



**ONE NORTH PARADE,
MANCHESTER**

DRAINAGE STRATEGY

Project No: 2404-02

October 2025

Rev: P02

ONP-REN-XX-XX-RP-C-00002

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1. INTRODUCTION

1.1 *Purpose of this Report*

This Surface Water Drainage Strategy has been prepared to support the planning application for the proposed development at One North Parade, Manchester.

The assessment includes: a summary of the existing site, an estimate of the existing and proposed surface water discharge rates, infiltration assessment, SUDs assessment, and outline drainage proposals and performance criteria.

This report should be read in conjunction with the following documents:

- renaissance Flood Risk Assessment – ONP-REN-XX-XX-RP-C-00001
- renaissance Phase 1 Desktop Study – ONP-REN-XX-XX-RP-C-00003

The proposals within this report are intended to demonstrate the feasibility of the overarching drainage strategy to support the planning proposal.

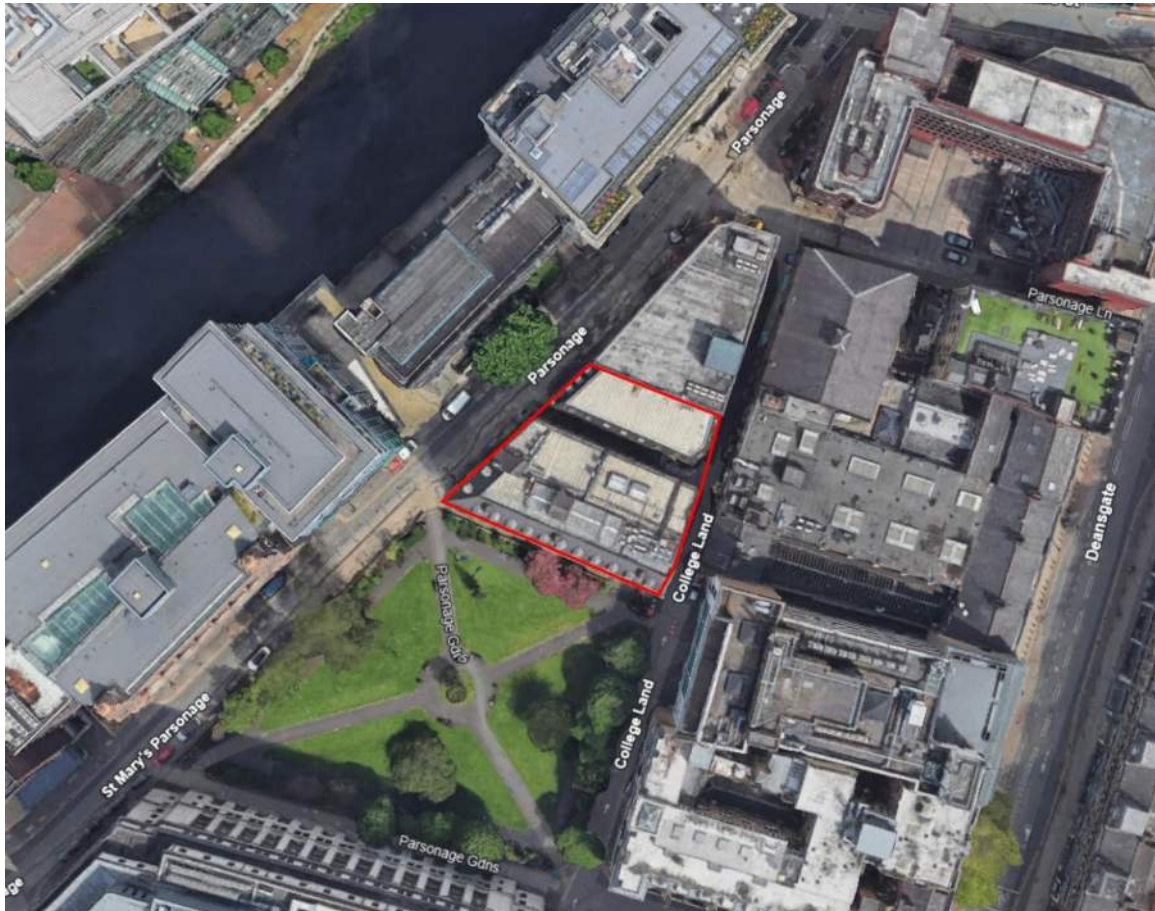
2. THE SITE

2.1 Site Location

The site location is described below:

- Post Code M3 2HS
- OS Reference (X) 383642
- OS Reference (Y) 398492
- National Grid Reference SJ836984

The site location is illustrated in Figure 2.1 below.



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Figure 2.1: Indicative Site Location

2.2 Site Description

The site is circa 0.102 Ha and is currently occupied by two buildings utilised as offices, with a road (Back College Land) passing between the building in a southeast – northwest orientation. The smaller building, located in the northeast of the site, is four storeys high, and the larger building, located in the southwest is five storeys high. Both buildings include basement structures.

The roadway between the two sites comprises brick paving and holds a narrow width which could be an obstacle for vehicle access.

The topography of the site is generally flat with levels ranging from 35.46mAOD to the north east of the site and 36.10mAOD to the south west.

Refer to Appendix A for further details of the existing topography of the site.

2.3 Existing Site Drainage

The existing site is considered 100% impermeable with associated existing drainage.

United Utilities sewer mapping indicates a 300mm diameter combined water sewer Parsonage to the west of the site and a 390x500mm combined water sewer within College Land to the east. For further details of the sewer networks surrounding the site refer to the United Utilities sewer asset map in Appendix B.

2.4 Geology

The following sections provide an overview of the Geology, Hydrogeology and Hydrology. Refer to ONP-REN-XX-XX-RP-C-00003 - Preliminary Site Investigation report produced by renaissance for further details.

BGS mapping does not display any made ground deposits on site, however based on the historical mapping and the development that has taken place, made ground is anticipated which poses a risk of potentially hazardous materials and the potential for groundwater / surface water contamination.

BGS mapping indicates the site is indicated to be underlain by superficial Glaciofluvial Sheet Deposits. This stratum typically comprises of Sand and Gravel.

The deeper solid geology is indicated to be part of the Chester Pebble Bed Formation which typically comprises of Sandstone

2.5 Hydrogeology & Hydrology

Based on the inferred geology, a summary of the Environment Agency aquifer designations is presented in the table below:

Stratum	Coverage	Aquifer Designation
Superficial Glaciofluvial Sheet Deposits	Full Site	Secondary (A) Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.
Bedrock Chester Pebble Bed Formation	Full Site	Secondary (A) These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

Table 2.1: Aquifer Designations

The nearest named watercourse to the site is the River Irwell, located 55m to the northwest of the site.

No active Potable Groundwater Abstraction points are located within 2000m of the site.

2.6 Proposed Development

The proposed development is for a commercial end use, comprising demolition of two existing buildings and construction of a fourteen-storey office building with an additional basement

Refer to Appendix C for the proposed development plans.

3. SURFACE WATER DRAINAGE HIERARCHY

3.1 Surface Water Discharge Assessment

In accordance with NPPF, the following hierarchy of surface water drainage options has been considered:

- priority 1: collected for non-potable use
- priority 2: infiltrated to ground
- priority 3: discharged to an above ground surface water body
- priority 4: discharged to a surface water sewer, or another piped surface water drainage system
- priority 5: discharged to a combined sewer

Rainwater Harvesting

The installation, running and maintenance costs, along with the spatial constraints associated with header tanks and pump sets make rainwater harvesting not viable for this development.

Infiltration Based Systems

Infiltration has been considered as the preferred method of surface water disposal. Due to the extent of the building footprint and proximity to the surrounding highways, this method of discharge has been discounted.

Surface Waterbody

Opportunities for discharge into a watercourse have been considered. The closest watercourse is the River Irwell which is located 55m to the northwest and forming a connection into the river would necessitate crossing 3rd party land. As such, this method of discharge has been discounted.

Surface Water Sewer or Highway Drain

Discharge to a surface water sewer, highway drain, or another drainage system have been considered. There are no surface water sewers present around the site which could be connected into without having to cross third party land, and as a result this method of discharge has been discounted.

Combined Sewer

Discharge to a combined sewer has been considered; UU sewer mapping indicates a 300 mm diameter combined sewer is present within Parsonage at a depth of approximately 9m, and a 390x500 diameter combined sewer is present within College Land at an unknown depth.

The invert level of the sewer within Parsonage is indicated to be sufficiently deep such that a gravity connection could be formed. A connection into the Parsonage sewer is therefore proposed for the discharge of surface water for the development.

The new connection will be subject to a S106 application with United Utilities under the Water Industry Act.

4. SURFACE WATER DISCHARGE RATE ASSESSMENT

4.1 Pre-Development Surface Water Run-Off Rates

The development is considered 100% impermeable. Refer to topographical survey in Appendix A and Existing Impermeable Areas drawing ONP-REN-XX-FN-DR-C-00050-P01 in Appendix D.

Existing Brownfield Run-Off Rates

The brownfield run off rate has been calculated using the Modified Rational Method, based on a 60 minute storm duration.

Modified Rational Method: $Q = 2.78Ci_{(peak)}A$

$$C = C_V C_R$$

$$C = 0.84 \times 1.3$$

Areas (ha)	I _(peak.) (mm.hr)			Peak Runoff (l/s)		
	1 in 1 Year	1 in 30 Year	1 in 100 Year	1 in 1 Year	1 in 30 Year	1 in 100 Year
0.102	40.398	98.615	129.253	12.509	29.607	40.023

Table 4.1 – Brownfield Run-Off Rates

Existing Greenfield Run-Off Rates

The greenfield run-off for the total site area has been considered, this has been calculated using Microdrainage ICP SuDS method (Appendix E). The rates presented below are what would be typical of a site with an equivalent surface area which remains undeveloped / covered in grass or vegetation., Qbar has a return period of 2.3 years

The equivalent greenfield run-off rate is tabled below: -

Return Period	Q _{Greenfield} (l/s)
1 in 1 year	1.2
1 in 2 year	1.4
1 in 30 year	2.1
1 in 100 year	2.2
Q _{BAR}	1.4

Table 4.2– Greenfield Run-off Rates

4.2 Proposed Surface Water Discharge Rates and Volume

The non-Statutory Technical Standards for Sustainable Drainage Systems (2025) state, where the volume of runoff discharged from the development to surface waters or sewers for the 1% AEP, 6-hour rainfall event is greater than the volume of greenfield runoff for the same rainfall event, the peak allowable discharge rate from the development for the 1% AEP event shall be limited to the 50% AEP greenfield runoff rate, which can be considered equivalent to the calculated QBAR (mean annual flood) or QMED (median annual flood) for the site, or 3l/s/ha, whichever is the greater.

Policy JP-S 5 from the Places for Everyone Joint Development Plan expects developments to manage surface water runoff through sustainable drainage systems and as close to source as possible (unless demonstrably inappropriate) so as to not exceed greenfield run-off rates or

alternative rates specified in district local plans, such as those identified for areas with critical drainage issues.

As set out within the Manchester Council SFRA, developments should aim to restrict the runoff rate from site to greenfield run-off rate where feasible.

It is not considered feasible to restrict the flow rate to Q_{BAR} due to the associated blockage risk it would pose. It is therefore proposed that the total runoff from the site is limited to 2.0 l/s to minimise the risk of blockage and overland flooding.

It is also not considered feasible to reduce the discharge volume to greenfield volume or provide long term storage for the additional runoff volume over the Greenfield volume. This is due infiltration being unviable and the limited space available over the site to provide long term storage.

5. ATTENUATION AND SUDS ASSESSMENT

5.1 Attenuation requirements

Attenuation for surface water on the area of flat roof will be provided by a blue roof. The remaining 0.056ha area of the site will need to be attenuated under the footprint of the building.

Refer to Appendix F for the proposed drained areas.

Due to the nature of the development urban creep has not been considered.

The post development discharge rates will include for an increase in the rainfall intensity of 45% for the 1% annual exceedance probability (AEP), to allow for climate change as is consistent with a design life of the development of 100 years, as outlined by the National Planning Practice Framework (NPPF).

Quick storage estimates for the above return periods, using Micro Drainage, indicate that the approximate attenuation volumes shown in table 4.1 are required to limit the peak surface water discharge to 1.5 l/s.

Return Period	Development Area (ha)	Surface Water Attenuation Estimate (m ³)
1:100 Year +45%CC	0.056	27-41

Table 4.1 – Attenuation Volumes

5.2 Sustainable Urban Drainage Assessment

Table 4.2 below provides a summary of typical SuDS outlined within CIRIA guide C753 'The SuDS Manual'. It provides an assessment of the various above and below ground SuDS that can provide water quality treatment and management of flows to reduce runoff rates and volumes and whether they can be suitably incorporated into this development. The purpose of this assessment is to set out the options that can be considered within the final drainage network and do not mean that all suitable features need to be incorporated into the final design:

SUDS Technique	Description	Suitability for Development Sites	
Rainwater Harvesting	Collection of rainwater run-off for use	Installation, running and maintenance costs are deemed not viable	×
Soft Landscaping	Grassed areas that allow direct infiltration of rainwater	Not suitable due to lack of external areas	×
Filter Drains	Granular filled Linear drains / soakaway with either granular fill and perforated pipe, or dense vegetation that treat runoff from adjacent impermeable areas	Not suitable due to lack of external areas	×
Swales	Shallow landscape channel that can infiltrate or convey runoff.	Not suitable due to lack of external areas	×
Infiltration Basins	Depressions in the ground designed to store and infiltration runoff to the ground. Can be landscaped to provide amenity value.	Not suitable due to lack of external areas	×
Wet Ponds	Basins with permanent pool of water providing water quality treatment, wildlife, and amenity benefit.	Not suitable due to lack of external areas	×

	Designed to provide temporary storage for additional runoff.		
Extended Detention Basins	Dry basins that are designed to temporarily store runoff providing water quality treatment.	Not suitable due to lack of external areas	✗
Constructed Wetland	Ponds and shallow wetland areas with vegetation to improve pollution removal and enhance wildlife habitat.	Not suitable due to lack of external areas	✗
Porous Paving	Granular build-up beneath permeable paving systems that can be used to either store runoff (lined system) and increase time of concentration or allow percolation into the ground.	Not suitable due to lack of external areas	✗
Trees Pits	Managed permeable paving systems around tree pits that can be used to either store runoff (lined system) and increase time of concentration or allow percolation into the ground.	Not suitable due to lack of external areas	✗
Soakaways	Infiltration device to temporarily store runoff and allow it to percolate into the ground.	Not suitable due to lack of external areas	✗
Green Roof	Vegetated roof area that reduces runoff and increases time of concentration.	Not suitable due to the extent of plant and maintenance access routes limiting the available space	✗
Blue Roof	Roof area designed to store and reduce peak runoff rates during intense storms.	Suitable on flat roof	✓
Underground Storage	Attenuation structures installed below ground to provide runoff storage.	Suitable under the basement footprint	✓

✗ Not suitable

? Potentially suitable subject to further investigation

✓ Suitable

Table 4.2 – SuDS Techniques & Suitability for Development Site

Following the above assessment, it is proposed the development will utilise the following:

- Blue Roof
- Attenuation Tank

The various SuDS elements are shown on the Below Ground SW Drainage GA within Appendix G, with a summary of the volumes provided in the table below.

SuDS Feature	Catchment Area (m ²)	Storage Area (m ²)	Depth (m)	Porosity (%)	Attenuation Volume (m ³)
Attenuation Tank	563	40	0.8	95	30.40
Blue Roof	458	388	0.129	95	47.55
Total	1021	-	-	-	77.95

Table 4.3 – Summary of Attenuation Volumes

5.3 Water Quality Assessment

Water quality is generally affected by frequent rainfall events, 1 in 1-year events or less. To assess the water quality, consideration will be given to the guidance within CIRIA Guide C753 The SuDS Manual. The pollution hazard levels for different land uses are presented in the table below.

Land Use	Pollution Hazard Level	Total Suspended Solids	Metals	Hydro-carbons
Residential Roofs	Very Low	0.2	0.2	0.05
Other roofs (typically commercial/ industrial roofs)	Low	0.3	0.2 (up to 0.8 where there is potential for metals to leach from the roof)	0.05
Individual property driveways, residential car parks, low traffic roads (eg cul de sacs, homezones and general access roads) and non-residential car parking within infrequent change (eg schools, offices) ie <300 traffic movements/day	Low	0.5	0.4	0.4
Commercial yard and delivery areas, non-residential car parking with frequent change (eg hospitals, retail), all roads except low traffic roads and trunk roads/motorways	Medium	0.7	0.6	0.7
Site with heavy pollution (eg haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites), site where chemical and other fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured, industrial sites; trunk roads and motorways	High	0.8	0.8	0.9

Table 4.4 – Pollution Hazard Levels

Given the pollution hazard level for the site is low and that the surface water runoff from the development is to discharge into the surrounding combined sewer network, no treatment is required, however, the use of silt traps and SuDS will provide inherent treatment.

5.4 SuDS Maintenance and Management Plan

In order to ensure the ongoing functioning of the below ground drainage networks a suitable maintenance strategy is to be adopted to ensure the drainage network is cleaned regularly and the routine maintenance and cleansing regime should be documented.

