



**35 Fountain Street, Manchester**

**Phase 1 Geo-Environmental Investigation**

Geo-Environmental Engineering Services

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## REVISIONS

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## 1.0 INTRODUCTION

This Phase 1 Geo-Environmental Investigation report has been prepared.

Instructions to proceed were received on 7<sup>th</sup> November 2022. Phase 1 desk study works were undertaken between 17<sup>th</sup> November and 28<sup>th</sup> November 2022.

### Proposed Development

This Phase 1 Geo-Environmental Investigation is to be used for submission to the Local Authority as part of a planning application. It is the Client's intention for the refurbishment and reconfiguration of 35 Fountain Street to create a new office building (Use Class E), including replacement building facades, a 2 storey rooftop extension and alterations to the internal layout servicing cycle parking, access and associated works.

A proposed sketch development plan is contained in Appendix 2.

## 1.1 Brief

The brief was to carry out a Phase 1 Geo-Environmental Investigation for the site based upon the proposed development outlined in Section 1.0. The site area is shown on the site location plan contained in Appendix 2.

The investigation was to include the following:

- a) Assess the probable ground conditions and contaminated land conditions on and below the site based on existing and historic site uses and relevant off-site activities, this is to include a site walkover.
- b) Identify probable contaminants / sources of contamination that may be present at the site using current contaminated land guidance and develop a conceptual site model for potential human health, ground gas and controlled waters receptors.

- c) Undertake a Preliminary Risk Assessment – which will determine the requirement for further environmental (contaminated land) investigation and assessment.
- d) Design, on the basis of the anticipated ground conditions, appropriate ground investigation works and discuss potential development issues (i.e. sub-surface features – obstructions, infilling, compressible ground, faulting, mineral extraction, mining and land instability).

A summary of the information / data sources is detailed in Section 2.2. A report was to be provided to summarise findings and to provide recommendations.

The limitations of this investigation work and report are included in Appendix 1.

## **1.2 Third Parties**

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## **2.0 SCOPE OF INVESTIGATION WORK**

### **2.1 Walkover Survey**

The site was visited on 23<sup>rd</sup> November 2022 in clear weather conditions and the objectives of the site walkover were, where applicable:

- to identify and assess visual and olfactory evidence of contamination (e.g. staining of concrete / soils, odours, presence of gas protection measures etc.);
- to identify locations of potential sources of contamination and assess their conditions (i.e. tank location, presence / condition of secondary containment / bunds, location of fill points, process areas);
- to identify surrounding land uses and any potentially contaminating activities;
- to identify / verify the presence of potential receptors (on- and off-site) which may be affected by identified sources;
- to obtain information on activities / procedures and standards of housekeeping etc.;
- to assess site access and potential investigation locations and constraints; and
- to assess any visual subsurface geotechnical features / anomalies (e.g. foundations, made ground, subsidence etc.).

Photographs were taken of the site during the walkover survey and these photographs, together with a plan indicating their location and direction, are contained in Appendix 3.

### **2.2 Documentation**

The following documents were obtained and examined during the desk study:

- a) A combined Enviro + Geo Insight report was obtained from Groundsure, an environmental database company, which provides a list of recorded past and present activities at or adjacent to the site which could have an impact on the levels of contamination in the soils and groundwater at the site. The report is contained in Appendix 5.

b) Aerial photographs of the site dated: April 2019, June 2015, June 2009, and June 2000. The photographs are contained within the Groundsure Enviro + Geo Insight report in Appendix 5.

c) Historical Ordnance Survey maps dated between 1854 and 2022, at scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560. These maps are presented in Appendix 4.

d) Groundsure maps, all dated 2022 as follows:

- Historical Land Use map;
- Environmental Permits, Incidents and Registers map;
- Landfill and other Waste Sites map;
- Current Land Use map;
- Hydrogeology and Hydrology maps;
- Environment Agency / Natural Resources Wales flood maps;
- Designated Environmentally Sensitive Sites map;
- Geological maps and Ground Working map;
- Mining, Extraction & Natural Cavities map;
- Natural Ground Subsidence maps;
- Borehole Records map;
- Railways and Tunnels map.

These maps are contained within the Enviro + Geo Insight report in Appendix 5.

e) The following sources were obtained and examined from the British Geological Survey (BGS). All items were copied under licence; [C18/01] British Geological Survey ©UKRI. All rights reserved:

- The BGS 1:50,000 Solid (2011) and Drift (2011) Geological Maps of the area (Sheet No: 85). 9 No. BGS Borehole logs were also obtained (Ref: SJ89NW343, SJ89NW335, SJ89NW336, SJ89NW337, SJ89NW3969, SJ89NW3970, SJ89NW3971, SJ89NW3972, SJ89NW3973). These borehole logs are contained in Appendix 6.

f) A Zetica UXO Risk Map is included in Appendix 7.

## 3.0 FINDINGS

### 3.1 Site Location and Description

This report pertains to a c. 0.07 Ha site at 35 Fountain Street, Manchester City Centre, at the postcode M2 2AN. The National Ordnance Survey Grid Reference for the centre of the site is 384168E, 398294N. The site currently comprises an 8-storey building with a basement, used for office spaces. Access to the site is via a main entrance in the north western corner of the site. This site is bound by Fountain Street to the west, Marble Street to the north, West Moseley Street to the east and an adjacent 8-storey building to the south

An aerial photo of the site is included below:

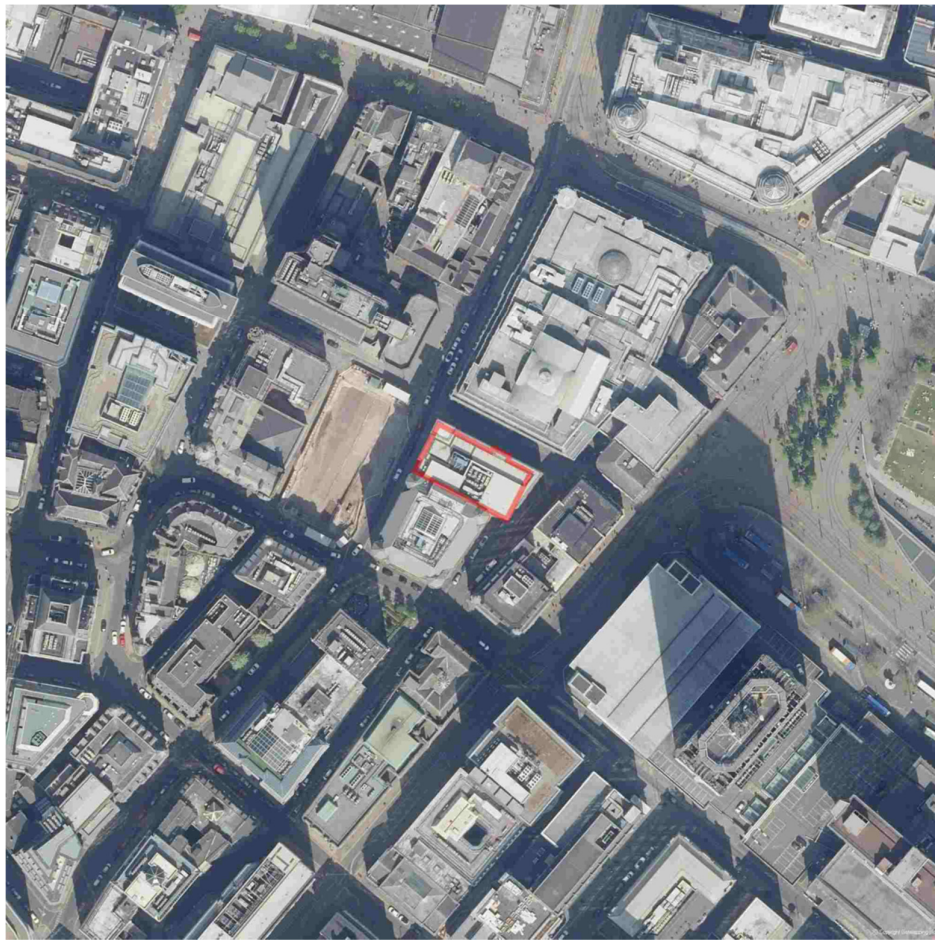


*Figure 1: Aerial image of the site dated April 2019.*

### 3.2 Walkover Survey

The walkover survey was carried out on 23<sup>rd</sup> November 2022 during clear weather conditions. Access to the site was via a main entrance off Fountain Street. The following features were noted.

The site currently comprises an 8-storey building with a basement. The building's ground floor and upper floors are currently used as office spaces, while the basement is used as a car park.



Figure 2: Photographs of the existing building, showing the main entrance, looking southeast (left) and from the south, showing the third party wall (beige column), looking northeast (right).

Figure 3: Photographs showing the entrance to the carpark off West Moseley Street (left) and the general view inside the



carpark (right).

### Contamination

A 4300 litre diesel tank was noted in a small room in the north east corner of the basement. No evidence of spillages or leaks were identified.



Figure 4: Photographs showing the 4300l diesel tank (left) and no evidence of spillages or leaks on the floor surrounding it (right).

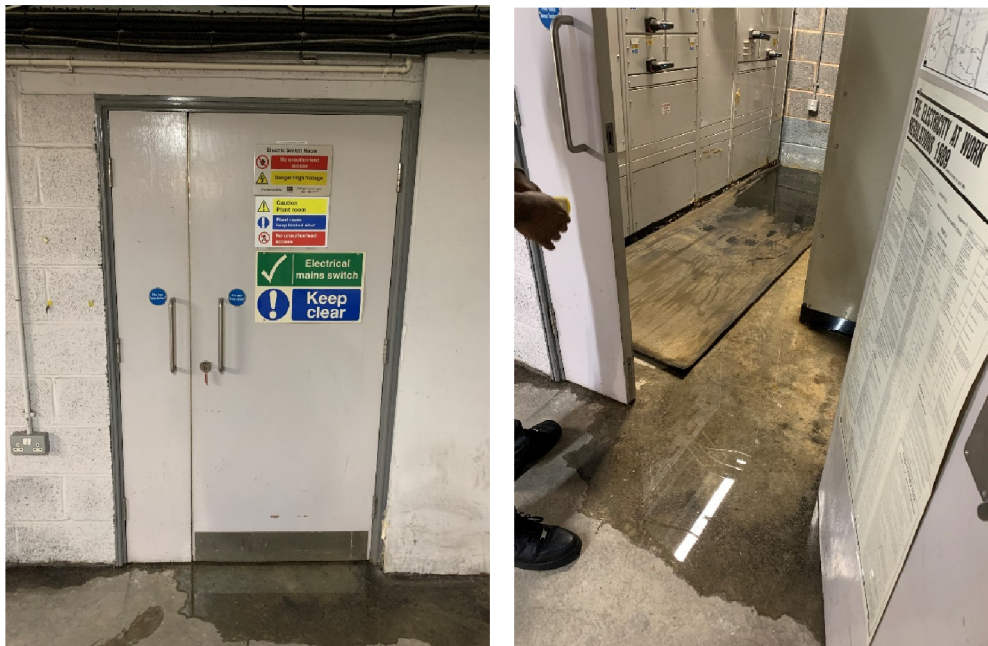


Figure 5: Photographs showing a water leak in the mains electricity switch room, showing the outside (left) and the inside (right).

Evidence of a water leak was noted in the mains electricity switch room. The source of the leak is unknown. No other evidence of potentially contaminative sources were identified during the walkover survey.

Numerous services were present in the building, therefore it is recommended that full service plans should be obtained before internal works commence.

It should be noted that a third party wall exists with the building to the south. Although this presents no geotechnical or contaminative hazards, it may become a liability risk if intrusive internal works are undertaken.

### 3.3 Site History

The site development history has been researched by reference to historical maps, street plans and aerial photographs. The historical maps are included in Appendix 4 to this report and the principal observations, which are divided into on-site history and off-site history, are summarised below:

#### 3.3.1 On-Site History

| Date        | Site Feature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1848 - 1949 | On the earliest reviewed historical map (1848) the site comprises three separate buildings. The largest of the three lies on the corner of Fountain Street and Marble Street. The two other smaller buildings are separated by Bank Street and Rook Street which trend southwest to northeast, running through the centre and the eastern sections of the site respectively. It is unknown what these buildings were used for, however the building adjacent to the south is recorded as a bank. |
| 1949 - 1968 | By 1949, Bank Street and Rook Street are no longer recorded and the 3 buildings on site have been demolished leaving the majority of the site as a vacant parcel of land, with a small building in the southeastern corner of the site.                                                                                                                                                                                                                                                          |
| 1968 - 1986 | From 1968 the entire site is recorded as a warehouse.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1986 - 2003 | In 1986, the on site building is no longer recorded as a warehouse and remains unchanged until 2000.                                                                                                                                                                                                                                                                                                                                                                                             |
| 2000 - 2022 | A planning application for the construction of a multi-storey building and car park was approved in November 2000, and Google Earth satellite imagery shows an increase in the height of the building by 2003. Therefore, the existing building on site was likely built in c. 2001. The building has remained unchanged ever since.                                                                                                                                                             |

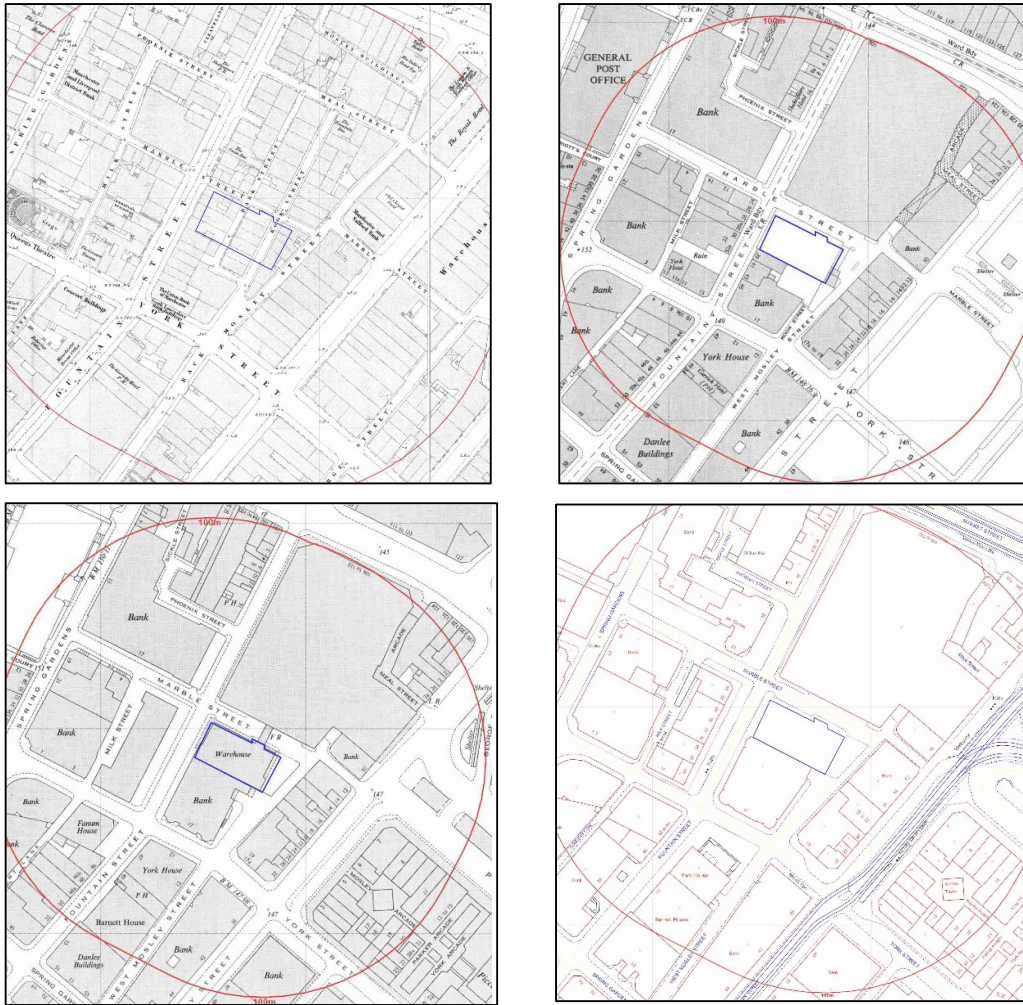


Figure 6: OS historical maps dated 1851 (top left), 1949 (top right), 1968 (bottom left) and 2003 (bottom right).

### 3.3.2 Off Site History

| Date        | Site Feature                                                                                 | Distance (m) | Direction |
|-------------|----------------------------------------------------------------------------------------------|--------------|-----------|
| 1949 - 1968 | In 1949 a ruin is recorded 20m west of the site and is absent by 1968.                       | 20           | W         |
| 1995        | An electricity substation is recorded 64m north of the site in 1995.                         | 64           | N         |
| 1958 - 1968 | 4 No. carparks are present from 1958 until 1968 between 80 – 240m southeast of the site.     | 80 - 240     | SE        |
| 1933 - 1995 | From 1933 until 1995 4 No. warehouses are recorded between 200 – 300m northeast of the site. | 200 - 300    | NE        |

|             |                                                                                                                                                             |           |    |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----|
| 1949 - 1968 | Another ruin is recorded in 1949 and absent by 1968, noted 240m south east of the site.                                                                     | 240       | SE |
| 1894 - 1938 | From 1928 a clothing factory, an unspecified mill, a foundry and 2 No. unspecified warehouses are recorded between 700 and 800 east of the site until 1938. | 700 - 800 | E  |
| 1906 - 1956 | An iron works is recorded 900m north of the site from 1906 until 1956.                                                                                      | 900       | N  |

It should be noted that numerous other warehouses, goods sheds and works existed approximately >750m from the site. Given they are a considerable distance from the site, they are not considered significantly contaminative sources.

