



# NORTHDRAIN

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



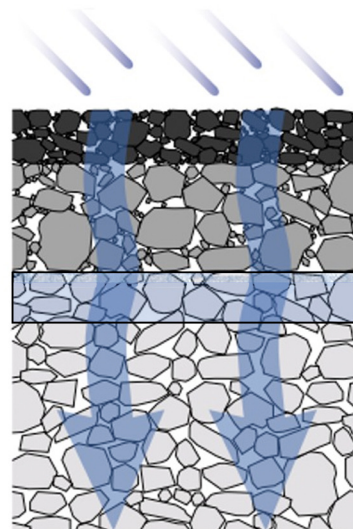
**NORTHRAIN** PA 10 surf \_\_\_\_\_

**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)	$>0.35 \text{ s}^{-1}$	$>0.1 \text{ s}^{-1}$	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](mailto: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

