



NORTHRAIN

POROUS ASPHALT
FOR SUSTAINABLE DRAINAGE

NorthDrain is a proprietary bituminous surface with advanced binder technology. This surfacing enables free water passage through to the underlying stone layers. NorthDrain integrates within a wide range of sustainable drainage systems to offer a key element of the perfect Sustainable Urban Drainage System (SUDS) solution. In addition to mitigating run-off, our NorthDrain surfacing, allows natural processes to break down pollutants.

Ideally NorthDrain must be paver laid, with hand laying restricted to small scale irregular areas.

We have refined NorthDrain R&D since 2007. This process included a Knowledge Transfer Partnership with Queen's University, Belfast.

NorthDrain is in accordance with PD 6691 Clause 12 guidance and adapted for equivalent performance to EN13108-7: Porous Asphalt.

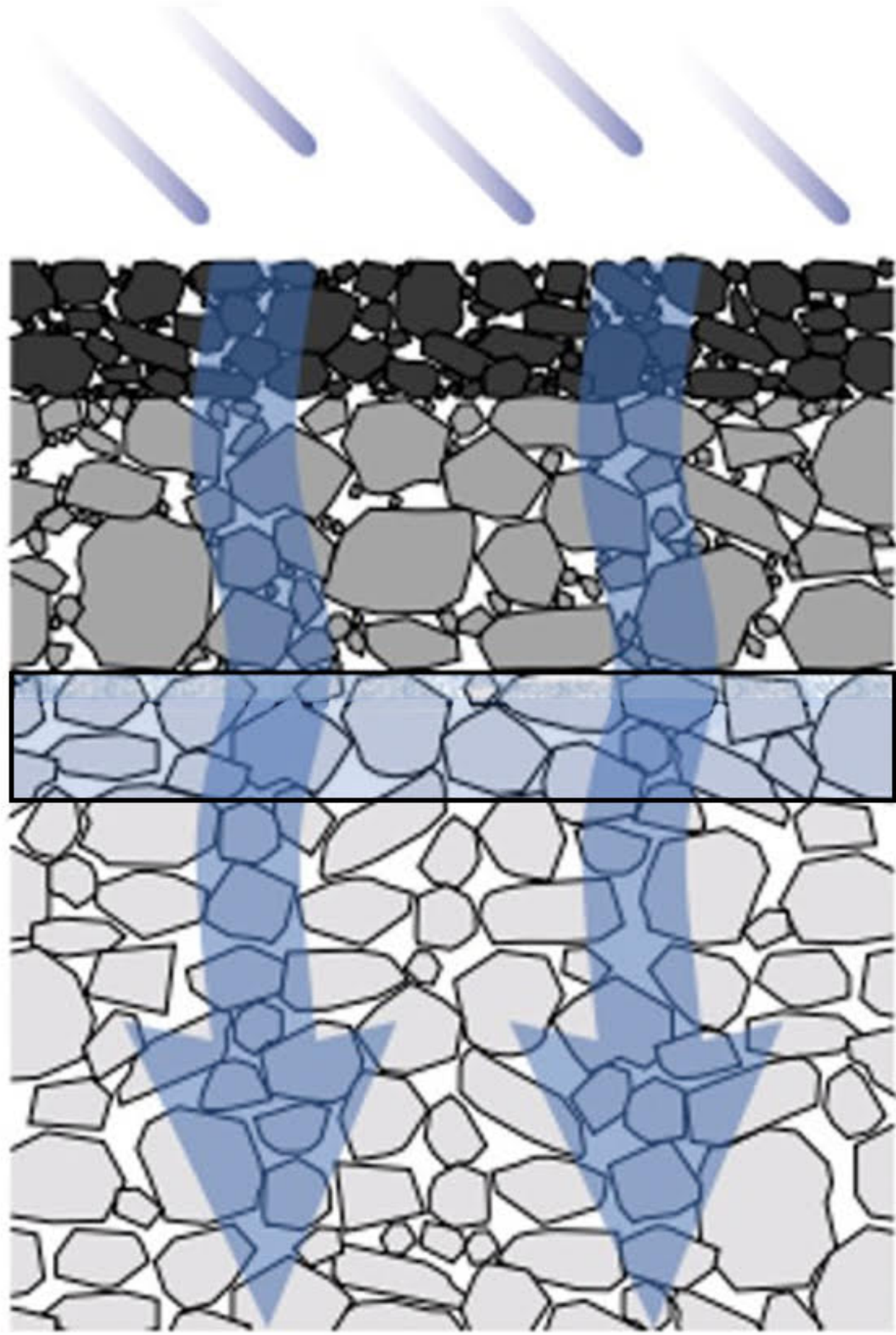


KEY BENEFITS

- Our SUDS pavement is both sustainable and offers an environmentally friendly solution for rainwater management, meeting local planning requirements
- Porous durable pavement which swiftly eliminates water run-off and flooding. Reduced groundworks and point source drainage pipework, offering excellent cost saving
- Speedy installation with 0% gradient design capacity, offering reduced disruption with high filtration of particulate pollutants
- Eliminates large land take regarding the use of swales and stormwater ponds
- Enhanced benefits over SUDS block paving; significantly less of a tripping risk with smooth rideability for wheelchair users, prams, shopping trolleys etc. & easier maintenance
- Reduced surface spray, headlight glare in wet weather and reduced ice risk
- The inverted texture allows for acoustic absorption
- The perfect application for housing developments, car parks, driveways & playgrounds

- NORTHRAIN** PA 10 surf
- NORTHRAIN** PA 20 bin
- No Fines - Traffic Enabler Layer
- Open Graded Sub-Base Aggregates With Up To 45% Voids

PA = Porous Asphalt



KEY PERFORMANCE PROPERTIES

PROPERTIES	NORTHRAIN PROVEN PERFORMANCE LEVEL	REQUIREMENT	
Hydraulic Conductivity (mm per Sec)	>0.35 s ⁻¹	>0.1 s ⁻¹	BS EN 13108-7 Porous Asphalt (BS EN12697-40)
mm/Hr	>1,260	Equivalent rainfall event	

NorthDrain can cope with a 1 in 100 year storm event, with permeability in excess of 3,500 l/s/ha (1,260mm/hour). For comparison the heaviest rainfall event recorded in Ireland is 269 l/s/ha (97mm/hour), with a normal heavy rainfall event in Ireland being approximately 55 l/s/ha (20mm/hour).

We offer sub-base options regarding SUDS ‘grey water’ storage compliance, and aggregate solutions to complement NorthDrain so as to enable construction plant trafficking the underlying sub-base.

SUSTAINABILITY

100% of NorthDrain can be recycled reducing our carbon footprint, local groundwater recharged by its use, flood reduction achieved, recycling of filtered ‘grey water’ & hydrocarbon pollutant biodegradation. We hold ISO 14001 accreditation for all our products & contracting activities.

TECHNICAL SUPPORT

Northstone guidance should be sought based on the specific requirements of each site and is available through our Estimating Department.

For further information contact enquiries@northstone-ni.com

“Northstone partnered with us regarding a solution to a poor existing gradient, offering NorthDrain as a porous asphalt to overcome issues for our Client. NorthDrain satisfied the criteria required and also resulted in a timely & less costly remedy compared to traditional drainage alterations. NorthDrain has exceeded Client expectation, with successful proven performance considering the extreme three storms experienced over one week in Feb 2022.”

MSM Contracts Ltd
Contractor at Agnew Car Complex, Sydenham Road, Belfast Harbour

