



DESIGN AND ACCESS STATEMENT - PROJECT NANO : 'BUILDING 3'

60m² of extension(s) to existing building

BROOKMANS PARK, HATFIELD, AL9 6NE

November 2023



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1.0 INTRODUCTION

1.1 Introduction and Application Overview

Made Architects have been appointed by Inmarsat Global Limited (the applicant) to prepare proposals which support a wider relocation strategy of the applicants operations, namely its research and laboratory spaces from 99 City Road London to Brookmans Park, Hatfield.

This document together with the accompanying drawings seeks approval for the repurposing of **Building 3** in order to make it suitable to accommodate mission critical, data aggregation facilities, offices, workshops and labs. which support the high tech nature of the operations on site.

A feasibility study has been drawn up which has demonstrated that the existing building is a viable option for the proposals outlined here within.

The proposed alterations to **Building 3** are critically important for ensuring that the activities associated with the successful operation of the Antenna Gantry (planning application ref **6/2023/0730/FULL**) are fulfilled. And that the site is capable of successfully delivering vital telecommunications services.

The proposals will be fully accessible from the main entrance to the site at Brookmans Park from the A1000 (Great North Road) using the existing roadways which will allow deliveries of necessary telecommunications equipment. The proposed site also offers adequate parking space for Inmarsat's employees and visitors.

Functions for **Building 3** proposal :

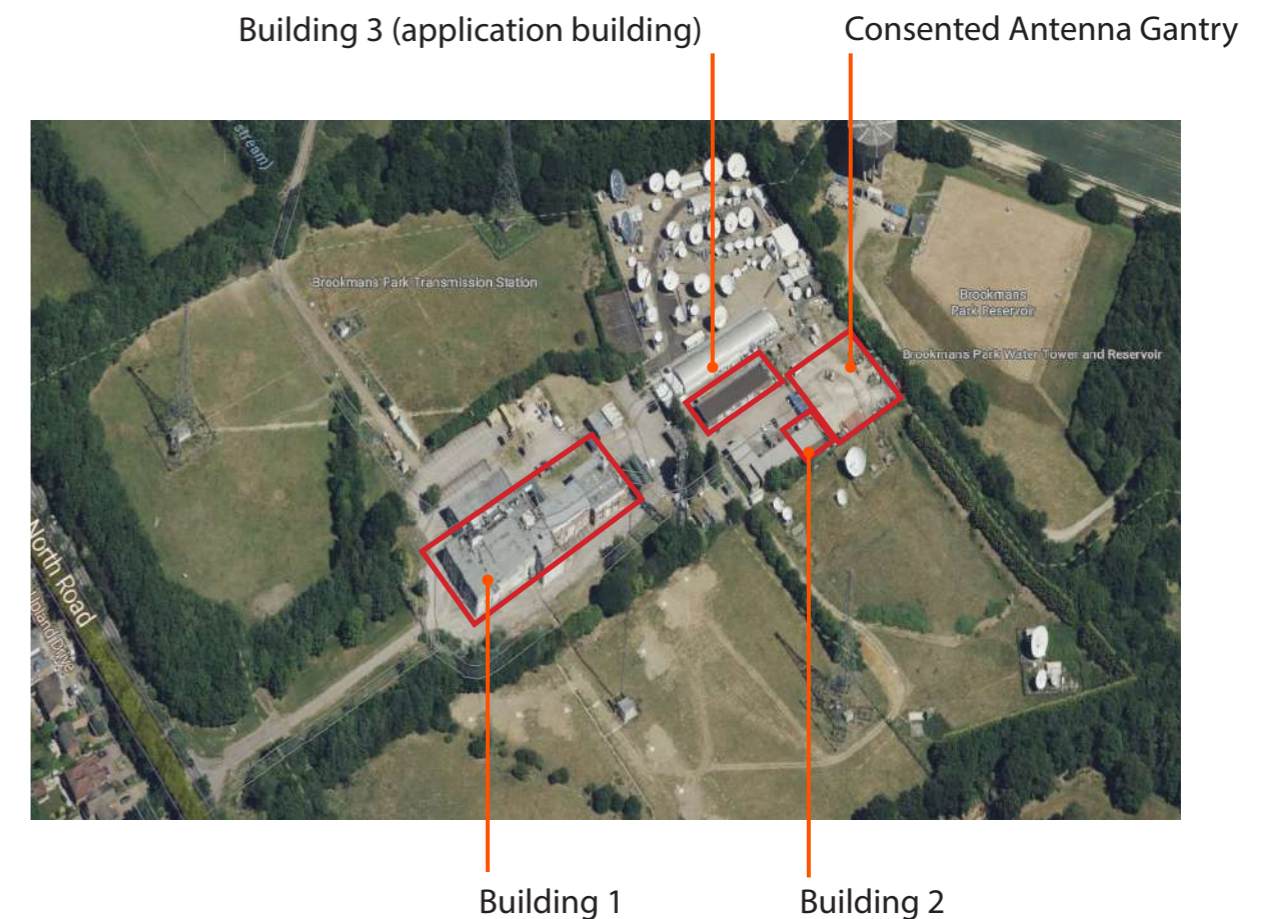
- **Data Aggregation Rooms**
- **R&D Labs**
- **Workshops Equipment Racks**
- **Welfare Facilities**

The proposal for **Building 3** is to increase the existing building footprint by approximately 60 m² to accommodate the Applicants R&D labs, Workshops & associated ancillary spaces.

The design aims to enhance the performance of the building envelope whilst retaining the current visual language of it.

This design statement should be read in conjunction with the following drawings :

- Site Location Plan
- Block Plan
- Existing Plan
- Existing Elevations
- Proposed Plan
- Proposed Elevations
- Proposed Section
- Proposed Fire Strategy Plan



1.0 INTRODUCTION

1.2 Background

Inmarsat has been actively seeking a suitable location for its research and development endeavors. After evaluating various potential sites, the Applicant has chosen Brookmans Park Teleport due to its strategic location, historical significance in satellite and telecommunications, and technical attributes. Brookmans Teleport uniquely fulfills all of the Applicant's operational requirements.

Brookmans Park originally served as a facility for the BBC's operations in the 1920s and has since evolved into a telecommunications teleport under the ownership of Arqiva. The iconic two-story BBC transmitter building still stands (See figure 1.1), accompanied by multiple outbuildings to the rear, numerous satellite dishes positioned to the northeast, and towering masts to the south and north. (See figure 1.0)

The site offers an ideal environment for the placement of satellite dishes, complementing the existing infrastructure, and readily accommodating Inmarsat's office, research, and computing needs. Inmarsat anticipates that a number of skilled engineers will be working at the Brookmans Park in high tech roles on a regular basis.

Given the nature of Inmarsat's operations, the satellite dishes (on the Antenna Gantry) will be dependant on the operation of **Building 3**, therefore this proposal has been designed according to Inmarsat's requirements to ensure that **Building 3** is successfully delivered which will safeguard the success of the Antenna Gantry.

To this end, extensive work has been carried out with the Applicant to ensure the labs and workshops have adequate space for the number of equipment racks and workspace required within the building to ensure a viable and practical working environment for transferring information / data / reports to the Gantry.

