

What to Look for When Inspecting Pervious Pavement or Pavers

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Pervious pavement or pervious pavers are used instead of impervious versions of the same to reduce the amount of runoff they create. Ordinary pavement allows little or no infiltration. Ordinary pavers (concrete, stone, etc.) also prevent infiltration. In situations where stormwater management is difficult because of a lack of space for other types of SCMs (Stormwater Control Measures) these may be practical. These pervious materials are more expensive than the impervious ones, and also require regular maintenance to keep them working.

Pervious Pavement or Pavers Working Properly



When you dump a bucket of water onto pervious pavement it should not run very far from where you dumped it. How far it goes will be a function of the slope (further if steeper) and the condition of the pavement (slower if proper maintenance hasn't been done). Proper maintenance includes using specialized high-powered vacuums to keep the pores clear. They should never be power washed as this will drive dirt and fine sand particles down into the pores permanently clogging them. Sweeping is also not effective. Vacuuming should be done at least twice a year, but more frequently if there are significant sources of fine materials getting onto the pavement.

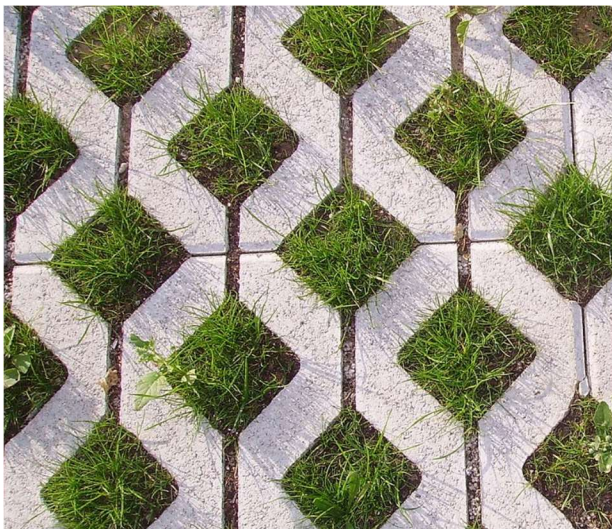
Pervious pavement has an infiltration area underneath, usually a stone infiltration bed. This allows the water that passed through the paving to infiltrate into the soil. A stone bed over the infiltration bed at the margins of the paving will allow water that didn't penetrate the paving to enter the infiltration bed.

Pervious (or Permeable) Pavers

Pervious pavers can function in two different ways. The pavers themselves can be permeable by having open pore spaces in the structure allowing water to penetrate the paver. Alternatively, the pavers (bricks, stone, plastic, etc.) may individually be impermeable, but small in size, and are placed with spaces between them for either gravel or soil planted with grass. In this case, the whole system is permeable because of the pervious spaces between the pavers. It is important to maintain a high ratio of space between the pavers to area of the pavers to allow more infiltration and less runoff.



Paving stones with soil filled gaps between the stones. For this surface to be permeable, the soil in the narrow gaps must be highly permeable. Stone is usually used in the gaps because of its higher permeability.



Pavers with larger soil-filled gaps planted in grass. This surface is more permeable than the one above, however with the grass present it is not suitable for high-traffic areas.

[Public Domain photo from Wikipedia.org]

Problems with Pervious Pavement or Pavers



This is a strange situation where the owner of a property that included pervious pavement didn't inform the new owner about it. The new owner, unaware of the situation, had the pavement seal coated. This results in the pavement no longer being pervious as can be seen from the water running off the surface rather than infiltrating. In this case, there was a strip of stone over the infiltration bed at the downhill end of the pavement. This trench allows the runoff to get into the infiltration bed under the now impervious pavement. Fortunately, it appears to be infiltrating sufficient water that it wasn't deemed necessary to remove and replace the pervious pavement.

One other problem that can happen with pervious pavers is if the spaces between them become too compacted to allow water to infiltrate. If this happens, it may be necessary to remove and replace the compacted material to restore the permeability of the system.

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