

INDIA HOUSE, WITWORTH STREET MANCHESTER

FLOOD RISK ASSESSMENT

Job Number: FRA 21 1119

Date: October 2021

Client: The Guinness Partnership



INCREASING LAND VALUE

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GROUP

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LK Consult			
Document Verification			
Site Address	India House, Whitworth Street, Manchester, M1 6HB		
Report Title	Flood Risk Assessment		
Job Number	FRA 21 1119	Document Ref.	FRA 21 1119 - R0
Date Issued	October 2021	Report Version	R0
Prepared By	Lisa Aspinall Senior Engineer	Signature	
Reviewed By	Mark Jones Associate	Signature	

Revision Record			
Revision No.	Date	Nature of Revision	Approved By

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EXECUTIVE SUMMARY

Scope and Background

This Flood Risk Assessment (FRA) has been undertaken by LK Consult Ltd (LKC) to support a planning application for the development of India House, Whitworth Street, Manchester. The development comprises of the change of use of the former upper ground floor offices to form eight one and two-bedroom apartments along with a self-contained designated concierge facility. There will be no significant changes to the basement levels in terms of flood risk.

LKC has prepared this FRA in line with the NPPF and Technical Guidance where appropriate.

In considering the proposals the following key principles have therefore been applied:

- Identification of flood risks.
- Protection of users of the new development.
- No increased flood risk to third parties.

Consultations

The Environment Agency (EA) has been consulted to inform the preparation of this report.

Manchester City Council and United Utilities were also consulted concerning flood risk.

Flood Risk

Environment Agency flood maps indicate that the southern part of the site is potentially vulnerable to fluvial flooding from the River Medlock.

The site is shown on the Environment Agency's (EA) website Flood Zone Mapping as being in Flood Zone 2 (PPG Table 1).

The building is shown within Flood Zone 2 – Low Risk – between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% – 0.1%). A comparison of the flood levels with the building and parking floor levels shows that only a small area of the lowest external parking area is shown partially within Flood Zone 2.

Mitigation

Design

The existing upper ground floor levels are raised above the surrounding roads the Floor levels of the proposed accommodation is significantly higher than the flood levels for all the events considered.

The development will not result in any reduction in flood plain storage compared to the existing situation.

The proposed accommodation level is considered to be at Very Low risk of flooding. It is recommended that the minimum finished floor levels for the development should be set at a minimum of 33.23mAOD. The existing, Finished Floor Level of the accommodation (37.55mAOD) is considerably higher than this requirement.

Access

Access close to the site is elevated above potential flood levels and will always provide safe access to and from the site from Whitworth Street.

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Appendix A:	Figures, Plans and Drawings
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1 Introduction

1.1 Background

LK Consult Ltd (LKC) were commissioned by The Guinness Partnership to carry out a Flood Risk Assessment (FRA) for India House, Whitworth Street, Manchester. The report was undertaken in support of a planning application (124656/FO/2019) to redevelop the site for residential use.

The report will address the vulnerability to flooding from all possible sources and the potential to increase flood risk elsewhere. The issues of actual flood risk are discussed in Section 4.

Government policy with respect to development in flood risk areas is contained within the Department of Communities and Local Government National Planning Policy Framework¹ and accompanying Technical Guidance of March 2012 (revised to the Planning Practice Guidance (PPG)², which supersedes Planning Policy Statement 25 (PPS25) 'Development and Flood Risk'. The guidance on Climate Change allowance issued by the Environment Agency in February 2016 has also been considered.

LKC has prepared this Flood Risk Assessment (FRA) in line with the NPPF and the PPG where appropriate. The level of detail entered into any flood risk assessment is dependent upon the scale and potential impact of the proposed development, and the vulnerability classification of the proposed land-use.

1.2 Site Details

A summary of the general site details is presented in Table 1-1. Plans, Drawings and Figures are provided in Appendix A. Figure 1 indicates the site location and boundary. Figure 2 indicates the proposed development.

Site Details	
Location	India House, Whitworth Street, Manchester, M1 6HB Centred at approximate National Grid Reference: 384205E; 397626N.
Area	Approximately 0.23Ha.
Topography	Approximately 37.55m AOD (50.4m local datum) Spot height on mapping from location plan shows Whitworth Street to be at 36.3m AOD to the front of the building which matches LIDAR data for the area. The site slopes from the north to the south towards the river.
Current Land Use	<u>Site</u> Current building is used as an office block with car parking located in the basement area. <u>Surrounding Area/ Boundary Treatment</u> North: Commercial Properties East: Commercial Properties South: The River Medlock and Car Parking West: Commercial Properties
Proposed Development	Residential properties. Access will be from Whitworth Street.

Table 1-1: Summary of site details.

¹ DCLG (2021). "National Planning Policy Framework." Department of Communities and Local Government. July 2021.

² DCLG (2014). "Planning Practice Guidance" <http://planningguidance.communities.gov.uk>, April 2014.

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2 Site Setting

2.1 Vulnerability

As an initial phase in identifying whether a site is potentially at risk of flooding, LKC has consulted the Environment Agency's (EA) website Flood Zone Mapping. This mapping is (often) based on coarse scale modelling and provides only an initial indication of the flood risk to a site. The Environment Agency Flood Zone maps were developed using a very coarse Digital Elevation Map (DEM) and are superseded by a more detailed analysis of modelled flood levels and topographic survey levels.

The Flood Zones divide the floodplain into three categories of flood risk, and do not take flood defences into account. The NPPF defines the Flood Zones as:

- » Flood Zone 1 – little or no risk, with annual probability of flooding from rivers and the sea of less than 0.1% (1 in 1000).
- » Flood Zone 2 – low risk, with annual probability of flooding of 0.1 to 1.0% from rivers and 0.1 to 0.5% from the sea.
- » Flood Zone 3 – medium to high risk of flooding with an annual probability of flooding of 1.0% or greater from rivers, and 0.5% or greater from the sea.

The Flood Zone Mapping indicates the site as being within Flood Zone 2 in the PPG (paragraph 065, Table 1). (There is a small part of the site to the south, which is classed as Flood Zone 3, however this is not in the vicinity of the building and therefore is not discussed within this report)

The development site is shown in Flood Zone 2, so under current regulations a Flood Risk Assessment will be necessary to accompany the Planning Application.

