

4.0 Design Evolution

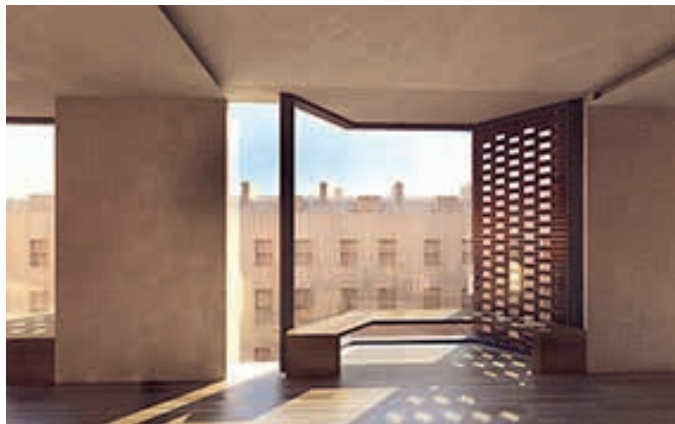
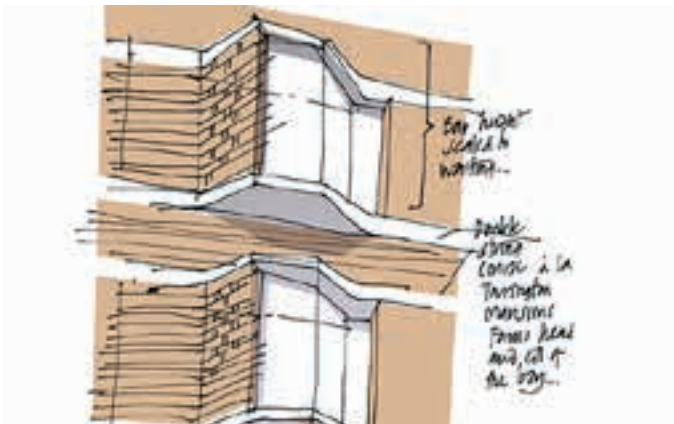
This chapter describes the evolution of the design proposals for Phase 5 and the design teams response to consultation with LB Camden and other stakeholders. Section 4.1 describes the evolution of the internal planning, 4.2 the building’s external expression.

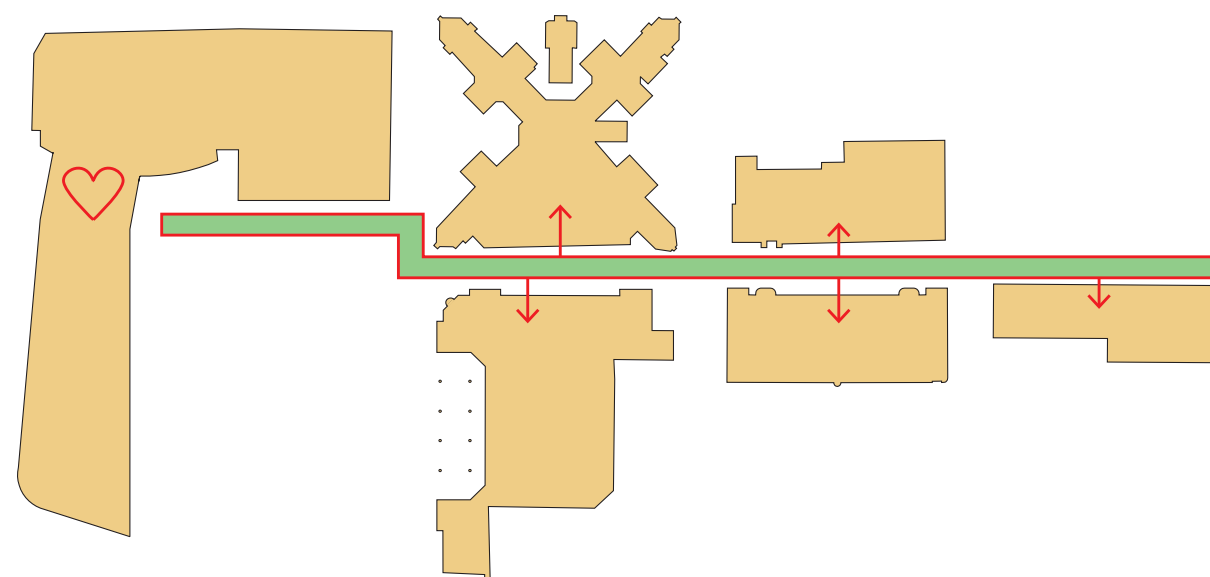
Steffian Bradley Architects (SBA) were commissioned to develop proposals for the new ear, nose and throat outpatient hospital on the Huntley Street site - Phase 5 - following an invited design competition. SBA have particular strengths in medical planning and their patient focused design approach was recognised by UCLH as an innovative and appropriate model for the building’s development.

The design was evolved through pre-application discussions with LB Camden and other stakeholders including CABE, local residents and BCAAC.

These initial design studies concluded that the retention of the entire Royal Ear Hospital building on the site would preclude the construction of the Phase 5 facility. A compromise retaining the end, Capper Street, elevation only, was explored.

LB Camden, endorsed the internal planning approach but felt the external elevational expression of the building failed to meet the standards required by its Bloomsbury Conservation Area setting. At their suggestion, Pilbrow & Partners (P&P) were invited to join the design team with a focus on the building’s external envelope. P&P’s initial analysis of the impact of retaining the end gable of the former Royal Ear Hospital suggested that it was this approach which lay at the heart of the shortcomings of the proposed building’s design. The scheme proposals which replaced the existing building offered significant benefits in relation to townscape, public realm and internal function.

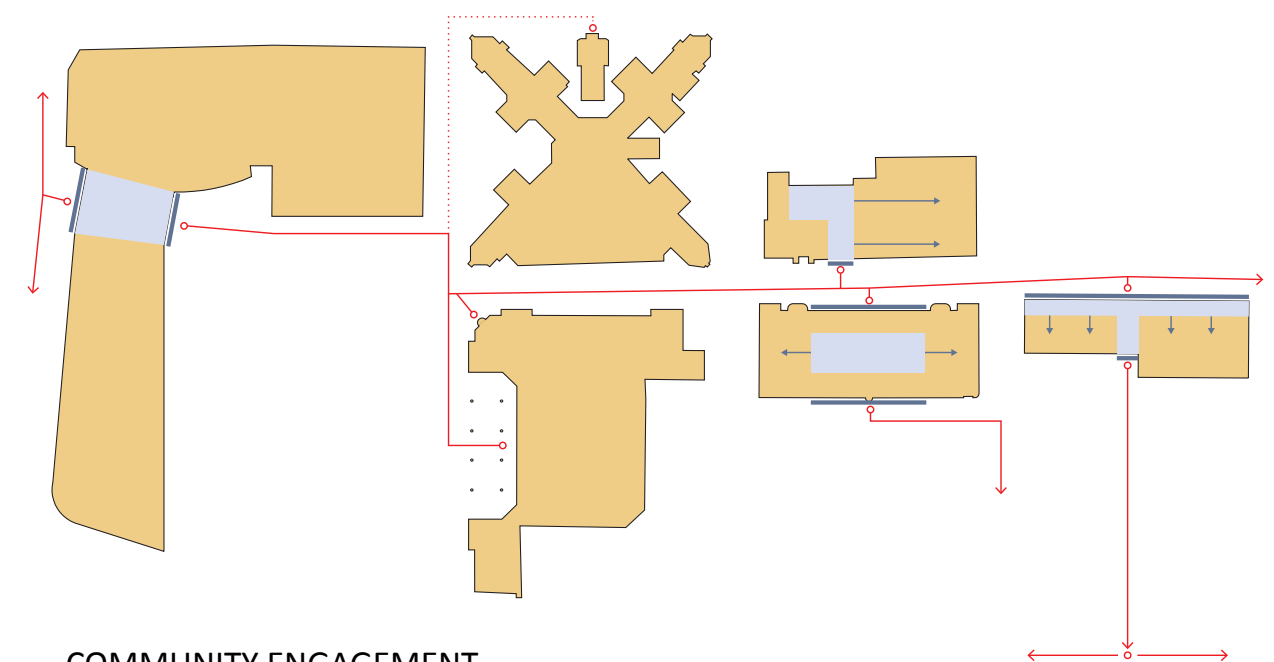




THE MEDICAL SPINE

- SPINE
- UCLH MAIN BUILDINGS
- VISUAL CONECTION

Connection with other services within the UCLH family network - The medical campus boulevard along Huntley Street



COMMUNITY ENGAGEMENT

- ACTIVE FACADE
- FOYER
- ENTRANCE

Community engagement - Linkages through the site to Tottenham Court Road - Connection of Bloomsbury to Fitzrovia

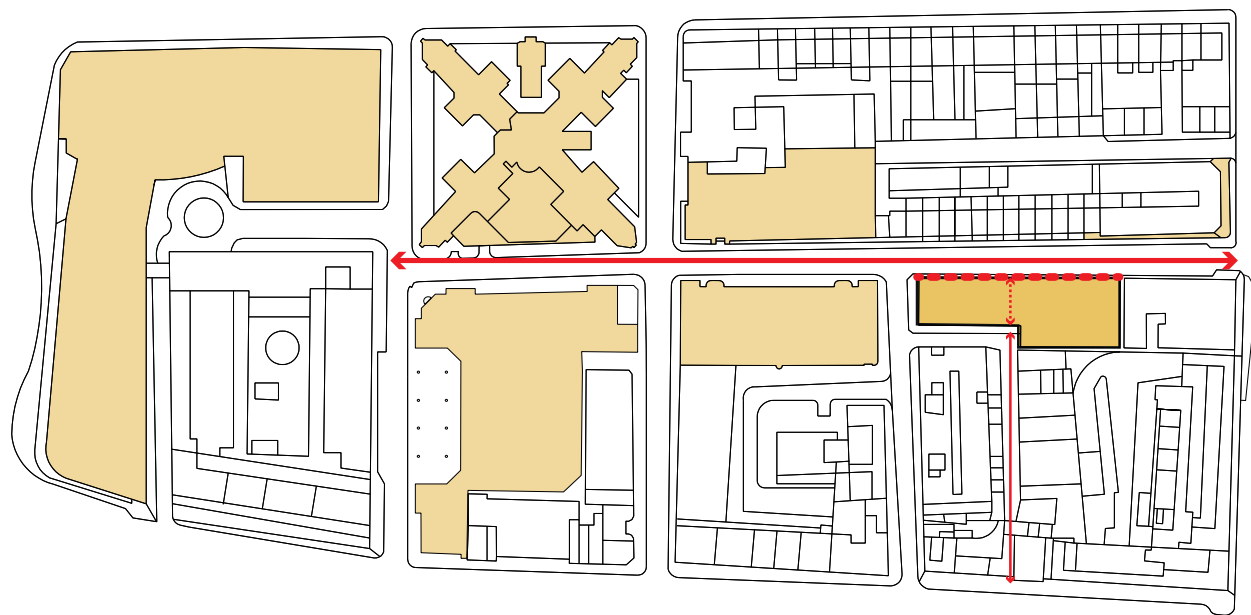
4.0 Design Evolution
4.1 Internal Organisation
Concept

Phase 5 will provide the highest standards of clinical excellence specialising in ear, nose, throat and dental medical care. The design evolution has been informed by UCLH’s specialists in these fields.

