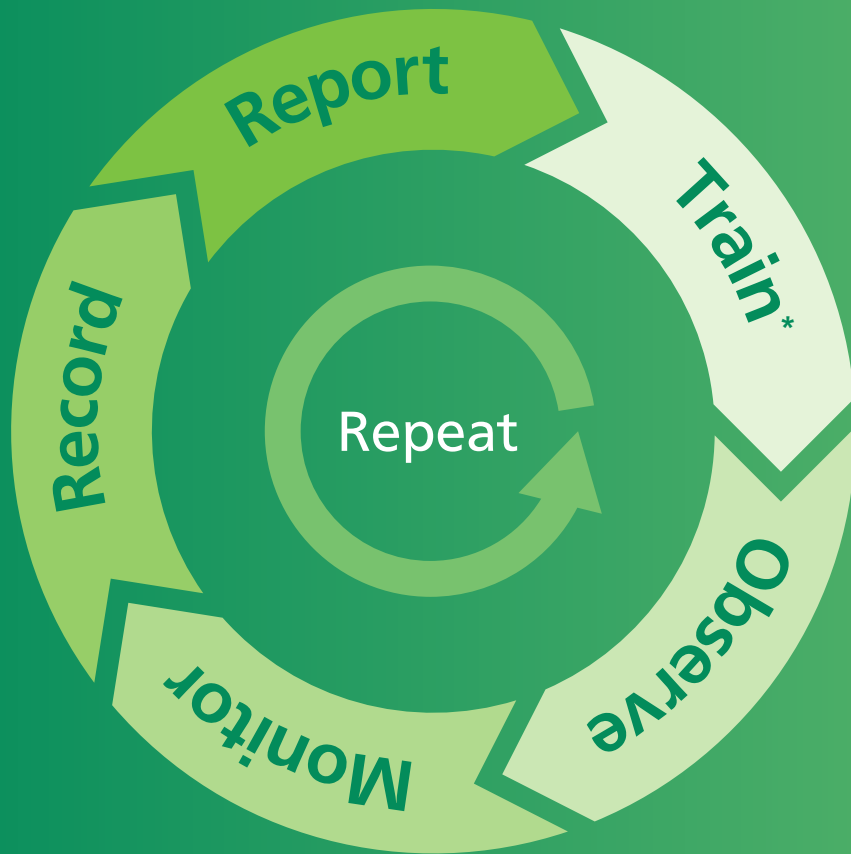




Independent Training*, Testing, Validation, Verification & Design

Construction systems designed to protect structures against water, ground gas and hazardous substance ingress





On-Site Quality Assurance Programs, Risk Assessment and Project Support.

It is internationally acknowledged (ref British Standard 8102:2009) that when human error occurs in product choice, application or design, partnered with climate variations, geological changes and alterations to water courses, the results can be devastating.

GeoShield's unique approach to on-site Quality Assurance Programming is proven globally at **reducing the negative effects of human error.**

This approach starts from project conception and continues through to building completion and occupancy.

Quality Assurance

As every project is unique, the GeoShield **Quality Assurance Program** will be created bespoke to your construction; each building will include:

- ✔ **Design & Validation** - Our designers can create individual designs for all scenarios backed by GeoShield PI.
- ✔ **Bespoke Method Statements** - can be produced at all stages of the construction program.
- ✔ **Project Training** - GeoShield's project specific training extends to all levels of management hierarchy from installer, site management through to senior management.
- ✔ **Inspection & Verification** - On-site verification and reporting which gives live feedback to create solution-based strategy.
- ✔ **Cloud Based QA** - All Quality Assurance documentation is assessed centrally in the UK via on-site operatives.
- ✔ **Every M² Verified** - The Quality Assurance process GeoShield has created means that every M/2 is checked so if a fault occurs information is available.



