

Design and Access Statement  
Barnsley Hospital Theatre Expansion

Barnsley Hospital NHS Foundation Trust

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## 1. Introduction

This report is to provide an overview of the site constraints, functional requirements and design approach which have been undertaken leading to the final design submitted for planning approval.

The proposal to expand the Operating Theatre department is multi-faceted with an overriding aim to improve the patient experience, further streamline the service provided by Barnsley Hospital and enhance welfare of staff working within the department.

## 2. Client Requirements

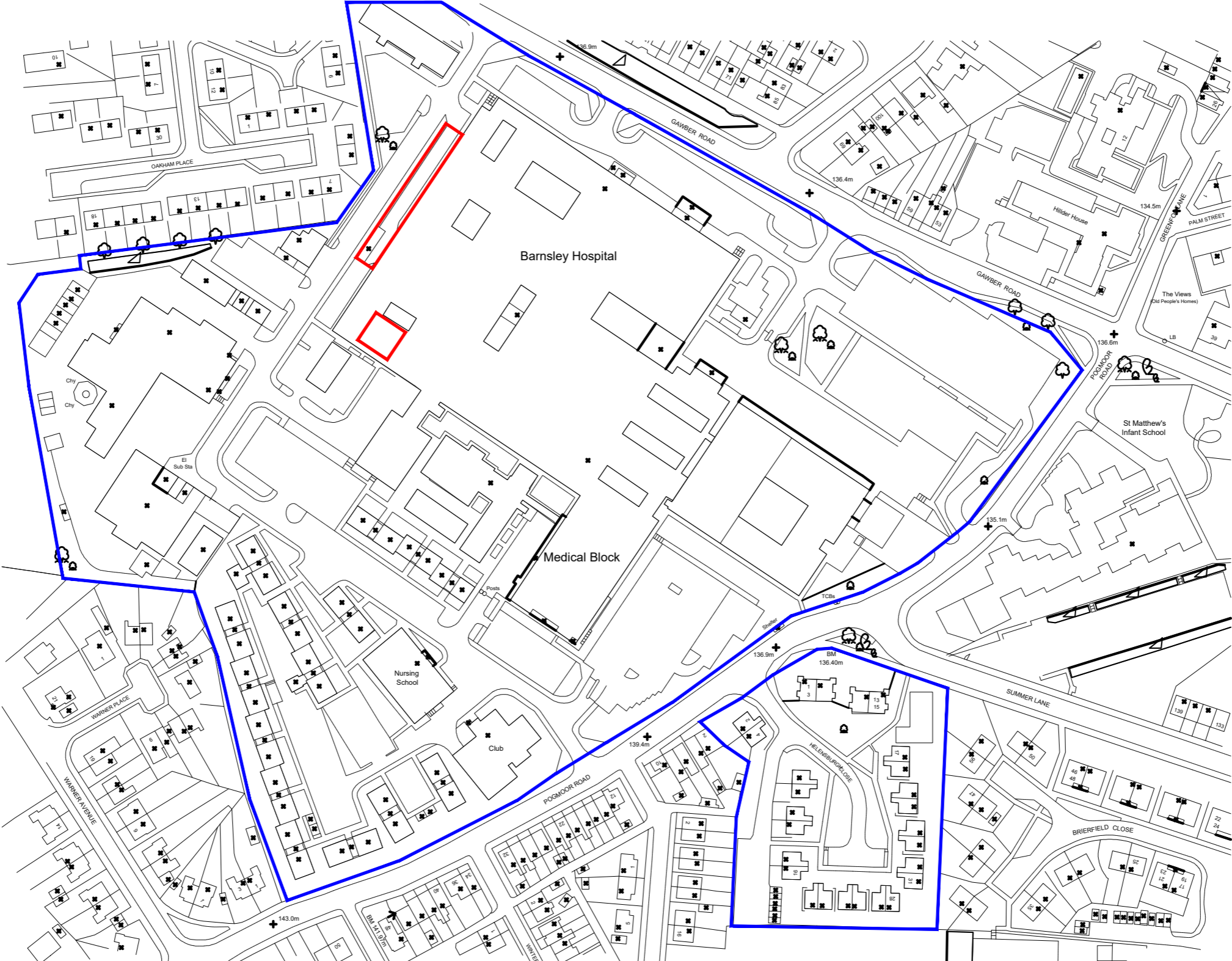
### 2.1 Site Context

Barnsley Hospital has origins dating back to the 1850's. The hospital underwent a major redevelopment in 1977 and most of the buildings currently on site date from around that time. The facility became known as Barnsley Hospital in 2005 having previously been known as Barnsley District General Hospital.

Barnsley Hospital provides a range of services to the local community and surrounding area. These include accident and emergency services, outpatient clinics, inpatient services, and maternity and children's services. The Hospital also provides a number of specialised services, including cancer and surgical services, in conjunction with Sheffield Teaching Hospitals.

2.2 Site Location

Barnsley Hospital is located on Gawber Road to the north west of Barnsley town centre.