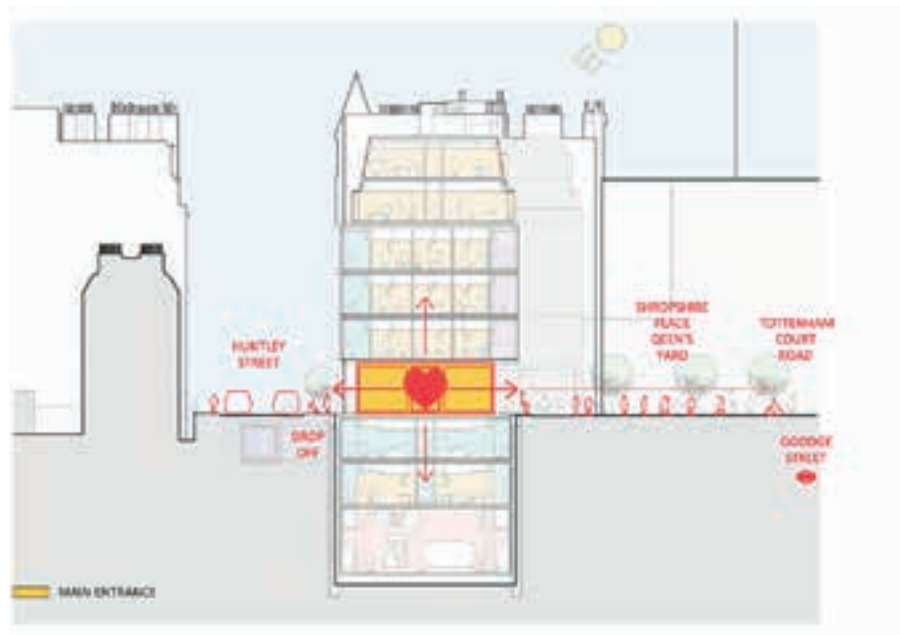
The relationship of the buildings and the main entrances to the wider campus was an important consideration in the evolution of the design. Care and attention was also given to the visual and physical linkages through the building in response to the FAAP aspirations. As a result the design provides a clear and accessible route through the building from Huntley Street linking Queen’s Yard.

The site is well located, close to other UCLH medical services, including the main University College London Hospital building, UCH Macmillan Cancer Centre, and the new clinical facility which will include a proton beam therapy and short stay surgery centre, located on the corner of Grafton Way and Huntley Street. The new facility would also be close to The Cotton Rooms, UCLH’s new patient hotel, opened in 2012, which offers free accommodation to patients and close relatives.

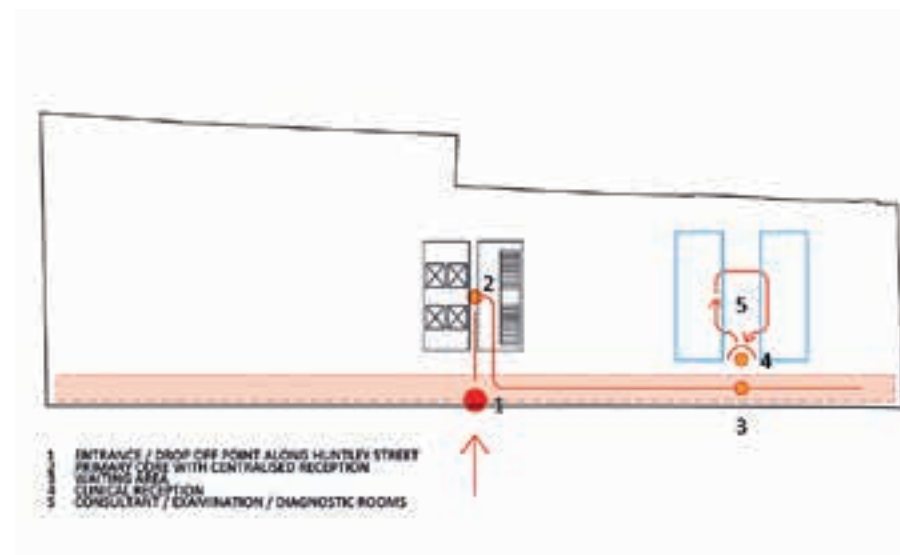
The clustering of these various facilities provides a more integrated and convenient clinical service to the local community.



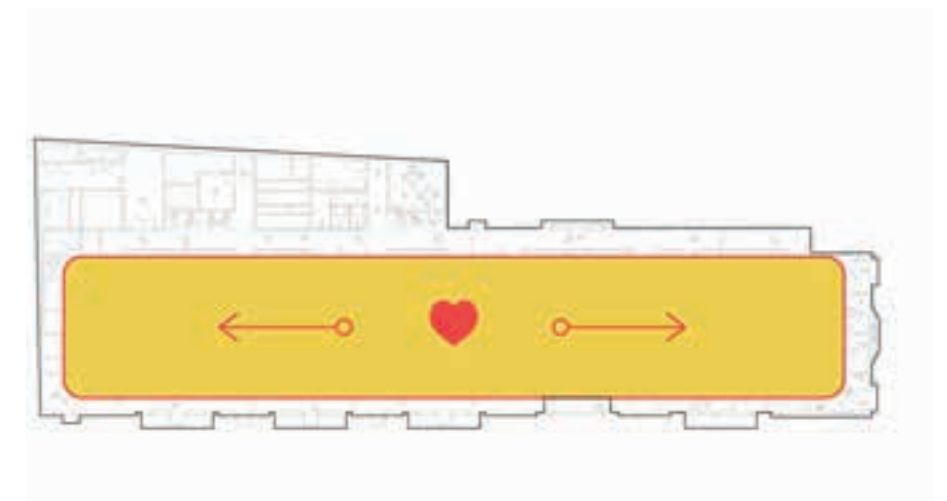
Better patient pathways to improve clinical outcome - This includes internal as well as external circulation



Heart of the building - Welcoming entrance and reception



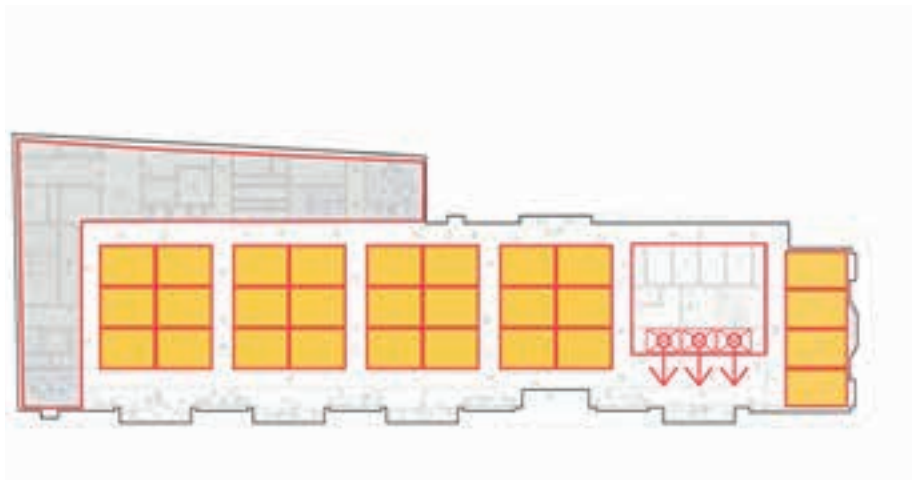
Wayfinding / Circulation of patients - Patient focused design



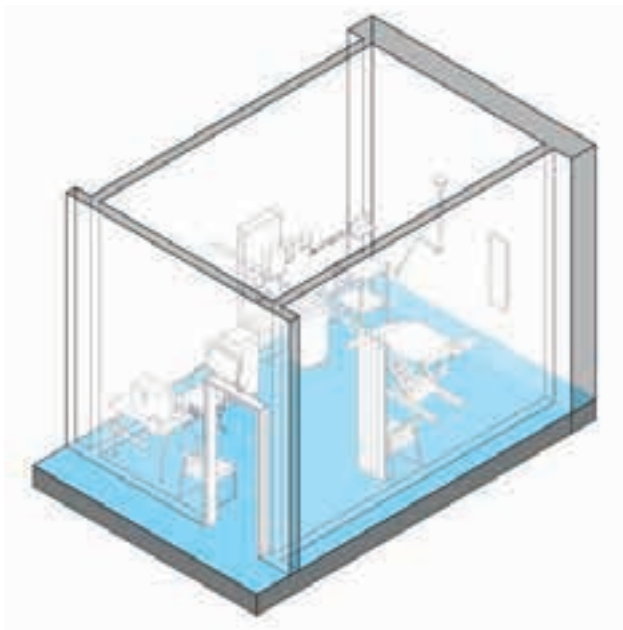
Clinical core - Efficiency

4.0 Design Evolution
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The internal configuration responds to design principles set as a vision for the UCLH:
World class facility - Transformation - Clinical efficiency



Cluster of consultation / examination rooms - Adaptability



3D of consultation / examination room study - Clinical innovation planning

UCLH Vision

- World class facility - to provide holistic treatment of nose, throat, ear, dental and head and neck services
- Transformation – more patient focused approach with reduced waiting times, better patient pathways to improve the clinical outcome
- Clinical efficiency - to reduce the need for additional appointments as diagnostic and treatment facilities would be co-located with other clinical departments

Welcoming entrance and reception

The entrance and movement circulation within the building should be clear and coherent to offer a clear way finding strategy.

Patient-focused design

The Phase 5 building has been designed to provide waiting areas on the external façade to enhance the user experience when visiting the building .

Efficiency

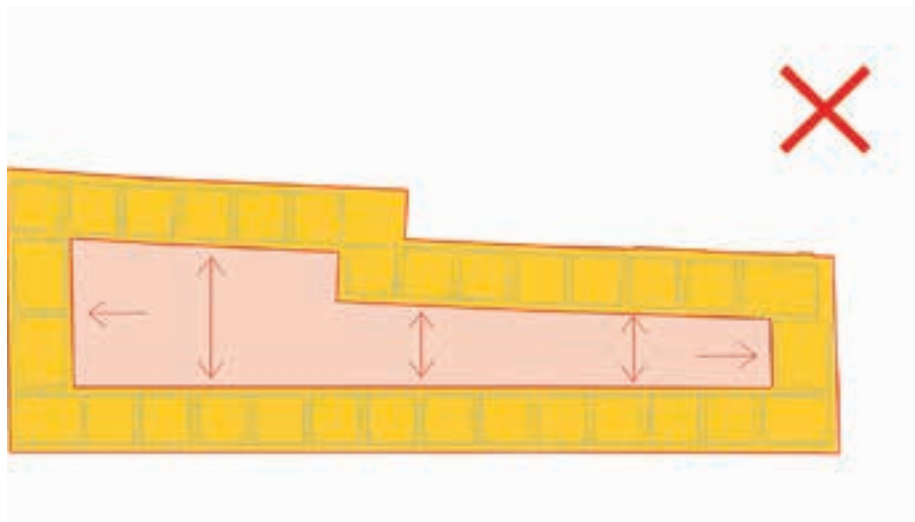
The planning of the building should be as efficient as possible to offer the maximum amount of net clinical space. The design allows an efficient linear spine of clinical spaces.

Adaptability

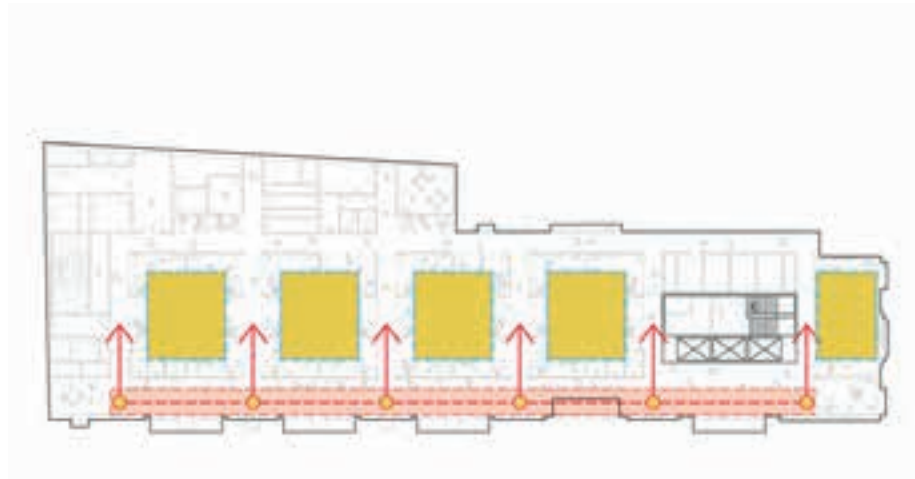
The floor plate and the stacking of the building has been designed and configured to offer a flexible clear span chassis to allow future flexibility. Clustered clinical spaces offer viarious ways of use.