On-Site QAP And Design Assistance

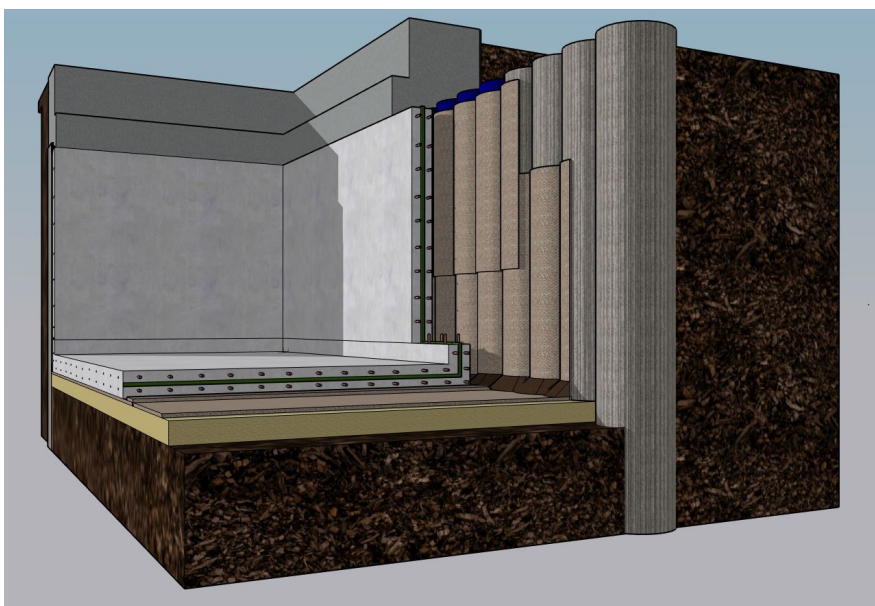
All construction projects are supported by the GeoShield On-Site **Quality Assurance Program** which includes its comprehensive design service, ensuring that all construction advice and design detailing is provided by qualified unbiased independent engineers.

GeoShield Global provide off-site, on-site and Cloud based validation and verification for all ground water and gas protection and retainment systems including design assistance method statement creation applicator training and overall management team awareness.

Taken from pre-construction stage through to building completion via our bespoke project **Quality Assurance Programs** GeoShield verify:

- ✔ All polymer, bituminous liquid and bentonite waterproofing membranes
- ✔ Land, pond and reservoir liners
- ✔ Concrete mat retainment systems
- ✔ Soil stabilisation systems
- ✔ Injection grouts, including basement void fillers
- ✔ On-site and Cloud based AquaTrace Waterproofing leak monitoring system for green roofs, high-rise pool & bar decks and podiums.

GeoShield's exclusive approach has proven effective all over the world. The implementation of our holistic approach to **Quality Assurance Programs** establishes step by step accountability, raises confidence in your chosen systems performance and is a key factor in keeping your project to schedule.



Methods of Testing

A variety of testing methods are available. As accuracy is paramount, methods are agreed at pre-verification/inspection stage though any GeoShield **Quality Assurance Program** can be enhanced as need requires. Our selected methods of testing are:

- ✔ Visual
- ✔ Mechanical point stress test (Pick and probe)
- ✔ Air lancing following ASTM D4437 / D4437M – 16 (2018)
- ✔ Pressure testing twin wedge welding joint
- ✔ Dielectric porosity testing
- ✔ Smoke test
- ✔ Inert gas test
- ✔ Weld testing using tabs (destructive test using 'mole' grips)
- ✔ Vacuum testing box
- ✔ Ultrasonic pulse echo testing
- ✔ Podium & Bund Lining Flood Tests
- ✔ Trench Lining Flood Testing
- ✔ Drone Surveys
- ✔ Surface Regularity Testing
- ✔ Surface Anti-Slip testing





AQUATRACE

Immediate leak detection technology for your roof top facilities, bar areas, restaurants, swimming pools and green roofs. Vital for all high-rise structures, know in seconds if your waterproofing has been compromised.

Providing a unique solution to determine the waterproofing performance of any building through the use of our IOT devices, via the iCloud which provide real time live performance of all waterproofing trades - we adapt standard building materials to monitor buildings for leaks.

