

WATERTIGHT CONCRETE SOLUTIONS

Watertight Solutions to
help make your structure
BS 8102 compliant



AN INTRODUCTION TO AGGREGATE INDUSTRIES

We're at the frontline of the construction and infrastructure industries, producing and supplying an array of construction materials. With over 200 sites and around 3900 dedicated employees, we're home to everything from aggregates, asphalt, ready-mixed concrete and precast concrete products. On top of that, we produce, import and supply construction materials, export aggregates and offer national road surfacing and contracting services. Overall we provide a full range of products which will help you work sustainably, safely, professionally and profitably.

We're also a proud member of LafargeHolcim, which is the leading global building materials and solutions company with around 90,000 employees in over 80 countries. It holds leading positions in all regions with a balanced portfolio of developing and mature markets.

INTRODUCTION TO WATERTIGHT

Watertight is a versatile range of specialised ready-mixed concretes designed to protect a structure from water ingress or to retain water within a structure. When compared to traditional methods of achieving watertight structures, Watertight offers you the competitive edge in both cost and time savings.

We partner with the UK's leading admixture suppliers to offer you the best solutions. If you need a little more security, we've partnered with BASF, one of the largest suppliers of chemical admixtures, to offer you a selection of warranties ranging from 10 years to 25 years. Providing you with the reassurance that using Watertight from Aggregate Industries is the ideal solution to your project.

WATERTIGHT CONCRETE SOLUTIONS

This reference guide is an introduction to Aggregate Industries' Watertight Concrete Solutions for Architects, Engineers, Owners and Procurement Departments.

- ▶ Up to 25 years warranty on complete system installation
- ▶ Extended life expectancy
- ▶ Reduced maintenance
- ▶ BBA Approved System

Water is the most destructive weathering element for concrete, masonry, steel and stone structures, damaging or destroying more buildings and structures than war or natural disasters. Whether above ground or below ground, all buildings must be able to resist unwanted water in some respect, in the form of rainwater, moisture or hydrostatic pressure. Hydraulic civil structures face yet more challenges in withstanding the ongoing effects of constant immersion,

Good waterproofing, or water resistance, can be the key factor in ensuring a structure's longevity, yet the importance of this facet of structural design is not always given the attention it warrants. The majority of problems with water ingress occur in a relatively small proportion of a structure's surface area, often where design details meet. Careful consideration at the design stage can limit cracks, leaks and potentially serious structural damage over a structure's lifecycle, providing that trades work together at the construction stage to implement design details successfully.



For any queries on the Aggregate Industries Watertight offering, please contact us at concrete@aggregate.com

THE WATERTIGHT RANGE

We offer three levels of warranty depending on the solution you use.