The SuDS and below ground drainage network are to be maintained by the building owners or a maintenance company employed on their behalf. They will be required to maintain the SuDS in line with the recommendations set out within the 'The SuDS Manual C753' and the suppliers' requirements.

The following tables are extracted from The SuDS Manual and provide an indication of the operation and maintenance requirements for the SuDS that are proposed. These requirements should be reviewed as part of the detailed design.

The Main Contractor delivering the development is to update the general requirements to reflect the product specific requirements of the as installed proprietary SuDS and incorporate these into the Operation & Maintenance manual for the building. A Verification Report, including photographic evidence, to demonstrate that the drainage has been constructed as per the design drawings should be produced by the Main Contractor. As-built drawings should be supplied by the Main Contractor where the construction of the drainage varies from the design drawings.

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary	Annually
	Remove sediment from pre-treatment structures and/ or internal forebays	Annually, or as required
Remedial Actions	Repair/ rehabilitate inlets, outlets, overflows and vents	As required
Monitoring	Inspect/ check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tanks for sediment build-up and remove if necessary	Every 5 years or as required

Table 4.5 - Operation and Maintenance requirements for Attenuation Storage Tanks (Table 21.3 'The SuDS Manual C753)

Maintenance Schedule	Required Action	Typical Frequency
Regular Inspection	Inspect all outlets, checking the flow restrictor has not been tampered with, damaged or removed.	Quarterly and after severe storms
	Check and replace pebble margin (if required) around the inspection chamber (this helps filter the water entering the outlet).	Quarterly and after severe storms
	Inspect drain inlets to ensure unrestricted runoff from the drainage layer to the conveyance or roof drain system	Quarterly and after severe storms
	Inspect all overflows to ensure the overflow will discharge freely. Check for any signs of discharge, discharge of water via the overflow indicates that the roof is not functioning correctly and a more thorough investigation may be required	Quarterly and after severe storms
	Check that the surface finishes of the blue roof (green or hard landscaping) are still correctly installed and in good condition. That there has been no movement to the finished surface during investigations or activities by other trades.	Quarterly and after severe storms
	Check that the filter fleece is still in place on vertical edges around outlets. Ensure there is no openings that might allow leaves and debris into the blue roof system.	Quarterly and after severe storms
	Access ladders and man-safe system inspected, and date tagged as required so that the blue roof can always be accessed.	Quarterly and after severe storms
	Inspect underside of roof for evidence of leakage	Quarterly and after severe storms
Regular Maintenance	Remove debris, litter and fallen leaves to prevent clogging of the system	Quarterly and after severe storms
	Remove any debris from inlets, outlets and overflows.	Quarterly and after severe storms
	Remove fallen leaves and debris from deciduous plant foliage	Quarterly and after severe storms
	Remove nuisance and invasive vegetation, including weeds	Quarterly and after severe storms
Remedial Actions	If drain inlets, outlets or overflows have settled, cracked or moved, investigate and repair as appropriate	As required
	Repair ladders and man-safe systems to maintain safe access	As required

Table 4.6 - Operation and Maintenance requirements for Blue/ Green Roofs

6. DRAINAGE STRATEGY

Refer to Appendix G for the Below Ground Drainage Plan.

6.1 Surface Water System

The development is to have a dedicated surface water network that collects the run-off from the proposed building roof and external landscaping and discharges to the combined public sewer within Parsonage via an existing connection. The suitability of re-using an existing connection is to be validated through a survey of the existing private drainage network at the next stage.

The discharge from the site to the public sewer is to be limited to greenfield run-off rates where possible. Given the small site area, rates should be restricted to 2 l/s so to not increase the overall flood risk to the development. The surface water network should use a vortex flow control to restrict flow.

Surface water attenuation is to be provided by utilising a blue roof and attenuation tank under the basement of the proposed building.

The surface water drainage network is to be designed in accordance with Building Regulation Part H, BS EN 752, Code for Adoption and the recommendations set out within the Circa SuDS Manual. In addition, the following requirements will also be adopted in accordance with the Non-Statutory Technical Standards for Sustainable Drainage: Practice Guidance:

- The below ground drainage system will be designed to ensure flooding does not occur on site for the 1 in 30 year and no flooding to habitable spaces for the 1 in 100-year + climate change storm events
- The surface water system is to be designed to accommodate the 1, 2, 30 and 100 year return events with 40% and 45% climate change allowances for the 30 and 100 year events respectively. The climate change allowances should be reviewed at the detailed design stage of each plot to ensure the latest allowances are used.

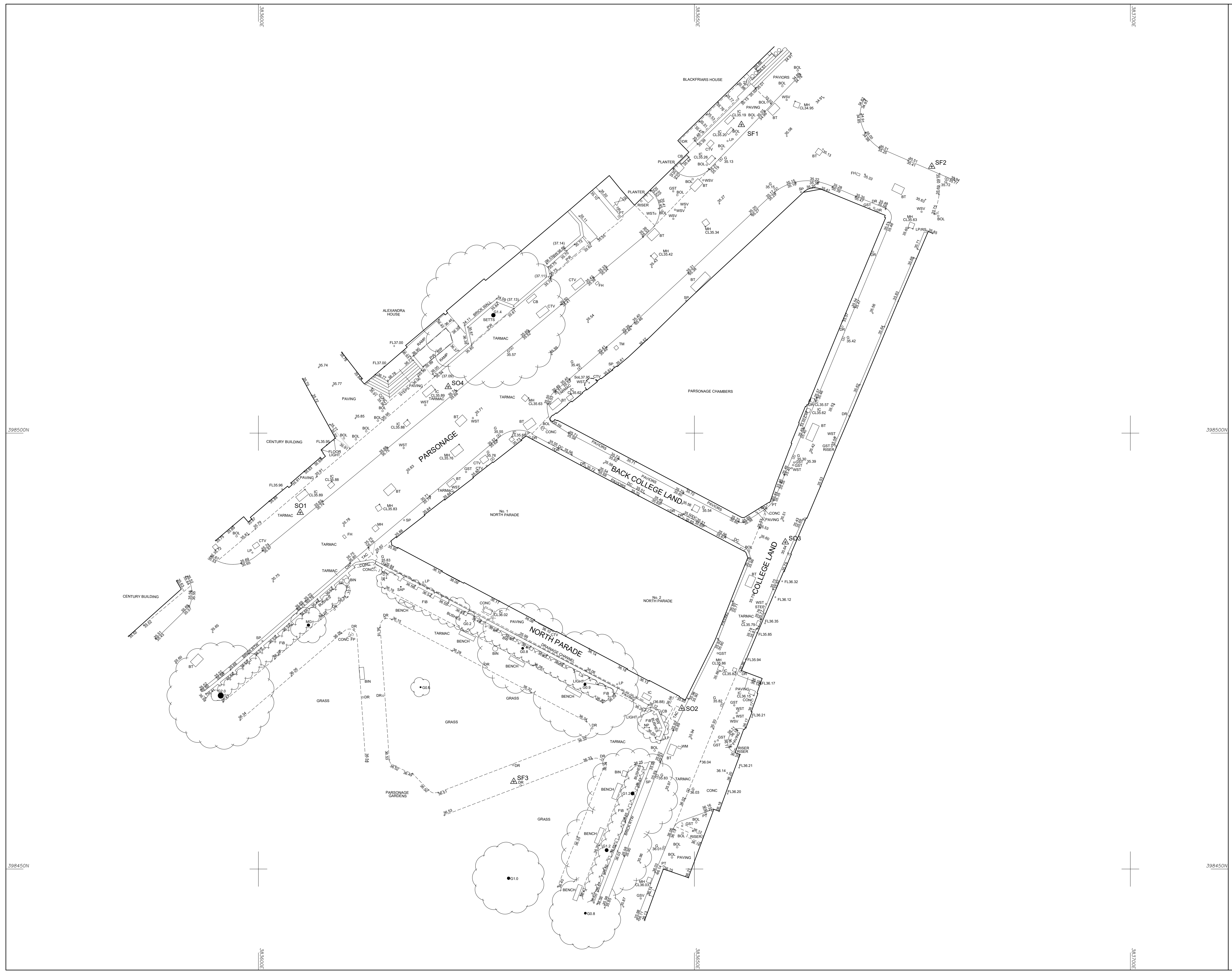
The North-West SuDS Pro-forma has been completed to support this application, refer to Appendix H.

6.2 Foul Water System

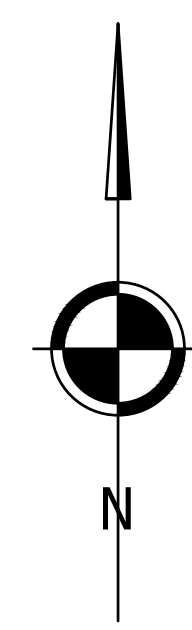
The foul water drainage from the building will be collected by a dedicated gravity foul network. The system is to discharge via an existing connection into the existing public combined sewer within Parsonage. The suitability of re-using an existing connection is to be validated through a survey of the existing private drainage network at the next stage.

APPENDIX A

TOPOGRAPHICAL SURVEY



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is prohibited without the prior permission of
Survey Operations Limited.



Note:

The survey is plotted on a plane local Grid. Orientation to National Grid.

All levels relate to Ordnance Datum, achieved using the

OS National GPS Network.

Survey Control Markers established for Mapping purposes only and should not be used for Construction without the written approval of Survey Operations Ltd.

SURVEY STATIONS			
Name	Easting	Northing	Height
S01	383604.79	398490.88	35.81
S02	383648.56	398468.42	35.91
S03	383660.43	398487.49	35.51
S04	383621.76	398505.31	35.81
SF1	383655.39	398535.36	35.11
SF2	383677.22	398530.58	35.71
SF3	383629.28	398460.02	36.41

Survey OPERATIONS

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Client
Chroma Consulting UK Limited

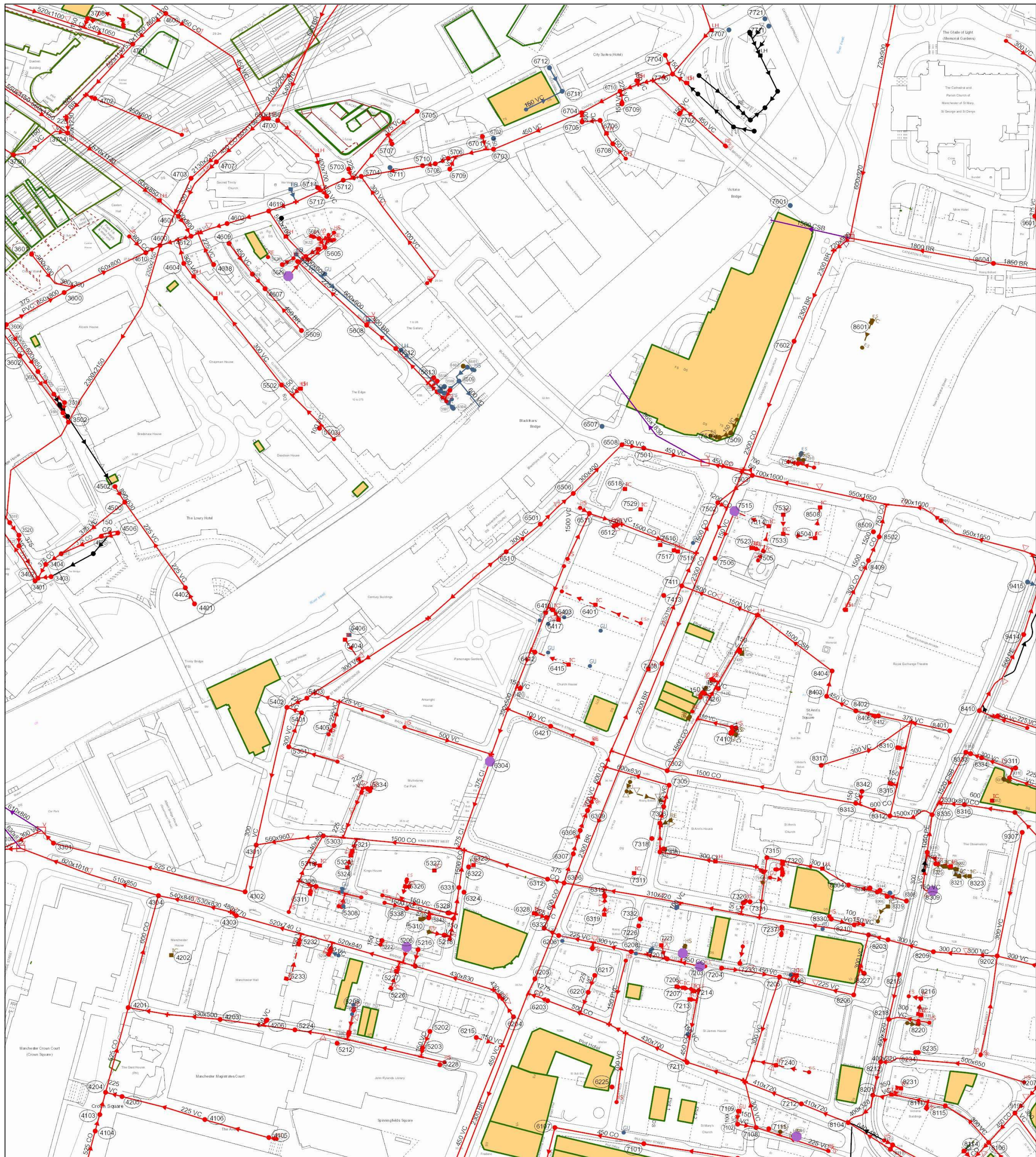
Drawing Title
Topographical Survey of Land at: One North Parade, Manchester.