Clinical innovation planning

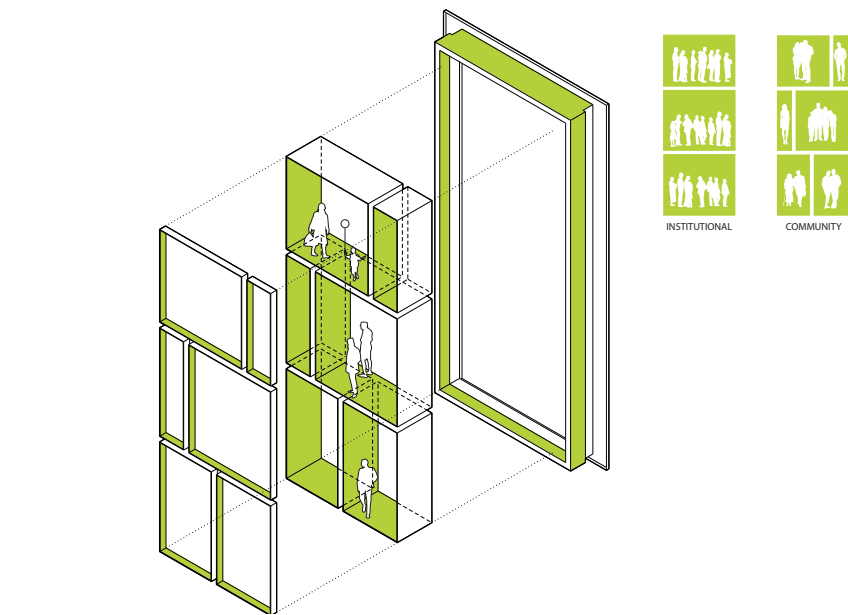
The primary consulting and examination rooms have been clustered in central pods to create inboard treatment areas.



Linear plate - Access to natural light and external views

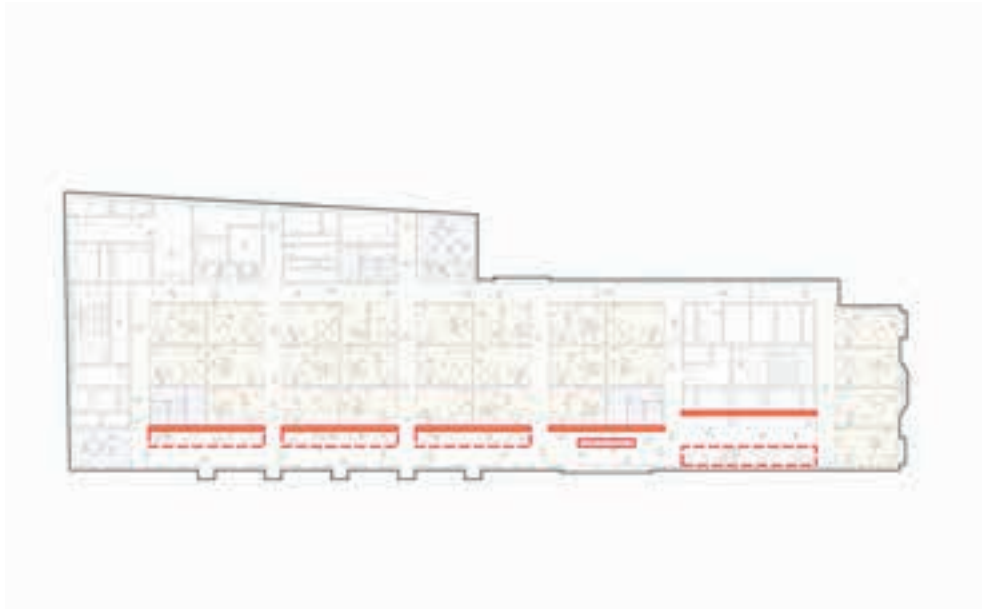


Public apaces - Waiting areas

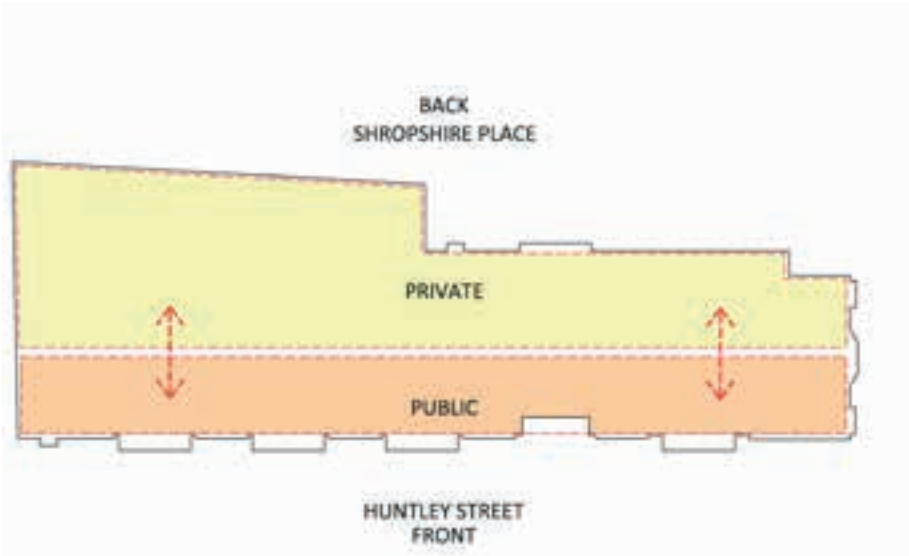


Bays / variety of waiting spaces - Child friendly design

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Articulated walls - Art Integration



Public frontage versus private - Safe and secure operational facility

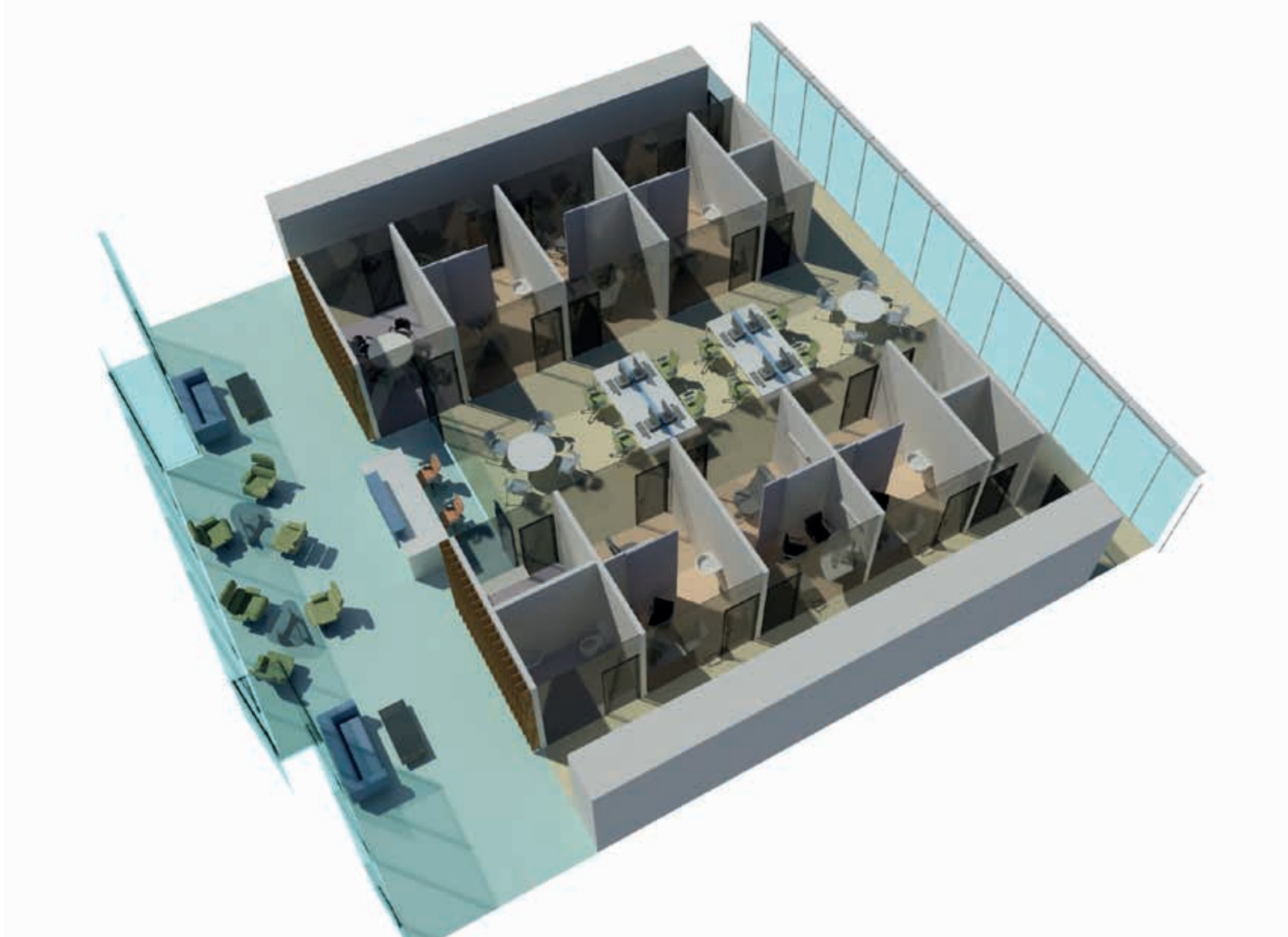
Access to natural light and external views
The outpatient facility has been designed to place key circulation, public waiting and staff circulation zones on the periphery of the building to provide access to natural light and external views.

Waiting areas
Care and attention has been given to the patient waiting strategy by locating the primary public waiting zones on the external facades. The outpatient waiting areas are designed as a dynamic feature which animates the primary facade along Huntley Street.

Child friendly design
The waiting zones have also been fragmented into zones and niches which affords the users and public an area for privacy if necessary.

Art integration
The central waiting area has been designed to accommodate a feature wall along the waiting area to provide a canvas for future art integration into the building.

Safe and secure operational facility
The segregation of these zones was a key clinical driver in the development of the Phase 5 concept. The public entrances are also clearly segregated from the staff and FM entrance with clear and secure visual sightlines to all entrances.



On Stage / Off Stage - 3D BIM loaded model

4.0 Design Evolution

4.1 Internal Organisation Concept Evolution

Clinical innovation - A current model in outpatient design is the On Stage / Off Stage organisation where the physician and staff access the consultation, examination rooms via a secondary corridor from a central team hub.