WATERTIGHT **PRO PROTECT**

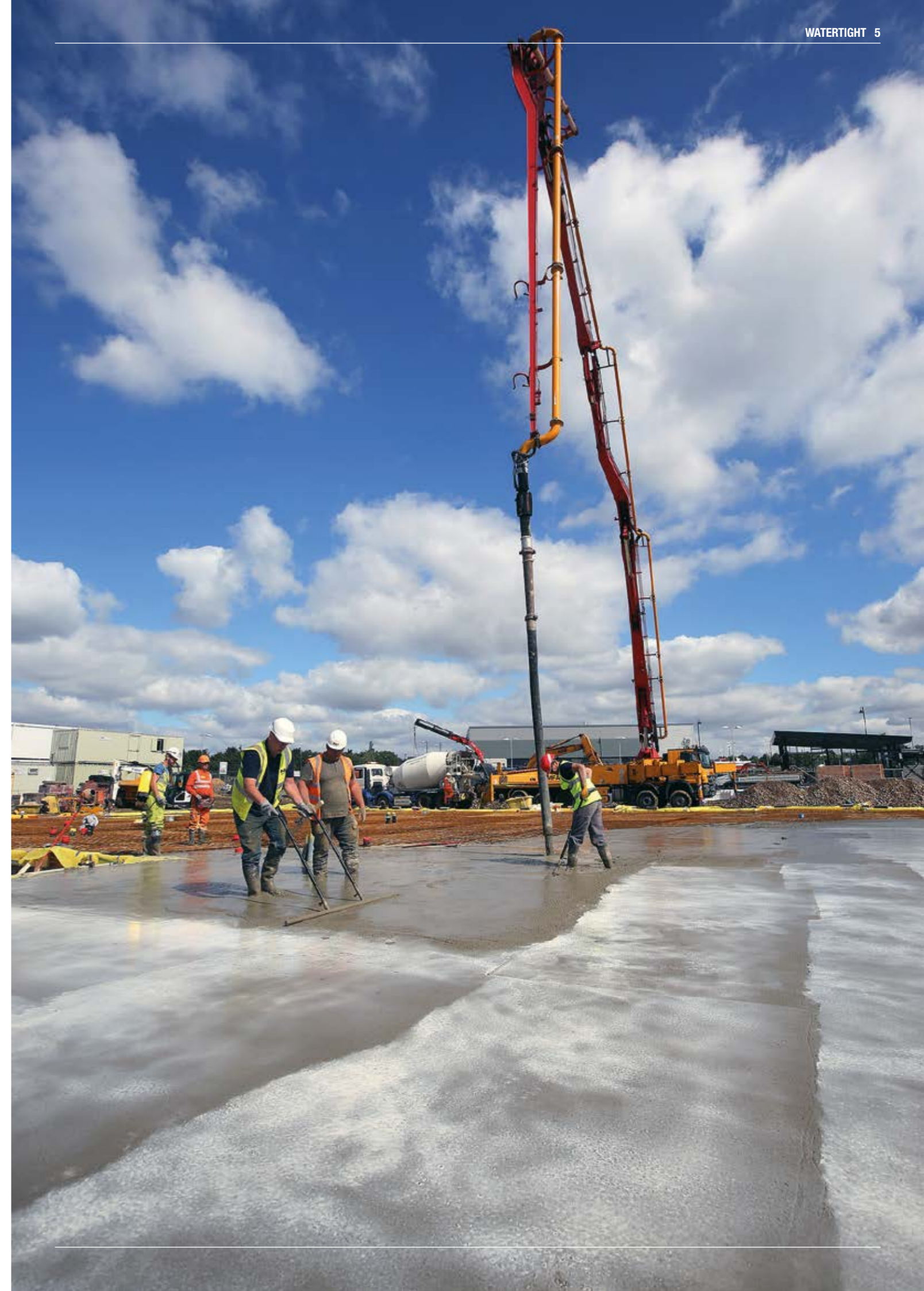
- ▶ Type A and B waterproofing construction in accordance with BS 8102:2009
- ▶ 25-year warranty
- ▶ Two lines of defense (Type B MasterSeal 754 pre-applied FPO waterproofing membrane for below ground concrete structures, MasterLife WP 799 waterproofing admixture, MasterInject 900 re-injectable hose waterstop system)

WATERTIGHT **SUPER PROTECT**

- ▶ Type B waterproofing construction in accordance with BS 8102:2009
- ▶ 15-year warranty
- ▶ One line of defense (MasterLife WP 799 waterproofing admixture and MasterInject 900 re-injectable hose waterstop system)