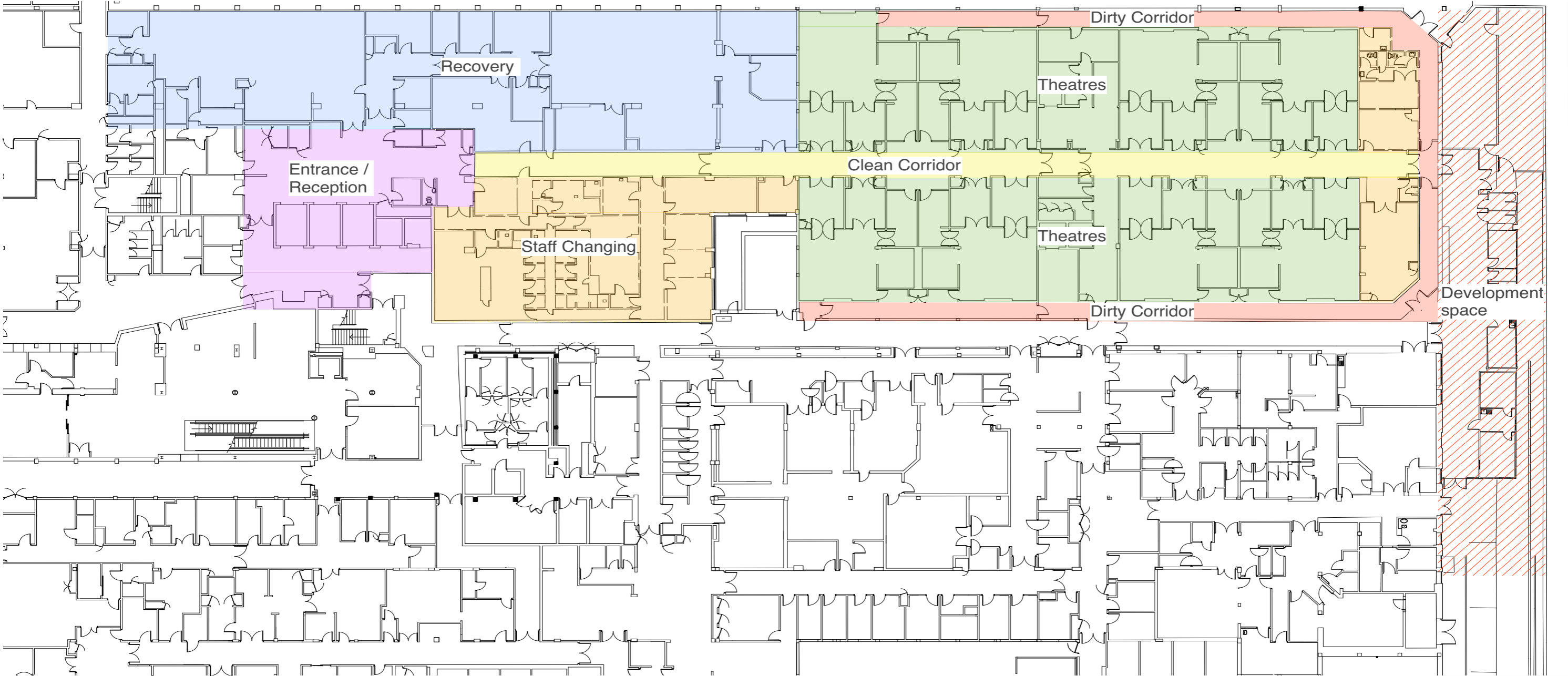
### 2.3 The Need for Expansion

The existing operating theatre department at Barnsley Hospital occupies an area on Level 01 of the main hospital building. The department is well situated close to the Emergency Department and adjacent to the Imaging Department on the main entrance level of the site. The department has an admissions unit which has been developed in recent years however this is located away from the main theatre department on a different level of the hospital which causes operational issues.

There are currently 8 theatres in the department which due to the number of operations undertaken each year is stretched to capacity.

### 2.4 Development Opportunities

Development opportunities in and around the theatre department are limited due to the nature of the site and location of the department. To expand the department within the footprint of the existing building would require relocating another clinical department elsewhere on site. An area has been identified for an extension to the building which has direct access to the theatre department (indicated on the plan below).