### 3.4 Geology

#### 3.4.1 BGS Geological Map

The BGS 1:50,000 scale solid and drift geological maps of the area (Sheet No: 85, 2011) and the Groundsure geology maps show that the site is underlain by Glacial Till superficial deposits which typically comprises firm to stiff, slightly gravelly, slightly sandy clay with intermittent sand bands. The site is underlain by sandstone bedrock of the Chester Formation which generally consists of reddish brown, fine to medium grained, cross bedded, commonly micaceous sandstone with subordinate bands of greenish grey sandstone.

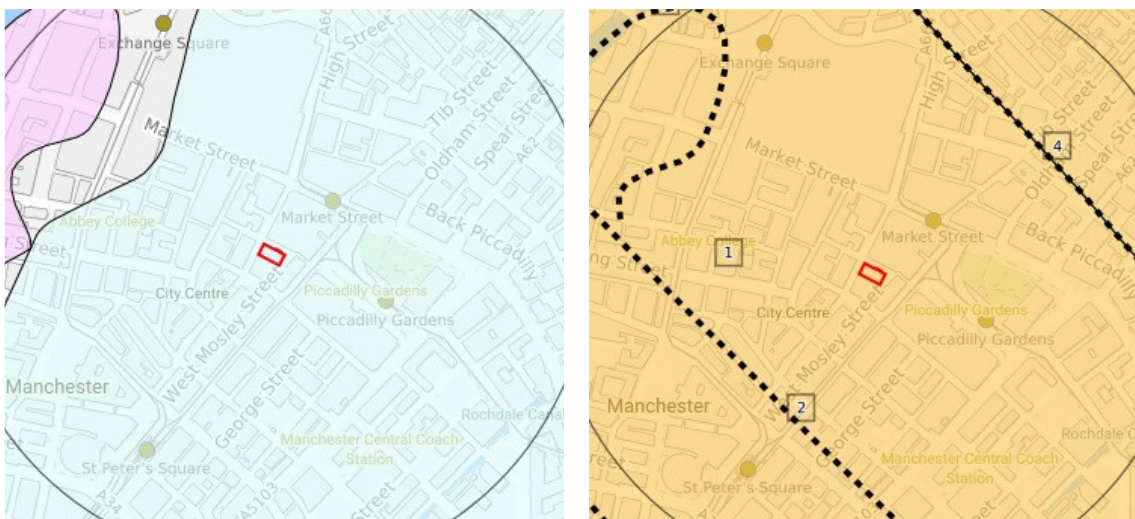


Figure 7: Extracts of the BGS 1:50,000 Drift (left) and Solid (right) Geological Maps. Light Blue = Glacial Till, Purple = Glaciofluvial Sheet Deposits. Orange = Chester Sandstone Formation

No faults are recorded on site. The nearest fault is recorded 240m south west down throwing to the north. A bedrock dip is not recorded in close proximity to the site.

#### 3.4.2 BGS Borehole Logs

There are no available BGS boreholes on-site. There are 9 No. BGS boreholes that lie within 150m of the site in a comparable geologic setting. The following pertinent information from these borehole logs is outlined below:

##### BGS Borehole Reference: SJ89NW343

This borehole is located approximately 43m west of the site and was excavated to a depth of 15.00m bgl in 1973. The log recorded the following pertinent information:

- MADE GROUND comprising brown, sandy, silty, clay FILL to a depth of 2.20m bgl, underlain by;
  - GLACIAL TILL comprising stiff, brown / grey, silty CLAY with occasional pebbles to a depth of 4.50m bgl, underlain by;
  - Brick and concrete SEWER to a depth of 5.80m bgl, underlain by;
  - GLACIAL TILL comprising stiff, brown, sandy, silty CLAY with occasional pebbles and small rock fragments to a depth of 13.87m bgl, underlain by;
- Weathered orangish brown SANDSTONE to a depth of 15.00m bgl.

##### BGS Borehole Reference: SJ89NW335 – SJ89NW337

These boreholes are located approximately 205m – 235m south of the site and was excavated to a depths of between 20.42m and 23.93m bgl in July and August 1959.

The logs recorded the following pertinent information:

- MADE GROUND to a depth of between 0.91m and 3.35m bgl, underlain by;
- GLACIAL TILL comprising firm to stiff, grey and brown mottled, sandy, silty CLAY with occasional gravel to a depth of 2.09m bgl, underlain by;
- GLACIAL TILL comprising stiff, brown, silty CLAY with occasional gravel and sand layers to a depth of between 6.10m and 6.63m bgl, underlain by;

- GLACIAL LACUSTRINE DEPOSITS comprising soft to firm, brown, laminated, slightly silty CLAY with occasional bands of red, fine, silty sand to a depth of between 7.77m and 7.93m bgl, underlain by;
- GLACIAL TILL comprising stiff to very stiff, brown, silty, sandy CLAY with occasional gravel to a depth of between 14.17m and 14.63m bgl, underlain by;
- WEATHERED BUNTER SANDSTONE comprising red, fine to medium SAND with cobbles of weakly cemented SANDSTONE or soft, red, weakly cemented SANDSTONE to a depth of between 16.00m and 16.15m bgl, underlain by;
- BUNTER SANDSTONE comprising moderately hard, weakly cemented, fine to medium grained red SANDSTONE to a depth of between 20.42m and 23.77m bgl

BGS Borehole Reference: SJ89NW3969 – SJ89NW3973

These boreholes are located approximately 165m – 220m south west of the site and was excavated to a depths of between 13.10m and 21.33m bgl in July and August 1959. The logs recorded the following pertinent information:

- MADE GROUND to a depth of between 1.37m and 3.96m bgl, underlain by;
- GLACIAL TILL comprising stiff, brown, silty CLAY with traces of silt and rare bands of sand to a depth of between 5.03m and 6.71m bgl, underlain by;
- Possible GLACIAL LACUSTRINE DEPOSITS comprising firm, stiff in places, brown, laminated CLAY to a depth of between 8.53m and 10.21m bgl, underlain by;
- GLACIAL TILL comprising very stiff, brown, sandy CLAY with occasional gravel to a depth of between 11.89m and 14.17m bgl, underlain by;
- WEATHERED CHESTER PEBBLE BEDS FORMATION comprising reddish brown, clayey SAND to a depth of between 13.44m and 15.24m bgl, underlain by;
- WEATHERED CHESTER PEBBLE BEDS FORMATION comprising weakly cemented, medium grained, red SANDSTONE, locally reduced to sand, to a depth of between 14.02m and 18.29m bgl, underlain by;
- CHESTER PEBBLE BEDS FORMATION comprising moderately cemented, medium grained, red SANDSTONE to a depth of between 17.98m and 21.34m bgl.

### 3.4.3 BGS Geohazards

| Data Type             | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ground Stability Data | <ul style="list-style-type: none"> <li>➤ The Potential for Shrinking or Swelling Clay Ground Stability Hazards is very low.</li> <li>➤ The Potential for Landslide Ground Stability Hazards is very low.</li> <li>➤ The Potential for Dissolution Ground Stability Hazards is negligible.</li> <li>➤ The Potential for Compressible Ground Stability Hazards is negligible.</li> <li>➤ The Potential for Collapsible Ground Stability Hazards is very low.</li> <li>➤ The Potential for Running Sand Ground Stability Hazards is very low.</li> </ul> |

For further details please see the Groundsure Enviro + Geo Insight report contained in Appendix 5.

### 3.4.4 BGS Estimated Soil Chemistry

The BGS have estimated that the superficial deposits across the site to naturally comprise the following determinands:

- Arsenic – 15 - 25mg/kg
- Cadmium – 1.8mg/kg
- Chromium – 60 - 90mg/kg
- Nickel – 30 - 45mg/kg
- Lead – 100 - 200mg/kg
- Bioaccessible Lead – 60 - 120mg/kg

## 3.5 Mining

### 3.5.1 Coal Mining

The site lies inside of a Coal Authority Coal Mining Reporting Area. However, the site does not lie within a high risk development area. No coal outcrops are on site or within the immediate vicinity of the site with the nearest being located 1580m north west of the site. Mine entries are also not recorded on site or within the immediate vicinity with the closest being located 1790m to the east. Consequently, the risk posed by coal mining is deemed low and no further assessment required.

### 3.5.2 Non-Coal Mining

The Groundsure geo-insight report (contained in Appendix 5) indicates that no non-coal historic mining areas exist on-site or within 1km of the site.

### 3.5.3 Salt Mining / Brine Extraction

The site lies outside the Cheshire Brine Subsidence Compensation Board Compensation District.

### 3.5.4 Historical Surface Excavations

No historical surface excavations have been recorded on-site. 8 No. historical surface excavations are recorded within 250m of the site. The nearest relates to an unspecified ground working in 1931 located 121m northeast. The remaining historical surface excavations include to 5 No. ponds and an unspecified pit.

### 3.5.5 Mineral Safeguarding

Where mineral resources are present the mineral planning authority may designate areas as Mineral Safeguarding Areas (MSA) and Mineral Consultation Areas (MCA). These are aimed to safeguard mineral resource areas from unnecessary sterilization by non-mineral development. The BGS Mineral Resources maps designate the areas of potential mineral resources and where active / lapsed planning permission was granted for mineral extraction.

The BGS Mineral Resources Map for Manchester indicates that the site does not lie within an area designated as containing mineral resources.

## 3.6 **Previous Reports**

### 3.6.1 Planning Portal

Following a review of the planning portal, no previous desk study or ground investigation reports were available for the site. However, the planning application for the existing building was obtained (planning reference 059090/FO/CITY1/00). The application was submitted on 17<sup>th</sup> April 2000 and was approved on 23<sup>rd</sup> November 2000. Conditions 14 states that:

*Before any development commences, a scheme of site investigation shall be submitted to and agreed in writing with by the City Council as local planning authority, to ascertain the existence and extent of any land contamination within the site, and details of remediation works to deal with any such contamination found shall be submitted to and approved in writing by the local planning authority; any such details of remediation works shall be implemented in full before the proposed development is commenced.*

This condition would be required to be fulfilled in order for the proposed development to have been approved and granted. Consequently, it is likely that a contamination assessment was undertaken in 2000 and that there was either low contamination risk or a sufficient remediation strategy was implemented prior to development.

### 3.6.2 IGE Site Investigation Works

IGE have previously undertaken a site investigation at a site 150m north east. The site investigation comprised trial pits, dynamic samples boreholes and follow-on rotary boreholes in a basement c. 7.00m below ground level, which recorded the following typical ground conditions across the site:

- CONCRETE SLAB to a depth of 0.25m bgl (36.64m AOD), underlain by;
- MADE GROUND [SUB-BASE] comprising reddish brown, sandy, angular to subangular GRAVEL of red brick, sandstone and concrete with occasional whole and half red bricks to a depth of between 0.35m and 0.70m bgl (36.54m and 36.19m AOD), underlain by;
- [Above Foundations Only] MADE GROUND (REWORKED NATURAL DEPOSITS) comprising firm to stiff, brown, slightly gravelly, slightly sandy CLAY with occasional whole and half bricks to a depth of between 0.55m and 1.80m bgl (36.34m and 34.84m AOD), underlain by;
- GLACIAL TILL comprising firm to stiff, brown, slightly gravelly, slightly sandy CLAY to a depth of between 4.90m and 6.20m bgl (31.99m and 30.69m AOD), underlain by;
- GLACIAL TILL comprising grey and brown, sandy, angular to subrounded, fine to coarse GRAVEL of mixed lithologies to a depth of between 5.90m and 6.70m bgl (30.99m and 31.19m AOD), underlain by;

- CHESTER FORMATION comprising weak to medium strong, red, fine to medium grained, slightly micaceous SANDSTONE.

It should be noted that 'ground level' = sub basement level (c. 7.00m below external footpath ground level).

### 3.7 Hydrology and Hydrogeology

Environmental data relevant to the site and its immediately surrounding area has been obtained from sources available in the public domain. In addition, an environmental report was obtained from Groundsure. The Enviro + Geo Insight report and associated maps that have been inspected are presented in Appendix 5 and the principal observations in relation to waters and flooding can be summarised as follows:

| Data Type                  | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flooding                   | <ul style="list-style-type: none"> <li>➤ With respect to rivers and seas, the site lies in flood zone 1.</li> <li>➤ With respect to surface water flooding, the site is at low risk, with the highest risk within 50m being 1 in 30 years, 0.3 – 1.0m.</li> <li>➤ With respect to groundwater, the site is recorded as being at moderate risk.</li> </ul>                                                                                                      |
| Surface Water Features     | <ul style="list-style-type: none"> <li>➤ No surface water features are recorded on site or within 250m of the site.</li> <li>➤ The nearest surface water feature is the Rochdale canal, located 470m south east. While the River Irwell is 570m north west.</li> </ul>                                                                                                                                                                                         |
| Surface Water Abstractions | <ul style="list-style-type: none"> <li>➤ There are no licensed surface water abstractions located on-site.</li> <li>➤ There are 2 No. licensed surface water abstractions located within 2km of the site, both are historical. The nearest license is located 1869m southwest, listed as Irwell Works for general cooling uses.</li> </ul>                                                                                                                     |
| Superficial Aquifer        | <ul style="list-style-type: none"> <li>➤ The underlying superficial aquifer is classified as a <b>Secondary Undifferentiated Aquifer</b>. Assigned where it is not possible to attributed either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.</li> </ul>                                                 |
| Bedrock Aquifer            | <ul style="list-style-type: none"> <li>➤ The underlying bedrock is classified as a <b>Principal Aquifer</b> – Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/ river base flow on a strategic scale. Generally principal aquifers were previously major aquifers.</li> </ul>                                                                                          |
| Groundwater Abstractions   | <ul style="list-style-type: none"> <li>➤ There are no recorded groundwater abstraction licenses located on-site.</li> <li>➤ There are 54 No. groundwater abstraction licenses located within 2km of the site, twenty one are active and thirty three are historical. The nearest active groundwater abstraction is located 603m north west of the site at Dial House, Chapel Street. The abstraction is noted to be a borehole for general cooling.</li> </ul> |
| Source Protection Zones    | <ul style="list-style-type: none"> <li>➤ There are no recorded Source Protection Zones recorded on-site or within 500m of the site.</li> </ul>                                                                                                                                                                                                                                                                                                                 |
| Nitrate Vulnerable Zones   | <ul style="list-style-type: none"> <li>➤ There are no recorded Nitrate Vulnerable Zones recorded on-site. 4 No. Nitrate Vulnerable Zones are recorded within 2000m of the site, the nearest is located 160m north east of the site relating to the River Irk.</li> </ul>                                                                                                                                                                                       |

|                                          |                                                                                                                                                                                                                                                                  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Licensed Discharge Consents              | ➤ There are no recorded licensed discharge consents to controlled waters located on site. 1 No. licensed discharge consent to controlled waters is recorded within 500m of the site, located 482m south east and noted as a sewage discharge from Aytoun Street. |
| Pollution Incidents to Controlled Waters | ➤ There are no recorded pollution incidents to controlled waters located on-site. 1 No. pollution incident was recorded in 2002, located 223m east. It was noted to have no impact on controlled waters.                                                         |

For further details please see the Groundsure Enviro + Geo Insight report contained in Appendix 5.

### 3.8 Hazardous Installations, Landfill and Waste

The following information relating to hazardous installations, landfill and waste has been obtained from the Groundsure Enviro + Geo Insight report, published information and the walkover survey and has been summarised as follows:

| Data Type                                                                                           | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment Agency Recorded Active Landfill Sites                                                   | ➤ There are no Environment Agency recorded landfill sites located on-site or within 500m of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Environment Agency Recorded Historical Landfill Sites                                               | ➤ There are no Environment Agency recorded historical landfill sites located on-site or within 500m of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| BGS Recorded Historical Landfill Sites                                                              | ➤ There are no BGS recorded landfill sites located on-site or within 500m of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Local Authority Recorded Landfill Sites                                                             | ➤ There are no Local Authority recorded landfill sites located on site or within 500m of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Local Authority Pollution Prevention and Control (Part A(2) and Part B Activities and Enforcements) | ➤ There are no Local Authority Part A2 or Part B Activities or Enforcements located on-site. 2 No. Part B permits are recorded within 500m of the site. The closest is noted as a dry cleaners located 203Mm northeast.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Registered Radioactive Substances                                                                   | ➤ There are no Registered Radioactive Substances recorded on-site or within 500m of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Registered Waste Treatment, Transfer or Disposal Sites                                              | <ul style="list-style-type: none"> <li>➤ There are no registered waste treatment, transfer or disposal sites located on-site.</li> <li>➤ There are 11 No. waste exemptions located within 500m of the site. The nearest pertains to the screening and blending of wastes located at 11 York Street, Manchester, 37m west of the site.</li> </ul>                                                                                                                                                                                                                                                                                                                            |
| Industrial Land Use                                                                                 | <ul style="list-style-type: none"> <li>➤ There are no current industrial land uses recorded on-site. There are 42 No. current industrial land uses recorded within 250m of the site, the nearest is an electricity substation located 67m north of the site.</li> <li>➤ There are no current or recent petrol stations recorded on-site or within 500m of the site.</li> <li>➤ There are no historical industrial land uses recorded on site. There are 32 No. historical industrial land uses recorded within 500m of the site. The nearest relates to unspecified commercial/Industrial land use 6m north east of the site from 1931. The remaining industrial</li> </ul> |

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              | <p>land uses include unspecified works, unspecified ground workings, unspecified pits and an unspecified wharf.</p> <ul style="list-style-type: none"> <li>➤ There are no historical tanks recorded on-site. However, 7 No. are recorded within 500m of the site, the nearest is located 369m southwest and was recorded from 1994 - 1999.</li> <li>➤ There are no historical petrol stations recorded on-site or within 500m of the site.</li> </ul> |
| Dangerous Substances         | <ul style="list-style-type: none"> <li>➤ There are no recorded discharges of dangerous substances on-site or within 500m of the site.</li> </ul>                                                                                                                                                                                                                                                                                                      |
| Hazardous Building Materials | <ul style="list-style-type: none"> <li>➤ No hazardous building materials are anticipated on-site.</li> </ul>                                                                                                                                                                                                                                                                                                                                          |

For further details please see the Groundsure Enviro + Geo Insight report contained in Appendix 5.

