



Summary Report on
Structural Condition
of
Faraday Tower, Sackville
Street, Manchester
Undertaken on behalf of
University of Manchester

CONTENTS

1.0	INTRODUCTION	1
2.0	ASSESSMENT WORKS.....	2
3.0	CONCLUSIONS.....	2

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1.0 INTRODUCTION

- 1.1 The Faraday Tower forms part of the University of Manchester North Campus and is located to the north and west of Sackville Street, with Drover Lane to the north.
- 1.2 The building has been vacant since the mid-2000s and the University are considering options for the future of the building.
- 1.3 WML Consulting Ltd have been employed periodically by the University in connection with the building elevations since 2005, with numerous reports produced reporting on the condition of the concrete.
- 1.4 The most recent instructions were to provide support in connection with a review of options for the site, ranging from refurbishment to demolition and future redevelopment.
- 1.5 WML have produced a report reference 10869-WML-XX-ZZ-RP-S-0002 detailing the investigations carried out and providing conclusions. This document provides a high-level summary.

2.0 ASSESSMENT WORKS

- 2.1 The precast concrete elevations have been suffering from deterioration for some time, and the University has been carrying out safety works periodically to remove loose concrete.
- 2.2 Detailed investigations were carried out in 2023 to assess the condition of the precast concrete panels. These works included abseil surveys and concrete cover and carbonation testing.
- 2.3 These investigations concluded that the depth of carbonation was close to or exceeding the concrete cover to reinforcement to large areas of the South and East elevations.
- 2.4 An internal visual inspection was carried out in January 2024. The visual inspection was confined to areas which were visible from the various floor levels, extensive asbestos contamination prevented access to large parts of the building.
- 2.5 Subsequently, intrusive investigation was carried out to the primary building frame to establish the structural arrangement and assess the condition of the concrete. These works were carried out by a specialist contractor in March 2024.
- 2.6 The carbonation and concrete cover testing of the primary building structure revealed a large proportion of locations where the depth of carbonation was close to or exceeding the concrete cover to reinforcement.
- 2.7 The intrusive investigation also revealed that the perimeter columns are precast concrete, formed 'floor to floor', rather than being instiu concrete continuous over the building height.

3.0 CONCLUSIONS

- 3.1 The depth of carbonation of the concrete has exceeded the concrete cover to reinforcement over large parts of the building elevations, and to areas of the primary building frame.
- 3.2 The nature of the construction, with non-continuous precast concrete cladding panels and perimeter columns, and precast concrete floor slabs, means that it would be extremely challenging to design and install a cathodic protection system to provide protection to the reinforcement.

This means that the corrosion of reinforcement will progress even if superficial concrete repairs are carried out, eventually compromising the building structure.

- 3.3 As such it is concluded that the condition of the concrete frame and cladding, combined with the nature of the construction, mean that repair is unlikely to be economically viable, and may not be technically possible using reasonable methods.