

**ARC Oxford**

Plot 4200

## Utilities Statement

Project Ref: **13520**

Report Ref: **R100**

Revision 1.2

November 2023

Client

**Advanced Research  
Clusters GP Limited  
(ARC)**

<b>Client</b>	Advanced Research Clusters GP Limited (ARC)
<b>Project Title</b>	ARC Oxford – Plot 4200
<b>Report Type</b>	Utilities Statement
<b>Report Number</b>	R101



<b>Revision</b>	<b>Revised by</b>	<b>Approved by</b>	<b>Date</b>
1.0	Marcel Richards – Assistant Engineer	Narinder Bangar – Director	06/11/2023
1.1	Marcel Richards – Assistant Engineer	Narinder Bangar - Director	23/11/2023
1.2	Marcel Richards – Assistant Engineer	Narinder Bangar – Director	02/02/2024

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## 1 Introduction

Baynham Meikle Partnership Limited has been commissioned on behalf of Advanced Research Clusters GP Limited (ARC) to prepare a utilities statement for the planning application for the development of a new laboratory space with an associated car parking area to the rear of the building. The utilities statement will be part of a Planning Application to be made to Oxford City Council. Existing site utilities can be found in Appendix A.2

The site is located at ARC Oxford and accessed off John Smith Drive. The development area is approximately 1.283 hectares in total and the Ordnance Survey Grid reference is E454750, N203802. Site location plan is included in Appendix A.1

The GEA of the office and laboratory space is 3780sqm. The car parking area has a 158 parking spaces, 8 of which being dedicated disabled bays. The developments total GEA is 12,829sqm. Please see the ground floor site plan in Appendix C.3



## 2 Existing Services

### 2.1 Electricity

Plot 4200 currently has high voltage (HV) and low voltage (LV) cables running within the development boundary supplying electricity to the existing buildings.

### 2.2 Gas

The existing gas infrastructure network at ARC Oxford runs underneath/within the main access roads of the development, before branching off to run supplies to buildings on the development plots. This is also the case for Plot 4200, with the closest gas main running within John Smith Drive.

### 2.3 Water

Plot 4200 is located in close proximity to the wider water supply infrastructure network for ARC Oxford. The closest water main runs within/underneath John Smith Drive.

### 2.4 Telecoms

Current records show BT cables running underneath the footpaths of the main access roads of ARC Oxford (e.g. John Smith Drive) before branching off the main run to supply telecommunications to the existing buildings on site.

### 2.5 Foul/Surface Water Drainage

Thames Water records confirms that their network is present in John Smith Drive including a public foul and surface water sewer running along the South western boundary of the site.

## 3 Proposed Services Strategy

### 3.1 Electricity Supply

The incoming electricity supply requirement for the facility has been advised by the tenant to be 2147kVA.

Mechanical and Electrical Consultant are currently engaging with Power On regarding wider power requirements for ARC Oxford. This includes the provision of a new sub-station and power supply to Plot 4200, with power loads of 2147 kVa being applied for.

An 11kV high voltage supply will be provided to the boundary of the site by an approved district network operator (DNO) with their high voltage ring main unit housed within an external GRP enclosure. The need for this enclosure is accounted for on the submitted plans.

### 3.2 Gas Supply

A gas supply is not required for the proposed redevelopment, as the building will be entirely reliant on electricity for its operation. On plot infrastructure will be required to enable laboratory gases delivered to the site to be fed into the building.

### 3.3 Water Supply

Dialogue will be opened with Thames Water (TW) to confirm water supply and capacity for the proposed development.

The site is to be served through one water connection which will enter through the mechanical riser which is within the core of the proposed building on the ground floor. The incoming water main is anticipated to flow at a rate of 1l/s. A small tank will be provided to boost water from the ground floor and onto the levels above.

The new water supply will be separately metered and linked to the site wide BMS for leak detection. It is envisaged that the water supply pressure will require boosting via a non-storage break tank and booster set to serve the new developments cold water supply requirements.

### 3.4 Telecommunications

Dialogue will be opened with BT to confirm telecommunications connectivity and capacity for the proposed development. Other telecommunication providers are to be contacted for their records to show what is within close proximity to the development.

It is proposed that BT provision could be taken from the existing network off John Smith Drive.

Telecommunication services will be routed to the new building Comms / server rooms. The landlord will also require incoming fibre for their IT systems which will also include access control, CCTV and BMS. Provision will be required for incoming fibres and potentially phone lines for any tenants. It is suggested that cable ducts are put in place and it is the responsibility of the tenant to source their connections.

### 3.5 Surface Water

The proposed surface water strategy is detailed in the Baynham Meikle "Flood Risk Assessment and Drainage Strategy" report. Confirmation of outfall can be found within Appendix B.2.

Surface water flows are proposed to discharge into the existing Thames Water public storm sewer.

A drainage developer services application has been applied for to Thames Water to agree points of connections and flow rate.

