

kyson:

CONTENTS

PART A

INTRODUCTION	04
--------------	----

SITE LOCATION	05
---------------	----

Camden, London Proposal Site	
---------------------------------	--

SITE HISTORY AND CONTEXT	07
--------------------------	----

Local Area Conservation Area Accessibility	
--	--

PLANNING APPRAISAL	10
--------------------	----

Policy Statement	
------------------	--

PLANNING CONTEXT	11
------------------	----

Relevant Planning Applications	
--------------------------------	--

EXISTING DRAWINGS	12
-------------------	----

Site Plan Block Plan Floor Plans Elevations Sections	
--	--

PART B

DESIGN	25
--------	----

Schedule of Accommodation	
---------------------------	--

PROPOSED DRAWINGS	26
-------------------	----

Site Access Plan Floor Plans Elevations Sections	
---	--

PART C

SUSTAINABILITY	38
----------------	----

Sustainability Statement	
--------------------------	--

# PART A

INTRODUCTION

SITE LOCATION

SITE HISTORY AND CONTEXT

PLANNING APPRAISAL

PLANNING CONTEXT

EXISTING DRAWINGS

## INTRODUCTION

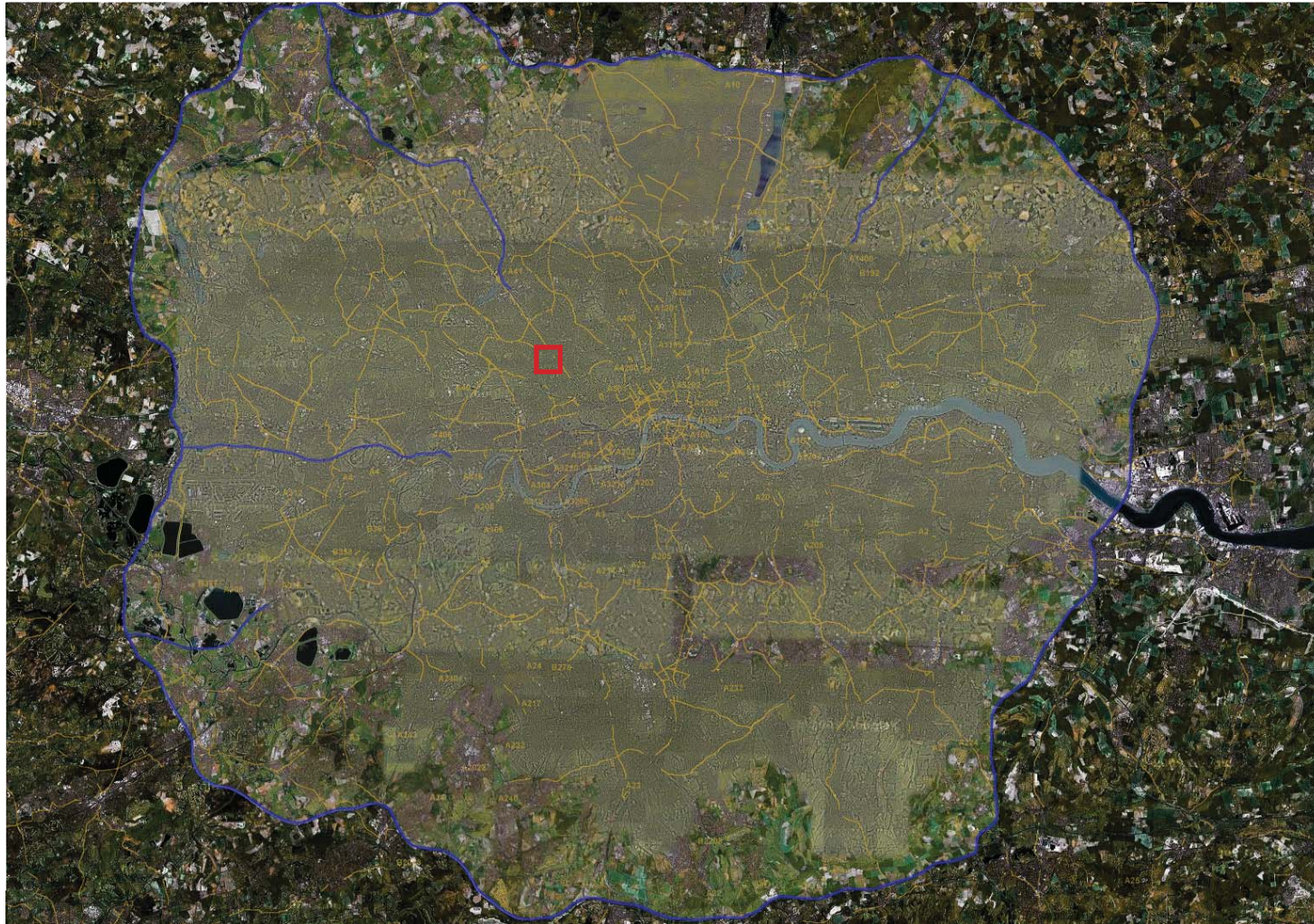
Kyson, on behalf of our client, seeks full planning permission for separation of the existing Lower Ground and Ground A4 use from the 1st and 2nd floor ancillary C3 residential accommodation. The proposals incorporate the refurbishment and extension to create 5 self-contained C3 residential units comprising of 3 Nos 1 bed and 2 Nos 2 bed flats.

Access to the residential dwellings will be provided at Ground Floor from Mill Lane; cycle and refuse storage is located at Lower Ground and can be accessed directly from Ravenshaw Street. Main access to the Public House will be retained from Mill Lane whilst the second access required as secondary means of escape will be formed next to the residential entrance.

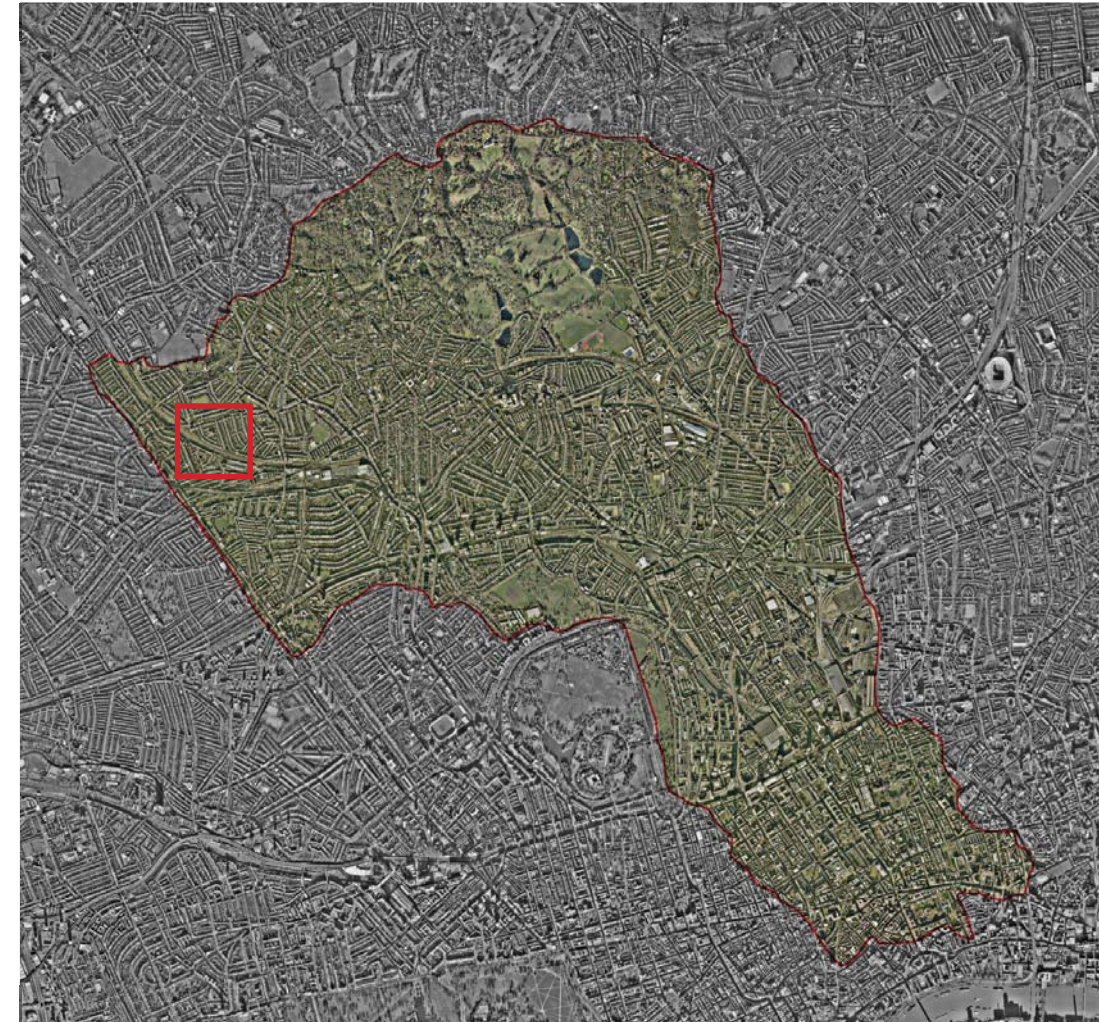


## SITE LOCATION

### LONDON BOROUGH OF CAMDEN



Map of London



London Borough of Camden

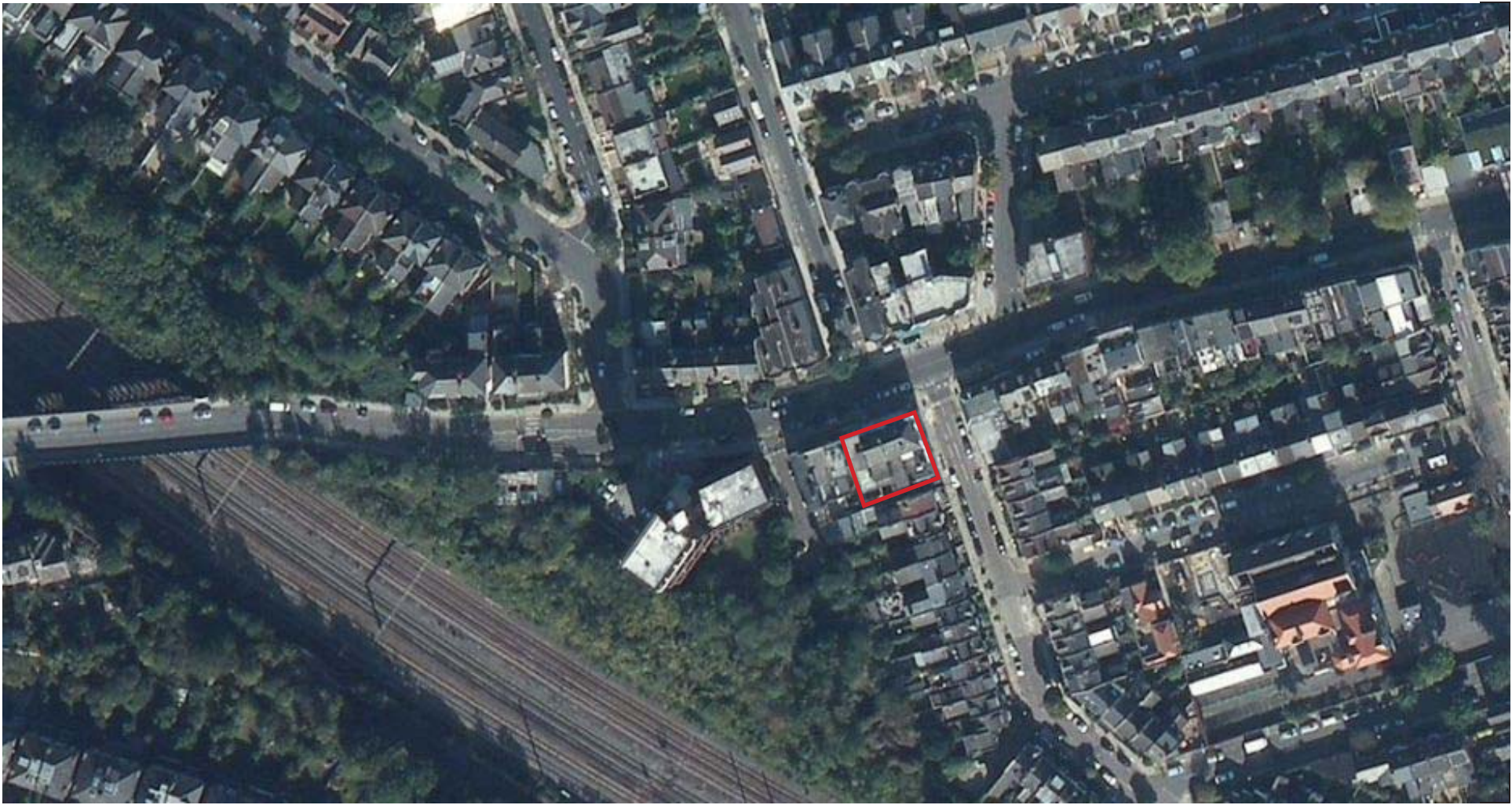


#### Location

The site is located north east of Kilburn Underground and north west of West Hampstead Underground. It is also located north west of West Hampstead rail, north of Brondesbury Rail and west of Finchley Road and Frognal rail.