The proposed development is for a residential end use, and this is classified within the 'More Vulnerable' category in the PPG (paragraph 066, Table 2).

2.2 The Sequential and Exception Tests

The NPPF requires that the Sequential Test be applied to development proposals in Flood Zones 2 or 3 to determine if there are any 'reasonably available' and suitable alternative sites at lower flood risk. The Sequential Test is outside this scope of works and shall be undertaken by others if required.

Notwithstanding the above, the principles outlined in the Sequential Test guidance should be applied for developments within the site such that, for example, dwellings are situated on a high part of the site when there is a risk of local surface water flooding. The issues of actual flood risk are discussed below. The issues of safety and reduction in flood risk to others required by an Exception Test are also addressed in this document.

In this situation the change of use to accommodation is significantly higher than the existing ground level.

The Local Planning Authority (LPA) will make the final decision with regard to any planning application.

2.3 Environmental Setting

LKC has undertaken a review of public domain information including British Geological Survey data, Environment Agency data, historical mapping and aerial photography to provide a summary of the environmental setting of the site. This is summarised in Table 2-1 below.

Summary of the Environmental Setting			
Geology	Superficial		Till, Devensian - Diamicton
	Bedrock		Chester Formation - Sandstone
	BGS Boreholes		BH Ref: SJ89NW3488, on site: 0.00-0.10m – Made ground – Concrete, 0.10-0.30m Made ground – Brick Hardcore, 0.30-1.90m – Made ground – Soft brown clay, brick fragments and gravel, 1.90-2.30m – Made ground – Ash and gravel, 2.30-3.10m – Stiff brown mottled slightly sandy clay with fine gravel, 3.10-3.70m – Medium dense brown sand, 3.70-5.40m – Very dense brown sandy gravel with Cobbles, 5.40-7.50m – Weathered red sandstone (Bunter sandstone). Water struck at 3.70m. BH Ref: SJ89NW3483, on site: 0.00-0.10m – Made ground – Concrete, 0.10-0.30m – Made ground – Brick hardcore, 0.30-2.50m – Made ground – loose clay, bricks and ash, 2.50-3.00m – Firm brown silty clay with occasional fine gravel, 3.00-4.80m – Medium dense brown clayey fine to medium sand, 4.80-6.70m – Very dense red weathered sandstone (Bunter Sandstone). Borehole was dry. BH Ref: SJ89NW3482, on site: 0.00-0.10m – Made ground – Concrete, 0.10-0.30m – Made ground – Brick hardcore, 0.30-2.20m – Made ground, Loose ash, sand and brick fragments, 2.20-3.20m – Made ground – Soft clay and bricks, 3.20-3.80m – Firm brown very sandy clay, 3.80-4.50m – Medium dense brown sand, 4.50-6.50m – Very dense red fine to medium weathered sandstone (Bunter sandstone). Borehole was dry.
	Defra Soilscape Mapping		Soilscape 17. Slowly permeable seasonally wet acid loamy and clayey soils. Impeded drainage.
	Hydrogeology	Aquifer Designation	Superficial
Bedrock			Principal Site is not within a SPZ.
Hydrology	All adjacent and internal surface water		The River Medlock is situated along the south boundary of the site and flows in a westerly direction.
	Flooding		No records of flooding
Site History			1893 – Site was a timber Merchants. 1922 - India House on maps.

Table 2-1: Summary of the Environmental Setting.

2.4 Site and Access Levels

Levels for the site have been provided by the client, and this information is included in Appendix B. The site falls from the north to the south, towards the River Medlock.

Site levels were supplied by the client, which are taken from a local datum and not to AOD. These have been converted to ordnance datum below. The final site levels and

ground floor levels of dwellings will remain as they currently are, with the finished floor level of the apartments being 51.8m, approximately 1.25m higher than the existing ground level to the north, and 1.5m above the existing ground level to the south. It should also be noted the opposite side of the River Medlock is considerably lower than the side of India House. The proposed access would join Whitworth Street at around 50.55m.

LiDAR data for the site shows a ground level of 36.3m AOD on Whitworth Street to the north, a difference of approximately 14.3m from the level supplied by the client. The finished floor level for the property has been assumed with this difference for the purpose of the FRA (table 2-2):

Location	Client Level (m)	AOD Level (m)
Whitworth Street	50.55	36.265 (LiDAR)
Finished Ground Floor Level	51.80	37.500 (assumed)
Land to the South of India House CAR park level	50.30	35.796 (LiDAR)

Table 2-2: Adjustment of levels.

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3 Consultation

Information from consultees (Environment Agency (EA), Manchester City Council, and United Utilities) is summarised in Table 3-1 below.

Relevant correspondence / information is provided in Appendices C (EA) and D (others).

Source	Details	
Environment Agency	Flood Zone 2: Low risk, with annual probability of flooding of 0.1 to 1.0% from rivers and 0.1 to 0.5% from the sea.	
	Modelled Levels for the River Medlock Nearest Nodes: MEDL01_1346 and MEDL01_1135D	MED01_1346: Level of 31.30m for 1% annual probability event. Level of 32.63m for 1% event with climate change allowance. Level of 34.10m for 0.1% annual probability event. MED01_1135D: Level of 31.22m for 1% annual probability event. Level of 32.62m for 1% event with climate change allowance. Level of 33.77m for 0.1% annual probability event.
	Records of Flooding	No records of flooding recorded.
	Records of Flood Warning Service	Not within a flood warning service area.
	Surface Water Flooding	Low risk of surface water flooding
	Flooding from reservoirs	At risk of flooding from reservoirs.
	Groundwater Source Protection Zone	Not within a Source Protection Zone.
Lead Local Flood Authority	No information provided at the time of writing the report.	
County Council	Possible or known incidents of highway flooding	No information provided at the time of writing the report.
United Utilities	Likely conditions for connecting into their sewerage system	United Utilities Waste Developer Department was contacted regarding the sewer flooding history of the site. No information has been received at the date of issue of this report.
	Sewer map	No surface water sewers running in the vicinity of the property. A 1500mm diameter combined sewer runs parallel to the site's boundary along Whitworth Street.
Strategic Flood Risk Assessment (SFRA)	Level 1 SFRA ³	The site has no history of flooding from any source.
	Level 2 SFRA ⁴	The site has no history of flooding from any source.
Preliminary Flood Risk Assessment (PFRA) ⁵	The Preliminary Flood Risk Assessment (PFRA) ³ for the area indicates that there are no records of flooding for the area. The PFRA also indicates that the site is not in an area susceptible to groundwater flooding.	