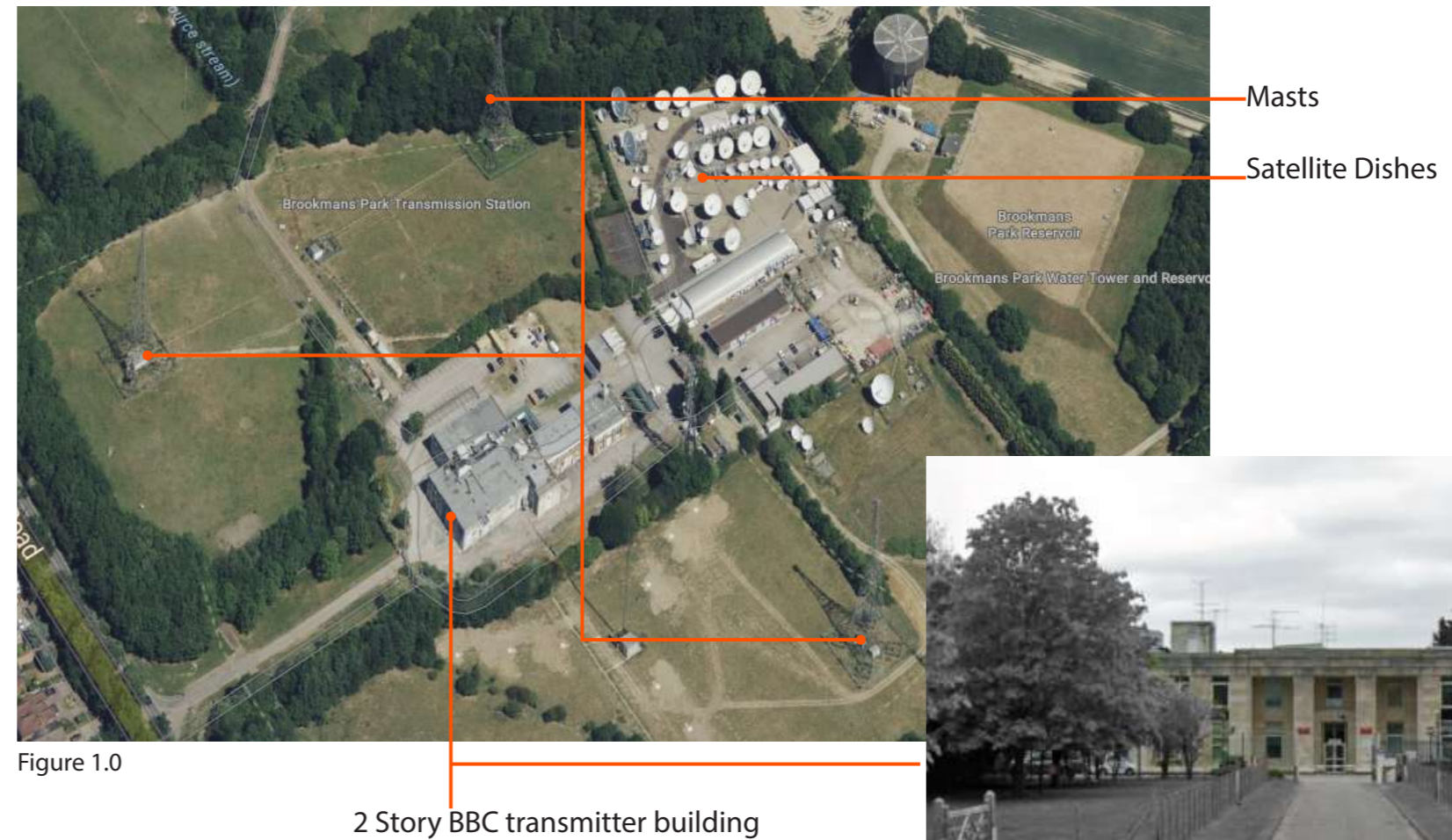


Figure 1.0



Figure 1.1 : Existing 2-story BBC transmitter building (view from main entrance to site)

1.0 INTRODUCTION

1.3 Project Drivers

Building 3 is comprised of workshops, R&D labs, Welfare Facilities, Equipment Racks and Plant Spaces .

The project objectives are :

-To upgrade **Building 3** to provide a sufficient environment for Inmarsat's employees.

-To provide a stable internal environment & Radio Frequency (RF) shielded spaces for the sensitive and extensive equipment and server racks housed within the building, (these will be relocated from Inmarsat's existing facilities at 99 City Road, London). See figure 1.2 and 1.3 for examples of server racks.

- Enhance the indoor environmental quality with comfort cooling, RF shielding and increased airtightness whilst improving the thermal performance of the external envelope.

-To provide adaptable spaces with future proofing opportunities for mission critical equipment and functions.



Figure 1.2 : Example of equipment racks



Figure 1.3 : An example of existing of Inmarsat's equipment racks arrangement / positioning.

2.0 SITE & CONTEXT

2.1 Site Location

Site Address :

Brookmans Park

Transmitting Teleport Station,

A1000 Great North Rd,

AL9 6NE

The application site is located on the north-eastern edge of Brookmans Park Village on the site of Brookmans Transmitter Station. The site is accessible from the A1000 (Great North Road).

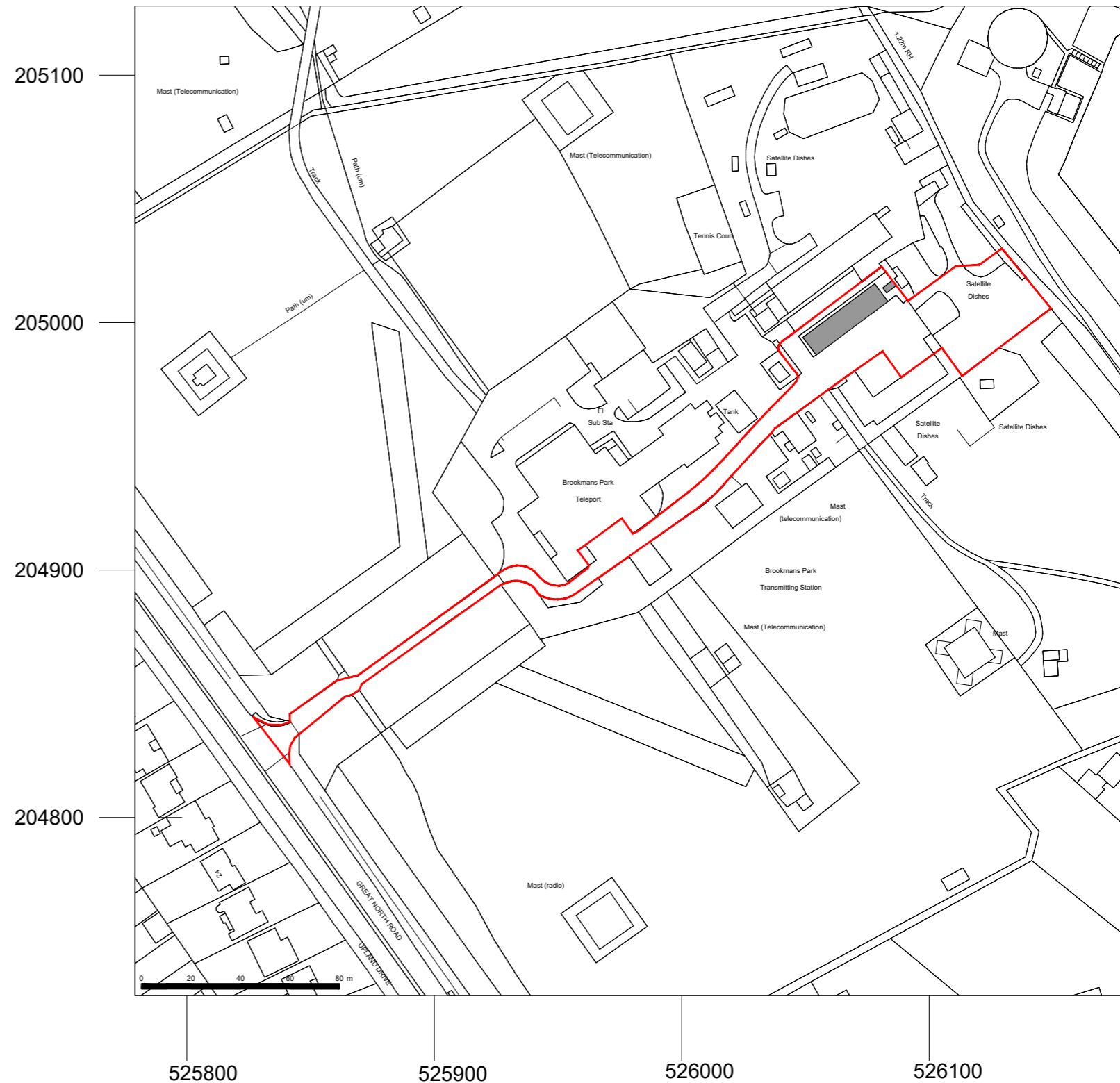
The proposed development site is located within the wider context of the transmitter station which is an area of approximately 20 hectares and characterised by a Central Control Zone (CCZ).

The rear of the CCZ contains three subsidiary buildings (including **Building 3**) and a large number of satellite dishes, along with other small buildings, a tennis court and hardstanding for vehicle circulation/loading and unloading purposes, parking facilities and storage.

Site Context

The Applicant has taken ownership of a number of buildings on the site in order to carry out its operations, it is important to understand that **Building 3** operates as a part of a collection of buildings, and that in particular its function is a vital element to the success of the Antenna Gantry.