SITE LOCATION  
PROPOSAL SITE



Site Map



North View



East View



South View



West View



## SITE HISTORY AND CONTEXT

### LOCAL AREA

The London Borough of Camden is rich in heritage and architectural history, with many buildings and places of historical importance. Camden contains many residential neighbourhoods which have their own distinctive identities and characteristics that make Camden unique. The borough is also known for its vast open spaces and local parks that add to the distinctive quality of Camden.

#### MILL LANE

Mill Lane is mostly of mixed development, featuring residential and commercial plots. The west of Mill Lane demonstrates more recent developments amongst large Edwardian buildings that have been converted into residential flats; this is also commonly featured central of Mill Lane, which is largely of commercial and retail usages at ground floor. The east part of Mill Lane is within the designated conservation area of West End Lane. The east of Mill Lane displays more examples of monumental mansion blocks and homogenous Victorian and Edwardian architecture in the form of grand red brick houses with features such as large sash window and bay windows that are prevalent within the West End Conservation Area.



Front View, 40-42 Mill Lane.



Rear View, Ravenshaw Street.



East View, 40-42 Mill Lane.



West View, 40-42 Mill Lane.

## SITE HISTORY AND CONTEXT

### CONSERVATION AREA

The proposal site is situated near to several conservation areas:

- West End Conservation Area
- South Hampstead Conservation Area
- Redington and Frognal Conservation Area

The three conservation areas sit adjacent to one another, the West End Conservation Area lies on the east of Mill Lane, with Redington and Frognal Conservation Area situated north east of the proposed site and the South Hampstead Conservation Area is located south east of the proposed site.

All three conservation areas display relatively similar characteristics, with slight differences which make each conservation area unique and therefore contributing to Camden's eclectic mix of architectural characteristics. The West End Conservation Area provides a core commercial shopping area to the district and features large red brick mansion blocks of a Victorian and Edwardian style that are similarly present in the South Hampstead and the Redington and Frognal Conservation area. The South Hampstead Conservation Area is largely a leafy residential area and the Redington and Frognal Conservation Area further displays dense vegetation that mimics the contoured slopes of the nearby Hampstead Heath.

The wider areas of Hampstead is historically rural and still displays elements of its rural past through the dense vegetation and the leafy suburb characteristics. It still retains much of its village charm and by the eighteenth and nineteenth century it was considered to be a retreat away from London's polluted industrial centre. Its attractive views, vast areas of parks and greenery is a key element of the area and still attracts visitors to the area today.

### APPRAISAL

The proposal is situated on the far west side of the busy road, Mill Lane. The area is mainly of residential and commercial use, with retail shops located at ground floor which contributes to the vibrancy of Mill Lane. The surroundings provides clear examples of Victorian and Edwardian domestic architecture that are prevalent within Mill Lane. This evokes a sense of grandeur through the scale of the large red brick mansion blocks that are mostly of three to four storeys high. The large scale of the buildings are further illustrated through the large sash and bay windows.

The site is three storeys high and is in keeping with the historical character of the area. Situated at the corner of Ravenshaw Street and amongst other commercial shops at ground floor, the site is relatively prominent and is a feature on the busy west side of Mill Lane.



Hampstead Conservation Areas Map

Key

- |   |   |  |   |
|---|---|--|---|
| <span style="display: inline-block; width: 15px; height: 15px; background-color: red; margin-right: 5px;"></span> Proposed Site | <span style="display: inline-block; width: 15px; height: 15px; border: 2px solid purple; margin-right: 5px;"></span> West End Conservation Area | <span style="display: inline-block; width: 15px; height: 15px; border: 2px solid blue; margin-right: 5px;"></span> South Hampstead Conservation Area | <span style="display: inline-block; width: 15px; height: 15px; border: 2px solid green; margin-right: 5px;"></span> Redington and Frognal Conservation Area |
|---|---|--|---|





## SITE HISTORY AND CONTEXT

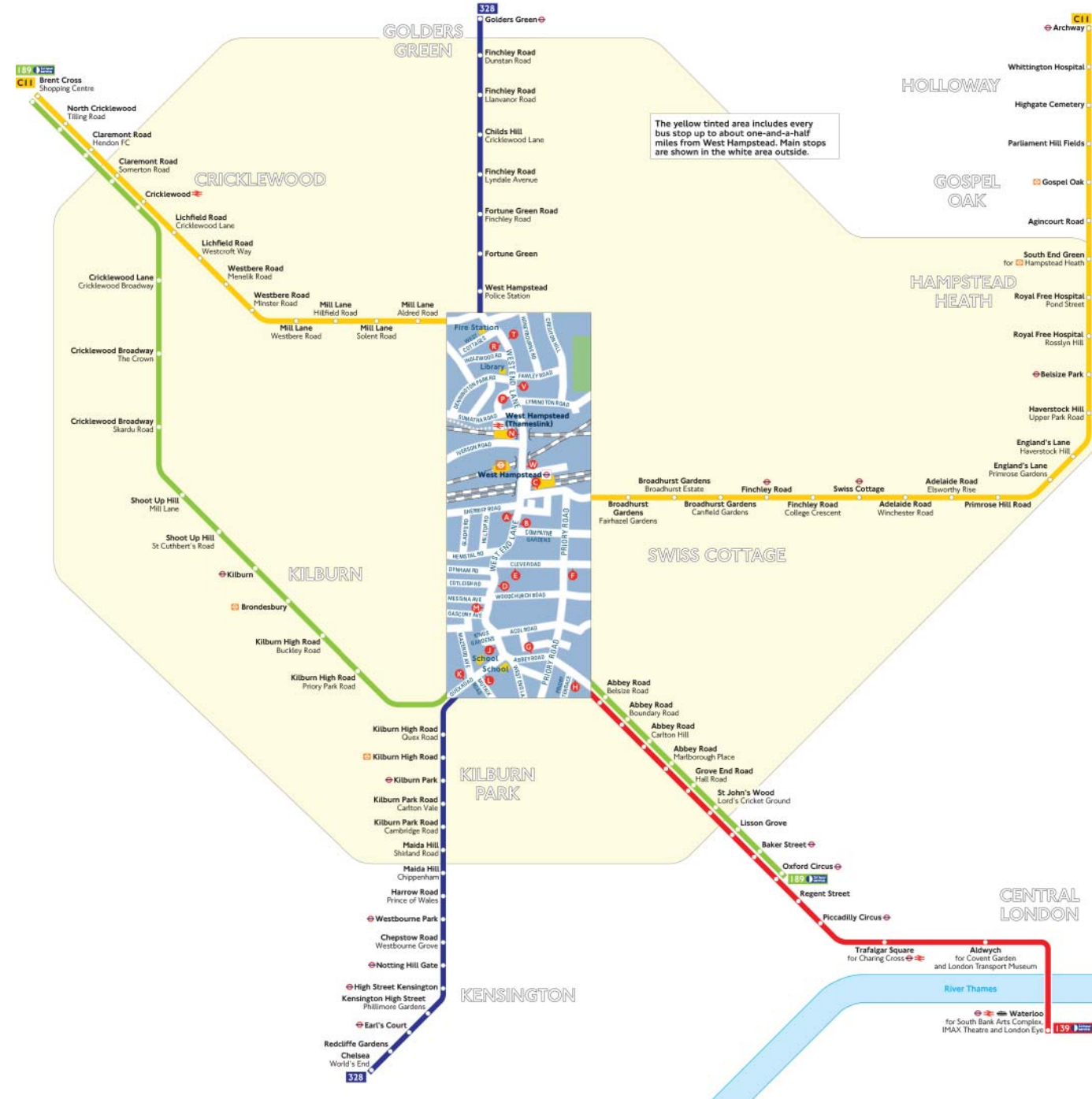
### ACCESSIBILITY

The public transport links to the site are excellent, with a PTAL rating of 4 and is within the travel card zone 2.

#### Buses

There are a few bus services that operate close by around the site. Here are a number of bus routes heading to the following destinations:

139	Waterloo / Brent Cross
189	Brent Cross / Oxford Circus
328	Chelsea / Golders Green
C11	Archway / Brent Cross



Bus Routes West Hampstead

PLANNING APPRAISAL  
PLANNING POLICY STATEMENT

1.0 INTRODUCTION

1.1 This application seeks to gain full planning permission for the retention of the basement and ground floor as A4 use (drinking establishment) and the separation, refurbishment and extension of the upper ancillary C3 residential space to form 3 Nos 1 bed and 2 Nos 2 bed self-contained residential units.

1.2 The key planning issues are in regards to the retention of the public house (A4) at basement and ground floor, as well as the separation of the drinking establishment and residential units at first and second floors.

1.3 The following documents have been used to support and form this proposal:

- National Planning Policy Framework 2012 [NPPF]
- London Plan 2015 [LP]
- Camden Core Strategy 2010
- Camde Development Policies 2010
- Camden Planning Guidance 2010 CPG1

1.4 The aim of this proposal is to separate the drinking establishment (A4) and the residential unit (C3).

2.0 NATIONAL CONTEXT

2.1 The proposal looks to work in conjunction with paragraph 57 ad 58 which will “optimise the potential of the site to accommodate development” and plan “positively for the achievement of high quality” designs, thus responding “to local character and history, and reflect the identity of local surroundings and materials”.

3.0 LOCAL CONTEXT

3.1 The building is situated on Mill Lane, a busy road which is predominantly a mix of residential and commercial use, with retail shops at ground level and mostly residential use on the upper levels. The surrounding buildings are mostly of three to four storeys high.

3.2 The building is currently in use as A4 (drinking establishment) at basement and ground floor, standing at three storeys high. The building is of a red brick material with elaborate detailing of friezes and brackets surrounding the windows and the parapet that are typical of Georgian architecture.

3.2 The site is located near to, but outside of several conservation areas:

- West End Conservation Area
- South Hampstead Conservation Area
- Redington and Frogna Conservation Area

3.3 The building is near to the Grade II Listed building, Beckford Primary School.

3.4 The building is located in an area that is recognised as a neighbourhood centre.

3.5 The main access to the site is directly off Mill Lane and Ravenshaw Street.

4.0 DRINKING ESTABLISHMENT

4.1 The proposal aims to retain the existing A4 use (drinking establishment).

4.2 Retaining the existing A4 floor area at basement and ground floor level will add to the vibrancy of Camden and contribute to the eclectic characteristics of the neighbourhood. As highlighted by Camden policies CS7 and DP12 that a mix of commercial developments is important to the success of the area. Further, policy CS8 seeks to promote businesses which will provide local employment within the area and is important in order to maintain Camden’s dynamic and prosperous image.

4.3 The sensitive approach for extending and refurbishing the building to meet modern requirements and in a manner that is sympathetic to the historic nature of the surrounding area, this will support policies CS5, CS14 and DP24. The improvements will ensure the retention of the A4 use will “not have a harmful impact on residents and the local area”.

5.0 HOUSING

5.1 The proposal will provide 5 Nos residential units and comprise of 3 Nos 1 bed and 2 Nos 2 bed self-contained residential flats on the first and second floor of the site.

5.2 By separating the A4 use and providing residential accommodation, the proposal looks to maximise the potential use of the site. The London Plan and the Camden’s local policies emphasise the growing need for housing. The design aims to address the demand for units within the area as highlighted in CS5, DP2 and DP5.

5.3 Further, the separation of the existing ancillary residential unit to create 5 Nos self-contained residential flats will enable residents “an improved quality of life, equality of opportunity and economic growth” by providing high quality living spaces and an improved access of amenity that are in line with the policies mentioned above.

6.0 ROOF AND REAR EXTENSION

5.1 The proposal will feature a new rear extension to provide additional space to the proposed residential units at first floor.

5.2 The proposed rear extension enhances the character of the existing period building and strengthens its function as a neighbourhood by articulating the corner along Ravenshaw Street. In addition the floor area gained at first and second floors allows to provide high quality accommodation required. Highlighted in the policies above, the proposal seeks enhance the quality of life of Camden residents as well as attracting new residents to the area that.

5.3 The erection of the rear extension at first floor and second floors level will not impede on neighbouring properties or future neighbouring developments and will not extend beyond the existing massing to the rear, complying with policy DP26.

5.3 Across all designs, materials will seek to match the existing building where possible and be sympathetic of the character area further supporting the policies outlined above and within the London Plan.

6.0 ACCESS, TRANSPORT AND SECURITY

6.1 The location of the site is within a PTAL 4 Zone. The site is within walking distance to Kilburn Underground Station (Jubilee line), West Hampstead Underground Station (Jubilee line), West Hampstead Rail and Brondesbury Rail.

6.2. There is currently no on site parking. The site is within the controlled parking zone CA-F and there will be no further provision of parking permits for new residents.

6.3 To comply with the London Plan there will be provision for a minimum of 7 cycle parking spaces accommodated securely internally and accessible from Ravenshaw Street. The spaces will be provided using a semi-vertical cycle stand suitable for the existing conditions. The area is approx. 3.9m by 3.85m with a headroom of approx. 2.3m. Please refer to the document by SFD showing an example for a suitable product.

7.0 WASTE

7.1 Waste collection for the A4 unit will be retained as per existing. The residential units will be provided with separate internal storage for both household and recycled waste within the kitchen units.