Table 3-1: Summary consultee information.

³ Strategic Flood Risk Assessment Level 1: Manchester City Council; 2010, JBA Consulting.

⁴ Strategic Flood Risk Assessment Level 2: Manchester City Council; 2011, JBA Consulting.

⁵ Preliminary Flood Risk Assessment: Manchester City Council; 2011, JBA Consulting.

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4 Assessment of Flood Risk

4.1 Flood Zones

The detailed flood map provided by the EA indicates that the site is in Flood Zone 2 (see Appendix C).

A direct comparison was made between the provided EA flood levels at this location and the topographical levels.

Comparison of the modelling data and topographical survey indicates that the 1% (100-year plus CC) flood level would not affect the existing building. The actual flood position is much better than that indicated by the published flood map.

The extents of the 0.1% (1000-year) flood level cover a reduced area of the development (see Appendix C).

4.2 Sources of Flooding

The risk of flooding from the following flood sources has been considered:

Fluvial – The EA has stated that the study area is within Flood Zone 2. The level of the development for the change of use to accommodation is significantly above the fluvial flood levels provided. Therefore, the flood risk associated with this source is considered to be Very Low. The lower ground floor car park level is also above the 1000-year flood level so access to the accommodation is considered safe from flooding.

Tidal – The study area is remote from the sea and tidally influenced water bodies. Therefore, the flood risk associated with this source is considered Negligible.

Pluvial (Rainfall) – The surface water flood risk maps show small areas that have the potential to flood during prolonged heavy rainfall within 20m of the property. These areas are associated with the adjacent watercourse. These risk areas are unlikely to affect the proposed accommodation level. Therefore, the risk of flooding from surface water flooding is Very Low.

Surface Water (Overland flow) – This relates to surface water entering the site. The north of the site is at a level generally above that of the study area. Any surface water arising from the north of the study area is likely to be intercepted by the highway drains and therefore pose no threat to the development. If there was a drainage failure causing overland flow it would flow towards the southern boundary, but the ground levels for the current buildings would potentially direct flow around the building. Therefore, the flood risk associated with this source is considered Low.

Groundwater – The EA/BGS has no groundwater records for the study area. Therefore, the flood risk associated with this source is considered Negligible.

Sewers – Water Company sewer records show combined sewers within the vicinity of the study area. There are no records of sewer flooding at the site. Therefore, the flood risk associated with this source is considered Very Low.

Artificial sources – According to the EA online maps, the study area is at risk from reservoir flooding. The likely risk of an incident occurring if the reservoir is adequately maintained and monitored is low.

4.3 Summary of Flood Risk

Source of Flooding	Risk Assessment Level
Fluvial	Very Low
Pluvial (Rainfall)	Very Low
Surface Water	Low
Tidal	Negligible
Groundwater	Negligible
Sewers	Very Low
Artificial Sources	Low

Table 4-1: Summary of Existing Risk Level.

The site is shown located within Flood Zone 2 and a Low risk of flooding from surface water and artificial sources have been identified for the site.

5 Mitigation Measures

5.1 Proposed Site levels and Developments Level

Current Environment Agency guidance recommends that the minimum ground floor levels of residential developments are set at a minimum of 600mm above the 1% annual probability (1 in 100 year) flood level including an additional fluvial allowance for climate change. It is generally accepted that vehicle parking can be accommodated within the flood zone with suitable safeguards. The 'design' flood level for the site should therefore be the 1% annual probability event with allowance for climate change plus an allowance for freeboard.

On the basis of the information provided, this flood level should be taken as 32.63m AOD. Normal Environment Agency recommendation is to set ground floor level for the development at a minimum of 600mm above the 'design' level. Therefore, a minimum finished floor level of 33.23m is proposed for the development, meaning the existing, and proposed, Finished Floor Level (37.55m) is considerably higher than this requirement.

5.2 Safe Access

Safe and dry access is available via Whitworth Street to the north. Therefore, no mitigation is proposed.

5.3 Flood Resistance and Resilience

The development proposed may be subject to flooding at more extreme events than those considered. However, the risk appears to be sufficiently low that flood resilience measures need not be included into development construction to aid recovery after any event. If utilised, typical measures would include solid floors, use of suitable materials and services fed from upper floors with outlets at high level. The need can be discussed and agreed with building control officers during detailed design.

5.4 Residual Risk

It is impossible to completely guard against flooding since extreme events greater than the design standard event are always possible. However, ground floor levels should be set above proposed levels across the site and provide a nominal freeboard to allow overland flow under exceptional conditions. Overland flow routes should be considered in case of drainage failure and the extreme events.

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6 Conclusions

The site is shown on published mapping to be located within the Environment Agency's Flood Zone 2. Comparison of topographical data with the EA modelled flood level data indicates that the whole site is in Flood Zone 1 – Very Low Risk of fluvial flooding.

Low to negligible risks of flooding from all sources have been identified from information provided.

An assessment of these risks in conjunction with the development proposals have resulted in the following recommendations for the safe development of the site:

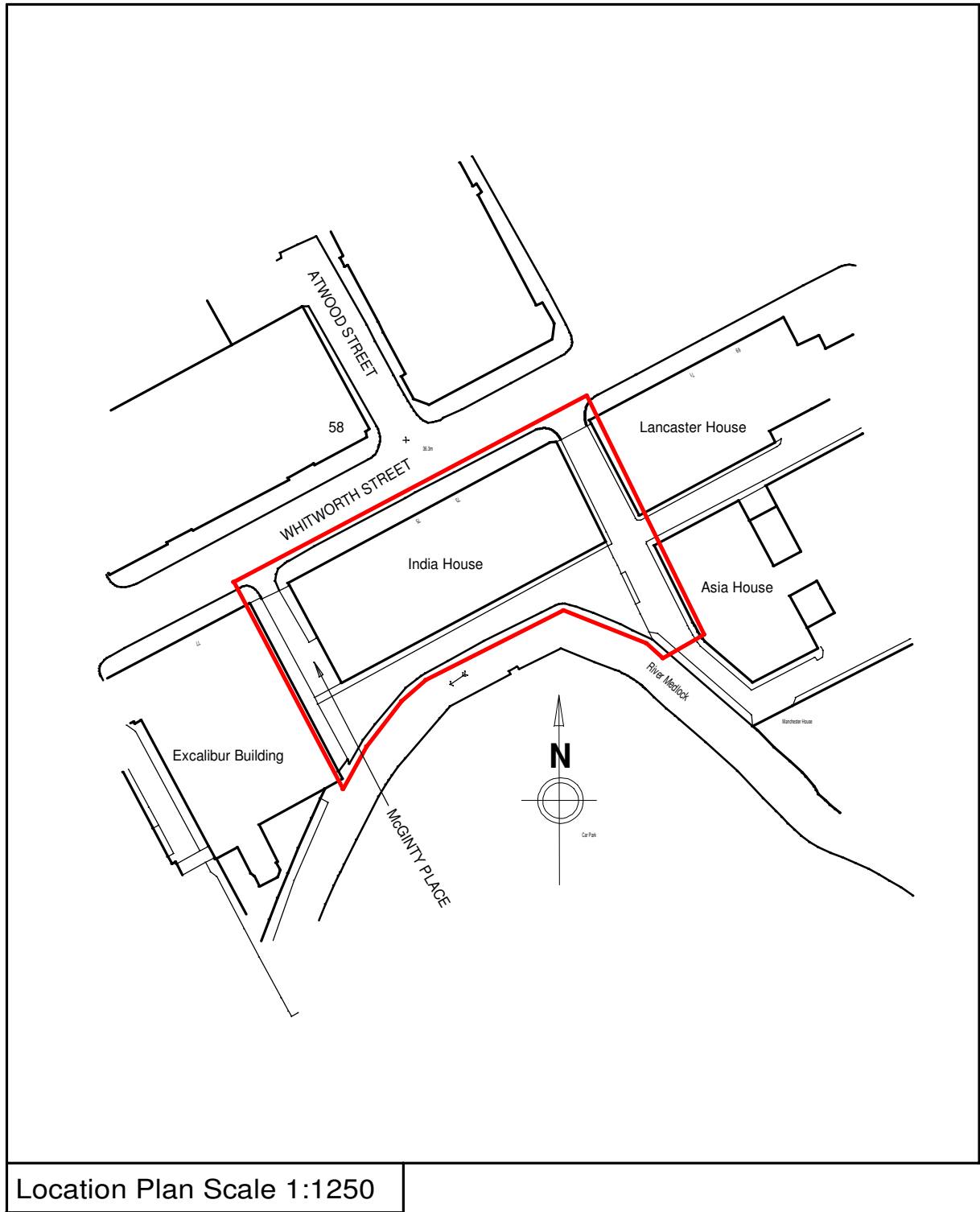
- » The recommended minimum finished floor level is 33.23m. This is 600mm above the 'design' flood level.
- » The finished floor level remains as the existing level at 37.55m, this is considerably higher than the recommended minimum level.
- » Pedestrian and vehicular safe access to and from the site is achievable under all conditions via Whitworth Street.
- » A formal evacuation plan not considered to be required.

Further details on the proposed mitigation measures are provided in Section 5. All proposed measures should be agreed with the Local Authority prior to commencement of the development.

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Appendix A

Figures, Plans and Drawings



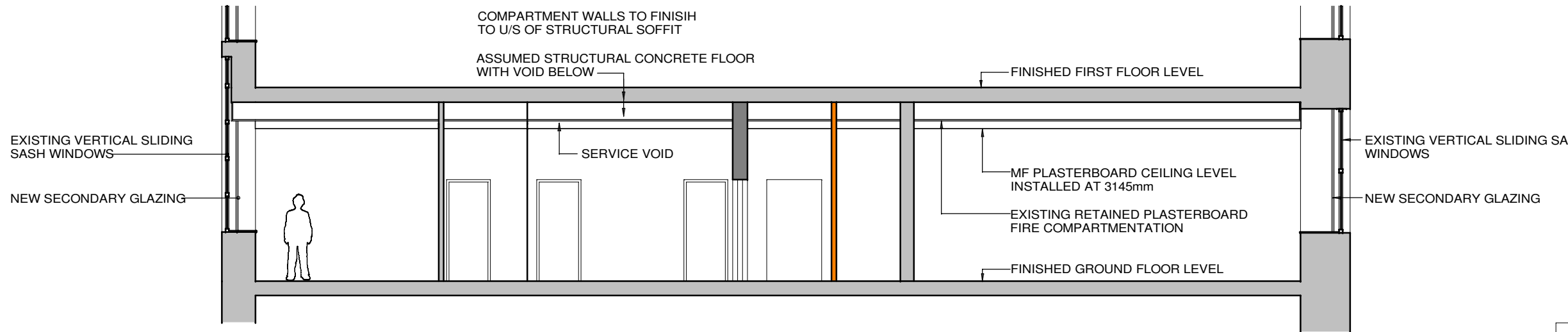
nicol thomas

REV A : ADDITIONAL ROAD NAMES ADDED

Client:		The Guinness Partnership	
Job:		India House, Whitworth Street, Manchester	
Drawing title:		LOCATION PLAN	
Drawing Number: (Job number)	M4371. L1	Revision:	A
Scale:		1:1250 @ A4	
Date:		March 2019	
Drawn by/ checked by:		S	