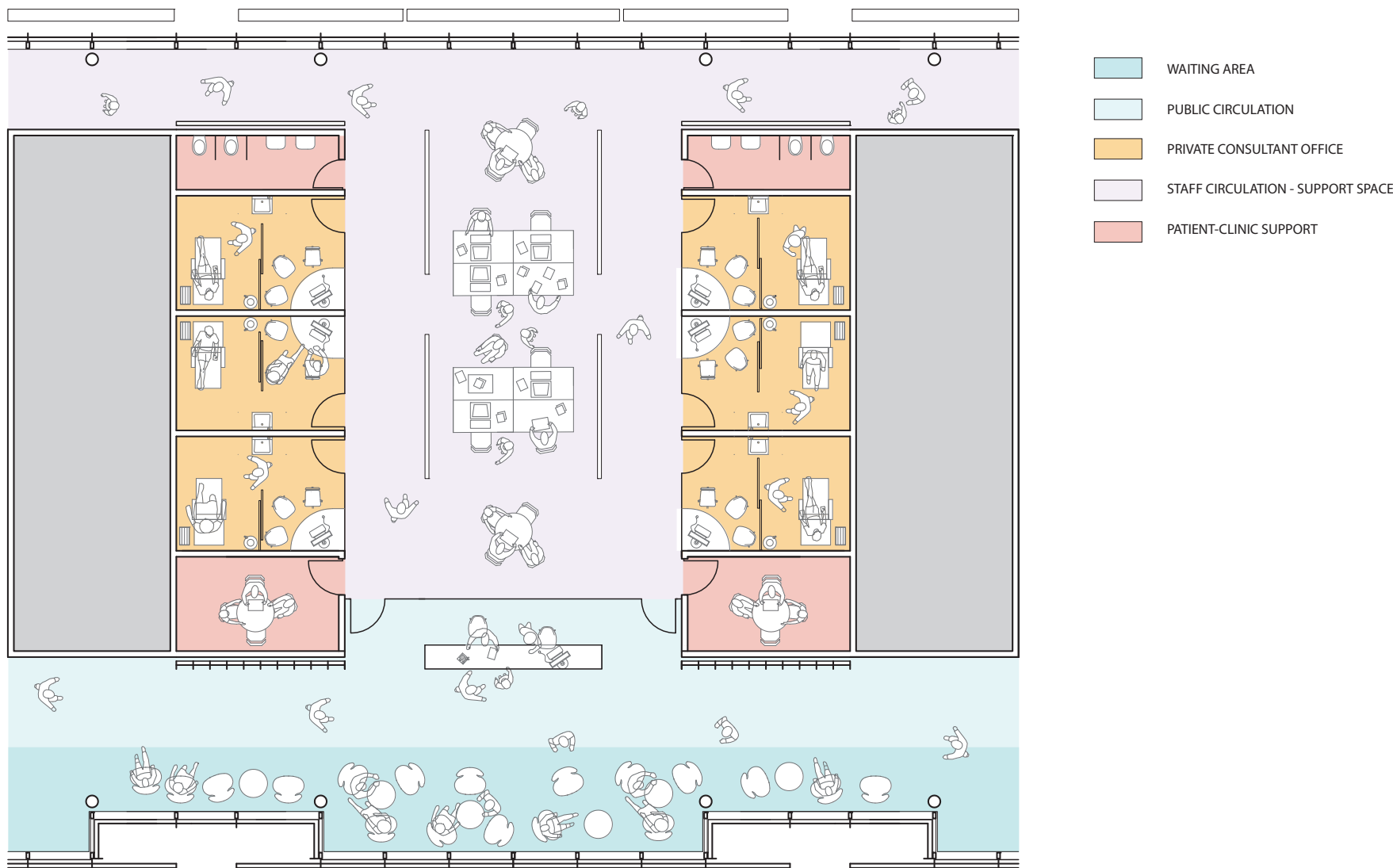
A concept of the Phase 5 outpatient facility is based on an On stage / Off stage clinical planning concept, developed in North America. This solution has been adapted to meet the needs of the UCLH brief.

The On Stage / Off Stage

In the purest form the patient and family access the consultation, examination and treatment rooms via a dedicated hallway, ideally designed much like a hotel corridor.

Concept drivers

- Patient in a single room – bring multiple care givers to patient.
- Multidisciplinary team hubs with direct access to patient rooms.
- Limit private consultation offices, interdisciplinary environment.
- Standardise room size to permit adaption between exam/consult, treatment, meeting, universal building block.
- On Stage / Off Stage model can save area in space for treatment and examination /consultation through faster throughput.
- Define check-in system, centralised vs. dispersed, electronic registration.
- Shared support core on each level - supplies, conference, clean and soiled utilities, medication, equipment, staff lounge.



On Stage / Off Stage - The purest form - Dedicated exit corridor

Royal National Orthopedic Hospital
OUT-PATIENT FACILITY ON BOLSOVER STREET
MAIN USE: MULTI PURPOSE
AREA: 2,623 sqm
BOROUGH: WESTMINSTER
DATE OF COMPLETION: 2007



The mixed-use development lies only 250m from Regent's Park in one of London's most sensitive urban environments. Phase 1 of the scheme opened in December 2009, providing a 2,000 sq m medical building boasting a state-of-the-art out-patients facility occupied by the Royal National Orthopaedic Hospital (RNOH). The scheme also includes 70 high-quality private apartments, 30 affordable apartments and 300 sq m of office space.

Key observations:
Hot desk room – 20 sqm maximum, 6 desks
Staff kitchen segregated from staff day room
Day room – 6 couch spaces, 1x table 4 chairs / 30 staff
1 hot spot – defibrillators and emergency spot - per floor
Play area for kids
Dedicated entrance to staff
Bariatric examination room in lower ground

PROS

- Hub (off stage) and pod (on stage) concept
- Waiting area close to the cells
- Different seating furniture to allow patient with various conditions to rest
- Colour scheme per floor
- Main reception and 2 floor sub receptions
- Lighting to lower ground by glazed pavement
- Compressed waste in a narrow waste store – waste released via secondary / staff entrance
- Glazed feature wall – serves as a street lighting

CONS

- No parking
- Future flexibility - new partitioning in bigger rooms to divide them into the two



Kentish Town Health Centre
GP ON BARTHOLOMEW ROAD
MAIN USE: GP
AREA: 3,829 sqm
BOROUGH: CAMDEN
DATE OF COMPLETION: 2009



Kentish Town Health Centre (KTHC) is a new health building in central London, housing a large GP practice and a wide range of health facilities. KTHC sets a new standard for the NHS.

Key observations:
Parking – 12 spaces on the plot
Cycle parkings – approximately 10 racks
Outside space – café
Community spaces and gallery

PROS

- Integration of the existing greenery into the scheme
- Internal Street with coloured scheme
- Centralised reception and atrium to allow light into the street
- 'Jenga' principles of massing and void composition
- Windows with the solid opening panels to allow the ventilation

CONS

- Dark flooring and walls in the clinical corridor – not positive environment
- Extensive ceiling soffit – cheap look
- Balconies – non accessible
- Wooden terraces to the ground floor examination spaces – not used



UCH Macmillan Cancer Centre
UCLH PHASE 3 ON HUNTLEY STREET
MAIN USE: OUT PATIENT
AREA: 14,000 sqm
BOROUGH: CAMDEN
DATE OF COMPLETION: 2012



Located on a tight urban site with strict height restrictions in central London, Hopkins Architects' UCH Macmillan Cancer Centre is the first ambulatory care cancer facility in the UK and represents a dramatic step forward in care for people with cancer. It houses the country's first PET scan and magnetic resonance imaging facilities for clinical research and trials, as well as the Cancer Risk Management Centre, the first of its kind in the UK. The hospital is one of the first to achieve the coveted BREEAM 'Excellent' rating.

Key observations:
4 passenger lifts and 4 staff / good lift
Dedicated FM entrance to the rear of Cancer Centre – corner of Copper Street and Mortimer Market
2 staircases on the outskirts of the building used by the staff only
Level 4 teenage cancer clinic with play areas to the Huntley street and chemotherapy towards Mortimer market
Level 3 open plan and cellular chemo treatment area
Level 2 consultants rooms – failure of seating areas
Level 1 / Ground – open plan entrance area with shop and café and main centralised reception, pharmacy
Level B1 – blood tests and Macmillan Support Centre
Private Clinics on top of the stack

PROS

- Concrete soffit to ceiling for the lighting, other services incorporated into the clinical / support zone creates clear floor to ceiling height
- Colour scheme is pale, lifted in the waiting areas by colourful flooring
- Consultant rooms with niches / seating at 15 sqm

CONS

- Deep atrium
- Roof top garden – not serving, acoustic issues and visual weak point



The Richard Desmond Children's Eye Centre, Moorfields Eye Hospital
CHILDREN'S CLINIC TO MOORFIELDS EYE HOSPITAL
MAIN USE: OUT-PATIENT
AREA: N/A
BOROUGH: ISLINGTON
DATE OF COMPLETION: 2007



This world-class, dedicated treatment centre for children's eye conditions combines the clinical expertise of Moorfields Eye Hospital with the research base of the adjacent Institute of Ophthalmology promoting fast transference of 'bench to bedside' research. An integrated art programme features an arrangement of aluminium louvers minimising solar gain and creating an iconic street presence.

Key observations:
Main reception and café at ground together with A&E
Waiting areas with different seating arrangements and sub receptions
No outside amenity space

PROS

- Feature façade with lighting scheme
- Good proportioned clinical spaces – consultation room at 14.25 sqm
- Lightwell to the B1 – openable windows
- Colour scheme per floor
- Voids to waiting areas to allow daylight penetration
- Allowance for buggies within the clinical spaces

CONS

- Lightwell to the B1 – narrow slot
- Entrance – non pleasant entry space
- Wayfinding – non existing
- Wooden terraces to the ground floor examination spaces – not used

Precedents visit

4.0 Design Evolution





4.1 Internal Organisation Concept

The design team undertook various clinical analysis exercises to analyse the brief and translate this into a concept for review with the clinical user groups.

We used benchmarks as a reference point when making design and planning decisions and as a tool to help define the programme and the project. These were carefully reviewed for applicability and effect on the design before being adopted as a measure.