Scale(s)	1:200	Surveyor	SF
Date	Aug 24	Drawn	AW
Job Number	24B297	Checked	MG

Sheet Size & Drg Number & Revision
A1 24B297/001

APPENDIX B

UNITED UTILITIES SEWER MAP



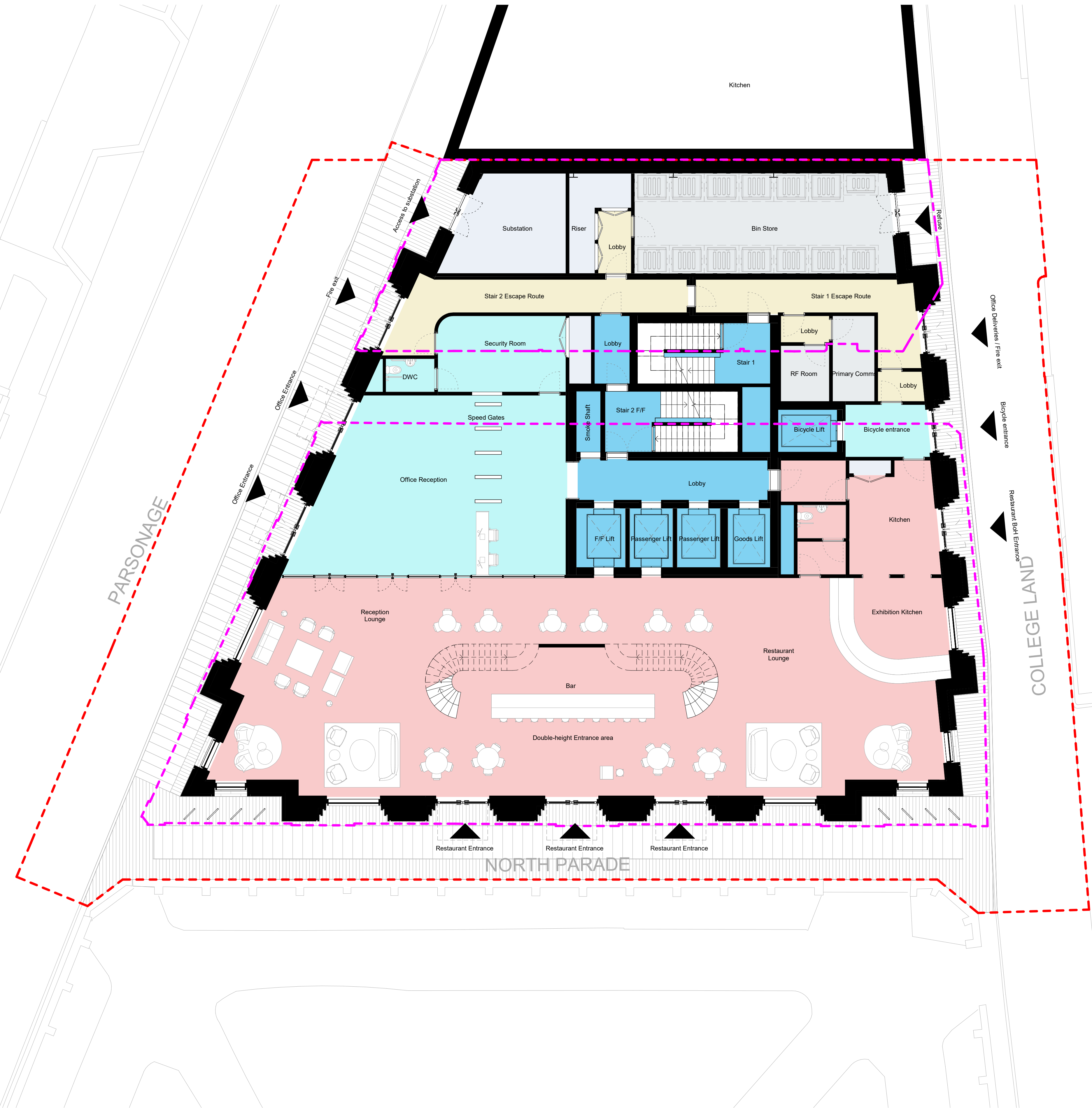
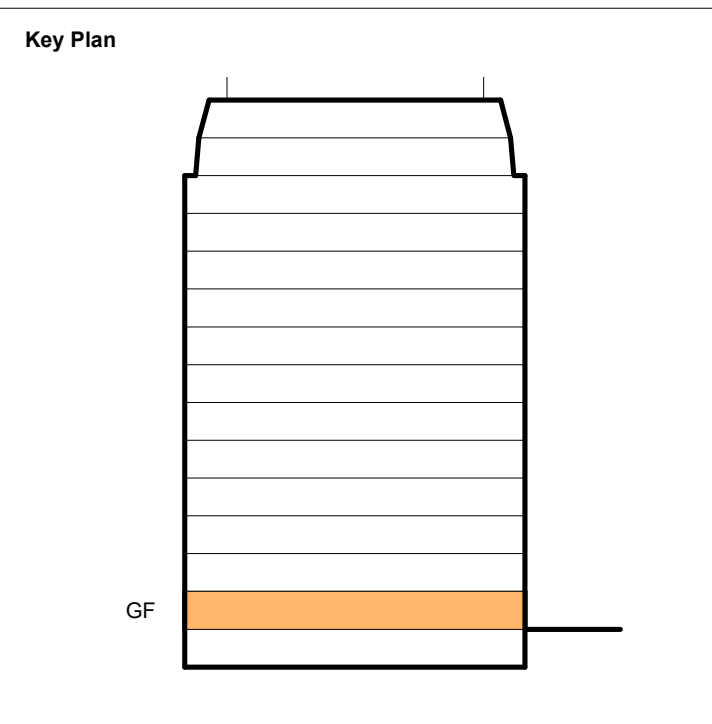
Refno	Cover	Func	Invert	Size x	Size y	Shape	Mat	Length	Grad
7234	CO	FO	2.22	150	300	VC	2.222599	150	300
9313	FO	FO	2.25	225	225	VC	1.836292	150	300
6306	35.83	CO	31.04	600	600	VC	16.76305	1 in 186	
6709	26.74	CO	28.8	150	300	VC	4	0	150
8330	29.27	CO	24.17	300	300	VC	13.7195	0	150
2001553	CO	FO	0	150	300	VC	20.01553	0	150
5628	CO	FO	0	500	500	BR	32.5925	0	150
3401	CO	FO	0	375	375	VC	4.212183	0	150
7704	26.7	CO	24.72	150	300	VC	11.04485	0	150
8106	40.3	CO	35.26	150	300	VC	5.32055	1 in 27	
6312	35.69	CO	36.65	1500	1500	CO	48.03318	1 in 2	
4506	26.72	CO	23.98	150	300	VC	0.996833	0	150
7404	CO	FO	0	150	300	VC	19.70964	0	150
6203	35.7	CO	23.05	1275	1275	CO	5.385165	0	150
5202	35.28	CO	31.23	150	300	VC	9.848896	0	150
5709	27.23	CO	24.28	150	300	VC	7.615773	0	150
8309	26.61	CO	24	150	300	VC	3.095596	0	150
7515	CO	FO	0	150	300	VC	26.14859	0	150
3403	CO	FO	0	375	375	VC	0.280843	0	150
6206	35.66	CO	31.91	375	375	VC	8.944772	1 in 25	
7203	36.24	CO	33.37	450	450	VC	18.43909	1 in 64	
7530	CO	FO	0	150	300	VC	4.836473	0	150
8401	37.17	CO	28.79	375	375	VC	40.28768	1 in 204	
5609	26.61	CO	24	150	300	VC	30.795	0	150
4800	29.92	CO	25.98	450	450	VC	22.472	0	150
5402	33.55	CO	28.24	300	300	VC	77.7811	1 in 88	
4106	CO	FO	0	150	300	VC	47.49375	0	150
7411	36.15	CO	25.52	1500	1500	VC	19.9772	0	1500
7302	36.54	CO	30	1500	1500	VC	107.2175	0	1500
7424	CO	FO	0	150	300	VC	1.6308	0	150
4800	29.92	CO	27.47	150	300	VC	12.94159	1 in 63	
8310	CO	FO	0	150	300	VC	4.474856	0	150
7328	CO	FO	0	150	300	VC	1.118059	0	150
6705	26.65	CO	22.54	300	300	VC	2.87207	0	150
5328	CO	FO	0	200	200	VC	4.231385	0	150
6203	37.8	CO	32.62	150	300	VC	11.07758	1 in 58	
4609	27.31	CO	0	450	450	VC	21.40093	0	150
3301	30.19	CO	24.27	600	600	VC	5.60568	1 in 48	
3521	6.78	CO	3.73	375	375	VC	30.72058	0	150
8334	CO	FO	0	150	300	VC	3.37297	0	150
8104	39	CO	32.26	410	410	BR	27.2001	0	150
7602	CO	FO	0	200	200	VC	76.2169	0	150
5707	CO	FO	0	375	375	VC	5.385165	0	150
7305	36.55	CO	30.44	600	600	BR	36.4055	0	150
3601	26.65	CO	24.27	600	600	VC	30.1577	0	150
5222	CO	FO	0	150	300	VC	24.95442	0	150
4204	30.9	CO	28.19	375	375	VC	49.45565	1 in 147	
4301	33.01	CO	27.17	525	525	VC	26.8533	1 in 107	
8215	38.24	VC	25.4546	400	400	VC	25.4546	1 in 31	
4610	13.81	CO	6.08	650	650	BR	8.94272	0	150
6312	36.88	CO	31.5	150	300	VC	20.24565	1 in 225	
3606	27.65	CO	24.35	375	375	PVC	20.3944	0	150
6703	26.65	CO	22.33	450	450	VC	25.8735	1 in 1279	
8315	CO	FO	0	150	300	VC	4.180113	0	150
6304	35.8	CO	31.34	375	375	CI	50.3151	0	150
3602	27.25	CO	21.19	1020	1020	MAAR	39.48927	1 in 35	
8227	CO	FO	0	150	300	VC	3.21374	0	150
4203	BR	CO	330	330	330	BR	29.31742	0	150
8332	37.17	CO	31.4	1520	1520	CSB	39.20944	1 in 47	
7410	CO	FO	0	150	300	VC	3.514045	0	150
3515	26.41	CO	20.87	375	375	VC	10.47955	1 in 105	
6327	CO	FO	0	150	300	VC	20.61553	0	150
5612	27.09	CO	22.75	225	225	VC	48.96997	1 in 117	
8304	37.03	CO	33.07	300	300	VC	10.2955	0	150
4401	CO	FO	0	150	300	VC	10.2955	0	150
4601	27.55	CO	21.78	800	800	BR	6.403124	1 in 0	
6712	26.97	CO	25.88	150	300	VC	14.74462	1 in 32	
5206	CO	FO	0	225	225	VC	8.826272	0	150
4612	CO	FO	0	375	375	VC	7.28011	0	150
6215	CO	FO	0	150	300	VC	14.89882	1 in 1	
6208	35.97	CO	32.75	300	300	BR	61.2418	0	150
8313	36.83	CO	31.57	1500	1500	VC	20.61553	1 in 50	
3704	30.32	CO	26.9	570	570	CO	105.5462	0	150
6306	35.83	CO	0	375	375	BR	30.8584	1 in 32	
8311	37.12	CO	28.13	1090	1090	PE	9.219444	1 in 348	
5229	CO	FO	0	150	300	VC	20.80259	0	150
7408	36.06	CO	32.1	600	600	BR	3.336106	0	150
4700	28.07	CO	24.6	600	600	BR	187.5527	1 in 6252	
7211	37.01	CO	30.72	430	430	BR	17.69181	1 in 885	
6706	26.64	CO	24.15	150	300	VC	37.57659	0	150
4505	22.46	CO	21.09	375	375	VC	10.1862	1 in 9	
6331	CO	FO	0	150	300	VC	24.07287	1 in 109	
5701	28.18	CO	23.28	560	560	BR	20.1657	0	150
3602	27	CO	16.31	2200	2200	BR	14.21267	1 in 284	
8317	36.69	CO	28.19	300	300	VC	209.9919	1 in 634	
8406	CO	FO	0	150	300	VC	56.17143	0	150
6204	35.52	CO	28.3	150	300	VC	1.942787	0	150
5626	CO	FO	0	150	300	VC	6.433961	0	150
6714	27.59	CO	24.5	150	300	VC	7.196777	0	150
4618	CO	FO	0	150	300	VC	3.865551	0	150
5605	26.61	CO	23.18	225	225	VC	19.26995	0	150
3603	27.24	CO	23.3	760	760	BR	7.071065	0	150
7109	33.38	CO	32.3	100	100	VC	15.30009	1 in 85	
7426	36.74	CO	28.36	150	300	VC	20.24466	1 in 32	
8403	36.74	CO	28.36	150	300	VC	7.276555	0	150
4703	27.98	CO	18.8	2130	2130	VC	4.939907	1 in 143	
4402	CO	FO	0	150	300	VC	14.31762	0	150
8209	38.67	CO	33.53	300	300	BR	40.71855	1 in 814	
8110	44	CO	27.53	940	940	VC	67.87597	1 in 71	
8402	36.66	CO	28.51	450	450	VC	25.91794	1 in 28	
5601	35.35	CO	26.37	225	225	VC	27.54536	1 in 17	
6501	CO	FO	0	300	300	VC	17.88854	1 in 138	
5704	27.78	CO	22.15	450	450	VC	5.747467	0	150
5502	36.94	CO	22.94	300	300	VC	12.72762	0	150
3514	27.06	CO	23.12	675	675	VC	10.18904	1 in 204	
4103	36.8	CO	28.28	525	525	VC	86.17817	1 in 66	
8201	39	CO	33.06	400	400	VC	7.55012	1 in 94	
7702	CO	FO	0	150	300	VC	12.6826	1 in 127	
5608	CO	FO	0	150	300	VC	22.8452	1 in 28	
5507	26.56	SW	25.18	150	150	VC	3.91028	0	150
6504	26.53	SW	26.18	150	150	VC	5.079491	0	150
4302	32.79	CO	26.99	525	525	VC	2.828427	0	150
7309	36.39	CO	31.79	800	800	VC	4.101243	1 in 4	
7227	CO	FO	0	150	300	VC	109.3846	1 in 254	
5708	27.27	CO	31.85	450	450	VC	4.9628	1 in 67	
3520	26.23	CO	0	225	225	VC	5.05398	0	150
7333	CO	FO	0	150	300	VC	7.071068	1 in 236	
8210	CO	FO	0	150	300	VC	0.5852811	0	150
7705	26.85	CO	22.92	100	100	VC	1.413899	0	150
4104	30.8	CO	26.47	525	525	VC	11.0125	0	150
6205	35.55	CO	22.26	2200	2200	VC	9.508722	1 in 53	
6506	34.94	CO	29.93	300	300	VC	137.5775	0	150
6508	34.1	CO	24.8	300	300	VC	38.18377	1 in 11	
9415	CO	FO	0	150	300	VC	12.15553	1 in 243	
7101	35.72	CO	33.08	450	450	VC	6.624962	1 in 35	
7205	36.7	CO	33.08	300	300	VC	49.91988	1 in 66	
9414	36.02	CO	32.15	500	500	PE	61.03383	0	150
4205	30.9	CO	27.84	225	225	VC	27.83223	1 in 58	
7503	CO	FO	0	656	656	BR	9.445328	1 in 189	
8218	36.48	CO	34.43	400	400	VC	13.60147	0	150
3404	22.27	CO	0	375	375	VC	23.8695	1 in 25	
5509	26.55	CO	24.49	150	300	VC	6.820005	0	150
8401	37.17	CO	28.79	375	375	VC	5.830952	0	150
7204	36.37	CO	33.41	450	450	VC	12.86285	1 in 49	
8342	CO	FO	0	150	300	VC	16.12452	0	150
8804	CO	FO	0	1800	1800	VC	7.325264	0	150
6220	CO	FO	0	225	225	BR	80.34482	0	150
5303	33.64	CO	28.4	1500	1500	VC	12.3695	0	150
4707	27.91	CO	24.5	450	450	PVC	18.11077	1 in 44	
6307	35.94	CO	30.83	600	600	VC	4.85281	0	150
4608	27.21	CO	0	450	450	CO	7.28011	0	150
5211	CO	FO	0	150	300	VC	10.30315	0	150
7502	36.25	CO	25.01	1200	1200	BR	0.8860747	0	

APPENDIX C

PROPOSED DEVELOPMENT PLANS

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Key

- BOH
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- Plant
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- Commercial

- Planning Application Boundary
- Existing Building Boundary
- 2000 mm Clear Head Height

Issued for Planning	25/07/25	MGr	P03
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Description	Date	Chk	Rev

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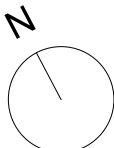
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Manchester
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Title
Proposed Floor Plan
Level 00

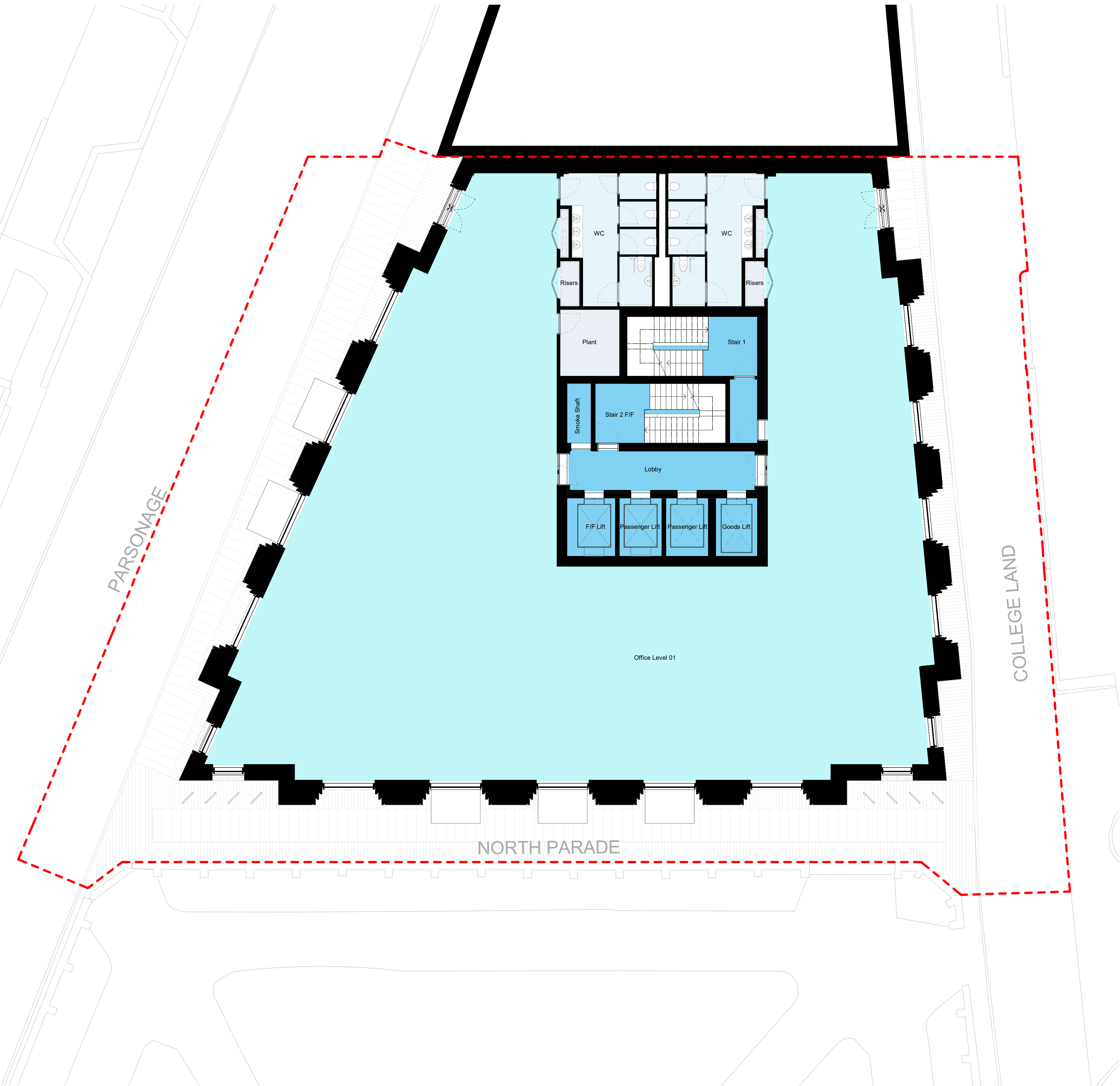
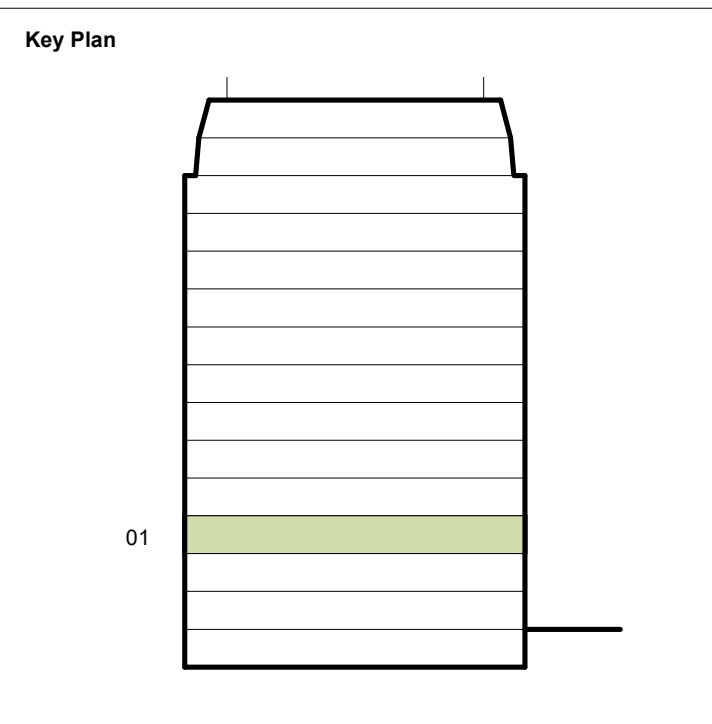
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Date	Scale @ ISO A1	Job Number
18/10/2024	1:100	19020
Drawing Number	Revision	
19020-SQP-ZZ-00-DR-A-PL101	P03	