Refuse storage is provided and will be accessed directly from Ravenshaw Street. Camden sets out the following requirements for household waste per dwelling:

- 100 litres per Studio/ one bedroom
- 170 litres per Two bedroom

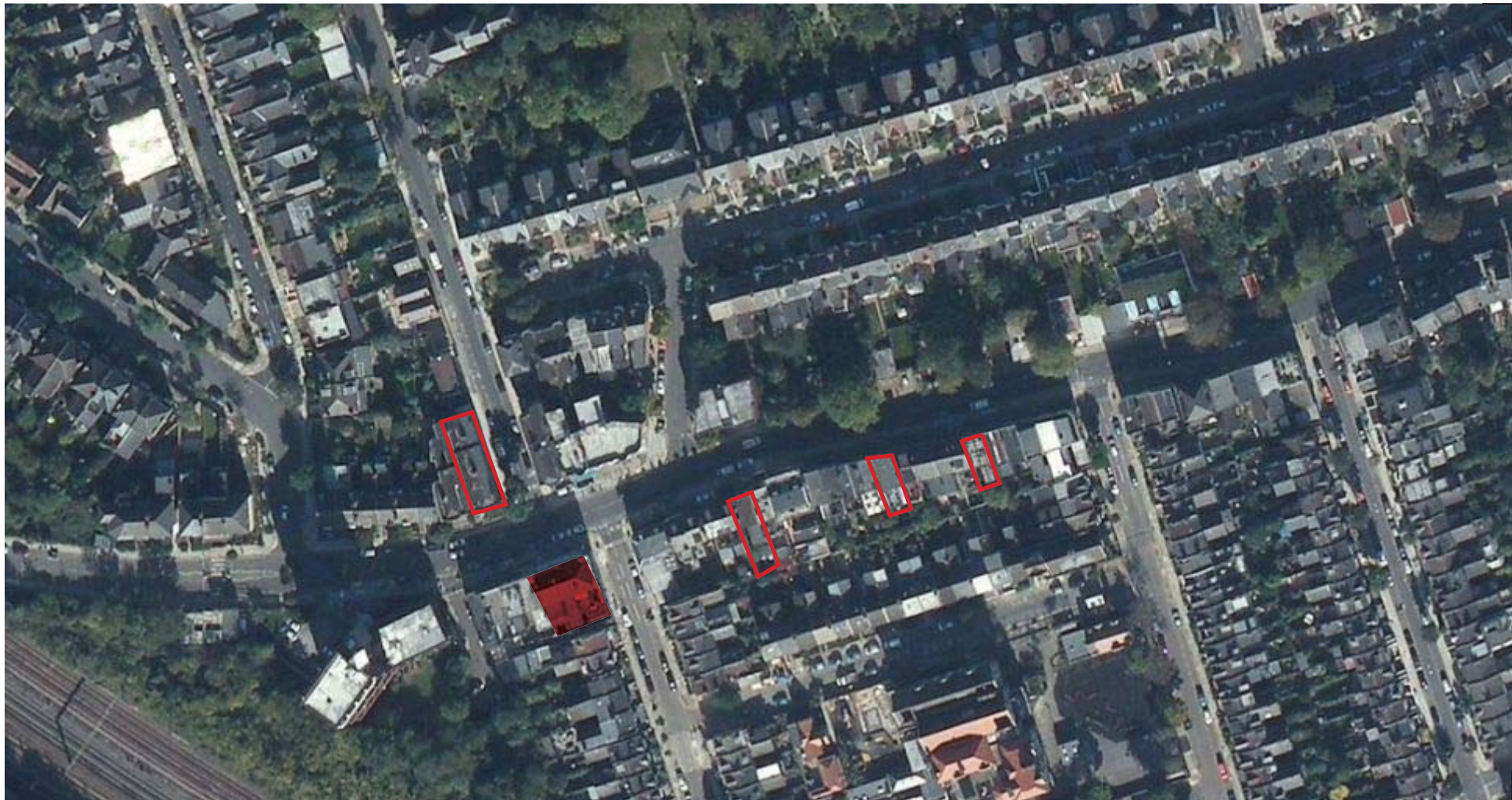
The requirement for the proposed development totals to a minimum of 640 litres of which 50% will be allocated for recyclables. Proposals accommodate for a minimum of two 360 litres wheelie bins for separate storage of household waste and recyclables in accordance with Camden’s guidelines. Additional storage for food waste can be incorporated in form of two small caddies of 23 litres.

Current collection arrangements for domestic recycling and waste are on a weekly cycle.

8.0 OTHER CONSIDERATIONS

8.1 The site is not located within a flood zone and is highlighted as a neighbourhood centre.





Site Map



Whilst considering the various planning policies noted above, the following application proposals have been taken into consideration setting the precedence for similar developments carried out within immediate vicinity and are noted on the above map:

**1. 40 Mill Lane London NW6 1NR**  
2012/4198/P

Installation of external metal staircase to rear elevation between lower ground and 3rd floor, the replacement of existing window at 3rd floor level and installation of new door for means of escape in connection with the use as residential flats (Class C3).  
APPROVED 4-10-2012

**2. 82 Mill Lane London NW6 1NL**  
2015/3887/P


Two storey rear extension (lower and upper ground floor level) and single storey rear extension (lower ground floor level) with lean-to roof  
APPROVED 14-08-2015

**3. 66 Mill Lane London NW6 1NJ**  
2013/1905/P

Alterations to the approved scheme (2012/4886/P) granted 21/02/2013 for: the erection of part single, part two and part three storey rear extension together with mansard roof extension, alterations to front light well, the change of use of part of the retail (Class A1) at ground floor into 3 SC flats, 1 x 2 bedroom flat at ground floor, 1 x 1 bedroom at first floor level and 1x 2 bedroom maisonette on second and third floor levels in connection with the use as residential flats (Class C3), namely, the setting back of the mansard roof extension and increase height of the extension to the rear elevation.  
APPROVED 11-04-2014

**4. Unit 7 56 Mill Lane London NW6 1NJ**  
2012/5210/P

The erection of a mansard roof as an extension to the second floor front flat no. 7  
APPROVED 24-12-2012

Proposal Site 

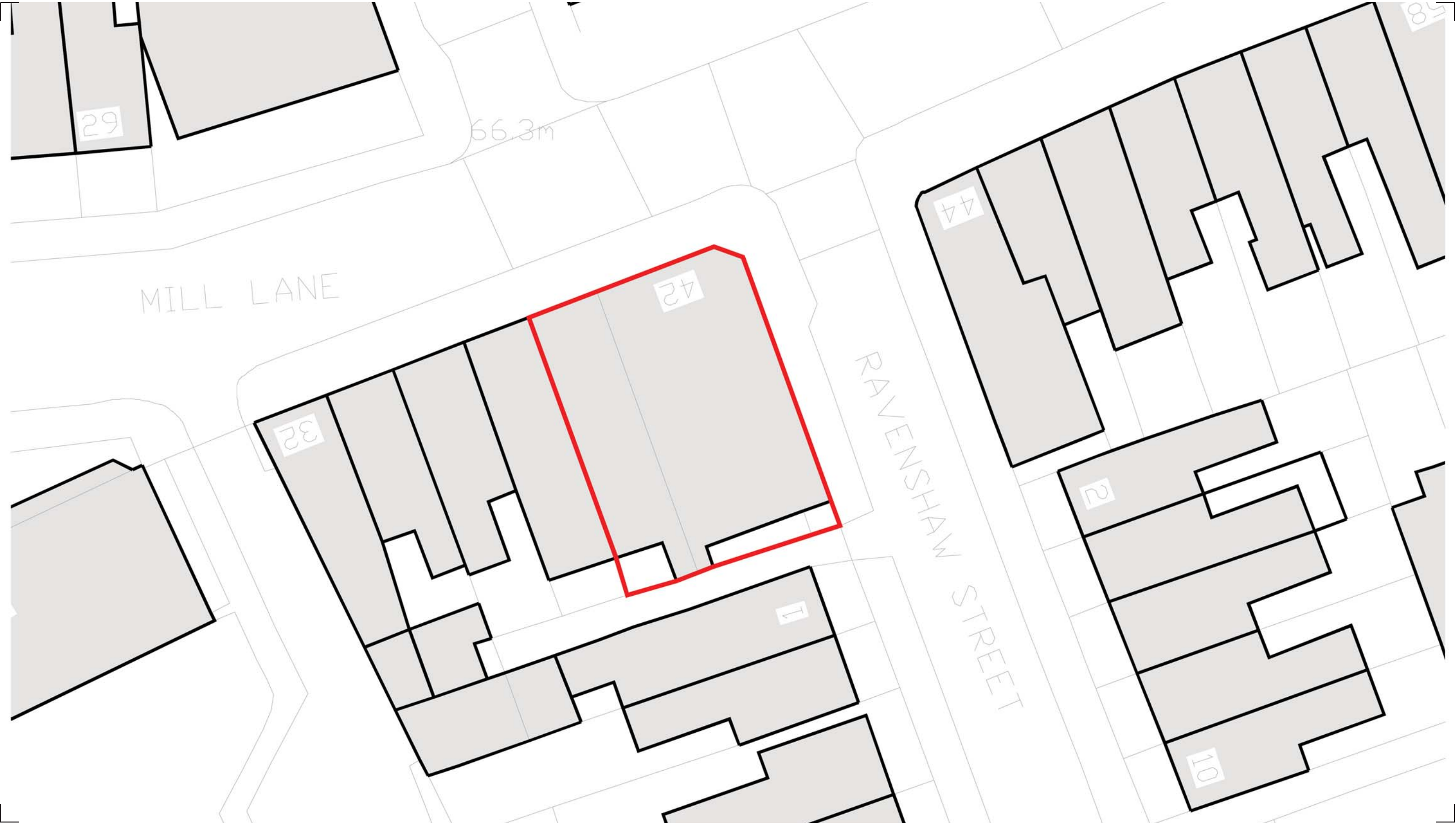
Relevant Planning Applications 

EXISTING DRAWINGS  
SITE PLANS



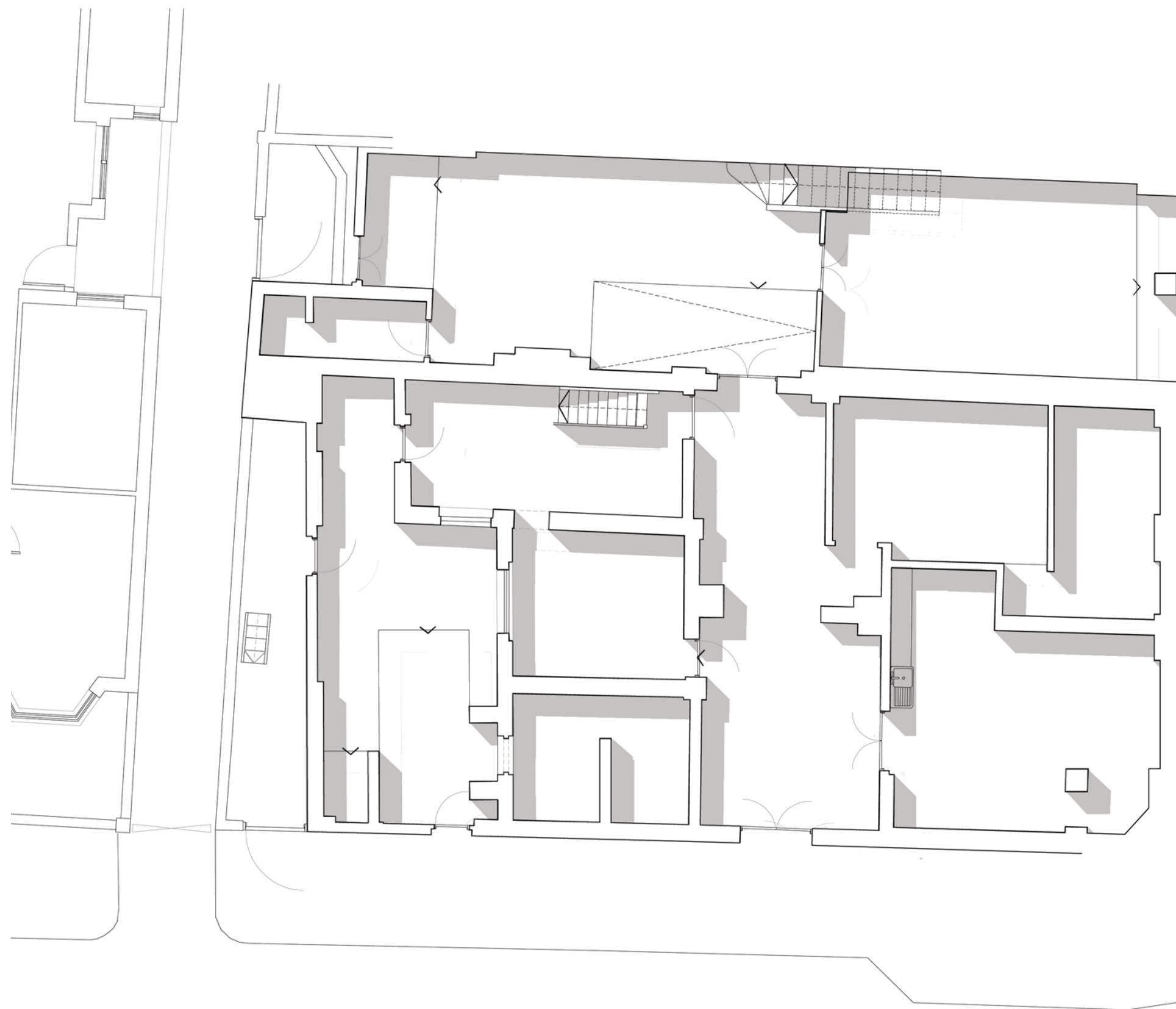
SITE LOCATION PLAN. DRAWING no. 0500A. 1:1250@A3