### 3.9 Radon

The Indicative Atlas of Radon in England and Wales produced by the Health Protection Agency and British Geological Survey indicates the site lies within a lower probability area as less than 1% of homes are above the action level. Consequently, BR211 (2015) indicates that no radon protection measures are required.

For further details please see Section 19 of the Groundsure Enviro + Geo Insight report contained in Appendix 5.

### 3.10 Services

Multiple services were noted on site during the walkover survey, consequently full service plans should be obtained prior to any intrusive internal works.

### 3.11 Unexploded Ordnance (UXO)

The Zetica UXO risk map, contained in Appendix 7, indicates that the site lies within an area of moderate risk. Historical maps from 1949 showed that there was a ruin situated 20m west of the site which is potentially associated with WW2 bombing of Manchester city centre. Consequently, it is recommended that a Preliminary UXO Risk Assessment is undertaken. Subject to the preliminary risk assessment, a detailed risk assessment may also be required.

### **3.12 Animal Burial Sites**

The Animal Health and Veterinary Laboratories Agency (AHVLA) no longer routinely respond to consultations relating to records of animal burial sites. Based upon a review of the site history it is considered unlikely that the site has been subject to recorded animal burials.

### **3.13 Archaeology**

We do not anticipate that the site will be affected by archaeological issues, however consultation with the county archaeologist is recommended.

## 4.0 CONCLUSIONS

### 4.1 General

The site at 35 Fountain Street currently comprises an 8-storey building with a basement, with the ground and upper floors currently used as office spaces. However, since the mid Nineteenth Century the site comprised three smaller separate buildings intersected by Bank Street and Rook Street. By 1949 these were demolished, leaving the site as a vacant parcel of land. A building then occupied the entirety of the site, which is recorded as a warehouse from 1968 until 1986. It is thought that the existing building was built in c. 2001 as a planning application for the construction of a multi-storey building and basement was approved in November 2000 and an increase in the height of the building can be seen in 2003 google satellite imagery. The building has remained relatively unchanged until present day.

### 4.2 Ground Conditions

The anticipated typical ground conditions across the site are as follows:

- **Made Ground** of flag stones, ash and rubble to a depth of approx. 1.00m - 3.20m bgl, underlain by:
- **Glacial Till** comprising firm to very stiff, brown, sandy, silty, laminated CLAY and reddish brown, clayey SAND to a depth of c. 11.00m – 15.00m bgl, underlain by:
- **Chester Formation** comprising red sandstone.

#### 4.2.1 Geotechnical Hazard Identification

Potential geotechnical hazards based on the expected ground conditions that may require further consideration at the site are outlined below:

| Factors            | Remarks                                                                                                      | Considerations                                                                                                                                                                                                                    | Risk                   |
|--------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Made Ground</b> | Potentially deep Made Ground of unknown composition is anticipated to be present on-site. (Although this may | Made Ground may settle variably, have highly inconsistent bearing capacity and may suffer significant movements that may be problematic for foundations, externals and infrastructure elements without treatment. The presence of | <b>Low to Moderate</b> |

|                                          |                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
|                                          | have been removed during construction of basement)                                                                                                                                                                                                                                                                                                                 | Made Ground may be problematic for foundations as there may be loose / soft spots within the Made Ground and it may not be suitable to utilise traditional foundations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |
| <b>Aggressive Ground and Groundwater</b> | Given the high likelihood of Made Ground there is potential for aggressive ground conditions to be present on-site.                                                                                                                                                                                                                                                | Acidic ground / groundwater and sulfate may attack the concrete and steel used in foundations and react with aggregates. The oxidation of pyrite and other sulfides can also occur due to geotechnical activities. This can lead to the generation of high concentrations of sulfate and low pH that attacks construction materials and may lead to the precipitation of gypsum resulting in the heave of foundations and floor slabs. Pyrite oxidation can also be triggered by mixing susceptible materials with lime or cement resulting in high pH that can lead to the expansion of some sulfates that cause heave of stabilised soils. | <b>Low</b> |
| <b>Artesian Groundwater</b>              | Perched water may be present within granular bands within the Glacial Till as well as the Principal Aquifer which is recorded within the sandstone bedrock. However, the groundwater within the bedrock is anticipated to be at considerable depth, therefore the risk of groundwater causing upward pressure on current and future foundations is considered low. | Shallow groundwater or groundwater contained within confined aquifers leading to artesian conditions may cause upward pressure on foundations and structures. Consideration of the uplifting action of shallow and / or artesian groundwater will be needed for foundation design.                                                                                                                                                                                                                                                                                                                                                           | <b>Low</b> |

### 4.3 Sources of Contamination and Probable Contaminants

Based on the desk study information the following potentially contaminative sources have been identified:

| Potentially Contaminative Source | Associated Determinands                                                                                                                                                            | Remarks                                                                                                                                                                                                                                                                                                                                                                                | Hazard                 |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Made Ground</b>               | Unknown - possible wide range of determinands including metals, semi-metals, PAHs, hydrocarbons and asbestos.<br><br>Ground Gas – carbon dioxide, methane, hydrogen sulphide, VOCs | Deep Made Ground of unknown composition is anticipated across the site. This may contain contaminants from former off-site industrial uses and possibly from the historical on site warehouse as it is unknown what the warehouse was used for or what activities occurred. (Made Ground is likely to have been removed during construction of building in 2000s including a basement) | <b>Low to Moderate</b> |
| <b>On site Diesel Tank</b>       | Diesel                                                                                                                                                                             | A 4300l diesel tank was identified in a small room in the north east corner of the basement. This large volume of diesel is a potential contaminative risk due to the possibility of a hydrocarbon 'hotspot'. (However, during the site walkover no evidence of spills or leaks were present).                                                                                         | <b>Low to Moderate</b> |

|                                                                       |                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>Historical On Site Warehouse (1968 – 1986)</b>                     | Unknown - possible wide range of determinants including metals, semi-metals, PAHs, hydrocarbons and asbestos. | The building on site is recorded as a warehouse from 1968 until 1986. It is unknown what the warehouse was used for. Therefore, potentially contaminative objects could have been stored there. However, given this warehouse was replaced by the existing building on site in the early 2000s it is unlikely that significant contaminative legacy remains on site.                                                                         | <b>Low</b> |
| <b>Historical Off Site Electricity Substation (109m W, 1953-1967)</b> | Unknown - possible wide range of determinants including Polychlorinated Biphenyls (PCBs) and hydrocarbons     | A historical electricity substation was located 109m west of the site., from 1953 until 1967. This could have caused a contaminative 'hotspot' of PCBs with the potential to migrate on site, however it is considered unlikely given its distance from the site.                                                                                                                                                                            | <b>Low</b> |
| <b>Historical Off Site Car Parks (60 – 250m SE, 1951 – 1965)</b>      | Hydrocarbons                                                                                                  | From 1951 until 1965 4 No. car parks were located between 60 and 250m south east of the site. Build up of hydrocarbons such as petrol and diesel from spills and leaks over this period may have caused hydrocarbon hotspots to have occurred. There is the potential for this contamination to have migrated on site given its relatively close distance away, however given the low volume of contaminant this is considered unlikely.     | <b>Low</b> |
| <b>Historical Off Site Industrial Uses</b>                            | Unknown - possible wide range of determinants including metals, semi-metals, PAHs, hydrocarbons and asbestos  | The site has been historically surrounded by numerous industrial uses, such as an unspecified mill (650m W 1923 – 1934), a clothing factory (780m W 1906 – 1938), a foundry (800m W, 1894 – 1906), an iron works (900m N, 1906 – 1956) and numerous warehouses ( all >750m). Any impact, if present, is likely to be found in the Made Ground, however it is anticipated to be unlikely due to the distance these sources are from the site. | <b>Low</b> |

It should be noted that potentially contaminative unrecorded historic activities may have occurred (e.g. the use or deposition of Made Ground from off-site during historic on-site developments) and in this event, further contaminative sources may be present.

#### 4.3.1 Unknowns

Following the desk study, the areas of uncertainty are summarised as follows:

- Extent, composition and thickness of Made Ground.
- Composition and thickness of superficial deposits (Glacial Till).
- Presence of perched water within granular bands within the Glacial Till.
- Existing Foundation type / depth

## 4.4 Pathways for Contamination

### 4.4.1 Human Health

The pathways along which contamination could potentially reach the receptors on-site during use and after completion of development works are detailed in 'Updated Technical Background to the CLEA Model' (Environment Agency 2009) but can be summarised as follows:

End Users (Commercial Land Use Scenario):

- Inhalation of soil vapours (indoor and outdoor);

### 4.4.2 Controlled Waters

The pathways along which contamination could potentially reach the controlled waters receptors during use and after completion of development works are as follows:

- Vertical migration along current and future foundations and pooling at base / beneath foundations / basement columns / stanchions within glacial till.
- Vertical migration through granular made ground, natural granular deposits and granular lenses in natural cohesive deposits.
- Lateral migration along low permeability natural deposits and pooling at relative low points.
- Negligible infiltration through low-permeability natural cohesive deposits.
- Migration through porous sandstone bedrock.
- Migration along groundwater flow.
- Overland flow

### 4.4.3 Ground Gas Pathways

The pathways along which ground gas could potentially reach the receptors on-site during use and after completion of the development works are as follows;

- Migration through fractures and fissures in bedrock
- Preferential migration along foundations, service ducts / trenches
- Migration within groundwater
- Ingress through wall cavities and floors and accumulation

- Inhalation of ground gas and vapours

#### **4.5 Receptors of Contamination**

Human Health receptors for these pathways include the following:

- End Users (commercial land use scenario)
- Construction workers.
- The general public and adjacent site users.

Controlled waters receptors for these pathways include the following:

- Groundwater contained within the underlying Secondary Undifferentiated and Principal Aquifer
- Surface Waters – Rochdale canal 470m south east and the River Irwell 570m northwest

Other receptors for these pathways include the following:

- Subsurface plastic (e.g. potable plastic water pipe).
- Building fabric (e.g. concrete foundations).

## 4.6 Conceptual Model

| Source                       | Pathway                                                                                                                                                                                                                            | Receptor                                          | Likelihood                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Risk |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Possible On Site Made Ground | Ingestion of soil and dust (indoor and outdoor)<br><br>Dermal contact with contaminated soil (indoor and outdoor)<br><br>Inhalation of dust (indoor and outdoor), airborne fibres and soil vapours<br><br>Inhalation of ground gas | End-user<br><br>General public                    | <p><b>Unlikely:</b> Made ground is likely below the basement of the existing building. The Made Ground may contain contamination associated with the building previously being used as an unspecified warehouse as well as other various industrial off site activities which could have migrated on site. However, given the presence of hardstanding in the basement of the building, any contamination in the Made Ground will be prevented from coming into contact with end users, therefore avoiding any contamination linkages via dermal, ingestion and inhalation pathways. However, if any ground investigation occurs such as foundation inspections or excavation, then a possible contamination linkage will occur for construction workers, which will resultantly be at higher risk.</p> <p>Made Ground beneath the basement hardstanding is a possible ground gas source as its composition is unknown. However, ground gas generation is anticipated to be low as no significant sources (ie landfills) are present on site or in close proximity. Therefore, the ground gas risk posed by Made ground is low.</p> <p>Additionally, a planning application for the existing building on site was approved in November 2000. One condition for its approval was to 'ascertain the existence and extent of any land contamination within the site, and details and remediation works to deal with any such contamination found shall be submitted to and approved in writing by the local planning authority'. Therefore, given that planning was approved, there was either low contamination and ground gas risk within the Made Ground or if there was, a remediation strategy was undertaken to remove the risk. Therefore, further reducing the overall risk posed by Made Ground.</p> | LOW  |
|                              |                                                                                                                                                                                                                                    | Construction workers                              | <b>Low Likelihood:</b> If any ground investigation occurs such as foundation inspections / excavation, then construction workers will be at the highest risk due to acute interaction with soils, however, as the development is continued use and with appropriate PPE and health and safety measures, the risk of exposure to Made Ground is significantly reduced.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LOW  |
|                              | Migration through ground vertically into aquifer groundwater                                                                                                                                                                       | Principal Aquifer                                 | <b>Unlikely:</b> Glacial Till is recorded as the superficial deposits on site. This is likely to comprise clay, which is of low permeability, acting as an aquitard to any soluble contaminants. Therefore, negating any vertical migration into the underlying aquifer Bedrock is anticipated at a depth of c. 11.00m – 15.00m bgl, therefore significant superficial cover is anticipated above this.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | LOW  |
|                              | Overland flow                                                                                                                                                                                                                      | Rochdale canal (470m SE) & River Irwell (570m NW) | <b>Unlikely:</b> Contamination associated with possible Made Ground on site could migrate into 2 No. sensitive surface water receptors (the Rochdale canal 470m SE and the River Irwell 570m NW) via lateral migration in the shallow subsurface or via overland flow. However, given the site and surrounding area is covered in hardstanding and existing drainage, there is a low risk of contaminative migration. Also, both receptors are located relatively far distance from the site, further lowering the risk.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | LOW  |

|                                                                  |                                                                           |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |
|------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>Historical On Site Warehouse (1968 – 1986)</b>                | Ingestion of soil and dust (indoor and outdoor)                           | End-user                                          | <b>Low Likelihood:</b> From 1968 until 1986, the site is recorded as a warehouse. This poses a potential contamination risk as it is unknown what type of warehouse was present or what activities occurred during this time. Therefore, various possible determinands may be associated with this previous site use. However, the contamination, if any, is likely to be present within the Made Ground, which is inaccessible to end users due to hardstanding in the basement, meaning no contaminative linkages are present. | <b>LOW</b> |
|                                                                  | Dermal contact with contaminated soil (indoor and outdoor)                | General public                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |
|                                                                  | Inhalation of dust (indoor and outdoor), airborne fibres and soil vapours | Construction workers                              | <b>Low Likelihood:</b> Construction workers are at the highest risk due to acute interaction with soils if any ground investigation occurs such as foundation inspections / excavation. However, with appropriate PPE and health and safety measures, the risk is reduced.                                                                                                                                                                                                                                                       | <b>LOW</b> |
|                                                                  | Migration through ground vertically into aquifer groundwater              | Principal Aquifer                                 | <b>Unlikely:</b> If contamination is present associated with the historical on site warehouse, there is the possibility for vertical migration into the underlying Principal Aquifer through high permeability granular deposits. However, given the site is underlain by Glacial Till, it is likely that any possible contamination will be negated by low permeability, cohesive, clay deposits. Therefore, the risk to the underlying Principal Aquifer within the bedrock is considered low.                                 | <b>LOW</b> |
| <b>On site Diesel Tank</b>                                       | Migration through ground laterally into surface water                     | Rochdale canal (470m SE) & River Irwell (570m NW) | <b>Unlikely:</b> 2 No. sensitive surface water receptors are present within 600m of the site. Therefore, if contamination is present associated with the historical on site warehouse, then there is the potential for shallow depth lateral migration or overland flow of this contamination into these surface water features. However, both receptors are located relatively far distance from the site, lowering this risk.                                                                                                  | <b>LOW</b> |
|                                                                  | Overland flow                                                             |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |
|                                                                  | Ingestion of soil and dust (indoor and outdoor)                           | End-user                                          | <b>Unlikely:</b> A 4300l diesel tank is present within a small room in the basement. This presents a possible contaminative risk due to the potential for a hydrocarbon 'hotspot' to exist. However, during the site walkover no evidence of spills or leaks were identified in the close vicinity of the tank. Also, only authorised personnel have access to this room within the basement, therefore end users are unlikely to come into contact with this source, reducing its overall risk.                                 | <b>LOW</b> |
|                                                                  | Dermal contact with contaminated soil (indoor and outdoor)                | General public                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |
| <b>Historical Off Site Car Parks (60 – 250m SE, 1951 – 1965)</b> | Inhalation of dust (indoor and outdoor), airborne fibres and soil vapours | Construction workers                              | <b>Low Likelihood:</b> Construction workers are at the highest risk if any ground investigation occurs due to their acute interaction with soils. However, with appropriate PPE and health and safety measures, the risk is very low.                                                                                                                                                                                                                                                                                            | <b>LOW</b> |
|                                                                  | Ingestion of soil and dust (indoor and outdoor)                           | End-user                                          | <b>Unlikely:</b> 4 No. historical car parks were recorded between 60 – 250m south east of the site from 1951 until 1965. This presents a possible contaminative risk due to the possibility of hydrocarbon hotspots to have existed with the potential to have migrated on site. Any contamination associated, if any, is likely to be contained within the Made Ground which is below the hardstanding of the basement. Therefore no contaminative linkage to end users exist, making this source low risk.                     | <b>LOW</b> |
|                                                                  | Dermal contact with contaminated soil (indoor and outdoor)                | General public                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |
|                                                                  | Inhalation of dust (indoor and outdoor), airborne fibres and soil vapours | Construction workers                              | <b>Low Likelihood:</b> Construction workers are at the highest risk due to acute interaction with soils, however, with appropriate PPE and health and safety measures, the risk is low.                                                                                                                                                                                                                                                                                                                                          | <b>LOW</b> |
| <b>Historical Off Site Electricity Substation</b>                | Ingestion of soil and dust (indoor and outdoor)                           | End-user                                          | <b>Unlikely:</b> An electricity substation was recorded 109m west of the site from 1953 until 1967. This poses a possible hotspot of contaminative Polychlorinated Biphenols (PCBs), with the potential to have migrated on site. However, PCBs have a low mobility and therefore the distance from site negates this risk.                                                                                                                                                                                                      | <b>LOW</b> |
|                                                                  |                                                                           | General public                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |

|                                            |                                                                                                                                             |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>(109m W,<br/>1953 - 1967)</b>           | Dermal contact with contaminated soil (indoor and outdoor)<br><br>Inhalation of dust (indoor and outdoor), airborne fibres and soil vapours | Construction workers | <b>Low Likelihood:</b> Construction workers are at the highest risk due to acute interaction with soils, however, given the distance and relative low mobility of PCBs the risk from this possible contamination source is low. The risk is further negated with appropriate PPE and health and safety measures.                                                                                                                                                                                                                        | <b>LOW</b> |
| <b>Historical Off Site Industrial Uses</b> | Ingestion of soil and dust (indoor and outdoor)                                                                                             | End-user             | <b>Unlikely:</b> Historically the site has been surrounded by many industrial activities such as clothing factories, unspecified mills, warehouses and car parks. These potentially contaminative sources have the potential to migrate on site and accumulate in the Made Ground. However, none are of significant high risk, and most are greater than 500m from the site. Therefore, the risk remains relatively low. Also, the presence of hardstanding on site will negate any contamination linkages to end users from occurring. | <b>LOW</b> |
|                                            | Dermal contact with contaminated soil (indoor and outdoor)<br><br>Inhalation of dust (indoor and outdoor), airborne fibres and soil vapours | Construction workers | <b>Low Likelihood:</b> Construction workers are at the highest risk due to their acute interaction soils, however the risk from these historical off site sources are not anticipated to be of high risk. Therefore, with appropriate PPE and health and safety measures, the risk is very low.                                                                                                                                                                                                                                         | <b>LOW</b> |

A diagram of the conceptual site model is contained within Appendix 2.