01 Level 00
1:100



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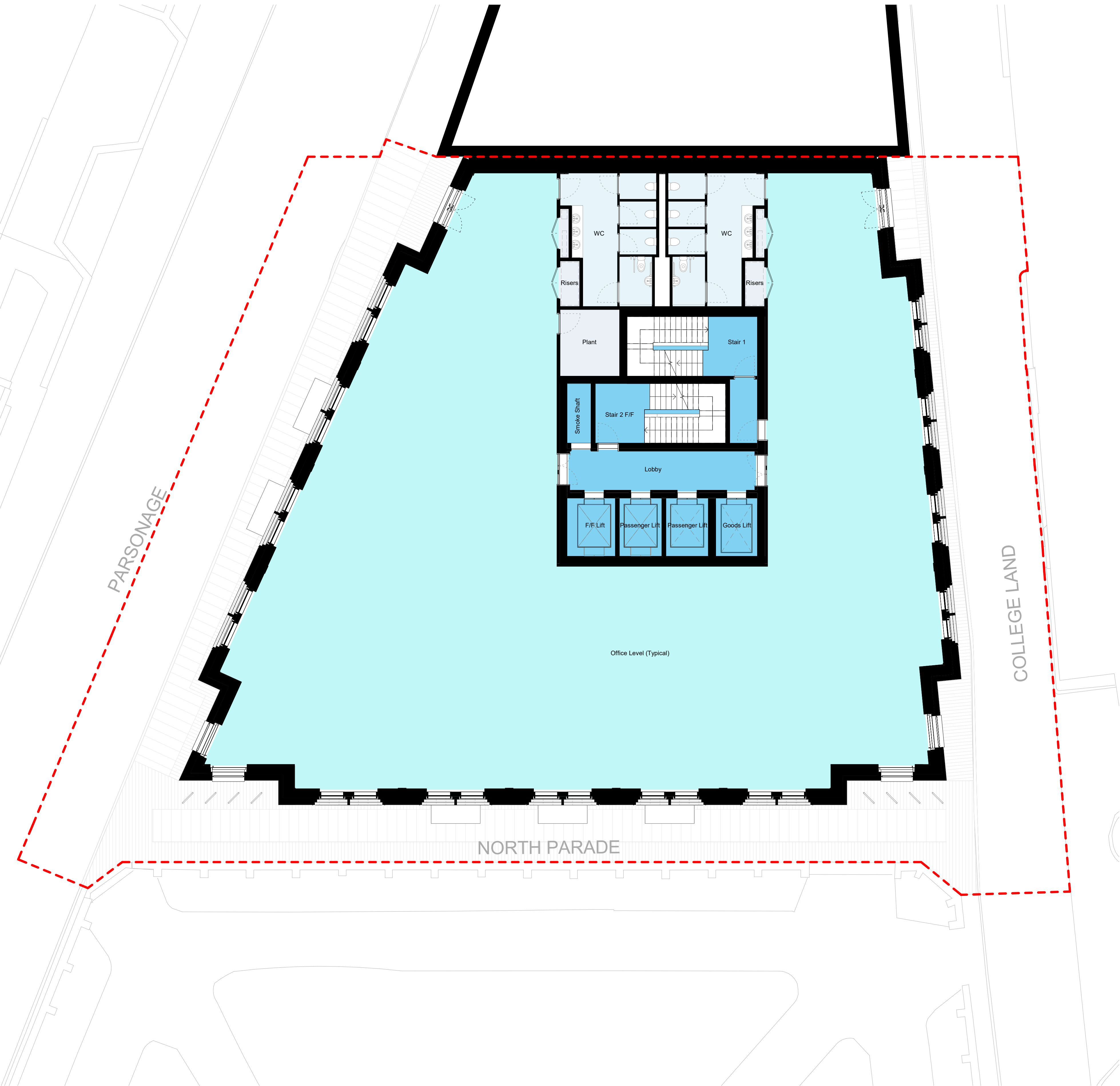
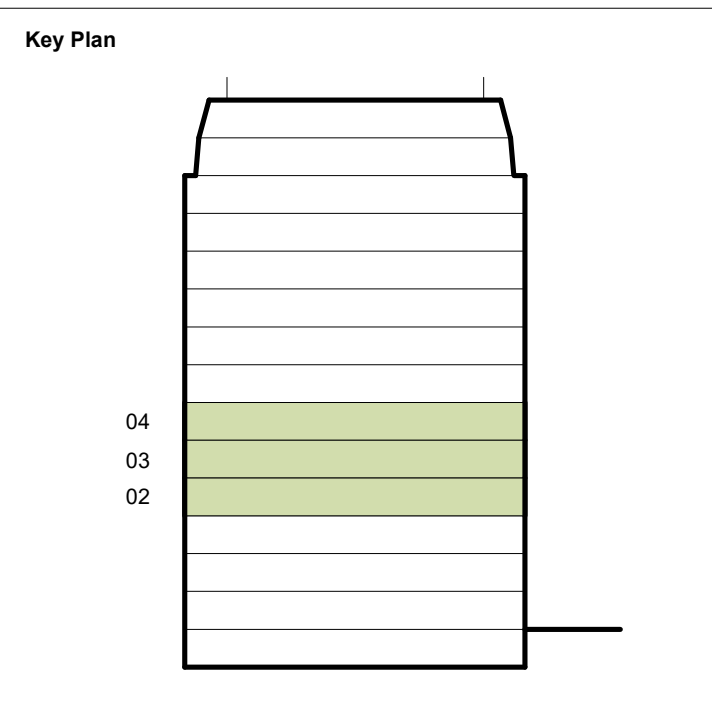
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Parsonage Gardens
Manchester
M3 2NH

Title
Proposed Floor Plan
Level 01

Suitability	Status	Job Number
A2	For Planning	19020
Date	Scale @ ISO A1	Job Number
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Drawing Number	Revision	
19020-SQP-ZZ-01-DR-A-PL103	P03	

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Issued for Information	16/05/25	MGr	P02
Issue for Information	25/09/24	MGr	P01
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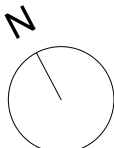
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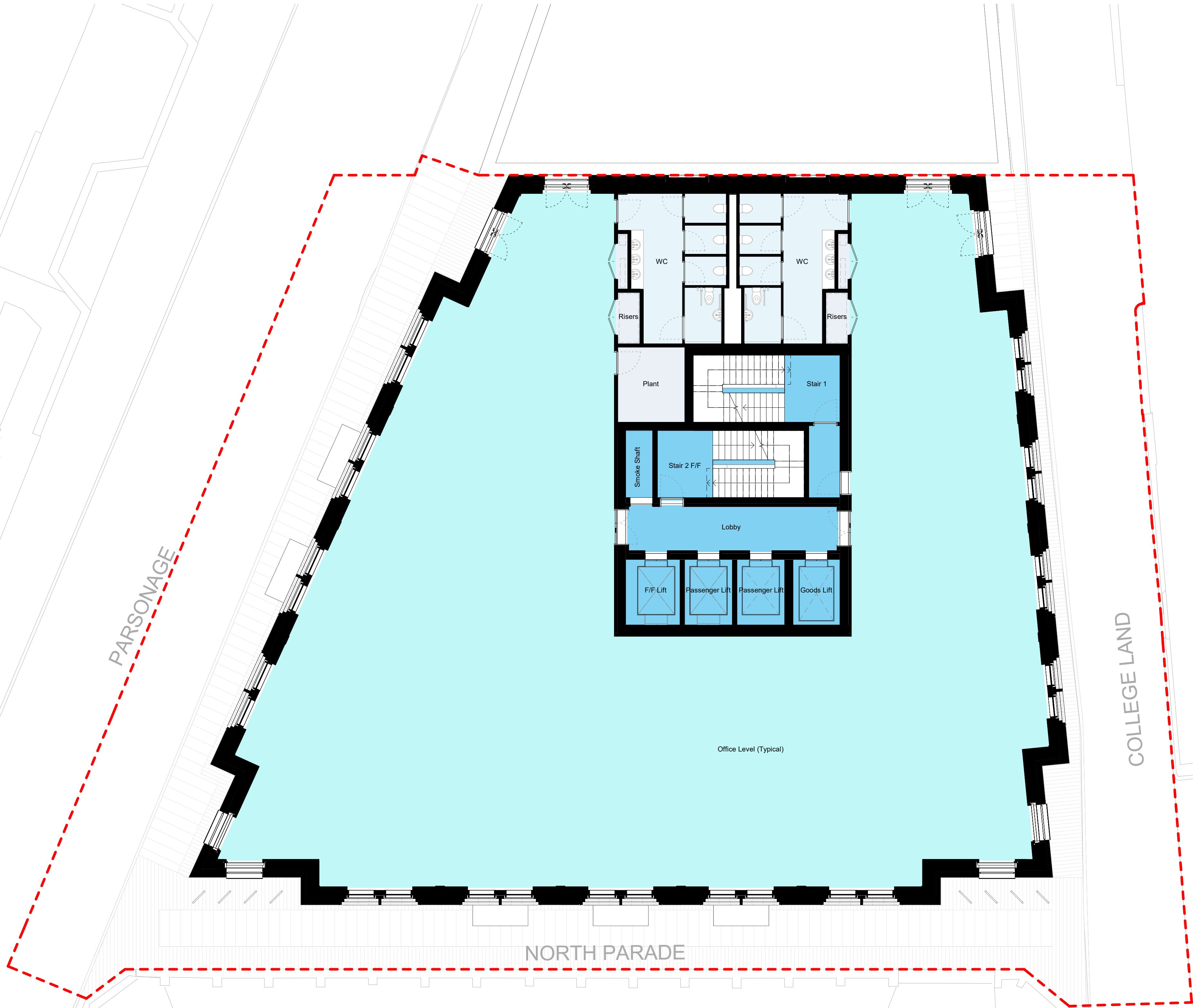
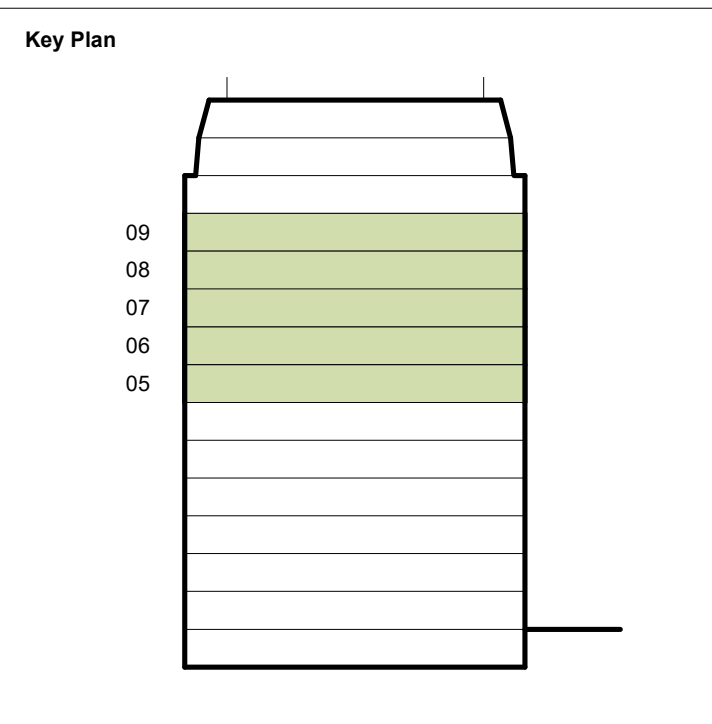
Title
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Level 02 - 04 (Typical)

Suitability	Status	Job Number
A2	For Planning	19020
Date	Scale @ ISO A1	Job Number
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Drawing Number	Revision	
19020-SQP-ZZ-02-DR-A-PL104	P03	



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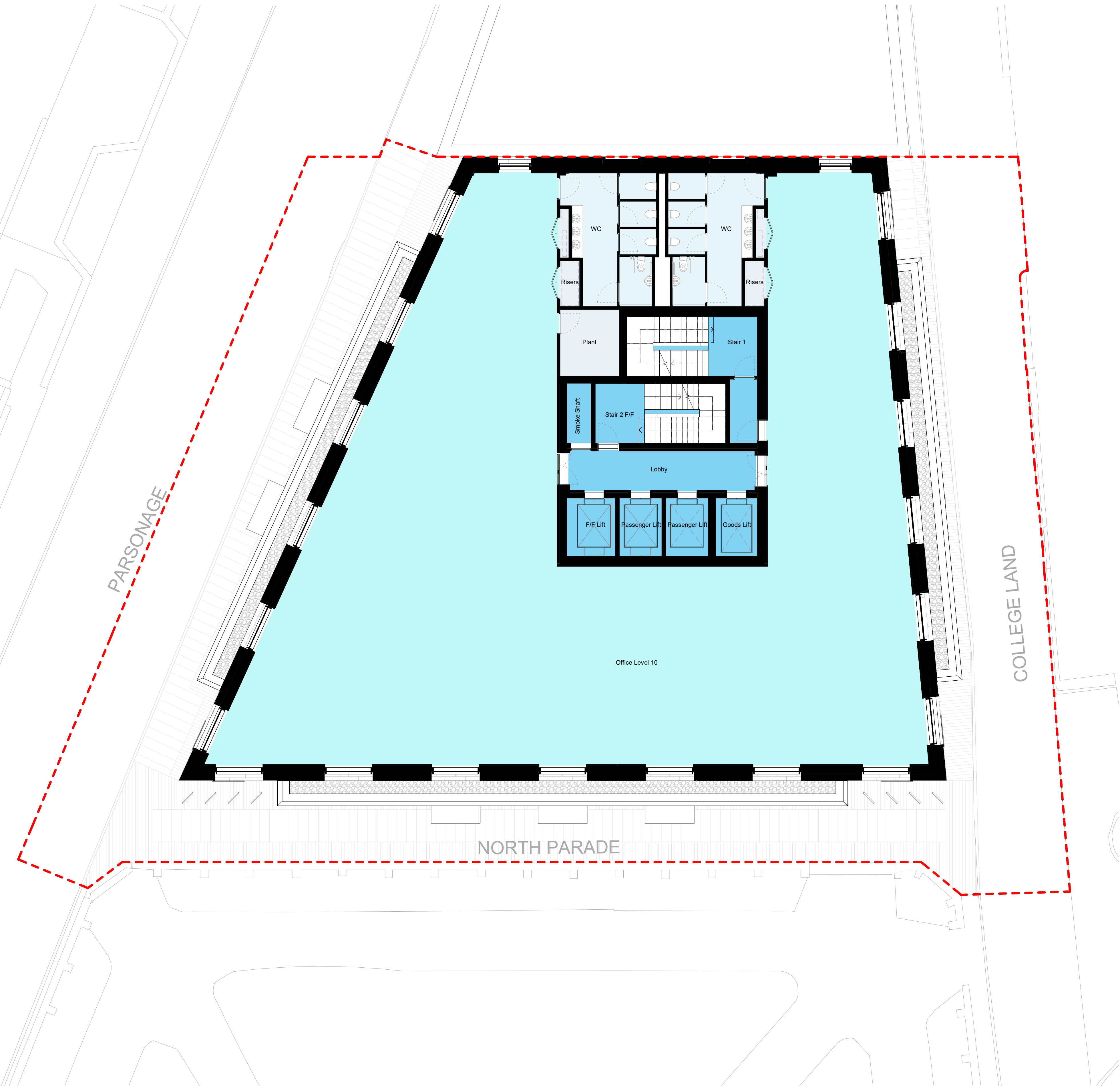
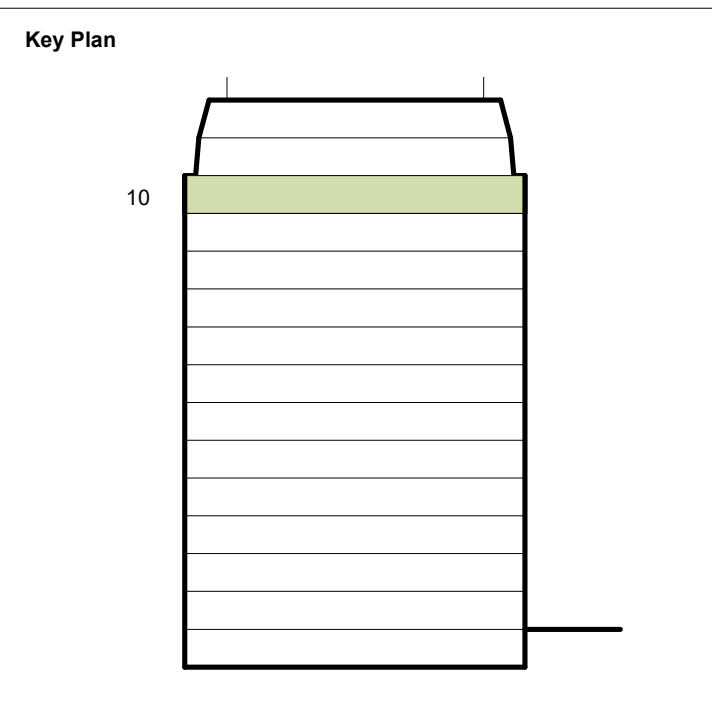
Project
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Title
**Proposed Floor Plan
Level 05-09 (Typical)**

