RIDGE

STRUCTURAL INSPECTION REPORT
BARRA HALL, HAYES

December 2024

STRUCTURAL INSPECTION REPORT

RIDGE

BARRA HALL, HAYES

Prepared for

The Workspace Consultants
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Prepared by

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VERSION CONTROL

VERSION	DATE	DESCRIPTION	CREATED BY	REVIEWED BY
1.0	03.12.2024	First Issue	JB	ME

CONTENTS

1. INTRODUCTION

1.1. Client's Name and Address

Mike Bird, Unit 1, Avenue Business Park, Brockley Road, Elsworth, Cambridge, CB23 4EY.

1.2. Property Address

Barra Hall, Hayes UB3 2SA.

1.3. Purpose of Report

Ridge and Partners were appointed to carry out a structural survey of the Barra Hall property. A condition survey report has previously been produced by Oakleaf in August 2024. This survey report highlighted some concerns regarding the condition of the structural elements of the property.

This report therefore addresses the structural elements of the building.

A site visit was conducted by James Bishop of Ridge and Partners on the 26th November 2024.

2. SCOPE OF WORK

The scope agreed in the Ridge fee proposal (S24-4517) of 16th October was to carry out the following:

1. Attend site to undertake a structural visual inspection of the primary structural elements. It is noted from the condition survey report that some cracking is evident in the load-bearing walls.

2. Prepare a structural visual inspection report outlining our observations and conclusions, and inclusive of recommendations for any appropriate remediation required to make the building structurally suitable for continued use.

3. LOCATION OF ELEMENTS INSPECTED

- All internal rooms of the property were inspected.
- The loft space was not inspected.
- The external elevations of the building were inspected. However, the rear playground area was not accessible and therefore the external elevations could not be inspected from this vantage point.
- The external wall of the detached boiler house was inspected but internal access was not possible.

4. THE PROPERTY

4.1. Overview

Barra hall is understood to be a Grade II listed building dating from the mid to late 19th Century. The building is currently unoccupied.