### 3.6 Foul Water

It is proposed that the foul water drainage from the proposed development is discharged into the on plot foul public sewer. It is proposed that a free discharge will be allowed with no restriction of flow rate.

## 4 Summary

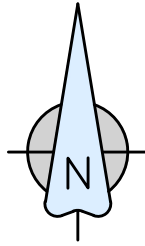
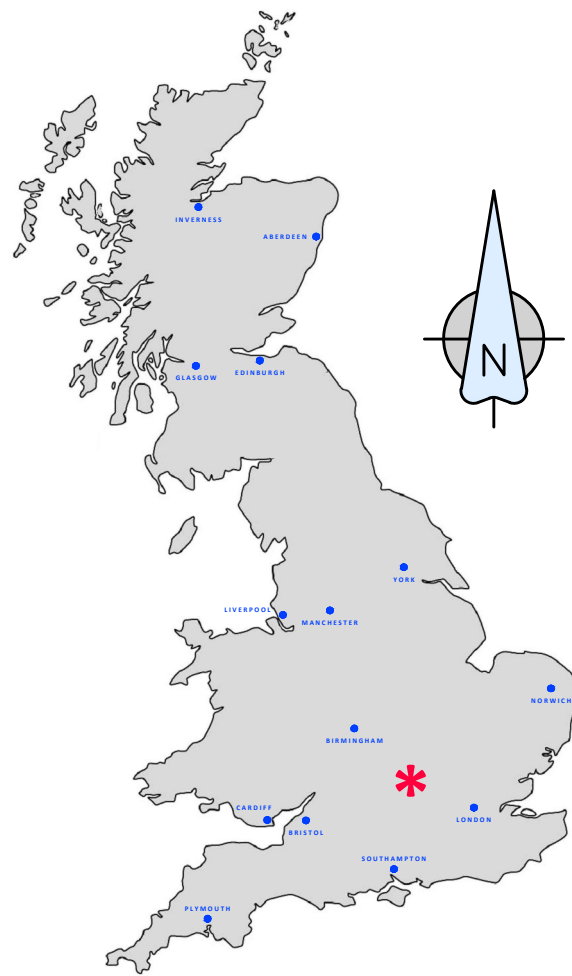
Subject to detailed discussions with the various statutory authorities, it is anticipated that the proposed services and drainage connections for the new development should be accepted and connected with minor disruptions onto the local infrastructure.

It is our opinion that proposals are feasible and sufficient to support the proposed development, without the requirement of any major off-site reinforcements.

## Appendix A – Existing Site

- A.1 Site Location Plan
- A.2 Existing Utilities





SITE DETAILS		
Address:	NASH COURT, OXFORD BUSINESS PARK, COWLEY, OXFORD	
Nearest Postcode:	OX4 2RU	
Grid Co-Ordinates:	E: 454748	N: 203779