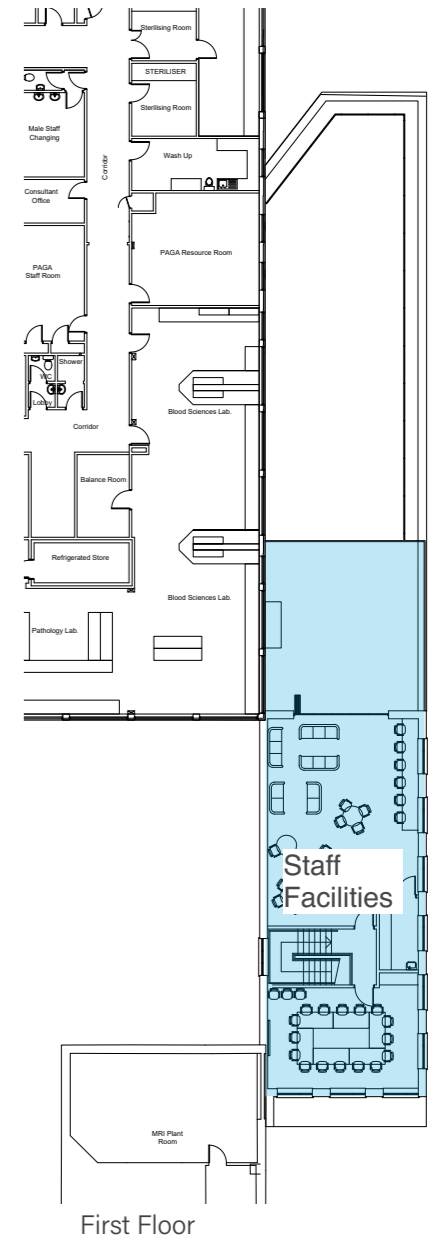
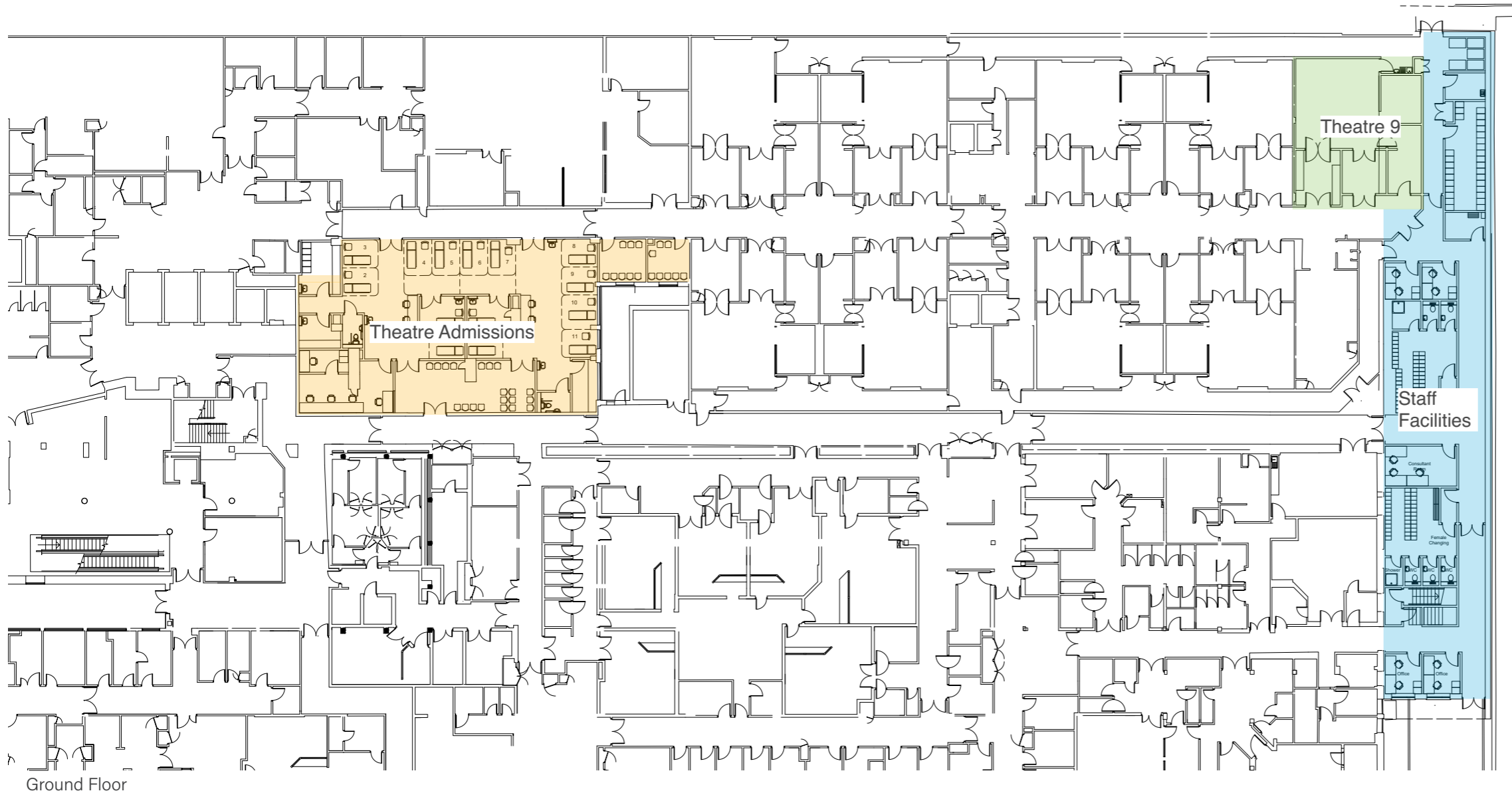
### 3. Design

#### 3.1 Space Utilisation

The development area identified whilst having a connection to the theatre department is not suitable for provision of the admissions unit as primary patient flow of the theatre department is from the lift lobby within the hospital. A two phase development is therefore proposed in order to relocate the staff changing facilities into a new extension which would be suitably placed in order to vacate an area adjacent to the theatre entrance to locate a new admissions unit. This is an ideal location for the patient flow through the department.