Suitability	Status	Job Number
A2	For Planning	19020
Date	Scale @ ISO A1	Job Number
18/10/2024	1:100	19020
Drawing Number	Revision	
19020-SQP-ZZ-09-DR-A-PL105	P03	

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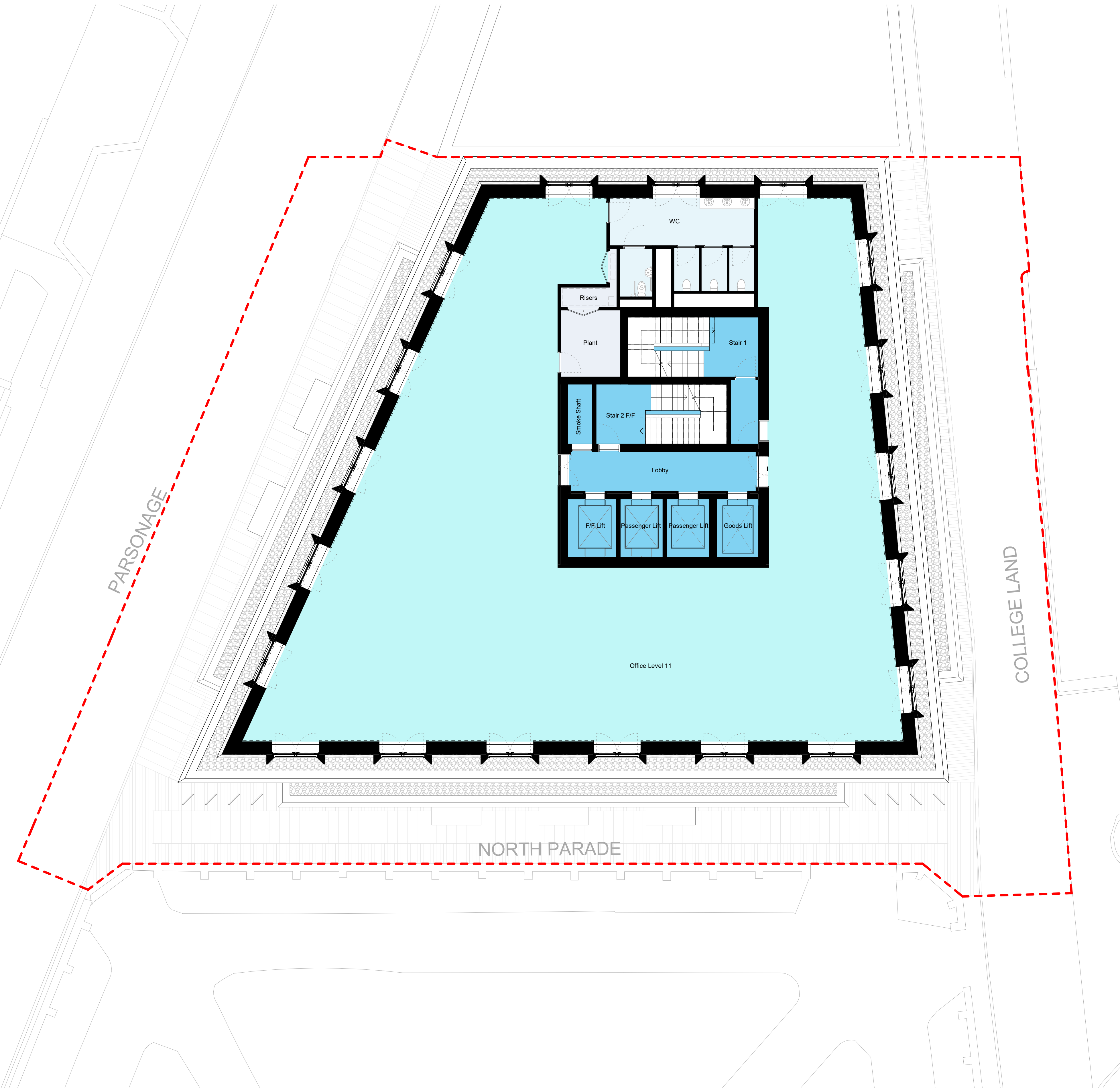
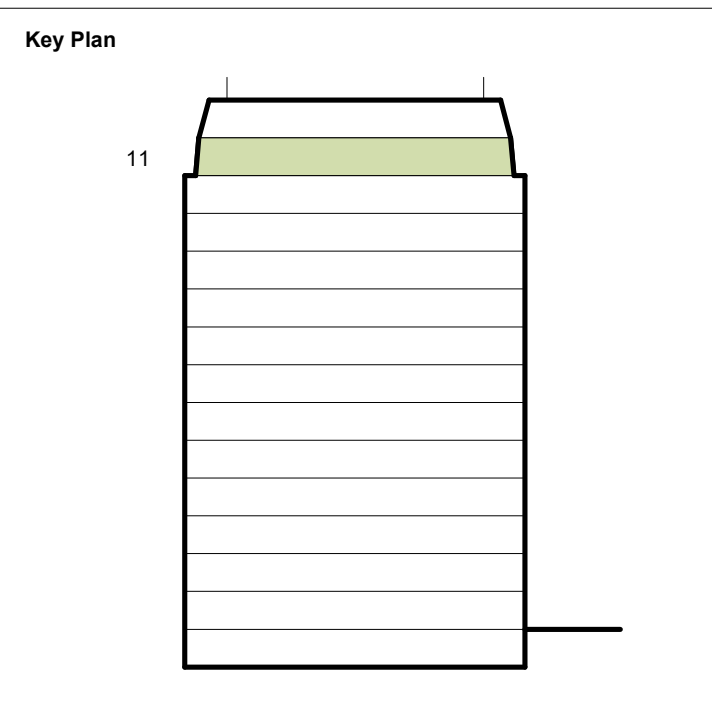
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Manchester
M3 2NH

Title
Proposed Floor Plan
Level 10

Suitability	Status	Job Number
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Date	Scale @ ISO A1	Job Number
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Drawing Number	Revision	
19020-SQP-ZZ-10-DR-A-PL112	P03	

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--- Planning Application Boundary

--- Existing Building Boundary

--- 2000 mm Clear Head Height

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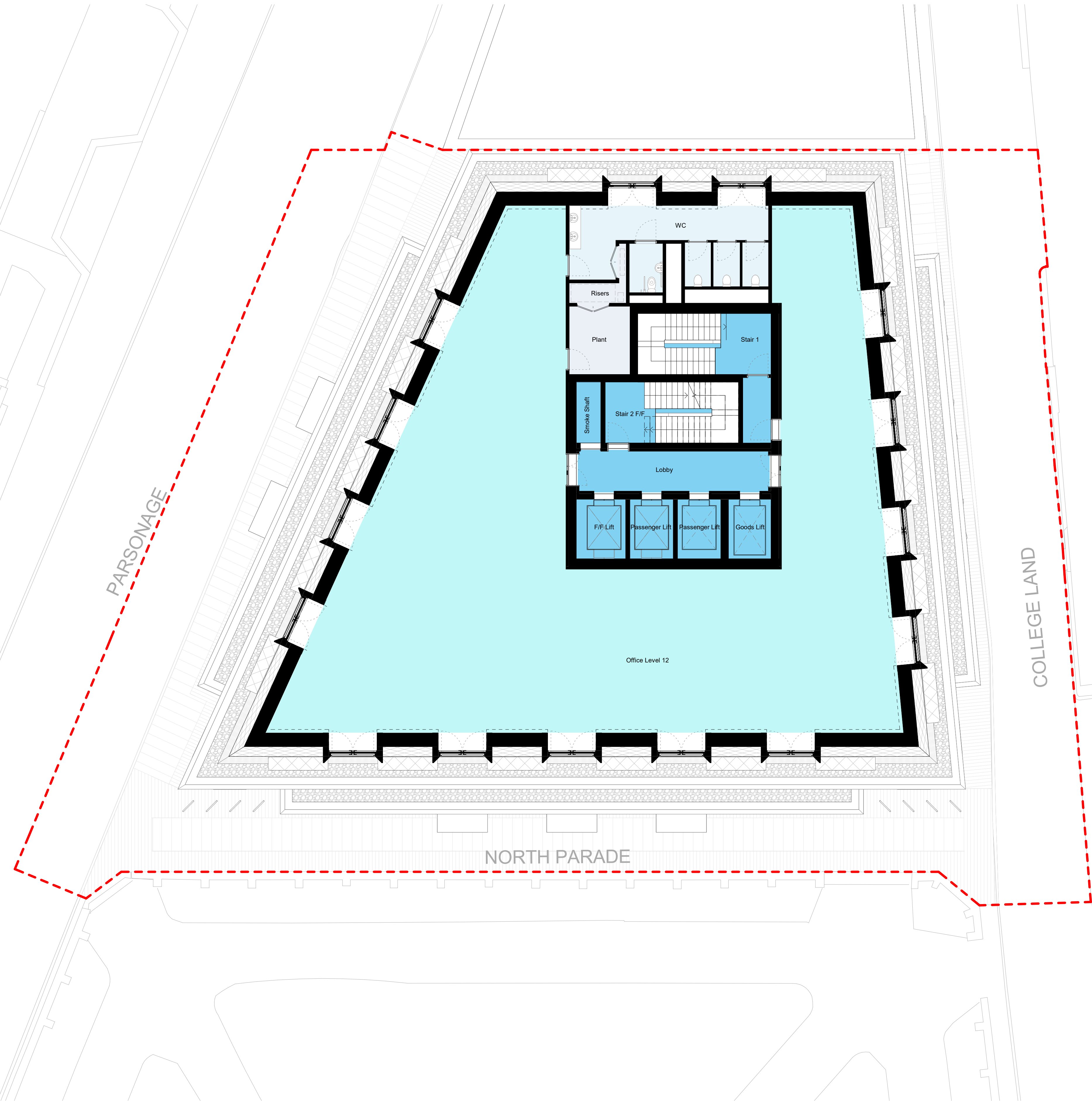
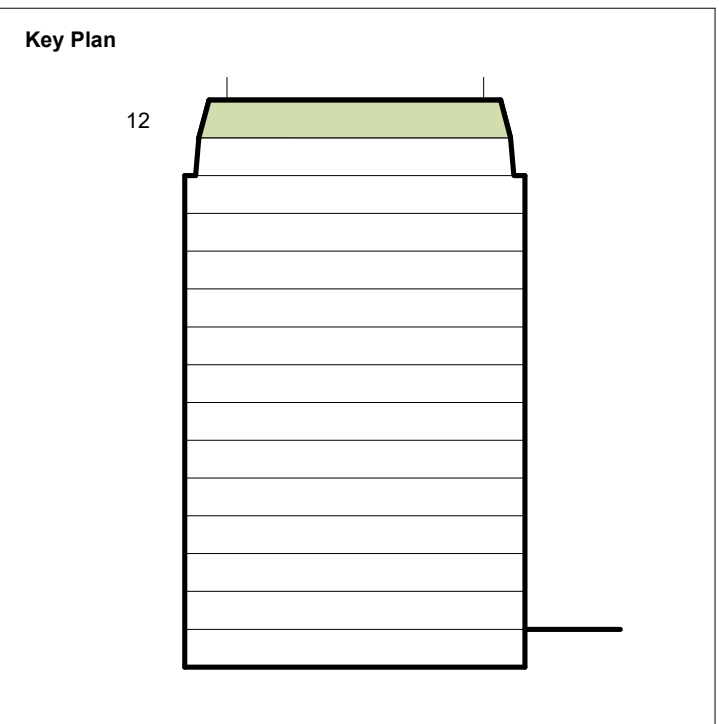
Project
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Title
**Proposed Floor Plan
Level 11**

Suitability	Status		
A2	For Planning		
Date	Scale @ ISO A1	Job Number	
18/10/2024	1:100	19020	
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19020-SQP-ZZ-11-DR-A-PL113	P03		

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- Planning Application Boundary
- Existing Building Boundary
- 2000 mm Clear Head Height

Issued for Planning	25/07/25	MGR	P03
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Issue for Information	25/09/24	MGR	P01
Description	Date	Chk	Rev

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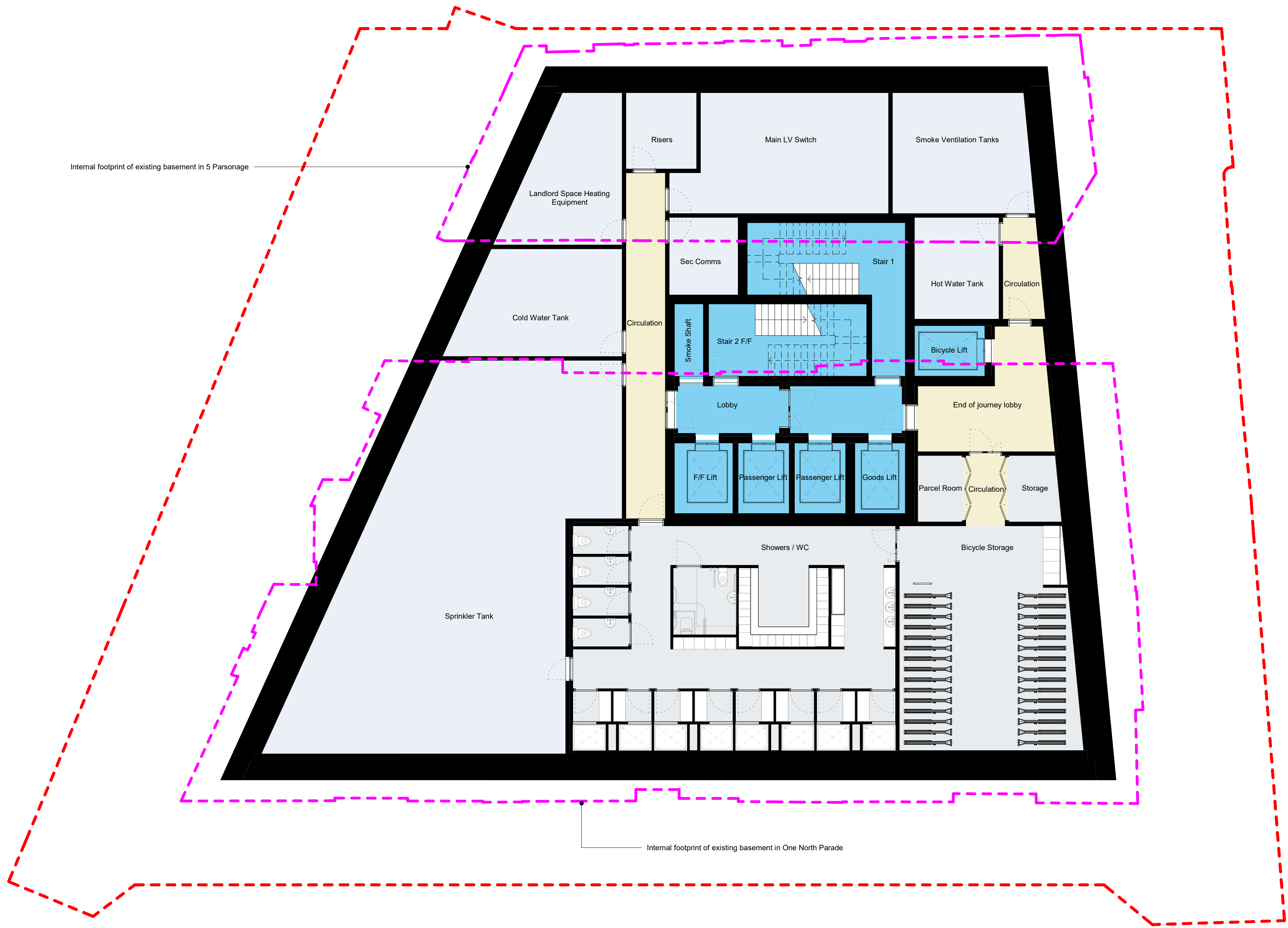
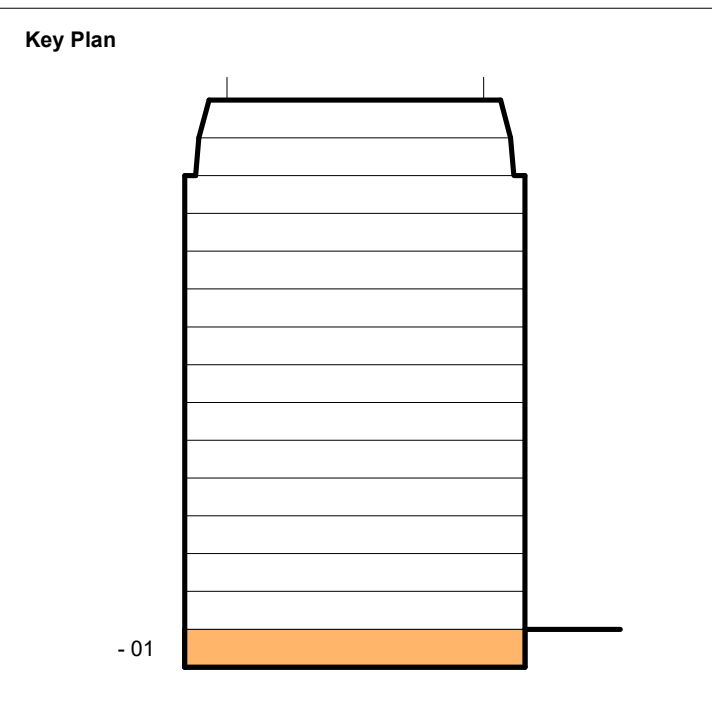
Project
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Title
**Proposed Floor Plan
Level 12**