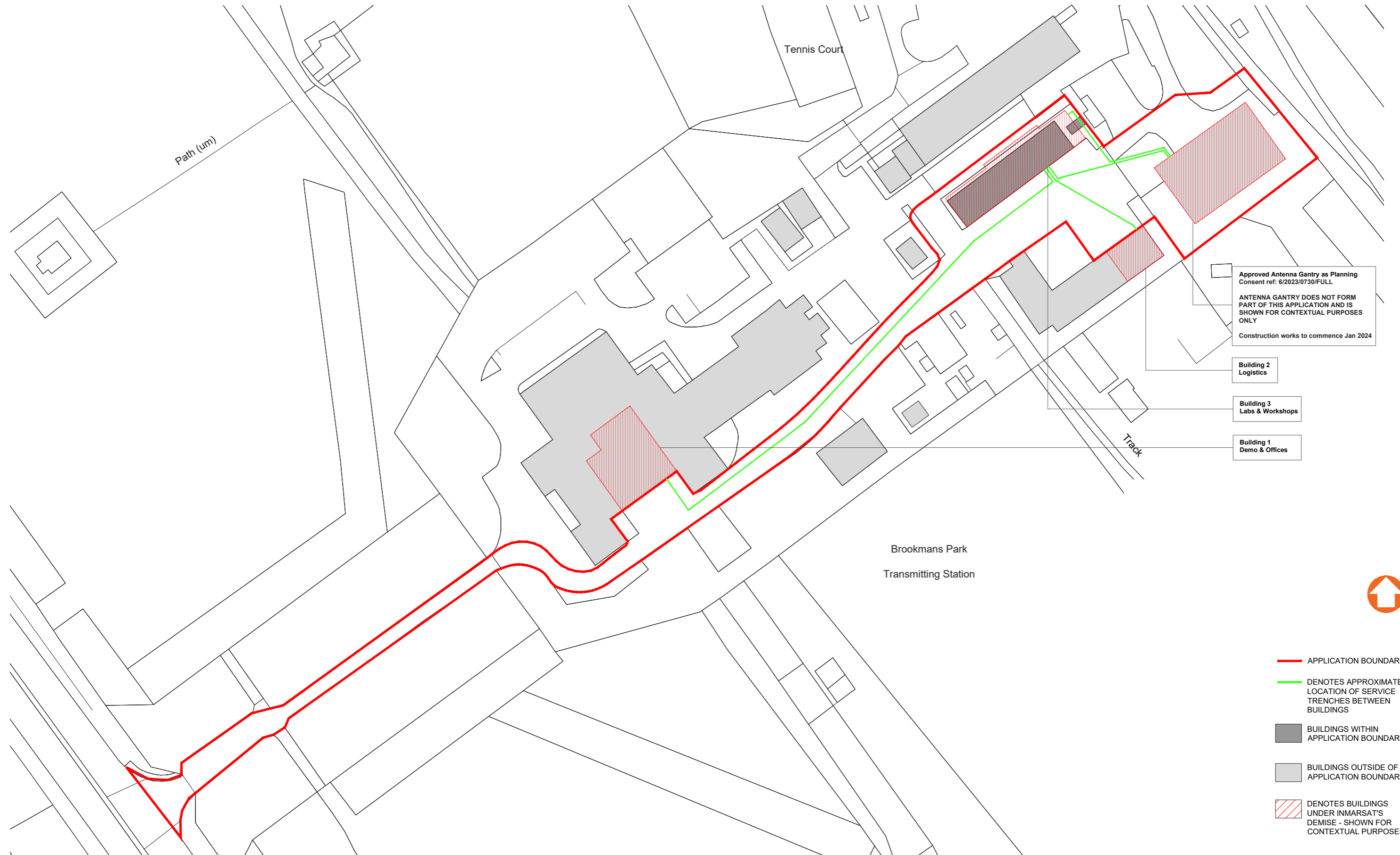
Construction works on the Antenna Gantry are scheduled to begin in January 2024 but this application makes reference to enhancements to security lines and hard landscaping around the Antenna Gantry that are also vital to that buildings operation.



— APPLICATION BOUNDARY
■ BUILDINGS WITHIN APPLICATION BOUNDARY

2.0 SITE & CONTEXT

2.2 Site Boundary Applicant Demise



2.0 SITE & CONTEXT

2.3 Site Photographs

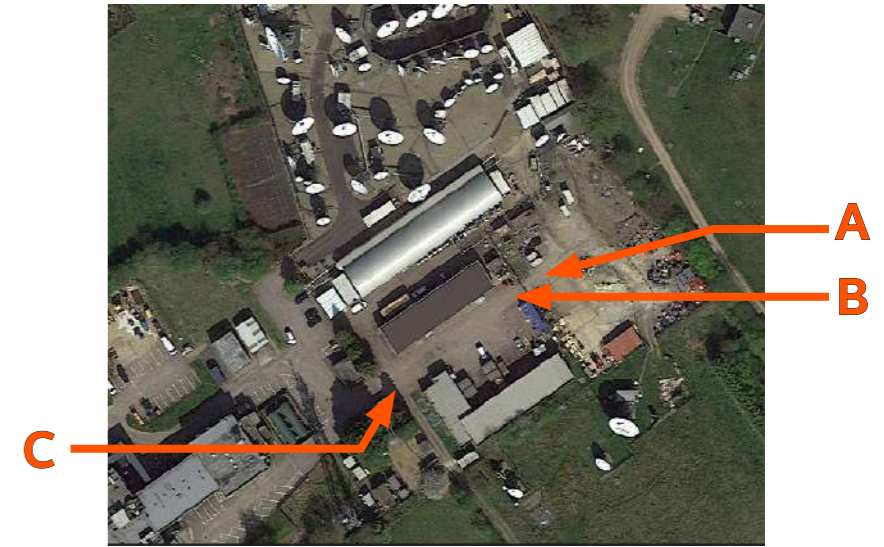


Photo A

Building 3 & Existing Plant Cabin

As seen from southeast : View of **Building 3** from location of proposed Antenna Gantry.



Photo B

Building 3 & Existing Plant Cabin

As seen from east.



Photo C

Building 3

As seen from southwest

2.0 SITE & CONTEXT

2.3 Site Photographs

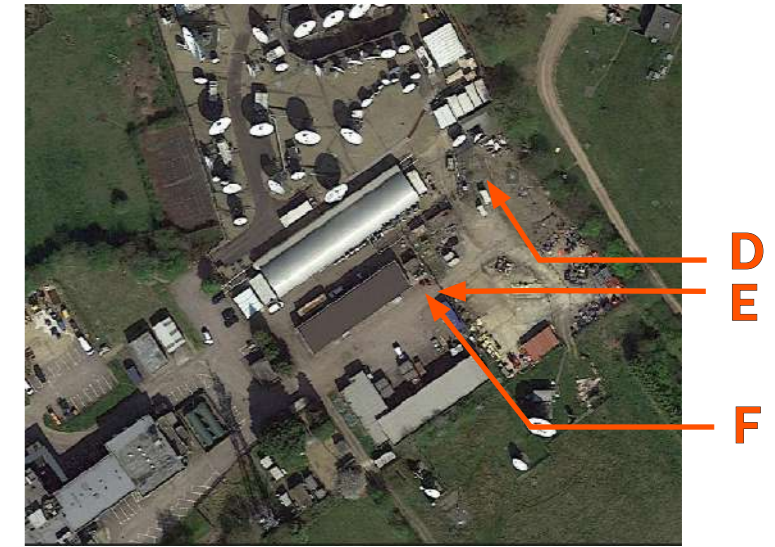


Photo D

Site Context

As seen from south : View towards the existing satellite dishes at the rear of **Building 3**.