BLOCK PLAN. DRAWING no. 0501A. 1:250@A3

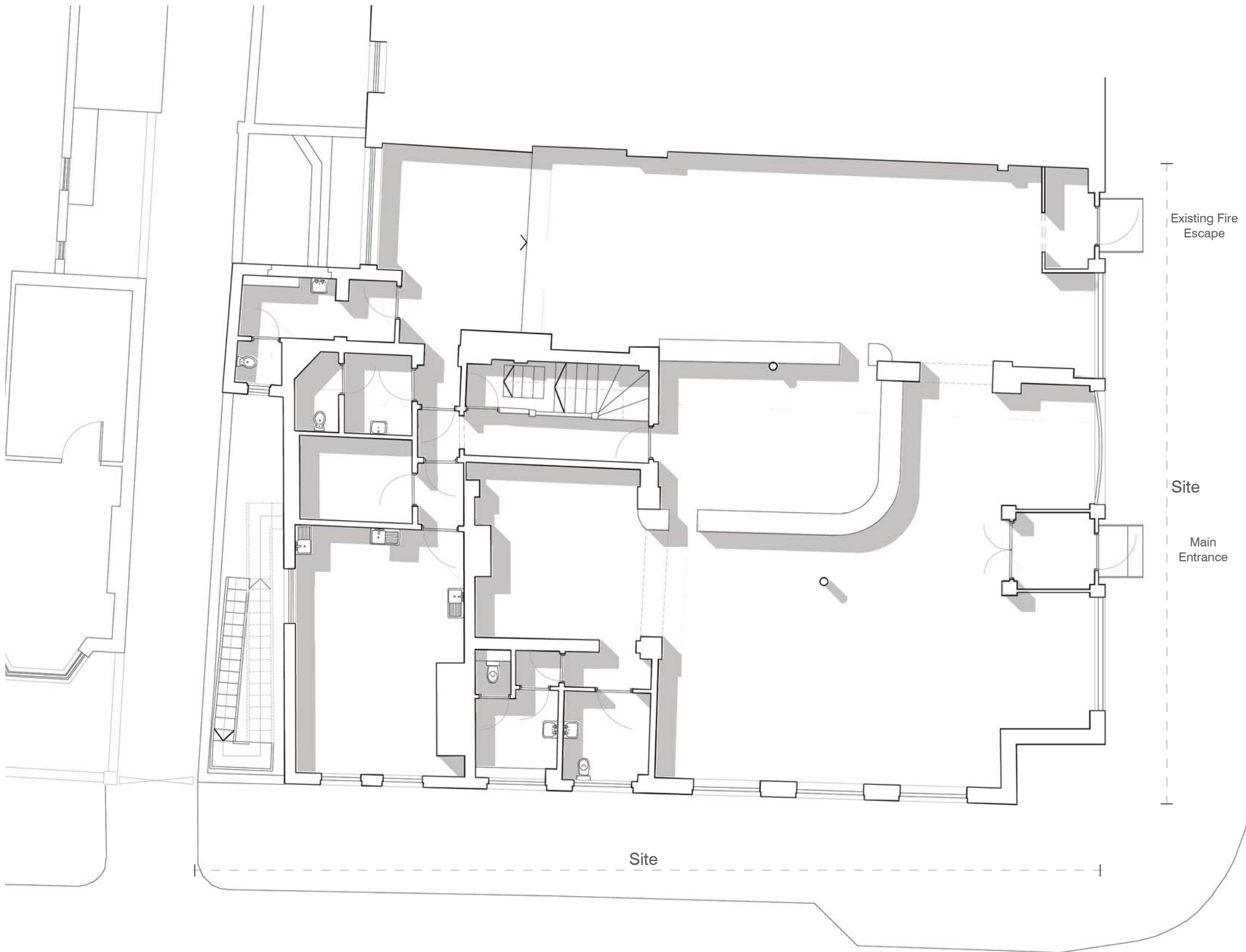
EXISTING DRAWINGS  
FLOOR PLANS



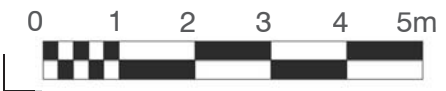
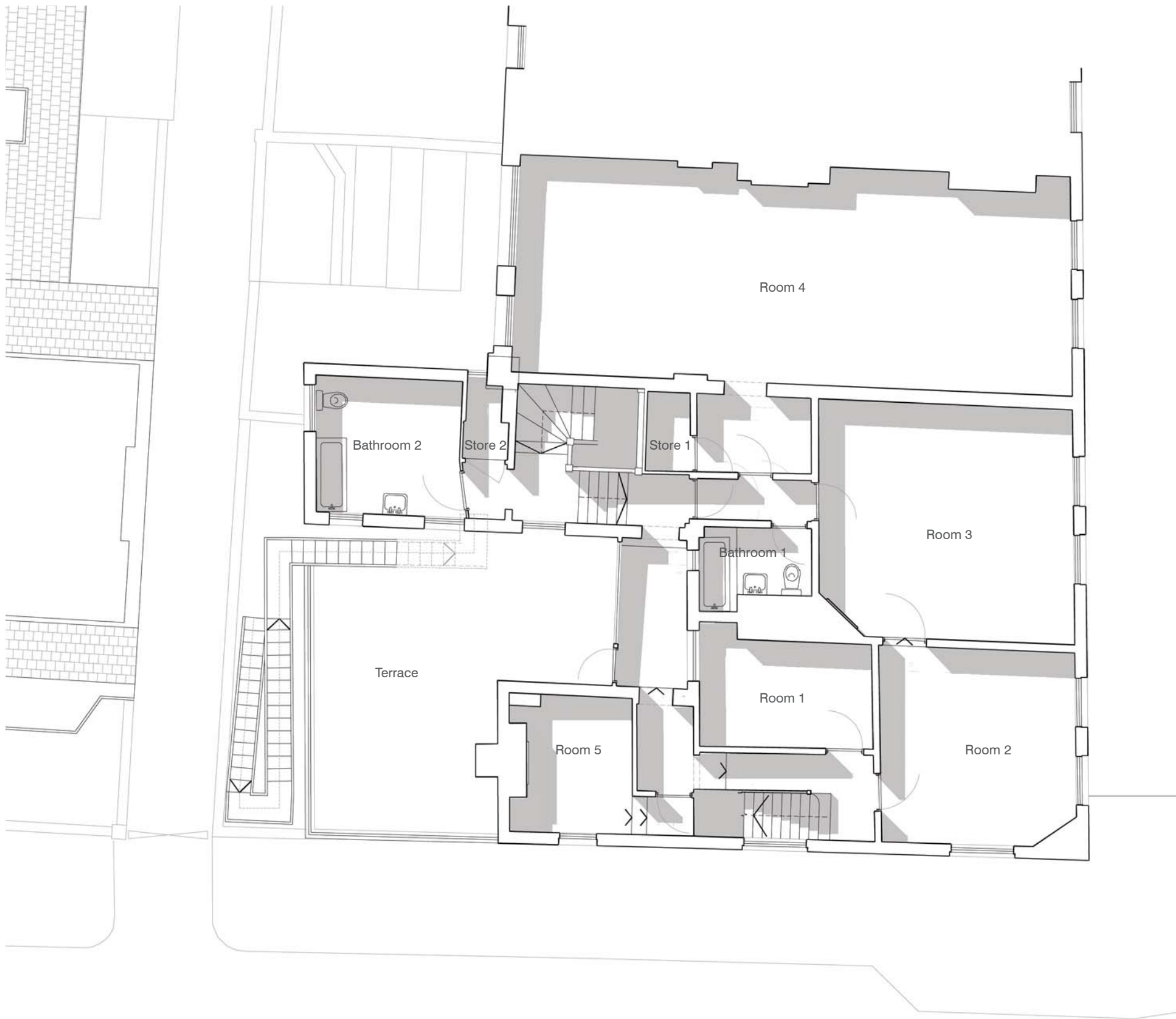
LOWER GROUND FLOOR PLAN. DRAWING no. 1000A. 1:100@A3