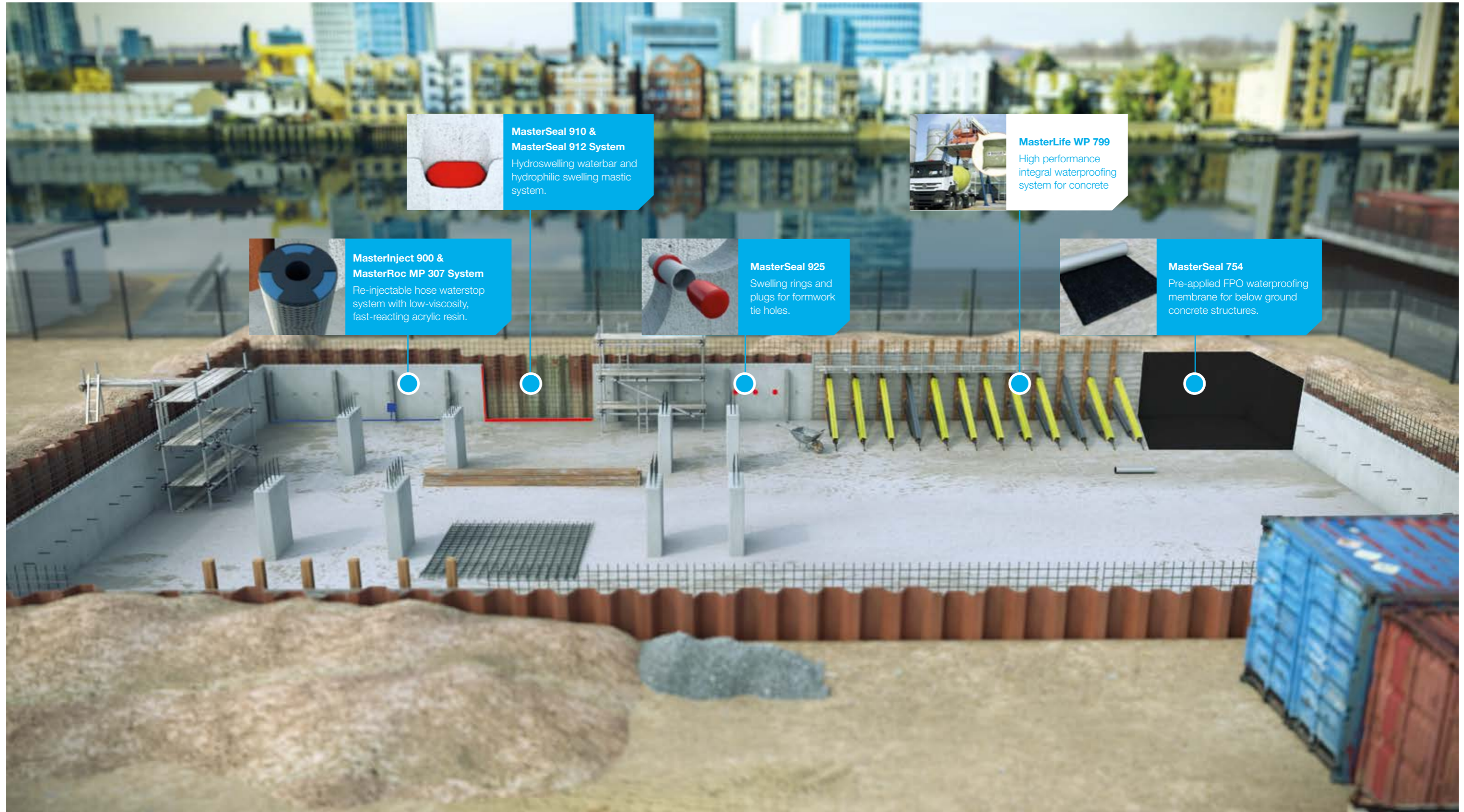
WATERTIGHT **CORE PROTECT**

- ▶ Type B waterproofing construction in accordance with BS 8102:2009
- ▶ 10-year warranty
- ▶ One line of defense (MasterLife WP 799 waterproofing admixture and MasterSeal 910/912 hydroswelling waterbar and hydrophilic swelling mastic system for construction joints)



THE COMPLETE RANGE

Aggregate Industries working together with BASF, has a complete product offering to help make your structure BS 8102 compliant.



MasterSeal 910 & MasterSeal 912 System
Hydroswellung waterbar and hydrophilic swelling mastic system.