Photo E

Building 3 & Context

As seen from east : showing proximity of **Building 3** to its immediate context



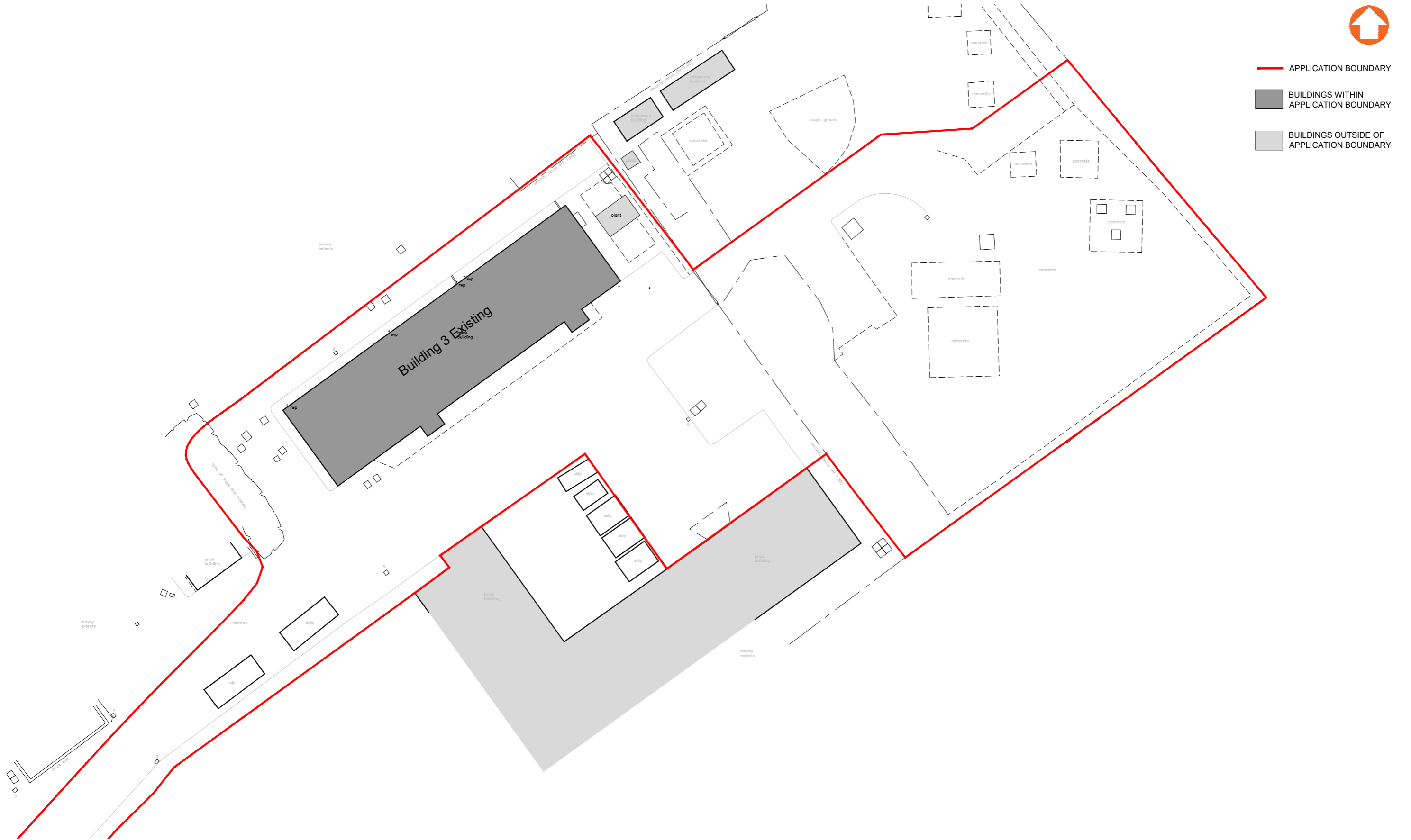
Photo F

Existing Plant Cabin adjacent to **Building 3**

As seen from south : The distance between existing building and the existing cabin (to be demolished) for the proposed extension.

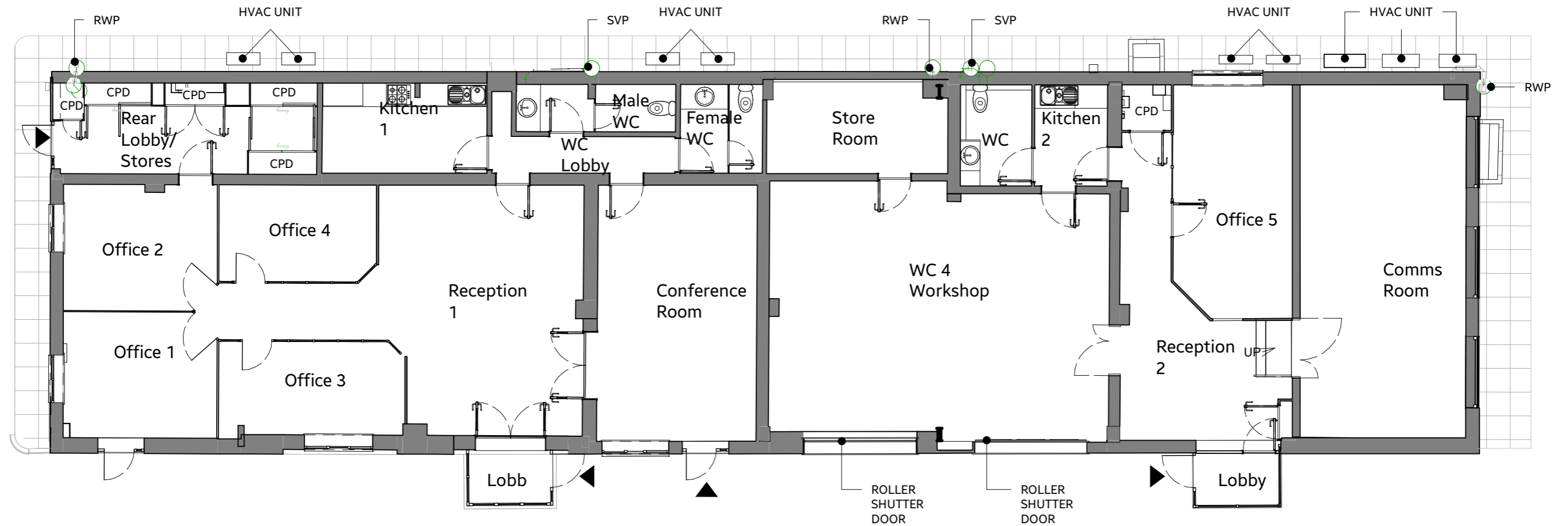
3.0 Design Proposals

3.1 Existing Site Plan



3.0 Design Proposals

3.2 Existing GA Plan



Existing building fabric

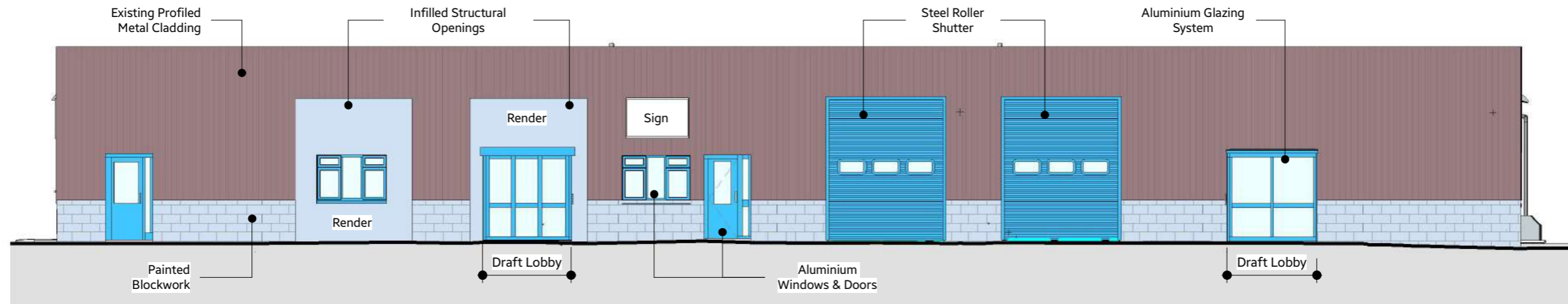
The existing external envelope of **Building 3**, is the product of a building that has been adapted to suit different needs throughout its life span.

As we can see from the existing elevations this modest building has been modified to include loading bay doors, (some of which have subsequently been infilled) has had extensions added to it in the form of draft lobbies, and has had numerous new penetrations through the envelope as its useage has changed.

