Premier House
Manchester, UK —

Sustainable Drainage Strategy

FOR / Civil and Structural Engineering Services
CLIENT / Property Alliance Group REV / DRAFT DATE / 16 June 2021
PROJECT NO / L20081

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Document *Control*

Revision	Date	Description	Prepared (PM)	Reviewed (PR)
DRAFT	07/06/21	Preliminary for Discussion	SR	LJK
00	16/06/21	For Planning	SR	LJK

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1 INTRODUCTION AND SCOPE

1.1 Scope of Report

This report has been prepared by BG&E on behalf of Deansgate SOF Alliance Lease Co Limited, a joint venture between Property Alliance Group (PAG) and an affiliate of Starwood Capital (SCG), to support a full planning application for the redevelopment and extension of Premier House, which has been long term vacant, to deliver high quality new workspace with retail/ leisure uses at ground floor level, fronting Deansgate. The site is situated within the jurisdiction of Manchester City Council (MCC).

The National Planning Policy Framework (NPPF) states that an appropriate Flood Risk Assessment (FRA) will be required for all development proposals of 1 hectare or greater in Flood Zone 1 and for any development within Flood Zones 2 or 3. The EA's indicative floodplain map indicates that the site is in Flood Zone 1 and the site is less than 1 hectare.

The MCC Strategic Flood Risk Assessment (SFRA) User Guide (dated May 2010) states in Critical Drainage Areas (CDAs), a detailed FRA is advised for all developments over 0.5 hectares, regardless of which Flood Zone the site falls within. Although the application is within the Conurbation Core CDA, the site is less than 0.5 hectares. Furthermore, the development proposals comprise of refurbishment works only, therefore a full FRA should not be required.

1.2 Introduction

This Sustainable Drainage Strategy summarises flood risk from all sources to the proposed development. Foul water and surface water calculations are then presented, followed by a SuDS assessment and the proposed drainage layouts.

1.3 Reference Documents

This Sustainable Drainage Statement has been carried out in accordance with the National Planning Policy Framework (NPPF), the revised Planning Practice Guidance "Flood Risk and Coastal Change", national Non-Statutory Technical Standards for SuDS, advice and guidance from the Environment Agency (EA) and MCC.

In particular, the following MCC documents have been referred to:

- SuDS Requirements for New Developments (Update 2019);
- The Final MST SFRA (Level 1, Level 2 and the User Guide, dated 2010); and
- local policies DM1, EN08, EN14 and EN17 of the Core Strategy.

2 THE SITE

2.1 Site Location

The site forms part of the wider Renaissance Hotel complex which has long been a longstanding strategic regeneration priority for MCC and is the last remaining undeveloped site within the 1999 City Centre Masterplan.

During the last 20 years, various attempts have been made to bring forward its redevelopment. Most recently, this was in the form of a mixed use scheme in 2008, comprising 4 new buildings, the tallest at 35 storeys and a 2018 Strategic Regeneration Framework by MCC and Urban & Civic. Despite the efforts of well-respected developers, MCC officers, and Sir Howard Bernstein, the lack of activity over the last 20 years illustrates the complexities associated with bringing forward the meaningful regeneration of the site and all previous proposals for wholesale demolition and redevelopment have ultimately proven undeliverable.

The current masterplan proposals have taken a different approach to those that have failed in the past focusing on the part-retention and part-redevelopment of the wider site – one that the Applicants believe is the only way that this site can be realistically brought forward – and ultimately represents a deliverable scheme. Various planning applications will be submitted to MCC for approval pursuant to the overall illustrative masterplan, and the high quality offices and retail/leisure floorspace subject to this particular application are a crucial and fundamental part of ensuring the delivery of this strategically important site.

As well as ensuring deliverability, sustainability is also at the heart of the approach to regenerating the site. The ethos of the Architects Journal "Retro First" initiative strapline "The greenest building is one that already exists" has been adopted. One of the key sustainability benefits of the overall masterplan is the approach to retention and re-use of the existing buildings on site, where appropriate, which will result in a saving in embodied carbon versus a comparable demolition and new build scheme, before the application of other sustainability measures.

Figure 1 below shows the wider masterplan site. The Renaissance complex currently comprises a vacant 15-storey, 203 bedroom hotel building, a multi-storey car park, a restaurant and a dilapidated former office building (Premier House) which has been vacant for a significant number of years. This particular application proposes the redevelopment of Premier House. Separate planning applications have already been submitted for the new 4* Treehouse hotel and the partial demolition of Premier House.

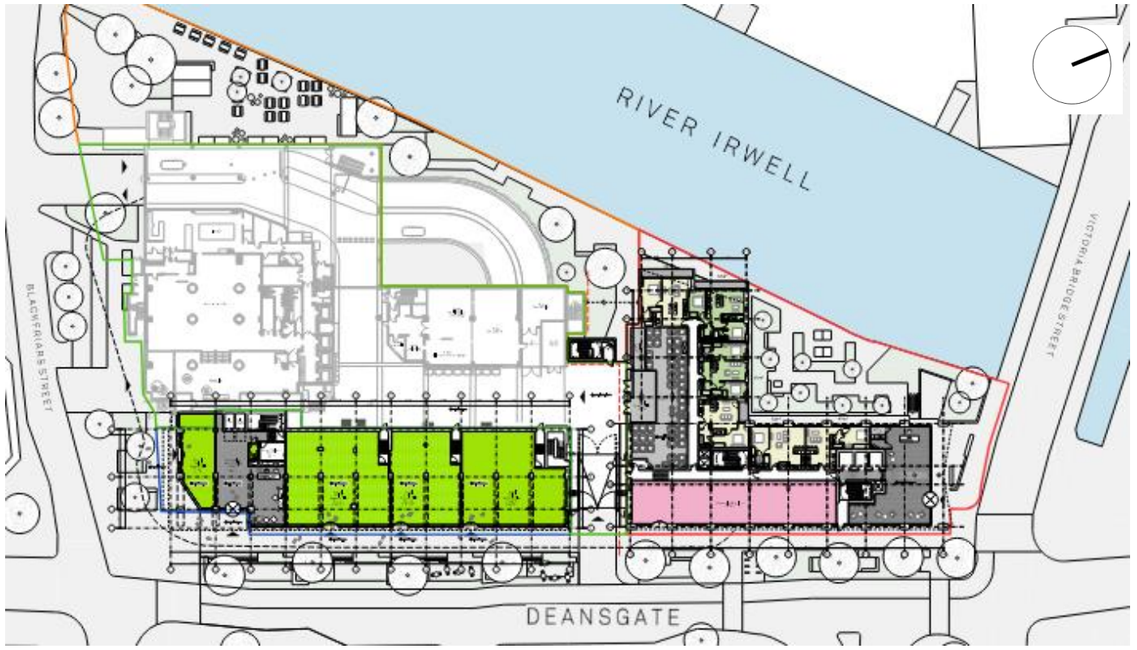


Figure 1 – Masterplan site location

Figure 2 below shows the red line planning application boundary for the Premier House refurbishment and the application site is approximately 0.19 hectares.

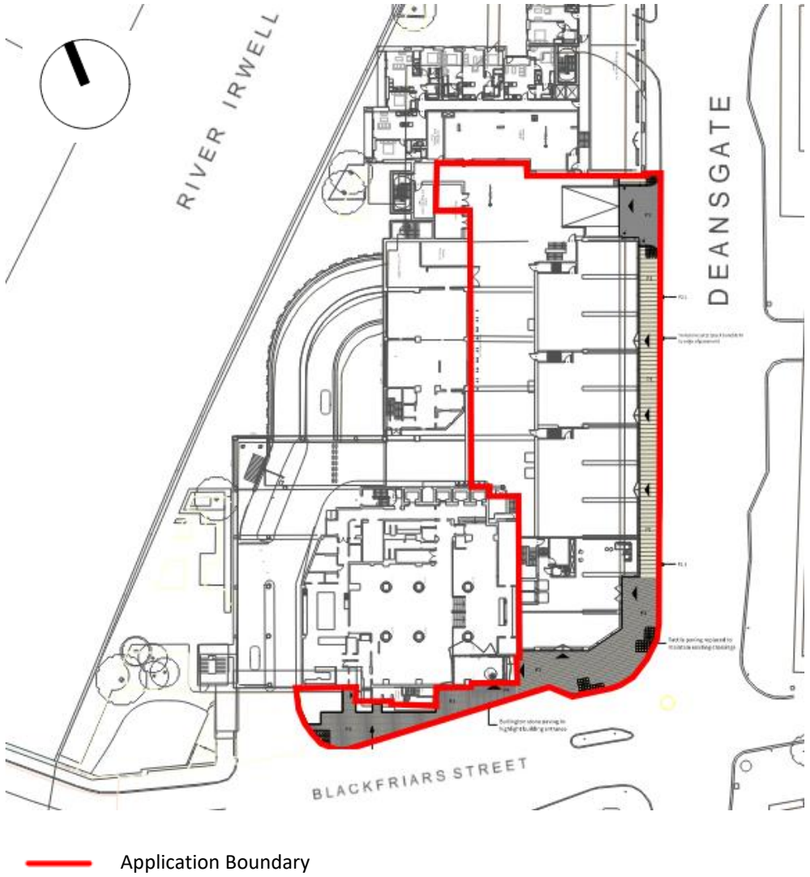


Figure 2 – Application site location

The application site includes modifications to the public footpath along Deansgate and Blackfriars Street. From Deansgate, access can be found to the ground floor level. This is further illustrated in Figure 3 overleaf. The existing building has 3 levels of carpark beneath the ground floor that will be retained. From the River Irwell footpath, direct access to the -3 basement is found.

The extent of the application site is further detailed in the Architectural plans submitted with the planning application.

