# Certificate No: EW543A

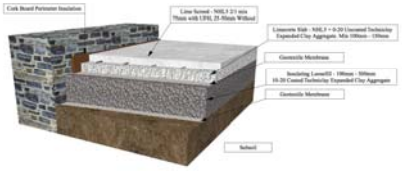
**This certificate is valid for Building Regulations & associated technical guidance in force on the date of registration and for the regulations in the countries indicated**

## Mike Wye & Associates Ltd - Limecrete Flooring System

### Description of Product

This is an assessment of the Limecrete flooring system as supplied by Mike Wye & Associates. Limecrete is a system designed to provide an insulated breathable ground bearing floor slab, intended primarily for traditionally built housing which might not be well suited to the provision of impervious, non-flexible concrete floor construction.

A limecrete floor slab is constructed using natural hydraulic lime powder (NHL) with sand and/or clay aggregates and the insulation is achieved by the use of a loosefill 'hardcore' layer of coated foamed clay aggregate. The system also incorporates geotextile membranes.



### 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 1st February 2016 and is valid until 1st February 2020.

Issue Dated 9th January 2017

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## Scope of Registration

This registered detail relates to the use of the complete Limecrete flooring system as designed and supplied by Mike Wye & Associates Ltd for a specific project.
The registered detail is limited to the use of the Limecrete system as a replacement floor construction within existing buildings only.
The registered detail does not therefore cover the use of the system in new build projects or where the system is not designed and supplied by Mike Wye Ltd specifically for the 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 . 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 Limecrete 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 Mike Wye and Associates for the project, and if it identifies that the building is not suitable to receive the Limecrete floor, then this registered detail should not be considered applicable.
Buildings which are also subject to a 'Material Change of Use', may have additional requirements imposed over those for alterations to a building not undergoing a change of use, and early discussions with the building control body should be sought.
When a ground bearing floor slab is replaced in an existing property, the building regulations require that it is replaced 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, since the work constitutes both a material alteration of the property, and the provision of a new thermal element where this is applicable.
These can be onerous requirements, particularly in an older building 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.

## 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 the 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 Limecrete 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 construction should not need to 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 Limecrete 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.

# Regulations

LABC consider that, Limecrete 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.<br>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.<br>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. |

## The Building Regulations 2010 (as amended) England

| | |
|---|---|
| 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 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

## Non-Regulatory Information

**LABC Warranty**

The use of the Limecrete 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

## Supporting Documentation

10mm-20mm Techni-clay

20mm-0mm Techni-clay

Lightweight clay insulation aggregate/ NHL Limecrete Floor

BM Trada Test Certificate No: SCREEDLC03061542195

BM Trada Test Certificate No: SCREEDLS02061542195

Limecrete Detail LABC

Mike Wye & Associates Ltd Limecrete Method Statement v2

Wrekin products Specification Guide – Multitrack 1000

Secil Natural Hydraulic Lime

Secil NATURAL LIME NHL 5

Techni Clay – Expanded Clay Aggregate

Aggregate Industries – Aggregate Properties Data Sheet

Warmwell 0_4 SWPS

## Contact Information

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