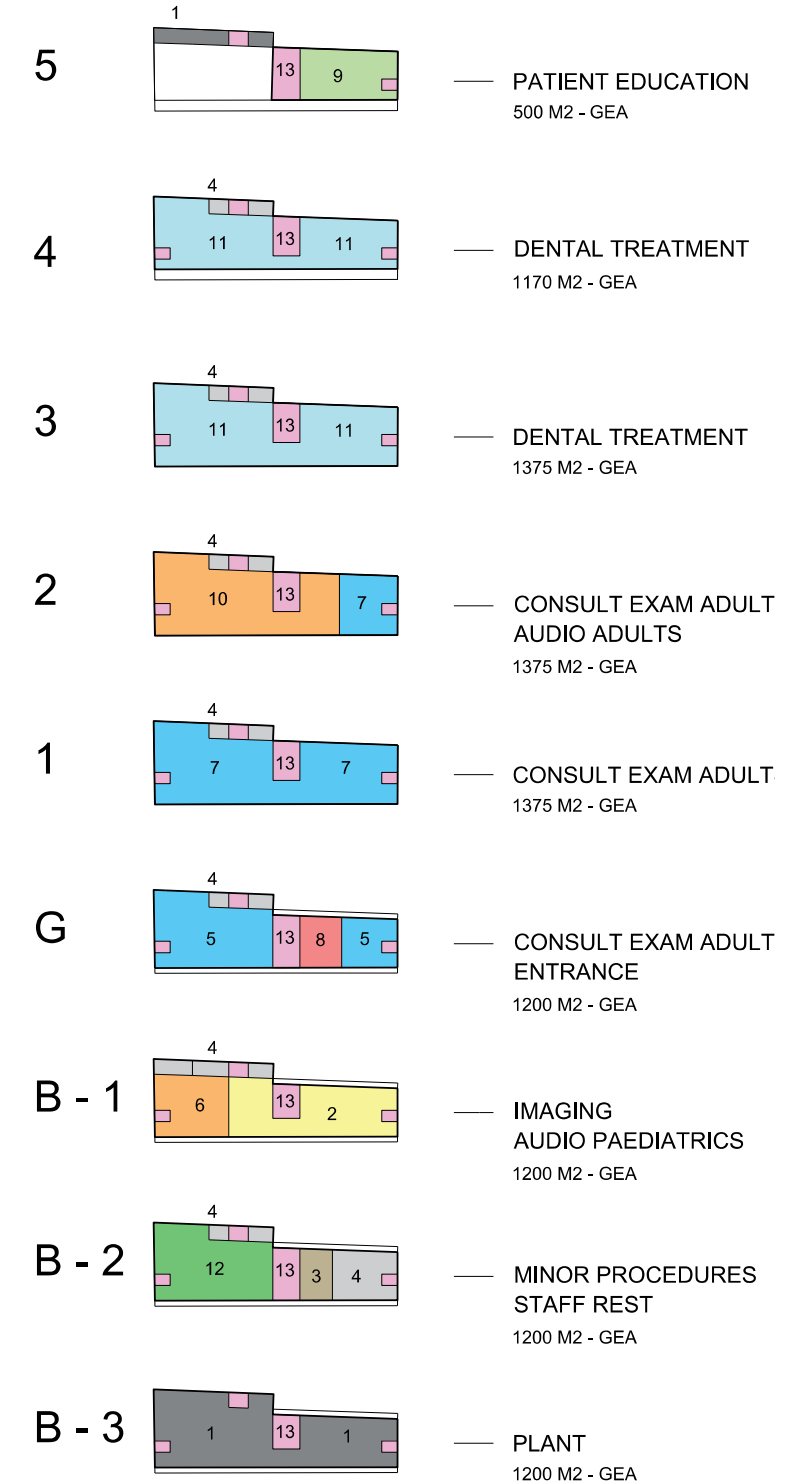
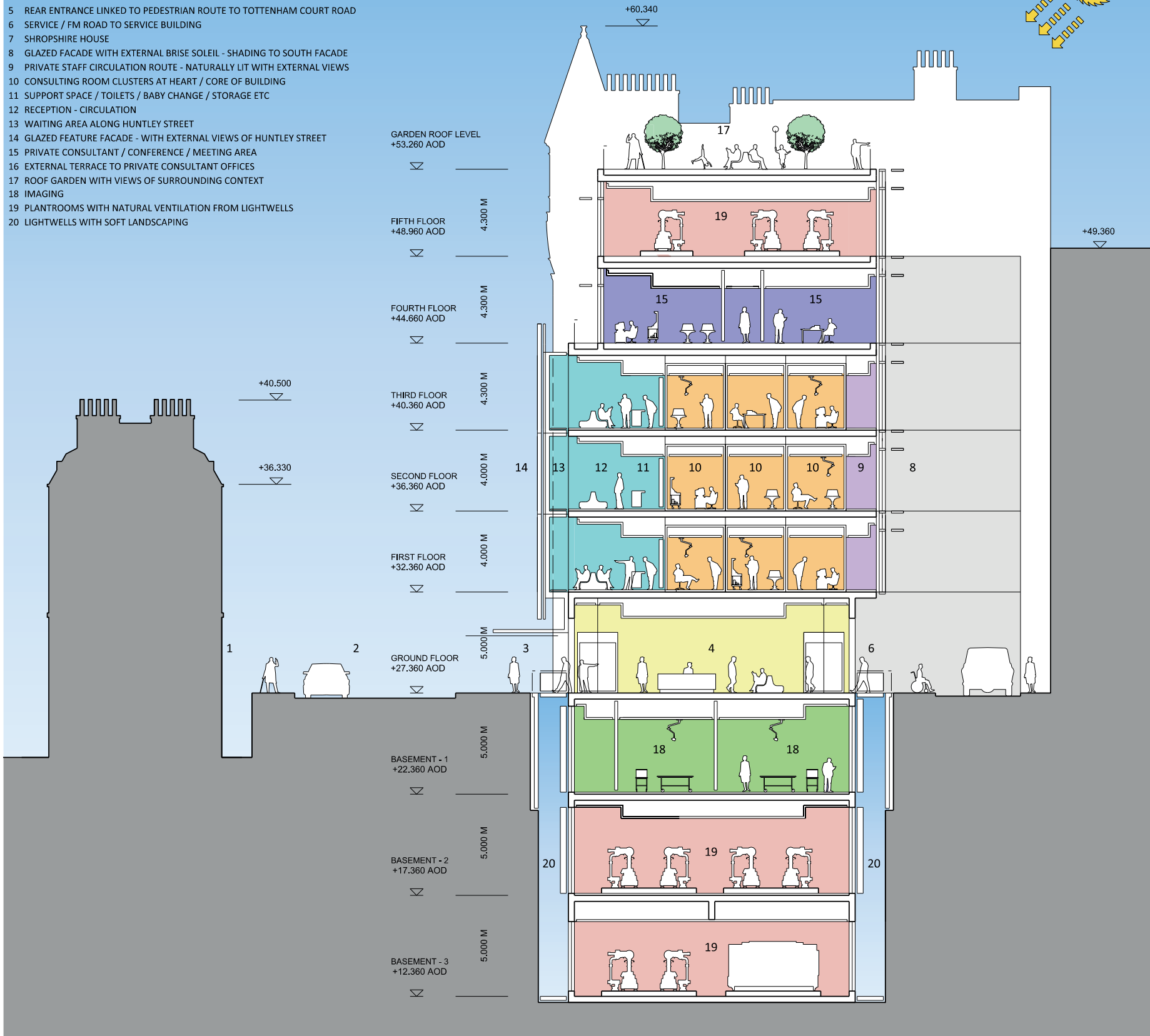
We continually collected and updated a broad set of benchmarks focused on programmatic utilisation, department sizes, ratios of visits per square metre, room sizes, construction/project costs and building square foot ratios, etc., that reflect academic medical centres, community hospitals, and the broad spectrum of health care services and programs. From this frame of reference, we made informed decisions about the project’s unique components.

This allowed the Client and the design team to engage in discussion with clinical users around practice patterns, constraints and opportunities for efficiencies. Working in collaboration with the Client and clinical users enabled the design team to secure a better understanding of the ‘culture’ of the UCLH that could be embedded in building design.

	RNOH	Phase 3	KTHC	Eye Hospital
				
NAME	Royal National Orthopedic Hospital - Out Patient facility	UCH Macmillan Cancer Centre	Kentish Town Health Centre	The Richard Desmond Children's Eye Centre, Moorfields Eye Hospital
FULL ADDRESS	45 Bolsover Street W1W 5AQ	Huntley Street WC1E 6AG	2 Bartholomew road NW5 2AJ	162 City Road EC1V 2PD
BOROUGH	Westminster	Camden	Camden	Islington
MAIN USE	Out-Patient	Out-Patient	GP	Out-Patient
ADDITIONAL USE	Residential (AH-32, MH-76) + Offices	none	none	none
ARCHITECTS	HOK	Hopkins	AHMM	Penoyre & Prasad
CLIENT	Ridgeford Pgm LTD & Manhattan Loft Corporation	UCLH & Macmillan Cancer Support	Camden & Islington Community Solutions LTD & CSIP	Moorfields Eye Hospital Foundation Trust & Balfour Beatty Procure 21 LTD
CONTRACTOR	SISK	Skanska	Morgan Ashurst PLS	
CONTRACT	PPP		LIFT	Procure 21
DATE OF COMPLETIOIN	Sep-07	2012 (120 weeks construction)	Jan-09	2007
VALUE	40 million	confidential	13 million	12.3 million
AWARDS		Excellent BREEAM	Lift 2009, 2010	2009 WAN Awards, Healthcare Building of the Year 2008 World Architecture
GEA	16,993 sqm total (2,623 sqm D1)	14,000 sqm	3,829 sqm	
STOREYS	7 + B1 (3 storeys D1)	6 + B1 + B2	3	6
GIA OF TYPICAL CONSULTANT/ EXAMINATION ROOM	15 sqm	15 sqm	n/a	14.25 sqm
LISTED STRUCTURES ON SITE	yes	no	no	no
MATERIAL	masonry, blue+black+white plastic	brass metal cladding	brick + stucco	glass
ART	Glass façade by Carpenter	Marmoleum art piece Love by Grayon Perry 2012	Signages - Internal Street	Lighting + Folded aluminium louvres
CLINICS	Orthopedics specialist	Staff Conference, Teenage and Adult service, Chemotherapy Centre, Aseptic Production, Pharmacy, CT,MRI,X-ray; Day Surgery; Macmillan Support and Info	40 % GP. 40 % Mosaic (Camden's Children Service), 10% Distric nurses, 10% other	Ages 0-16, play areas, outpatient, day surgery, research, overnight accommodation for families
PARKING	4	no	very limited on street	very limited on street
CYCLE PARKING	16	no	no	no
GREEN SPACES	courtyard	terrace	surrounding	none

Precedents visit and analysis focused on typical consultation / examination room size

- KEY
- 1 LISTED GEORGIAN HOUSING ALONG HUNTLEY STREET
 - 2 HUNTLEY STREET
 - 3 MAIN ENTRANCE ALONG HUNTLEY STREET
 - 4 MAIN ENTRANCE RECEPTION AT GROUND FLOOR
 - 5 REAR ENTRANCE LINKED TO PEDESTRIAN ROUTE TO TOTTENHAM COURT ROAD
 - 6 SERVICE / FM ROAD TO SERVICE BUILDING
 - 7 SHROPSHIRE HOUSE
 - 8 GLAZED FACADE WITH EXTERNAL BRISE SOLEIL - SHADING TO SOUTH FACADE
 - 9 PRIVATE STAFF CIRCULATION ROUTE - NATURALLY LIT WITH EXTERNAL VIEWS
 - 10 CONSULTING ROOM CLUSTERS AT HEART / CORE OF BUILDING
 - 11 SUPPORT SPACE / TOILETS / BABY CHANGE / STORAGE ETC
 - 12 RECEPTION - CIRCULATION
 - 13 WAITING AREA ALONG HUNTLEY STREET
 - 14 GLAZED FEATURE FACADE - WITH EXTERNAL VIEWS OF HUNTLEY STREET
 - 15 PRIVATE CONSULTANT / CONFERENCE / MEETING AREA
 - 16 EXTERNAL TERRACE TO PRIVATE CONSULTANT OFFICES
 - 17 ROOF GARDEN WITH VIEWS OF SURROUNDING CONTEXT
 - 18 IMAGING
 - 19 PLANTROOMS WITH NATURAL VENTILATION FROM LIGHTWELLS
 - 20 LIGHTWELLS WITH SOFT LANDSCAPING



Concept cross section

Clinical stacking diagram

4.0 Design Evolution

4.1 Internal Organisation Competition Concept

The Competition Concept proposed a 3 storey basement with 6 storeys above ground to meet the aspirations of the UCLH brief.

Steffian Bradley Architects were invited as part of the UCLH Architecture Framework to develop a concept proposal for the Phase 5 site. Steffian Bradley Architects were successful in this competition of 6 and were appointed to develop the concept further.

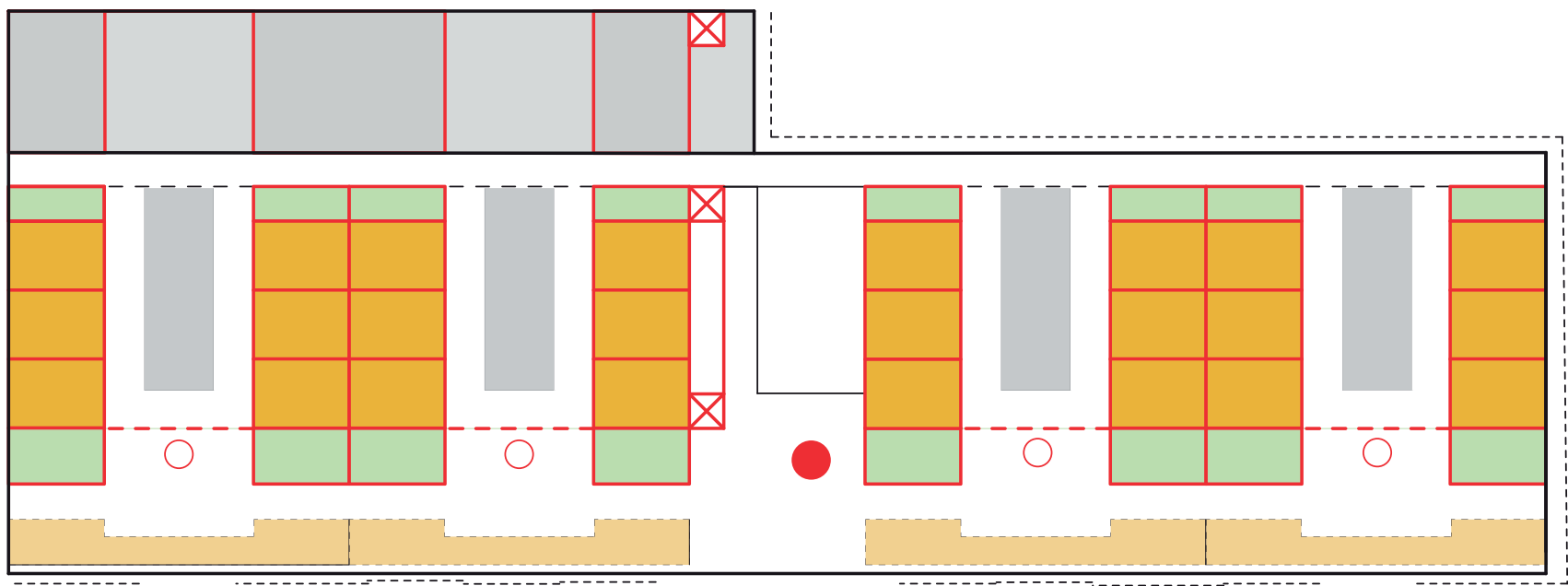
A detailed brief was developed by EC Harris in conjunction with UCLH and the design team and the team began to develop concept proposals for the site. As part of this exercise the design team undertook various visits and studies of exemplar outpatient facilities in London to examine the key design drivers in this building types. Steffian Bradley have a wealth of experience in healthcare facilities in the US and the UK. However it was felt that it was important to review current and up to date thinking in central London.