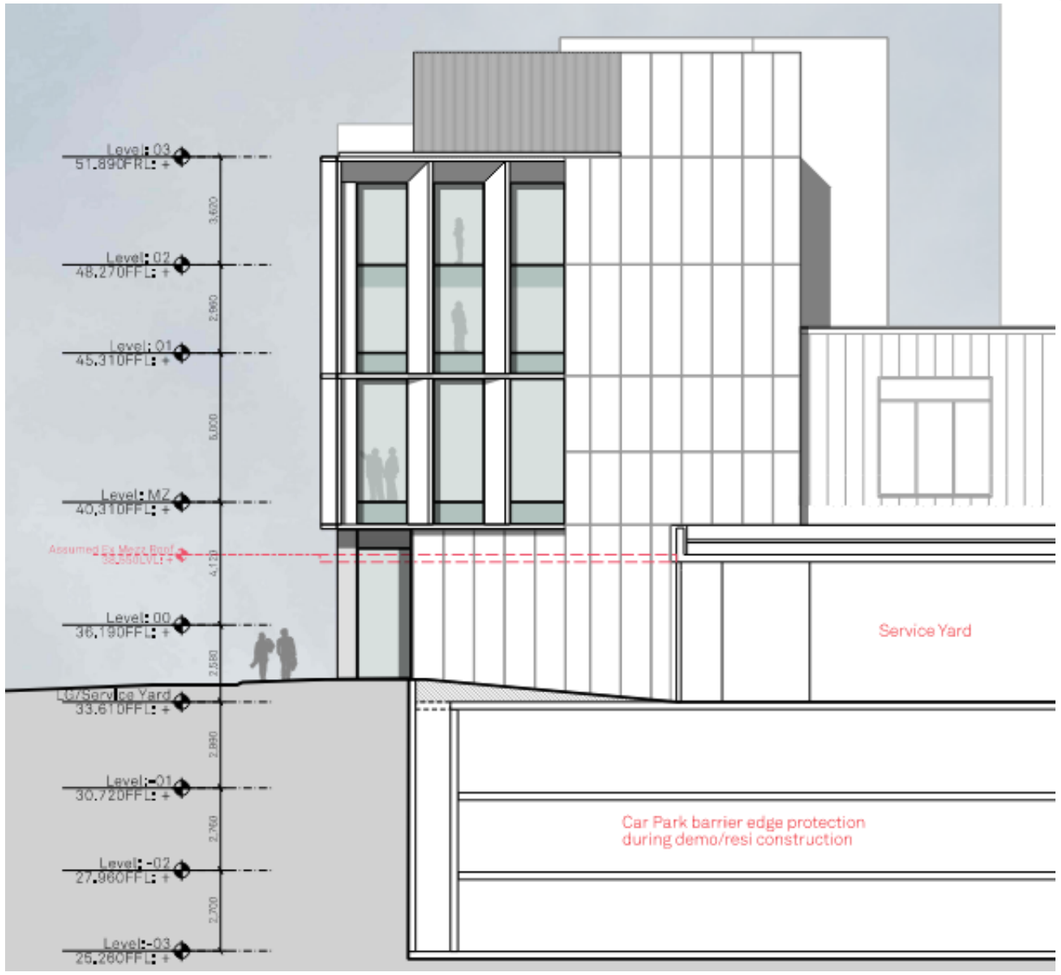


Figure 3 – South Elevaton of Premier House

2.2 Surveys and Information

At the time of writing, further CCTV drainage surveys were in progress to confirm the existing drainage arrangements. The current survey information (Figure 4 below and Appendix A) shows that there are separate surface water and foul water drainage networks. Surface water from the site discharges to outfalls along the River Irwell river wall. Foul water from the site runs south along Deansgate and then heads west along Blackfriars Street.

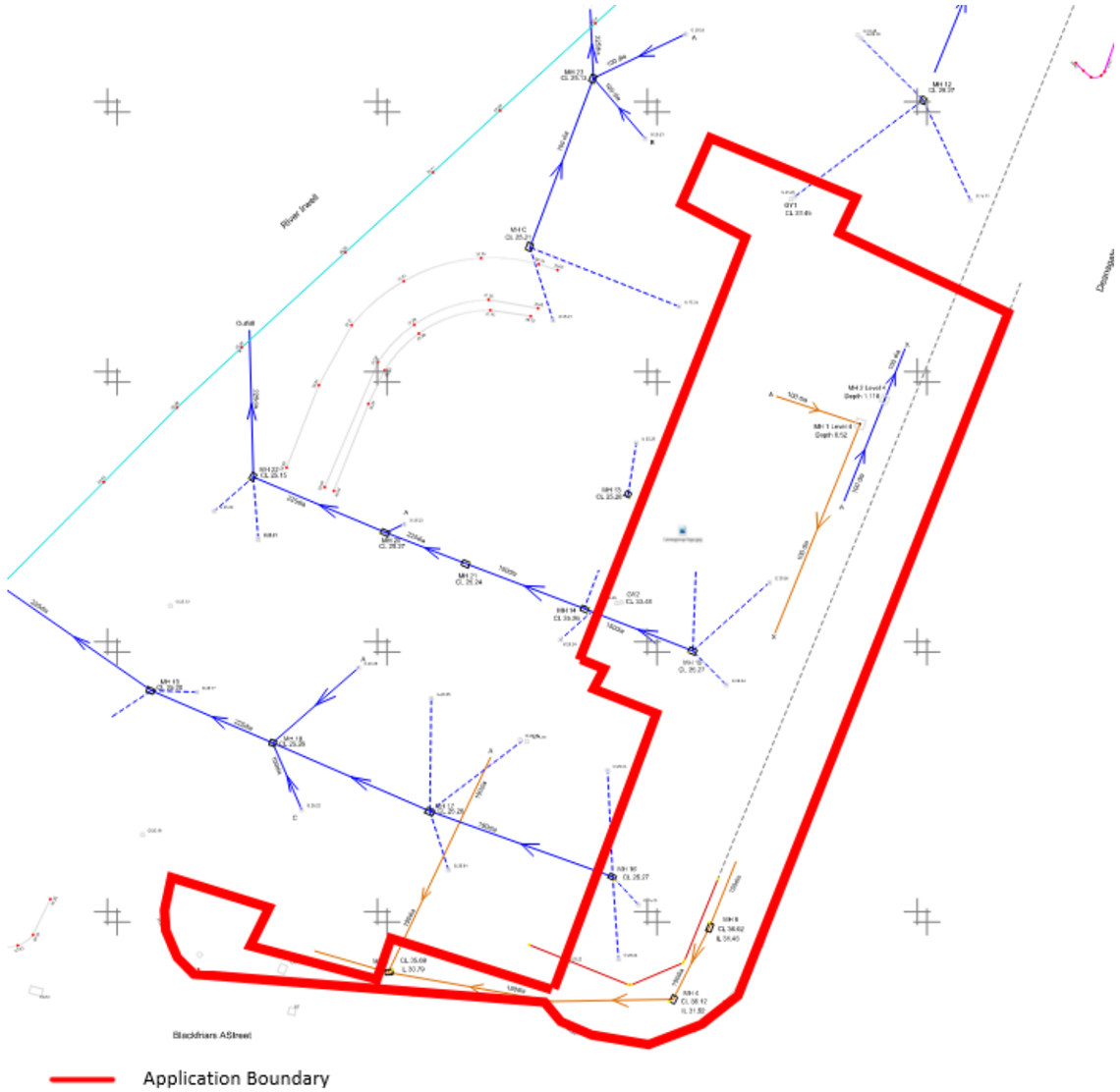


Figure 4 – CCTV survey Extract

The topographical survey in Appendix B shows further manholes/ inspection chambers that will be investigated further as part of the ongoing survey works.

The United Utilities (UU) sewer records (Figure 5 below and Appendix C) shows that there is a public sewer overflow that crosses the site (985 x 1830mm, indicated with a purple line). No modifications are proposed below the basement slab. Therefore, this overflow will be retained. At the time of writing, a CCTV drainage survey was being undertaken to prove the route and condition of the overflow, prior to construction. A CCTV drainage survey will be conducted at completion, to ensure the overflow if fully functional at handover. Furthermore, a build over application will be submitted to UU at the detailed design stages.

The records also show there is an 150mm vitrified clay foul water public sewer at the corner of Deansgate and Blackfriars Street. The additional CCTV drainage survey will confirm if this pipe crosses ownership boundaries, making it a public sewer. If it is found to serve adjacent properties, a build over application will be submitted to UU.

The combined sewer that runs along Deansgate (indicated with a red line) is 2300mm in diameter and UU have confirmed this is a strategic sewer, formed in brick. At the time of writing, the design team have been in discussion with UU to confirm requirements, as the application site is in close proximity to the public sewer. UU correspondence can be found in Appendix D.