CONVERSION OF GROUND FLOOR OFFICE PREMISES

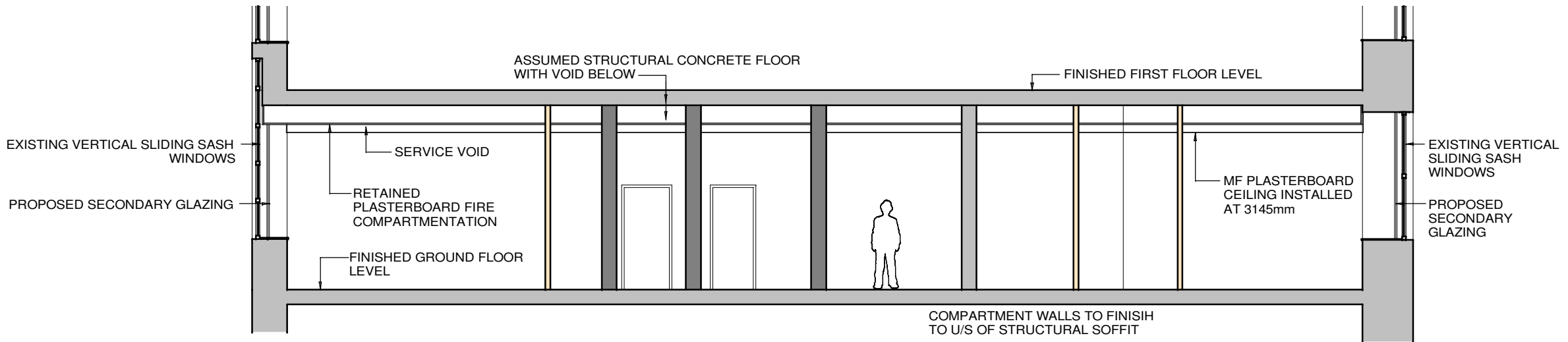
INDIA HOUSE WHITWORTH STREET, MANCHESTER



PROPOSED SECTION A-A

SCHEDULE OF ACCOMMODATION

UNIT 1	1 Bed 1 Person	39.50 Sq.Metres
UNIT 2	2 Bed 4 Person	76.00 Sq.Metres
UNIT 3	2 Bed 3 Person	65.70 Sq.Metres
UNIT 4	2 Bed 4 Person	73.40 Sq.Metres
UNIT 5	2 Bed 4 Person	89.00 Sq.Metres
UNIT 6	2 Bed 4 Person	81.20 Sq.Metres
UNIT 7	2 Bed 4 Person	77.50 Sq.Metres
CONCIERGE - 43.60 Sq.Metres		



PROPOSED SECTION B-B

WALL LEGEND

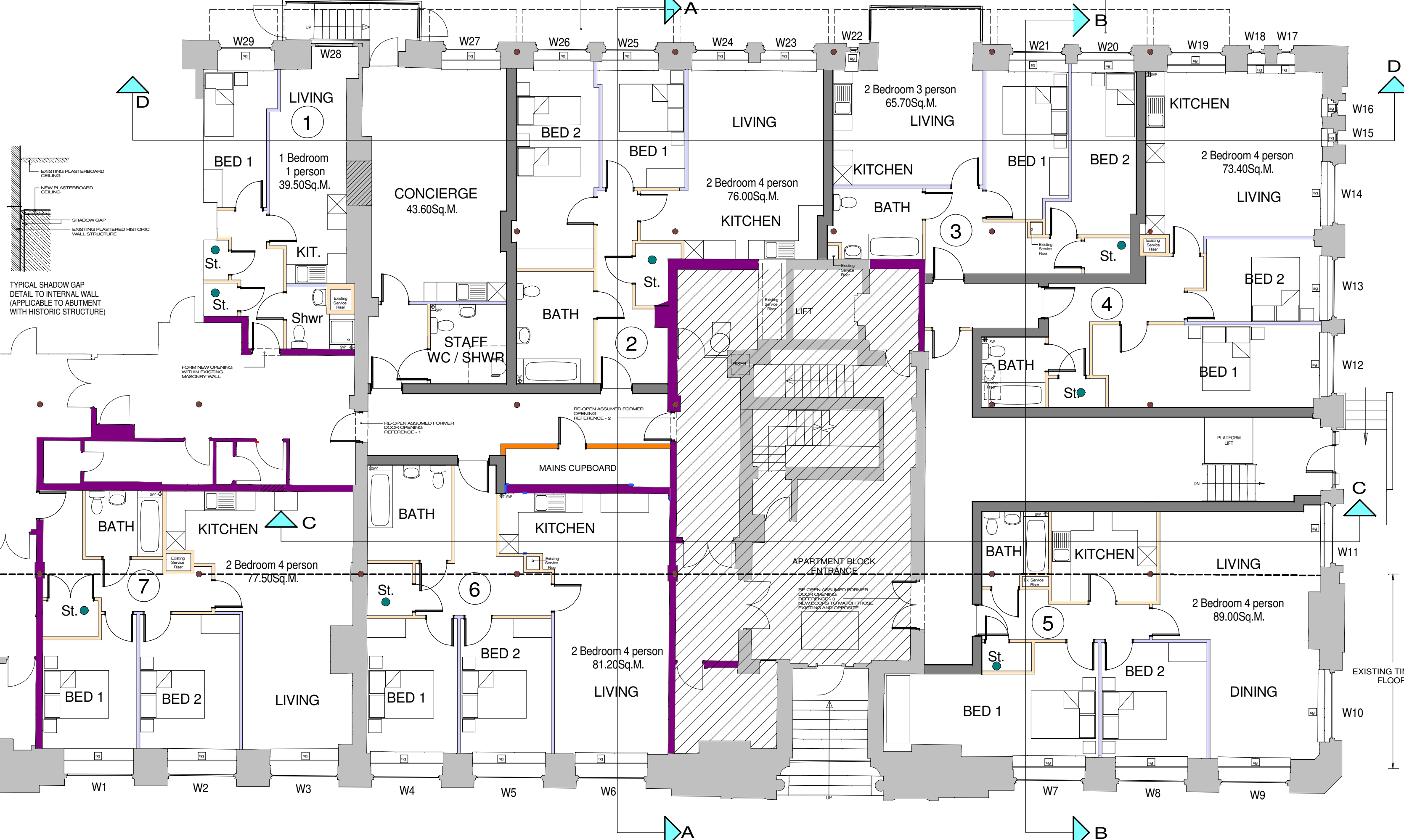
WALL TYPE - 1
Existing external wall and plaster wall to be retained and protected from damage during the contract works

WALL TYPE - 2
Party Wall constructed to E-W5:1 (sound testing required) 250mm of Gypframe metal studs (size dependent upon wall height) with one layer of 50mm Min unfaced mineral wool batts (density 33-60 kg/m³) Wall lining to comprise both sides 1 layer of 9mm OSB and 3 or more layers of gypsum board (minimum total normal mass per unit area 22kg/m²), all joints staggered. Wall linings to be a minimum of 200mm wide on plans (Wall shown as 275mm wide on plans)