Aquamat

Our product consists of a 2 ply adapted polyester fleece that is commonly used on flat roofs as a breathable layer under various waterproofing membranes. Our method and product allowed us to demonstrate the ability to (in real time) detect not only leaks as they happen, but the concentration of water coupled with the behaviour of water (its movement under the waterproofing layer). In addition to this instant detection, we determine the location of said leak and confirm that a repair has been carried out successfully and most likely confirm the cause of the leak.



Aquatherm

Adapted standard Foil Backed insulated panels, connected via our innovative technology enable us to monitor the waterproofing performance (without an additional membrane layer). The most significant advantage centres on the ease of adaptation to Facades, Soffits, Podiums, Balconies, Bathrooms, Kitchens, High pressure internal pipes and Habitable Basements. As all of these are areas within a building and are commonly already insulated with foil backed aluminium.





GasTrace creates an accurate integrity testing solution which is not affected by weather or access. The aluminum foil membrane is laid and the GasTrace Hub is connected to the membrane via bespoke clips.



This allows the GasTrace Hub to detect any defect. Unique to this system the information is transferred through App technology which will identify the location and extent of the defect at any phase of the installation process.

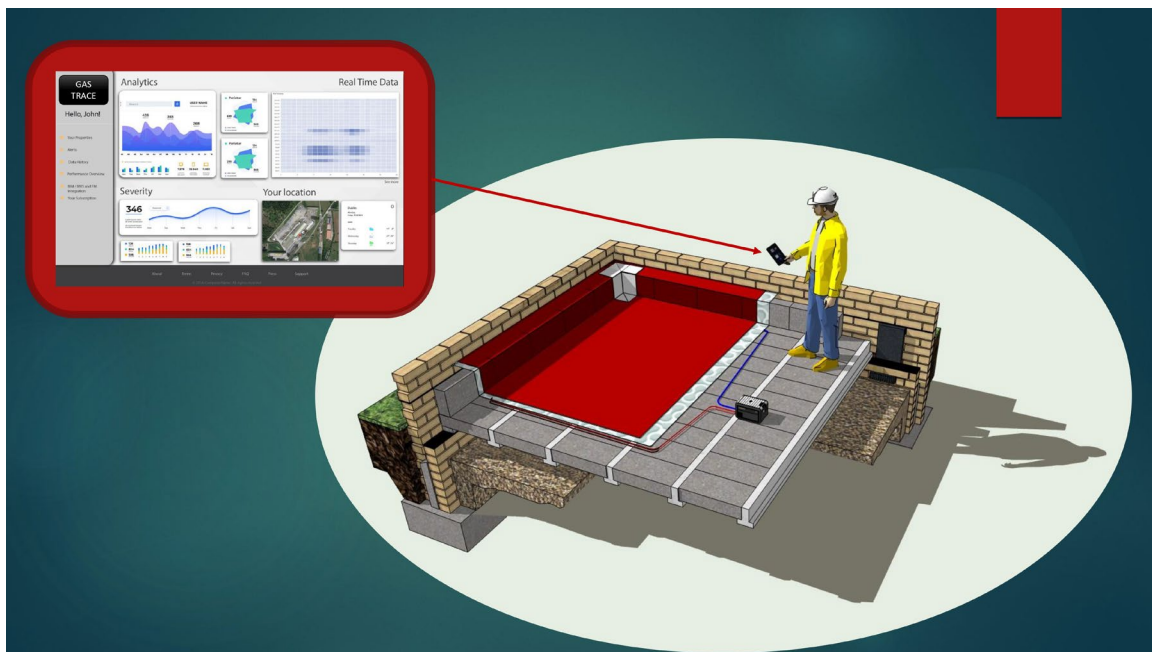
An immediate advantage is when insulation or steel reinforcement has been placed and a visual inspection is not possible.



The GasTrace Mat is an alternative solution where the Gas membrane does not have an aluminum foil, the same technology and advantages are utilized however a GasTrace Geotextile Fleece is placed.

This has the dual purpose of:

-  Protecting the gas membrane from substrate intrusions & level changes
-  Providing the matrix for the GasTrace Hub



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For operations in the United Kingdom visit www.geoshield.co.uk