EXISTING DRAWINGS  
FLOOR PLANS

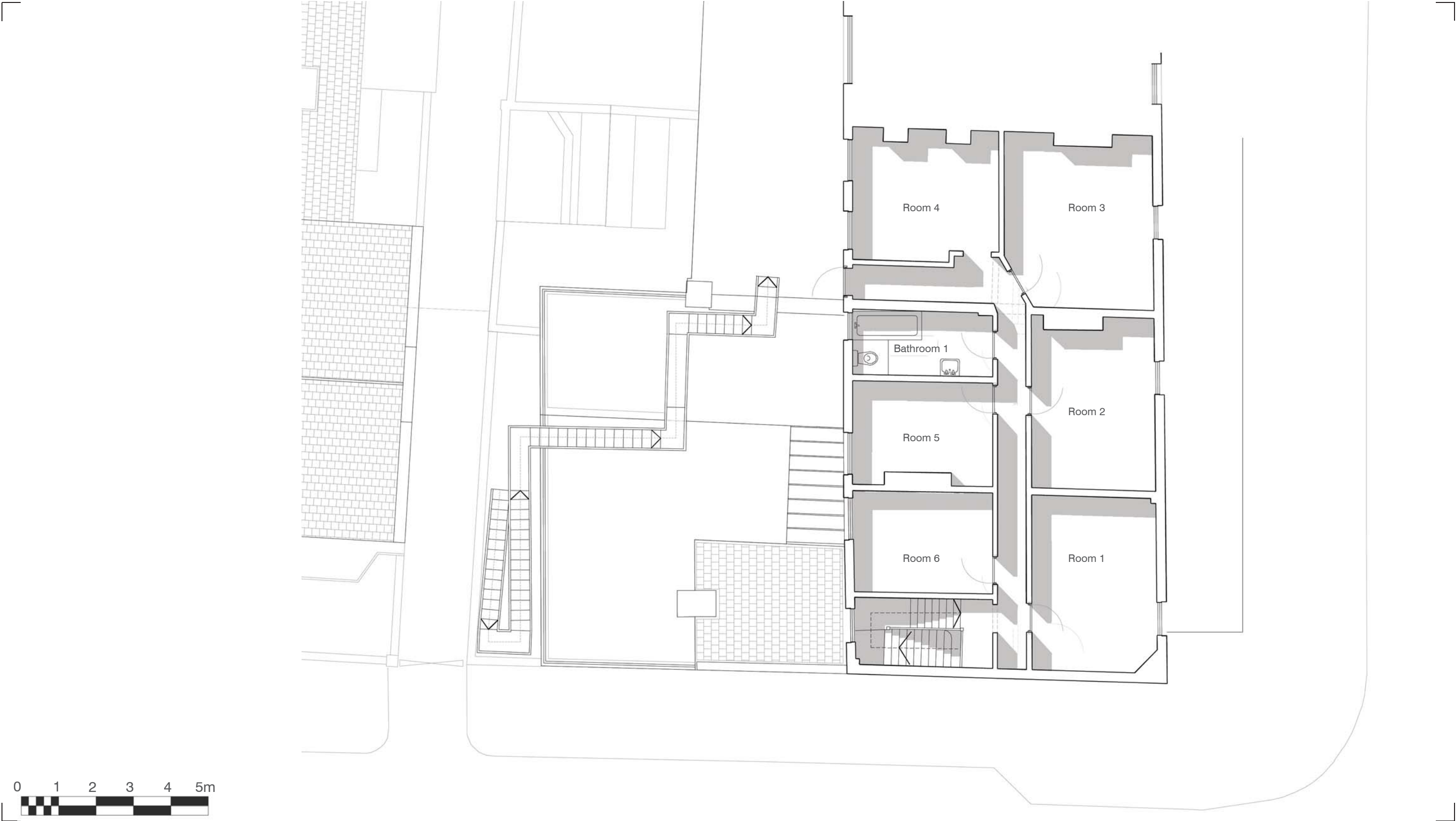


EXISTING DRAWINGS  
FLOOR PLANS



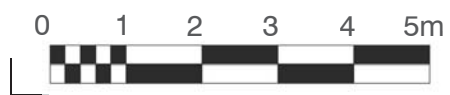
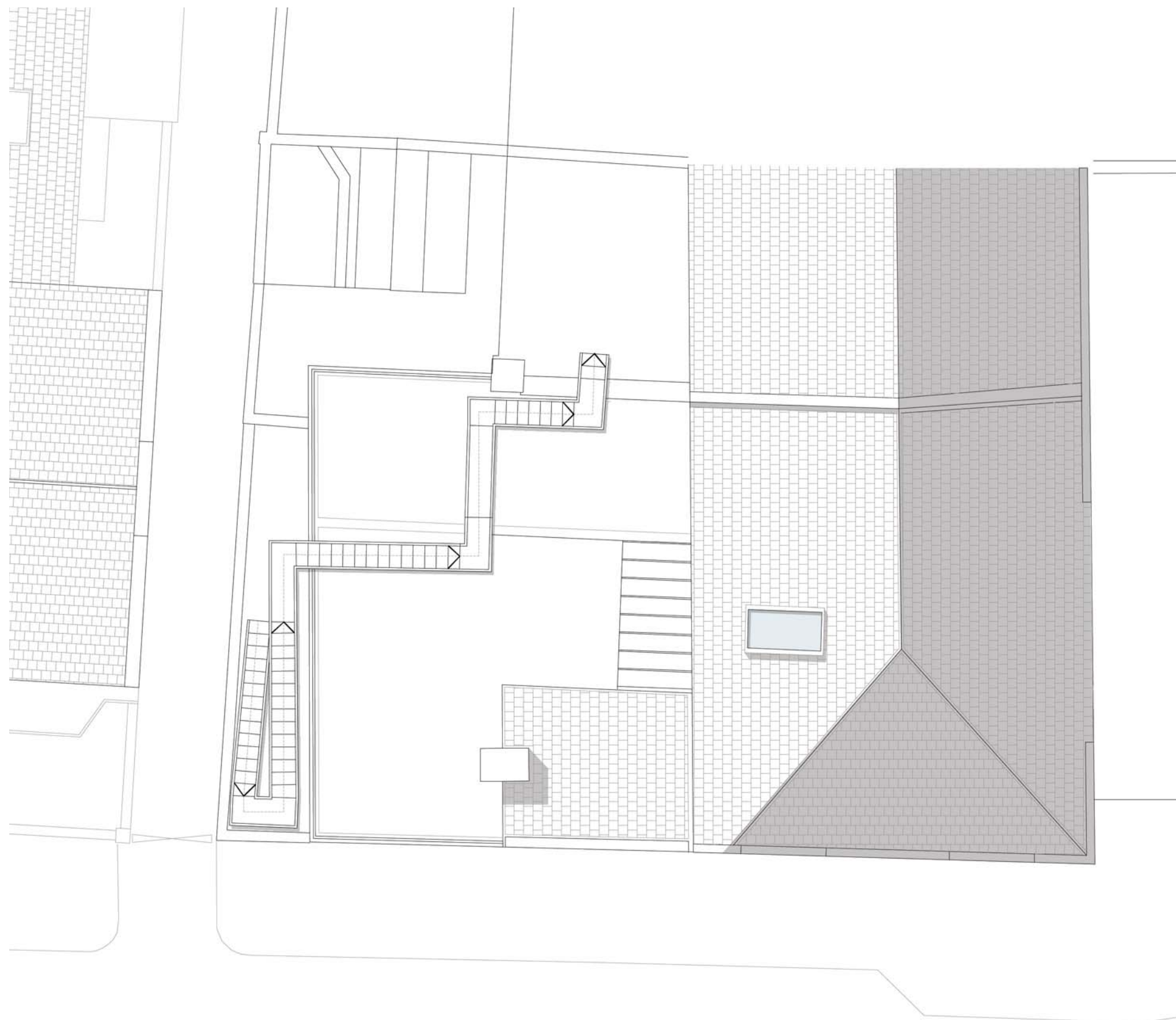
FIRST FLOOR PLAN. DRAWING no. 1002A. 1:100@A3





SECOND FLOOR PLAN. DRAWING no. 1003A. 1:100@A3

EXISTING DRAWINGS  
FLOOR PLANS

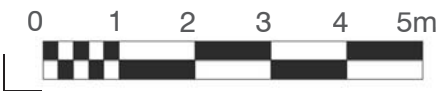


ROOF PLAN. DRAWING no. 1004A. 1:100@A3

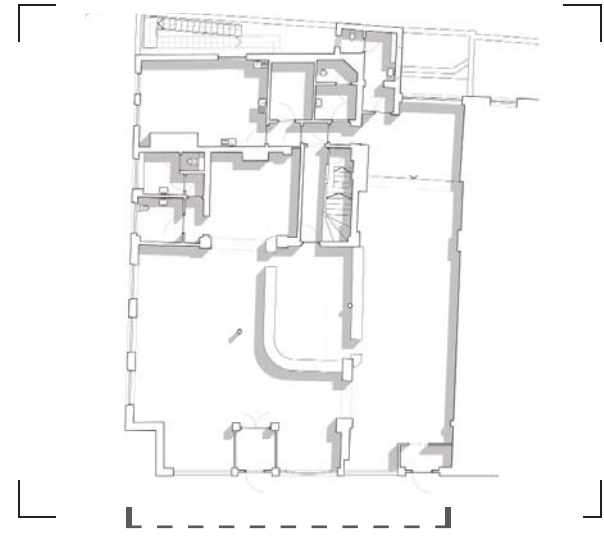




EXISTING DRAWINGS  
ELEVATIONS



MILL LANE ELEVATION. DRAWING no. 1100B. 1:100@A3

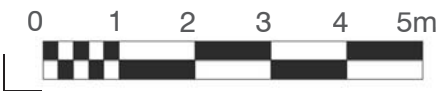
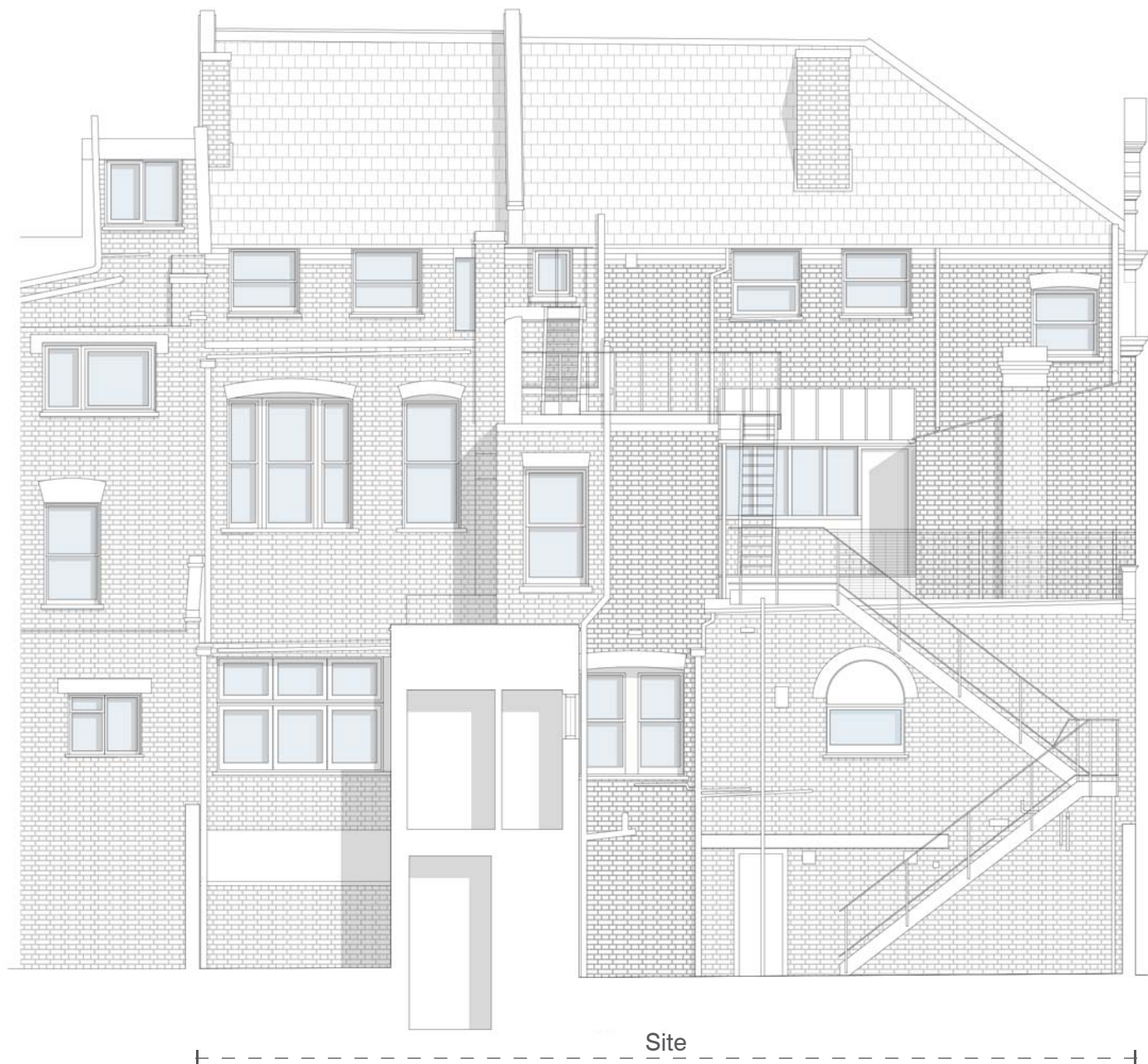




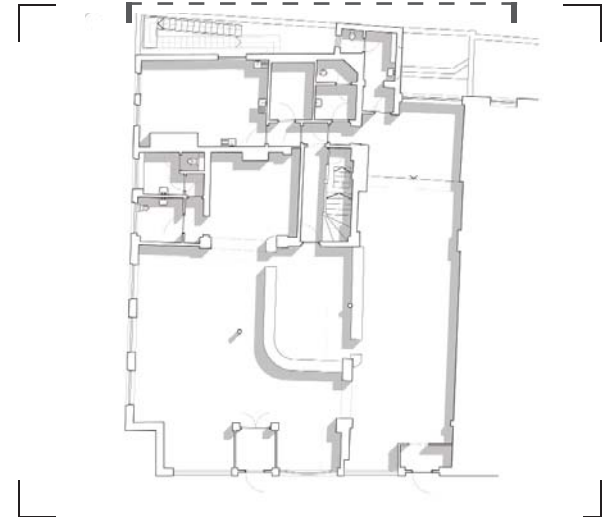
RAVENSHAW STREET STREET ELEVATION. DRAWING no. 1101A. 1:100@A3



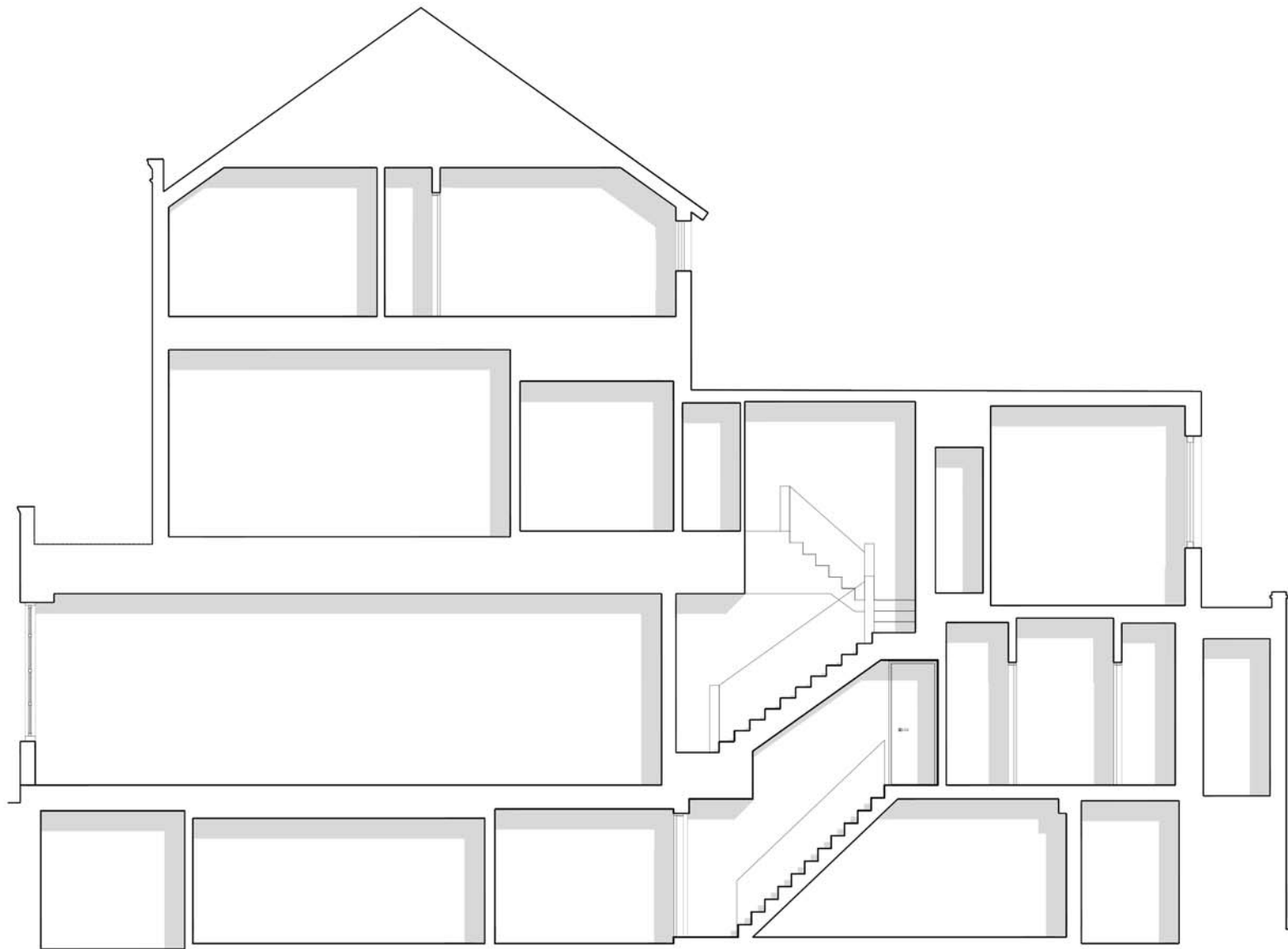
EXISTING DRAWINGS  
ELEVATIONS



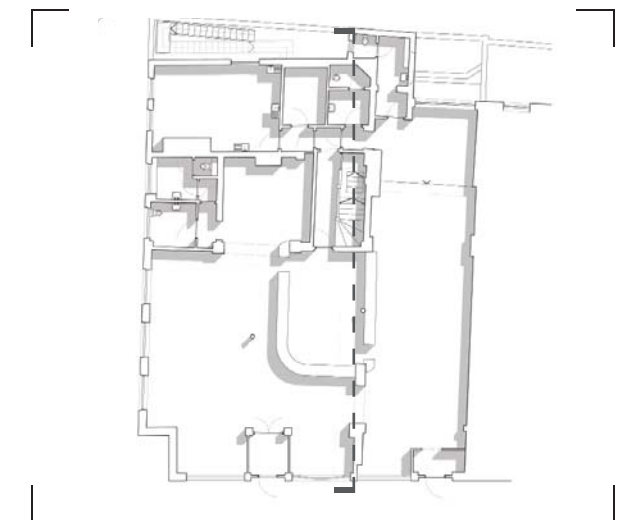
REAR ELEVATION. DRAWING no. 1102A. 1:100@A3