A number of options were explored as part of the feasibility study to maximise the massing on the site.

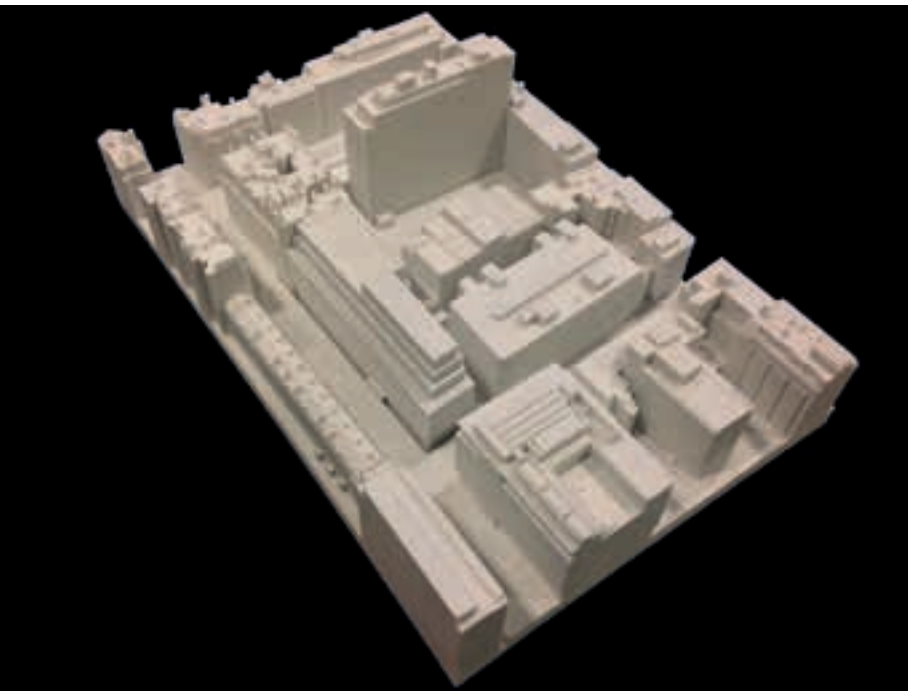
The options explored were informed by:

- Varying number of basement levels
- Alternative scenarios for slab to slab heights
- Rights-of-Light and daylighting issues
- FAAP/Heritage issues

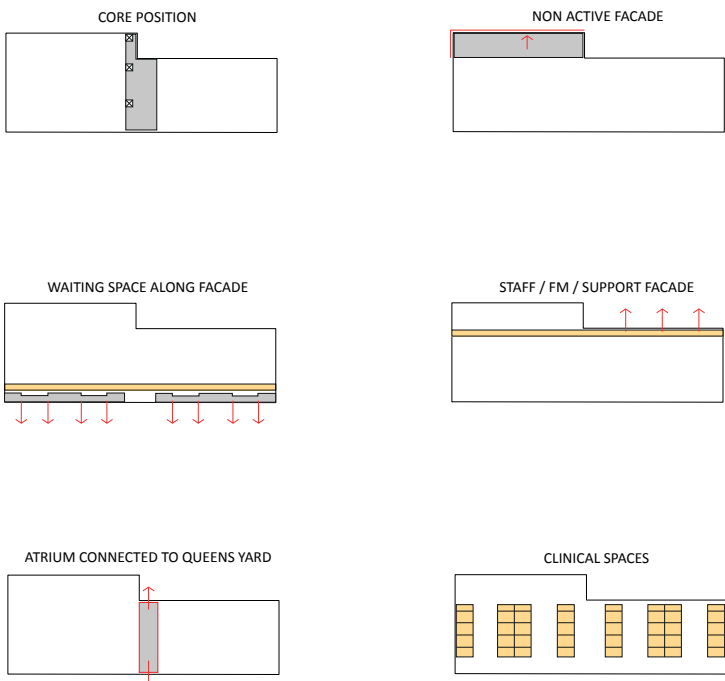
The design team initially focused on the experience of the users of the building to develop a concept which created the most positive experience for the users and patients. Care and full consideration was also given to need of the staff and support who will work in the building. The building footprint was utilised to create a clear differentiation between the visitors area and the staff area. The design team developed an On Stage / Off Stage clinical concept for the building that harmonised the functional needs of the building to create a better architectural concept .



Floorplate of typical level

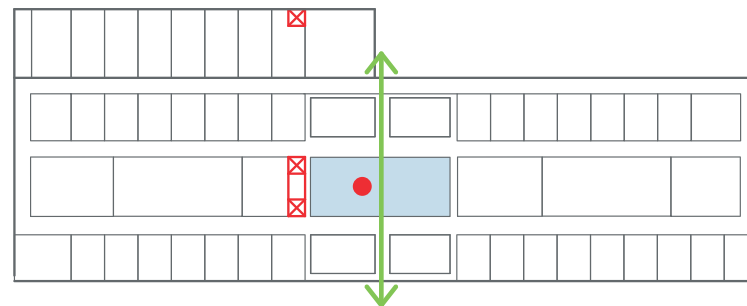
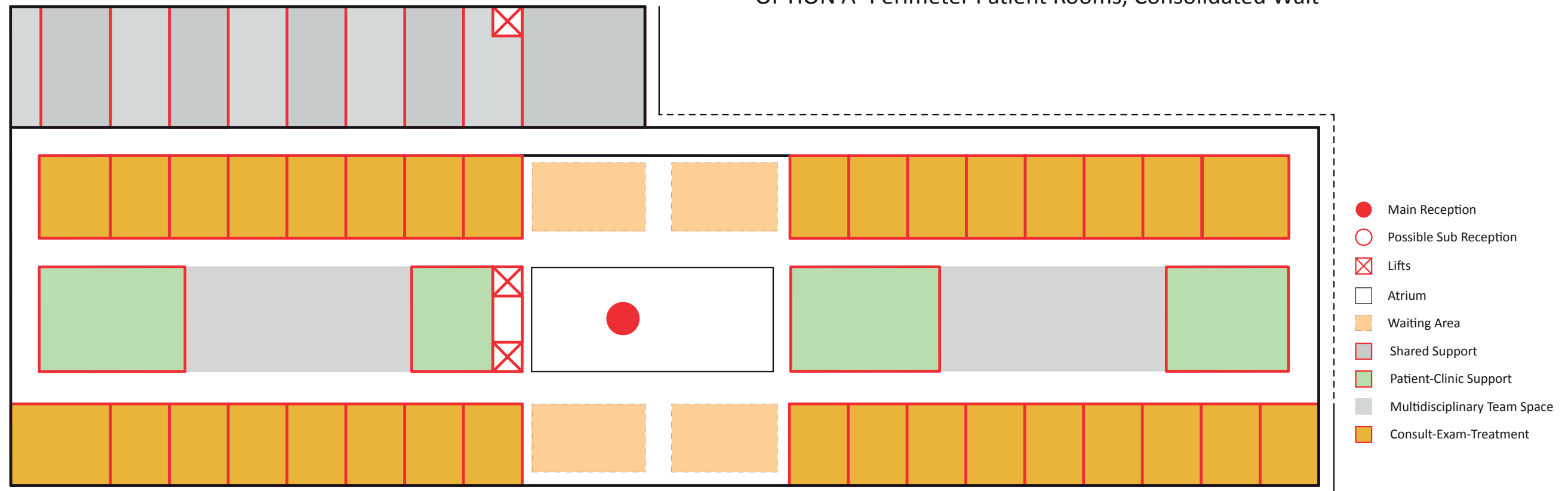


3D printed massing model

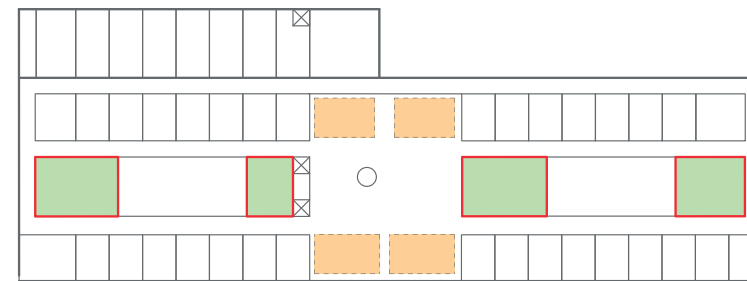


Key design drivers

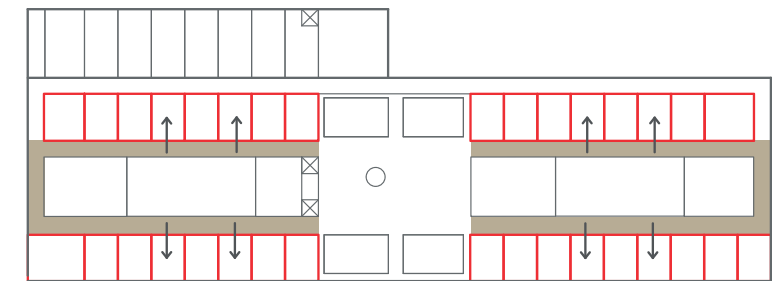
OPTION A- Perimeter Patient Rooms, Consolidated Wait



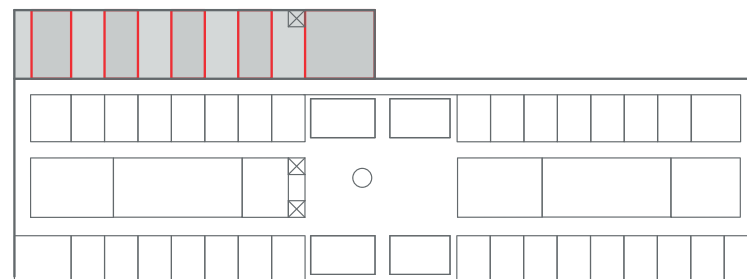
Atrium, Main Reception and Lifts



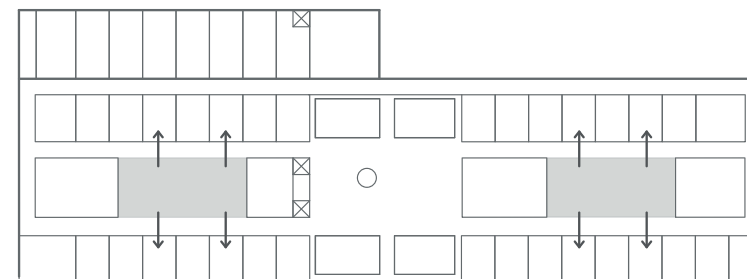
Client - Patient Support and Waiting Areas



