



**INDEPENDENT TESTING,
VALIDATION & VERIFICATION
OF**

**SYSTEMS DESIGNED TO
PROTECT AGAINST HAZARDOUS
GROUND GAS INGRESS**

COMPLIANT WITH BS 8485:2015 & CIRIA 735 (2014)
RADON / METHANE / CARBON DIOXIDE
VOLATILE ORGANIC COMPOUNDS





GEOSHIELD VERIFICATION PROGRAM

Since 2015 construction & design standards Internationally have begun to be restructured with the aim of eliminating all possible factors that relate to the failure of systems applied to protect against life threatening ground gas ingress into new constructions. The spearhead of these changes was in the UK with the updated version of the British Standard for Good Practice on the Testing and Verification of Protection Systems for Buildings against Hazardous Ground Gases. BS8485: 2015 – this superseded all previous guidance.

BS 8485:2015 OPERATING ALONGSIDE THE CIRIA 735 CODE OF PRACTICE 'INDEPENDENT VERIFICATION & TESTING PROGRAMS' HAS NOW BEEN HARMONIZED BY MANY EU COUNTRIES.

GeoShield Validation, Verification & Testing programs are currently underway across Europe including projects in the Republic of Ireland, the United Kingdom, Romania, Croatia, Belgium, Turkey and as far east as the Philippines. BS8485: 2015 sets the codes of practice which govern the installation of membrane systems designed to protect against the ingress of Methane, Carbon Dioxide and has annexes regarding Radon & VOC's. Dependent on the various project criteria independent inspection is now often mandatory to ensure every effort is made to minimize the risk to life.

GEOSHIELD LIMITED ARE FOUNDER MEMBERS OF THE BRITISH VERIFICATION COUNCIL AND ARE ISO EN 9001 ACCREDITED.

For projects of CS2 & above (British Standards) / Amber 2 (NHBC) an Independent Testing and Verification program is required as an integral part of the project strategy. The Verification Company is usually required to be employed prior to construction. The GeoShield Verification Package is in accordance with all insurances made by the British Verification Council including £2,000,000 PI Insurance that is specific to Verification.





GEOSHIELD VERIFICATION PROGRAM

Methane / Carbon Dioxide / Volatile Organic Compounds – Hydrocarbons

CIRIA 735 states that the verification plan (which includes consideration of the need for any integrity testing) becomes an integral part of the design of the gas protection system.

As each project is unique in terms of size, construction type, ground gas protection system and applicator experience it is recommended that a Validation & Verification Program is in place prior to the employment of any specialist application company in order that all risks are correctly assessed.

GEOSHIELD PROVIDE

- £2,000,000 PI Insurance for verification & build-ability design
- Comprehensive knowledge of the installation requirements
- A thorough understanding of BS 8485:2015 and how the changes from previous British Standard affect current installations
- Extensive experience of BS 8485:2015 gas remediation strategy
- An in-depth knowledge of CIRIA 735
- A systematic approach to logged reporting
- 100% Independence from any installation company
- Company owned testing equipment & rigs
- Comprehensive knowledge of the systems used & their capabilities
- Complete awareness of the BS 8485:2015 points scoring system
- A thorough understanding of the BS 8485:2015 full system evaluation program & how this is placed within Verification Planning
- A Professional Risk Based Assessment Pre-Verification Plan

VERIFICATION REPORT

The GeoShield Verification Report is a user friendly document published in hard copy, cloud link, instant email & flash drive. The final report is a concise document that relates to the history of the Ground Gas Protection System application process. The final report will have:

- A description of the inspection regime
- A description of the elements of the ground gas protection system
- Dates of inspection, inspection staff present, weather conditions & the surrounding trades activity
- Recognized defects & repairs along sectors & grid lines
- Areas of limitation: areas unable to be inspected identified and noted
- An on-going log of applicator capabilities, professionalism & experience
- A presentation of the material specifications etc.
- Installation photos along sectors & grid lines
- Areas inspected along sectors & grid lines



GEOSHIELD LTD

GEOSHIELD GSR+
RADON GAS PROTECTION SYSTEM VALIDATION,
VERIFICATION AND ASSURANCE

**DEATHS ATTRIBUTED TO RADON PER YEAR
ARE ESTIMATED AT 1100 (SOURCE PHE)**

A major cause of lung cancer in the UK is the invisible odourless gas RADON. Home Builders & Main Contractors need to ensure comprehensive measures have been taken when protecting against RADON gas ingress, to provide evidence of this important activity GeoShield have formulated the GSR+ Quality Assurance Program.

The GSR+ Quality Assurance Program is a comprehensive hand-over document created for house builders and developers to pass to future owners. GSR+ provides new buyers with a historical log of the protection system application, ensures peace of mind and assists in conveyancing. The GSR+ comprises:

- The RADON Protection design & validation
- Independent Verification of the installation
- GeoShield Validation Certificate
- Relevant information from BRE 211
- Test results of RADON monitoring (3 months testing)





GEOSHIELD LIMITED

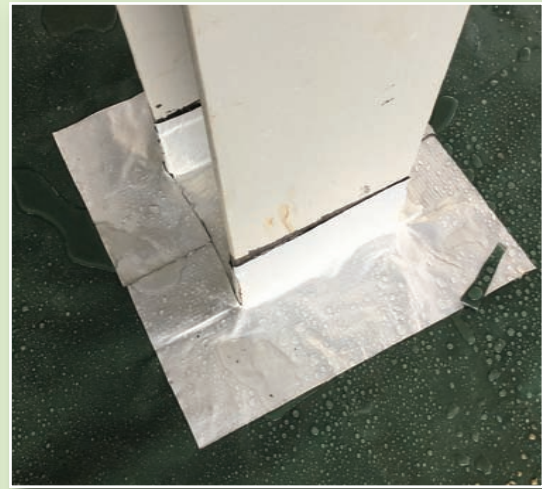
promote a risk based approach to the application of ground gas protection systems, the venting & installation of primary barriers and the verification of barriers in accordance with BS 8485:2015 & CIRIA 735 (2014).

Independent Verification Programs are now an industry requirement, to learn more call

GEOSHIELD HEAD OFFICE 0113 320 8639

GEOSHIELD ON-SITE VERIFICATION 0113 320 8828

alternatively info@geoshield.co.uk



GEOSHIELD LIMITED

Icon Business Centre, 4100 Park Approach, Thorpe Park, Leeds LS15 8GB . Tel: 0113 320 8639

Doxford International Business Park, 4 Admiral Way, Sunderland, Tyne & Wear SR3 3XW . Tel: 03330 165 550

2nd Floor, Quayside Tower, Broad Street, Birmingham, B1 2HF . Tel: 0121 726 1340

Centurion House, London Road, Staines, TW18 4AX . Tel: 0178 477 9391

Falcon Drive, Cardiff Bay, Cardiff, CF10 4RU . Tel: 0292 167 9961

3rd Floor, Arnott House, 12 - 16 Bridge Street Belfast BT1 1LU . Tel: +44 28 9590 8972

83 Princes Street, Edinburgh EH2 2ER . Tel: 0131 322 1514

www.geoshield.co.uk

Company Reg: 9455588