As part of the extension works it is possible to create a new operating theatre adjacent to the existing theatres, benefiting from direct access to clean and dirty corridors. This will increase capacity of the department.

The location of staff facilities at first floor of the extension will offer a significant improvement to staff well-being through the provision of larger facilities which benefit from natural light and an external seating area.



3.2 Precedent Images

The photographs below are a selection of precedent images of Cladding, Canopies and Balustrades which have been referenced in the design development of the project.

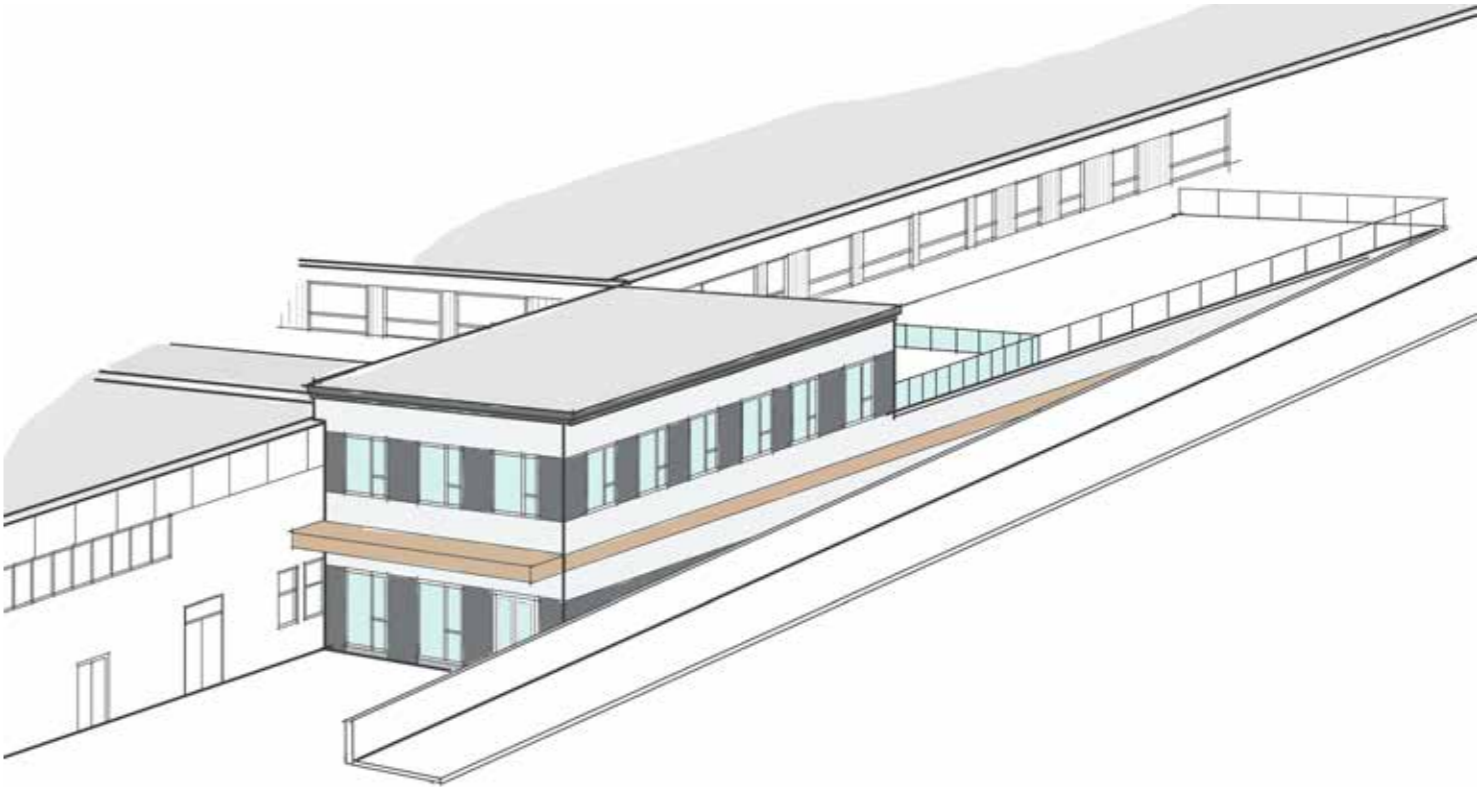


### 3.3 Design Development

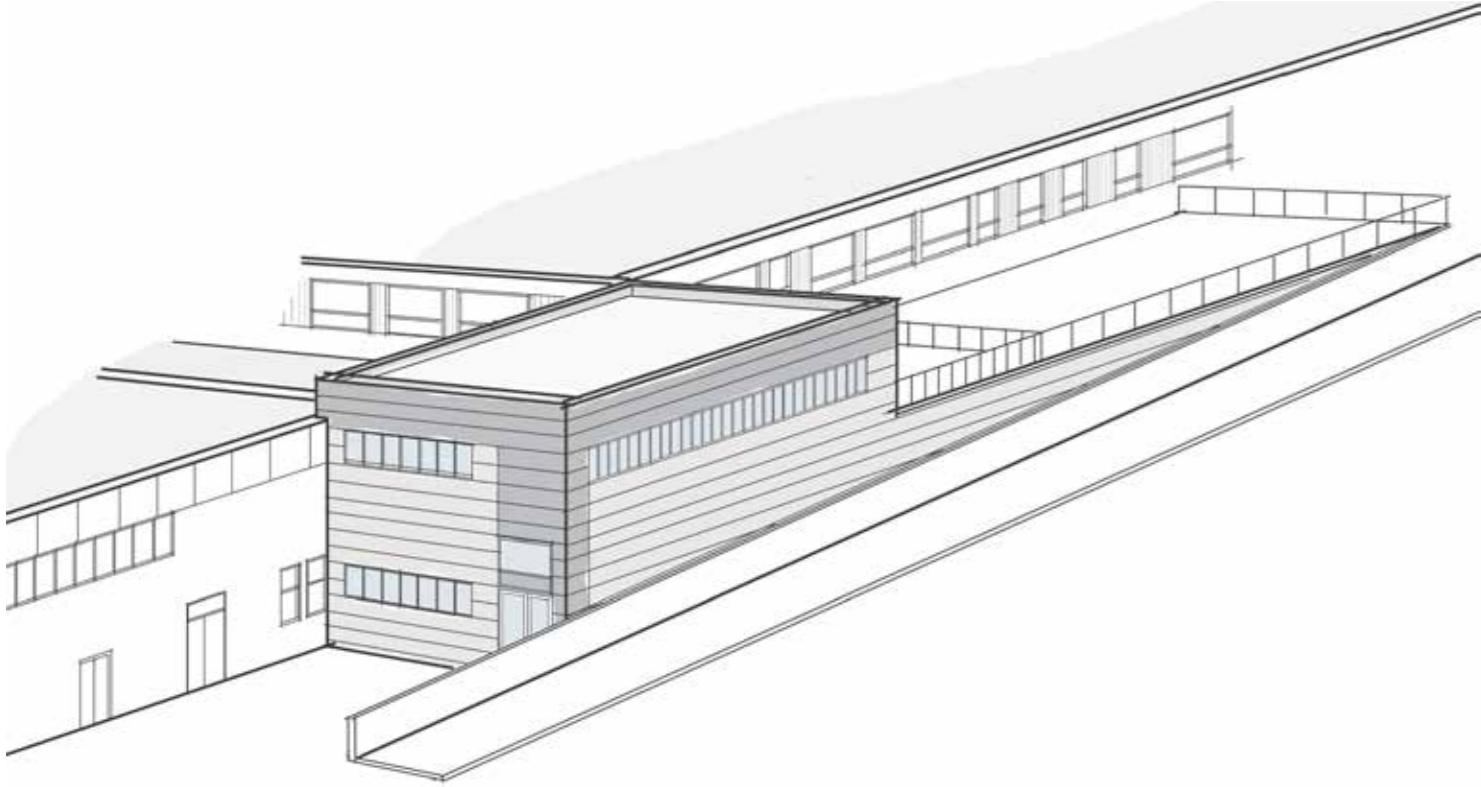
The images below are a selection taken from design development stages from the initial massing sketch through to exploring alternative cladding layouts and canopy designs.

The overall design concept has been to develop a building which stands as a modern piece of architecture but also include design features which echo the 1970's buildings occupying this part of the site such as the flat roof and regular repeating fenestration layout.