# EXISTING DRAWINGS SECTIONS

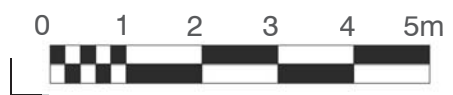
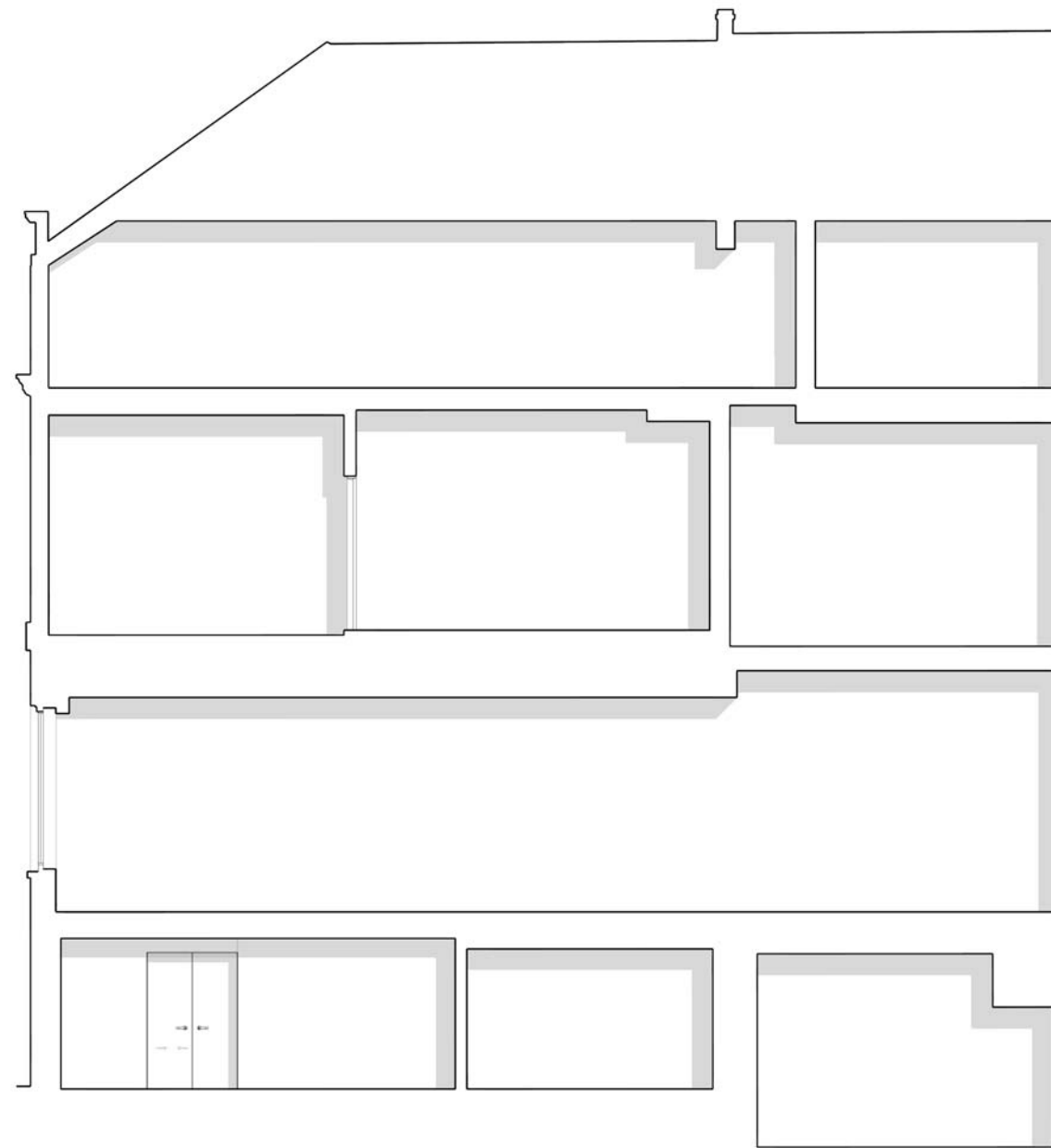


**SECTION A-A.** DRAWING no. 1200A. 1:100@A3





# EXISTING DRAWINGS SECTIONS



**SECTION B-B.** DRAWING no. 1201A. 1:100@A3



## PART B

### DESIGN

### PROPOSED DRAWINGS



DESIGN  
SCHEDULE OF ACCOMMODATION

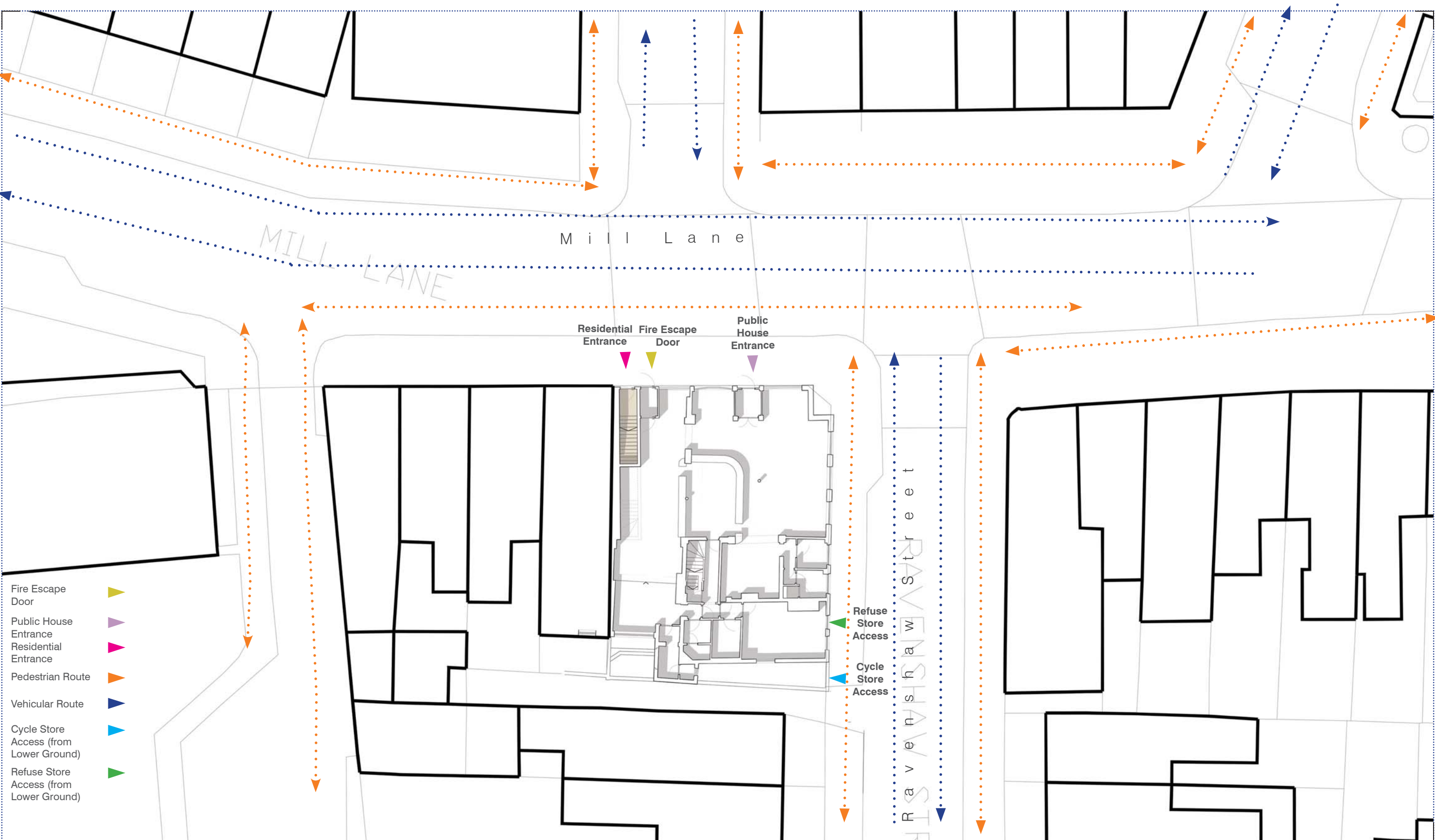
EXISTING SCHEDULE OF ACCOMMODATION:

Lower Ground Floor	(GIA) 260.6 sq.m
Ground Floor	(GIA) 257.6 sq.m
First Floor	(GIA) 177.2 sq.m
Room 1	(NIA) 8.7 sq.m
Room 2	17.3 sq.m
Room 3	27.2 sq.m
Room 4	58.3 sq.m
Room 5	8.8 sq.m
Bathroom 1	3.7 sq.m
Bathroom 2	9.2 sq.m
Storage 1	1.6 sq.m
Storage 2	1.4 sq.m
Terrace	31.7 sq.m
Second Floor	(GIA) 116.2 sq.m
Room 1	(NIA) 15.5 sq.m
Room 2	14.8 sq.m
Room 3	17.6 sq.m
Room 4	13.0 sq.m
Room 5	9.8 sq.m
Room 6	10.1 sq.m
Bathroom	6.5 sq.m
PUBLIC HOUSE (A4):	
TOTAL FLOOR AREA (GIA) (incl. Circulation)	518.2 sq.m
C3 ANCILLARY ACCOMMODATION:	
TOTAL FLOOR AREA (GIA) (incl. Circulation)	293.4 sq.m
TOTAL AMENITY	31.7 sq.m
BUILDING TOTAL GIA	811.6 sq.m
BUILDING TOTAL AMENITY	31.7 sq.m

PROPOSED SCHEDULE OF ACCOMMODATION:

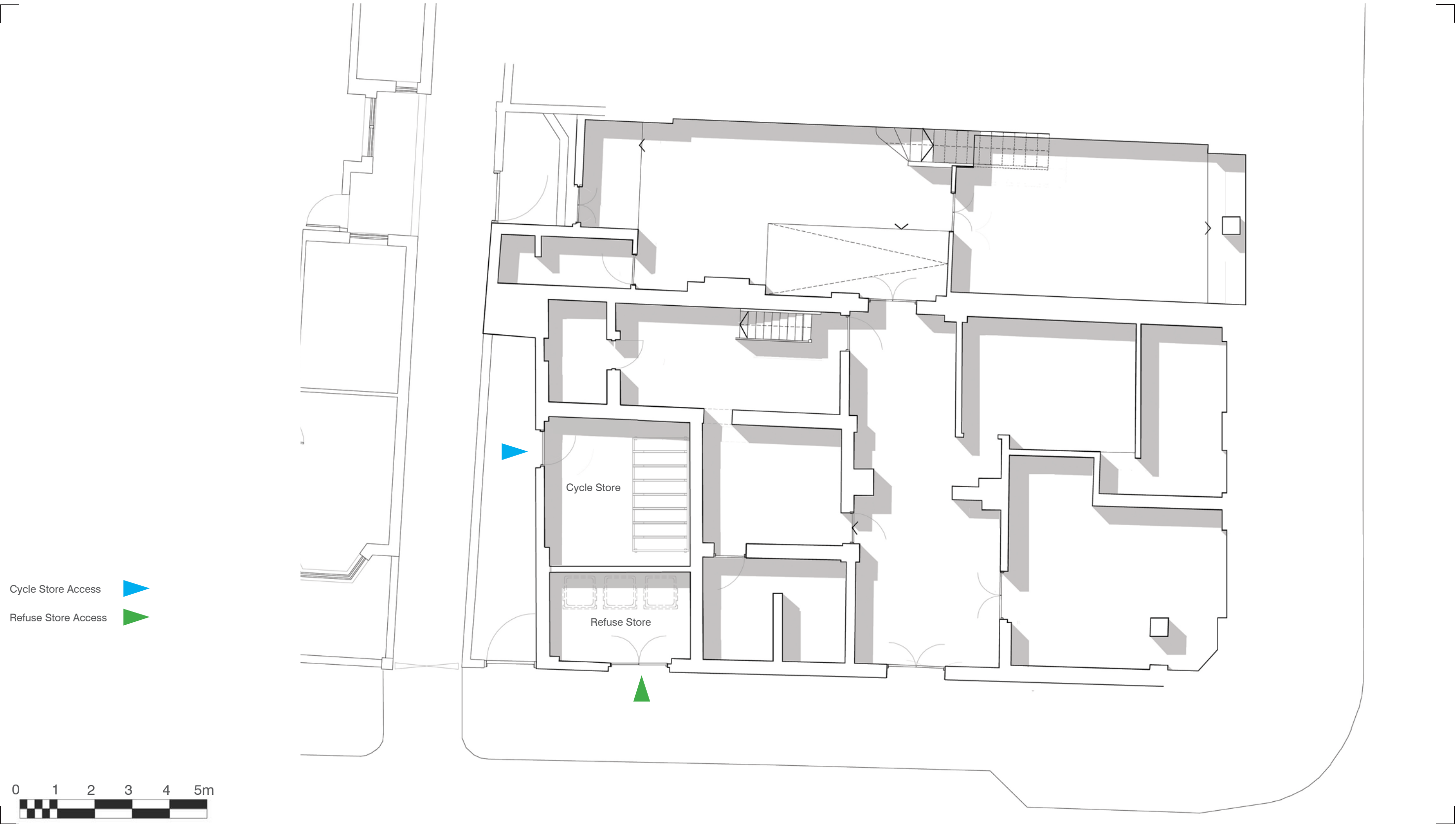
Lower Ground Floor	(GIA) 261.6 sq.m	Second Floor	(GIA) 156.0 sq.m
Cycle Storage	(GIA) 15.2 sq.m	Flat 4 (2 Bed)	71.0 sq.m
Refuse Storage	9.0 sq.m	Lobby	(NIA) 7.1 sq.m
Public House ancillary (A4)	232.3 sq.m	Bedroom 1	12.6 sq.m
		En-suite	4.0 sq.m
		Bedroom 2	14.3 sq.m
		Kitchen/ Dining/ Living	25.8 sq.m
		Bathroom	3.7 sq.m
Ground Floor	254.7 sq.m		
Public House (A4)	(GIA) 248.7 sq.m	Terrace	8.1 sq.m
Residential Entrance	6.0 sq.m		
First Floor	184.3 sq.m	Flat 5 ( 2 Bed)	73.6 sq.m
Flat 1 (1 Bed)	55.0 sq.m	Lobby	(NIA) 6.8 sq.m
		Bedroom 1	12.7 sq.m
		Ensuite	2.5 sq.m
		Bedroom 2	14.4 sq.m
		Kitchen/ Dining/ Living	29.5 sq.m
		Bathroom	3.7 sq.m
Lobby	(NIA) 4.8 sq.m	PUBLIC HOUSE (A4):	
Bedroom	13.6 sq.m	TOTAL FLOOR AREA (GIA)	
Bathroom	4.8 sq.m	(incl. Circulation)	
Kitchen/ Dining/ Living	29.9 sq.m	481.0 sq.m	
Terrace	9.7 sq.m	RESIDENTIAL (C3):	
Flat 2 (1 Bed)	50.0 sq.m	TOTAL FLOOR AREA (GIA)	
	(NIA)	(incl. Circulation, Refuse/ Cycle Store)	
	3.2 sq.m	371.1 sq.m	
	17.6 sq.m	TOTAL AMENITY	
	22.7 sq.m	26.9 sq.m	
	17.6 sq.m	BUILDING TOTAL GIA	
Flat 3 (1 Bed)	51.2 sq.m	856.6 sq.m	
	(NIA)	BUILDING TOTAL AMENITY	
	4.9 sq.m	26.9 sq.m	
	13.3 sq.m		
	28.2 sq.m		
	3.6 sq.m		
	9.1 sq.m		
Terrace			

PROPOSED DRAWINGS  
BLOCK PLANS



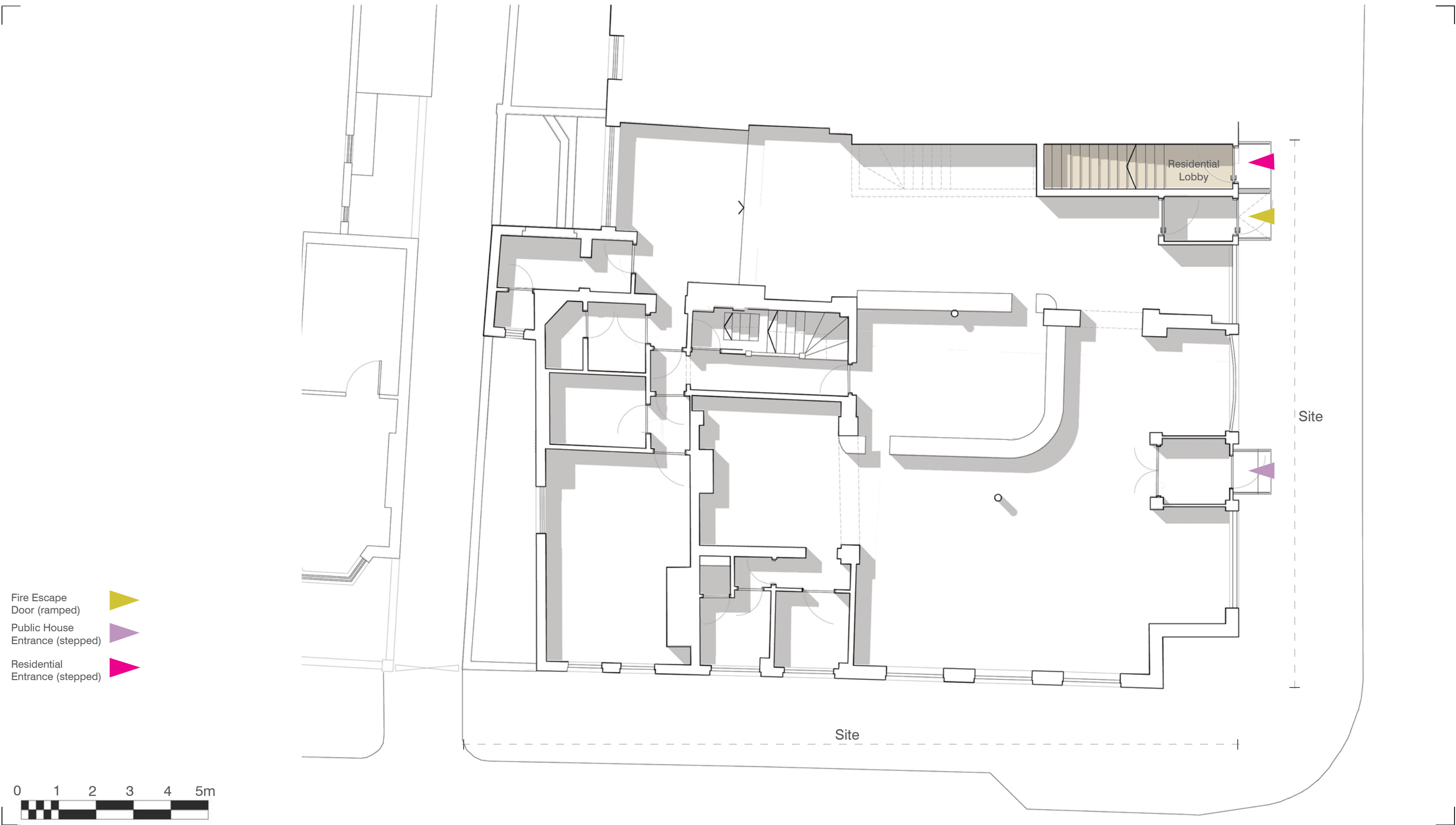
SITE ACCESS PLAN. DRAWING no. 1999B. 1:250@A3





LOWER GROUND FLOOR PLAN. DRAWING no. 2000B. 1:100@A3

**PROPOSED DRAWINGS  
FLOOR PLANS**

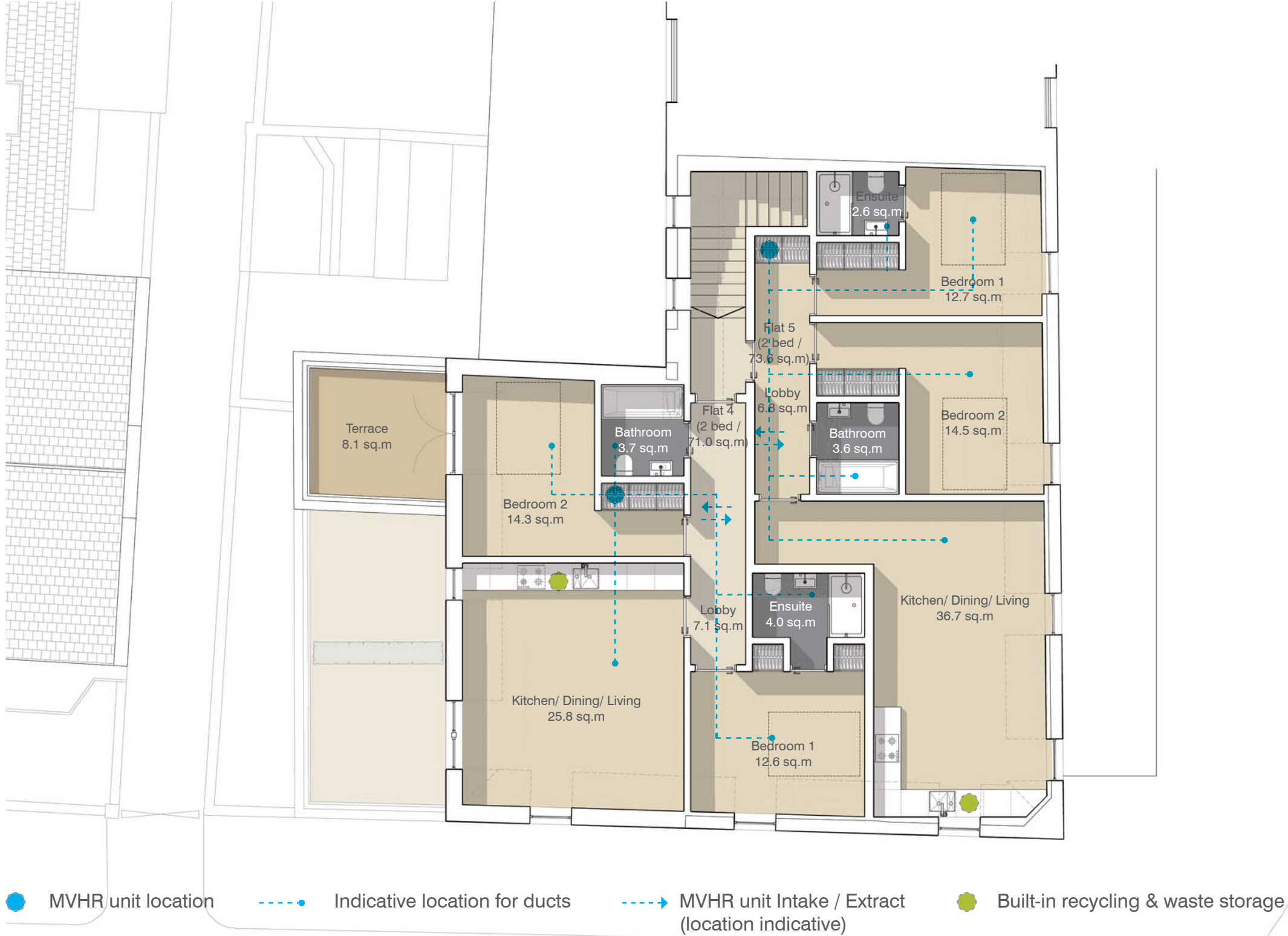


**GROUND FLOOR PLAN.** DRAWING no. 2001B. 1:100@A3

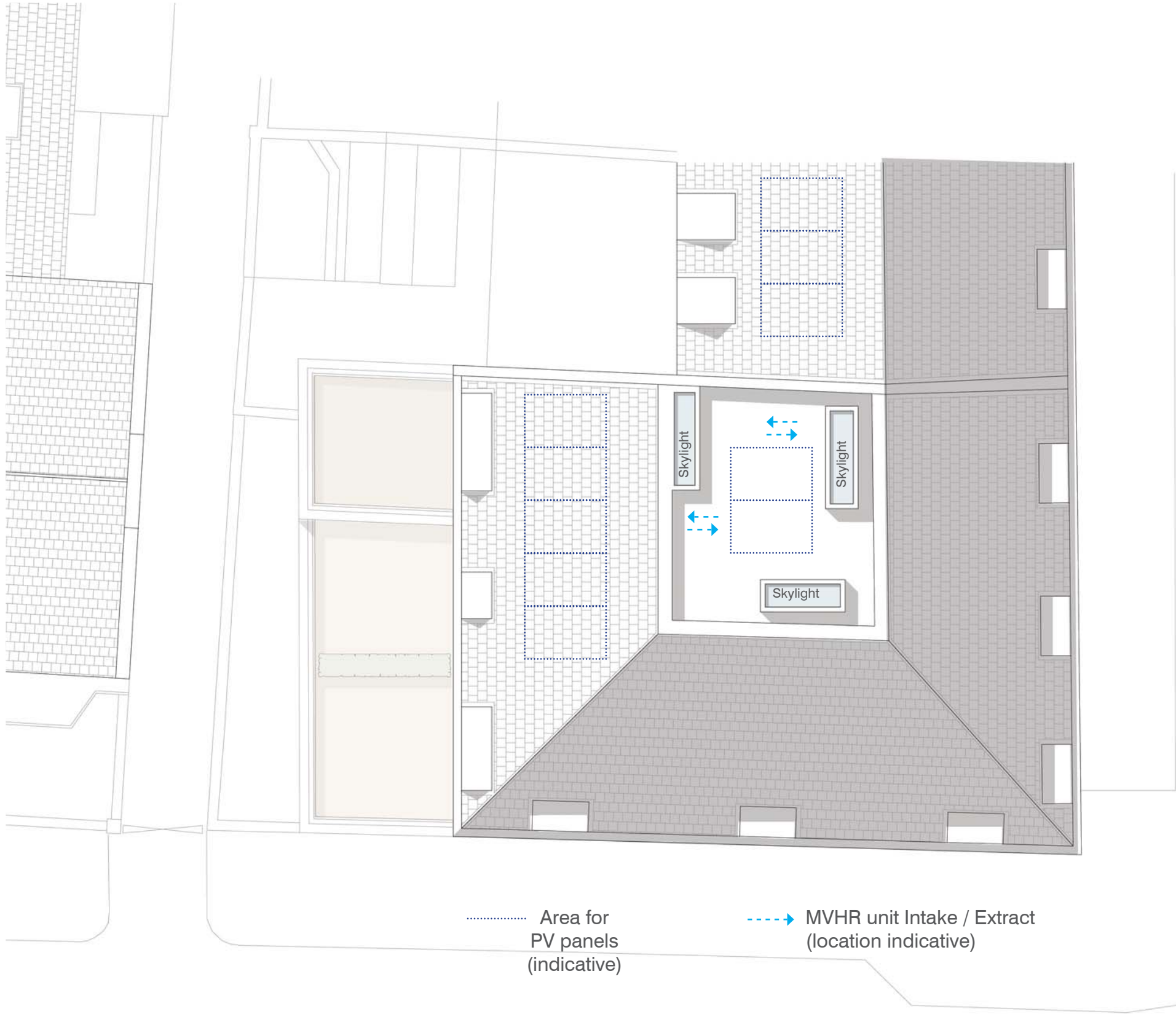




FIRST FLOOR PLAN. DRAWING no. 2002A. 1:100@A3



SECOND FLOOR PLAN. DRAWING no. 2003A. 1:100@A3



..... Area for  
PV panels  
(indicative)