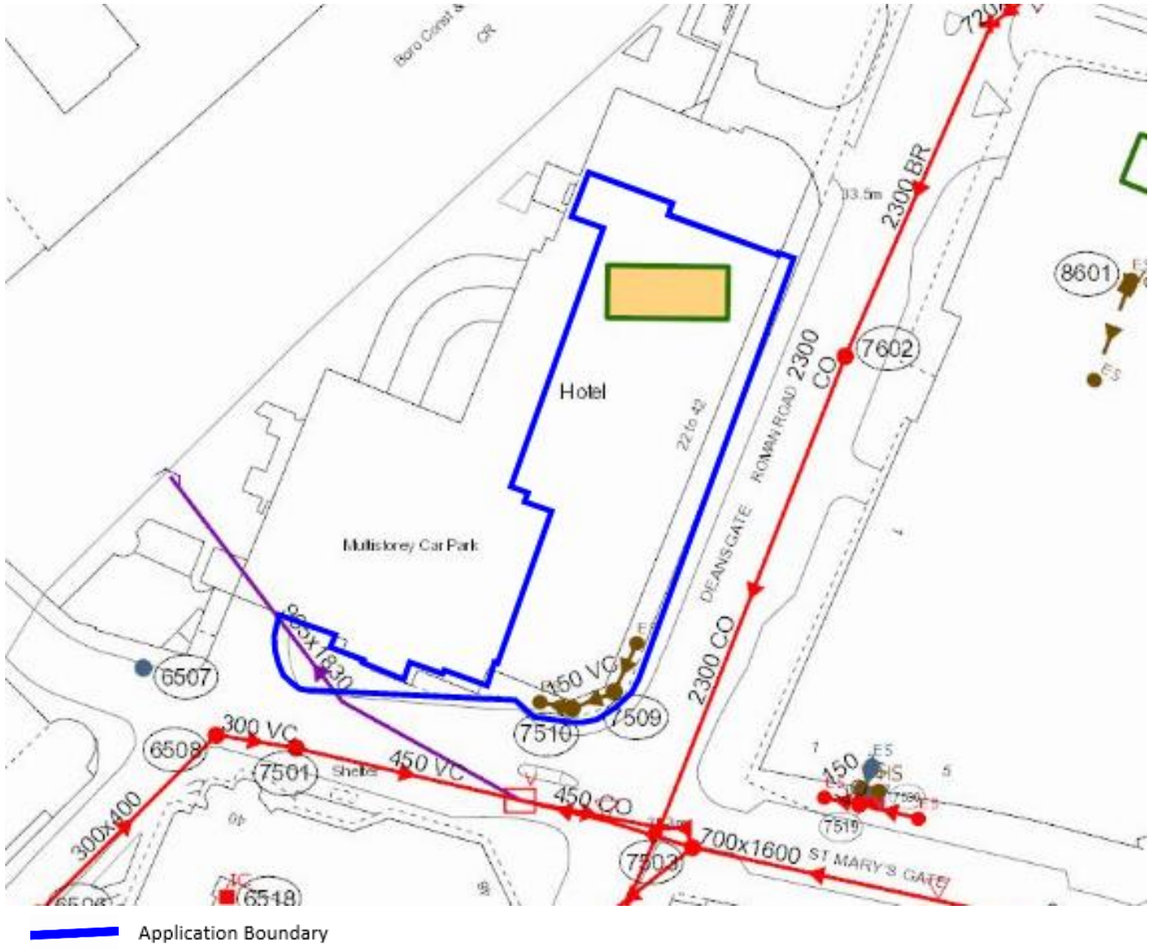


Figure 5 – CCTV United Utiliites Public Sewer Records

3 FLOOD RISK

3.1 Main Watercourses

Figure 6 below shows that the application site is situated within Flood Zone 1 and is at low risk of flooding from main rivers and the sea (less than 0.1% annual probability of river flooding). Development in this zone have no restrictions other than ensuring the surface water drainage proposals do not increase the flood risk on site and the surrounding areas.

Figure 6 – EA flood map for planning

3.2 Ordinary Watercourses

The site is adjacent to the River Irwell and this is turn discharges to the Manchester Shipping Canal (MSC). The Lead Local Flood Authority (LLFA) has confirmed that these are classified as Ordinary Watercourses. The MCC SFRA Level 2 maps shows that whilst some of the wider masterplan site is in Flood Zone 2, the application site is not (FL_1.2E, JBA Consulting, 2010).

The application site is not identified in a Canal Breach Hazard Zone or Canal Overtop Hazard Zone (MM_3.2B, JBA consulting, Feb 2011). The site is not in an area with significant hydraulic interactions (Hl_5.1, JBA consulting, Mar 2010). The site is not at risk of flooding from the River Irwell or MSC (both in defended and undefended scenarios, FL_1.14A, FL_1.13A, FL_1.12 and FL_1.11, JBA Consulting, 2010).

The MCC SFRA level 2 maps also show fluvial flood depths for the 1 in 100 year event, plus climate change (FL_1.7B, JBA Consulting, Jan 2011). This map shows that the application site is not inundated for this design rainfall event.

3.3 Surface Water and overland flows

The MCC SFRA shows that the site is at very low susceptibility of surface water flooding for both the present and future scenarios. An extract of the surface water future scenario map is shown in Figure 7 below.

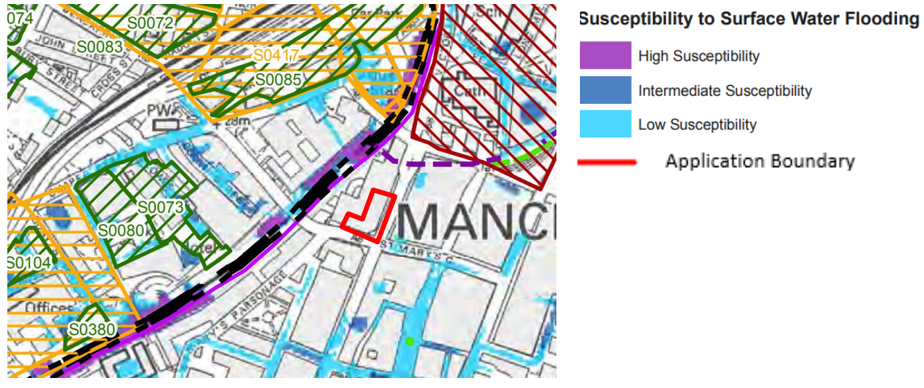


Figure 7 - Susceptibility to Surface Water Flooding - Future Scenario (SS_4.2E)

3.4 Groundwater

The MCC SFRA groundwater flood maps (MM_3.1, JBA Consulting, Feb 2011) does not identify the application site at risk of groundwater flooding, shallow groundwater levels or groundwater rebound. The basement car park will be retained and the waterproofing strategy will prevent the ingress of groundwater. Furthermore, the sandstone geology at the site location has poor porosity properties and reduces the risk of groundwater flooding further.

3.5 Infrastructure failure

The MCC SFRA reservoir screening maps (G W _ 2 . 1, JBA Consulting, Feb 2011) does not identify the application site at risk of reservoir flooding.

As part of the wider masterplan, existing drainage (both private and adopted) will be fully surveyed to ensure its integrity. This includes the combined sewer that runs along Deansgate. A culvert has been identified within the masterplan site and this is located within the boundary of the proposed residential plot occupying the northern area of the Renaissance Complex, which will be subject to a separate planning application later this year. This will be discussed further in the site-wide FRA as this falls outside the current application boundary.

4 SUDS ASSESSMENT

A holistic approach has been taken regarding the sustainability aspects of the application site. The ethos of the Architects Journal "Retro First" initiative strapline "The greenest building is one that already exists" has been adopted, therefore the existing structure and drainage systems will be reused, wherever possible.

In accordance with NPPF PPG Paragraph 080, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable:

1. into the ground (infiltration);
2. to a surface water body;
3. to a surface water sewer, highway drain, or another drainage system;
4. to a combined sewer.

The existing building takes up the majority of the application site and infiltration systems such as soakaways require easements that are not achievable within the application boundary. Permeable pavements could be considered for infiltration along the footpaths of Deansgate and Blackfriars Street. However, public sewers run along these footpaths. UU approval will be required if permeable pavements are constructed above their assets (this can make maintenance difficult). Additionally, if the footpaths are offered for adoption, MCC Highways approval will be required for the permeable pavement systems.

In line with the wider design approach, it is considered that the most sustainable option is to re-use the existing surface water drainage network, that discharges directly to the River Irwell. No modifications will take place below the basement slab and therefore installing attenuation systems to greenfield runoff rates would significantly increase to the scope of the project and contradict the design approach.

Relevant SuDS are discussed below in turn:

Rainwater harvesting
The capacity of rainwater harvesting systems to attenuate rainwater depends on the water use within the building. If there is no activity in the building and the harvester is full, no attenuation will be provided during a subsequent storm event. In the worst case scenario the rainwater harvester will provide no attenuation. As this is an office development, a rainwater harvesting system would have limited benefits. Furthermore a holding tank would be required below the basement car park slab and a pump would be required to take this to WCs. Considering the sustainability aspects of the required pump chamber, rainwater harvesting is not considered a sustainable option.

Green/blue roofs
It is proposed to re-use the existing structure and this would not be able to accommodate the additional loads associated with a blue/green roof.

Below ground cellular attenuation
As above, it is proposed to re-use the existing car park basement slab. Therefore below ground cellular attenuation is not deemed feasible.

Direct discharge to watercourse
It is proposed that the existing outfalls to the River Irwell are maintained, as works within the application site compromise of refurbishment works only at the lower basement levels.

Pollution Control in the carparks
The basement carpark will remain as existing and this will provide 281 car parking spaces at each level (riverside, -2 and -1). At the time of writing CCTV drainage surveys were being undertaken to confirm if there are petrol interceptors and other pollution prevention systems. These will be maintained, where found. All opportunities for retrofitting pollution prevention will be considered upon receipt of the CCTV drainage survey.

5 RUNOFF ASSESSMENT

MCC guidance states "for Brownfield site developments, for all sites located within Conurbation Core Critical Drainage Areas, details of surface water attenuation that offers a reduction in surface water runoff rate in line with the Manchester Trafford and Salford Strategic Flood Risk Assessment, i.e. at least a 50% reduction in runoff rate compared to the existing rates with an aim to reduce to Greenfield runoff rates wherever practicable".

However, the works consist of refurbishment only at the lower car park levels. In accordance with the aforementioned "Retro First" initiative, it is considered the most sustainable solution to re-use existing drainage, as the structure is being retained. Furthermore, the existing site discharges directly to the River Irwell and this will not affect the surrounding CDA.

Existing Surface Water Run-off

The total site area is approximately 0.21 hectares and all of the site area is impermeable. The existing run-off rate for the 1 in 100 year storm event was calculated using the modified rational method as shown below:

Q_{100} = 2.78 x i x A

Where 'A' is the catchment area in ha and 'i' is the rainfall intensity in mm/hr as estimated from Micro Drainage software).

Q_{100} = 2.78 x 42.85 x 0.19 = 22.63 l/sec

Proposed Surface Water Run-off

The development proposals show that the impermeable areas on site will remain as existing. A 30% allowance has been considered for climate change:

Q_{100+30} = 2.78 x 55.71 x 0.19 = 29.43 l/sec

MCC LLFA guidance states "[proposals are] never to exceed the runoff volume from the development site prior to redevelopment". However, it should be noted that as part of the wider masterplan site, SuDS will be used to reduce surface water runoff rates and volumes. Therefore, the wider masterplan site will not exceed current runoff rates.

Proposed Foul water Run-off

An 150mm and 100mm foul water drain has been identified within the plot boundary that will be re-used. A Pre-development Inquiry has been submitted to UU and this can be found in Appendix D and the extract below.

"Foul flow from this site will be allowed to drain into the public foul water/combined sewer system.