## 4.7 Preliminary Risk Assessment Summary

### Human Health

Based on the human health conceptual model the risk to human health is deemed low to end users, the general public and adjacent site users as no significant contaminative linkages have been identified other than possible localised hotspots within the Made Ground. However, the presence of hardstanding below the basement, will prevent any pathway to these receptors from existing. And Made Ground may have been removed or remediated as part of the 2000s planning application for the current on-site building development. The risk to construction workers is increased due to their potential interaction with the Made Ground if foundation inspection / excavation occurs, however, it is envisaged that with appropriate PPE and site management, risks to construction workers can be mitigated therefore the risk remains low.

### Ground Gas

Due to a lack of significant ground gas sources on-site or in close proximity to the site and the proposed continued use of the site, the ground gas risk is deemed low. Therefore, it is not considered necessary to undertake ground gas monitoring unless visual and / or evidence of contamination is encountered during intrusive site investigation works (if undertaken).

If any organic rich Made Ground deposits are identified, or if previously unrecorded potential ground gas sources are recorded during ground investigation works (if undertaken), additional ground gas monitoring may be required. The length and frequency of the ground gas monitoring regime and the sampling method, initial results and revisions to the conceptual model are subject to the findings of the ground investigation works and development constraints (i.e. development timescales and liaison with the local authority).

### Controlled Waters

Although a sensitive receptor exists beneath the site (Principal Aquifer at unknown depth within the bedrock), no high risk contamination has been identified on site and

contaminative linkages are deemed unlikely due the presence of a significant thickness of impermeable Glacial Till and given the relatively far distance the off-site surface water receptors are from the site (the Rochdale Canal 470m SW and the River Irwell 570m NW). Consequently, the risk to the controlled waters is deemed very low.

If unrecorded contaminative sources are noted, the above conceptual models may require re-assessment / re-appraisal.

#### **4.8 Scope of Phase 2 Intrusive Geo-Environmental Ground Investigation**

As a result of the preliminary risk assessment, it is not considered necessary to undertake a Phase 2 intrusive environmental ground investigation as no significant changes are anticipated on-site (continued use) and the contaminative risk is regarded as low. However, it may be necessary to undertake a foundation inspection site investigation for geotechnical purposes subject to detailed design of the proposed development and whether existing foundations and loading potential are known.

If deemed necessary, the proposed initial ground investigation works should comprise:

- Concrete Cores
- Hand Dug Pits

The rationale for the exploratory holes is discussed below:

- Concrete cores to inspect the existing ground-floor / basement subfloor slab (i.e. thickness, presence of reinforcement) and whether floor slab is ground bearing or suspended.
- Hand dug pits adjacent to existing foundations in order to determine their dimensions and constituents (if unknown).

## 5.0 RECOMMENDATIONS

- 5.1 As a result of the information gathered and the risks identified in this report, there is a low risk to human health on the basis that no significant widespread sources of contamination have been identified on the site and the proposed development will be a continued use. The risk to controlled waters is deemed low given the anticipated presence of cohesive Glacial Till acting as an aquitard to the underlying Principal Aquifer and the anticipated lack of shallow groundwater.
- 5.2 On the basis that a low ground gas risk potential has been identified, it is not considered necessary to undertake ground gas monitoring unless visual and / or evidence of contamination is encountered during intrusive site investigation works (if undertaken). Given that the site lies within an area where between less than 1% of homes are above the action level no radon protection measures are necessary.
- 5.3 Due to the planned extension to height of the building foundation inspection site investigation for geotechnical purposes may be required to understand whether existing foundations are suitable for additional loadings. This will determine the foundation conditions with a greater degree of certainty and allow design of the proposed development. Further site investigation works will be subject to the detailed design of the proposed development and what is already known regarding existing foundations.
- 5.4 It should be noted that, if any visual or olfactory evidence of contamination is encountered during remediation or construction work, then the Local Authority Environmental Health Officer and Environment Agency should be contacted immediately in order to agree any necessary remediation measures.
- 5.5 Given the presence of multiple services on-site, full service plans should be obtained prior to any intrusive ground investigation works.

- 5.6 If ground investigation works are undertaken it is recommended that a Preliminary UXO Risk Assessment is obtained. Subject to the preliminary risk assessment, a detailed risk assessment may also be required.

## **APPENDIX 1**

### **LIMITATIONS OF INVESTIGATION WORK AND REPORT AND CONTAMINATED LAND LEGISLATIVE FRAMEWORK**

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## **LIMITATIONS OF REPORT**

This consultancy report was compiled and carried out by IGE Consulting Limited ('IGE') for the client, as defined in the main report (the 'client'), on the basis of a defined programme and scope of works and the terms of a contract between IGE and the client. IGE undertook this with all reasonable skill and care, taking into account the limits of the scope of works required by the client, the prevailing site conditions, the time scale involved and the resources, including financial and manpower resources, agreed between IGE and the client. IGE cannot accept responsibility to any parties whatsoever, following the issue of this report, for any matters arising which may be considered outwith the agreed scope of works.

Unless otherwise agreed this report has been prepared exclusively for the use and reliance of the client in accordance with generally accepted consulting practices. This report may not be relied upon, or transferred to, by any other party without the written agreement of its author. If a third party relies on this report, it does so wholly at its own and sole risk and IGE disclaims any liability to such parties.

It is IGE's understanding that this report is to be used for the purpose described in the 'Brief' section of this report. That purpose was a significant factor in determining the scope and the services to be provided. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of, or reliance upon the report in those circumstances by the client without IGE's review and advice shall be at the client's sole and own risk.

The information contained in this report is protected by disclosure under Part 3 of the Environmental Information Regulations 2004 pursuant to the provisions of Regulation 12(5) without the consent in writing of a Director of IGE.

This report is a function of the date it was written and should be read in light of any subsequent changes in legislation, statutory requirements and industry practices. Ground conditions can also change over time and further investigations or assessment should be made if there is any significant delay in acting on the findings of this report. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of IGE. In the absence of such written advice of IGE, reliance on the report in the future shall be at the client's own and sole risk. Should IGE be requested to review the report in the future, IGE shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between IGE and the client.

The observations and conclusions described in this report are based solely upon the scope of works agreed between the client and IGE. IGE has not performed any observations, investigations, studies or testing not specifically set out or mentioned within this report. IGE is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the agreed scope of works. The report does not cover environmental aspects such as air or noise pollution and ground vibrations and the like. In addition, ecological matters relating to wildlife, flora and fauna have not been investigated as part of this report. In particular, the site has not been inspected for the presence or otherwise of invasive species (e.g. Japanese Knotweed). It is recommended that the client appoints a specialist in this subject to carry out a detailed inspection / survey of the site if its presence is suspected. Where mention has been made to the suspected presence asbestos or asbestos-containing materials this is for indicative purposes only and does not constitute or replace full and proper surveys.

Throughout the report the term 'geotechnical' is used to describe aspects relating to the physical nature of the site (such as foundation requirements) and the term 'geo-environmental' is used to describe aspects relating to ground-related environmental issues (such as potential contamination).

## **LIMITATIONS OF INVESTIGATION WORK**

### **Desk Study References**

This report is based upon IGE's interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. Reliance has been placed on this publicly available data obtained from the sources identified in the main report. When using the information, it has been assumed that it is correct. The findings and recommendations contained in this report are based in part upon information provided by third parties, and whilst IGE have no reason to doubt the accuracy and that it has been provided in full from those it was requested from, the items relied on have not been verified. No responsibility can be accepted for errors within third party items presented in this report. IGE did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services. IGE is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to IGE and including the doing of any independent investigation of the information provided to IGE except when otherwise provided in the terms of the contract between the client and IGE.

### **Historical Mapping**

Historical Ordnance Survey maps do not provide a comprehensive description of a site history. They provide details of the site from a date prior to the publication of the map (i.e. a snapshot in time). The period between map editions can be substantial (i.e. several decades). Not all map series are available for every date range in many areas of the UK and therefore there will be gaps in this mapped record for some sites. Potentially contaminative land uses could have been present and removed during such periods and may therefore not form a part of this particular record. In addition, there will be potentially contaminative land uses which are not identified on the map records such as small scale storage / use of hazardous materials, illegal / unlicensed waste disposal activities etc. Different map series identify different features utilising different symbols which can result in features that remain on-site being removed from maps. Some features are also not mapped for security reasons (e.g. airfields and other military installations). These areas are mostly shown as blank areas on historical maps.

### **Site Walkover**

During the site walkover reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.

## **CONTAMINATED LAND LEGISLATIVE FRAMEWORK**

Environmental risks are assessed in accordance with Contaminated Land (England) (Amendment) Regulations (2012), Part IIA of the Environmental Protection Act 1990, and Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance, DEFRA (2012). Part IIA provides a statutory definition of contaminated land. To fall within this definition it is necessary that, as a result of the condition of the land, substances may be present on or under the land such that:

- (a) Significant harm is being caused or there is a significant possibility of such harm being caused; or
- (b) Significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused.

Risk from contamination is assessed by consideration of possible linkages between contaminant sources and potential receptors which could be harmed or polluted and the potential pathways between them – known as the Contaminant Linkage. For a risk of pollution or environmental harm to occur as a result of ground contamination, all of the following elements must be present:

- A source – a substance that is capable of causing pollution or harm;
- A receptor – something which could be adversely affected by the contaminant;
- A pathway – a route by which the contaminant can reach the receptor.

If one of these elements is absent there can be no significant risk. If all are present then the magnitude of the risk is a function of the magnitude and mobility of the source, the sensitivity of the receptor and the nature of the migration pathway.

The Environment Agency Land Contamination: Risk Management (LCRM 2020) provides the technical framework for structured decision making about land contaminations. LCRM (2020) advocates a phased approach to risk assessment comprising:

- Preliminary Risk Assessment (PRA) – desk study and qualitative assessment;
- Generic Quantitative Risk Assessment (GQRA) – assessment of contaminant concentrations against generic assessment criteria;
- Detailed Quantitative Risk Assessment (DQRA) – detailed site-specific risk assessment and development of site-specific assessment criteria.

Each of these phases follows the same basic steps but adds site specific details and further certainty into the assessment as the stages progress. The basic steps are:

- Hazard Identification and hazard assessment- development or refinement of the source – pathway – receptor conceptual model, and identification of potential pollutant linkages;
- Risk Estimation – qualitative risk estimation predicting magnitude and probability of potential consequences that may arise as a result of a hazard.
- Risk Evaluation – deciding whether a risk is unacceptable.

The key to the classification is that the designation of risk is based upon the consideration of both:

- (a) The magnitude of the potential consequence which takes into account both the potential severity of the hazard and the sensitivity of the receptor;
- (b) The magnitude of probability which takes into account both the presence of the hazard and receptor and the integrity of the pathway.

Generic Quantitative Risk Assessment (GQRA) will utilise generic assessment criteria (GAC) for the purposes of screening allowable concentrations in comparison to the measured site concentrations. The GAC are defined based on the critical receptors identified at the site. Receptors are considered in relation to:

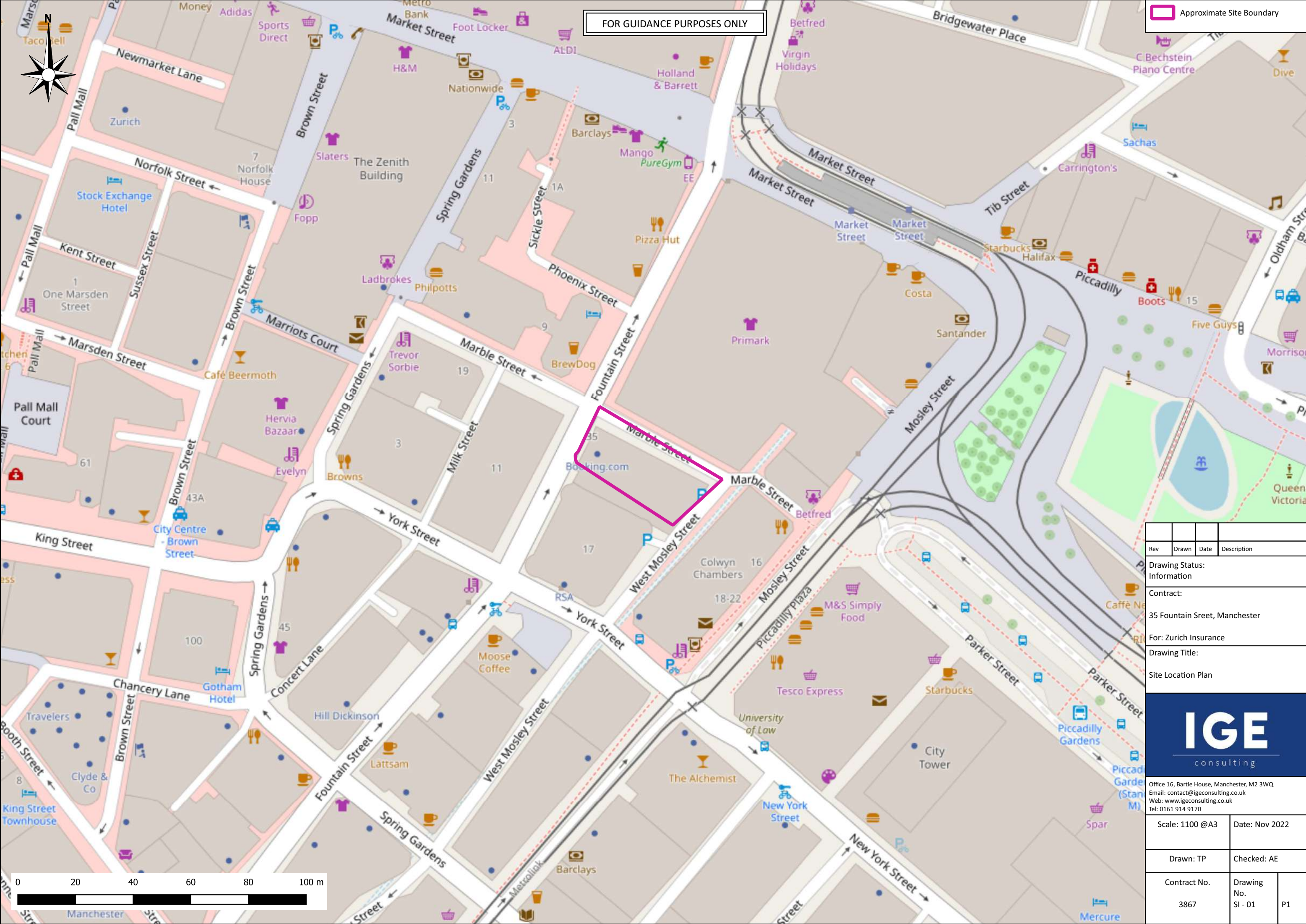
- Human health receptors (e.g. site users) via measured solid concentrations;
- The water environment (e.g. groundwater and surface water) via measured leachate / water concentrations.

Additional receptors may be relevant dependant on the site e.g. flora/fauna, water supply pipes, buried concrete.

The GAC adopted for assessment of soils in relation to Human Health are based on published Soil Guideline Values (SGV) in 2009 for those compounds for which published criteria are available for varying scenarios (residential, commercial, allotment). In the absence of SGVs the following GAC defining documents are adopted - LQM/CIEH S4ULs (2015), CL:AIRE Soil GAC for Human Health Assessment (2010) and Category 4 Screening Levels (C4SL's) (2014).

GACs for waters must be selected to assess potential risks to the identified environmental receptors. There are numerous UK and European guidelines for waters based on the site situation and different receptors. GACs utilised include - The River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Directions 2009 (Part 7: Groundwater Threshold Values), UK Drinking Water Standards (2000), Environmental Quality Standards, World Health Organisation concentrations, Environment Agency guidance concentrations and United States Environmental Protection Agency – Region 9 GACs.