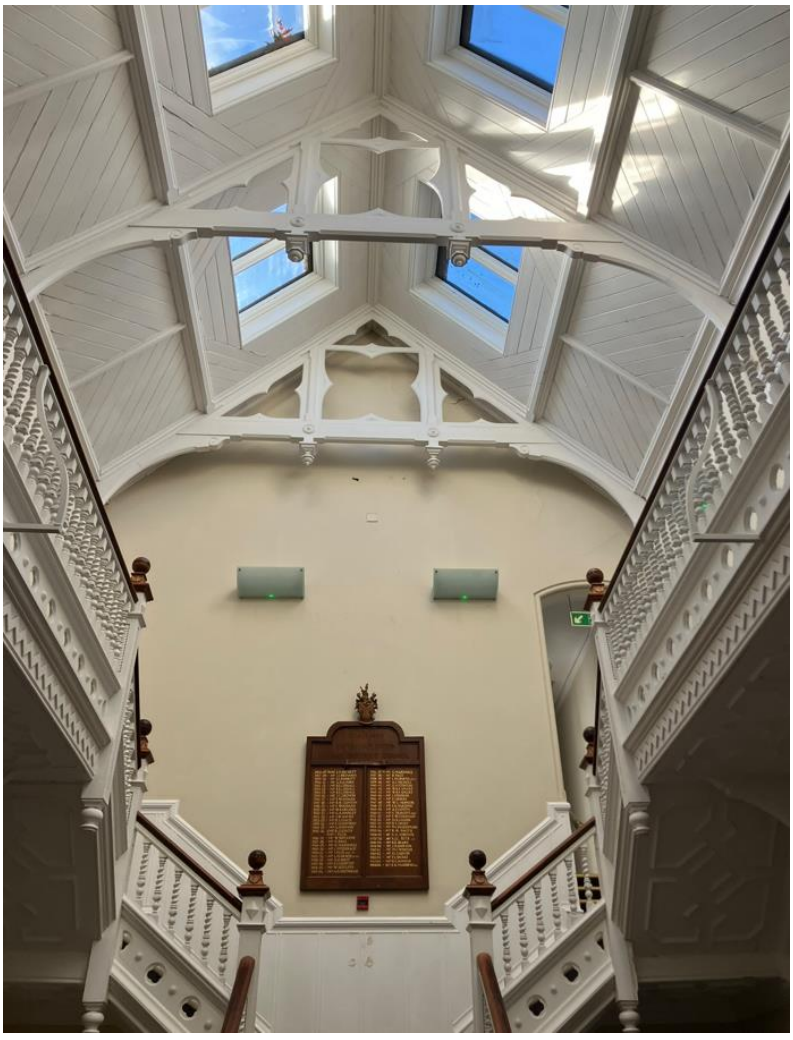
4.2. Structural arrangement

The building has 2-storeys with pitched roofs. No basement spaces were evident. The primary structure consists of load-bearing masonry walls with timber floors and an assumed timber roof.

The external wall surface has the appearance of dressed stonework. However, it is understood that this is Stucco render over brickwork.

The foundations to the walls could not be inspected but are expected to be shallow strip footings.

A local record borehole shows that the ground is likely to be silty clay with some gravel. There are some mature trees surrounding the building, but they are set back by several metres.



4.3. Observations

The general observation from our survey is that the building structure is generally in decent condition with no indication of structural failures. The walls and ceilings are suffering from cracking which is typical of a building of this age. Cracks are common in masonry structures which are brittle and have not been detailed to allow for movement due to atmospheric effects (thermal and moisture).

Cracking is also noted in the ceilings which again are brittle elements of the fabric and can crack over time due to long term movements from the timber floors and masonry walls.

The defects described below all require cosmetic repair and in some cases minor strengthening is required to reduce the likelihood of further issues.

The following defects were discovered during the structural inspection:

1. **Cracking in walls.** This ranged from minor hairline cracks to large cracks of up to 5mm that require repair. The most significant wall cracks are as follows:

    - At ground floor on the west side of the building adjacent to the round window. This crack appears to be caused by restraint from a perpendicular wall. See Figure 1 below.
    - Over the doorway on the first-floor landing in the main hallway – see Figure 2 below.
    - In the rear walls of the storeroom at ground floor.
    - Over the rear door of the kitchen. See Figure 3 below.
    - By the door of the boiler house. See Figure 7 below.
    - In the Sensory room at ground floor in the corner by the bay window – see Figure 8 below

2. **Cracking in ceilings.** This is generally minor and has probably appeared over a long duration with the floors subject to repetitive footfall movement and long-term creep of timber joists. It may also be caused by storage loads in loft areas. There are significant ceiling cracks in the following locations:

    - Above the Creche room which appear to have been caused by excessive deformation of the floor structure as this could be observed from the room above. See Figure 9.
    - Above the therapy room. See Figure 10.

3. **Cracking to cornicing at the perimeter of ceilings**. See Figure 11.

4. **Water damage to wall and roof areas**. See Figures 5 and 6.

The observations are recorded in the drawings that can be found in Appendix 1 of this report.

Figure 1 – Crack in wall by round window

Figure 2 – Crack to wall over landing in hallway

Figure 3 – Cracks to wall over doorway of kitchen

Figure 4 – Horizontal crack to wall over window in bay of Toy Library room

Figure 5 – Water damage to ground floor wall in corridor

Figure 6 – Water damage to roof structure in first floor meeting room

Figure 7 – Crack to wall over doorway in Boiler House

Figure 8 – Vertical wall crack in the Sensory Room

Figure 9 – Ceiling crack over Creche

Figure 10 – Ceiling crack over first floor Therapy Room

Figure 11 – Typical Cornice damage

4.4. Recommendations

- **Wall Cracks:**
  - The crack locations marked in red on the observation drawings are to be repaired in accordance with BRE253 and using a recognised masonry repair system such as Helifix.
  - The masonry over the window at the front elevation (Figure 4) should be exposed to investigate whether the crack is structural or just within the render.

- **Ceiling cracks:**
  - It is recommended that the joists above the ceiling in the creche and therapy rooms are exposed for further inspection by an Engineer.
  - Other cracked ceilings should be filled or replaced with new plasterboard prior to decoration.
  - Lofts areas should not be used for storage without strengthening to the ceiling joists.

- **Water damage:**
  - A specialist should be consulted to determine whether measures need to be taken to repair the structural elements and prevent future water ingress/rising damp

5. SUMMARY

We trust this report provides useful insight into the integrity of the structural elements investigated and helps identify repair work that will be required to the property prior to occupation.