Our preferred point of discharge would be to the 450mm and the 2300mm diameter public combined sewers Blackfriars Street and Deansgate respectively as per your proposal drawing at an unrestricted rate."

6 CONCLUSIONS

The site forms part of the wider Renaissance Hotel complex which has long been a longstanding strategic regeneration priority for MCC and is the last remaining undeveloped site within the 1999 City Centre Masterplan. The ethos of the Architects Journal "Retro First" initiative has been adopted and the proposals involve refurbishment works only at the lower levels of the development. It is proposed that the existing structure and drainage is retained for re-use.

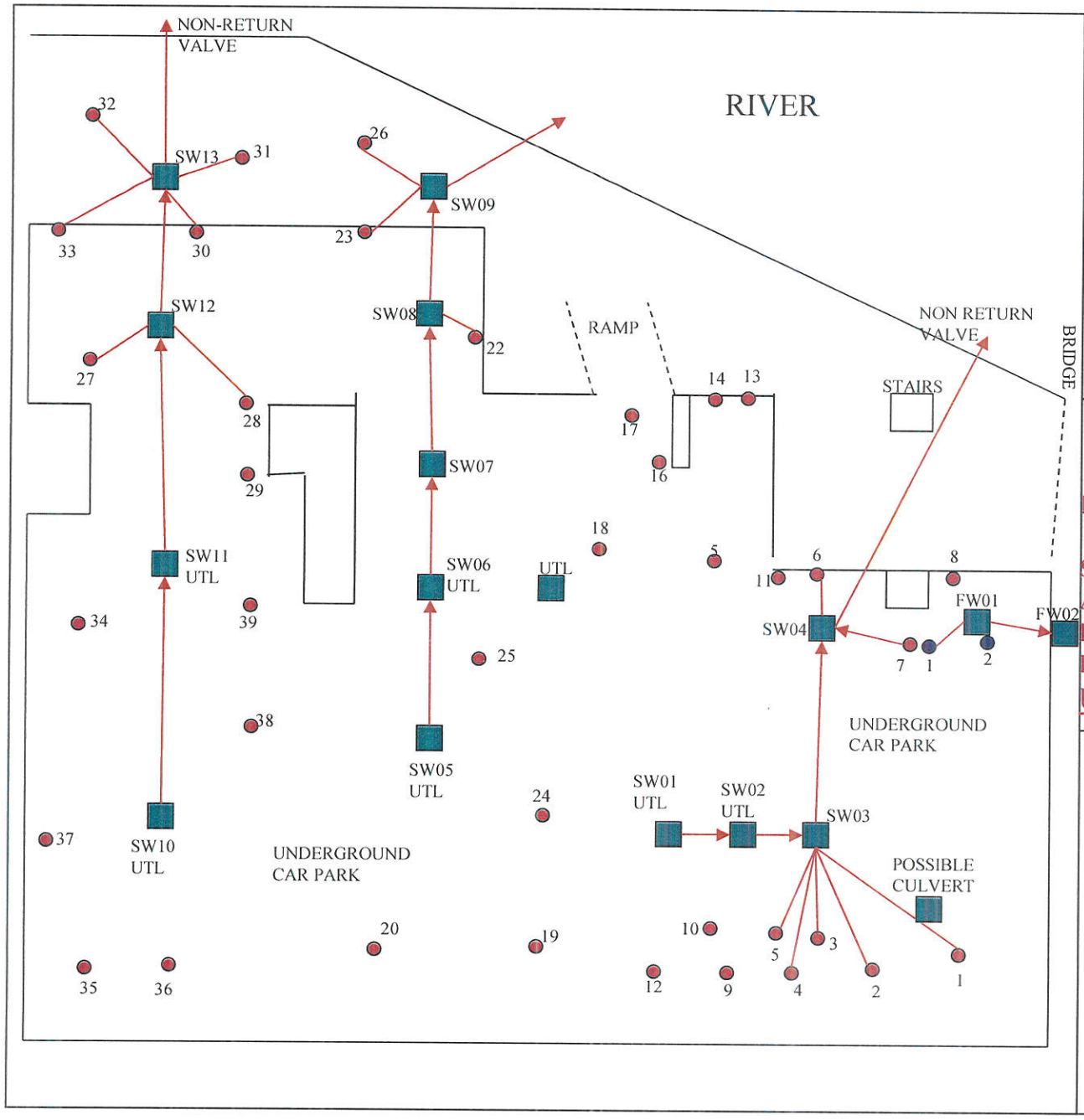
A UU buildover application will be submitted for the public sewer overflow crosses the site. When the additional CCTV drainage survey is completed, discussions will be concluded with UU regarding foul water public sewer within the site boundary and the combined sewer that is close to the site, along Deansgate.

It is proposed that the existing drainage is re-used and flow rates and volumes will remain as existing. Although flow rates and volumes are not reduced within this application boundary, a reduction in the wider masterplan will reduce flood risk at the site location.

This report demonstrates that the flood risk to the site is low and will remain low following the development proposals. Flood risk elsewhere is not increased by the proposed development.

This report has not identified any significant risks that should prevent the re-development of the site. Therefore, the proposed redevelopment has an acceptable flood risk within the terms and requirements of the NPPF.

APPENDIX A –DRAINAGE SURVEY PLANS



KEY

- Inspection Chamber
- Directional Flow
- Soil Vent Pipe
- Gully
- Rainwater Pipe
- X Fault

NOTES NOT TO SCALE

DISTANCE, DIRECTION AND LOCATIONS OF DRAINAGE RUNS SHOWN ON THIS PLAN ARE ALL APPROXIMATE AND SHOULD NOT BE USED AS AN ACCURATE REFERENCE.

UTL = Unable To Lift

Title: Blackfriars Street, Manchester

Drawn by: MJ

Date: 24.05.21

Approved By:

Date:

Drawing Number: Aqua -

BG&E Markup
SR
19.04.21

Were these chambers buried?

Was this manhole lifted?

Was this manhole lifted?

Was the public sewer along Deansgate surveyed?

We believe there is drainage in the vaults, under the ramp. Was this within your scope of work and do you have any photographs of this area?

Why does the trace end here?

Why does the trace end here?

Surface Water

Foul Water

Possible route unable to survey

River Irwell

Deansgate

Blackfriars AStreet

Top/Bottom of bank
Building
Channel
Concrete slab
Closeboard fence
Chainlink fence
Concrete post & panel fence
Iron railing fence
Palisade fence
Post & Panel fence
Post & rail fence
Post and Wire Fence
Hedge
Invert
Kerb line (bottom)
Kerb line (top)
Overhead Power lines
Switchbox
Steel
Tree spreed
Verge
Wall
Borehole
Bollard
Cable tv
Electric cover
Electricity pole
Earth rod
Fire hydrant

Gulley
Gas cover
Inspection cover
Lamp post
Manhole
Marker post
OSBM
Rodding eye
Road sign
Sign post
Stump
Sluice Valve
Telegraph Pole
Trees
Traffic lights
Trial pit
Tree Trunk
Water cover
Bus stop
BT rectangle 3 pts

DRAINAGE DISCLAIMER

ONLY DRAINAGE DISCOVERED WHILST ON SITE IS DISPLAYED ON THIS DRAWING FURTHER INVESTIGATIONS MAY NEED TO BE CARRIED OUT TO ASCERTAIN THE FULL EXTENT OF THE DRAINAGE FOR THE SITE

KEY DIMENSIONS SHOULD BE CHECKED ON SITE BEFORE COMMENCEMENT OF ANY WORKS

NOTE

Grid and Level related to OS
using active GPS data network OSGB36
and transformations OSTN15/OSGM15