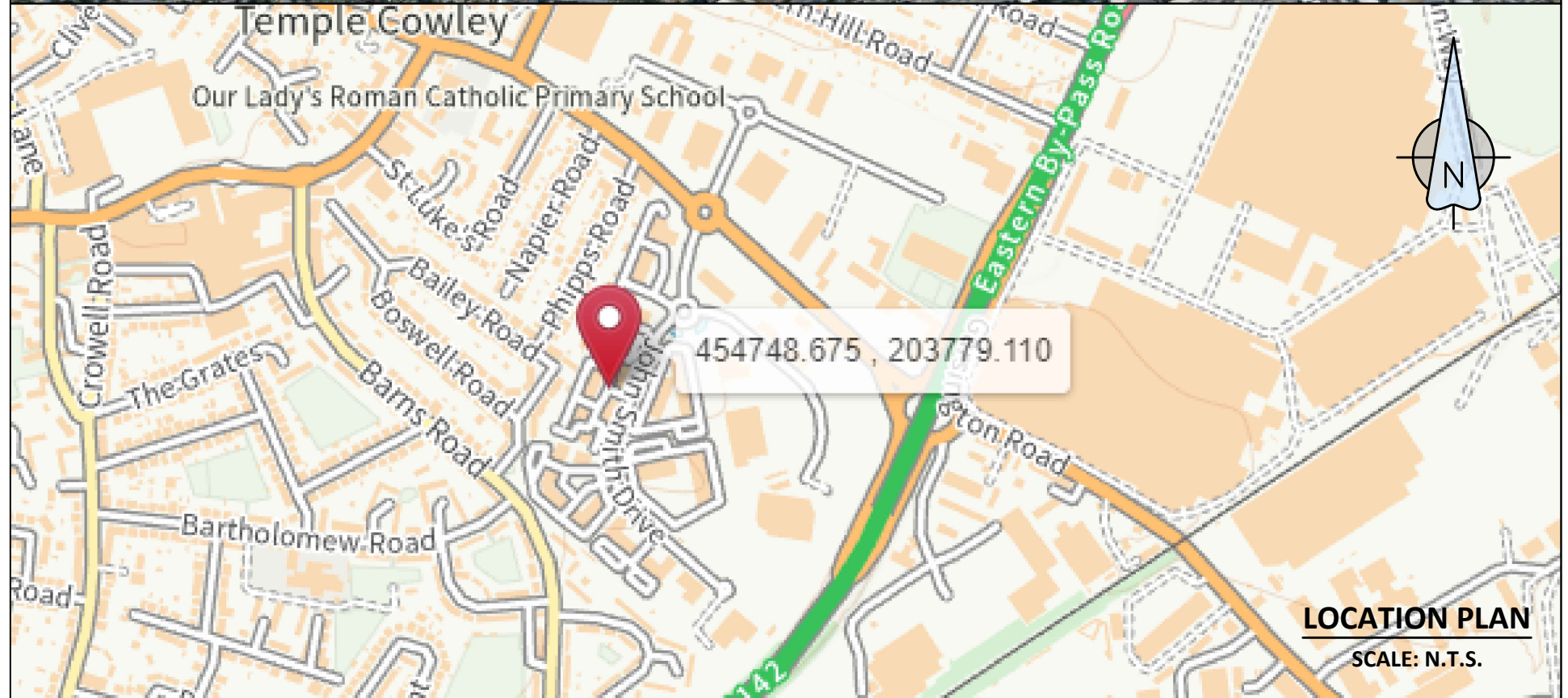


Notes

A3



**SITE PLAN**  
SCALE: N.T.S.



**LOCATION PLAN**  
SCALE: N.T.S.



CHECK: For the plan to be in scale, the above scale bar must measure correct, i.e. 100mm when printed.

Project Title <b>NASH COURT REDEVELOPMENT</b>				
BM Ref 13520	Scale @ A3 1 : —	Drawn by M.R.	Checked by J.H.	Project Eng J.H.

Drawing Title <b>SITE LOCATION PLAN</b>	
Drawing Number <b>13520_100</b>	Revision

DRAFT  
DRAWING

Drawing Status <b>For Information</b>	
	0121 434 4100 admin@baynhammeikle.co.uk www.baynhammeikle.co.uk

Rev	Date	Description	By	Chkd
A	01/08/2023	First Issue.	M.R.	J.H.

Revision Schedule

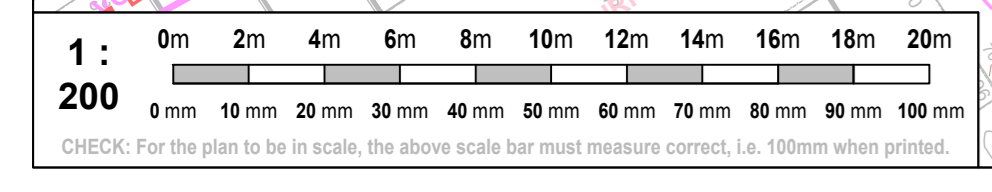
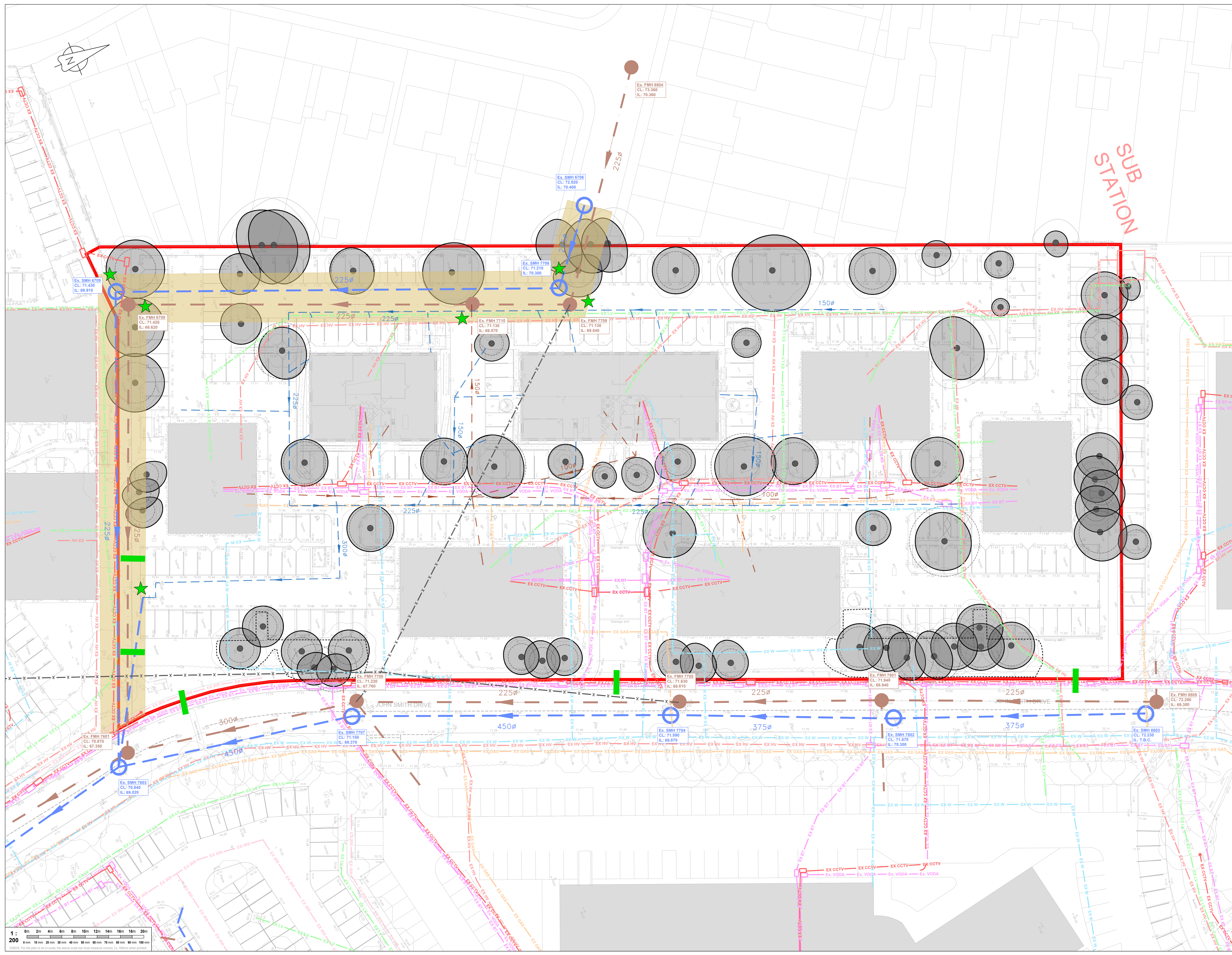