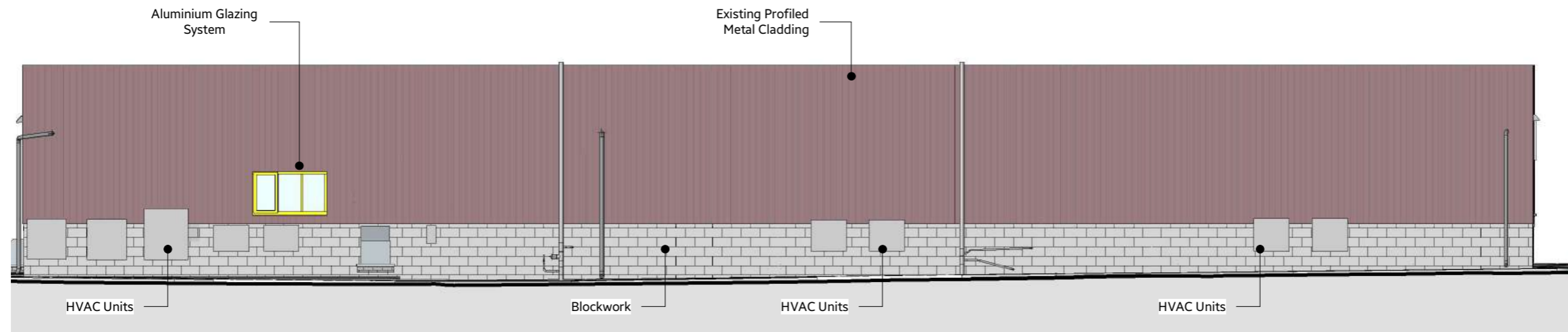
The proposal seeks to strip back some of the changes in order to provide a robust and functional aesthetic.

3.0 Design Proposal

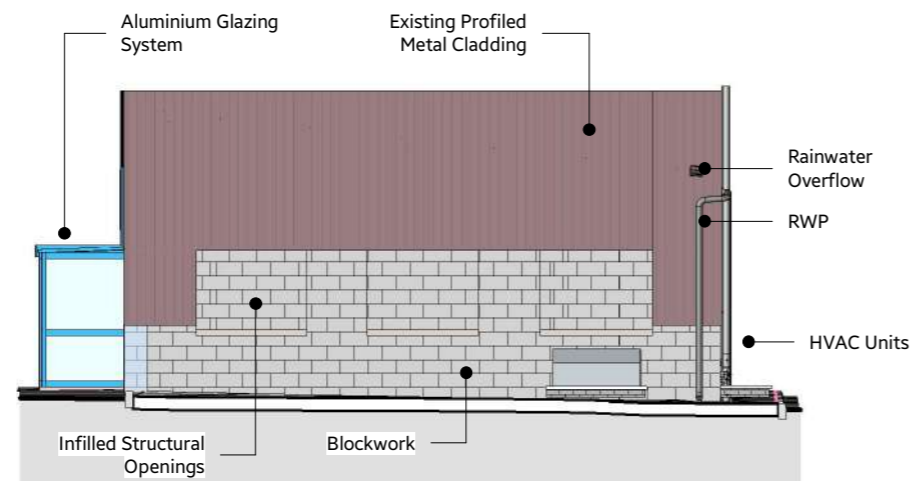
3.3 Existing Elevations



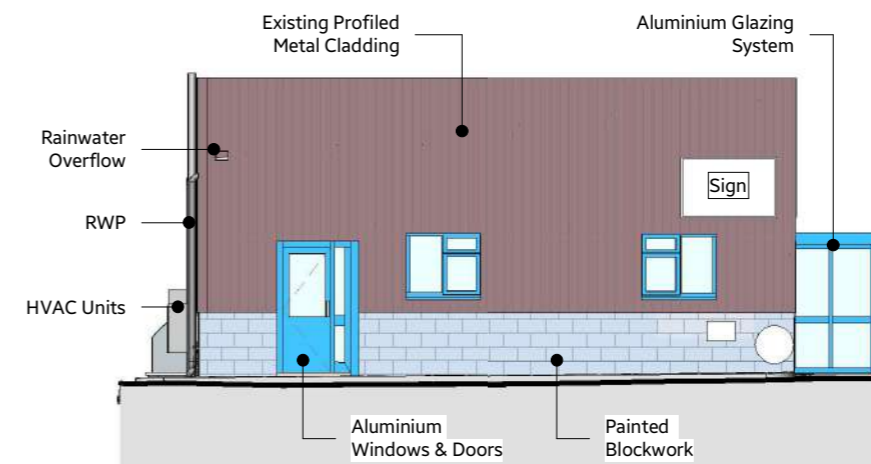
SOUTH ELEVATION



NORTH ELEVATION



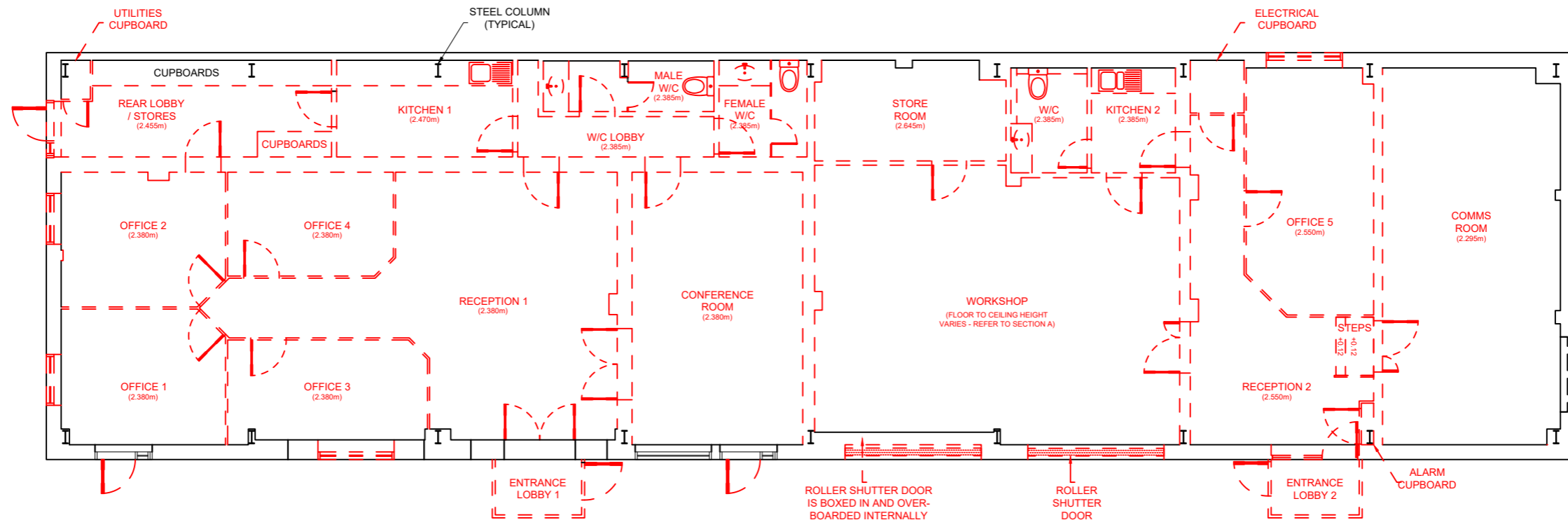
WEST ELEVATION



WEST ELEVATION

3.0 Design Proposal

3.4 Existing Layout - with proposed demolition



The proposal for **Building 3** requires that the current internal configuration and elements of the external facade are stripped out of the existing super structure to allow for an extensive replanning of the internal space.

As the proposed use of the building is heavily technical in nature (Data Aggregation, R&D Lab & Workshop) it will require comprehensive provision of data and power and a steady state (controlled) internal environment, in order to deliver this the proposal makes use of raised access floor to provide a plenum for environmental control and power and data distribution.

The raised access floor will be installed through out the project at a height of 500mm above the existing SSL.

Due to the sensitive nature of the equipment housed within the building, provision for Radio Frequency (RF) Shielding must be accounted for in the external envelope, in addition to this there is a requirement for a controlled internal environment and an airtightness factor above conventional levels which must be achieved.

In order to achieve this and provide a weathertight and secure envelope it is proposed that the existing profiled metal cladding is removed from the scheme and replaced with a building system that can achieve the performance required.

3.0 Design Proposal

3.5 Proposed Site Plan

Site Proposals

In this proposed site plan we can see the proposals for enhancements to the existing hardstanding, fences and access which will future proof the Antenna Gantry.

