



47a, 47&49 Lower Mortlake Road Structural Report (including Basement Impact Assessment)

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QUALITY MANAGEMENT

PROJECT NO.	2218		
PROJECT NAME	47a, 47 & 49 Lower Mortlake Road		
CLIENT	Westlake Property Limited		
PROJECT ADDRESS	47a, 47 & 49 Lower Mortlake Road, Richmond, TW9 2LW		
DOCUMENT TITLE	Structural Report (including Basement Impact Assessment)		
DOCUMENT REV.	B		
DATE	03.02.2022		
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REVISION HISTORY

Rev.	Date	Issue Purpose	Prepared	Checked	Authorised
-	26.01.22	For Planning	GW	PRH	PRH
A	02.02.2022	For Planning	GW	PRH	PRH
B	03.02.2022	For Planning	GW	PRH	PRH

TABLE OF CONTENTS.

1. INTRODUCTION	4
1.1. THE EXISTING SITE AND STRUCTURE	
1.2. THE PROPOSED WORKS	
2. DESK STUDY	6
2.1. SITE HISTORY	
2.2. LOCAL GEOLOGY AND HYDROLOGY	
2.3. UNDERGROUND FEATURES	
2.4. FLOOD RISK	
2.5. AQUIFERS	
2.6. UNEXPLODED ORDNANCE	
2.7. NEIGHBOURING PROPERTIES	
3. STAGES 1 & 2: SCREENING AND SCOPING ASSESSMENTS	14
3.1. STAGE 1: SCREENING	
3.2. STAGE 2: SCOPING	
4. STAGE 3: SITE INVESTIGATION	18
4.1. WATER TABLE / AQUIFER	
4.2. SOIL UNDERLYING THE SITE	
4.3. DEPTH OF OUR FOUNDATIONS AND THOSE OF THE NEIGHBOURING BUILDING	
4.4. GROUND MOVEMENT ASSESSMENT (GMA)	
5. STAGE 4: IMPACT ASSESSMENT	19
5.1. SECONDARY AQUIFER & SUBTERRANEAN GROUNDWATER FLOW IMPACT	
5.2. PUBLIC HIGHWAY BOUNDARY PROXIMITY IMPACT	
5.4. STABILITY OF EXCAVATIONS	
6. DETAILED PROPOSALS AND DESIGN CONSIDERATIONS	20
6.1. SITE CONSTRAINTS & SEQUENCING	
6.7. DESIGN CODES	
7. CONSTRUCTION METHODOLOGY	22
7.1. SEQUENCE OF WORKS	
7.2. TEMPORARY WORKS	
7.3. MOVEMENT CONTROL	
7.4. MONITORING OF ADJACENT STRUCTURES	
7.5. NOISE, DUST AND VIBRATION	
8. SUMMARY	26
APPENDICES.	27
APPENDIX A: PROPOSED DRAWINGS	
APPENDIX B: POSSIBLE CONSTRUCTION SEQUENCE	
APPENDIX D: STRUCTURAL CALCULATIONS	

1. INTRODUCTION

Constructure Ltd were appointed to provide structural advice on the proposed construction of new basements below the existing HMO properties at 47 & 49 Lower Mortlake Road, and a new building, including basement, on the adjoining vacant plot known as 47A Lower Mortlake Road in Richmond, south-west London.

This Structural Report (including Basement Impact Assessment) has been produced to accompany the Planning Application, describing the scope and nature of the structural works. It details the outline approach that will be taken to safeguard the integrity of the existing buildings, neighbouring structures, highways and services, in particular with the construction of the proposed basements as well as the possible implications of the build on the local environment and how these are to be mitigated.

It has not been possible to assess local ground conditions physically on site, but a review of the publicly available information has been investigated and taken account of in the design approach. The results of the desktop investigations are included within this report.

Please refer to the appendix for a list of structural engineering drawings which support this report and show the proposals for the shell and core works.

1.1. THE EXISTING SITE AND STRUCTURE

The Site is located to the north side of Lower Mortlake Road, near the junction with Kew Road, in the TW9 postcode of the London Borough of Richmond upon Thames (LBRuT). The Site consists of two component parts. The first (no.47A) is a largely vacant plot accessed between HMO properties facing the road. It is understood to have previously been used as a car washing facility. The second component is two semi-detached premises known as no. 47 & 49. These buildings are 3 storey dating from the early 20th century and constructed of typical load-bearing masonry construction with timber floors and roof.

There is a single storey structure to the north-west of the Site, which will be demolished as part of the works. The total footprint is circa 590m².

The proposals involve the clearance of the vacant plot (no.47A) and the construction of a 1/2/3 storey (plus lower ground floor) co-living development, with outdoor amenity to the rear. A new single storey basement/lower ground floor will be incorporated below nos.47 & 49, with new lightwells to the front, and a new lower ground floor terrace area to the rear.



1.2. THE PROPOSED WORKS

The Proposed Development comprises of the construction of a part 1/2/3 storey building (plus lower ground) to provide 14 co-living units (sui generis) and associated internal amenity space at lower ground floor level, with new lower ground level amenity space to neighbouring buildings, and alongside external communal space at ground and lower ground level.

As part of a general refurbishment, it is also proposed to construct full-footprint single storey lower ground floor basements beneath the existing buildings of no.47 & 49.

Two small lightwells are proposed to bring some natural light into the proposed basement floor - one internal and one external lightwell by the recessed part of the south facade. A sunken garden will similarly provide natural light to the rear of the basement.