-----> MVHR unit Intake / Extract  
(location indicative)



ROOF PLAN. DRAWING no. 2004B. 1:100@A3



PROPOSED DRAWINGS  
ELEVATIONS

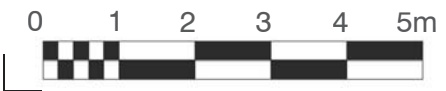
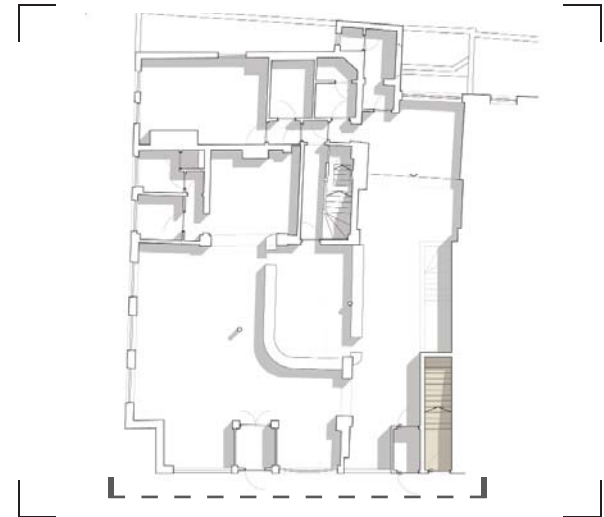


Key

- ① New double glazed sash windows
- ② Re-instated parapet including banisters; details to match existing
- ③ Re-instated window pediment
- ④ Brickwork to be cleaned and made good
- ⑤ New cornice
- ⑥ New glazed door for Public House (fire escape)
- ⑦ New residential entrance with frosted glazing
- ⑧ Air bricks to be installed, painted to match existing brickwork colour (location indicative)
- ⑨ New windows to match existing
- ⑩ Metal handrails to match existing
- ⑪ Ramped access to match existing
- ⑫ Stepped access



Example of external  
cast iron air brick



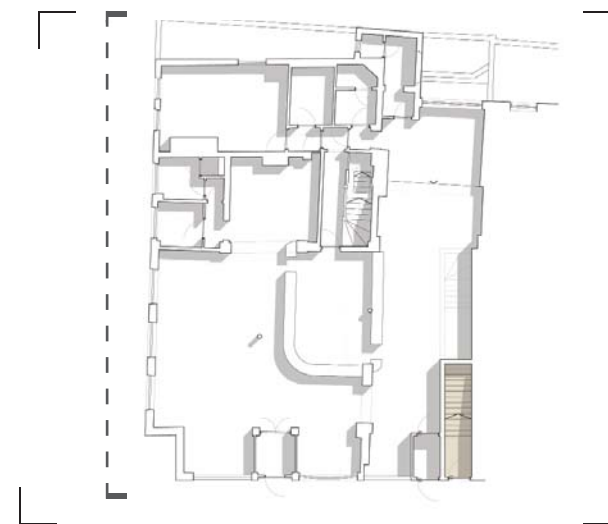
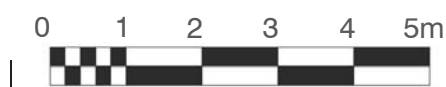
MILL LANE ELEVATION. DRAWING no. 2100B. 1:100@A3

# **PROPOSED DRAWINGS ELEVATIONS**



## **Key**

- ① New double glazed sash windows
- ② Re-instated parapet including banisters; details to match existing
- ③ Re-instated window pediment
- ④ Brickwork to be cleaned and made good
- ⑤ New cornice
- ⑥ Rear extension; brickwork to match existing
- ⑦ Metal balustrade, painted black
- ⑧ Privacy Screening
- ⑨ New double door for refuse store access
- ⑩ New roof; Roof tiles to match existing
- ⑪ New double glazed door
- ⑫ New timber door



**RAVENSHAW STREET ELEVATION.** DRAWING no. 2101B. 1:100@A3



## PROPOSED DRAWINGS ELEVATIONS

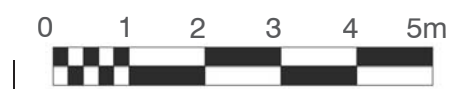
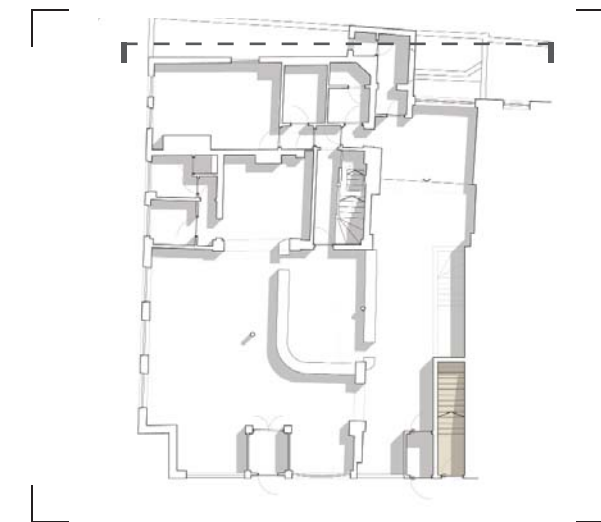


### Key

- ① New double glazed sash windows
- ② Re-instated window pediment
- ③ Brickwork to be cleaned and made good
- ④ New cornice
- ⑤ Rear extension; brickwork to match existing
- ⑥ Metal balustrade, painted black
- ⑦ Privacy Screening
- ⑧ New roof; Roof tiles to match existing
- ⑨ New double glazed door
- ⑩ Air bricks to be installed, painted to match existing brickwork colour (location indicative)



Example of external  
cast iron air brick



**REAR ELEVATION.** DRAWING no. 2102B. 1:100@A3





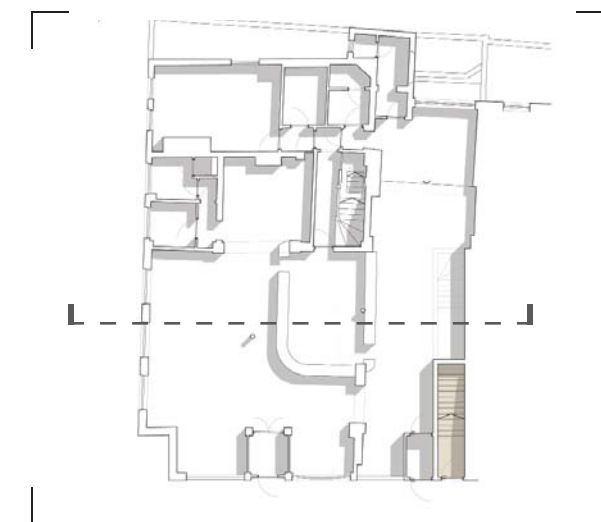
SECTION A-A. DRAWING no. 2200B. 1:100@A3



# PROPOSED DRAWINGS SECTIONS



**SECTION B-B.** DRAWING no. 2201A. 1:100@A3



## PART C

### SUSTAINABILITY



## SUSTAINABILITY

### SUSTAINABILITY STATEMENT

#### Air Quality

Air quality is greatly affected by polluting vehicle emissions. Asthma and respiratory disease are known to be adversely affected by air pollution. New uses of land that involve motorised vehicles coming to and from property will thus cumulatively have an effect on the air quality as will the influx of polluting vehicles during the construction process of some developments. The proposed development would not involve polluting vehicles visiting the site post completion and those visiting the site during construction are required to meet the 'Low Emissions Standards'. Domestic and commercial heating systems can also have a negative impact on air quality due to their nitrogen oxide and carbon dioxide emissions. Condensing boilers recycle heat and have less such emissions than conventional boilers. A new heating system will be introduced that will loosely comprise of a Condensing boiler with a SEDBUK efficiency rating in excess of 86% in compliance with Part L of the Building Regulations (2006).

#### Pollution from Noise, Light / Glare, Fumes & Land Contamination

##### Noise

Due to the residential nature of the building, there will be no adverse noise pollution created. During construction, workers will be constrained the working hours set out within the Planning Conditions.

##### Light / Glare

No external lighting is proposed on the street elevations of the building due to the residential nature of the site. Through the removal of the office lighting and installation of low energy pendant fittings, the amount of light emitted through the windows will be reduced once the proposals are implemented.

#### Fumes Not Applicable Land Contamination Not Applicable Waste Storage & Recycling Facilities

Homes need sufficient space to store waste, including for recycling purposes, within the dwelling as well as outside for waste collection. The proposed kitchens have been provisionally laid out to accommodate enough storage for recycled waste as well as general waste, whilst the external space for refuse collection has also been provided.

#### Renewable Energy

Most experts agree that Global warming is a consequence of burning fossil fuels with a resulting increase in carbon dioxide in the atmosphere. Greenhouse gas emissions such as carbon

dioxide trap heat from the sun inside the Earth's atmosphere and this leads to global warming. For example burning natural gas in heating systems will contribute to this effect. Renewable energy thus can reduce the dependence on fossil fuels and consequently reduce greenhouse gas emissions. In addition to 'renewables', energy efficiency needs to be built into the design with insulation, and fitting out with energy efficient appliances. The proposed development will involve upgrading insulation to the walls, windows and floors of the building where appropriate, as well as the existing roof to be made good. Each of the renewables' technologies is considered for its applicability for the property and whether or not it can be used to reduce the energy consumption of the Condensing Boiler. The following technologies are considered:

- Wind Turbines
- Bio Mass Heating
- Solar Water Heating
- Photovoltaic Panels

#### Wind Turbines

An average wind speed of between 4-5m/s is assumed for the site at 15metres above ground level, (this figure is taken from analysis at a nearby site). An average wind speed of 6m/s is required to ensure a consistent power output of a turbine, so it is unlikely that this could make an effective contribution to the site. In order for a turbine to be at its most effective, its position would be raised above the residential rooftop and would have a material impact on the setting of the building within the conservation area. In addition, there would be potential noise pollution. These various factors indicate that this technology is unsuitable for this location and therefore has been considered no further.

#### Bio Mass Heating

A search for biomass suppliers within Central London indicates that there are two suppliers within 5 miles, WoodExpert and Biomass UK Ltd. However, it is considered that due to the urban nature of the site, the emerging nature of Bio Mass fuel supply chain, and the location of the site (the road infrastructure is not appropriate for regular lorry delivery of wood chips/pallets) this technology is inappropriate and therefore is considered no further.

#### Photovoltaic Panels

Photovoltaic (PV) modules convert solar radiation directly into electricity for use in the building and can be used for domestic

purposes such as home heating and lighting systems. Installing Photovoltaic Panels on parts of the roof that are non-visible to contribute to the overall power consumption of the building is considered an effective measure. Typical Photovoltaic panels will produce 1kW peak for 8m<sup>2</sup> of panel area. Although at this stage we have not made a proposal to install Photovoltaic Panels. We recommend that this technology is investigated further prior to implementing the proposed scheme.

#### Materials

If appropriate, construction materials should be reused / reclaimed, long lasting or recycled e.g. using reclaimed on-site materials such as re-using timber from demolished partitioning. When using new materials, care should be taken not to deplete the earth's threatened resources, which include certain tropical hardwood. Longer lasting materials are preferred over those less robust as not only does this avoid frequent replacement (and more waste from discarded materials) but costs less. Locally supplied materials should be chosen as it avoids unnecessary transport of goods over long distances, this is equally true of recycled products in that transportation costs should be put into the notional environment equation (i.e. it could, on occasion, be more sustainable to buy local new products). Natural paints and solvent-free wood finishes can be used that do not give out any toxins.