1. Do not scale from this drawing. All dimensions must be checked & verified on-site. If in doubt ask.
2. The Contractor is to check & verify all dimensions & levels before any work is started on-site.
3. Existing site survey works have been carried out by others & no guarantee can be given by Bayham Meikle for their accuracy.
4. Any discrepancies noted on-site are to be reported to Bayham Meikle immediately.
5. This drawing is to be read in conjunction with all relevant Architects', Engineers' and other Specialists' drawings & specifications.
6. For existing ground conditions, refer to Site Investigation reports.

**NOTE:**

ALL EXISTING UTILITIES HAVE BEEN TAKEN FROM EXTERNAL SOURCES, AND THEIR ACCURACY CANNOT BE GUARANTEED BY BAYHAM MEIKLE. THE PRECISE LOCATIONS, DEPTHS AND SIZES OF EXISTING UNDERGROUND UTILITIES WILL NEED TO BE CONFIRMED BEFORE ANY WORK IS STARTED ON-SITE. ANY REDUNDANT UTILITIES ENCOUNTERED ARE TO BE CONFIRMED DEAD VIA ON-SITE TESTING.

- KEY :**
- NASH COURT - SITE BOUNDARY.
  - EXISTING PUBLIC STORM DRAINAGE.
  - EXISTING PUBLIC FOUL DRAINAGE.
  - EXISTING PRIVATE STORM DRAINAGE.
  - EXISTING PRIVATE FOUL DRAINAGE.
  - EX BT - EXISTING B.T. TELECOMS.
  - EX VODA - EXISTING VODAFONE.
  - EX CCTV - EXISTING C.C.T.V. / SECURITY.
  - EX W - EXISTING WATER MAINS.
  - EX GAS - EXISTING GAS MAINS.
  - EX HV - EXISTING H.V. ELECTRICITY.
  - EX LV - EXISTING L.V. ELECTRICITY.
  - EX IRR - EXISTING IRRIGATION MAINS.
  - EXISTING EASEMENTS.
  - X — X — EXISTING REDUNDANT DRAINAGE.
  - EXISTING TREE ROOT PROTECTION AREAS.
  - LOCATION OF PROPOSED TRIAL TRENCHES (5 No. TOTAL).
  - ★ EXISTING MANHOLES TO BE INVESTIGATED (6 No. TOTAL).



B	24/01/2024	Existing Services Records updated	K.M.	N.S.B.
A	10/09/2023	First Issue	M.R.	N.S.B.
Rev	Date	Description	By	Chk'd
		Revision Schedule		

**For Information**

Project Title  
**ARC Oxford  
 Nash Court Redevelopment**

Drawing Title  
**Existing Site Constraints Plan**

Drawing Number  
**13520-102**

Revision  
**B**

RM Ref	Scale @ A0	Drawn by	Checked by	Project Eng
13520	1:200	M.R.	J.H.	N.S.B.