Other alterations not directly impacting the basement works are not addressed within this basement impact assessment, unless they relate to the likely construction sequence of the basement and superstructure works.

2. DESK STUDY

A desk study has been carried out. Reference has been made to the following sources.

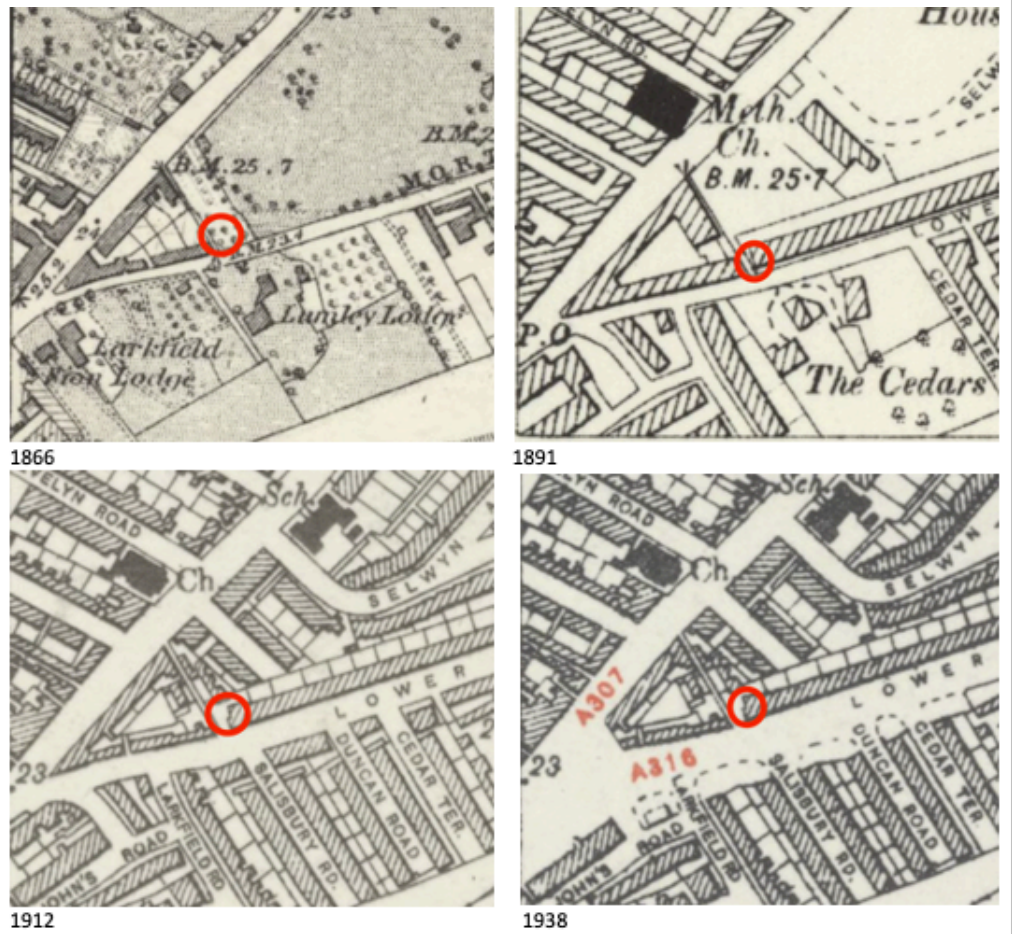
- . Online Geological Maps
- . Online Hydrogeological Maps
- . Aerial Photographs
- . Historic Ordnance Survey Maps
- . BGS Online Historical Borehole Records
- . MAGIC website mapping
- . Environment Agency website for Flood Risk
- . Bomb Maps

2.1. SITE HISTORY

Large scale residential building work commenced in the area towards the middle of the 19th century, as can be seen from the 1866 map which indicates limited areas around the Site farmland/marshland converting to developed infrastructure. The buildings immediately west of Blue Anchor Alley can be seen to have already appeared at this stage, however the majority of Lower Mortlake Road remains undeveloped, with Pagoda House and its surrounding lands (including the site of 47A, 47 & 49 Mortlake Road) shown as marshland.

The maps of 1891 and 1912 show the encroaching development over the aforementioned Pagoda House grounds, with the terraced housing that frames Lower Mortlake Road being constructed during this period. The later map from 1838 shows the area looking similar to how it appears today, with some newer buildings that bordered Lower Mortlake Road being demolished in order to widen the road, presumably to accommodate the increased motor vehicle traffic through the area. The junction with Kew Road to the west of the area will have been developed into the junction we see today sometime later in the 20th century.

As the history of the site and surrounding area appears to be purely residential or undeveloped in nature, the risk of encountering contamination is considered low. There is however a chance of some aggressive substance run off as a result of the more recent use of the vacant plot as car-washing facility. A suite of contamination testing will take place prior to Construction, during the site investigation process, and reported accordingly.



Old Maps

2.2. LOCAL GEOLOGY AND HYDROLOGY

From a review of the publicly available geology information, the Site appears to be in an area of the Kempton Park Gravel formation, underlying topsoil or made ground. A nearby borehole indicates this strata is likely to be circa 4-5m in depth (extending to circa 5.5m below ground level), with London Clay below.

Knowledge of nearby projects indicate that the water table is circa 5.0-6.0m below ground level, so expected to be below our proposed excavation. If we excavate to just above the clay formation as expected then perched water should be assumed.