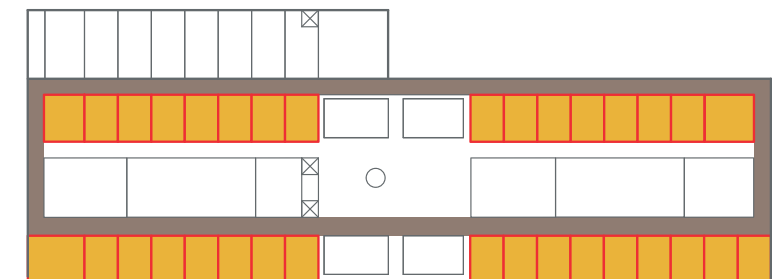
Patient Access Consult/Exam/Treatment



Shared Support



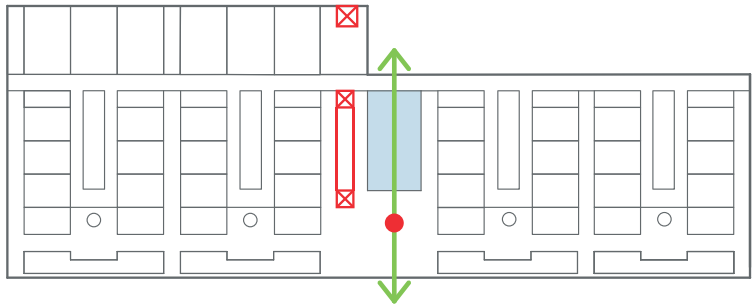
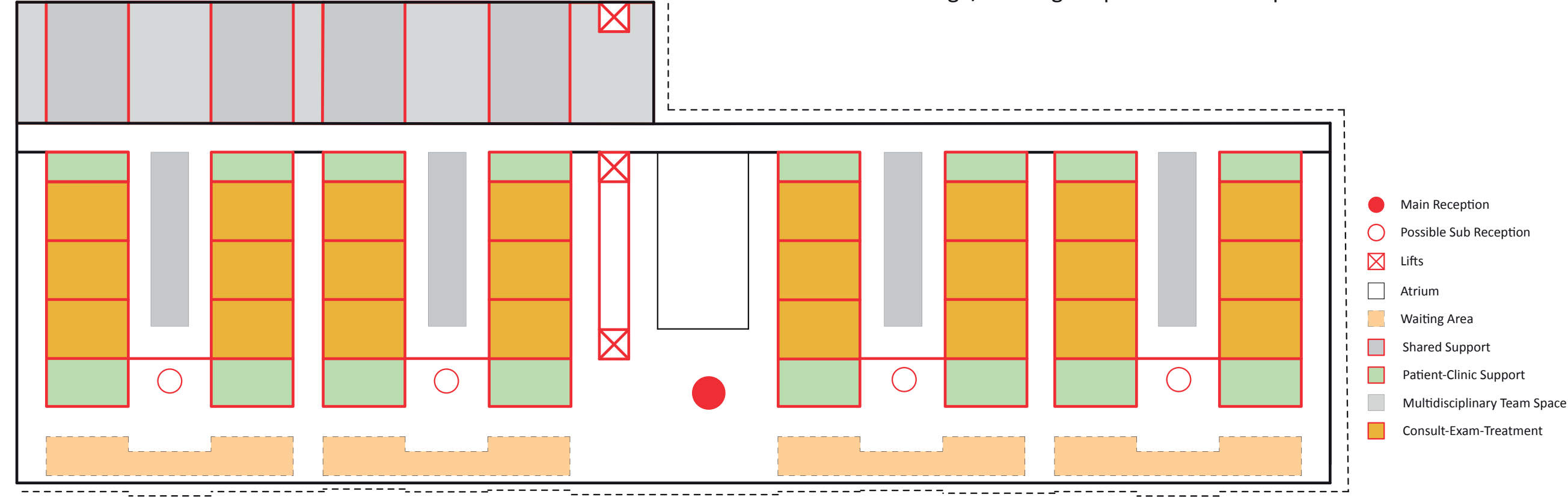
Multidisciplinary Team Space



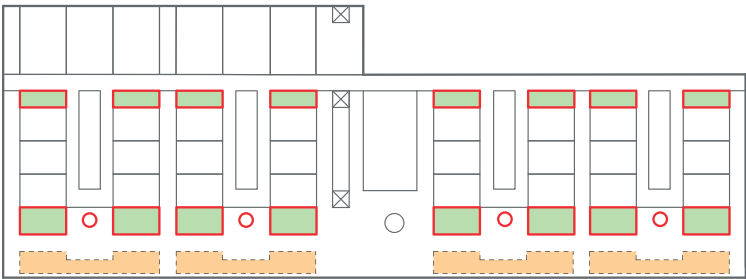
Staff Access Consult/Exam/Treatment Rooms

Clinical concept plate analysis

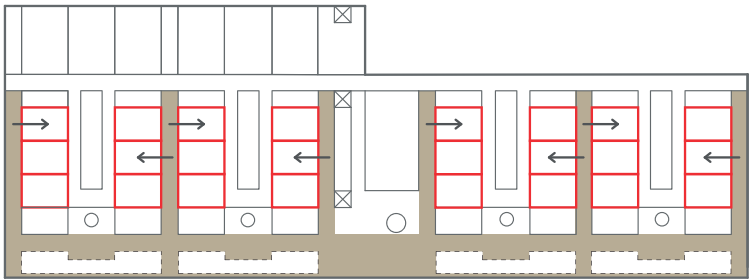
OPTION B- On-Stage/Off-Stage separation of staff-patient circulation



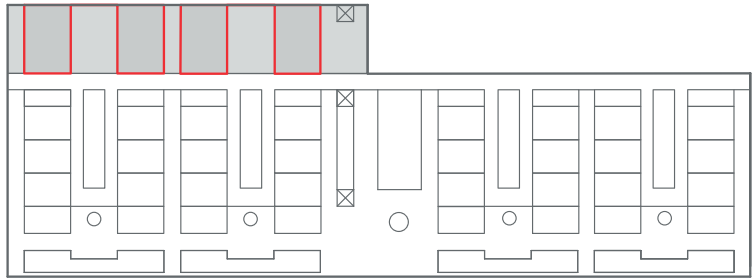
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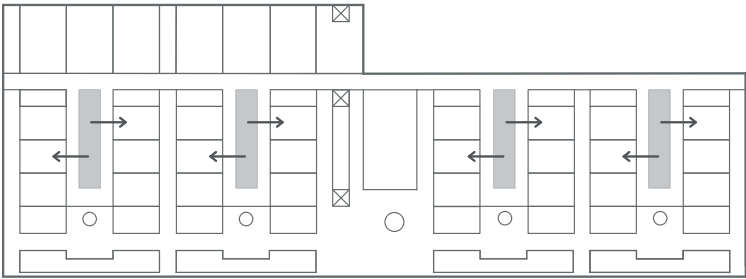
Clinical-Patient Support Waiting Areas and Possible Sub Receptions