**BAYHAM MEIKLE**  
 Consulting Civil & Structural Engineers

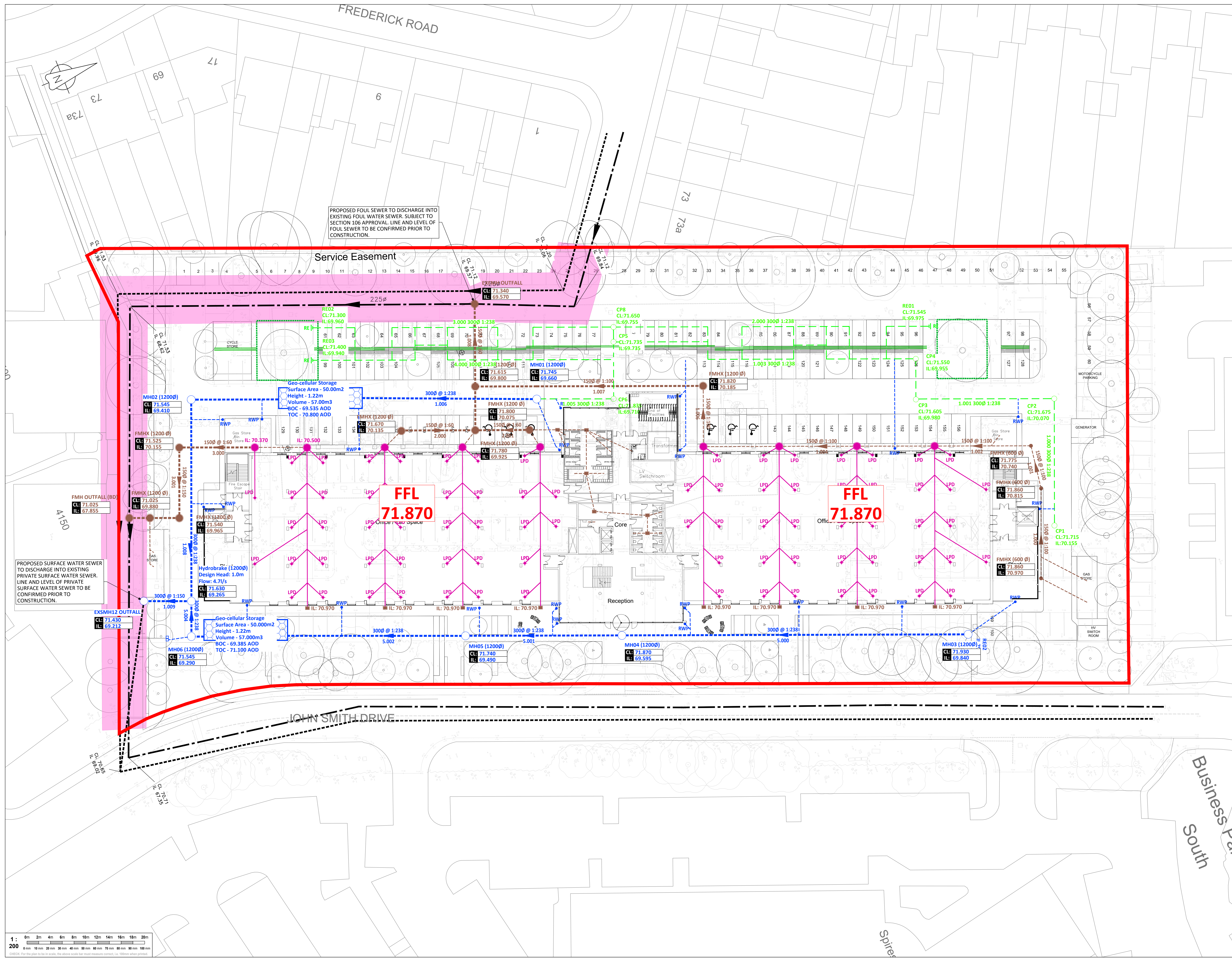
020 434 4000  
 admin@bayhammeikle.co.uk  
 www.bayhammeikle.co.uk



## Appendix B – Authority Information

- B.1 Fresh Water Connection
- B.2 Foul and Storm Water Connection





PROPOSED FOUL SEWER TO DISCHARGE INTO EXISTING FOUL WATER SEWER. SUBJECT TO SECTION 106 APPROVAL. LINE AND LEVEL OF FOUL SEWER TO BE CONFIRMED PRIOR TO CONSTRUCTION.

PROPOSED SURFACE WATER SEWER TO DISCHARGE INTO EXISTING PRIVATE SURFACE WATER SEWER. LINE AND LEVEL OF PRIVATE SURFACE WATER SEWER TO BE CONFIRMED PRIOR TO CONSTRUCTION.