Amendments

	Date	Surveyor	Description of work

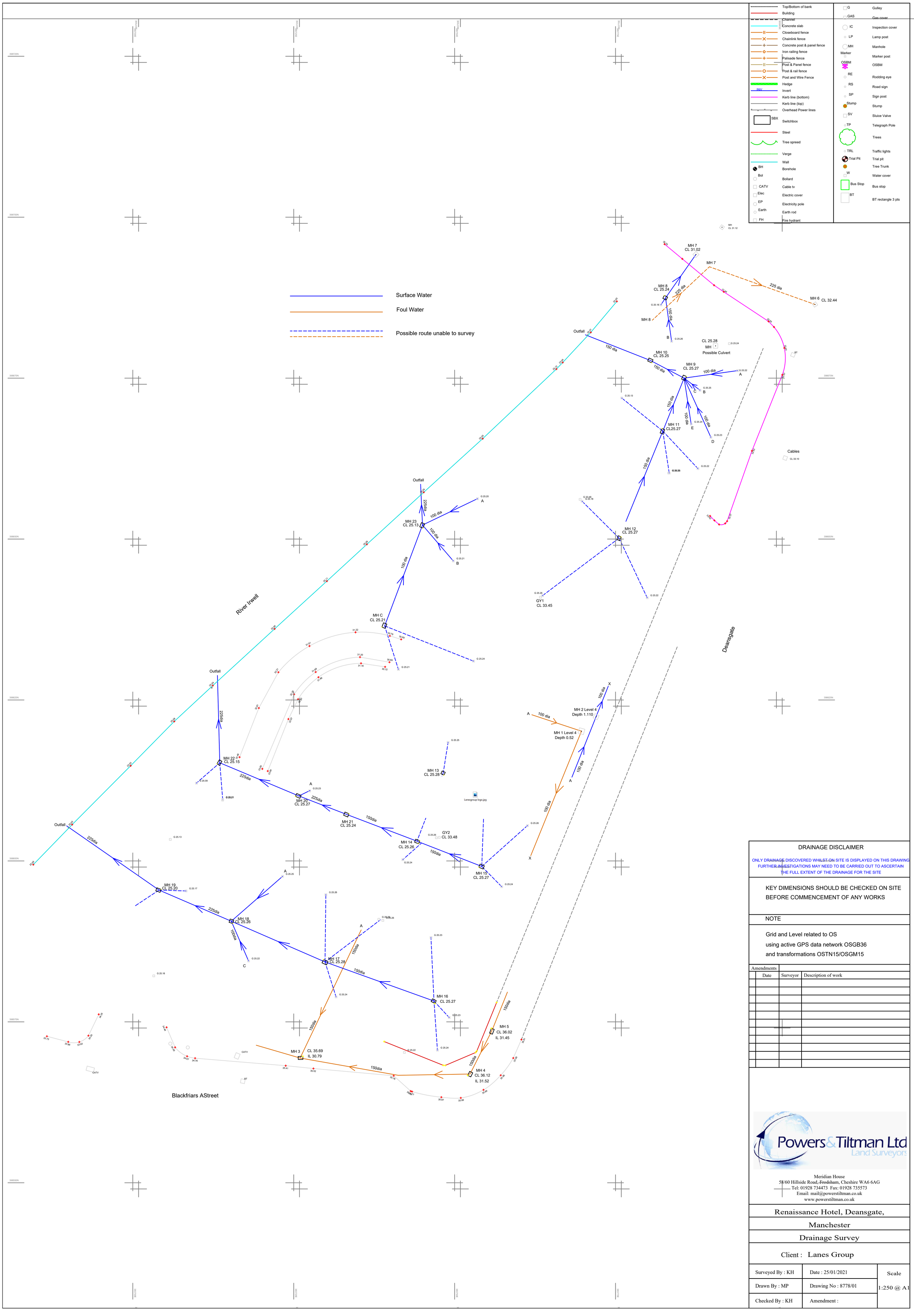
Powers&Tiltman Ltd
Land Surveyors

Meridian House
58/60 Hillside Road, Frodsham, Cheshire WA6 6AG
Tel: 01928 734473 Fax: 01928 735573
Email: mail@powerstiltman.co.uk
www.powerstiltman.co.uk

Renaissance Hotel, Deansgate,
Manchester
Drainage Survey

Client : Lanes Group

Surveyed By : KH	Date : 25/01/2021	Scale
Drawn By : MP	Drawing No : 8778/01	1:250 @ A1
Checked By : KH	Amendment :	



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Land Surveyors

Meridian House
58/60 Hillside Road, Frodsham, Cheshire WA6 6AG
Tel: 01928 734473 Fax: 01928 735573
Email: mail@powerstiltman.co.uk
www.powerstiltman.co.uk

Renaissance Hotel, Deansgate,

Manchester

Drainage Survey

Client : Lanes Group

Surveyed By : KH	Date : 25/01/2021	Scale
Drawn By : MP	Drawing No : 8778/01	1:250 @ A1
Checked By : KH	Amendment :	

APPENDIX B –TOPOGRAPHICAL SURVEY

Survey Notes

Grid: Local Plane Metric grid related to national grid at SC1

Levels: Related to OS Datum from GNSS positioning, converted using the national Geiod model OSGM15

Notes

Topographical Survey Legend

BUILDINGS AND WALLS

GENERAL INFORMATION

FENCE STYLES AND DESCRIPTIONS

OVERHEAD FEATURES

ROADS

WATER FEATURES

STREET FURNITURE

RELIEF AND VEGETATION

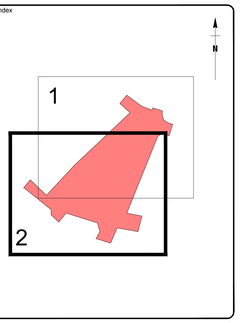
INSPECTION CHAMBERS AND PIPES

LEVEL AND HEIGHT INFORMATION

SURVEY INFORMATION SIGNS

GEOTECHNICAL INFORMATION

Sheet Index



Rev.	Date	Description
A	22/03/18	River Terrace level added

MALCOLM HUGHES
CHARTERED LAND SURVEYORS
65 Cross Street, Sale, Manchester
M33 7HF, Tel: 0161 905 1265
www.malcolmhughes.co.uk
survey@mhls.co.uk

Accreditations

Client
URBAN & CIVIC PLC
WESTMINSTER, ST MARKS COURT
STOCKTON ON TEES, TS17 6QP

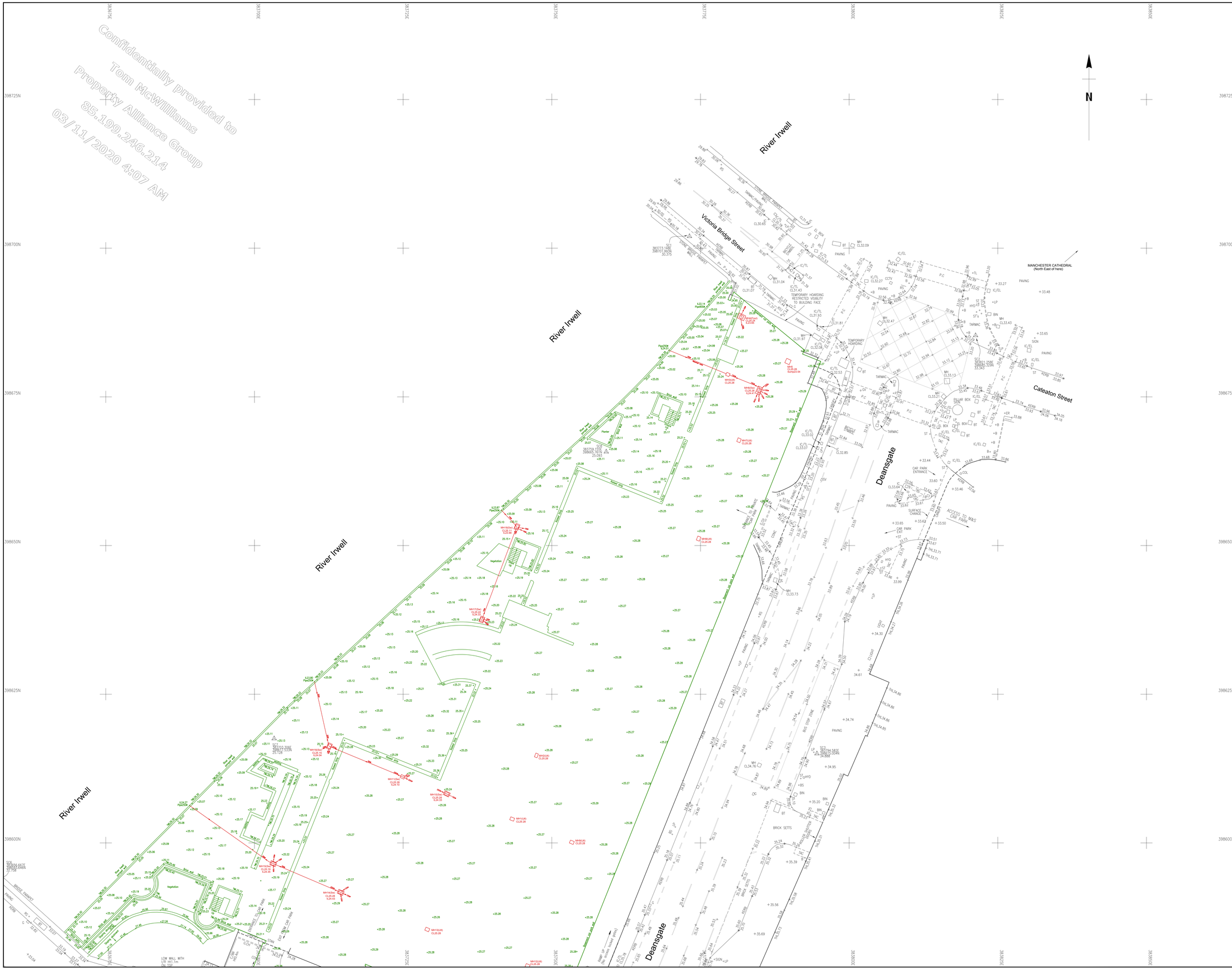
Project
SITE AT DEANSGATE
MANCHESTER

Drawing Title
TOPOGRAPHICAL SURVEY

Drawn By DCL	08/03/18	Survey Date	March 2018
Checked by CT	09/03/18	Scale	A0@1:200scale

Drawing No 51344/2 Revision A

Confidentially provided to
Tom McWilliams
Property Alliance Group
85.199.246.214
03/11/2020 4:07 AM



Survey Notes

Grid: Local Plane Metric grid related to national grid at SC1

Levels: Related to OS Datum from GNSS positioning, converted using the national Geiod model OSGM15

Notes

Topographical Survey Legend

BUILDINGS AND WALLS

Building
Building Open Sided
Ruin — RUIN
Passage
Wall with Height — WALL HT1.2m
Retaining Wall — R/W

FENCE STYLES AND DESCRIPTIONS

Close Boarded — C/B
Corrugated Iron — C/I
Chestnut Paling — C/P
Chainlink — C/L
Handrail — H/R
Interwoven — WN
Iron Railings — I/R
Lattice — L/T
Miscellaneous — Misc
Palisade — PAL
Post & Chain — P/C
Post & Rail — P/R
Post & Wire — P/W
Post & Barbed Wire — B/W
Wire mesh — W/M
Stile
Gate
Fence Linestyle

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing — PC
Track
Footpath — FP

STREET FURNITURE

Belisha Beacon — BB
Bus Stop — BS
Bollard — B
Cats Eye — CE
Cost Chucks — CC
Closed Circuit TV — CCTV
Drain — DR
Electricity Pole — EP
Flood Light — FL
Flag Staff — FS
Lamp Post — LP
Letter Box — LB
Name Plate (street) — NP
Mooring Ring — MR
Wire Post or Mooring Post — WP
Service Marker — MK
Mile Stone — MS
Post — P
Parking Meter — PM
Reflector Post — RP
Rodding Eye — RE
Road Sign — RS
Speed Camera — S/CAM
Information Sign — SIGN
Stop — ST
Traffic Light — TL
Telegraph Pole — TP
Traffic Light Push Button Post — TLP
Traffic Light Control — T/CTP
Control Box — C/BOX
British Telecom Box — BT BOX
Electricity Box — EL BOX
Gas Box — GAS BOX