We will be in contact regarding the requirement to arrange a second visit to inspect the elements that have been recommended for further investigation.

In accordance with our standard practice, we must state this report is confidential to the party to whom it is addressed and their professional advisers.

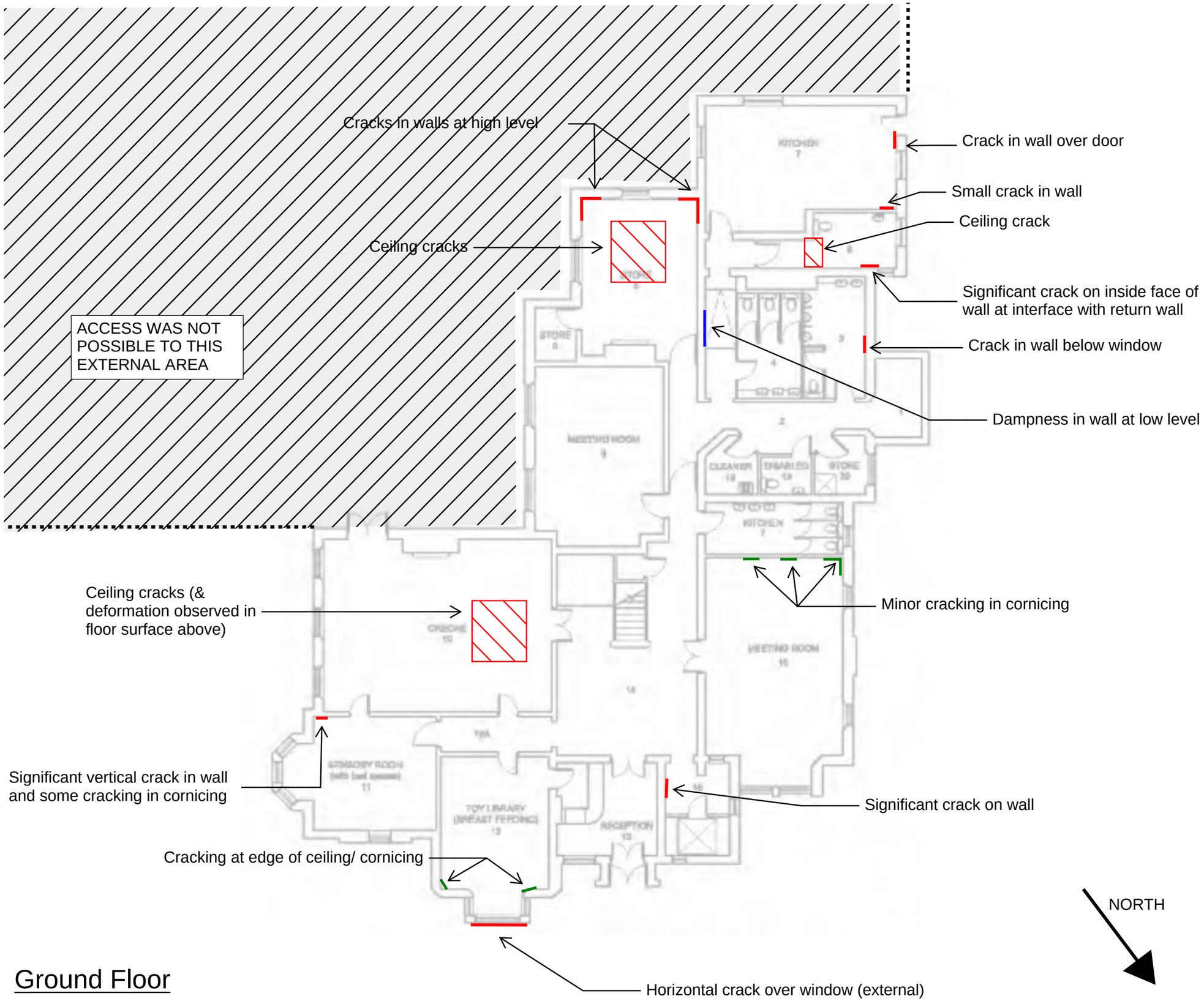
SIGNED: ....