WALL TYPE - 3
70mm Gypframe metal studs (size dependent upon wall height) with one layer of 50mm Min unfaced mineral wool batts (density 33-60 kg/m³) Wall lining to comprise both sides 1 layer of 9mm OSB and 3 or more layers of gypsum board (minimum total normal mass per unit area 22kg/m²), all joints staggered. Wall linings to be a minimum of 200mm wide on plans (Wall shown as 275mm wide on plans)

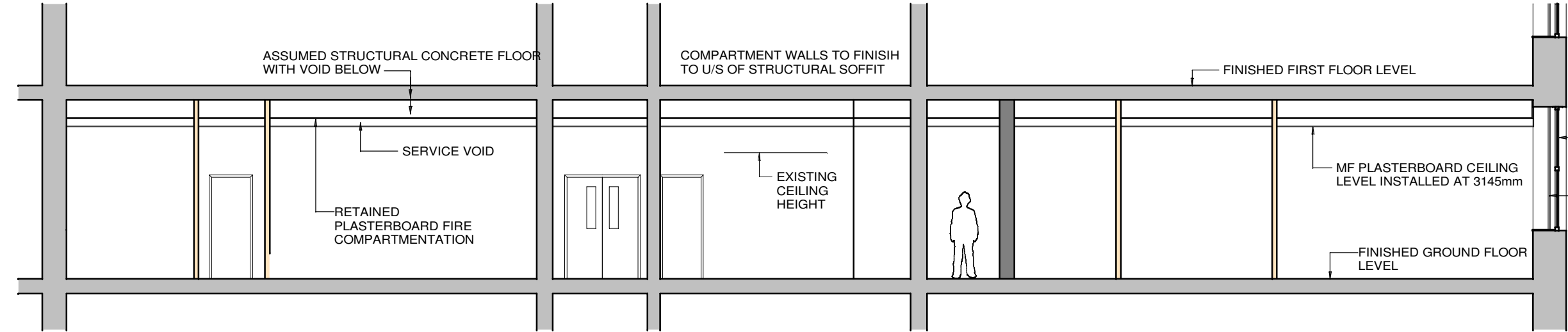
WALL TYPE - 4
70mm Gypframe metal studs (size dependent upon wall height) Walls to be finished with 2 layers of 12.5mm plasterboard and skim (each side) Additional layer of 12.5mm OSB board to line stud walls to kitchens and bathrooms where there is a requirements for fixtures / fittings (wall units, shower units etc)

WALL TYPE - 5
70mm Gypframe metal studs (size dependent upon wall height) Lined with 12.5mm OSB board both sides and finished with 2No layers of 12.5mm plasterboard and skim to both faces

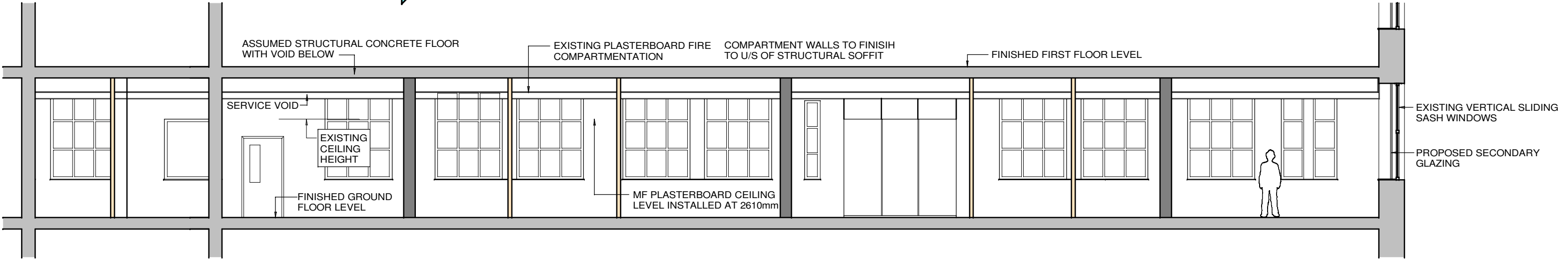


LEGEND

- EXISTING STRUCTURE - TYPE 1 OF STRONG HERITAGE SIGNIFICANCE NO MECHANICAL FIXING OF ANY ADJOINING WALLS / M&E SERVICES ETC PERMITTED
- EXISTING STRUCTURE - TYPE 2 RETAINED WALLS WITH NO HERITAGE SIGNIFICANCE
- EXISTING STRUCTURE TO BE ALTERED
- EXISTING STRUCTURAL OPENING TO BE INFILLED USING MATERIALS AND CONSTRUCTION METHODS AS THE ADJACENT WALL TO ACHIEVE AN INVISIBLE REPAIR
- NEW NON-LOADBEARING PARTITIONS - TYPE 3
- NEW NON-LOADBEARING PARTITIONS - TYPE 4
- NEW NON-LOADBEARING PARTITIONS - TYPE 5
- NEW NON-LOADBEARING COMPARTMENT WALL - TYPE 2
- SECONDARY GLAZING AS DETAILED / ACOUSTIC REPORT
- NO WORKS PROPOSED



PROPOSED SECTION C-C



PROPOSED SECTION D-D

nicol thomas

Revision	Date	Details
A	12.08.19	UNIT 7 LAYOUT AMENDED
B	17.09.19	PLANNING AMENDMENTS
C	14.01.20	EXISTING ENTRANCE OF MCGINTY PLACE RETAINED
D	07.04.20	GENERAL DRAWING DEVELOPMENT
E	04.09.20	STORAGE CUPBOARDS AMENDED
F	01.02.21	ADDITIONAL INFORMATION ADDED

nicol thomas
architects project managers construction cost consultants CDM
co-ordinators
Registered in England and Wales. Reg No. 2140838
Quality Assured to BS EN ISO 9001:2015 Certificate Number GB 4723
Heyside House Blackshaw Lane Heyside Royton Oldham OL2 9NS
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Also at Birmingham (Registered office)
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Client:	The Guinness Partnership
Job:	India House, Whitworth Street, Manchester
Drawing title:	Proposed Ground Floor Plan
Drawing Number: (Job number)	M4371.P.01
Scale:	1:100 @A1
Date:	May 2019
Drawn by/ checked by:	
Revision:	F

Appendix B

Site Information

Lisa Aspinall

From: Steve Winterbottom <steve.winterbottom@NicolThomas.com>
Sent: 06 September 2021 16:12
To: 'Sabeel Sharif'
Cc: Lisa Aspinall
Subject: RE: India House FRA
Attachments: M4371.S.01 - Existing Basement Plan (-2).pdf; M4371.S.02 - Existing Basement Plan (-1).pdf; M4371.S.03 - Existing Ground Floor Plan.pdf

Hi Lisa,

The finished floor level of the property is I would say on average would be 51.80. I have this from a third party internal topographical survey, but this has no external dimensions, nor am I certain whether this is to a local or National OS grid datum.