MasterLife WP 799
High performance integral waterproofing system for concrete

MasterInject 900 & MasterRoc MP 307 System
Re-injectable hose waterstop system with low-viscosity, fast-reacting acrylic resin.

MasterSeal 925
Swelling rings and plugs for formwork tie holes.

MasterSeal 754
Pre-applied FPO waterproofing membrane for below ground concrete structures.

SUCCESS STORIES

We are delighted to share a selection of projects using watertight, each benefiting from it's qualities in the best way for their needs.

NORTHWAY HOUSE

Refurbishment and redevelopment of a 1970s office building converted into 145 dwellings including a 167 space basement car park. The main challenge on this project was completely waterproofing the sub-grade basement car park. Aggregate Industries' Watertight Concrete solution was the answer. BASF's MasterLife WP 799 admixture was used in the concrete with MasterInject 900 system also installed. This system was chosen as it provides a complete maintenance solution if any leaks occur in the future and makes BS 8102 type B – structurally integral protection construction maintainable throughout the lifetime of the structure.



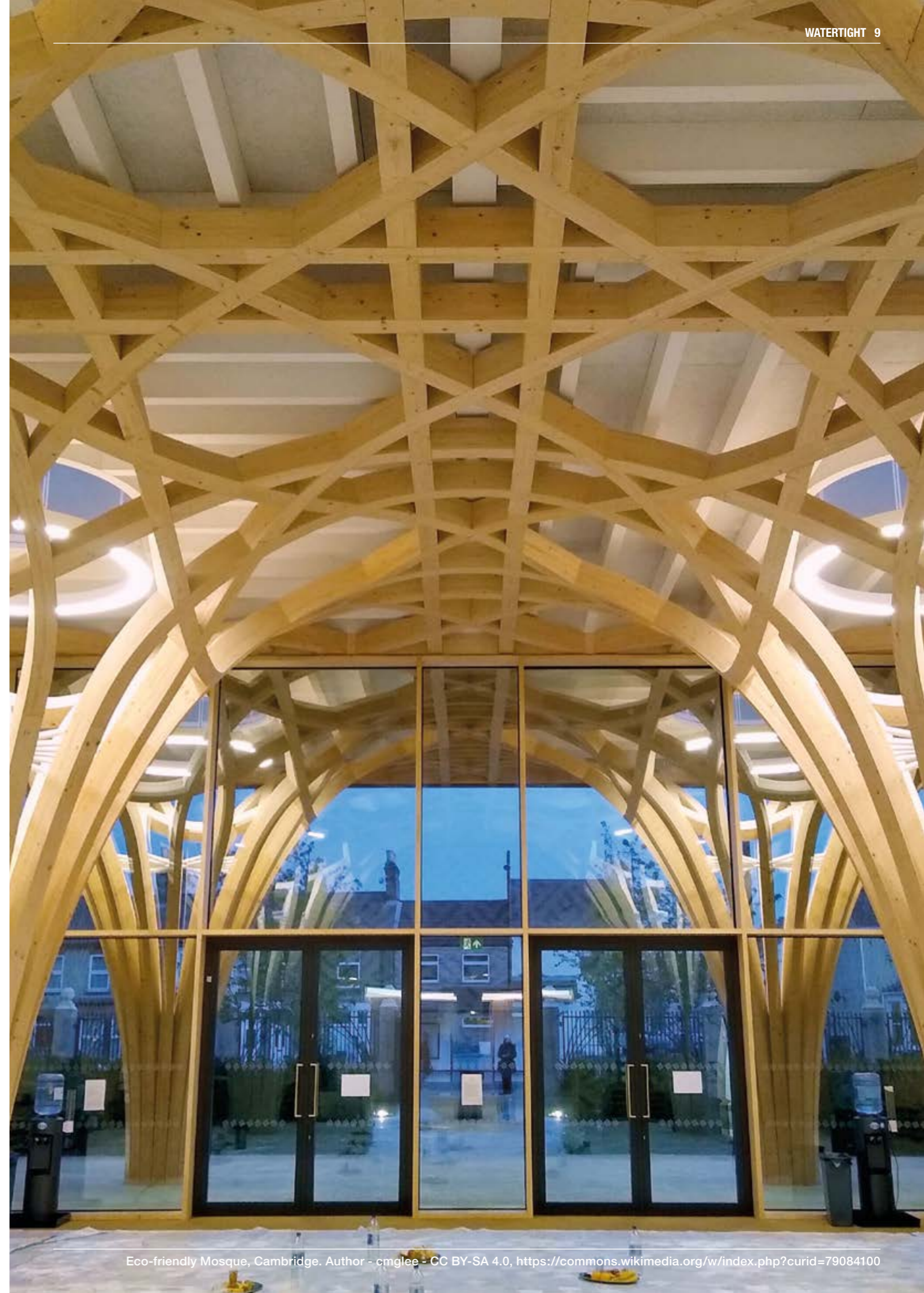
CENTER PARCS, SHERWOOD FOREST - £15M REVAMP FOR SUBTROPICAL SWIMMING PARADISE

Center Parcs indoor waterpark facility was extended to include new raft rides, toddler pools, a children's adventure cove and a high-octane Tropical Cyclone ride, complete with zero-gravity drop. The waterpark, which opened in 1987 and was extended in 2002, needed a concrete that could deliver lasting water resistance and protection from water ingress and damp, as well as high strength to withstand the stresses of the new ride. DBM Construction, working for principal contractor SDC, chose to use Aggregate Industries' Watertight Concrete, which uses BASF's MasterLife WP 799 admixture containing both waterproofing and superplasticising components. BASF's MasterSeal 910 hydroswellable waterbars and ancillary jointing components completed the solution. In total, Aggregate Industries supplied over 2,000m³ of Watertight Concrete, providing reduced water and air permeability and reduced water penetration and absorption, as well as quicker installation and cost efficiencies.