Suitability	Status	Job Number
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Date	Scale @ ISO A1	Job Number
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19020-SQP-ZZ-12-DR-A-PL114	P03	

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- Existing Building Boundary
- 2000 mm Clear Head Height

Issued for Planning	25/07/25	MGr	P03
Issued for Information	16/05/25	MGr	P02
Issue for Information	25/09/24	MGr	P01
Description	Date	Chk	Rev

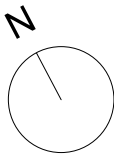
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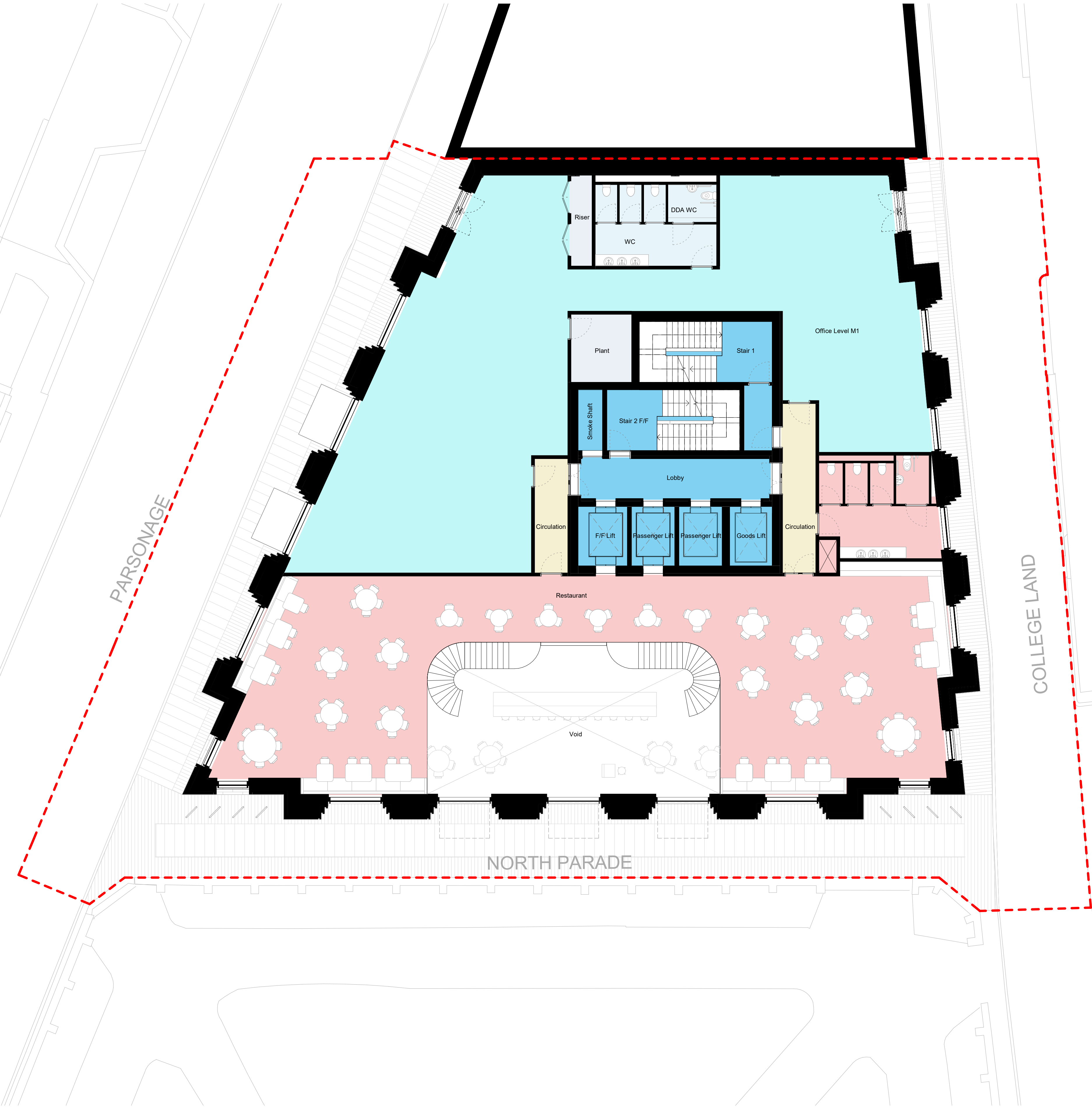
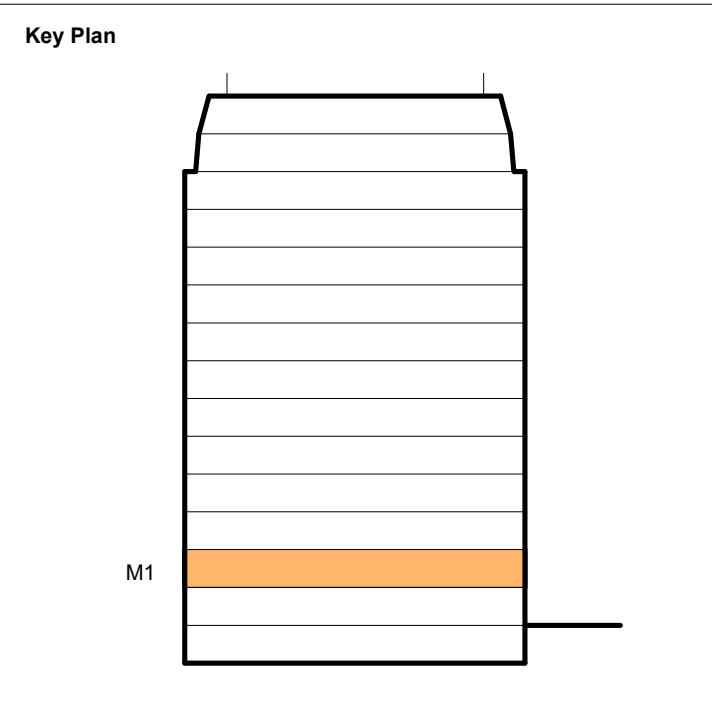
Title
**Proposed Floor Plan
Level B1**

Suitability	Status	Job Number
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Date	Scale @ ISO A1	19020
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Drawing Number	Revision	
19020-SQP-ZZ-B1-DR-A-PL100	P03	



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 - Facilities
 - Plant
 - Office
 - Commercial
- Planning Application Boundary
- Existing Building Boundary
- 2000 mm Clear Head Height

Issued for Planning	25/07/25	MGr	P03
Issued for Information	16/05/25	MGr	P02
Issue for Information	25/09/24	MGr	P01
Description	Date	Chk	Rev

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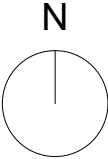
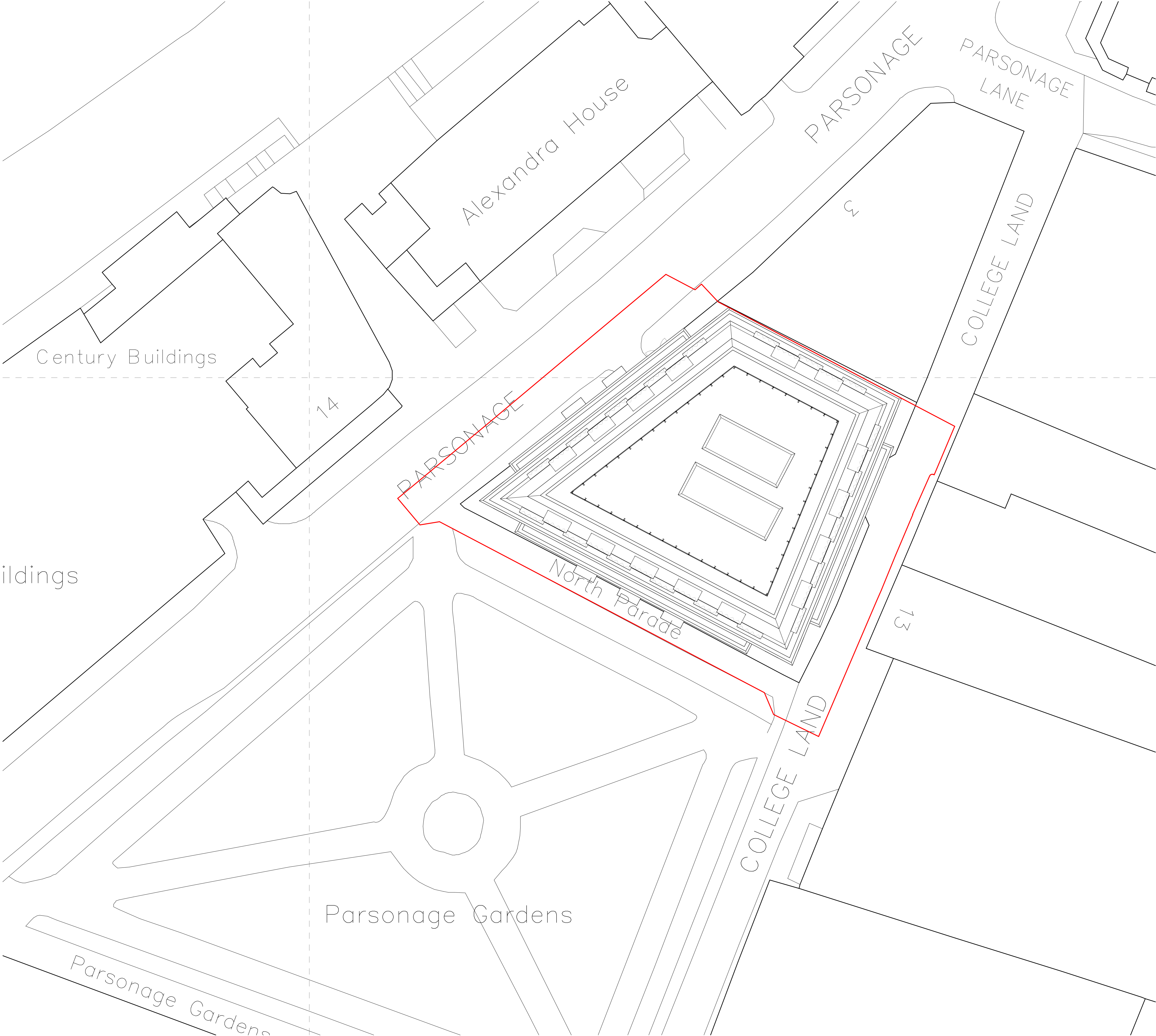
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Title

Proposed Floor Plan
Level M1

Suitability	Status	Job Number
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Date	Scale @ ISO A1	Job Number
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Drawing Number	Revision	
19020-SQP-ZZ-M1-DR-A-PL102	P03	



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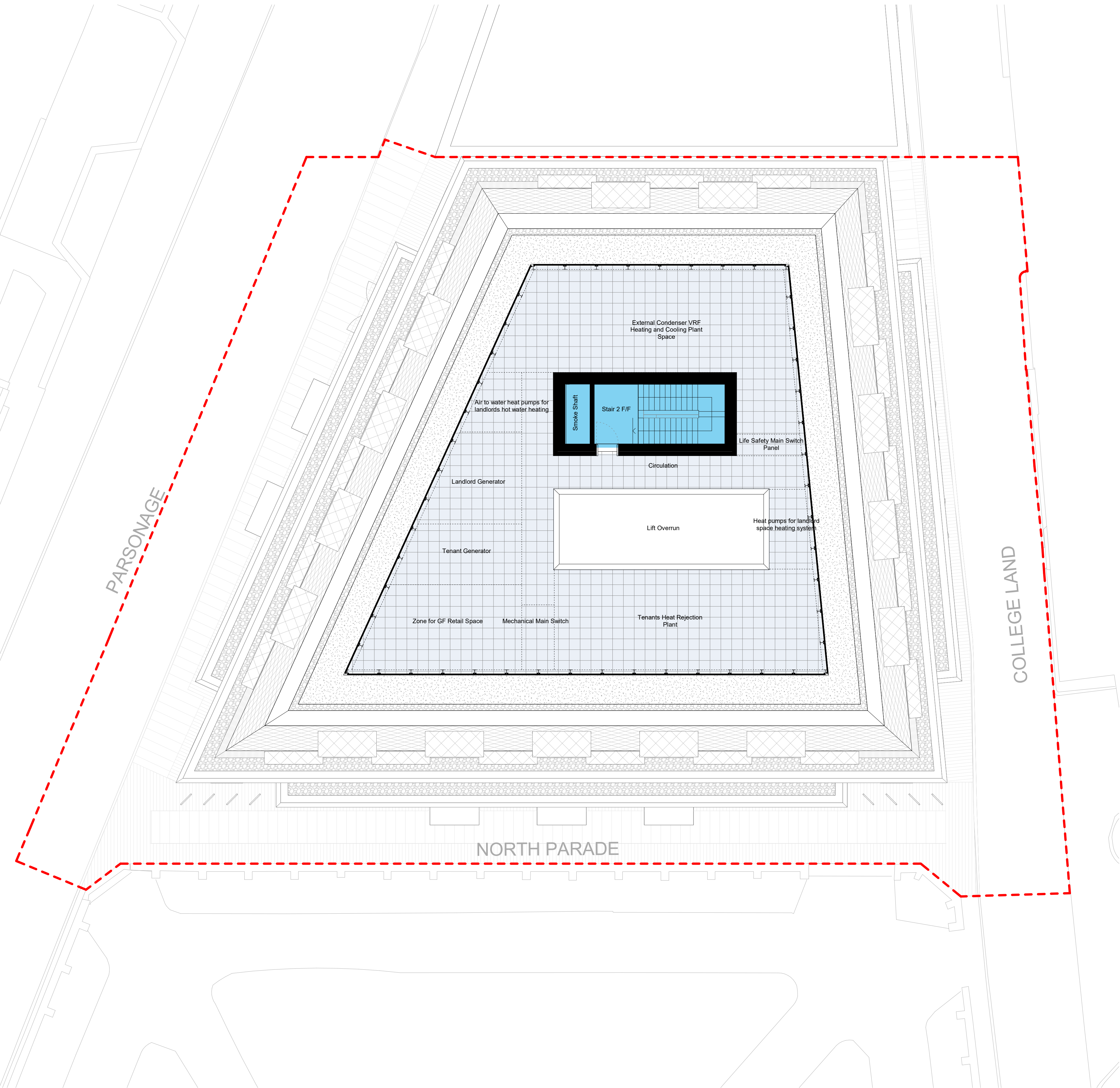
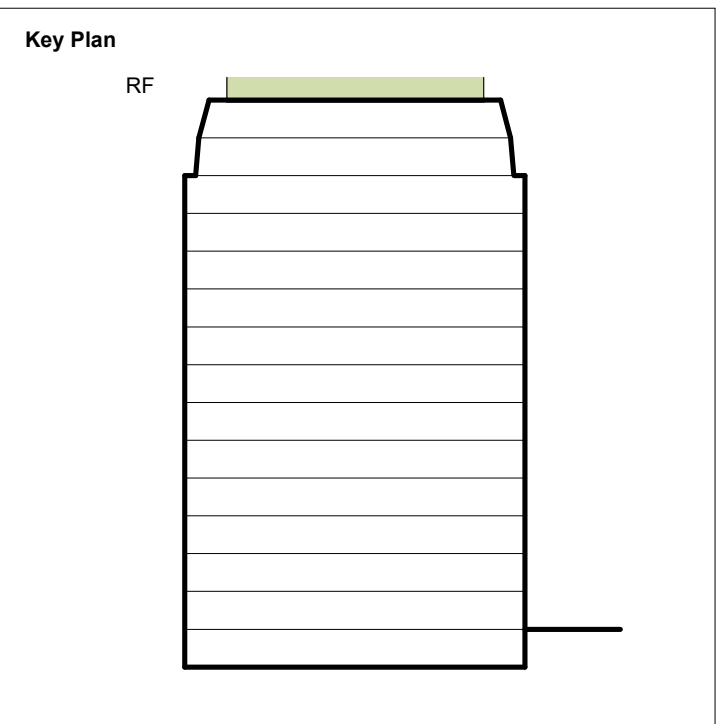
Project
Parsonage Gardens
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Title
Proposed Site Plan
Level RF

Suitability	Status	Job Number
A2	For Planning	19020
Date	Scale @ ISO A1	Job Number
18/10/2024	1:200	19020
Drawing Number	Revision	
19020-SQP-ZZ-RF-DR-A-PL002	P01	

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The internal layouts and furniture arrangements are shown for illustrative purposes only and are not submitted for approval.