- Do not scale from this drawing. All dimensions must be checked & verified on-site. If in doubt ask.
- The Contractor is to check & verify all dimensions & levels before any work is started on-site.
- Existing site survey works have been carried out by others & no guarantee can be given by Baynham Meikle for their accuracy. Any discrepancies noted on-site are to be reported to Baynham Meikle immediately.
- This drawing is to be read in conjunction with all relevant Architects, Engineers and other Specialists' drawings & specifications.
- For existing ground conditions, refer to Site Investigation reports.
- The drainage installation is to be compliant with Building Regs. (Part H).
- All adoptable drainage works shall comply with 'Water UK - Design and Construction Guide'.
- The following pipe strengths shall be adopted (unless noted otherwise):
  - Pipes up to and including 150mm Ø to be PVC-U to BS-EN 1326, or Clayware to BS-EN 295 Class 160
  - Pipes 150mm Ø up to and including 225mm Ø to be Clayware to BS-EN 295 Class 160
  - Pipes 300mm Ø to be Clay to BS-EN 295 Class 160 or Concrete to BS 5911 Class M.
  - Pipes over 300mm Ø to be Concrete to BS 5911 Class M.
- All pipe runs to be laid with flexible joints.
- All pipes entering and exiting manholes are to be connected to pipe soffit level unless noted otherwise.
- Pipe Bedding and surround to be as follows:

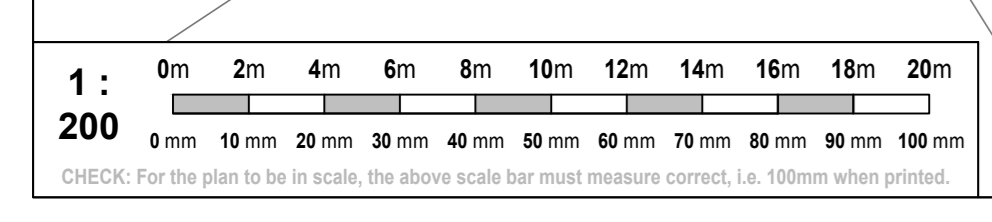
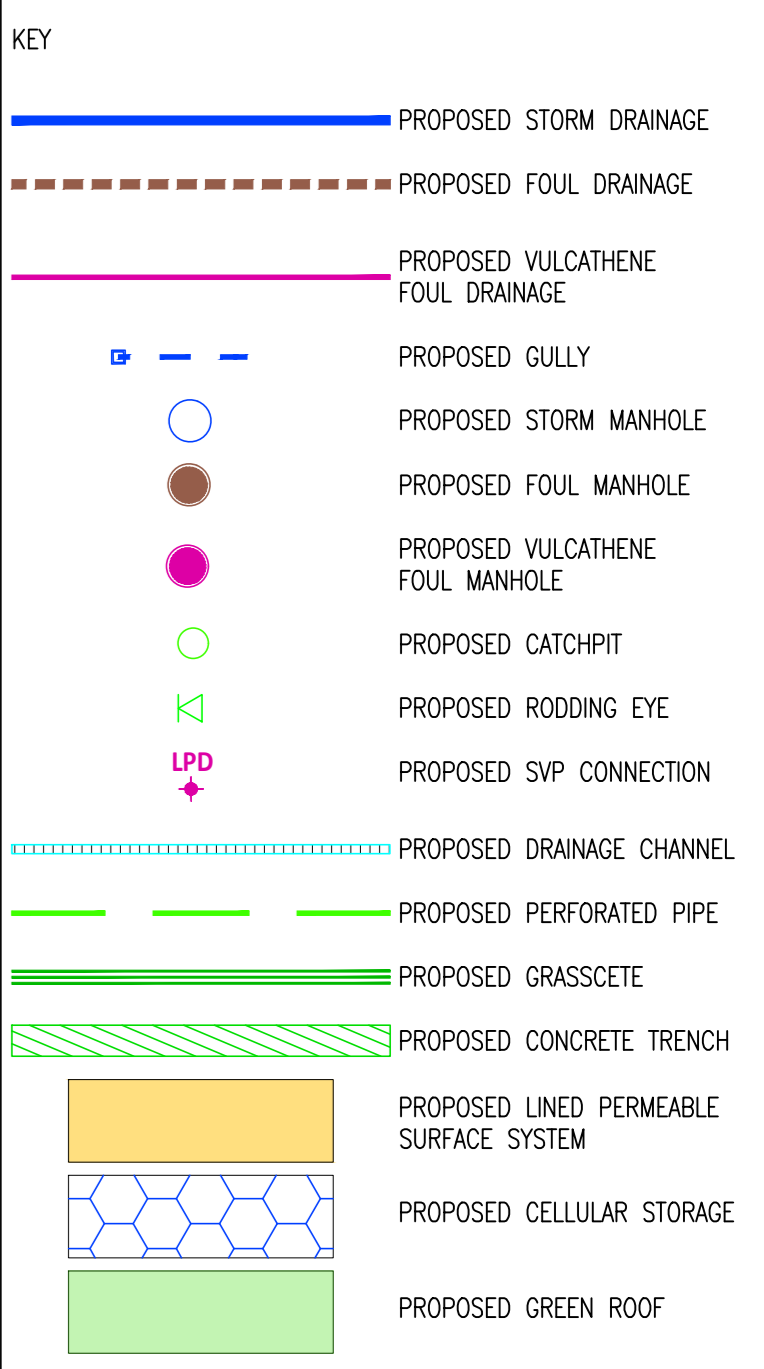
Location:	Cover to Soffit:	Pipe Bedding:
Roads:	>1.2m	>0.9m Class S
	<1.2m	>0.9m Class Z
Hard and Soft Landscaping:	>0.6m	>0.6m Class S
	<0.6m	>0.6m Class Z