**APPENDIX 2**  
**FIGURES AND DRAWINGS**



FOR GUIDANCE PURPOSES ONLY

Approximate Site Boundary

| Rev                                                                                                                                                                                                                                   | Drawn | Date                | Description |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------|-------------|
| Drawing Status: Information                                                                                                                                                                                                           |       |                     |             |
| Contract: 35 Fountain Sreet, Manchester                                                                                                                                                                                               |       |                     |             |
| For: Zurich Insurance                                                                                                                                                                                                                 |       |                     |             |
| Drawing Title: Site Location Plan                                                                                                                                                                                                     |       |                     |             |
| <div><br/>IGE consulting</div>                                                                                                                   |       |                     |             |
| Office 16, Bartle House, Manchester, M2 3WQ<br>Email: <a href="mailto:contact@igeconsulting.co.uk">contact@igeconsulting.co.uk</a><br>Web: <a href="http://www.igeconsulting.co.uk">www.igeconsulting.co.uk</a><br>Tel: 0161 914 9170 |       |                     |             |
| Scale: 1100 @A3                                                                                                                                                                                                                       |       | Date: Nov 2022      |             |
| Drawn: TP                                                                                                                                                                                                                             |       | Checked: AE         |             |
| Contract No. 3867                                                                                                                                                                                                                     |       | Drawing No. SI - 01 | P1          |

SOURCES

PATHWAYS

RECEPTORS

Notes

- Sources
- 1. On-Site Made Ground
  - 2. On Site Diesel Tank (4300l)
  - 3. On-Site Historical Warehouse (1968 - 1986)
  - 4. Off Site Historical Electricity Substation (109m W, 1953 - 1967)
  - 5. Off-Site Historical Car Parks (60 - 250m SE, 1951 - 1965)

- Secondary Sources
- 7. Pooling Beneath Current and / or Future Foundations
  - 8. Pooling in Relative Low Points Above Low Permeability Deposits

- Ground Gas Sources
- 1. On-Site Made Ground

- Pathways To Human Health
- 1. Dermal Contact
  - 2. Inhalation of Soil Dust and Vapours
  - 3. Ingestion of Soil Directly

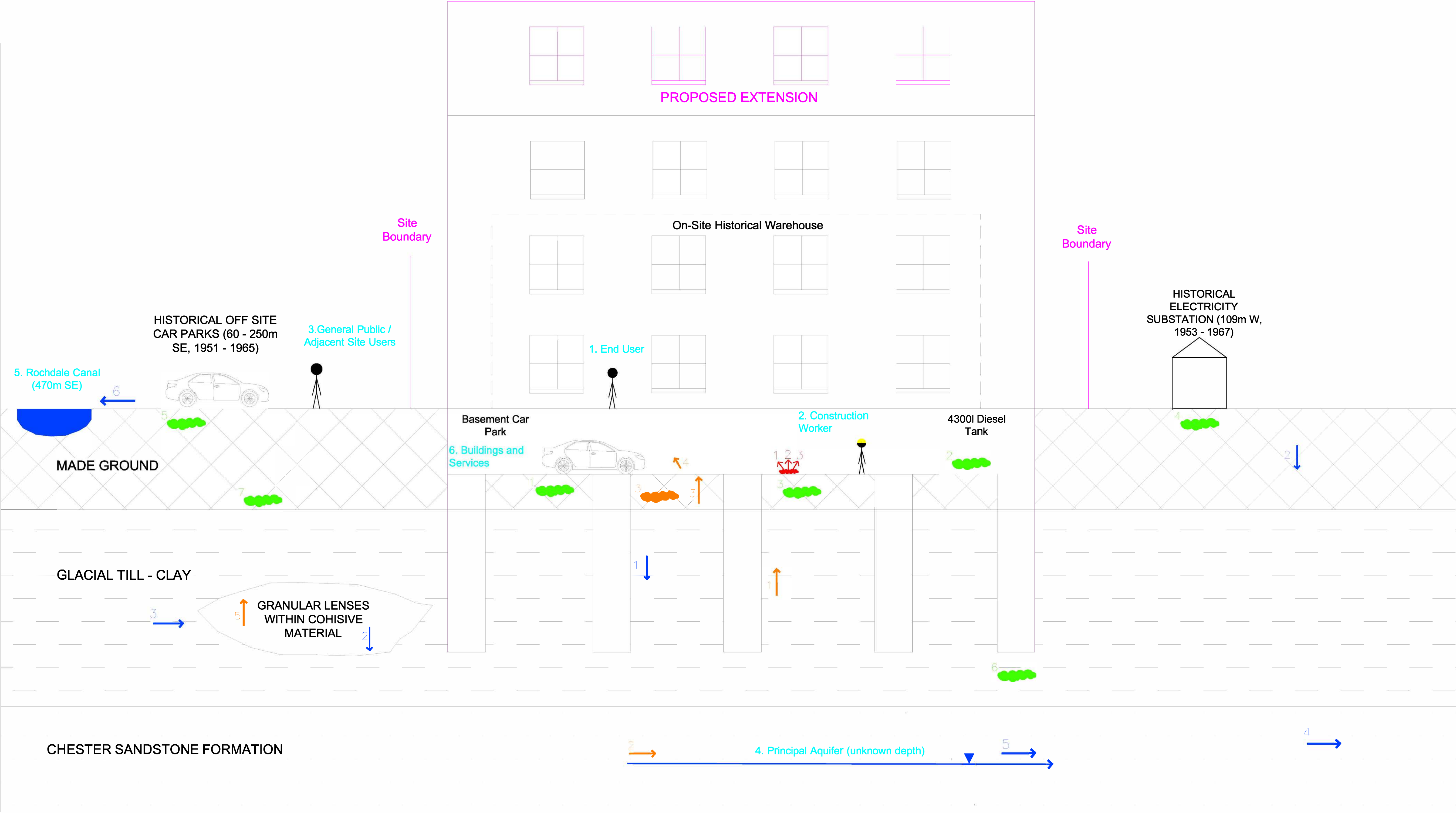
- Pathways To Controlled Waters
- 1. Vertical Migration Along Current and Future Foundations
  - 2. Vertical Migration Through Granular Made Ground, Granular Natural Deposits and Granular Lenses Within Natural Cohesive Deposits
  - 3. Lateral Migration Along Low-Permeability Natural Deposits
  - 4. Migration Through Fractures and Fissures in Bedrock
  - 5. Migration Along Groundwater Flow
  - 6. Lateral Overland Flow (Surface Runoff From Hardstanding)

- Ground Gas Pathways
- 1. Preferential Migration Beneath Hardstanding, Along Foundations, Service Ducts and Trenches
  - 2. Dissolved Gases Within Groundwater
  - 3. Ingress Through Wall Cavities / Floors and Subsequent Accumulation
  - 4. Inhalation of Ground Gas and Vapours
  - 5. Vertical Migration Through Granular Deposits

- Receptors
- 1. End User
  - 2. Construction Workers
  - 3. General Public / Adjacent Site Users
  - 4. Principal Aquifer within bedrock (Unknown Depth)
  - 5. Rochdale Canal (470m SE)
  - 6. Building and Services

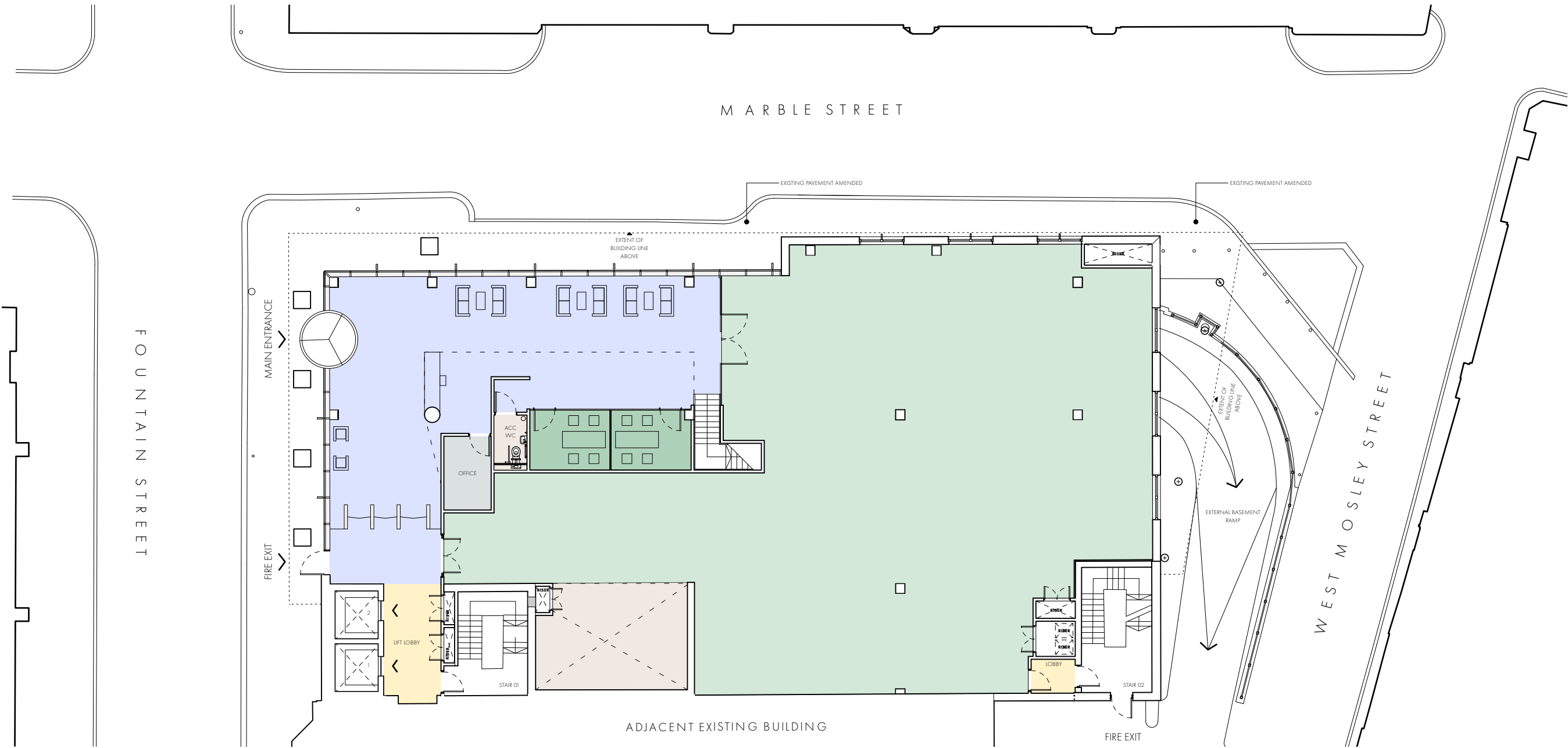
Key

- ☒ Made Ground
- ☒ Glacial Till – Clay
- ☒ Chester Sandstone Formation



|                                                                                                                                                                                                                                       |       |               |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------|-------------|
|                                                                                                                                                                                                                                       |       |               |             |
| Rev                                                                                                                                                                                                                                   | Drawn | Date          | Description |
| Drawing Status                                                                                                                                                                                                                        |       |               |             |
| INFORMATION                                                                                                                                                                                                                           |       |               |             |
| Contract                                                                                                                                                                                                                              |       |               |             |
| 35 Fountain Street,<br>Manchester                                                                                                                                                                                                     |       |               |             |
| FOR: Zurich Insurance                                                                                                                                                                                                                 |       |               |             |
| Drawing Title                                                                                                                                                                                                                         |       |               |             |
| PHASE 1 CONCEPTUAL<br>SITE MODEL                                                                                                                                                                                                      |       |               |             |
|                                                                                                                                                  |       |               |             |
| Office 16, Bartle House, Manchester, M2 3WQ<br>email: <a href="mailto:contact@igiconsulting.co.uk">contact@igiconsulting.co.uk</a><br>web: <a href="http://www.igiconsulting.co.uk">www.igiconsulting.co.uk</a><br>tel: 0161 914 9170 |       |               |             |
| Scale                                                                                                                                                                                                                                 |       | Date          |             |
| NTS                                                                                                                                                                                                                                   |       | November 2022 |             |
| Drawn                                                                                                                                                                                                                                 |       | Checked       |             |
| TP                                                                                                                                                                                                                                    |       | AE            |             |
| Contract No.                                                                                                                                                                                                                          |       | Drawing No.   |             |
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|                                                                                                                                                                                                                                       |       | P1            |             |

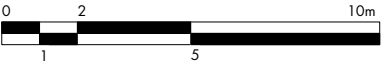
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| B        | 17/01/23 | Planning Issue    |
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35 FOUNTAIN STREET | PROPOSED PLANS

GROUND FLOOR

1:200 @A3



PLAN KEY

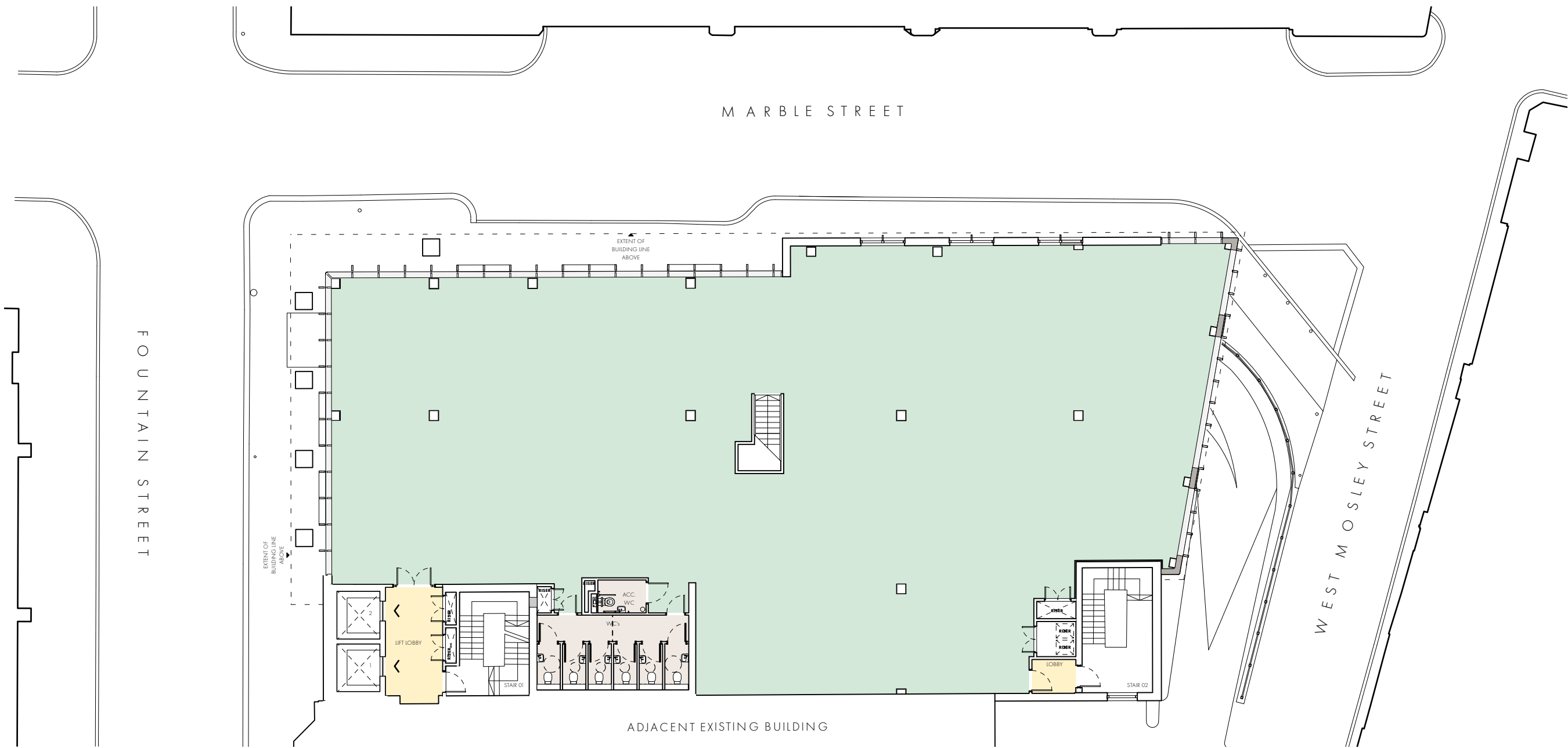
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| <div></div> | LOBBY SPACE            | <div></div> | RECEPTION/WELCOME |
| <div></div> | TOILETS                |             |                   |

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|---------|--------------------------|----------|----------|-------|-------|-----|
| PROJECT | 35 FOUNTAIN ST           |          |          |       |       |     |
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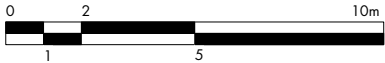
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|----------|----------|-------------------|
| A        | 20/10/22 | Preliminary Issue |
| B        | 17/01/23 | Planning Issue    |
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35 FOUNTAIN STREET | PROPOSED PLANS