NEW ECO-FRIENDLY MOSQUE, CAMBRIDGE

A major project to construct a new, environmentally-friendly mosque in Cambridge used BASF's Watertight Concrete System to waterproof its basement car park. At a cost of approximately £15 million, the mosque has two worship halls, which will be able to hold around 1000 men and women in prayer. Green features incorporated in the project's design included vegetation on the roof, a water recycling scheme and natural lighting to reduce the need for artificial light. The mosque features complex timber geometry and includes a basement, designed as a car park with approximately 80 car parking spaces. The basement contains approximately 2500m³ of concrete, supplied by Aggregate Industries, using BASF's MasterLife WP 799 high performance integral waterproofing system. BASF's MasterSeal 910 and MasterSeal 912 ensured that all construction remained watertight and MasterSeal 925 tie-hole solution waterproofed all tie-holes left from the formwork system ensuring each one was sealed permanently.





- RMX**
- AI Concrete
 - Kendalls
 - London Concrete
 - AI Scotland
 - Maxi Readymix
 - AI JV

FIND YOU NEAREST READY-MIXED CONCRETE PLANT

AGGREGATE INDUSTRIES

Ready-mixed concrete office sites.

FOR ORDERS CALL:

MIDLANDS/SOUTH EAST* OFFICE
 01283 712677
concretesales.barton@aggregate.com

HIGHROADS OFFICE NORTH
 01524 736 933
concretesales.carnforth@aggregate.com

TRILOGY PARK SCOTLAND
 01698 870 947
scotland.concrete@aggregate.com

MOORCROFT OFFICE SOUTH WEST
 01752 485 201
concretesales.moorcroft@aggregate.com

LONDON CONCRETE
 020 8380 7300
london.concrete@aggregate.com

*For enquiries only

AGGREGATE INDUSTRIES MINIMIX

A dedicated concrete delivery service for small loads or where there are site access issues.