- The following Conc. mixes are to be used (in accordance with BS 8500):
 

Location:	Mix Reference:
Concrete Surround to Pipes	ST4
Concrete Base and Surround to Manholes	ST4

- All precast-concrete products (i.e. pipes, manhole rings, etc.) shall be of suitable Concrete mix to cater for Class Z Sulphates.
- Pre-formed channels are to be used in manholes where applicable.
- Granolithic Concrete benching to be used in manholes to a dense smooth face neatly shaped and finished to all branch connections and laid in accordance with the Specification.
- All connections to be turned in the direction of flow using pipe bends.
- Manhole covers and frames to be Ductile Iron Medium Duty grade S175 rectangular to BS-EN 124 positions outside vehicular-trafficked areas, and Heavy Duty grade D400 in vehicular-trafficked areas.
- Manhole covers and frames to be Ductile Iron Medium Duty grade A15 covers in Soft Landscaping.
- First flexible joint in pipes adjacent to a manhole shall be a maximum of 600mm from inside face of manhole, connecting to rocker pipe.
- The length of Rocker Pipe is as follows:
 

Pipe Diameter:	Length of Rocker Pipe:
150mm - 600mm	600mm
675mm - 750mm	1000mm
825mm & Over	1250mm
- Manholes with outgoing pipes greater than 600mm Ø shall be fitted with guard bars, safety chairs or other safety devices.
- The Principle Contractor shall be responsible for checking the existing line and invert levels of any connection points for both the Foul and Surface Water systems, prior to undertaking installation of any new drainage works. Any deviation to the levels and positions indicated on the drawings should be brought to the attention of the Engineer.
- All invert levels specified are outgoing (except Backdrop connections).
- All Foul connections to be 150mm Ø or larger as a minimum gradient of 1:40 unless noted otherwise. Surface Water pipe sizes are as indicated.
- Foul pipes to be externally vented (EVP) at head of run.
- For location of internal EVP, SS, etc. refer to Architect's latest layouts.
- Internal Foul drainage connections / positions and setting-out information to be confirmed by the M&E Consultant / Architect.
- This drawing is subject to detailed design and for planning purposes only.



Rev	Date	Description	By	CHKD
B	29/01/2024	Drainage updated to full layout	M.R.	N.S.B.
A	10/09/2023	First Issue	M.R.	N.S.B.

