

# Donald Insall Associates

## THE BLOOMSBURY HOTEL Methodology for Terrazzo Repair For Doyle Collection

BLOOM.01  
June 2016

ISSUED FOR PLANNING



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Prepared by: Aimée Felton - Associate

Checked by:

**Donald Insall Associates**

Chartered Architects and Historic Building Consultants

12 Devonshire Street, London, W1G 7AB

020 7245 9888

[www.insall-architects.co.uk](http://www.insall-architects.co.uk)

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# 1. Background

This report has been prepared by Donald Insall Associates as Historic Buildings Consultant, to assist as part of the planning and listed building consent application for the repair of the following materials:

- Terrazzo linings to the swimming pool

The report describes the following:

- The approach to recording
- The purpose of the method statement
- Method statements
- Protection
- Recording for replication and repair
- New Works Based on historic evidence

## 2. Scope of works

### 2.1 Relevant drawings

Reference should be made to the following drawings by Donald Insall Associates to identify the location and extent of the works and their relative locations in the building:

BLOOM.01-1010

BLOOM.01-2010

BLOOM.01-5010

## 3. Background to repair

### 3.1 Generally

The general approach is:

- i. To avoid damaging any of the terrazzo in the restoration and re-opening of the swimming pool
- ii. Restore the surface finish of the terrazzo to ensure that is water tight
- iii. Retain as much historic fabric as possible

## 4. Method Statements

This document has been written as part of the submission to the London Borough of Camden as part of the planning and listed building consent application. It is recommended that the following additional method statements are written prior to any works proceeding.

- Dismantling, cleaning, protection, storage, recording, repair and reinstatement of the terrazzo
- Dismantling, protection, storage, recording, repair and reinstatement of the metal lights and accessories including handrails, grab rails and steps

## 4.1 The purpose of the Method Statement

The method statement describes the approach and methodology to be employed to:

- i. Dismantle items (if necessary) in a manner that will allow the elements to be re-used in the building
- ii. Record areas of poor repair which are bad replicas or have been lost in other areas

Before commencing the removal of existing fixtures, fittings or elements for repair, the contractor shall agree with Donald Insall Associates: the location of joints, the construction layers, the method of fixings and where any cutting of original fabric may take place; the location of and nature of any temporary markers as applicable and the method of protection. The contractor is also to ensure that statutory consent has been granted.

## 4.2 The content of the Method Statement

The specialist sub-contractor shall be an experienced Installer who is a current National Terrazzo and Mosaic Association (NTMA) member in good standing and who has completed a minimum of 3 terrazzo installations similar in material and extent to that indicated for Project over the last 5 years that have resulted in construction with a record of successful in-service performance.

The specialist sub-contractor shall provide (to the Main Contractor in the first instance for comment by the Historic Buildings Architect) in advance of commencement of the works, a Method Statement describing how he proposes to carry out the work including descriptions of all works of a temporary nature, such as scaffolding, lifting apparatus and protection. The method statement will also clearly explain:

- Which elements are to be recorded
- Which elements are not subject to either of the above
- The sequence of removal, repair and refurbishment/reinstatement

The specialist contractor shall not commence any works until the Historic Buildings Architect has made comment on the method statement to the Main Contractor and confirmation that the relevant conditions to the Planning Permission have been confirmed in writing as discharged by London Borough of Camden.

Any comment or lack of comment by the Historic Buildings Architect shall not alleviate the specialist sub-contractor of his responsibility for providing suitable plant or temporary supports to successfully carry out the works without jeopardising the safety of the materials or those working in the building as controlled via health and safety by the Main Contractor.

## 5. Recording: Procedure and Practice

### 5.1 Recording: Procedure and Practice

The recording of work is of the utmost importance. The specialist sub contractor shall label every element before dismantling. The specialist sub contractor shall apply self adhesive labels provided there is no danger that they will be lost from the fabric or mark the object in such a way as to be reversible to each element and shall give each element a discrete number which he shall record on 1:20 drawings all as agreed with the Historic Buildings Architect via the Main Contractor.

The numbering sequence to be agreed with the Historic Buildings Architect via the Main Contractor before dismantling commences. The contractor shall photograph the elements (with numbered self adhesive labels on them if appropriate or indelibly on the non face side) prior to and during the dismantling works. The specialist sub-contractor shall provide digital copies of the photographs as jpeg, together with two copies of all drawn material recording the elements in PDF or hard copy.

### 5.2 Sequence of recording

Before commencing recording work, the specialist sub-contractor shall agree, in writing, with the Historic Buildings Architect via the Main Contractor, the full scope and nature of the recording process. He will agree:

- The full nature and scope of the repair to the terrazzo lining to the swimming pool

### 5.3 Particular Issues

Before undertaking any repair, the surface of the terrazzo should undergo a conservation level clean to remove any surface varnishes and coatings, which may be affecting the colour.

Following terrazzo application, the area must be sufficiently screened off from any other work, foot traffic or accidental damage and for not less than 24 hours after application unless manufacturer recommends a longer period.