- Key
- BOH
 - Circulation
 - Core
 - Facilities
 - Plant
 - Office
 - Commercial
- Planning Application Boundary
- Existing Building Boundary
- 2000 mm Clear Head Height

Issued for Planning	25/07/25	MGR	P03
Issued for Information	16/05/25	MGR	P02
Issue for Information	25/09/24	MGR	P01
Description	Date	Chk	Rev

SQUIRE & PARTNERS

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Project
Parsonage Gardens
Manchester
M3 2NH

Title
Proposed Floor Plan
Level RF

Suitability	Status	Job Number
A2	For Planning	19020
Date	Scale @ ISO A1	Job Number
18/10/2024	1:100	19020
Drawing Number	Revision	
19020-SQP-ZZ-RF-DR-A-PL115	P03	

The internal layouts and furniture arrangements are shown for illustrative purposes only and are not submitted for approval.



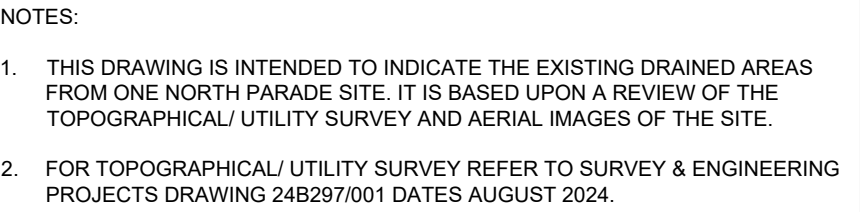
— — — Planning Application Boundary



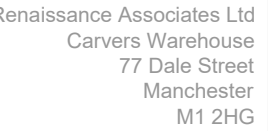
19020-SQP-ZZ-ZZ-DR-A-PL001

APPENDIX D

EXISTING DRAINED AREA



P02	ISSUED FOR PLANNING	16.10.25	SA	JA
P01	DRAFT ISSUE	18.07.25	SA	PW
Rev:	Description:	Date:	By:	Chkd:



Drawing Title:

*EXISTING DRAINED AREA
PLAN*

Size: A1	Date: JUL 25	Drawn by: SA	Designed by: SA	Checked by: PW
Scale:	1:100	Project No:	2404-02	

APPENDIX E

GREENFIELD RUNOFF RATE

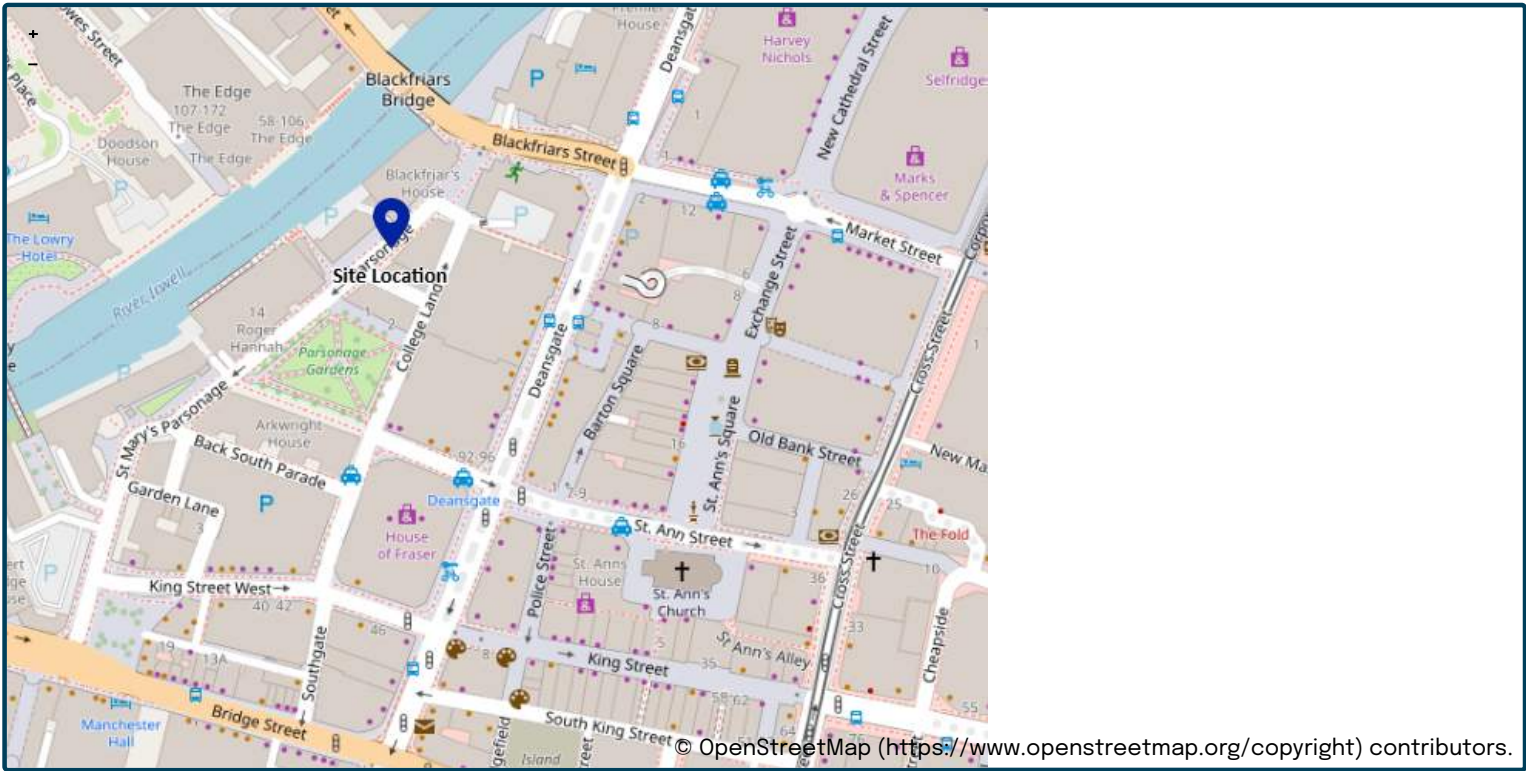
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	07/07/2025
Calculated by	SA
Reference	PW
Model version	2.0.1

Location

Site name	ONE NORTH PARADE
Site location	MANCHESTER



Site easting	383640
Site northing	398503

Site details

Total site area (ha)	0.102	ha
----------------------	-------	----

Greenfield runoff

Method

Method	IH124		
	<u>My value</u>		<u>Map value</u>
SAAR (mm)	889 mm		889
How should SPR be derived?	WRAP soil type		
WRAP soil type	4		4
SPR	0.47		
QBar (IH124) (l/s)	0.65 l/s		

Growth curve factors

	<u>My value</u>		<u>Map value</u>
Hydrological region	10		10
1 year growth factor	0.87		
2 year growth factor	0.93		
10 year growth factor	1.38		
30 year growth factor	1.7		
100 year growth factor	2.08		
200 year growth factor	2.37		

Results

Method	IH124
Flow rate 1 year (l/s)	0.57 l/s
Flow rate 2 year (l/s)	0.61 l/s
Flow rate 10 years (l/s)	0.9 l/s
Flow rate 30 years (l/s)	1.1 l/s
Flow rate 100 years (l/s)	1.4 l/s
Flow rate 200 years (l/s)	1.5 l/s

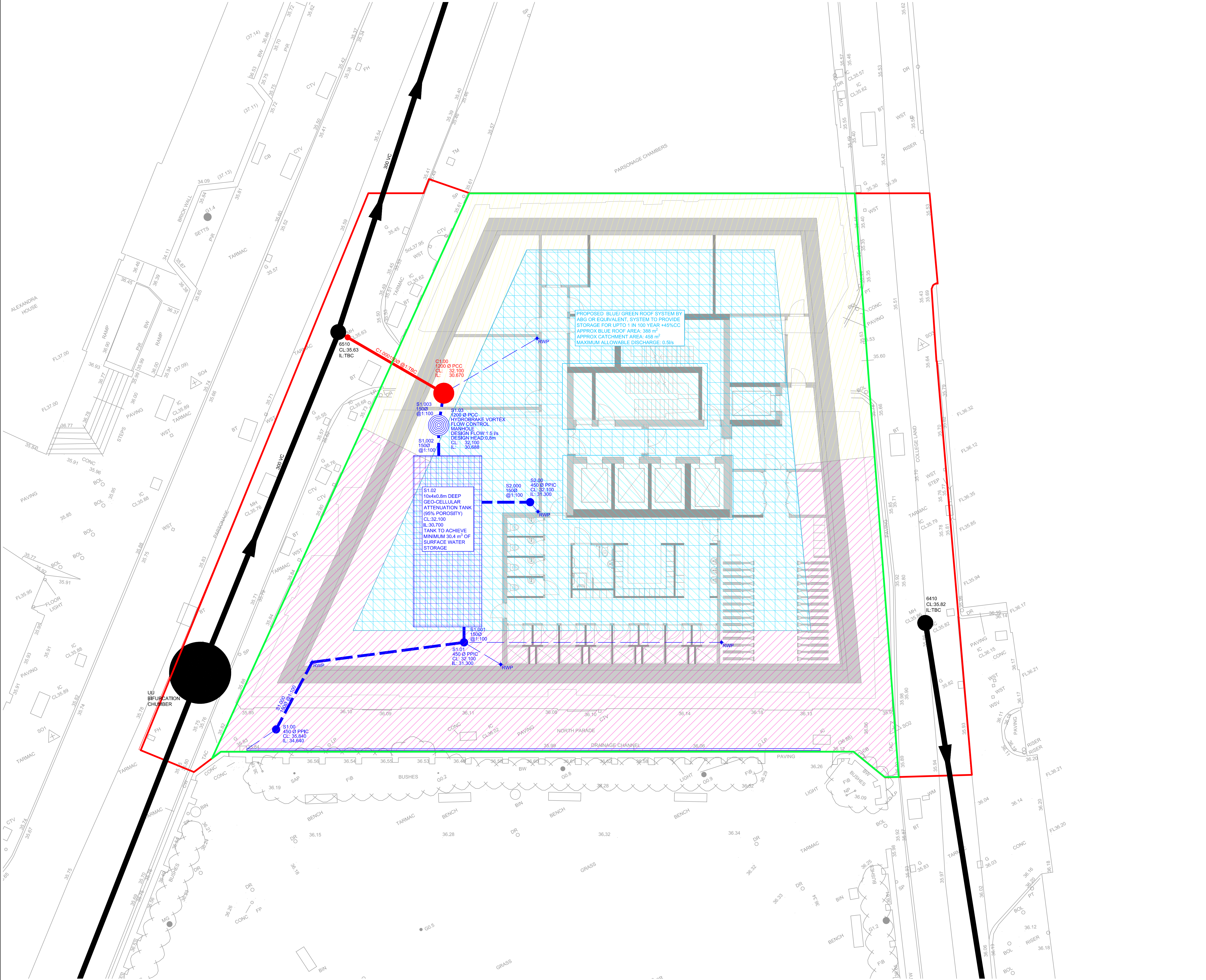
Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.0.1) developed by HR Wallingford and available at [uksuds.com](https://www.uksuds.com/) (<https://www.uksuds.com/>).

The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at [uksuds.com/terms-conditions](https://www.uksuds.com/terms-conditions) (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

APPENDIX F

PROPOSED DRAINED AREAS



- NOTES
- DO NOT SCALE FROM THIS DRAWINGS
 - THIS DRAWING IS INTENDED TO INDICATE THE ANTICIPATED DRAINED AREAS FROM THE ONE NORTH PARADE DEVELOPMENT. IT IS BASED UPON A REVIEW OF THE ARCHITECTURAL AND LANDSCAPE SITE PLAN DRAWINGS.
 - REFER TO DRAWING ONP-REN-XX-FN-DR-C-01100 BASEMENT BELOW GROUND DRAINAGE PLAN FOR DETAILS AND NOTES.

PROPOSED IMPERMEABLE AREAS			
MH REFERENCE	HATCH	AREA (Ha)	COMMENTS
C1.00		0.046	
S1.00		0.028	
S2.00		0.028	
TOTAL		0.056	

RIBA STAGE 2

THIS DRAWING INTENDS TO COMMUNICATE THE CONCEPT DESIGN FOR THE BELOW GROUND DRAINAGE NETWORK FOR THE PROPOSED BUILDING AND IS APPROPRIATE FOR RIBA STAGE 2 (CONCEPT DESIGN). ALL SIZES ARE INDICATIVE ONLY AND ARE TO ASSIST WITH HIGH LEVEL COSTING BY THE PROJECT QUANTITY SURVEYOR AND CONTRACTOR. ALL LAYOUT AND CONNECTION PRINCIPLES ARE INDICATIVE AND ARE SUBJECT TO CHANGE THROUGH RIBA STAGE 3 (SPATIAL CO-ORDINATION) AND STAGE 4 (TECHNICAL DESIGN) FOLLOWING INPUT AND FEEDBACK FROM THE RELEVANT AUTHORITIES.

A DESIGN CONTINGENCY OF 15-20% IS RECOMMENDED TO ALLOW FOR DESIGN DEVELOPMENT DURING RIBA STAGE 2, 3 AND STAGE 4 (TECHNICAL DESIGN) AND TO REFLECT INPUT FROM CONTRACTOR DESIGNED PACKAGES.

P02	TANK SIZE INCREASED	16.10.25	SA	JA
P01	DRAFT ISSUE	18.07.25	SA	PW
Rev:	Description:	Date:	By:	Chkd:



Project:

ONE NORTH PARADE MANCHESTER

Drawing Title:

PROPOSED DRAINED AREAS PLAN

Status:

STAGE 2

Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	JUL 25	SA	SA	PW
Scale:	1:100	Project No:	2404-02	

Project - Originator - Volume - Level - Type - Role - Number: Revision:

ONP-REN-XX-FN-DR-C-00060 P02

APPENDIX G

BELOW GROUND DRAINAGE PLAN



APPENDIX H

NORTH-WEST SUDS PROFORMA

NORTH WEST SuDS PRO-FORMA

This pro-forma is a requirement for any planning application for major development¹.

It supports applicants in summarising and confirming how surface water from a development will be managed sustainably under current and future conditions.

Your sustainable drainage system should be designed in accordance with [CIRIA The SuDS Manual C753](#) and any necessary adoption standards.

HOW TO COMPLETE

Blue Box	Instruction/ Question
Orange Box	Evidence Required
White Box	To be completed by Developer / Consultant

1. Complete ALL white boxes
2. Submit this pro-forma to the Local Planning Authority, along with:
 - Sustainable Drainage Strategy
 - Site Specific Flood Risk Assessment (if required)
 - Minimum supporting evidence, as indicated in orange boxes of this pro-forma.

GUIDANCE TO SUPPORT YOU

The pro-forma should be completed in conjunction with ‘Completing your SuDS Pro Forma Guide.’

The pro-forma can be completed using freely available tools such as [Tools for Sustainable Drainage Systems](#) or appropriate industry standard surface water management design software.

¹ as defined in Section 2 of [Statutory Instrument 2015 No. 595](#) or on sites in Critical Drainage Areas.