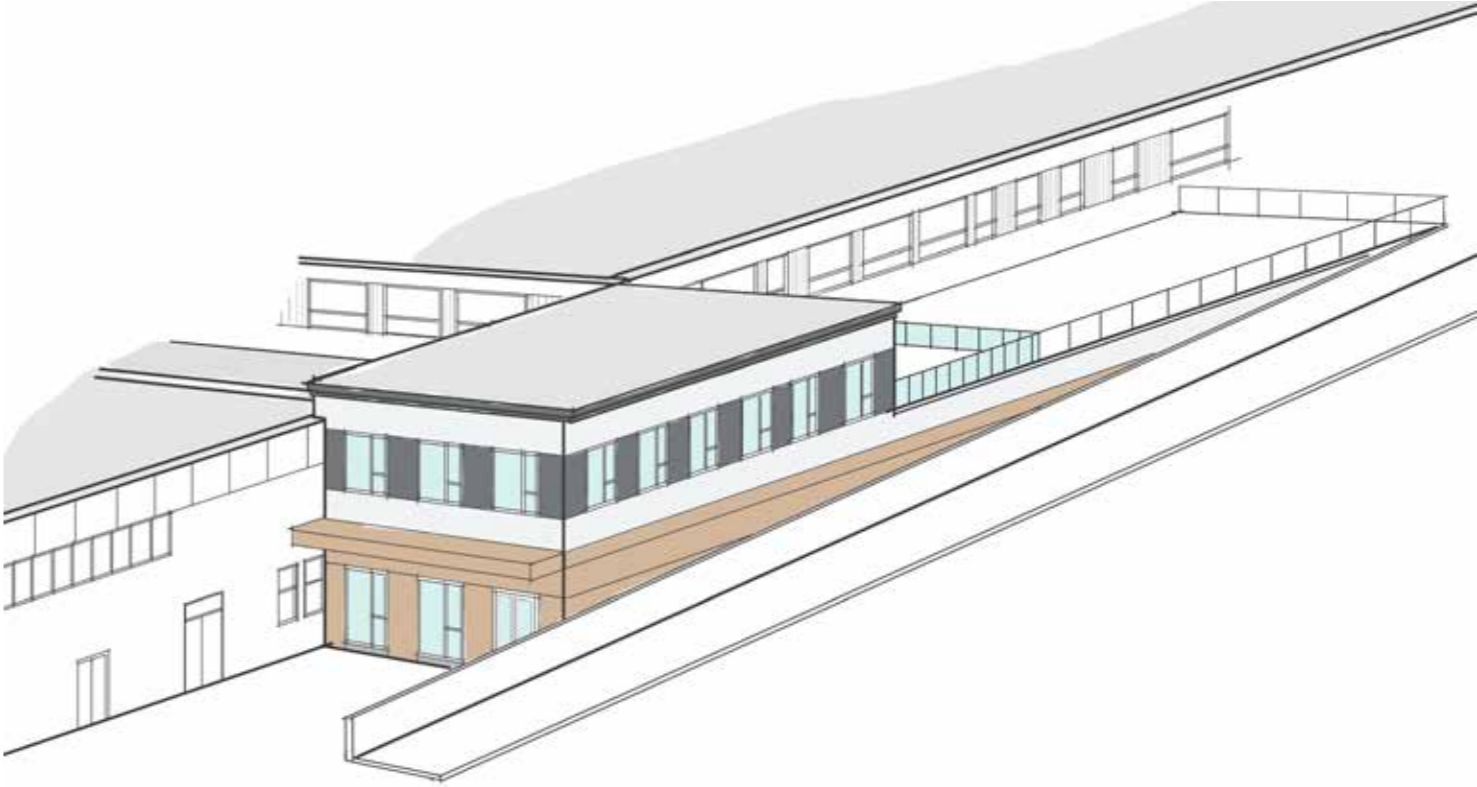
Modern methods of construction (MMC) are proposed for the fabric of the extension to speed up the build and allow for greater levels of off-site manufacture of components.