FOR RIDGE AND PARTNERS LLP

DATED: 4th December 2024

APPENDIX 1

Observation record drawings



Ground Floor

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The Workspace Consultants

PROJECT:
Barra Hall

TITLE:
Structural Survey - Ground Floor

DRAWN BY:	SCALE: @ A3
CHECKED BY:	DATE: Dec-24
STATUS:	

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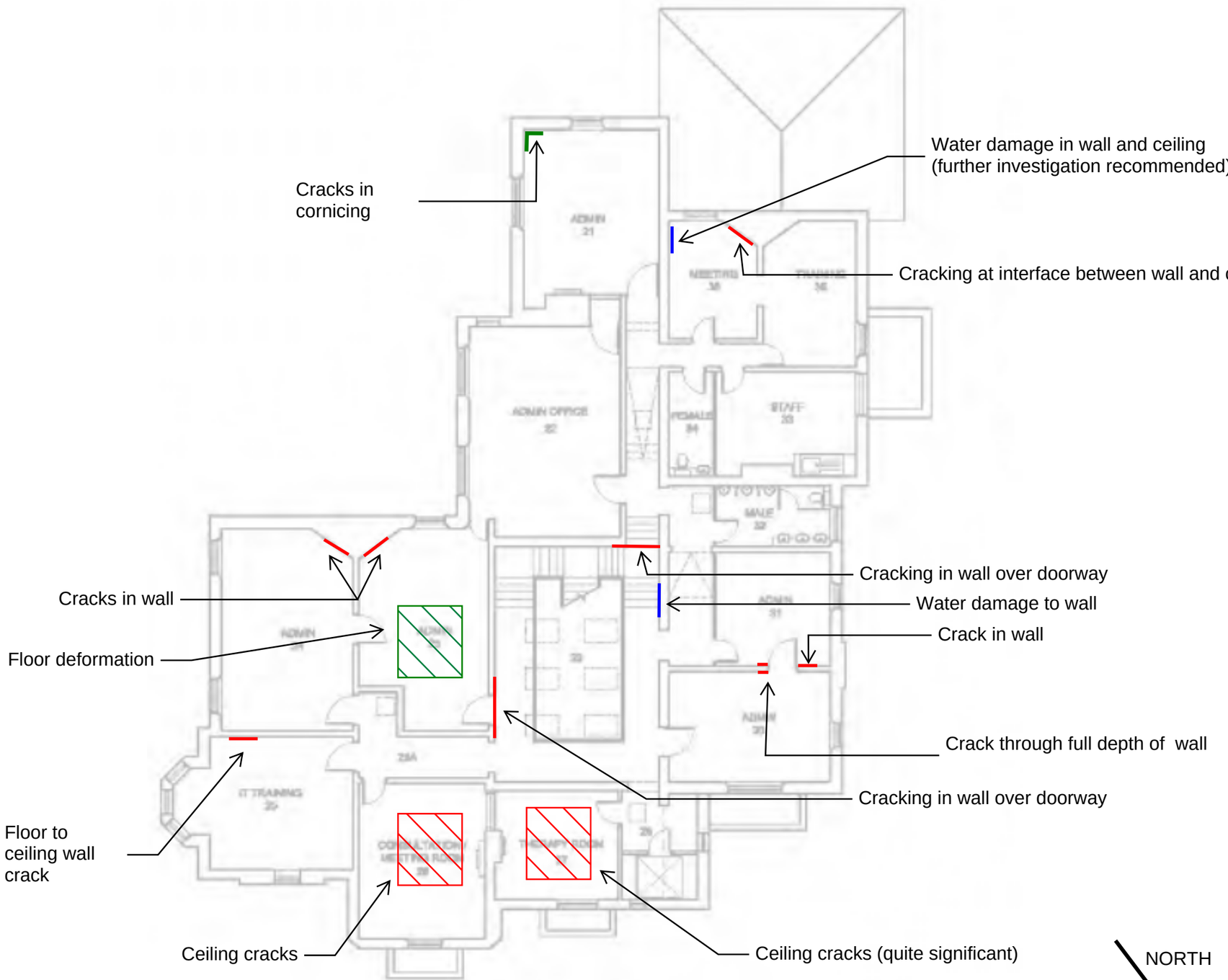

First Floor

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