INSPECTION CHAMBERS AND PIPES

Inspection Cover — IC
Inspection Cover (Elec) — IC/EL
Manhole — MH
British Telecom Cover — BT
Inspection Cover (Comms) — IC/COM
Cable TV — CATV
Inspection Cover Traffic Signals — IC/TL
Gully — G
Kerb Outlet — KO
Vent Pipe — VP
Down Pipe — DP
Rain Water Pipe — RWP
Soil Pipe — SVP
Gas Pipe — G=PIPE
Unable to lift cover — U/TL
Stop Tap — ST
Stop Valve — SV
Lamphole — LH
Hydrant — HYD
Earth Rod — ER
Gas Valve — GV
Water Meter — WM
Washout — WO
Rodding Eye — RE

GENERAL INFORMATION

Petrol Pump — PP
Basement Light — BL
Footbridge
Dish Type Channel
Slot Type Channel
Grate Type Channel
Tactile Paving — TAC
Crash Barrier — C/BR
Column — COL
Stanchion — STAN
Car Vacuum — VAC
Offset FH — o FH
Air Valve — o AV
Trough — TR
Chimney — CHIM
Telephone Call Box — TCB

OVERHEAD FEATURES

Electricity Pylon — E.PYLON
Electricity — EL
Telephone — TEL

WATER FEATURES

Canal
Stream
Ditch
River
Weir
Culvert — CUL
Grip (Land Drain)
Spring — SPR

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
Stump — STUMP
Individual Tree
Slopes with Height Greater than 1m
Cliff Face
Marsh
Reeds

LEVEL AND HEIGHT INFORMATION

Standard Spot Height — +123.45
Precision Spot Height — +123.456
Bed Level — +BL23.50
Boiler Level — +BL24.32
Soffit Level — +SL25.82
Threshold Level — +TH26.98
Cover Level — +CL28.45
Invert Level — +IL25.15
Pipe Soffit Level — +PS25.00
Floor Level — +FL6.00
Finished Floor Level — +FFL6.00
Top of Tank Level — +TT7.00
Eave Level — +EL8.00
Ridge Level — +RL8.00
Roof Hip Level — +RHL8.50
Flat Roof Level — +FRL7.00
Top of Canopy Level — +TOP/CY3.00
Underside of Canopy Level — +SOF/CYL5.50
Window Sill Level — +WSL8.00
Window Head Level — +WHL9.00
Springing Level — +SPL8.50
Arch Level — +AL7.00
Cable Level — +CHR8.55
Top of Wall Level — +TWL10.00
Underside of Beam Level — +UBL9.55
General Height — +H16.00

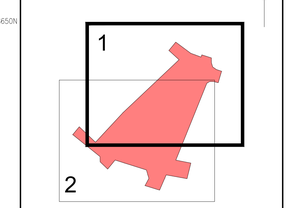
SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

GEOTECHNICAL INFORMATION

Borehole — BH
Trial Pit — TP
Monitor Pin — MON
Probe Hole — PH
Window Sample — WS

Sheet Index



Rev.	Date	Description
A	23/03/18	River Terrace level added

MALCOLM HUGHES
CHARTERED LAND SURVEYORS
65 Cross Street, Sale, Manchester
M33 7HF. Tel: 0161 905 1255
www.malcolmhughes.co.uk
survey@mhls.co.uk

Accreditations

Client
URBAN & CIVIC PLC
WESTMINSTER, ST MARKS COURT
STOCKTON ON TEES, TS17 6QP

Project
SITE AT DEANSGATE
MANCHESTER

Drawing Title
TOPOGRAPHICAL SURVEY

Drawn By	DCL 08/03/18	Survey Date	March 2018
Checked by	CT 09/03/18	Scale	A0@1:200scale

Drawing No: 51344/1 — Revision: A

United Utilities
Water for the North West

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

warren chan

40
peter street,
Manchester,
M2 5GP

FAO:

Your Ref: C1405
Our Ref: UUPS-ORD-250037
Date: 19/02/2021

Dear Sirs

Location: FLAT 101 1 DEANSGATE, MANCHESTER, M3 1AZ

I acknowledge with thanks your request dated 11/02/2021 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

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

Water for the North West

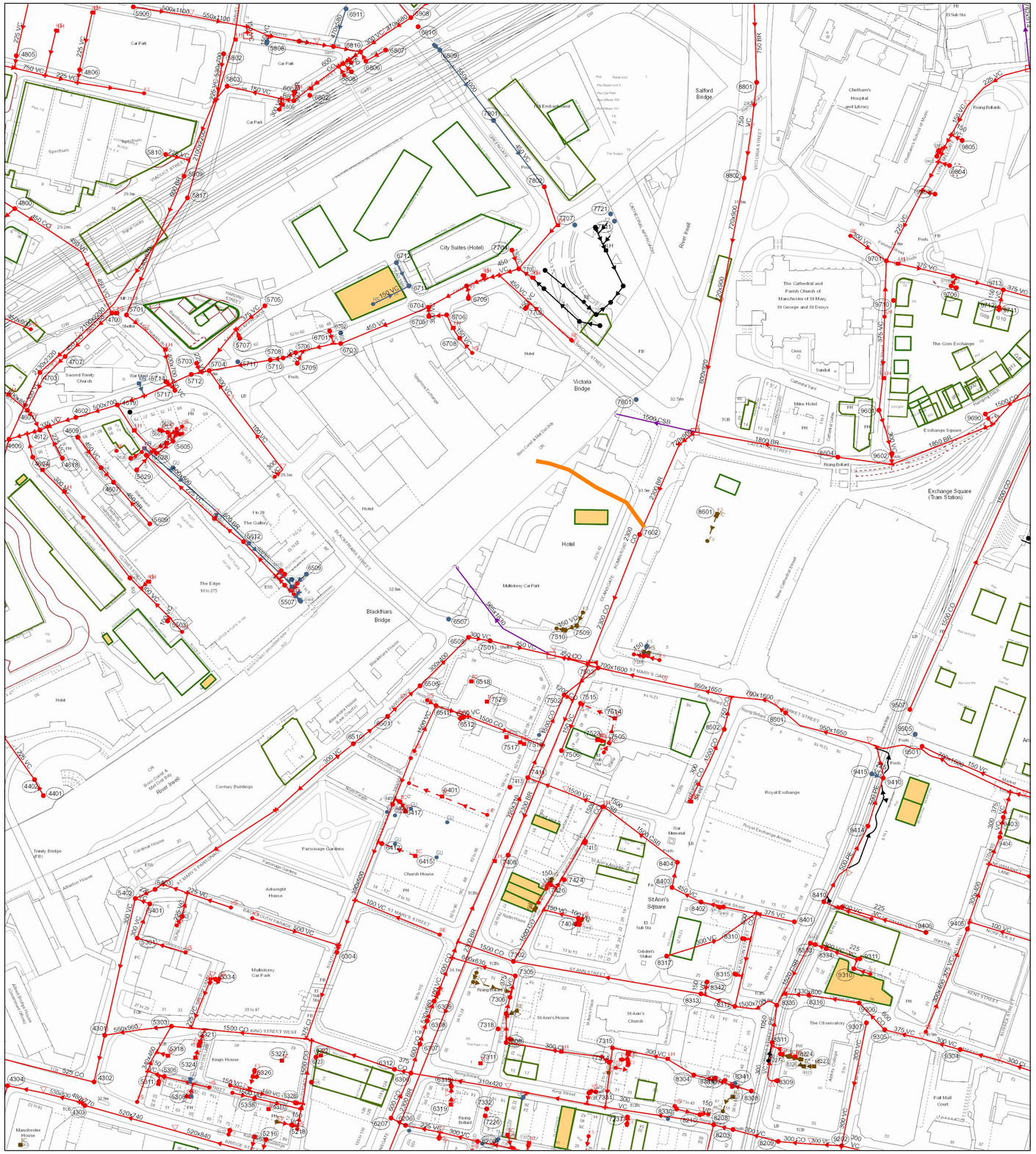
TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

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.

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP


Car Park
Spectrum
Salford Bridge
Victoria Bridge
Blackfriars Bridge
City Suites (Hotel)
Hotel
The Cathedral and Parish Church of Manchester of St Mary, St George and St Denys
Cheetham's Hospital and Library
The Corn Exchange
Exchange Square
Exchange Square (Tram Station)
Royal Exchange
Multistorey Car Park
St Ann's Square
St Ann's Church
St Ann's House
The Observatory
Kings House
Century Buildings
Parsonage Gardens
Church House
Trinity Bridge (PB)
Manchester House
Fall Mall Court
River Irwell
The Edge
The Gallery
Sacred Trinity Church
Cathedral Yard
Sundial
Cross
Mitre Hotel
Cobden's Statue
Fire Emergency Point
Rising Bollard
Posts
FB
PH
TCB
LB
CATHEDRAL APPROACH
DEANSGATE
VICTORIA STREET
MARKET STREET
ST MARY'S GATE
ST ANN'S STREET
KING STREET WEST
BLACKFRIARS STREET
GREENGATE
HARDMAN STREET
Boot Court & Mail Tub Bds
Rum Court & Mail Tub Bds
Alexandra House (Law Courts)
Alberton House
Cardinal House
Albert Memorial
Manchester Cathedral (Ruins)
Alan Turing Building (Manchester Museum)
Sackville Gardens
Sackville Street
Mancunian Way
Hulme Hall Road
Chorlton Street
Oldham Street
Dantzic Street
Deansgate
Tonman Street
Gaulter Way
Cathedral Walk
Cathedral Gardens
Cathedral Street
Chapel Walks
Exchange Street
Corporation Street
Market Place
Hanging Ditch
Cross Keys Walk
Cromford Walk
Kennedy Street
Brown Street
Cooperage Lane
Bridgewater Street
Bridgewater Place
Spinningfields
Quay Street
Liverpool Road
Water Street
Deansgate Bridge
Scotland Bridge
Chapel Walks Bridge
Victoria Bridge
Blackfriars Bridge
Trinity Bridge
Hanging Ditch Bridge
Cathedral Bridge
Exchange Bridge
Corporation Street Bridge
Market Place Bridge
Cross Keys Walk Bridge
Cromford Walk Bridge
Kennedy Street Bridge
Brown Street Bridge
Cooperage Lane Bridge
Bridgewater Place Bridge
Spinningfields Bridge
Quay Street Bridge
Liverpool Road Bridge
Water Street Bridge

APPENDIX D –STAKEHOLDER CORRESPONDANCE

Sabrina Ram

From: Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Sent: 04 May 2021 17:11
To: Sabrina Ram
Cc: Angela Leckie
Subject: RE: L20081 Manchester Renaissance

Good Afternoon Sabrina,

Hope you've had a nice bank holiday. Thank you for your patience in me getting back to you, apologies we have been quite swamped recently.