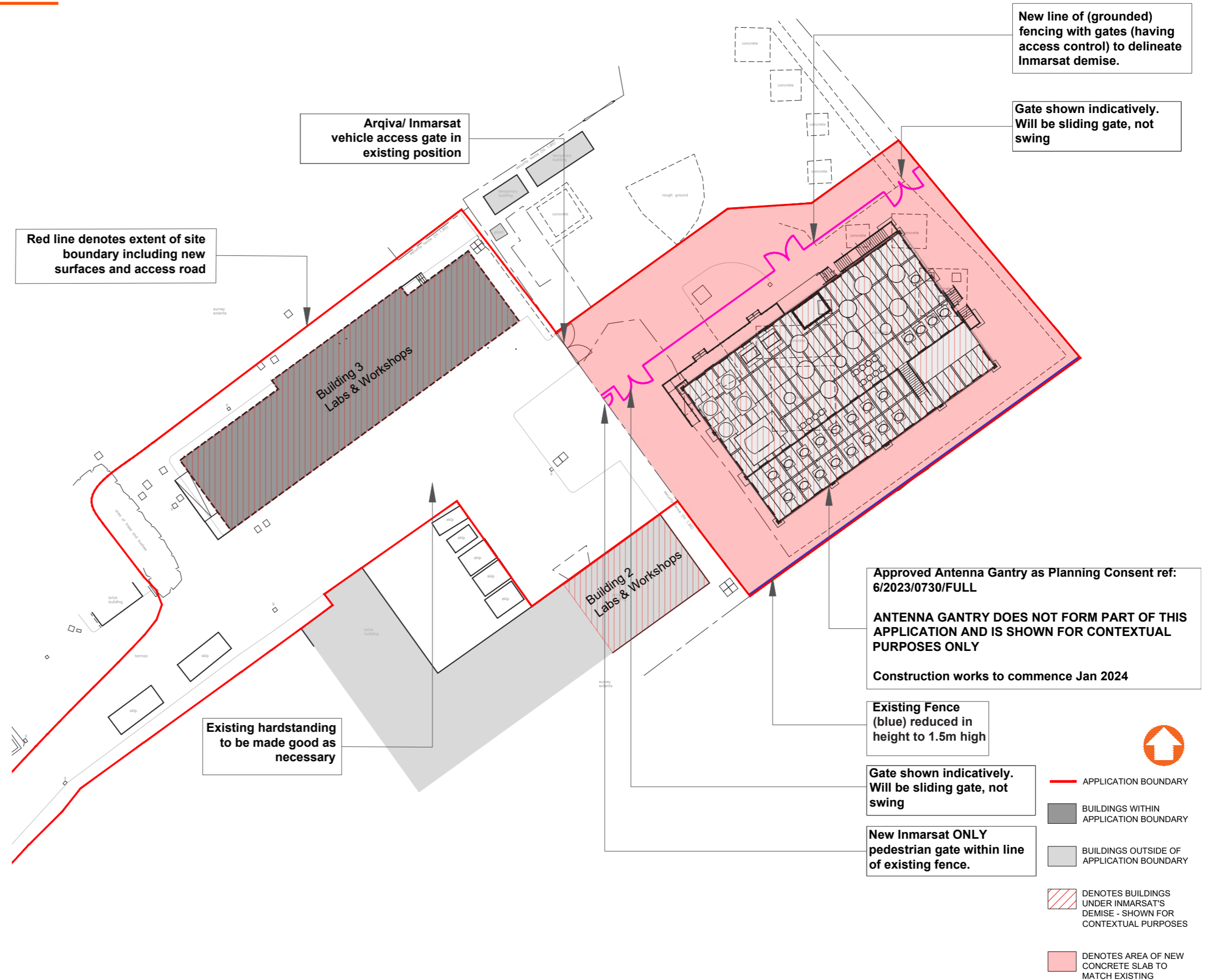
The current Hardstanding is comprised of reinforced concrete bases which have been built to different heights as the need arose. The proposal aims to remove these bases and reinstate a continuous slab at a consistent level. This will provide a homogenous slab for the ground level of the Antenna Gantry and additionally provide a fit for purpose working area for cranes to maintain and service the Antenna Gantry.

Please note the proposals **do not** intend to alter the previously consented planning approvals in terms of levels or massing

Additionally the scheme looks to enhance security to the applicants demise by introducing a fence line to the North of the Antenna Gantry. This will serve to add an additional level of safeguarding for the applicants equipment and will prevent unauthorised individuals from accessing the Antenna Gantry.

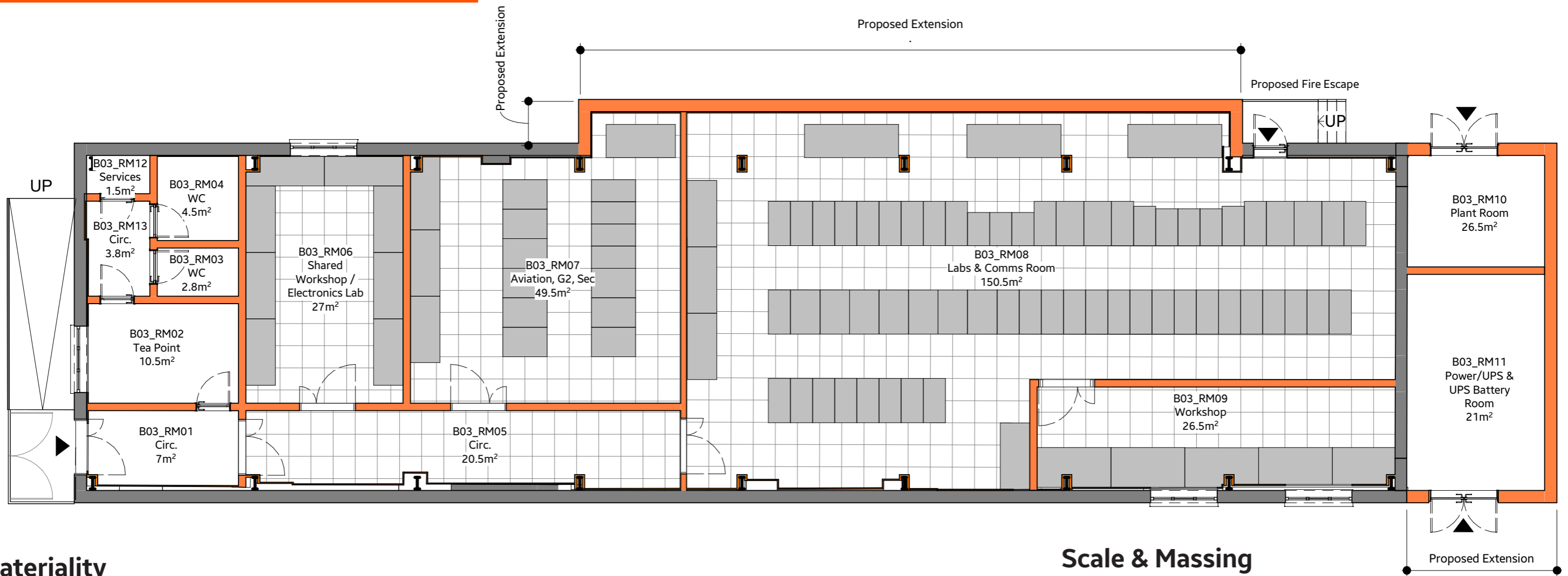
This proposed fence line will tie into the existing fence to the East & West of the Antenna Gantry whilst the existing fence line to the South will be lowered to mitigate potential technical issues involving lines of sight.

Due to its location within the site its is not anticipated that this proposed fence will effect site wide daily operations (deliveries etc).



3.0 Design Proposal

3.6 Proposed Plan



Materiality

The proposed scheme allows for the replacement of the external aluminium cladding, as we have previously seen the external facade consists of painted & unpainted blockwork, profiled metal cladding installed with the ribs running vertically and aluminium windows and doors.

The intention is to remove the existing aluminium cladding and replace it with a preformed carrier panel fixed back to the retained steel superstructure. The carrier panel will provide an increased thermal performance to the external envelope and a homogenous appearance to the facade. This will create an appearance of a single phased construction rather than a facade that has been adapted as the building use has changed throughout its life span.

The proposed carrier panels will be finished in a Polyester Powder Coating (PPC) RAL colour TBC. The proposed colour scheme will allow for an easily maintainable facade and a refreshed look which aims to move away from the tired existing aesthetic.

The windows and doors will be PPC aluminium/steel finished to match in the same colour as the block work. The new doors and windows will meet the requirements of Part L2 of the building regulations and improve upon the existing built fabric currently on site, in addition to this the glazed elements of the doors and windows will be treated with RF shielding to prevent damage to equipment within the envelope, the construction will use the principles of a Faraday cage to isolate the equipment within from the effects of the RF on site.

