The drainage solution of the future, a sustainable urban drainage system (SuDS) is an alternative to the traditional pipes, gullies and culverts approach to a development and drainage strategy. “If you could imagine a green field,” says Michael Vaughan of Roadstone, “you’d have about a 10% water runoff. A built-up, hard landscape area could have up to 50% runoff. The sheer amount of runoff water you have to deal with is immense when you are constructing high-density developments.” Managing the water on site, minimising its runoff, infiltrating the water for passive treatment and controlling its discharge rate are the key elements of this kind of drainage. The Roadstone Aquaflow paving system provides a practical solution to SuDS.

Michael Vaughan says that the fact of the matter is that while there are drainage systems in place throughout the country, we can’t keep feeding into them forever more. “I think this is an issue the entire country will be dealing with going forward. The way we address this issue is by dealing with the water close to its source,” he explains. By doing that, we can use SuDS paving which allows the water to filter through the paving into a sub-structure, which is designed, and you have controlled release of the water back into the ground.” The Roadstone Aquaflow SuDS allows rainwater to infiltrate through a permeable block paved surface into a unique sub-base before being released in a controlled manner into the ground or storage tanks for reuse or delayed discharge. The system is capable of handling rainfall up to 4,500mm per sq.m per hour.

The water leaving the Aquaflow system is cleaned by filtration and microbial action and can be used for secondary non-potable uses such as flushing toilets and watering soft landscapes. A further advantage of Roadstone’s Aquaflow system is that roof water can be drained directly into the sub-base through a dispersion chamber. A good example of the efficient use of SuDS is the 21,000 sq.m car park with a SuDS system used by Kildare County Council offices “It takes the carpark surface water and filtrates it, then transfers it into storage tanks to be used as non-potable water in the building itself,” says Michael.

Now is the time to take notice of water management systems, according to the experts at Roadstone. “We have to look to the future, we have to put rain water management on a sustainable footing,” says Michael Vaughan. “We can’t keep putting water through existing systems because the capacity will keep increasing and increasing. We have to manage the possibility of flooding also, which happens throughout the country each year and this is one element that would help in managing it.”

The Roadstone Aquaflow paving system is ideal for new builds, and SuDS is something we will likely see as a requirement in new developments of the future, says Michael Vaughan.

“We have to look to the future, we have to put rain water management on a sustainable footing.”

“Roadstone are a one-stop shop for SuDS. Roadstone can provide a full design service for your Aquaflow paving system issuing a site specific Aquaflow design including construction depths, invert levels, restraints, drainage and any other design elements.”

Roadstone have shown full commitment to SuDS paving solutions by providing a SuDS equivalent for all their popular standard paving ranges. For example Roadstone Castlestone paving range has an Aquaflow Castlestone permeable paving equivalent. Permeable paving is available in a full range of colours including Roadstones popular blended colours. Other permeable finishes are available such as permeable porous asphalt in the form of the “Duraflow” product, permeable “no fines concrete” and “core gravel sheets” complete the permeable range.

Sustainable urban drainage systems (SuDS) are the future of rainwater management, says Michael Vaughan of Roadstone.