Drawing Status: **For Planning**

Project Title: **ARC Oxford - Plot 4200**

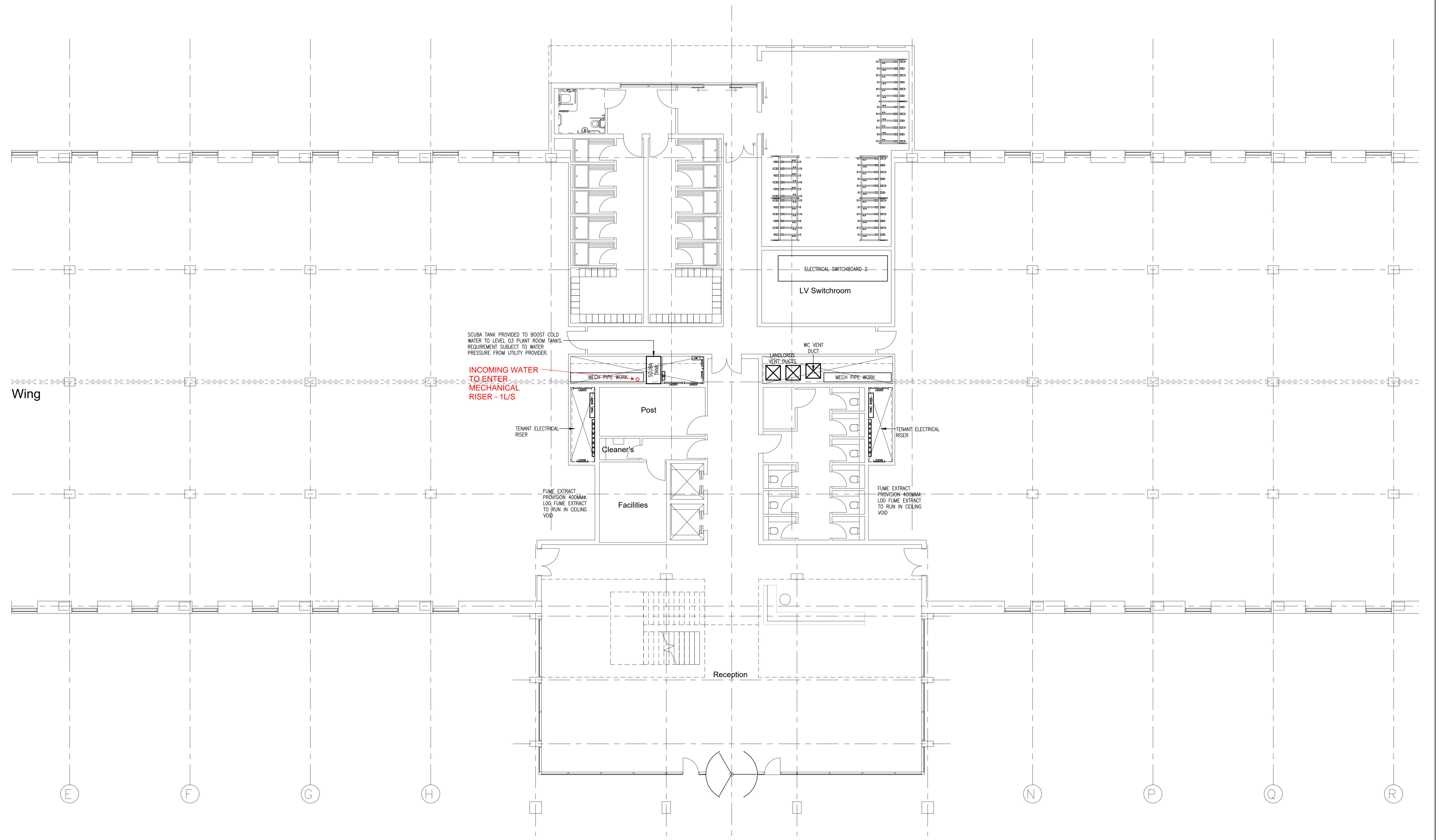
Proposed: **Drainage Plan**

Drawing Number: **13520\_200** Revision: **B**

BM Ref	Scale @ A0	Drawn by	Checked by	Project Eng
13520	1:200	J.H.	J.H.	N.S.B.

**BAYNHAM MEIKLE** 020 434 4000  
 Consulting Civil & Structural Engineers admin@baynhammeikle.co.uk  
 www.baynhammeikle.co.uk





Rev	Description	By Date	M	E	P	F	Issue Date
P01.02	STAGE 2 DRAFT ISSUE	JAB					11.09.23
P01.01	STAGE 2 DRAFT ISSUE	JAB					23.08.23

Drawing Title  
**LEVEL 00  
 RISER AND PLANT SKETCH**

Status of Drawing <b>STAGE 2</b>				
Engineer JAB	Drawn JAB	Date JUNE 2023	Checked	Date
Project Name <b>ARC OXFORD          PLOT 4200/4400 NASH COURT</b>				



Dalkia  
 Second Floor, Unit 1B, Stratford Court, Cranmore Boulevard, Solihull B904QT.  
 tel +44 (0) 121 713 8100 www.dalkia.co.uk

Drawing No.  
**P4200-DAL-XX-00-DR-ME-SK1**

Scale @A1  
 1:100  
 Rev.  
 P01.02

## Appendix C – Proposed Information

### C.1 Proposed Site Plan



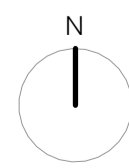
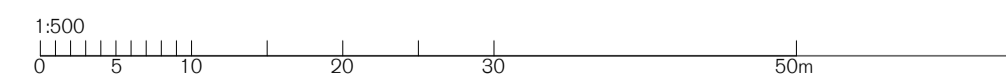
**GENERAL NOTES**

All architectural drawings should be read in conjunction with reports by other consultants submitted along with the application.

All proposed internal layouts are indicative and approximate.

Any dimensions or datum levels are subject to further detail design development.

- Key**
- 1. Stacked Plant Core
  - 2. Roof Terrace
  - 3. Biodiverse Roof & PV Cells
  - 4. Future Tenant Flues
  - 5. Lab Gas / Bin Store
  - 6. Covered External Cycle Store



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REV	ISSUED	DESCRIPTION	DRAWN	CHECKED
P01	01/02/24	Issued to Carter Jonas for Planning Submission	MC	SG

PROJECT	DESCRIPTION	DATE	SCALE AT A1	JOB NO		
Nash Court, ARC Oxford	PL - Proposed Site Plan - Roof	Feb 2024	1 : 500	23.036		
CLIENT	STATUS	SUITABILITY				
ARC - Advanced Research Clusters	PLANNING	S3				
DRAWING NO	REV	DRAWN	CHECKED			
NCO - SP - ZZ - RF - DR - A - 0011	P01	MC	SG			
PROJECT	ORIGINATOR	ZONE	LEVEL	TYPE	NO.	NUMBER