### 5.4 Samples

Samples of all new materials used for the repair will be agreed with the Historic Buildings Architect prior to construction and remain on site for comparison.

All items are to be re-constructed are to match the original details and materials exactly.

For each type, material, colour, and pattern of terrazzo and accessory required showing the full range of colour, texture, and pattern variations expected.

Label each terrazzo sample to identify manufacturer's matrix colour and aggregate types, sizes, and proportions.

Prepare samples of same thickness and from same material to be used for the Work, in size indicated below:

- i. Terrazzo: 6-inch- (150-mm-) square Samples
- ii. Accessories: 6-inch- (150-mm-) long Samples of each exposed strip item required

Source Limitations for Aggregates: Obtain each colour, grade, type, and variety of granular materials from single source with resources to provide materials of consistent quality in appearance and physical properties.

Mockups will be built for Historic Building Architect and London Borough of Camden approval to verify selections made under Sample submittals. These will demonstrate aesthetic effects and set quality standards for materials and execution.

## 5.5 Preparation for repair and Repair

Following analysis of the colour, aggregate type and size, a sample panel of new terrazzo to match should be prepared for Historic Building Architect and London Borough of Camden approval.

- Examine terrazzo and substrate (if visible due to failure)
- Mark minimum area for repair to ensure good bond for new repair
- Cut out and replace terrazzo areas that evidence lack of bond with substrate or underbed, including areas that emit a "hollow" sound if tapped
- Clean area of substances, including oil, grease, and curing compounds, that might impair terrazzo bond. Provide clean, dry, and neutral substrate for terrazzo application
- Roughen concrete substrates before installing terrazzo system according to NTMA's written recommendations
- Cover entire surface to receive terrazzo with dusting of sand
- Install isolation membrane over sand, overlapping ends and edges a minimum of 75 mm
- Install welded-wire reinforcement, overlapping at edges and ends at least two squares. Stop mesh a minimum of 25 mm short of any pre-existing expansion joints
- Verify that concrete substrates are dry and moisture-vapour emissions are within acceptable levels according to manufacturer's written instructions
- Protect other work from water and dust generated by grinding operations. Control water and dust to comply with environmental protection regulations
- Erect and maintain temporary enclosures and other suitable methods to limit water damage and dust migration and to ensure adequate ambient temperatures and ventilation conditions during installation

## 6. Cleaning

Prior to any works undertaken, a sample cleaning test should be undertaken of an area no less than 0.5m<sup>2</sup>.

The sub-contractor can provide guidance but, as a general principle, the following specification should be a sufficient step-by-step incremental approach to cleaning the historic terrazzo with the minimum amount of chemical necessary.

Using a DOFF conservation clean, trial areas to determine type of surface dirt.

Portland Cement Terrazzo Cleaner: Chemically neutral cleaner with pH factor between 7 and 10 that is biodegradable, phosphate free, and recommended by cleaner manufacturer for use on terrazzo type indicated.

## 7. Sealing

Sealer: A stain-resistant, penetrating-type sealer that is chemically neutral; does not affect terrazzo colour or physical properties; is recommended by sealer manufacturer; and complies with NTMA's "Terrazzo Specifications and Design Guide" for terrazzo type indicated.

- iii. Surface Friction: Not less than 0.6 according to ASTM D 2047
- iv. Acid-Base Properties: With pH factor between 7 and 10
- v. Sealers shall have a VOC content of 200 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24)
- vi. Product: "Scotchgard Stone Floor Protector"

## 8. Dismantling: Procedure and Practice

### 8.1 Particular Issues

The contractor shall not cut any element unless this is agreed with the Historic Buildings Architect. It is expected that timber elements fixed to other backings will be gently prised off and fixings cut or removed as the piece is dismantled.

## 9. The Proposed Works

The proposals are for the repair, refurbishment of the existing terrazzo lined swimming pool at sub-basement level within The Bloomsbury Hotel.

The scope of works includes new mechanical and electrical plant together with new lighting (should the existing lights be found to be unrepairable) which may impact on the proposals for reinstatement and repair. The Main Contractor will be expected to liaise with the appropriate consultants to ensure that the works are fully co-ordinated and that any conditions to the consented scheme are fully discharged in writing prior to works commencing on site.

### 9.1 Design Responsibility

The contractor shall:

- Take all necessary site dimensions for the setting out to allow the reinstatement and manufacture of all components as applicable
- Produce all necessary design and construction drawings including, rods, for all elements being replicated or reconstructed. The specialist sub-contractor shall not commence manufacturing components until he has received the Historic Buildings Architect's comments
- Design all necessary support systems and fixings for the installation of all elements being re-located and ensure that all parts of the structure to which the supports are fixed are suitable and capable of supporting the loads which will be imposed upon them. Present fixing details to the Historic Buildings Architect for comment prior to construction

### 9.2 Installation Requirements

The contractor shall:

- Co-ordinate with the other specialist trade contractors regarding the installation of all the associated and adjoining elements
- Present fixing details to the Historic Buildings Architect and Project Design Team for comment via the Main Contractor prior to construction