FIRST FLOOR

1:200 @A3



PLAN KEY

- OFFICE SPACE
- LOBBY SPACE
- TOILETS

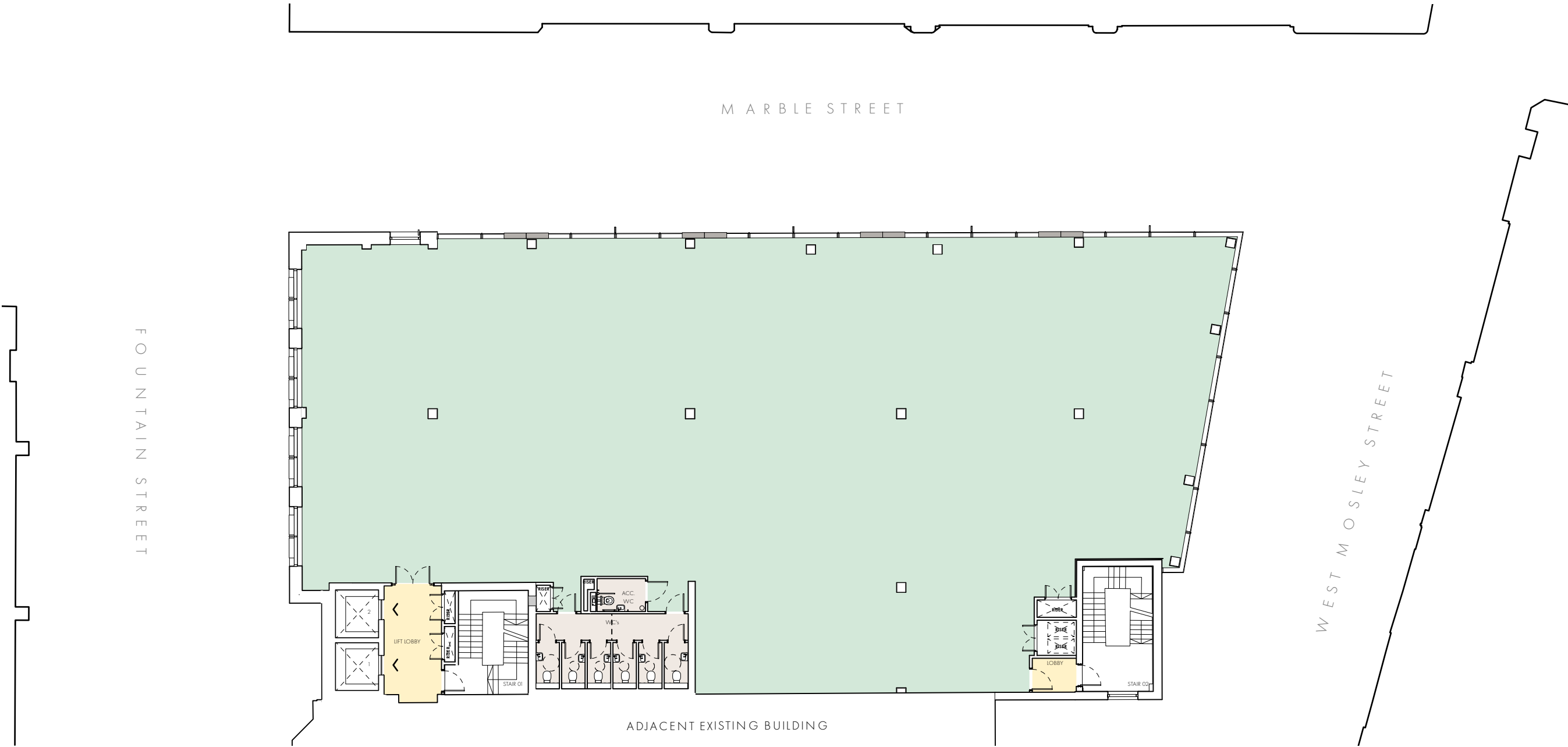
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| REVISION | DATE       | DESCRIPTION          |
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| B        | 11/11/2022 | Stage 3 Issue        |
| C        | 30/11/2022 | Draft Planning Issue |

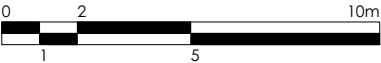
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35 FOUNTAIN STREET | PROPOSED PLANS

SECOND FLOOR

1:200 @A3



PLAN KEY

- OFFICE SPACE
- LOBBY SPACE
- TOILETS

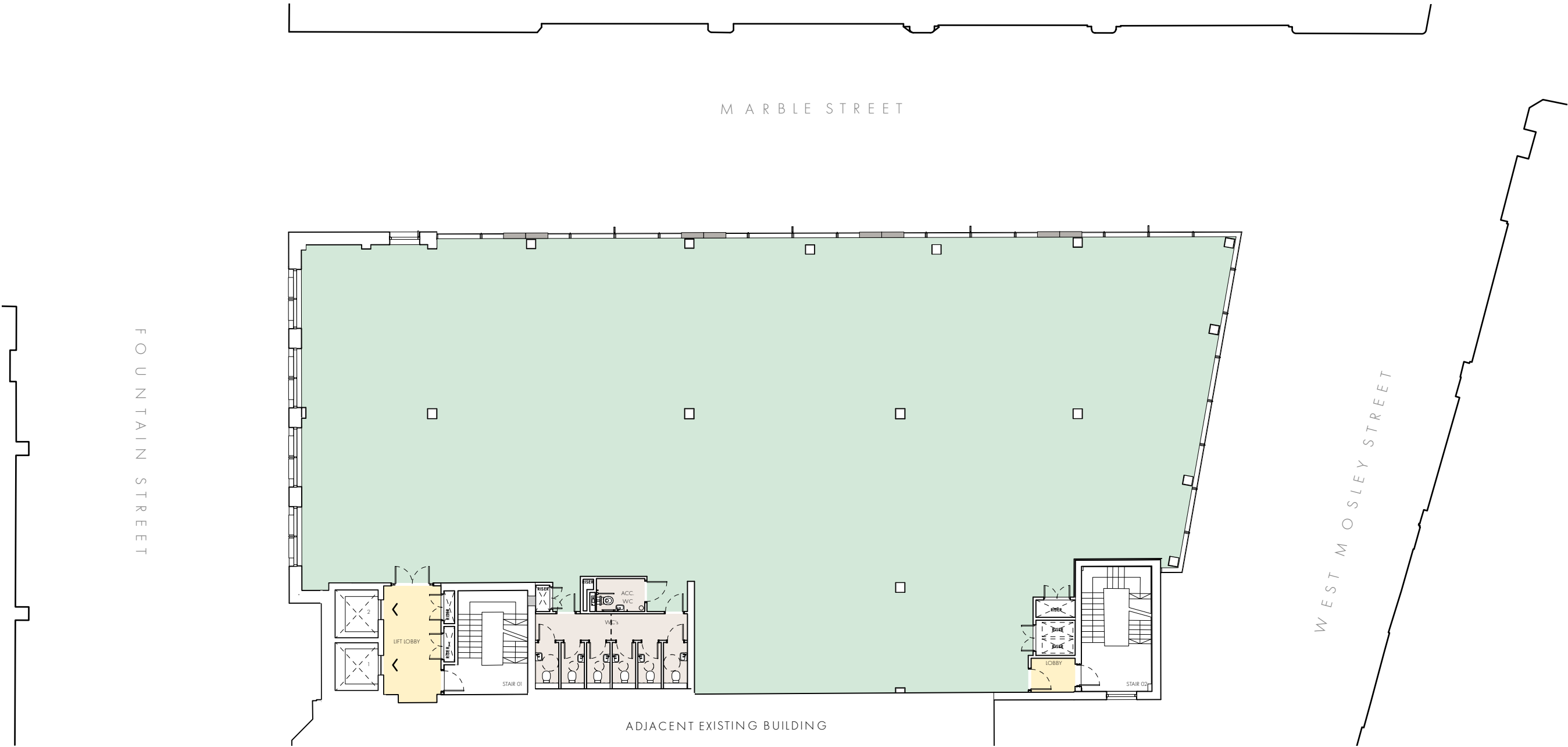
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| C        | 30/11/2022 | Draft Planning Issue |

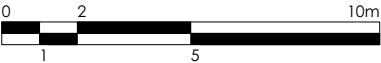
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35 FOUNTAIN STREET | PROPOSED PLANS

THIRD FLOOR

1:200 @A3



PLAN KEY

- OFFICE SPACE
- LOBBY SPACE
- TOILETS

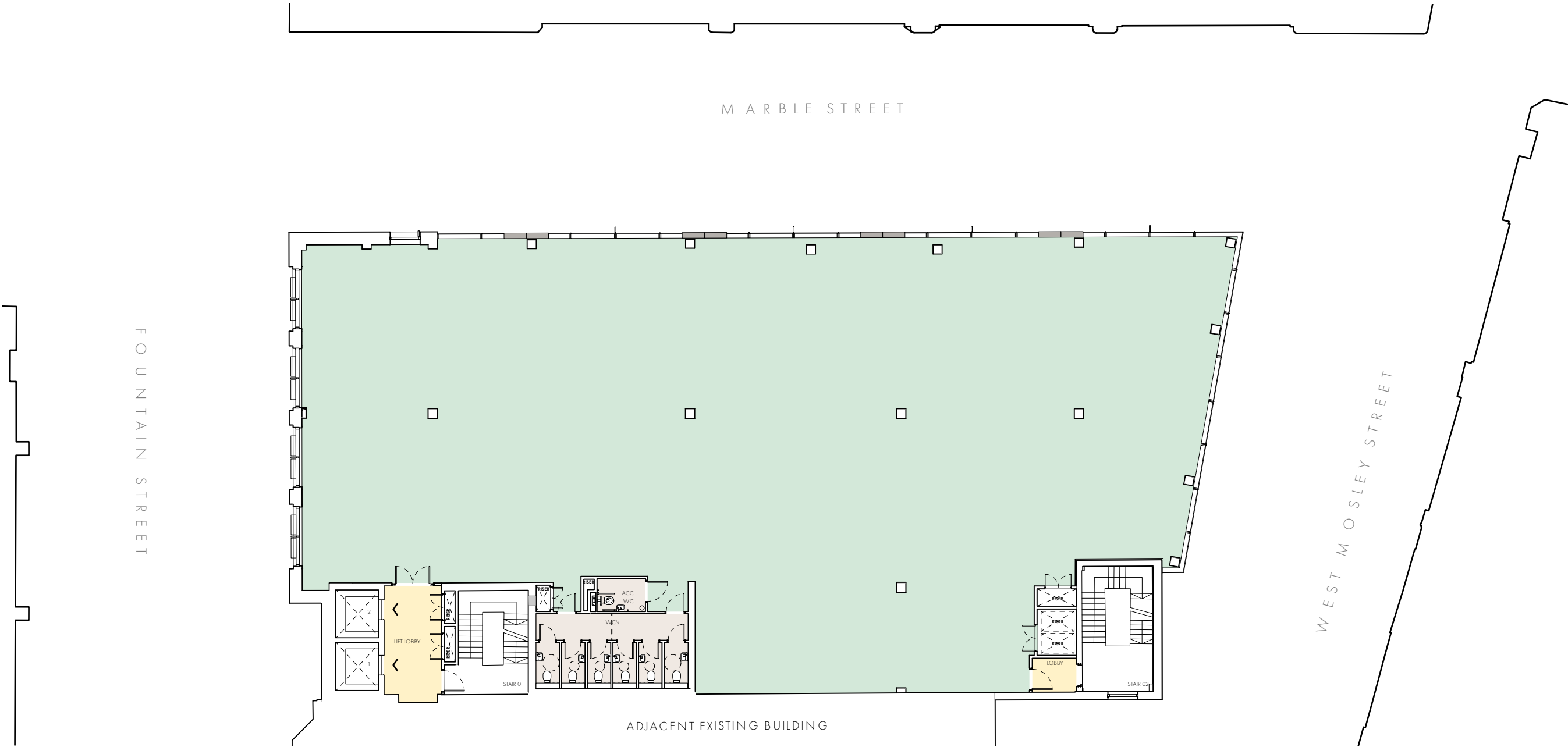
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| B        | 11/11/2022 | Stage 3 Issue        |
| C        | 30/11/2022 | Draft Planning Issue |

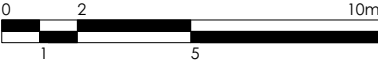
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35 FOUNTAIN STREET | PROPOSED PLANS

FOURTH FLOOR

1:200 @A3



PLAN KEY

- OFFICE SPACE
- LOBBY SPACE
- TOILETS

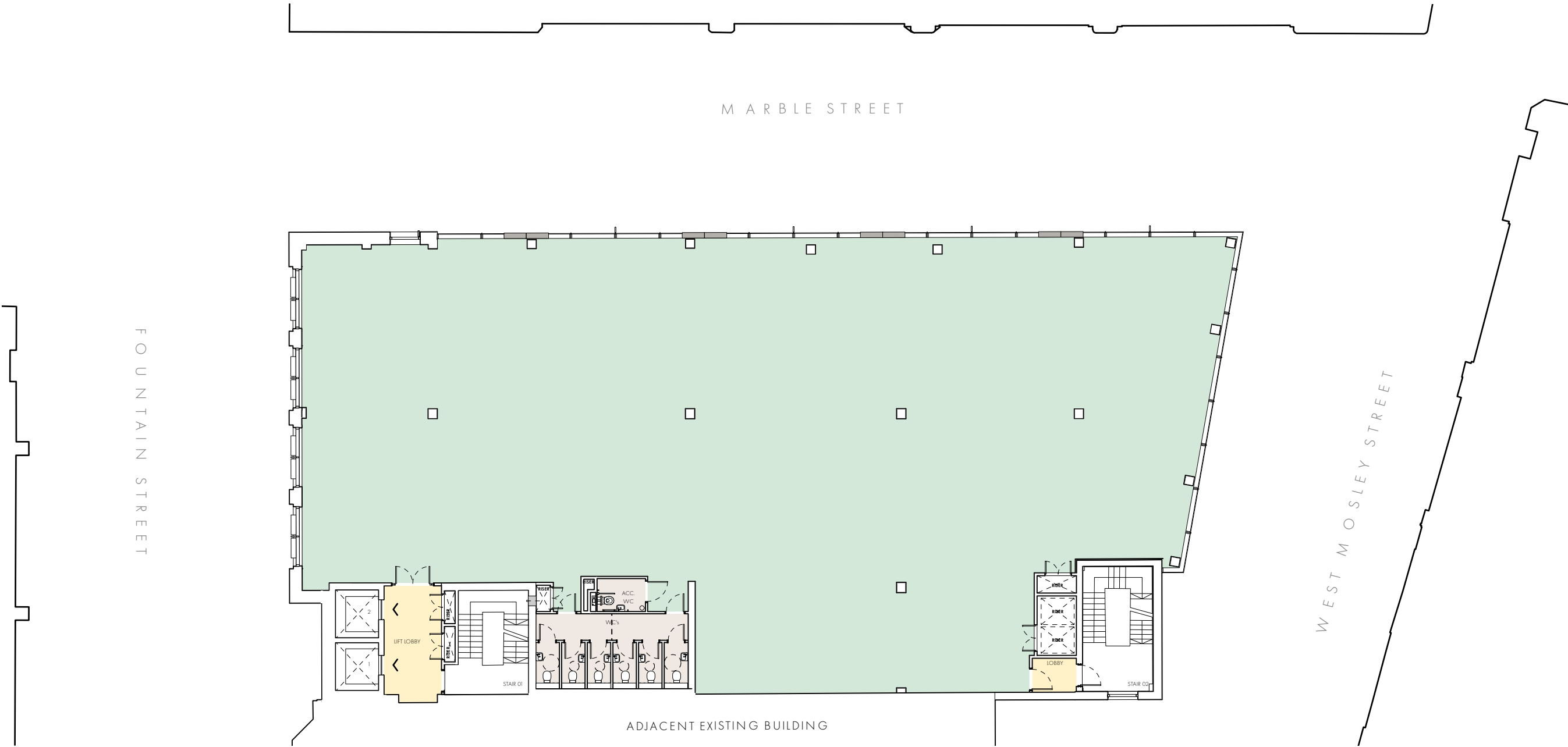
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| DRAWING | PROPOSED PLAN - LEVEL 04 |          |        |       |       |     |
| DATE    | OCT 22                   | DRAWN BY | DC     | SCALE | 1:200 | @A3 |
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| REVISION | DATE       | DESCRIPTION          |
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| A        | 20/10/22   | Preliminary Issue    |
| B        | 11/11/2022 | Stage 3 Issue        |
| C        | 30/11/2022 | Draft Planning Issue |

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35 FOUNTAIN STREET | PROPOSED PLANS

