

This certificate is valid for Building Regulations & associated technical guidance in force on the date of registration and for the regulations in the countries indicated

## Mike Wye & Associates Ltd - Glasscrete Flooring System

### Description of Product

This is an assessment of the Glasscrete flooring system as supplied by Mike Wye & Associates. Glasscrete is a system designed to provide an insulated breathable ground bearing floor slab, primarily for buildings that will benefit from a breathable, flexible floor construction. A Glasscrete floor slab is constructed using natural hydraulic lime powder (NHL) with sand aggregates and the insulation is achieved by the use of a 'hardcore' layer of compacted Geocell lightweight foamed glass aggregate. The system also incorporates geotextile membranes, cork perimeter insulation and may incorporate under floor heating systems.



### Key Factors Assessed

- Mechanical Resistance & Stability
- Safety in case of Fire
- Health, Hygiene and Environmental
- Safety in Use
- Energy Economy and heat retention
- Durability serviceability and identification

### Validity

This certificate was first issued on 10<sup>th</sup> March 2016 and is valid until 10<sup>th</sup> March 2023.

Issue Dated 14<sup>th</sup> January 2020

## Scope of Registration

This registered detail relates to the use of the complete Glasscrete flooring system as designed and supplied by Mike Wye & Associates Ltd for a specific project.

The registered detail is limited to works in properties that are identified as having less than 3% potential of Radon Gas exposure, as assessed against information carried by Public Health England and available via [www.ukradon.org](http://www.ukradon.org). Where a higher radon potential is identified, measures to provide layers impervious to gas are likely to be needed, which will compromise the breathable nature of the floor. Contact the relevant building control body for further information.

The acceptance of the registered detail for any given project must also remain conditional on the wider suitability of the existing building to receive the Glasscrete floor system. This suitability must be established by carrying out a thorough assessment of the building, site topography and ground conditions. This assessment must therefore form part of the design and specification process to be carried out by a suitably qualified professional and if it identifies that the building is not suitable to receive the Glasscrete floor, then this registered detail should not be considered applicable.

The building regulations require that a ground bearing floor slab is constructed to an appropriate standard with regard to all of the applicable requirements of the regulations. These would include structural integrity, thermal insulation, resistance to ground moisture and resistance to contaminants such as radon gas, methane etc, irrespective of whether the building is new or existing.

These can be onerous requirements, particularly in older existing buildings and their application needs to be considered on a case by case basis to establish how the regulations should be applied. Early engagement of the building control body is important to ensure an appropriate solution is achieved. Relaxation of the standards of the Building Regulations will typically only be considered where there are reasons of building conservation or preservation.

The Geocell component for Glasscrete systems is available both in the 10/60 grain size or a 10/30 subset which allows for different minimum floor thicknesses of 150mm and 100mm respectively.

The minimum recommended thickness of the Geocell insulation component of 100mm, meets the minimum r-value recommended for use beneath underfloor heating in a solid ground floor in BS 1264-4 and therefore will adequately limit heat loss through this floor system when utilising underfloor heating. However, where a reduced insulation value has been considered necessary, the increased energy losses that occur from a heated ground bearing slab may dictate that under-floor heating is not acceptable.

## Conditions of Certificate

The floor system is not intended to span over soft spots in the oversite area, and additional means of reinforcing the flooring system will need to be considered if the subsoil is of poor load-bearing capacity.

It is not acceptable to excavate below the depth of the foundations of existing walls when reducing levels to install the floor. In order to meet the regulations for insulation value, it may be necessary to consider alternative insulation products/flooring systems, to reduce the depth of excavation.

A breathable floor is not able to resist the ingress of gasses such as radon and methane. In areas where there is a risk of contaminant gasses, consideration must be given to whether the regulations require that a gas tight membrane is added as part of the floor system and whether a de-gassing sump should be considered below the new floor. This would remove the ability of the system to act as a breathable floor.

The Glasscrete system has a non-capillary nature and will not draw ground moisture. However, it is not impervious and will therefore not resist ingress of water resulting from high water levels or poor drainage. There must be adequate precautions to prevent the build up of water below the slab.

The new floor finish will not alter the character or appearance of the building. Therefore, even in a listed building, there is no automatic allowance for a reduction in insulation value below that required for new thermal elements in Part L of the regulations. Consider whether the full elemental requirement of Part L can be achieved using the Glasscrete system. The design should include a U-value assessment as supporting information. If the elemental requirement cannot be met, then more efficient insulating products should be considered before assessing whether it is necessary or acceptable to reduce the standard of insulation.

Particularly where a reduced insulation value has been considered necessary, the increased energy losses that occur from a heated ground bearing slab may dictate that under-floor heating is not acceptable.

LABC consider that, Glasscrete Flooring System will meet the functional requirements of the Building Regulations (listed below) if the criteria detailed in this certificate are met;



## The Building Regulations 2010 (as amended) England & Wales

AD A	Structural integrity
Note:	The system is acceptable, subject to a favourable assessment in relation to the host building.
AD B	Fire Safety
Note:	The system is acceptable.
AD C	Site preparation and resistance to contaminants and moisture
Note:	Part C1 of the regulations will only be met if there are no contaminant gasses identified that might require the introduction of a gas proof membrane. Part C2 of the regulations will only be met if the site is properly assessed and/or designed to prevent the build up of ground/surface water beneath the floor system.
AD J	Heat Producing Appliances
Note:	If used beneath a fireplace, major component products are non combustible. Consideration may need to be given to positions of geotextile and cork insulation depending on hearth detailing and appliance specifications.
AD L	Conservation of fuel and power
Note:	The system is capable of meeting the requirements of Part L, to be proven by an appropriate insulation value calculation and/or comprehensive assessment of the insulation value required by the regulations, in that specific building.
Regulation 7	Materials and Workmanship
Note:	If used in the correct manner, the components and system are acceptable.



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AD L	Conservation of fuel and power
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## The Building Regulations 2010 (as amended) Wales

AD L	Conservation of fuel and power
Note:	The system is capable of meeting the requirements of Part L, to be proven by an appropriate insulation value calculation and/or comprehensive assessment of the insulation value required by the regulations, in that specific building.



### **The Building (Scotland) Regulations 2004 (as amended)**

If you would like to discuss a specific use of the product in Scotland it will require an additional assessment under the Scottish Building Regulations and accordingly you should contact the LABSS STAS Administrator at [www.labss.org](http://www.labss.org)

## Non-Regulatory Information



### LABC Warranty

The use of the Glasscrete Flooring System has not been assessed to meet the requirements of the LABC Warranty Technical Manual. If you would like to discuss a specific use please make an enquiry to [technical.services@labcwarranty.co.uk](mailto:technical.services@labcwarranty.co.uk)

## Supporting Documentation

Geocell Technical Data

LS020615 BMTRADA Screed results

Secil Natural Lime NHL5 TC.E.077

Glasscrete Detail LABC

Multitrack 1000

Warmwell Physical Chemical Data

Glasscrete Method Statement

Secil Natural Hydraulic Lime Product Sheet

Warmwell 0\_4 SWPS

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