I can confirm the River Irwell at your site is classified as an ordinary watercourse.
As such, the LLFA is responsible for risk management for this section of watercourse.

There are certain criteria to trigger consent under the Land Drainage Act, known as Land Drainage Consent. Unlike the EA's FRAP process which can be triggered by proximity to watercourse, Land Drainage Consent is usually triggered by temp. or perm. works affecting channel flow or culverts. This can include discharge connections.
We would want to see consideration for existing onsite drainage & protection of the River Irwell regardless of whether the site needs any formal consents: Survey of existing drainage will need to be done to ensure no outfalls are severed by your works. Embedded design and construction management plans should be shown to protect the River Irwell.
I would suggest we have a look at your proposals to see if anything would trigger need for consent.

I would also note that it appears an indicative culvert conduit crosses your site boundary. This would need to be investigated and factored into your design. Please note I have made this interpretation based on the site plan here.

Shall I set up a Teams meeting to talk through your site tomorrow, please advise of a convenient time.

Kind Regards,
Laura

From: Sabrina Ram <Sabrina.Ram@bgeeng.com>
Sent: 04 May 2021 15:39
To: Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Cc: Emily McKiernan <emckiernan@propertyalliancegroup.com>; Will Clarke <wclarke@propertyalliancegroup.com>; Luke Kelly <luke.kelly@bgeeng.com>; Angela Leckie <angela.leckie@manchester.gov.uk>
Subject: RE: L20081 Manchester Renaissance

Dear Laura,

Hope you had a good bank holiday weekend and sorry to pester you again.

Would we be able to confirm who is responsible for the River Irwell, adjacent to our site (M3 2EQ)?

We are also keen to understand the consenting / approvals process for major works in close proximity to the river wall.

Any information you could share would be warmly received.

Kind regards,

t. 07809 760 571

Sabrina *Ram*—
Senior Civil Engineer

BG&E 50 years of curiosity, bravery and trust

163 Tower Bridge Road, London SE1 3LW
P / +44 203 775 1400 ***E*** / Sabrina.Ram@bgeeng.com ***W*** / bgeeng.com

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From: Sabrina Ram
Sent: 27 April 2021 14:28
To: Angela Leckie <angela.leckie@manchester.gov.uk>; Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Cc: Emily McKiernan <emckiernan@propertyalliancegroup.com>; Will Clarke <wclarke@propertyalliancegroup.com>; Luke Kelly <luke.kelly@bgeeng.com>
Subject: RE: L20081 Manchester Renaissance

Hi Angela,

Thanks for the email and information.

Hi Laura/ the FRM Team,

We're working on the civil and structural elements of the proposed development at Manchester Renaissance. This will involve major works in close proximity to the River Irwell. I understand this river is not the responsibility of the EA (see attached email). However, one of our design team members (who is based in Manchester) believes this falls under the responsibility of the EA.

The project is at Stage 2 and we would like to confirm the consenting process, requirements and easements as soon as we can, as this will have an impact on the building layout and also the programme.

Would you able to confirm who is responsible?

I look forward to hearing from you.
Best wishes,

Sabrina *Ram*—
Senior Civil Engineer

BG&E 50 years of curiosity, bravery and trust

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P / +44 203 775 1400 ***E*** / Sabrina.Ram@bgeeng.com ***W*** / bgeeng.com

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From: Angela Leckie <angela.leckie@manchester.gov.uk>
Sent: 27 April 2021 13:45
To: Sabrina Ram <Sabrina.Ram@bgeeng.com>; Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Cc: Emily McKiernan <emckiernan@propertyalliancegroup.com>; Will Clarke <wclarke@propertyalliancegroup.com>; Luke Kelly <luke.kelly@bgeeng.com>
Subject: Re: L20081 Manchester Renaissance

Hi Sabrina

I have actually been discussing this site with our Flood Risk Team (Laura Peacock) as it ties in with some stuff that we are dealing with outside of the Catherdral. My understanding from that is that MCC not the EA are the responsible authority.

I have copied Laura in so that you can continue this discussion with the FRT direct.

Best Wishes

Angela

There are two outfalls within the plot boundary that discharge to the River Irwell and we will be piling in close proximity to the river banks. Therefore, early discussions are required to understand the approvals process and requirements.

I understand that adjacent to our site, the river is classified as an ordinary watercourse and therefore is not the responsibility of the Environment Agency (see attached email). However, another member of our design team, who is preparing the Flood Risk Assessment, believes the River Irwell in this location is owned and maintained by the Environment Agency.

Would you be able to check with the LLFA to confirm

From: Sabrina Ram <Sabrina.Ram@bgeeng.com>
Sent: 23 April 2021 17:07
To: Angela Leckie <angela.leckie@manchester.gov.uk>
Cc: Emily McKiernan <emckiernan@propertyalliancegroup.com>; Will Clarke <wclarke@propertyalliancegroup.com>; Luke Kelly <luke.kelly@bgeeng.com>
Subject: L20081 Manchester Renaissance

Dear Angela,

Kassim Bahsoon of Property Alliance Group Ltd passed on your details, as we're looking at the civil engineering aspects of the proposed Manchester Renaissance project.

There are two outfalls within the plot boundary that discharge to the River Irwell and we will be piling in close proximity to the river banks. Therefore, early discussions are required to understand the approvals process and requirements.

I understand that adjacent to our site, the river is classified as an ordinary watercourse and therefore is not the responsibility of the Environment Agency (see attached email). However, another member of our design team, who is preparing the Flood Risk Assessment, believes the River Irwell in this location is owned and maintained by the Environment Agency.

Would you be able to check with the LLFA to confirm?

Many thanks and should further information be required, please don't hesitate to get in touch.

Kind regards,

Sabrina *Ram*—
Senior Civil Engineer

BG&E 50 years of curiosity, bravery and trust

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Sabrina Ram

From: Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Sent: 24 May 2021 13:17
To: Sabrina Ram; Flood Risk Management
Cc: Luke Kelly; Mark Martin; Frank Fitzpatrick; Emily McKiernan; Will Clarke
Subject: RE: L20081 - Manchester Renaissance

Thank you Sabrina,

I will try to get you some comments for your specs now as this will be more helpful to you.
I have forwarded your scope to the Structures Manager and will send you his response as soon as it lands.

Should you want to discuss anything further just let me know.

Kind Regards,
Laura

From: Sabrina Ram <Sabrina.Ram@bgeeng.com>
Sent: 24 May 2021 12:26
To: Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Cc: Luke Kelly <luke.kelly@bgeeng.com>; Mark Martin <MMartin@propertyalliancegroup.com>; Frank Fitzpatrick <FF@planit-ie.com>; Emily McKiernan <emckiernan@propertyalliancegroup.com>; Will Clarke <wclarke@propertyalliancegroup.com>
Subject: RE: L20081 - Manchester Renaissance

Dear Laura,

Thanks for getting back to us.

Mark (copied into this email) is currently pricing the job and is looking into the methodology on site. If the Structures Manager has any comments on the attached scope, we can incorporate this into the specifications now. Alternatively, Mark can send you these documents once complete.

Best wishes,

Sabrina *Ram*—
Senior Civil Engineer

BG&E 50 years of curiosity, bravery and trust

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From: Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Sent: 24 May 2021 11:28
To: Sabrina Ram <Sabrina.Ram@bgeeng.com>
Subject: RE: L20081 - Manchester Renaissance

Hi Sabrina,

Hope you're well and that you had a lovely weekend in the rain again,

Thanks for your 3 emails, sorry we have been a bit stretched and would have been unable to get to site last Thurs, but thank you for the invite which is much appreciated.

- I am downloading your file transfer now and will have a look,
- Would you mind sending the proposals for the SI near the river wall to me, I will then send it on to the Structures Manager as soon as it lands? This is just because we are the planning consultee, so it will be easier for me to keep tabs on what has been done for when we come to your Planning Application.

Look forward to hearing from you,

Kind Regards,
Laura

From: Sabrina Ram <Sabrina.Ram@bgeeng.com>
Sent: 21 May 2021 16:23
To: Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Cc: Emily McKiernan <emckiernan@propertyalliancegroup.com>; Mark Martin <MMartin@propertyalliancegroup.com>; Will Clarke <wclarke@propertyalliancegroup.com>; Stuart Ellis <sellis@e3p.co.uk>; Luke Kelly <luke.kelly@bgeeng.com>; Laura Peacock <Laura.Peacock@manchester.gov.uk>
Subject: L20081 - Manchester Renaissance

Dear Laura,

Hope you're well.

As briefly discussed in our Teams meeting, we will be digging some small trial pits close the river wall in the coming weeks. Please could we confirm if we need to apply for any permits/ approvals for this? It would be great if we could receive the contact details for the Structures Manager (Neil?). We can then forward our proposals for review.

And a little update; I went to site yesterday and the additional CCTV drainage survey is in progress. I believe the UU overflow at the north end of the site and the culvert may be the same asset, as the culvert route appears to match the UU overflow route.

We'll send over the full CCTV survey report once this is available.

Have a great weekend.

Kind regards,

Sabrina *Ram*—
Senior Civil Engineer

BG&E 50 years of curiosity, bravery and trust

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Sabrina Ram

From: Perry, Graham <Graham.Perry@uuplc.co.uk>
Sent: 04 March 2021 17:05
To: Warren Chan
Cc: Wastewater Developer Services
Subject: Pre Development Enquiry for : Ramada Renaissance Deansgate Manchester M3 1AZ UU reference Number : 4200037613

Caution: Email originated from outside the SGi Network.