FOR ORDERS CALL:

SCOTLAND OFFICE
 01698 871 111
scotland.concrete@aggregate.com

NORTH ENGLAND
 0191 469 9992
minimix.northern@aggregate.com

MIDLANDS
 01283 714 405
minimix@aggregate.com

SOUTH EAST
 01268 561 418
minimixsouth@aggregate.com

SOUTH WEST
 01752 485 262
minimixsouth@aggregate.com

PLANT LOCATIONS

SOUTH EAST

Central South East
 Bicester OX26 4LD
 Milton Keynes MK6 1LN
 Wellingborough NN8 4NL
 Harlow CM20 2EL
 Wickford SS11 8BH
 London Gateway SS17 9PD
 Bordon GU35 9HL
 Shoreham BN43 6R
 Alton GU34 2QH
 Newbury RG19 4NT
 Romsey SO51 0PF

Cambridgeshire
 Cambridge CB24 6AZ
 Peterborough PE6 8QE

LONDON

Battersea SW8 3EG
 Bow E3 2TB
 Brentford TW8 9HF
 Denham UB9 4HE
 Greenwich SE10 0RT
 Harlington UB7
 Ripon HG4 1UG
 Purley CR8 2AL
 Tolworth KT5 9NU
 Watford WD24 4QZ
 Wembley NW10 0JE

SOUTH WEST

East Devon and Hampshire
 Axminster EX13 7RG
 Southampton SO19 7GB
 Eastleigh SO50 6NZ

North Cornwall/Devon
 Barnstaple EX32 0NU
 Bodmin PL31 1DR
 Bude EX22 7EB
 Callow BS27 3DQ

South Devon
 Exeter EX2 7LL
 Kingsbridge TQ9 7QQ
 Plymouth PL9 8AJ
 Torquay TQ12 5LL

West Cornwall
 Kessel TR10 9BZ
 Melbur TR8 5UA
 Penzance TR20 8AG
 Redruth TR15 3RN

MIDLANDS

East Midlands
 Croft LE9 3GP
 Derby DE21 7BR
 Mansfield NG21 0HJ
 Nottingham NG4 2JT

North Midlands
 Barton DE13 8EF
 Cheadle ST10 1TZ
 Sandbach CW11 3HT
 Stoke ST5 7RB

West Midlands
 Birmingham B42 1BS
 Bordesley Green B6 1BY
 Coventry CV6 6LN
 Coleshill B46 1JU
 Kidderminster DY11 7DN
 Redditch B96 6BG
 Three Counties WR8 0PW
 Wolverhampton WV13 3RX

NORTH ENGLAND

Merseyside
 Chester CH1 6NX
 Liverpool L31 8BX
 Mansfield NG21 0HJ
 Nottingham NG4 2JT

Manchester
 Salford M50 1DG
 Manchester M22 4TF
 Wigan WN6 0XQ

North East
 Ashington NE22 7BY
 Darlington DL1 2PB
 Gateshead NE10 0ES

North West
 Barrow LA14 4QR
 Barrow 2 LA14 2TW
 Holme Park LA6 1NZ
 Lancaster LA1 5QP
 Preston PR2 5AR

Yorkshire
 Bradford BD4 7AP
 Leeds LS9 0PF
 Ripon HG4 1UG
 Sheffield S4 7WT

SCOTLAND

Bonnyrigg EH19 3HY
 Coatbridge ML5 3BZ
 Duntilland ML7 4NZ
 Glasgow G31 5JL
 Grangemouth FK3 8XP
 Kirkintilloch G64 4AB
 Edinburgh EH6 6PQ
 Ratho EH28 8LU
 Renfrew PA4 8SY

OUR READY-MIXED CONCRETE

Our specialist performance concretes range from concrete designed for constant water exposure or attractive coloured concrete, which provides endless possibilities for house or building design, to ultra-strong concrete which will withstand aggressive and abrasive chemical exposure.

You can be sure that we have a solution for your project no matter how big or small.

AGILIA®

Agilia is a self compacting concrete and will flow freely around congested reinforcement without the need for vibration or other energy input.