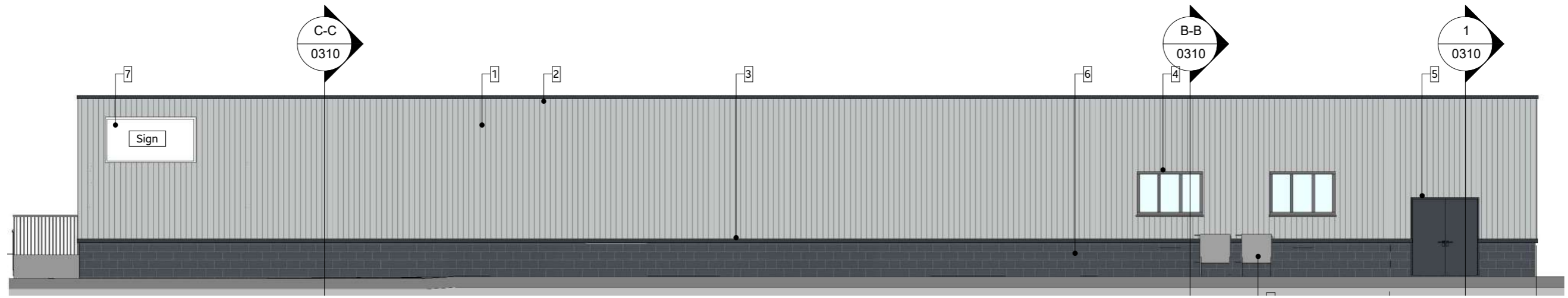
Scale & Massing

The proposal includes a full height extension to the East facade and a low level extension to North facade, these are necessary to house elements of plant which are vital to operations of the proposal.

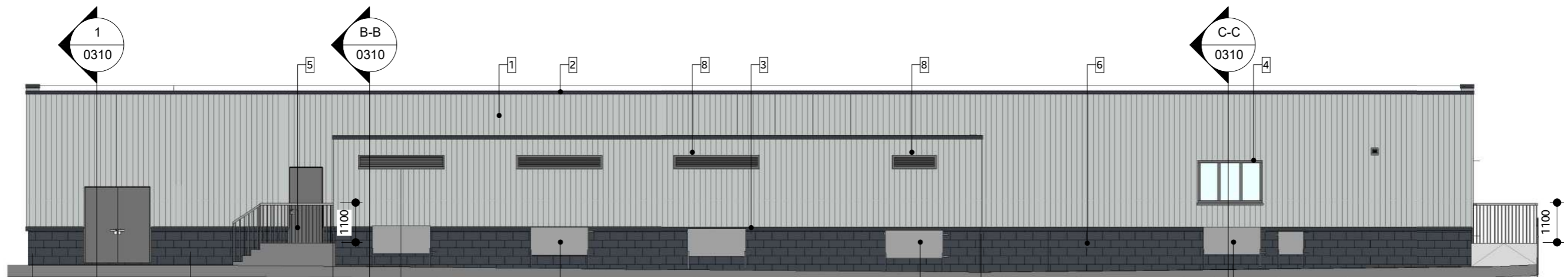
Both elements will be finished in the same materials as previously discussed (please see the following elevations).

3.0 Design Proposal

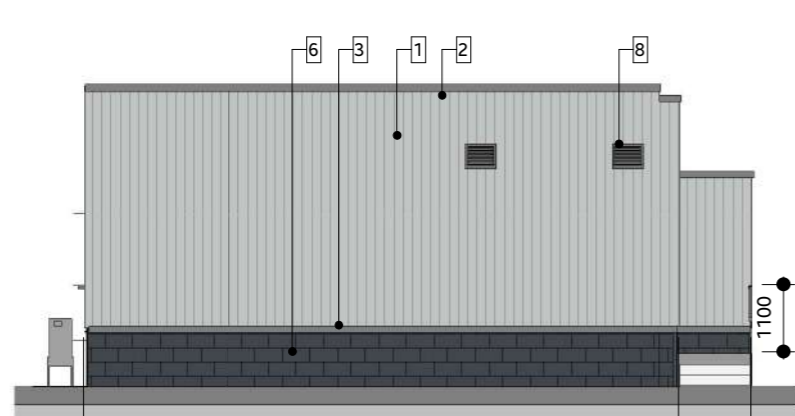
3.7 Proposed Elevations: With Material Key



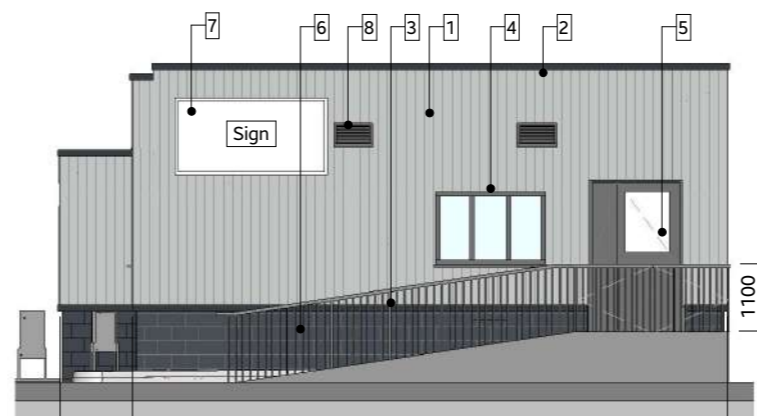
PROPOSED NORTH ELEVATION



PROPOSED SOUTH ELEVATION



PROPOSED EAST ELEVATION



PROPOSED WEST ELEVATION

Materials Key

- 1 - PPC Profiled metal cladding to match existing (RAL = TBC to match existing)
- 2 - PPC Aluminium coping to top of cladding (RAL = TBC)
- 3 - PPC Aluminium Flashing (RAL = TBC)
- 4 - PPC Aluminium casement windows with RF shielding mesh between glazing panes
- 5 - PPC Aluminium Door with RF shielding
- 6 - Existing block work
- 7 - Proposed Company Signage

4.0 Access

4.1 Access Statement

The site access is unaltered with the original transmitter hall (Building 1) visible at the end of the main entrance road. The proposed site is not visible from the main road. (See Figure 4.0)

The following has been prepared by the Inmarsat in relation to the provision of accessible services present in Building 3 and its wider context within the Inmarsat's operations at Brookmans Park:

"GPF Lewis have been appointed to deliver the works at Inmarsat's premises at Brookman's Park Transmitting Station to meet the needs of Inmarsat's research & development functions across the business.

The accommodation will be used primarily by members of staff, with Inmarsat customers arriving to site for acceptance testing activities.

Due to limitations of the site and the nature of the work carried out at the premises, not all potential provisions can be included. Any disabled person will largely be limited to the conventional office premises in Building 1. The remaining areas including the research & development lab in Building 3, the facilities / logistics area in Building 2, and the antenna structure in the yard are dynamic work environments deemed unfit for disabled persons.

The areas that cannot provide disabled access contain racked equipment and test terminal electronics which will be installed, removed, assembled, and disassembled in a constant state of flux. The ferrying of equipment via dollies and forklifts in and out of the buildings and on and off the antenna structure will create a dangerous environment for a disabled person. Additionally, most employees working onsite will be lab engineers whose job responsibilities include all the physical activities described herein. Therefore, careful consideration has been made between the balance of access provisions and the occupier's requirements."



