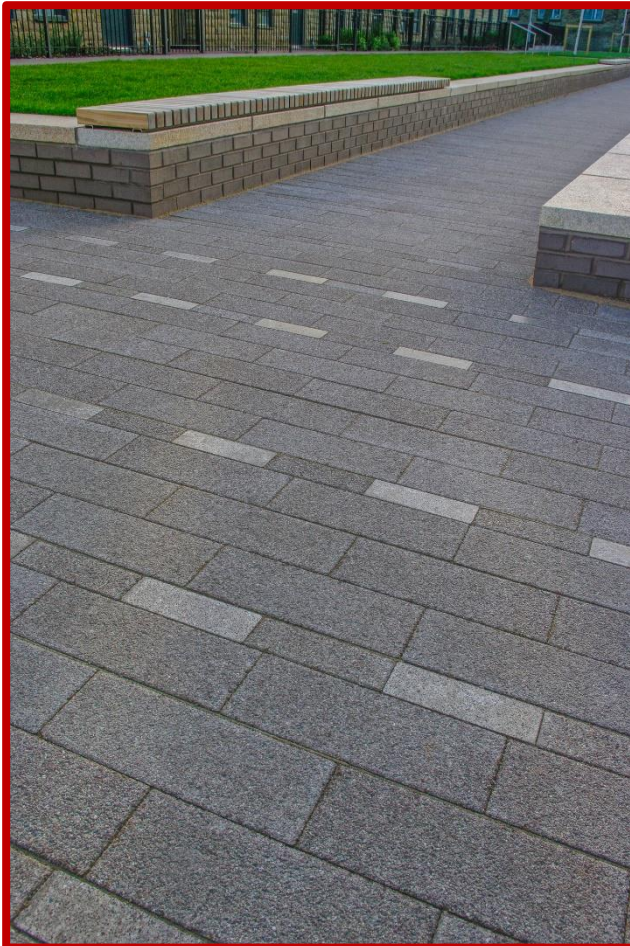
Killelea House, Brandlesholme Road, Bury – 900m²



Dundashill, Glasgow



Chain Street, Bradford



Further Schemes:

- Capital Square, Edinburgh
- Elephant Park, London
- Canada Water, London
- Lewes, Brighton
- Raymond Road, Wimbledon
- St Stephens Tower, Norwich
- Knockrath, Co. Wicklow
- New Cross, Manchester