Dear Sirs,

Pre Development Enquiry for: Ramada Renaissance Deansgate Manchester M3 1AZ UU reference Number : 4200037613

We have carried out an assessment of your application which is based on the information provided. This pre-development advice on your drainage strategy will be valid for 12 months. Your drainage strategy will need to be reviewed by other competent authorities as part of the planning process, and we advise that you carry out the necessary site investigations to confirm the viability of your proposals.

If your investigations require access to our public sewer network, we ask that you contact our network engineers with a request for an access certificate via our main contact telephone number 0345 3723223 or refer to the link below:
https://www.unitedutilities.com/builders-developers/working-near-our-assets/

Foul Water

Foul flow from this site will be allowed to drain into the public foul water/combined sewer system.

Our preferred point of discharge would be to the 450mm and the 2300mm diameter public combined sewers Blackfriars Street and Deansgate respectively as per your proposal drawing at an unrestricted rate.

If you are able to identify an alternative, more suitable point of discharge, we request that you contact us at your earliest convenience so that we can assess suitability.

Surface Water

I have noted that your application is for a foul only connection but if you require to dispose of surface water you must adhere to the following advice

All surface water flow from the proposed development should drain in-line with the drainage hierarchy, as outlined in Paragraph 80, (Reference ID: 7-080-20150323), of the National Planning Practice Guidance. We also recommend you prioritise the use of multi-functional sustainable drainage systems for the management of surface water in accordance with national planning policy.

Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable.

This is outlined as follows, in order of priority:

1. **into the ground (infiltration);**
2. **to a surface waterbody;**
3. **to a surface water sewer or highway drain;**
4. **to a combined sewer.**

For guidance, The North West SuDS Pro-Forma provides information on the appropriate evidence required at each stage of the hierarchy, to demonstrate how each level has been discounted.

The Lead Local Flood Authority has responsibility for all surface water drainage concerns and their input to your proposal is critical. You should also consider whether it is necessary to discuss your proposal with the Environment Agency, or Internal Drainage Board (if operating in your area).

The Local Planning Authority are the determining authority for any application for planning permission and the appropriate authority for determining cost viability of a proposed drainage scheme, such assessments are outside of the jurisdiction of United Utilities.

Infiltration

Surface water runoff generated from this development should discharge to the ground via infiltration system where feasible.
A detailed evidence based feasibility assessment must be carried out in line with Chapter 25 of the CIRIA SuDS Manual 2015 to determine whether infiltration is a suitable method of surface water disposal.
Particular attention must be paid to Ground Water Source Protection Zones to ensure that the risk of pollution to these valuable resources is not compromised. Details can be obtained from the government website:
https://www.gov.uk/guidance/groundwater-source-protection-zones-spzs#find-groundwater-spzs
If your site is in a Groundwater Source Protection Zone, you should have regard to the Environment Agency's approach to Groundwater Protection. Information on this is available via the link below:
https://www.gov.uk/government/publications/groundwater-protection-position-statements
Please note that such a location could have implications for the principle of your development and the need for additional mitigating measures to protect the groundwater environment and public water supply in the detailed design of your site.

Waterbody

If an evidence based assessment has been carried out and confirms that infiltration is not feasible, we recommend that you contact the Lead Local Flood Authority and/or Environment Agency to discuss a point of discharge to the adjacent River Irwell
We would encourage you to identify and engage with any third party landowner and riparian owner to agree access and discharge rights to the water body if this is not in your ownership.

Levels

For low-lying sites, (where the ground level of the site or the level of a basement is below the ground level at the point where the drainage connects to the public sewer), care should be taken to ensure that the property is not at increased risk of flooding. If these circumstances exist, we recommend that you contact us to discuss further. It could affect the detailed design of your site and result in the need to incorporate appropriate mitigating measures in your drainage scheme.

Land drainage / Overland flows / track drainage

United Utilities have no obligation, and furthermore we do not accept land drainage, overland flows or track drainage into the pubic sewerage network under any circumstances

Existing Wastewater Assets Crossing the Site

We have significant assets crossing this site that cannot realistically be diverted. We would ask that you obtain a copy of our asset data records from your provider and plan your development around them ensuring that all legal easements are observed. If any work is required that may impart vibration into the ground we would ask that you contact us for further advice.

Existing Water Assets Crossing the Site

It is the developer responsibility to identify utilities on-site. Where clean water assets are shown on our records, we recommend that you contact our Water Pre-Development Team, via the following email address:
DeveloperServicesWater@uuplc.co.uk. Further information for this service can be found on our website via the link below:
https://www.unitedutilities.com/builders-developers/larger-developments/pre-development/water-pre-dev/

Connection Application

Although we may discuss and agree discharge points and rates in principle, please be aware that you will have to apply for a formal sewer connection. This is so that we can assess the method of construction, Health & Safety requirements and to ultimately inspect the connection when it is made. Details of the application process and the form itself can be obtained from our website by following the link below:
https://www.unitedutilities.com/builders-developers/larger-developments/wastewater/sewer-connections/
We recommend that the detailed design should confirm the locations of all utilities in the area and ensure that any proposed drainage solution considers routing and clash checks where required.
If we can be of any further assistance please don't hesitate to contact us further.
Kind regards,
Graham Perry

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Developer Services
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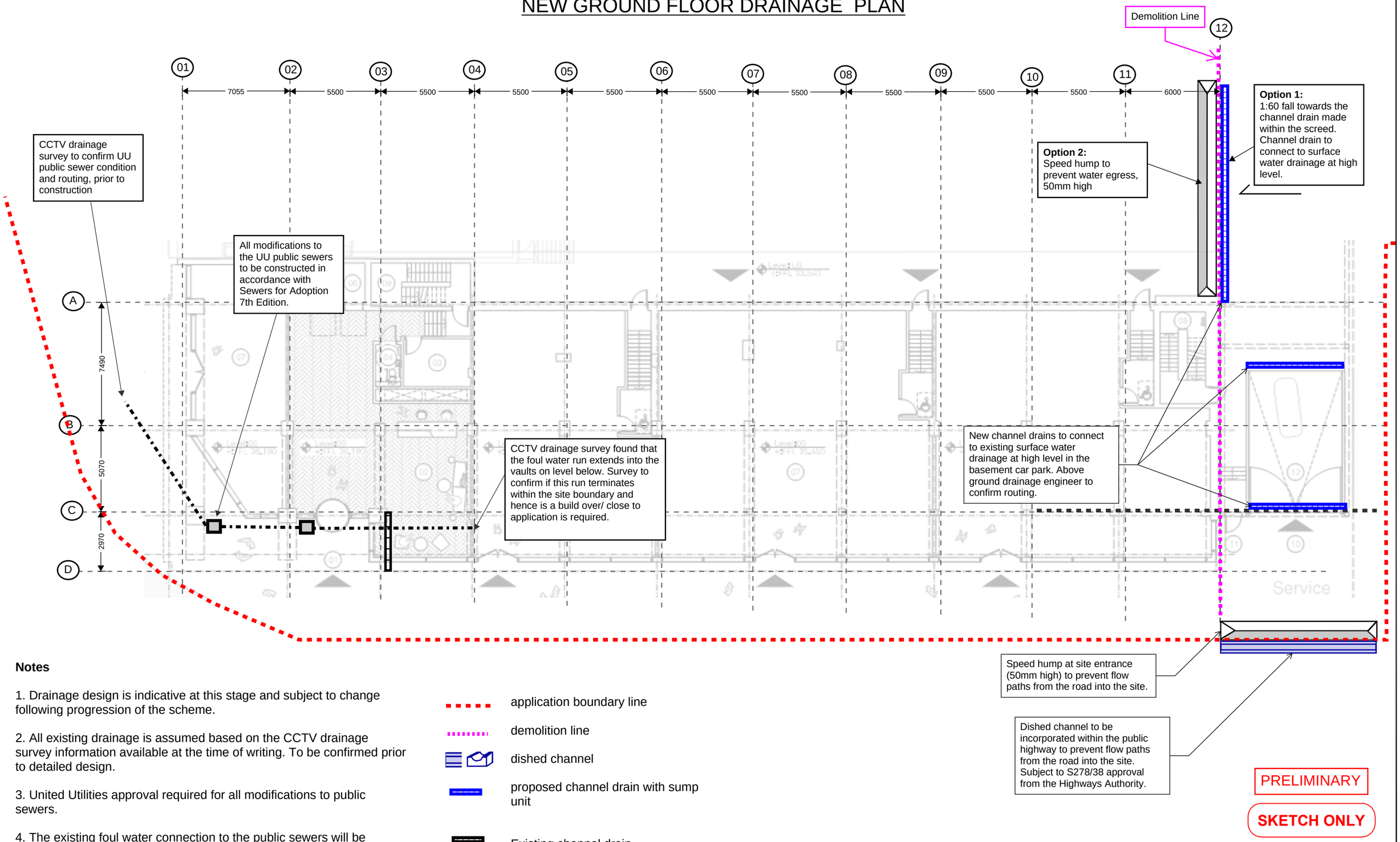
APPENDIX E - PRELIMINARY PROPOSED DRAINAGE PLANS

NEW GROUND FLOOR DRAINAGE PLAN



Notes

1. Drainage design is indicative at this stage and subject to change following progression of the scheme.

2. All existing drainage is assumed based on the CCTV drainage survey information available at the time of writing. To be confirmed prior to detailed design.

3. United Utilities approval required for all modifications to public sewers.

4. The existing foul water connection to the public sewers will be re-used, if possible. Allow for remedial works (high pressure jetting). If the existing connection does not have sufficient capacity, a new connection to the public foul water sewer will be required. This would require Section 106 approval.

5. Surface water to drain as existing, with the exception of the channel drains shown on this plan.

- application boundary line
- demolition line
- dished channel
- proposed channel drain with sump unit
- Existing channel drain
- Existing drain (assumed)
- Existing UU foul water public sewer
- Existing UU foul water chamber

PRELIMINARY

SKETCH ONLY

BG&E	DATE 16/06/2021	PROJECT RENAISSANCE - PREMIER HOUSE	
	SCALE NTS	TITLE DRAINAGE PLAN GROUND FLOOR	
	GRID -		
	PREPARED SR		
	SHEET A3	PROJECT No. L20081	SKETCH No. PH-SK-CIV-001 REV P0

APPENDIX F –CALCULATIONS