Development of fenestration and materials

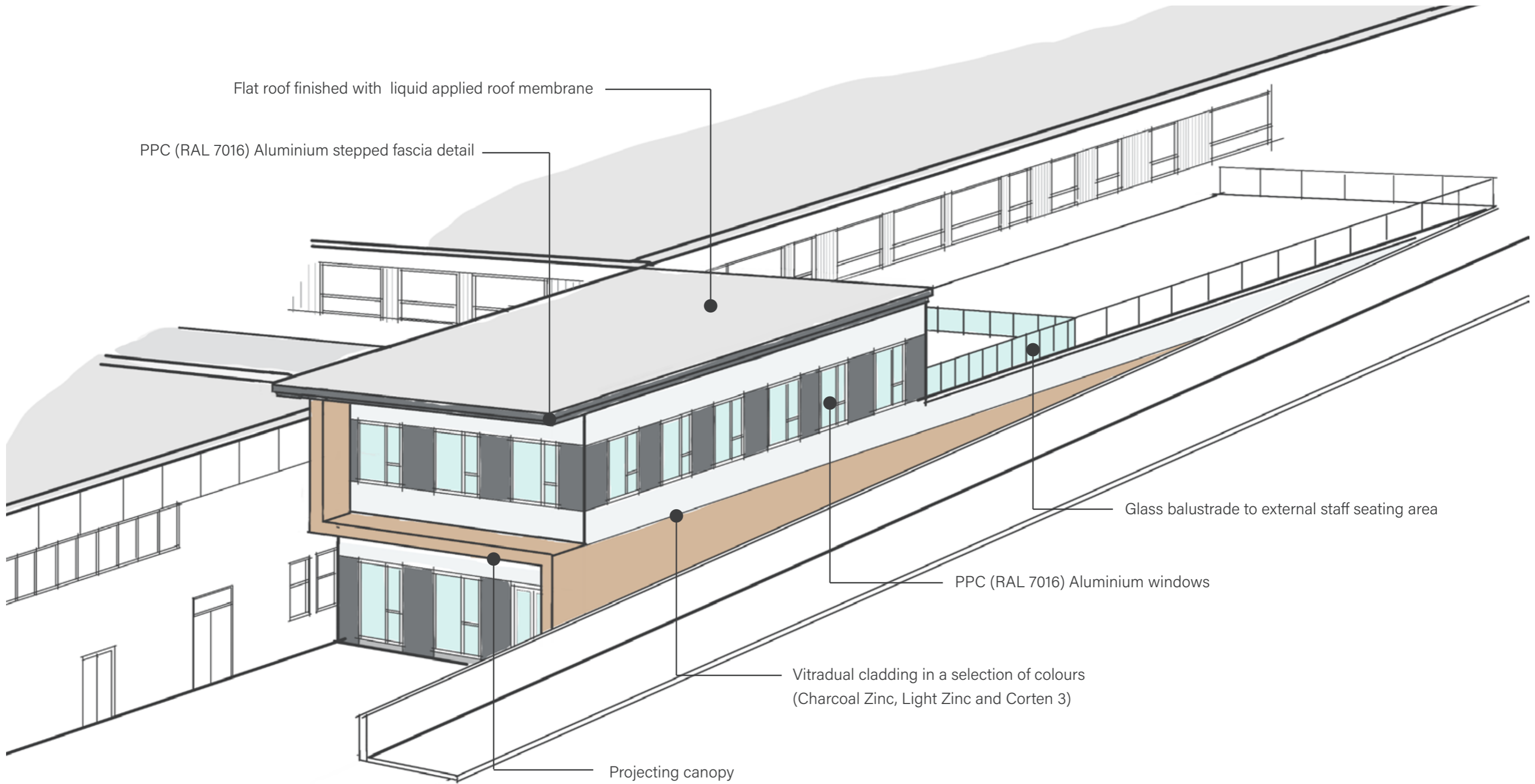


Initial Massing Sketch



Alternative design option

3.4 Selected Design



### 3.5 Cladding Materials

The cladding material selected for use on the external façades of the building is the Valcan Vitradual system. The product is manufactured from Aluminium and is installed as a rain-screen system over an insulated SFS framing system to ensure efficient and high speed build.

The Vitraduel cladding system is a high quality product which has been designed, manufactured as a non combustibile cladding material and is A1 rated when tested to BS EN 13501-1.

A surface fix installation is proposed for this project in the following colours: -



Charcoal Zinc



Light Zinc



Corten 3



**vitradual**®

Non-Combustible Cladding

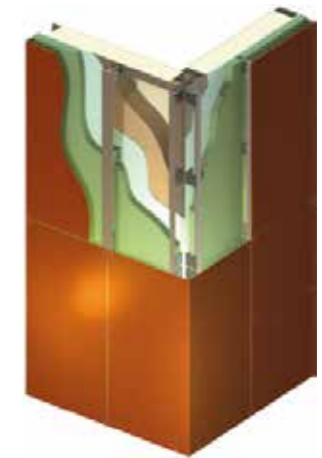
Discover the ultimate amalgamation of design and safety with our A1 rated, non-combustible solid aluminium rainscreen cladding. Imbued with a modern aesthetic, it's available in a vast selection of colours and finishes - from chromatic and stone to wood and beyond.

#### VITRADUAL BENEFITS

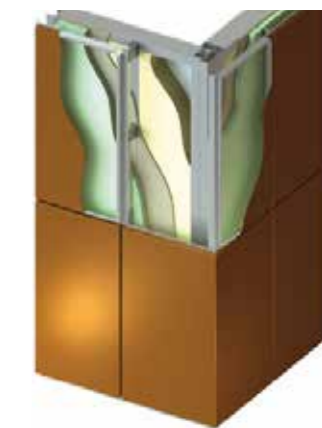
- ▲ Non-combustible – A1 rated to BS EN 13501-1
- ▲ Lightweight – VitraDual® is incredibly rigid and lightweight and is therefore also easy to install
- ▲ Versatile – VitraDual® can be custom designed into a wide range of shapes and dimensions as well as able to be perforated or curved in some applications making it a versatile design choice
- ▲ Maintenance – easy to maintain compared to polyester-based coatings
- ▲ High Durability – VitraDual® panels are highly durable and impact resistant. They can be used effectively in high traffic areas
- ▲ Paint System – VitraDual® only use the highly recognised PVDF KYNAR 500 or FEVE paints known for their high durability, providing the optimum resistance to weather and industrial pollutants
- ▲ Warranty – VitraDual® has up to a 30-year warranty
- ▲ Extremely Flat – Low Surface Stress
- ▲ NBS Chorus - easily add VitraDual® into your specification
- ▲ Complete System - Can be purchased separately or as part of a complete non-combustible A1 rated cladding system

#### POPULAR FIXING TYPES

Face-Fix Assembly



Cassette-Fix Assembly



More fixing systems are available, please speak to our sales team for more information.