The basement below the floor we are concerned about is 2980mm below the finished ground floor level. The lower basement I would estimate at 5960mm below finished ground floor level.

The deck to the rear of the building I would say is 1500mm below finished floor level.

The proposed finished floor level is the same as existing.

I would also say from the information I have the footpath to the front of India House (Whitworth Street would be 50.55.) 1.25m below the finished floor level of our proposal.

I hope this is of assistance.

Kind regards
Steve

Steve Winterbottom
Regional Director

nicol thomas

Heyside House
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From: Sabeel Sharif [mailto:Sabeel.Sharif@guinness.org.uk]
Sent: 06 September 2021 15:16

To: Steve Winterbottom
Cc: L.Aspinall@thelkgroup.com
Subject: FW: India House FRA

Afternoon Steve,

Please could you provide Lisa with the information requested below?

Many thanks,

Sabeel Sharif

**Project Delivery Manager
Development (North)**

The Guinness Partnership, Bower House, 1 Stable Street, Hollinwood, Oldham OL9 7LH
DDI: 0161 219 7282 Tel: 0303 123 1890 Mob: 07740423216
Email: sabeel.sharif@guinness.org.uk Website: www.guinnesspartnership.com

From: Lisa Aspinall <L.Aspinall@thelkgroup.com>
Sent: 06 September 2021 15:10
To: Sabeel Sharif <Sabeel.Sharif@guinness.org.uk>
Subject: India House FRA

Hi Sabeel,

I'm just going through the FRA for the above scheme. DO you have any existing and proposed levels for the property externally and the floor you're proposing to change at all?

Kind Regards

Lisa



Lisa Aspinall BSc. (Hons) EngTech MICE
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I N C R E A S I N G L A N D V A L U E



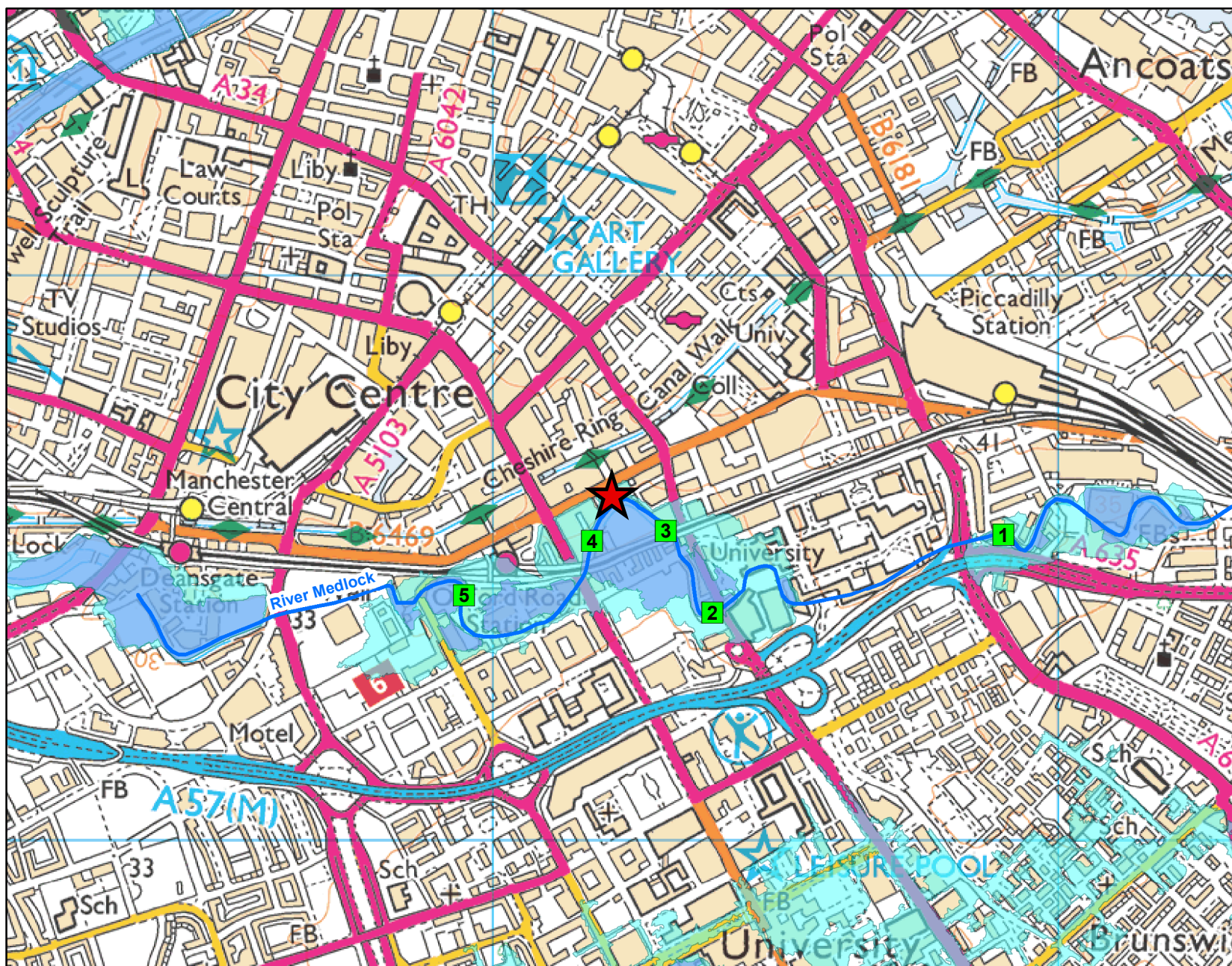


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Appendix C

EA Data

Detailed Flood Map centred on Whitworth Street, Manchester, M1 6HB. Created on 14/10/2021 [GMMC237079SW]