SECTION 1. APPLICATION & DEVELOPMENT DETAILS

Planning Application Reference <i>(if available)</i>		
State type of planning application <i>i.e. Pre-application, Outline, Full, Hybrid, Reserved Matters*</i> *Information only required if drainage is to be considered as part of reserved matters application		FULL PLANNING
Developer(s) Name:		BEACONSFIELD ESTATES
Consultant(s) Name:		RENAISSANCE ASSOCIATES LTD
Development Address <i>(including postcode)</i>		M3 2HS
Development Grid Reference <i>(Eastings/Northings)</i>		383642, 398492
Total Development Site Area (Ha)		0.102
Drained Area (Ha)* of Development		0.102
Please indicate the flood zone that your development is in. Tick all that apply. <i>Based on the Environment Agency Flood Map for Planning and the relevant Local Authority Strategic Flood Risk Assessment (to identify Flood Zones 3a/3b).</i>		Flood Zone 1 ☒ Flood Zone 2 ☐ Flood Zone 3a ☐ Flood Zone 3b ☐
What is the surface water risk of the site? Tick all that apply. <i>Based on the Environment Agency Surface Water Flood Map.</i>		High ☐ Medium ☐ Low ☒
Have you submitted a Site Specific Flood Risk Assessment (FRA)? <i>See separate guidance notes for clarification on when a FRA is required</i>		Yes ☒ No ☐
Have you submitted a Sustainable Drainage Strategy?		Yes ☒ No ☐
Does your drainage proposal provide multi-functional benefits via SuDS?		Yes ☒ No ☐
Expected Lifetime of Development <i>(years)</i> <i>Refer to Planning Practice Guidance "Flood Risk and Coastal Change" Paragraph 026</i>		100 YEARS
Development Type:		State Proposed Number of Units
Greenfield Site Site is wholly undeveloped, and a new drainage system will be installed	☐	1
Previously Developed/ Brownfield Site - Site is already developed, and the <u>entirety</u> of the existing surface water drainage system will be used to serve the new development (evidence must be provided to prove existing surface water drainage system is reusable); <u>OR</u> - Where records of the previously developed system are not available so that the hydraulic characteristics of the system cannot be determined or where the drainage system is not in reasonable working order i.e. broken, blocked or no longer operational for other reasons.	☐	
Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 1.		ONP-REN-XX-XX-RP-C-00001 ONP-REN-XX-XX-RP-C-00002

SECTION 2: IMPERMEABLE AREA AND EXISTING DRAINAGE

	Existing (E)	Proposed (P)	Change (P – E)
State Impermeable Area (Ha)	0.102	0.102	
Evidence Required: Plans showing development layout of site with existing and proposed impermeable areas.			☒

Are there existing sewers, watercourses, water bodies, highway drains, soakaways or filter drains on the site?	Yes ☐ No ☒ Don't Know ☐
Evidence Required: Plan(s) showing existing layout to include all: - Watercourses, open and culverted - Water bodies – ponds, swales etc. - Sewers, including manholes - Highway drains, include manholes, gullies etc. - Infiltration features - soakaways, filter drains etc.	☒

Drainage Design <u>Outline planning applications</u> should be able to demonstrate that a suitable drainage system is achievable. <u>All other type of planning application</u> should provide full details or reference to previous planning application where drainage details have been submitted or approved.	
Select which design approach you are taking to manage water quantity (refer to Section 3.3 SuDS Manual)	
Approach 1 – Volume control / Long Term Storage (Technical Standards S2/3, S4/5) - The attenuated runoff volume for the 1 in 100 year 6 hour event (plus climate change allowance) is limited to the greenfield runoff volume for the 1 in 100 year 6 hour event, with any additional runoff volume utilising long term storage and either infiltrated or released at 2 l/s/ha - The discharge rate for the critical duration 1 in 1 year event is restricted to the 1 in 1 year greenfield runoff rate - The discharge rate for the critical duration 1 in 100 year event (plus climate change allowance) is restricted to the 1 in 100 year greenfield runoff rate	☐
Approach 2 – Qbar (Technical Standards S6) Justification has been provided that the provision of volume control/long term storage is not appropriate and an attenuation only approach is proposed. All events up to the critical duration 1 in 100 year event (plus climate change allowance) are limited to Qbar (1 in 2 year greenfield rate) or 2 l/s/ha, whichever is greater.	☒
Evidence Required: Plans showing: - Existing flow routes and flood risks - Modified flow routes - Contributing and impermeable areas - Current (if any) and proposed 'source control' and 'management train' locations of sustainable drainage components (C753 Chapter 7) - Details of drainage ownership - Details of exceedance routes (Technical Standards S9) - Topographic survey - Locations and number of existing and proposed discharge points	☒

Note consideration should be given to manage surface water from both impermeable and permeable surfaces (including gardens and verges) likely to enter the drainage system.

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 2.

ONP-REN-XX-XX-RP-C-00001
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SECTION 3: PEAK RUNOFF RATES – TECHNICAL STANDARDS S2, S3 AND S6 (UNLESS S1 APPLIES)

Rainfall Event	Existing Rate (l/s)	Greenfield Rate (l/s)	Proposed Rate (l/s) <i>Previously developed sites - In line with S3 should be equivalent to Greenfield runoff rates – discuss with LLFA if this is not achievable pre-application</i>
Qbar (Approach 2)		1.4	2
1 in 1 Year Event (Approach 1)	1.2		
1 in 30 Year Event	2.1		
1 in 100 Year Event* (Approach 1)	2.2		
* Total discharge at the 1 in 100 year rate should be restricted to the greenfield runoff volume for the 1 in 100 Year 6 hour event with additional volumes (long-term storage volume) released at a rate no greater than 2 l/s/ha where infiltration is not possible. The climate change allowance should only be applied to the proposed rate and not the existing or greenfield rate.			
Evidence Required: Methodology used to calculate peak runoff rate clearly stated and justified. Impermeable areas plan, supported by topographical survey confirming positive drainage. Hydraulic calculations and details of software used.			☒ ☒ ☒

State the hydraulic method used in your calculations
(Refer to Table 24.1 of The SuDS Manual)

IH124
FEH

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 3.

ONP-REN-XX-XX-RP-C-00001
ONP-REN-XX-XX-RP-C-00002

SECTION 4: DISCHARGE VOLUME – TECHNICAL STANDARDS S4, S5 AND S6 (UNLESS S1 APPLIES)

Rainfall Event	Existing Volume (m ³)	Greenfield Volume (m ³)	Proposed Volume (m ³)
1 in 100 Year 6 Hour Event <i>(Approach 1)</i>			
Does the below statement apply to your development proposal? Long term storage is not achievable on this site and, in accordance with S6 of the Non Statutory Technical Standards for SuDS, the surface water discharge rates for events up to and including the 1 in 100 year critical event are limited to Qbar (Approach 2)			Yes ☒ No ☐
Evidence Required: Approach to managing the quantity of surface water leaving the site clearly stated and justified Methodology used to calculate discharge volume clearly stated and justified. Hydraulic calculations and details of software used.			☒ ☒ ☒

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 4.	ONP-REN-XX-XX-RP-C-00001 ONP-REN-XX-XX-RP-C-00002
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SECTION 5: STORAGE – TECHNICAL STANDARDS S7 AND S8

State climate change allowance used (%)	1 in 30 YEAR: 40% 1 in 100 YEAR: 45%
State housing density (houses per ha)	N/A
State urban creep allowance used (%)	0% - NOT SUITABLE DUE TO TYPE OF DEVELOPMENT
Evidence Required: State / used in appropriate industry standard surface water management design software.	☒

State storage volume required (m³) (excluding non-void spaces) <i>Must include an allowance for climate change and urban creep</i>	78
Have you incorporated interception into your design? <i>(Refer to Chapter 24 of The SuDS Manual C753)</i> <i>Where possible, infiltration or other techniques are to be used to try and achieve zero discharge to receiving waters for rainfall depths up to 5mm.</i>	Yes ☐ No ☒
Evidence Required: Drainage plans showing location of attenuation and all flow control devices and supporting calculations.	☒

Summarise how storage will be provided for 1 in 30 year event on site. <i>Storage must be designed to ensure that at no flooding occurs onsite in a 1 in 30 year event except in designed areas and no flooding occurs offsite in a 1 in 100 year (plus climate change allowance) event.</i>	BLUE ROOF AND BELOW GROUND GEOCELLULAR TANK
Summarise how storage will be provided for 1 in 100 year (plus climate change) event on site. <i>Where storage above the 1 in 30 year rainfall event is provided in designated areas designed to accommodate excess surface water volumes, plans showing storage locations and surface water depths and supported by calculations used in appropriate industry standard surface water management design software. It is important to run a range of duration events to ensure the worst case condition is found for each drainage element on the site</i>	AS ABOVE
Evidence Required: Plans showing size and location of storage and supporting calculations. Where there is controlled flooding, extents and depths must be indicated.	☒

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 5.	ONP-REN-XX-XX-RP-C-00001 ONP-REN-XX-XX-RP-C-00002
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SECTION 6: WATER QUALITY PROTECTION

Contaminated surface water run-off can have negative impacts on the quality of receiving water bodies. The potential level of contamination will influence final the design of an appropriate treatment train as part of your sustainable drainage system.

Is the proposal site known to be or potentially contaminated?	Yes ☒ No ☐
If the site is contaminated, it should be demonstrated that the sustainable drainage system will not increase the risk of pollution to controlled waters through the mobilisation of contaminants and/or creation of new pollution pathways.	

Confirm the Pollution Hazard Level of the proposed development - Tick <u>ALL</u> that apply <i>Refer to Pollution Hazard Indices for different Land Use Classifications in Table 26.2 of The SuDS Manual C753 for further guidance.</i>		
Pollution Hazard Level <i>Tick <u>ALL</u> that apply</i>	Surface water run-off from the proposed development will drain from:	
VERY LOW	☐	Residential roofs
LOW	☒	- Other roofs (typically commercial/industrial roofs) - Individual property driveways, residential car parks, low traffic roads (e.g. cul de sacs, home-zones and general access roads) - Non-residential car parking with infrequent change (e.g. schools, offices) i.e. < 300 traffic movements/day
MEDIUM	☐	- Commercial yard and delivery areas - Non-residential car parking with frequent change (e.g. hospitals, retail) - All roads except low traffic roads and trunk roads/motorways²
HIGH	☐	- Sites with heavy pollution (e.g. haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites) - Sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured - Industrial sites - Trunk roads and motorways¹

If the development's Pollution Hazard Level is 'Very Low' or 'Low', has the sustainable drainage design been risk assessed and appropriate mitigation measures included?	Yes ☒ No ☐
If the proposed development has a very low or low polluting potential, you should design your sustainable drainage system to include an appropriate treatment train in accordance with The SuDS Manual (C753).	

If the development's Pollution Hazard Level is 'Medium' or 'High', is the application supported by a detailed water quality risk assessment?	Yes ☐ No ☐
- If the proposed development has a high polluting potential, a detailed risk assessment <u>will</u> be required to identify an appropriate SuDS treatment train and ensure compliance with Paragraph 170 of the National Planning Policy Framework. - If the proposed development has a medium polluting potential, a detailed risk assessment <u>may</u> be required depending on the nature, scale and location of the development.	

Has pre-application advice on water quality been obtained from the Environment Agency?	Yes ☐ No ☒
If YES, provide details:	

² Motorways and trunk roads should follow the guidance and risk assessment process set out in Highways Agency (2009).

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 6.

ONP-REN-XX-XX-RP-C-00001
ONP-REN-XX-XX-RP-C-00002

SECTION 7: DETAILS OF YOUR SUSTAINABLE DRAINAGE SYSTEM

a) Function of your Sustainable Drainage System

Do your proposals store rainwater for later use (as a resource)?	Yes ☐ No ☒
Evidence Required: Please provide a brief sentence in the adjacent white box to describe how this function has been achieved.	

Do your proposals promote source control to manage rainfall close to where it falls? (e.g. promoting natural losses through soakage, infiltration and evapotranspiration)	Yes ☒ No ☐
Evidence Required: Please provide a brief sentence in the adjacent white box to describe how this function has been achieved.	BLUE ROOF

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 7a.

ONP-REN-XX-XX-RP-C-00001
ONP-REN-XX-XX-RP-C-00002

b) Hierarchy of Drainage Options – Planning Practice Guidance

The proposed method of discharge are set out within order of priority. Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable.

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 1: Into the ground (via infiltration)		Yes ☐ No ☒	
If YES - Evidence Required		If NO – Evidence Required Tick ALL that apply	
☐	A. Completed Infiltration Checklist from The SuDS Manual (C753) Appendix B <i>An editable version of this form is available on SusDrain website.</i>	☐	A. Site investigation to demonstrate that the ground is not free draining. Test results to be provided in accordance with: - The methodology within BRE 365 (2016), OR - Falling head permeability tests BS EN ISO 22282-2: 2012
☐	B. British Geological Survey (BGS) Infiltration SuDS Map	☐	B. NOTE: where an applicant is unable to access a site to undertake testing, e.g. where unable to access a site for an outline application, they can submit a SuDS GeoReport or similar.
☐	C. Infiltration testing to BRE 365 (2016) or falling head permeability tests to BS EN ISO 2228-2: 2012 (optional for outline)	☐	C. Evidence to confirm that infiltration to ground would result in a risk of deterioration to ground water quality.
☐	'Plan B' sustainable drainage plan and statement of approach with an alternative discharge method, in case infiltration proposals are proven not feasible upon	☐	D. Geotechnical advice from a competent person* which determines that infiltration of water to ground would pose an unacceptable risk of geohazards to the site and/or local area.

	further site specific ground investigation e.g. to consider seasonal variations to groundwater.		<i>*Note: Competent person may include a Chartered Engineer, Chartered Geologists, Registered Ground Engineering Professionals (RoGEP).</i>
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Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 2: To a surface water body <i>(select type)</i> NOTE: Consent from LLFA or Permit from Environment Agency may be required – refer to guidance		Yes ☐ No ☒ N/A ☐	
		☐ Main river ☐ Canal ☐ Ordinary watercourse ☐ Other water body	
If YES - Evidence Required		If NO – Evidence Required Tick ALL that apply	
☐ Surface water body / watercourse survey and report	☐ Plan showing nearby watercourses and waterbodies AND ☒ Statement providing justification in your Sustainable Drainage Strategy <i>Note: Where discharge of any element in the hierarchy is discounted, an applicant should provide justification. If the reasoning for discounting a discharge of surface water to watercourse relates to issues associated with third party land or the securing of any other required consent, it may be necessary for the applicant to provide evidence to the local planning authority to support their proposed approach.</i>		

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 3: To a surface water sewer or highway drain <i>(select type)</i>		Yes ☐ No ☒ N/A ☐	
		☐ Surface water sewer ☐ Highway drain	
If YES - Evidence Required		If NO – Evidence Required Tick ALL that apply	
☐ Written correspondence from Water and Sewerage Company/ Highway Authority regarding proposed connection.	☒ Plan showing nearby sewers and highway drains AND ☒ Statement providing justification in your Sustainable Drainage Strategy		

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 4: To combined sewer		Yes ☒ No ☐ N/A ☐	
If YES - Evidence Required		If NO – Evidence Required	
☒ Written correspondence from Water and Sewerage Company	N/A		

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 7b.	ONP-REN-XX-XX-RP-C-00001 ONP-REN-XX-XX-RP-C-00002
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c) Proposed SuDS Component Types

	Tick ALL that apply				
Within property boundary	☐ Rainwater harvesting	☒ Green/ blue roofs	☐ Pervious pavements [Type: A ☐ B ☐ C ☐	☐ Soakaway	☐ Bio retention systems

	Tick ALL that apply				
Within development site boundary (not property)	☐ Infiltration system [Type: ☐ Surface level ☐ Below ground]		☐ Filter strips	☐ Filter drains	☐ Swales
	☐ Bio retention system	☐ Detention basins	☐ Ponds and wetlands	☒ Attenuation tanks/ Oversized pipes	☐ Other (state below)
	If 'Other' please state:				

Off site (not within the boundary of the proposed development)	Please state:
--	---------------

I confirm that the above selected components have been designed in accordance with The SuDS Manual (C753).	I confirm ☒
I confirm that the management of flows resulting from rainfall in excess of a 1 in 100 year plus climate change rainfall event, and their exceedance route(s), has been fully considered in order to minimise the risks to people, property (new and existing) and infrastructure.	I confirm ☒

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 7c.	ONP-REN-XX-XX-RP-C-00001 ONP-REN-XX-XX-RP-C-00002
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The applicant is responsible to ensure that ALL components selected in Section 7 can be maintained for the design life of the development. This information is required so the Local Planning Authority can ensure the maintenance and management of the sustainable drainage system. The Local Planning Authority will discuss how this will be secured (e.g. via planning condition or planning obligation).

[illegible]

Information Provided?	
Maintenance Schedule	Yes ☒ No ☐
Evidence Required: A copy of the maintenance schedule including: Proactive and preventative maintenance Detailing regular, occasional and remedial maintenance activities including recommendations for inspection and monitoring. This should include recommended frequencies, advice on plant/ machinery required and an explanation of the objectives for the maintenance proposed and potential implications of not meeting them. Reactive and corrective maintenance (e.g. product repair and replacement). Including advice on excavations, or similar works, in locations that could affect the SuDS components/ adjacent structures.	☒

		Information Provided?
Maintenance and Management Arrangements		Yes ☒ No ☐
Evidence Required: Evidence of formal agreement with the party responsible for undertaking maintenance. Please select any of the adopting bodies that you will be offering your sustainable drainage components for adoption. Tick all that apply. ☐ Water and Sewerage Company <i>Section 104 agreement (Water Industry Act 1991)</i> ☐ Highway Authority <i>Section 278/38 agreement (Highways Act 1980)</i> ☐ Local Authority Public Open Space <i>[Refer to Local Authority Policy]</i> Please select the arrangement(s) for all non-adopted sustainable drainage components. Tick all that apply. ☒ Management Company ☐ Property Owner <i>(for SuDS components within property boundary only)</i> ☐ Other (please state) 		☐

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 8.

ONP-REN-XX-XX-RP-C-00001
ONP-REN-XX-XX-RP-C-00002

DECLARATION AND SUBMISSION

This pro-forma has been completed using evidence from information which has been submitted with the planning application.

The information submitted in the Sustainable Drainage Strategy and site-specific Flood Risk Assessment (FRA), where submitted, is proportionate to the site conditions, flood risks and magnitude of development and I agree that this information can be used as evidence to this sustainable drainage approach.

Submitter Details			
Completed by	SELVANA AHMAD	Email Address	
		Telephone Number(s)	0161 393 6509
Signed off by	JOE BULLOUGH	Accreditation(s) and/or Qualification(s) of Signatory	MEng
Date (dd/mm/yyyy)	16/10/2025	Company	RENAISSANCE ASSOCIATES LTD

Client Details			
Name	STEWART HOULGRAVE	Company	BEACONSFIELD ESTATES