Figure 4.0 : Site access to Main Entrance road

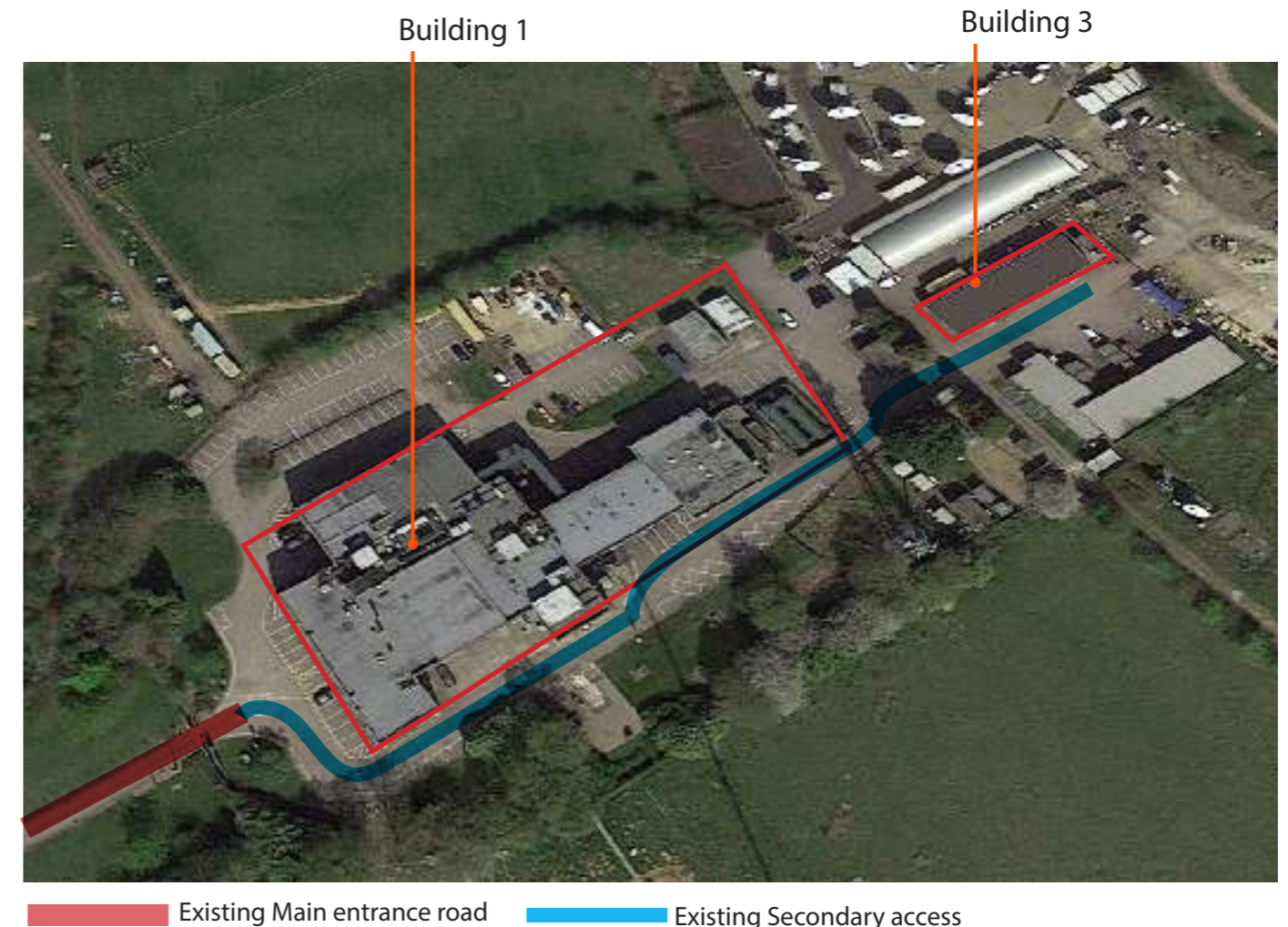


Figure 4.1 Access from A1000 to Building 3 with existing parking bays around Building 1

4.0 Access

4.2 Building Access

Vehicular Access & Security

The Site will generally be accessed via vehicles due to its location. Access will be granted through the primary driveway and the Great North Road, in order to access the buildings the visitor will need to pass the main secure line located at the main reception in Building 1.

Access to **Building 3** itself will be closely regulated and limited exclusively to Inmarsat employees and their authorised guests.

There are no plans to alter access to the site in any significant way, which means the current arrangements for parking, loading, servicing, waste management, deliveries, and emergency vehicle access will remain unchanged and as previously approved.

Parking

The site already offers a substantial amount of formal parking, (including EV charging bays) around Building 1 with designated parking bays allocated for Inmarsat's use. It is not anticipated that these parking bays will be fully utilised

Public Transport / Connectivity

The site is accessible via the A1000 (Great North Road) and is served (via a short walk) by 2 bus stops (North & South bound routes).

Approximately 8 miles to the North of the site the main line train station of Hatfield provides access to London where the Applicants head office is located. Additionally the site is accessible via junction 24 of the M25 approximately 11 miles South and the A1 through junction 2 approximately 5 miles to the West

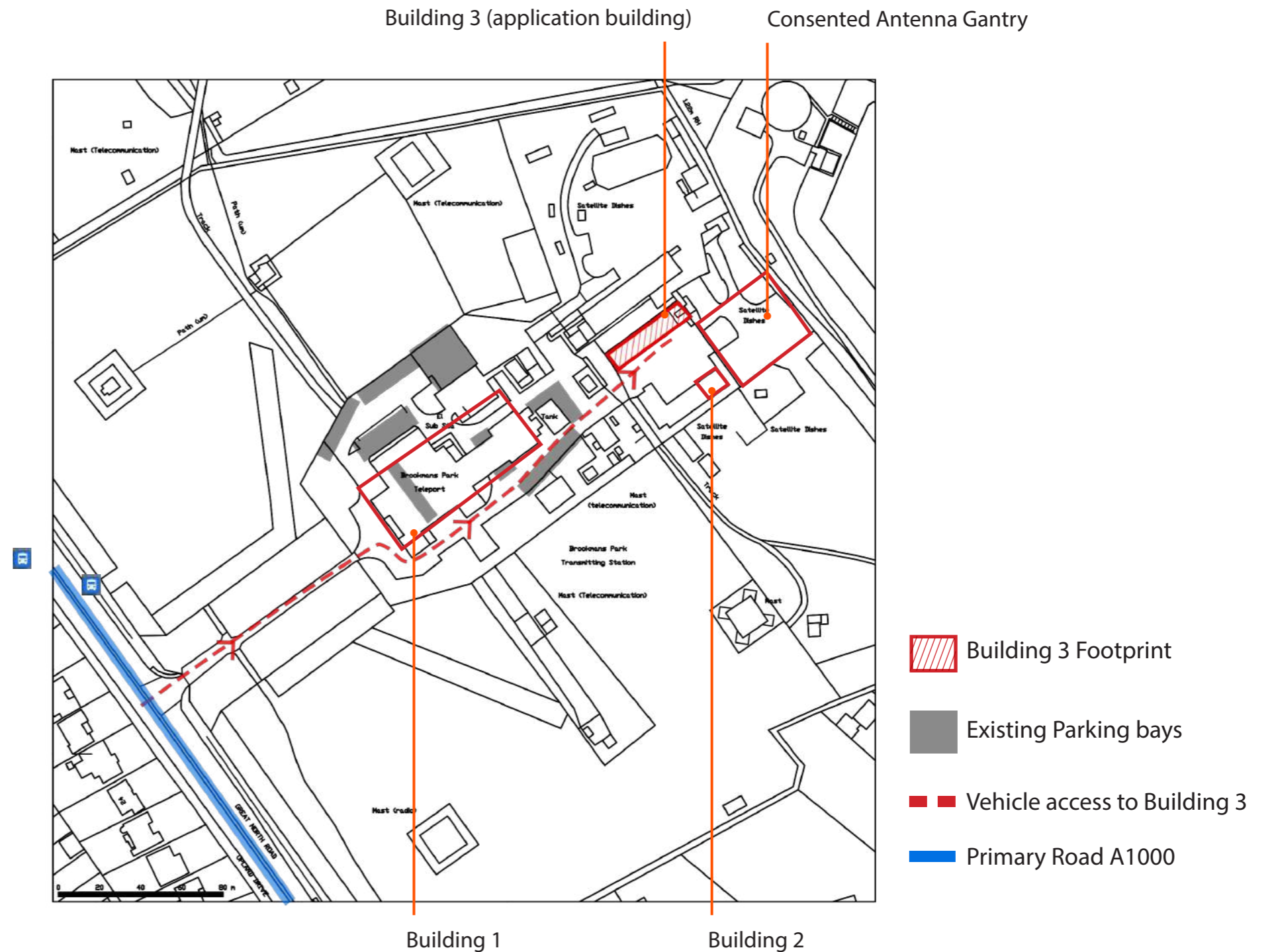


Figure 4.2 Access from A1000 to Building 3. Access is to be used both for loading / unloading of large vehicles including a drop-off circulation area.

5.0 Sustainability

5.1 Sustainability approach

The proposed scheme has a significant portion of unaltered/minimal infrastructure needed for the development, which makes the Brookmans Park a feasible project. Most of the existing facilities and offices are already in place.

From a perspective focused on minimizing carbon emissions, this site boasts commendable credentials. The scheme for Building 3 is maintaining the primary structure, repurposing the interior layout with an aim to replace and enhance the external envelope to increase the performance of building from both thermal and airtightness considerations.

Throughout the construction phase, best methods will be implemented including the utilisation of local materials and labor, vigilant tracking of transportation, energy usage, the reduction of landfill waste whilst encouraging recycling. In situations where waste does arise, our main objective is to attain zero landfill waste by giving prominence to recycling.

Regarding operational considerations, energy-efficient equipment will be selected whenever possible. use.