1:10,001



Legend



Site Location



Model Measurements



Main River



Flood Zone 3



Flood Zone 2

					Undefended				
Map Reference	Model Node Reference	Easting	Northing	Data	4 % AEP (1 in 25 year)	1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + 35% increase in flow	1 % AEP (1 in 100 year) + 70% increase in flow	0.1 % AEP (1 in 1000 year)
1	MEDL01_2131	384908	397542	Modelled Water Level (m aodN)	32.97	33.25	34.36	34.76	35.15
				Modelled Flow (cumecs)	50.51	59.98	73.75	86.27	91.48
2	MEDL01_1534B	384405	397418	Modelled Water Level (m aodN)	30.84	31.64	32.84	33.30	33.84
				Modelled Flow (cumecs)	50.77	60.18	67.08	67.55	68.61
3	MEDL01_1346	384321	397533	Modelled Water Level (m aodN)	30.51	31.30	32.63	32.77	34.10
				Modelled Flow (cumecs)	51.34	60.00	64.46	64.72	65.43
4	MEDL01_1135D	384172	397525	Modelled Water Level (m aodN)	30.32	31.22	32.62	33.17	33.77
				Modelled Flow (cumecs)	47.19	47.63	48.05	47.73	47.22
5	MEDL01_0746M	383951	397433	Modelled Water Level (m aodN)	29.01	29.38	30.17	30.59	31.18
				Modelled Flow (cumecs)	52.48	59.57	68.53	69.92	70.22
Site: India House	2D Measurement			Modelled Water Level (m aodN)					33.79

Model data taken from Medlock SFRA 2011

AEP - Annual Exceedence Probability

m aodN - metres above ordnance datum Newlyn

cumecs - cubic metres per second

Notes: *Climate Change Scenario - 35% and 70% increases in flow calculated for the 2080's (2070 - 2115). Please see <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances> for more information regarding the new climate change guidance. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.

Appendix D

Consultations

LKGroup**Unit 29 Eton Business Park
Eton Hill Road, Radcliffe
Radcliffe, Greater
M26 2ZS****FAO:****How to contact us:****United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP****Telephone: 0370 7510101****E-mail: propertysearches@uuplc.co.uk****Your Ref: FRA21 1119
Our Ref: UUPS-ORD-323574
Date: 09/09/2021****Dear Sirs****Location: FLAT 79 75 INDIA HOUSE WHITWORTH STREET, MANCHESTER, M1 6HB**

I acknowledge with thanks your request dated 06/09/2021 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. <http://www.unitedutilities.com/work-near-asset.aspx>.

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please [contact us](#).

Yours Faithfully,



Karen McCormack
Property Searches Manager

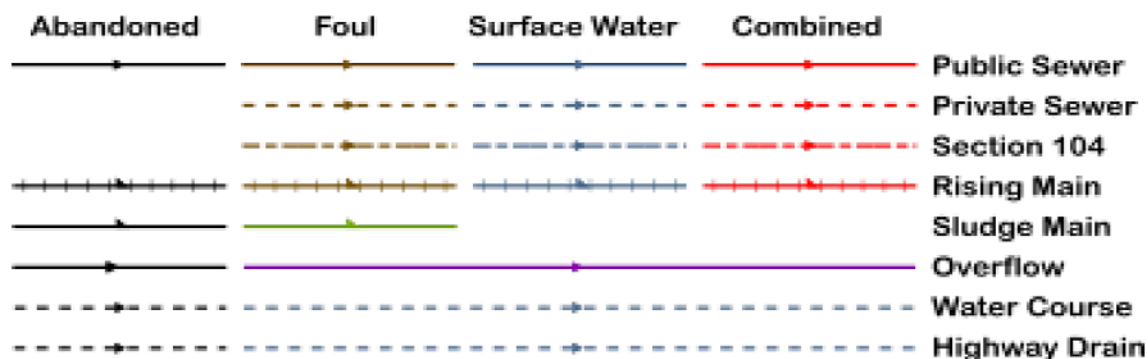
TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

TERMS AND CONDITIONS:

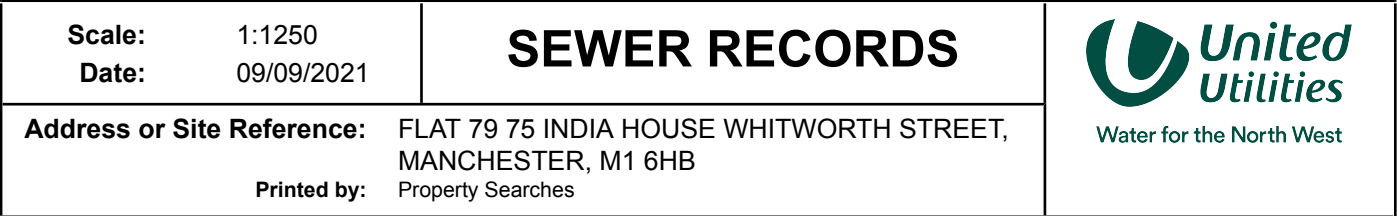
- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

Wastewater Symbolology



All point assets follow the standard colour convention: **red** – combined **brown** - foul
blue – surface water **purple** - overflow

Manhole	Side Entry Manhole
Head of System	Outfall
Extent of Survey	Screen Chamber
Rodding Eye	Inspection Chamber
Inlet	Bifurcation Chamber
Discharge Point	Lamp Hole
Vortex	T Junction / Saddle
Penstock	Catchpit
Washout Chamber	Valve Chamber
Valve	Vent Column
Air Valve	Vortex Chamber
Non Return Valve	Penstock Chamber
Soakaway	Network Storage Tank
Gully	Sewer Overflow
Cascade	Ww Treatment Works
Flow Meter	Ww Pumping Station
Hatch Box	Septic Tank
Oil Interceptor	Control Kiosk
Summit	
Drop Shaft	Change of Characteristic
Orifice Plate	



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