FIFTH FLOOR

1:200 @A3

PLAN KEY

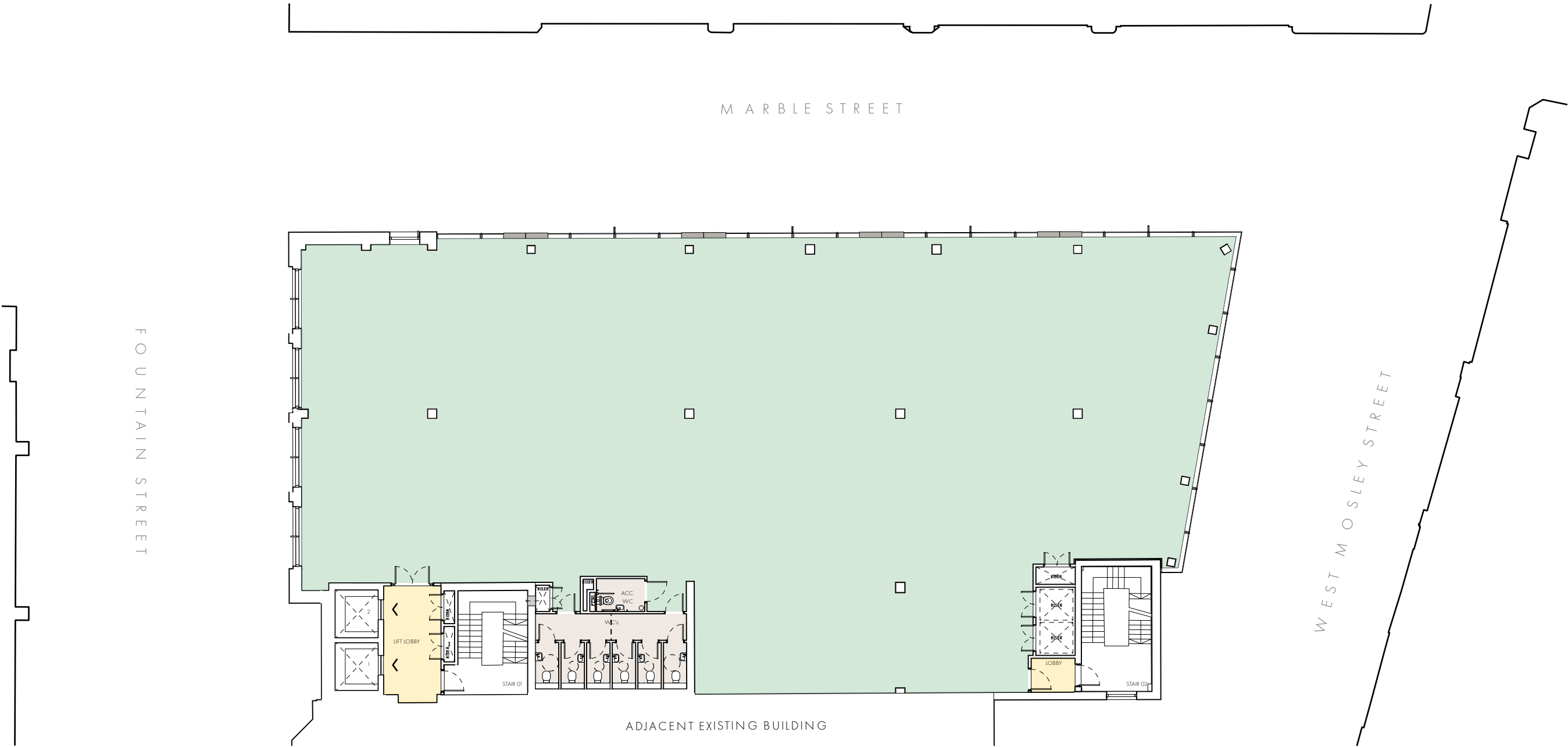
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|  | OFFICE SPACE |
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|  | TOILETS      |

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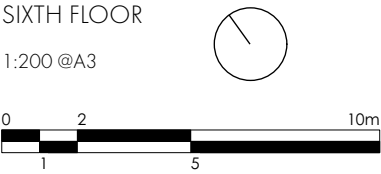
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| DRAWING                                                                                                                 | PROPOSED PLAN - LEVEL 05 |          |        |       |           |
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35 FOUNTAIN STREET | PROPOSED PLANS



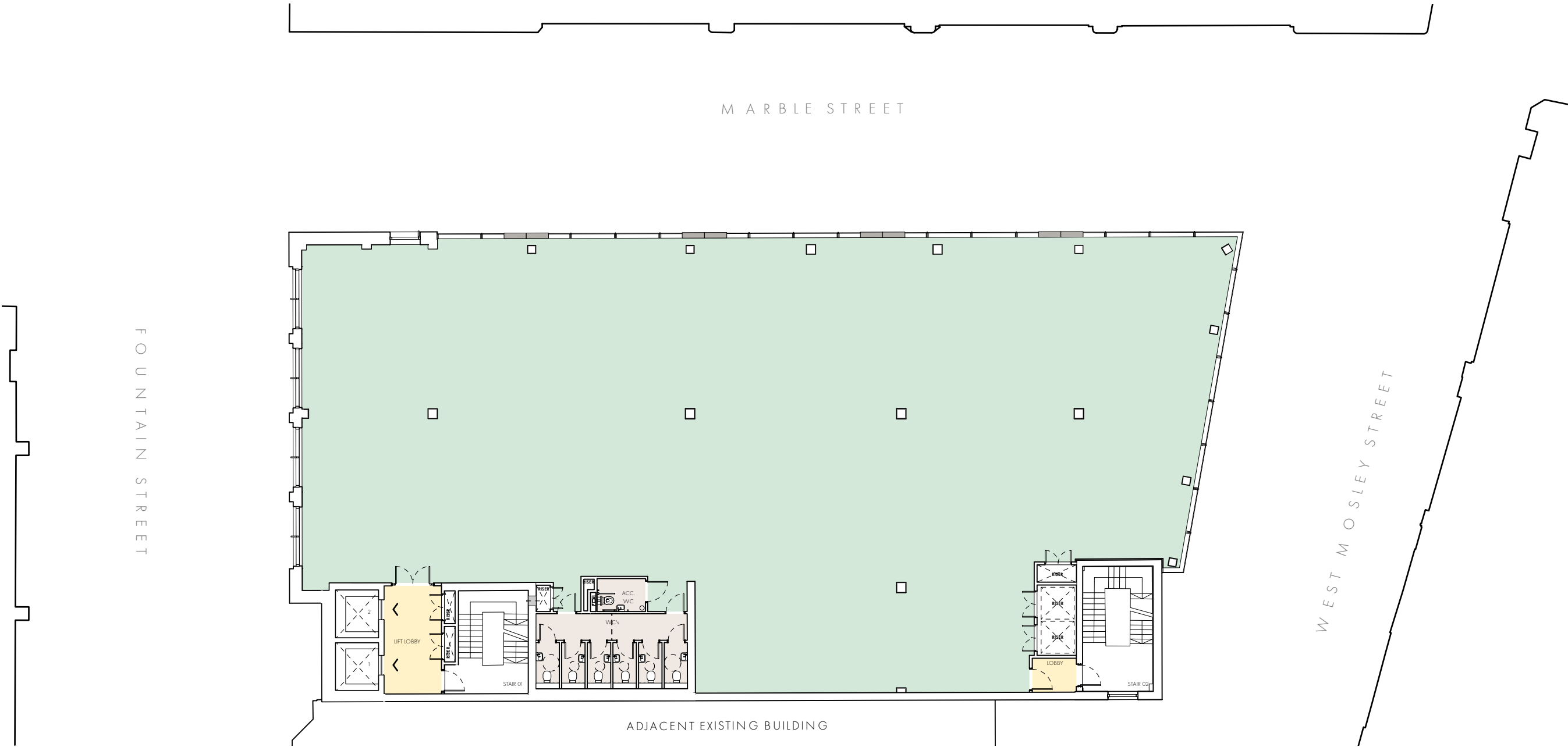
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| C        | 30/11/2022 | Draft Planning Issue |

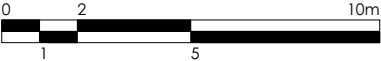
D R A F T



35 FOUNTAIN STREET | PROPOSED PLANS

SEVENTH FLOOR

1:200 @A3



PLAN KEY

- OFFICE SPACE
- LOBBY SPACE
- TOILETS

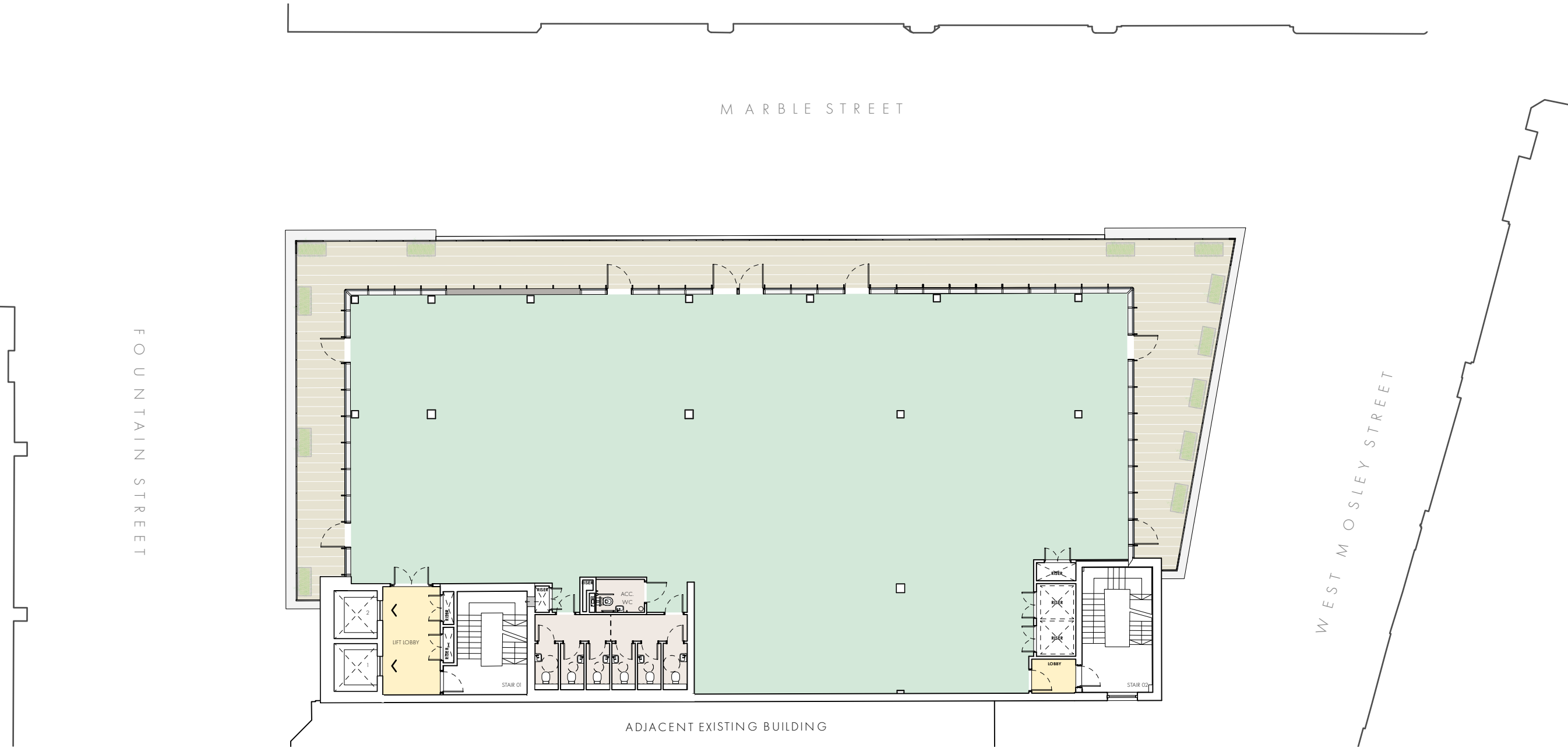
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| DRAWING | PROPOSED PLAN - LEVEL 07 |          |        |       |       |     |
| DATE    | OCT 22                   | DRAWN BY | DC     | SCALE | 1:200 | @A3 |
| JOB NO. | 1431                     | DWG.NO.  | L 1007 |       |       |     |

| REVISION | DATE       | DESCRIPTION          |
|----------|------------|----------------------|
| A        | 20/10/22   | Preliminary Issue    |
| B        | 11/11/2022 | Stage 3 Issue        |
| C        | 30/11/2022 | Draft Planning Issue |

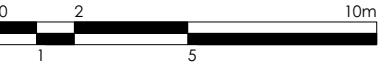
DRAFT



35 FOUNTAIN STREET | PROPOSED PLANS

EIGHTH FLOOR

1:200 @A3



PLAN KEY

|  |              |  |         |
|--|--------------|--|---------|
|  | OFFICE SPACE |  | TERRACE |
|  | LOBBY SPACE  |  |         |
|  | TOILETS      |  |         |

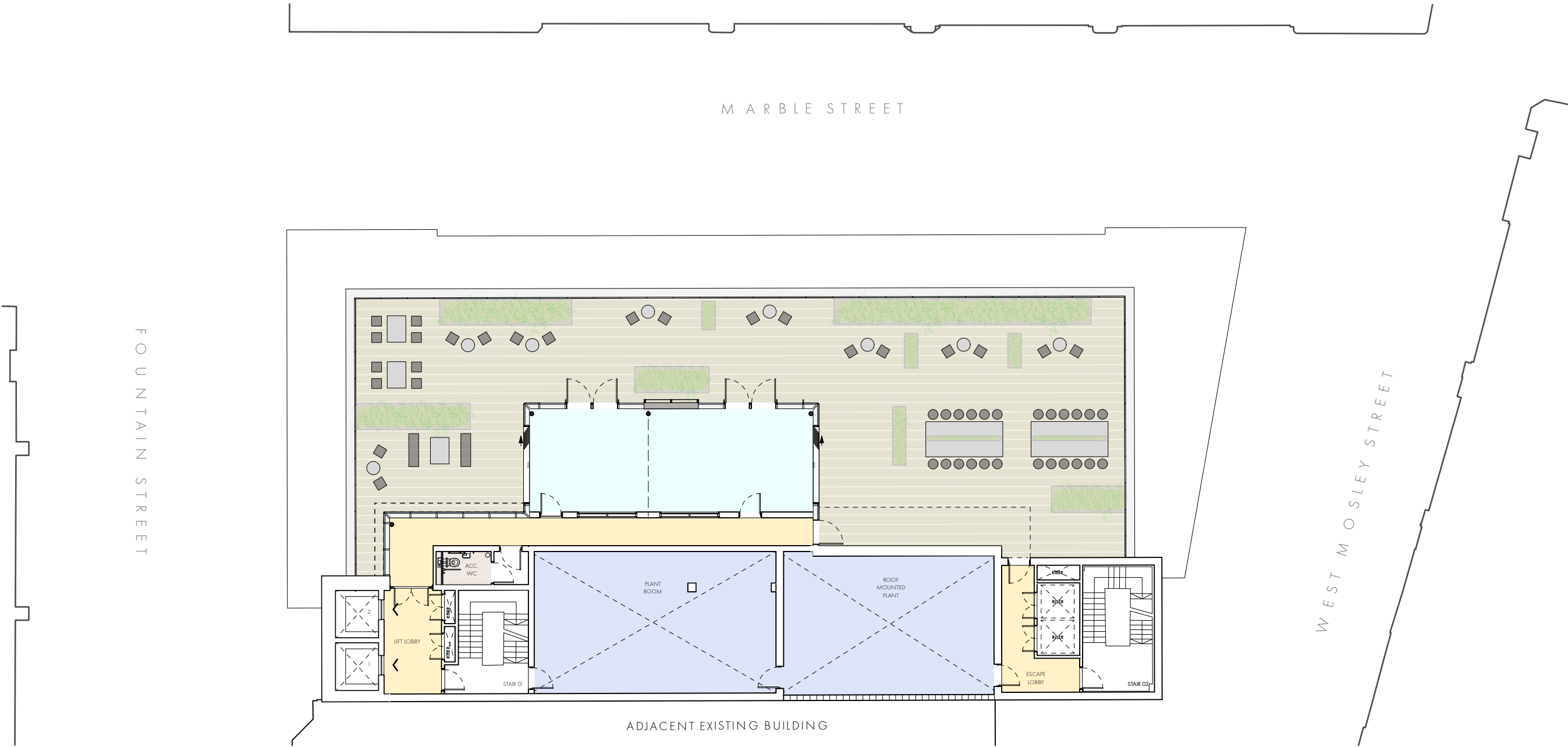
OMI Architects

31 Blackfriars Road, Salford, Manchester, M3 7AQ  
+44(0)161 832 3242 / info@omiarchitects.com / www.omiarchitects.com

|         |                          |          |        |       |       |     |
|---------|--------------------------|----------|--------|-------|-------|-----|
| PROJECT | 35 FOUNTAIN ST           |          |        |       |       |     |
| DRAWING | PROPOSED PLAN - LEVEL 08 |          |        |       |       |     |
| DATE    | OCT 22                   | DRAWN BY | DC     | SCALE | 1:200 | @A3 |
| JOB NO. | 1431                     | DWG.NO.  | L 1008 |       |       |     |

| REVISION | DATE       | DESCRIPTION          |
|----------|------------|----------------------|
| A        | 20/10/22   | Preliminary Issue    |
| B        | 11/11/2022 | Stage 3 Issue        |
| C        | 30/11/2022 | Draft Planning Issue |

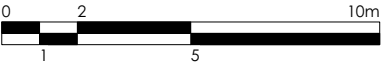
DRAFT



35 FOUNTAIN STREET | PROPOSED PLANS

NINTH FLOOR

1:200 @A3



PLAN KEY

|                                                                                                                             |                        |                                                                                                                             |                       |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------|
| <span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> | FLEXIBLE MEETING SPACE | <span style="background-color: #6495ED; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> | PLANT SPACE/ SERVICES |
| <span style="background-color: #FFD700; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> | LOBBY SPACE            | <span style="background-color: #D2B48C; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> | TERRACE               |
| <span style="background-color: #A0522D; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> | TOILETS                |                                                                                                                             |                       |