ARTEVIA® COLOUR

Artevia Colour enhances the architectural and visual approach of concrete and is the ideal solution when it comes to design, durability and cost.

ARTEVIA® EXPOSED

A range of exposed aggregate concretes that offer endless design opportunity.

DIAMONDCRETE®

Diamondcrete provides a high, performance ready-mixed concrete, securing fast track solutions to many of the more challenging aspects of construction.

HIGHPAVE™

Range of fibre reinforced pavement grade that reduces the errors associated with conventional reinforcing methods.

HYDRACRETE®

Hydracrete is a modified ready mix concrete designed for placement into still or moving water with minimal washout.

HYDROMEDIA®

Hydromedia is an ideal solution for surface and stormwater management. A fast draining concrete pavement solution that rapidly directs stormwater off streets, parking surfaces, driveways and walkways.

LYTACRETE

Lytacrete reduces the weight of structural concrete and can be pumped to any height and achieve a high quality finish.

STRIKE+

High Early Strength Concrete is a range of products designed to meet specified return to service requirements in compressive strength.

STRIKE™

Strike concrete is a unique system developed to meet the ever increasing needs of fast track construction.

WEATHERMIX®

Specially developed to support and extend the construction season into the winter months. WeatherMix is designed to tolerate colder conditions than normal concrete. Formulated to allow placement of concrete across a range of ambient temperatures from +3°C to zero.



THE COMPLETE SERVICE

The Aggregate Industries group offers an extensive range of products and services to the construction industry.



AGGREGATES

We supply crushed rock, sand and gravel, stone and fill materials for construction. These can be delivered by road, rail or marine transport. We also produce silica and specialist sands.

T: 01455 285200

E: aggregates@aggregate.com



CONSTRUCTION SOLUTIONS

Our Charcon Construction Solutions business offers design, manufacture and installation of integrated offsite solutions including modular roofing, hydro, flooring, ground and structural frame solutions.

T: 01670 531160

E: sales@charconcs.com



ASPHALT

We are a leading supplier of a full range of coated materials with over 50 locations in the UK, serving major conurbations, including sites for collect business.

T: 01455 288222

E: asphalt@aggregate.com



CONTRACTING

We strengthen our construction materials portfolio through our involvement in infrastructure, surfacing and civil contracting works.

T: 01530 510066

E: contracting@aggregate.com



BUILDING PRODUCTS

Extensive range of masonry, walling, roofing and concrete block precast products. Ideal for commercial or residential projects.

T: 01285 646900

E: building.products@aggregate.com



GARDEN LANDSCAPING

Bradstone is one of the UK's leading ranges of natural and reconstituted stone paving, walling, edging and coping, block paving and decorative aggregates.

T: 01335 372222

E: bradstone.garden@aggregate.com



CEMENTITIOUS MATERIALS

Lafarge Cement offers a wide variety of bulk and packed cementitious materials, produced at our cement plants in Cauldon, Staffordshire and Cookstown, County Tyrone.

T: 01455 288 392

E: cementitious@aggregate.com

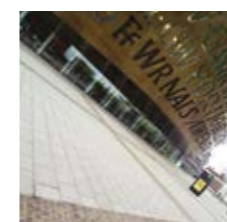


OVERSEAS

Aggregate Industries Overseas supplies high quality aggregates to Europe from bases in the UK, Poland, Germany, Norway and Latvia.

T: 01530 512025

E: overseas.sales@aggregate.com



COMMERCIAL LANDSCAPING

Flag paving, block paving and kerb products are available in both concrete and natural stone. Surface water drainage products are also part of a wide ranging portfolio.

T: 01335 372222

E: landscaping@aggregate.com

 Aggregate UK  Aggregate Industries UK  AggregateInd

Bardon Hall, Bardon Drive, Copt Oak Road, Markfield LE67 9PJ

T: 01530 510066

concrete@aggregate.com

aggregate.com