Tested to BS8141 & BR135 compliant



Specify this product online with NBS Chorus



Recyclable

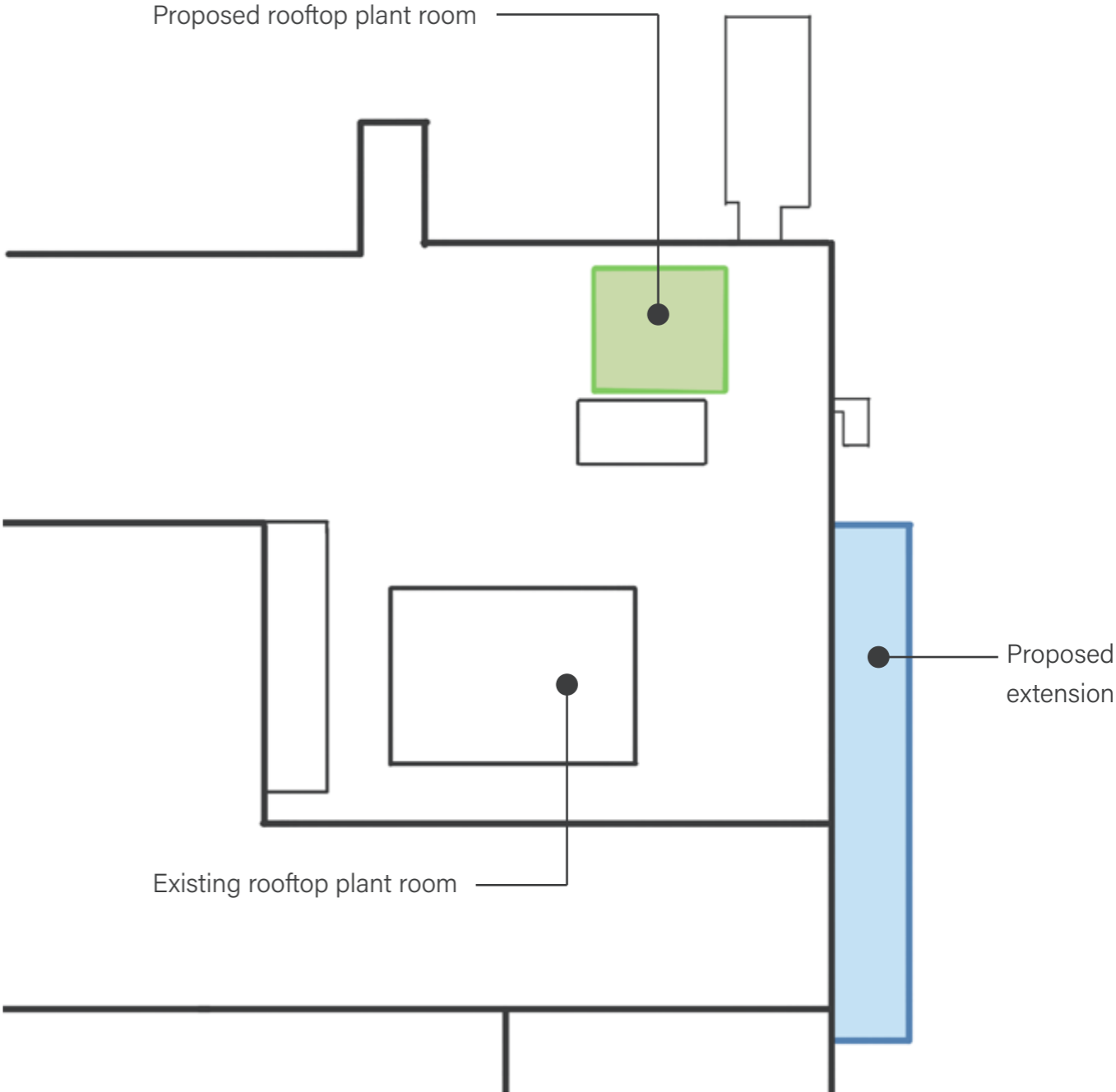


Environmental Product Declaration

3.6 Rooftop Plant

Several new air handling units (AHU) will be required to service the developed areas including a dedicated AHU for the new Theatre 9. Previous works to the theatre area have included a new rooftop plant room to house the AHU plant and associated ancillary equipment.

It is proposed that a new plant enclosure is constructed on top of the existing building in the location shown below. The design of this plant enclosure will be a lightweight steel frame with metal sheet cladding to match the existing roof top plant room.



## 4. Access

### 4.1 Accessibility

The ground floor of the new extension will be level access both via the external door and at connection points into the existing building. Fully accessible facilities are provided throughout the existing hospital campus.

### 4.2 Car Parking

The design proposal and location of the extension means no existing car parking spaces are lost from site. There is no requirement for additional parking to be created as part of the development as the primary reason for the project is to rationalise services and their locations on site.

## 5. Ecology and Landscaping

### 5.1 Ecology

There is no green space currently occupying the proposed development site therefore an ecology report has not been produced for this development.

### 5.2 Trees and Landscaping

There are no existing trees on site which will be affected by the development. The infill nature of the extension means that there are very few opportunities for any soft landscaping as part of the project.

### 5.3 Flood Risk

Barnsley Hospital lies within a low / very low flood risk zone therefore a flood risk assessment has not been produced for this development.

## 6. Sustainability

### 6.1 Aims

Barnsley Hospital NHS Foundation Trust are committed to sustainability in all of their operations including construction and maintenance of the built environment. The Trust has recently completed a site wide de-carbonisation scheme providing heat pumps across the estate and have a sustainability policy issued as part of tender documentation for Contractors to adhere to.

### 6.2 Design

The detailed design of the project will include the following: -

- » Building fabric design U-values in excess of building regulations minimums
- » Full control of heating and ventilation systems through a site wide building management system (BMS)
- » Low energy lighting incorporated throughout

Appendix A Site Photographs