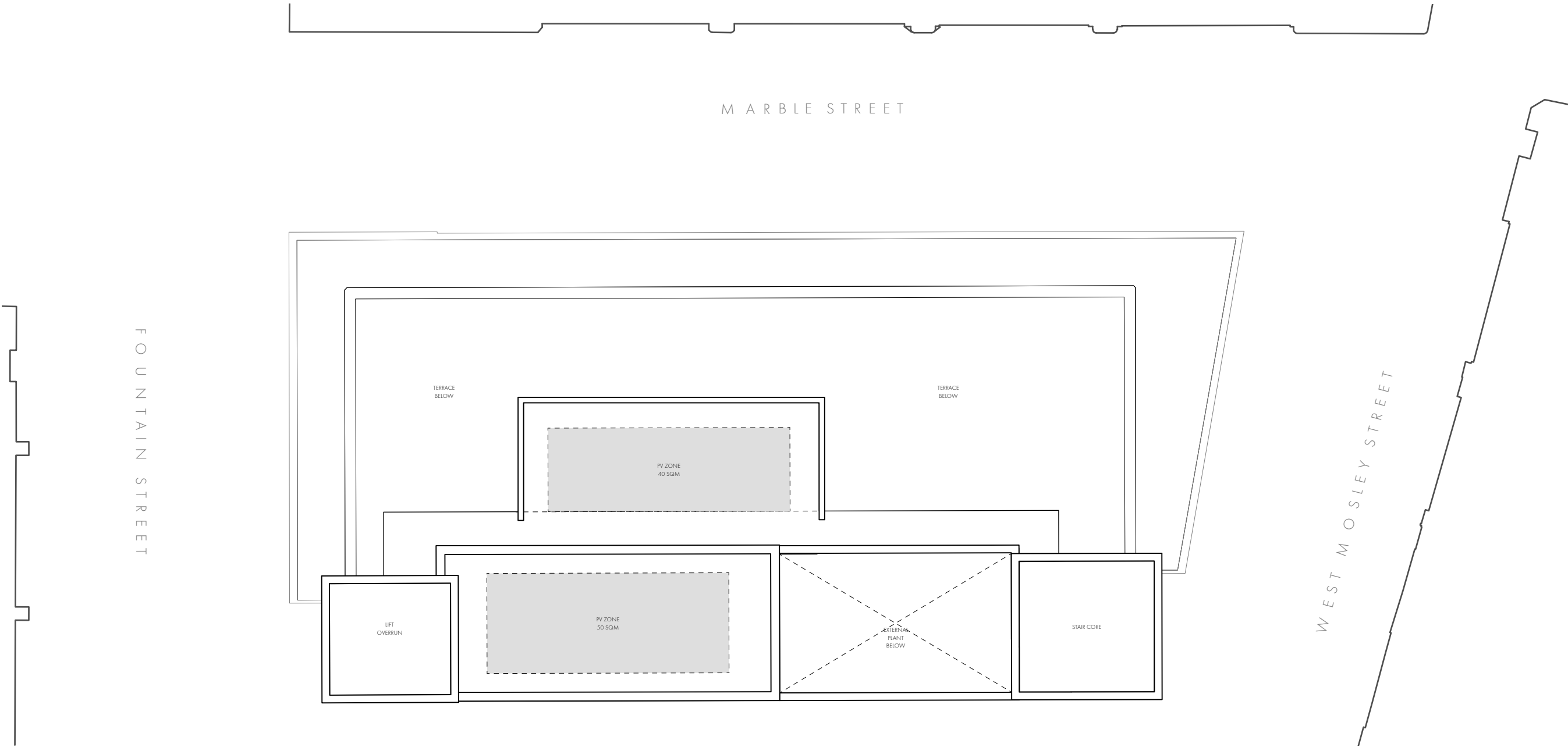
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|         |                          |          |        |       |       |     |
|---------|--------------------------|----------|--------|-------|-------|-----|
| PROJECT | 35 FOUNTAIN ST           |          |        |       |       |     |
| DRAWING | PROPOSED PLAN - LEVEL 09 |          |        |       |       |     |
| DATE    | OCT 22                   | DRAWN BY | DC     | SCALE | 1:200 | @A3 |
| JOB NO. | 1431                     | DWG.NO.  | L 1009 |       |       |     |

| REVISION | DATE       | DESCRIPTION          |
|----------|------------|----------------------|
| A        | 20/10/22   | Preliminary Issue    |
| B        | 11/11/2022 | Stage 3 Issue        |
| C        | 30/11/2022 | Draft Planning Issue |

D R A F T



35 FOUNTAIN STREET | PROPOSED PLANS

ROOF

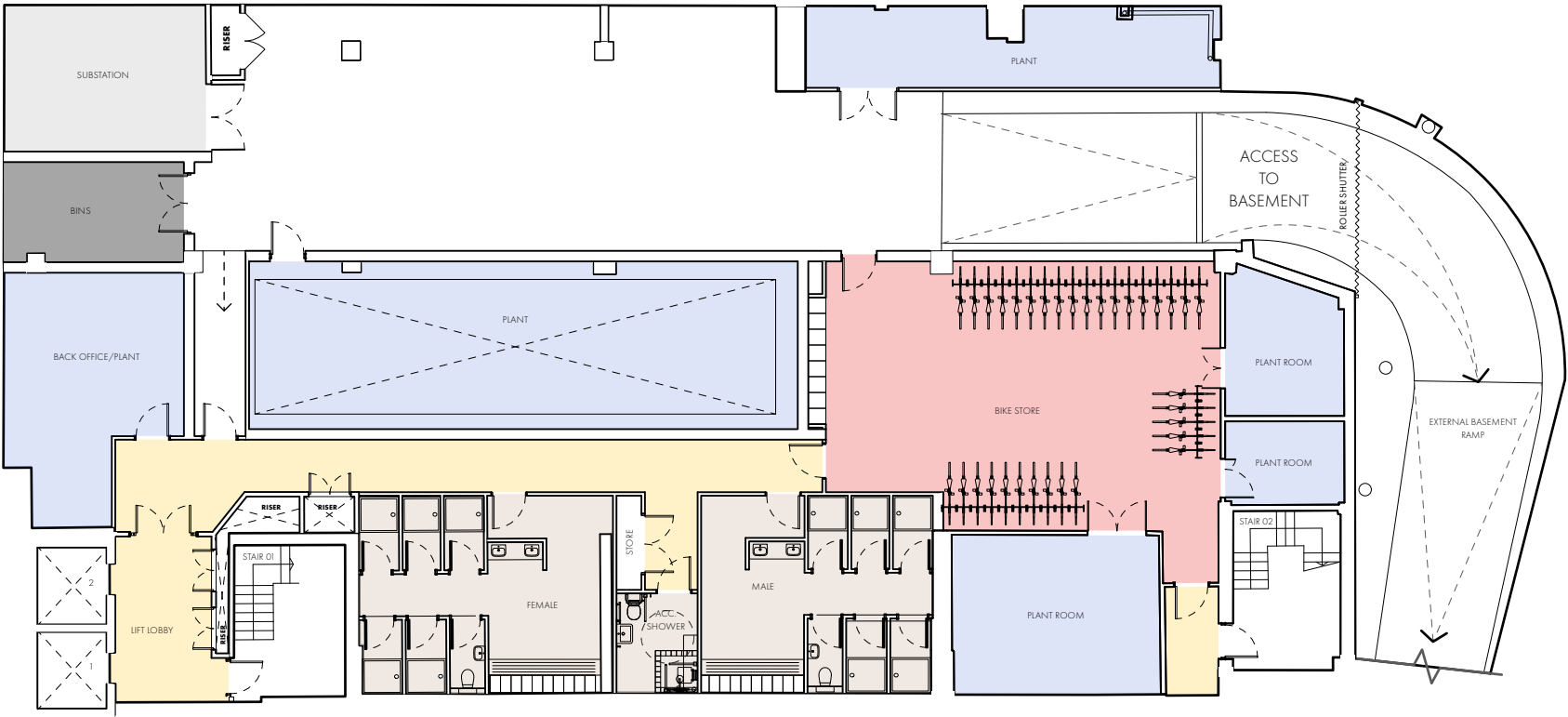
1:200 @A3

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|         |                      |          |        |       |       |     |
|---------|----------------------|----------|--------|-------|-------|-----|
| PROJECT | 35 FOUNTAIN ST       |          |        |       |       |     |
| DRAWING | PROPOSED PLAN - ROOF |          |        |       |       |     |
| DATE    | OCT 22               | DRAWN BY | DC     | SCALE | 1:200 | @A3 |
| JOB NO. | 1431                 | DWG.NO.  | L 1010 |       |       |     |

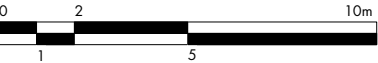
| REVISION | DATE     | DESCRIPTION          |
|----------|----------|----------------------|
| A        | 20/10/22 | Preliminary Issue    |
| B        | 11/11/22 | Stage 3 Issue        |
| C        | 30/11/22 | Draft Planning Issue |
| D        | 08/12/22 | Planning Issue       |
|          |          |                      |
|          |          |                      |
|          |          |                      |
|          |          |                      |
|          |          |                      |
|          |          |                      |



35 FOUNTAIN STREET | PROPOSED PLANS

BASEMENT

1:200 @A3



PLAN KEY



OCCUPIABLE OFFICE SPACE



LOBBY SPACE



REFUSE STORE



BIKE STORAGE (66.NO SPACES)



PLANT ROOM / SERVICES



TOILETS/ SHOWERS (10.NO )/  
CHANGING ROOMS/LOCKERS (38.NO )

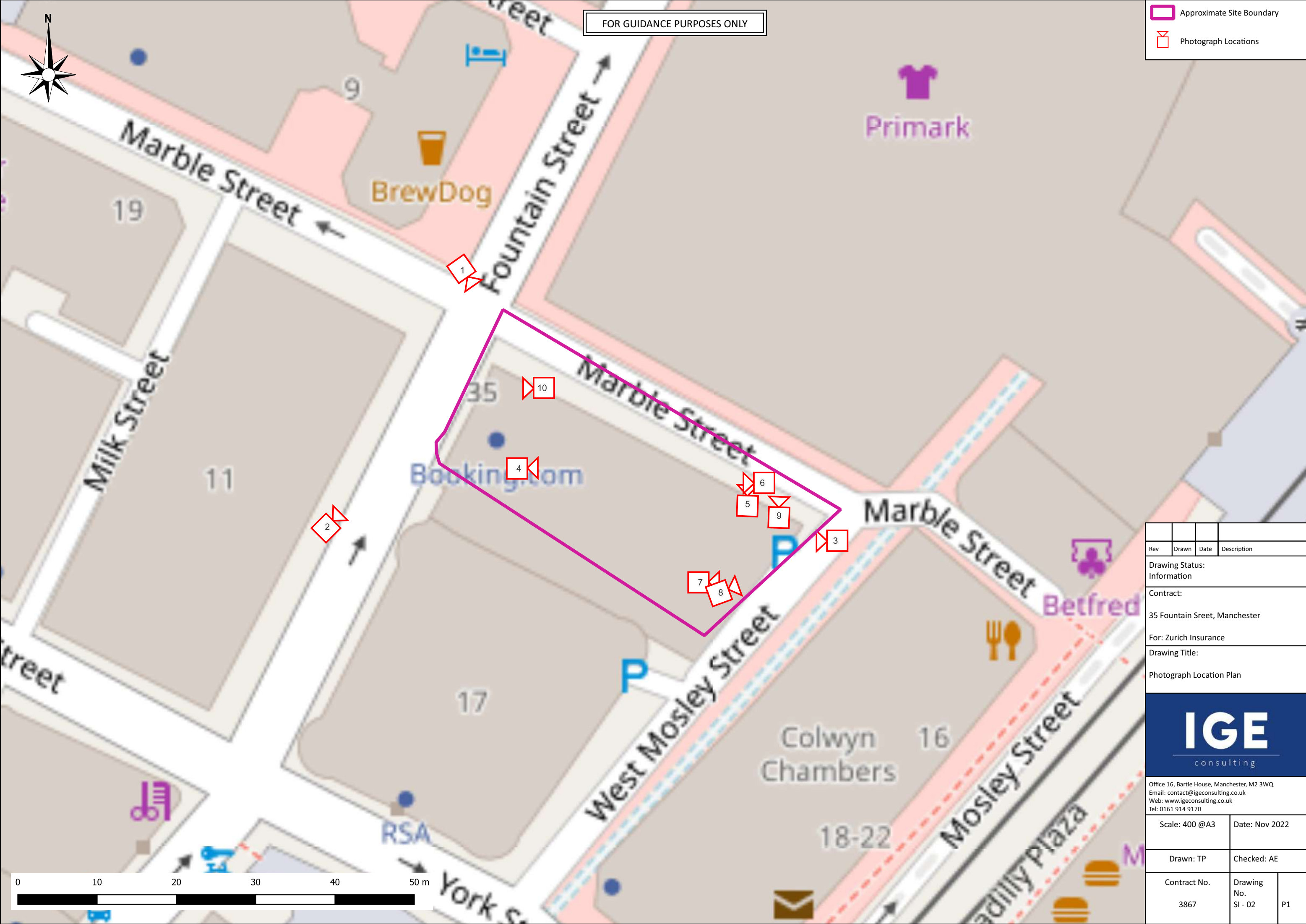
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|         |                          |          |        |       |       |     |
|---------|--------------------------|----------|--------|-------|-------|-----|
| PROJECT | 35 FOUNTAIN ST           |          |        |       |       |     |
| DRAWING | PROPOSED PLAN - BASEMENT |          |        |       |       |     |
| DATE    | OCT 22                   | DRAWN BY | DC     | SCALE | 1:200 | @A3 |
| JOB NO. | 1431                     | DWG.NO.  | L 1011 |       |       |     |

## **APPENDIX 3**

### **WALKOVER SURVEY PHOTOGRAPHS AND PHOTOGRAPH LOCATION PLAN**



FOR GUIDANCE PURPOSES ONLY

- Approximate Site Boundary
- Photograph Locations

| Rev                                                                                                                                                                                                                                   | Drawn | Date                | Description |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------|-------------|
| Drawing Status: Information                                                                                                                                                                                                           |       |                     |             |
| Contract: 35 Fountain Sreet, Manchester                                                                                                                                                                                               |       |                     |             |
| For: Zurich Insurance                                                                                                                                                                                                                 |       |                     |             |
| Drawing Title: Photograph Location Plan                                                                                                                                                                                               |       |                     |             |
| <div>IGE consulting</div>                                                                                                                                                                                                             |       |                     |             |
| Office 16, Bartle House, Manchester, M2 3WQ<br>Email: <a href="mailto:contact@igeconsulting.co.uk">contact@igeconsulting.co.uk</a><br>Web: <a href="http://www.igeconsulting.co.uk">www.igeconsulting.co.uk</a><br>Tel: 0161 914 9170 |       |                     |             |
| Scale: 400 @A3                                                                                                                                                                                                                        |       | Date: Nov 2022      |             |
| Drawn: TP                                                                                                                                                                                                                             |       | Checked: AE         |             |
| Contract No. 3867                                                                                                                                                                                                                     |       | Drawing No. SI - 02 | P1          |

SITE WALKOVER PHOTOGRAPHS – 23<sup>rd</sup> November 2022



Figure 1 – Looking south east, showing the the existing building on site and the main entrance off Fountain Street.



Figure 2 – Looking north east, showing the adjacent building and third party wall (beige column) shared with the building on site.



Figure 3 – Looking west, showing the entrance to the basement carpark from West Moseley Street.

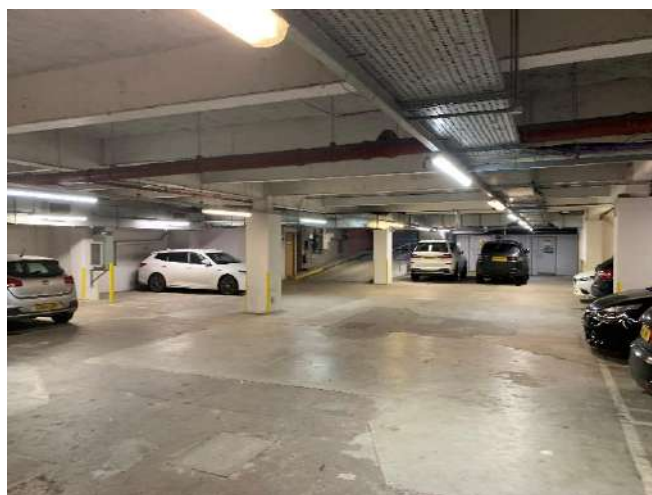


Figure 4 – Looking north east, showing the general veiw of the basement.



Figure 5 – Looking north, showing the 4300l deisel tank in a small room in the north east corner of the basement.



Figure 6 – Showingno evidence of spills or leaks on the floor around the diesel tank.



Figure 7 – Looking east, showing a water leak in the mains electrical switch room.



Figure 8 – Looking north east, showing the water leak inside the mains electrical switch room.



Figure 9 – Looking north, showing the pipe which transfers the deisel throughout the building.



Figure 10 – Looking west, showing the outside of the electricity sub station.

## **APPENDIX 4**

### **HISTORICAL ORDNANCE SURVEY MAPS**



#### Site Details:

35 FOUNTAIN STREET,  
MANCHESTER, M2 2AN

**Client Ref:** 3867  
**Report Ref:** GS-9204598  
**Grid Ref:** 384167, 398286

**Map Name:** County Series Town Plan

**Map date:** 1891

**Scale:** 1:500

**Printed at:** 1:1,000



Surveyed 1891  
Revised N/A  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1891  
Revised N/A  
Edition 1891  
Copyright N/A  
Levelled N/A



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Production date: 17 November 2022

Map legend available at:  
[www.groundsure.com/sites/default/files/groundsure\\_legend.pdf](http://www.groundsure.com/sites/default/files/groundsure_legend.pdf)



#### Site Details:

35 FOUNTAIN STREET,  
MANCHESTER, M2 2AN

**Client Ref:** 3867  
**Report Ref:** GS-9204598  
**Grid Ref:** 384167, 398286

**Map Name:** County Series

**Map date:** 1889-1893

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1892  
Revised N/A  
Edition 1892  
Copyright N/A  
Levelled N/A

Surveyed 1893  
Revised N/A  
Edition 1893  
Copyright N/A  
Levelled N/A

Surveyed 1893  
Revised N/A  
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Production date: 17 November 2022

Map legend available at:  
[www.groundsure.com/sites/default/files/groundsure\\_legend.pdf](http://www.groundsure.com/sites/default/files/groundsure_legend.pdf)