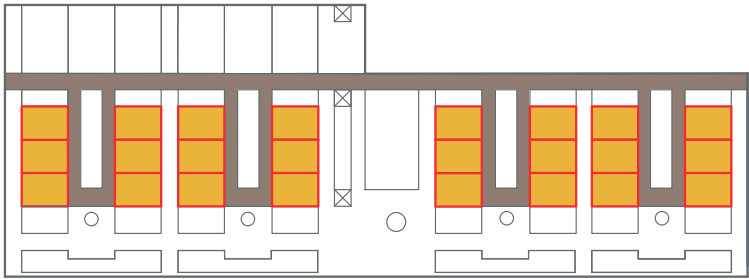
Patient Access Consult/Exam/Treatment



Shared Support



Multidisciplinary Team Space

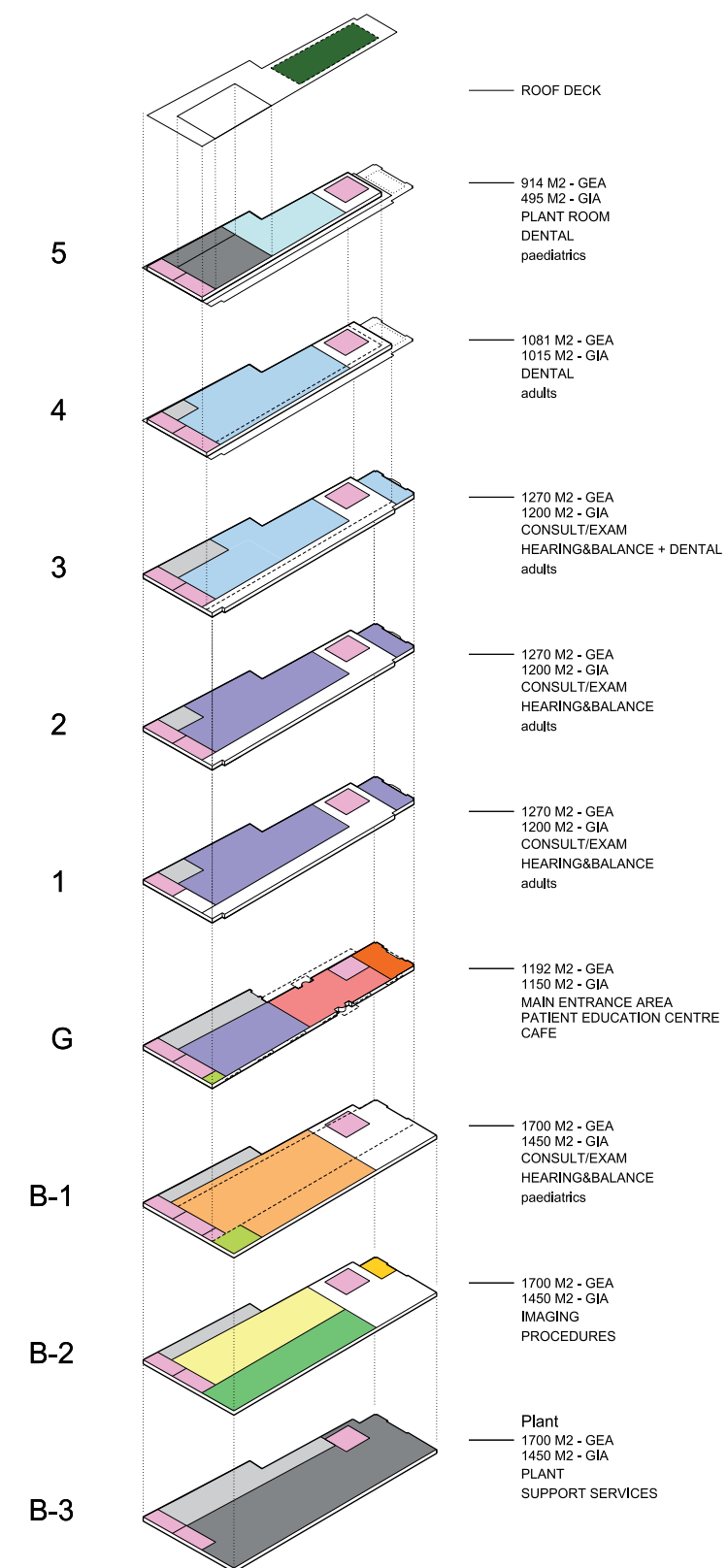


Staff Access Consult/Exam/Treatment Rooms

Clinical concept plate analysis

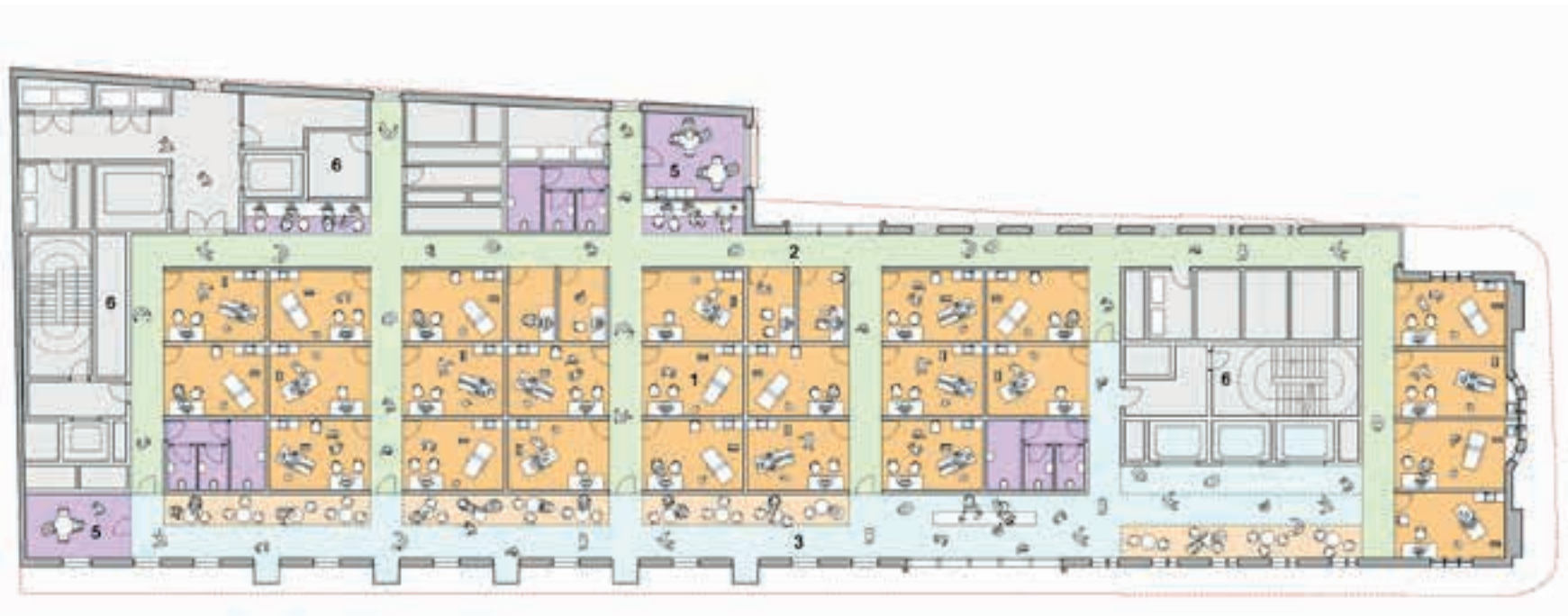


Concept cross section



Clinical stacking diagram

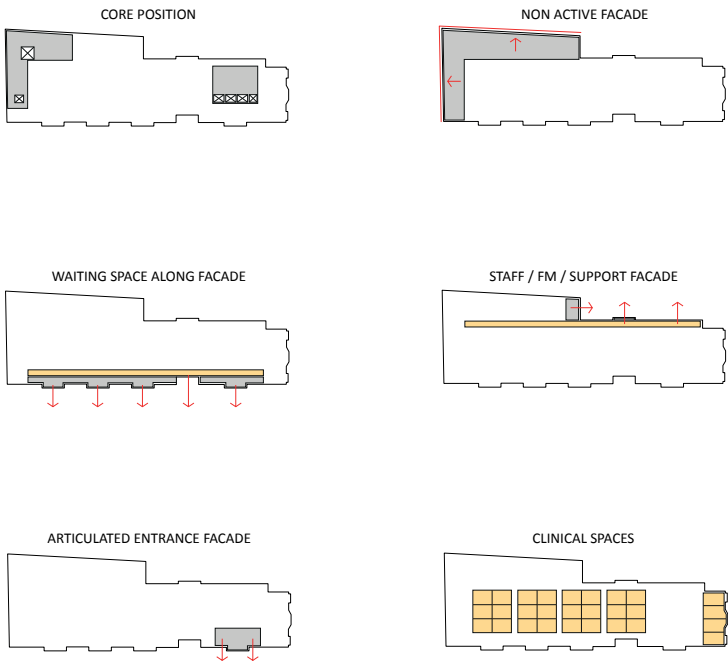
4.0 Design Evolution
4.1 Internal Organisation
Design Development - Retained Copper Street Facade



Floorplate of typical level



3D printed massing model



Key design drivers

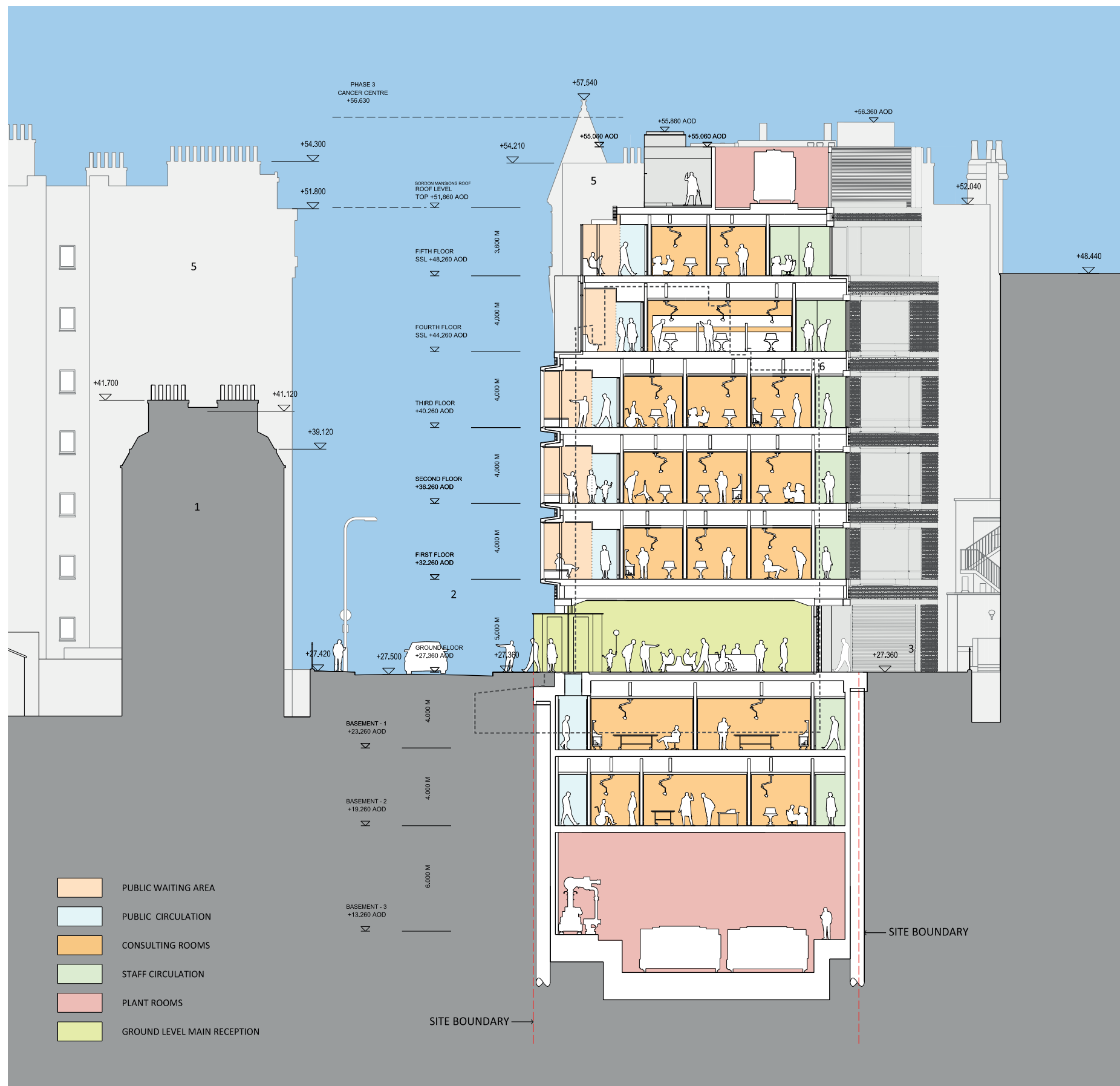
The developed concept evolved to a two core solution, which created more efficient floor plate. The Copper Street facade was retained, which created inefficient, segregated, clinical spaces.

The linear site imposes several key constraints which needed to be explored to maximise the potential of the site while also seeking to remain respectful to the surrounding context and the massing constraints of the FAAP.

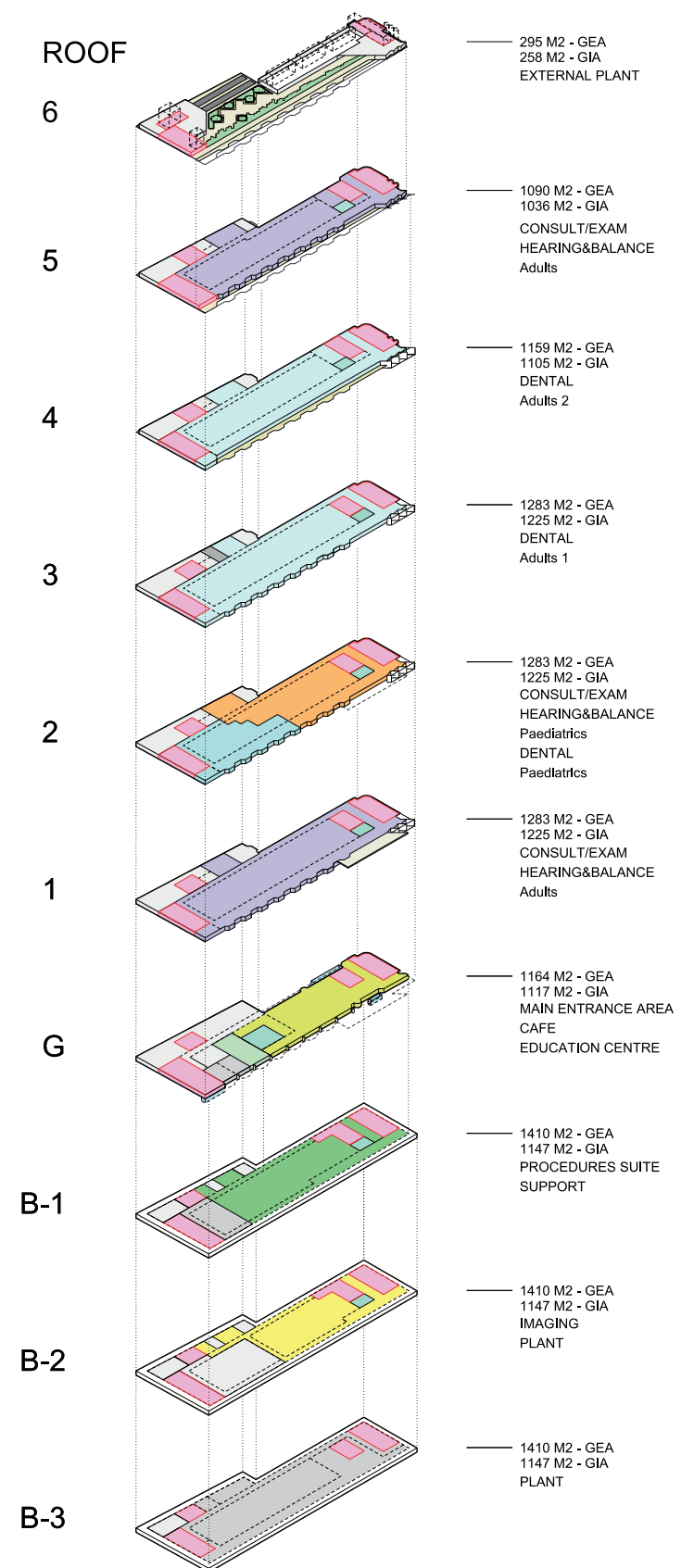
Following a detailed review of the concept and the brief it became clear that the massing of the site could only offer a defined area for the building. The brief required a quantum much larger than the envelope of the building so the team sought to develop the concept to see if the building could be more efficient. This resulted in the team developing a solution whereby the central core was removed from the linear floor plate and locate asymmetrically to the west, close to the Copper Street façade.

The 2 core solution created a more efficient floor plate and allowed for the retention of the Copper Street façade as part of the concept. However the clinical zone within the Copper Street façade was segregated from the main clinical plate which proved a major clinical flaw.

The On Stage / Off Stage concept was further developed to create an animated zone of waiting along Huntley Street and an animated zone of staff circulation along Shropshire Place. The two zones were interlinked with service corridors which provided linkage to the various consulting and treatment pods which were in board of the facades. This concept was developed architecturally and presented to LB Camden and CABE for their review.



Concept cross section



Clinical stacking diagram

4.0

Design Evolution

4.1

Internal Organisation

The Updated Concept - Copper Street Facade Not Retained



Floorplate of typical level

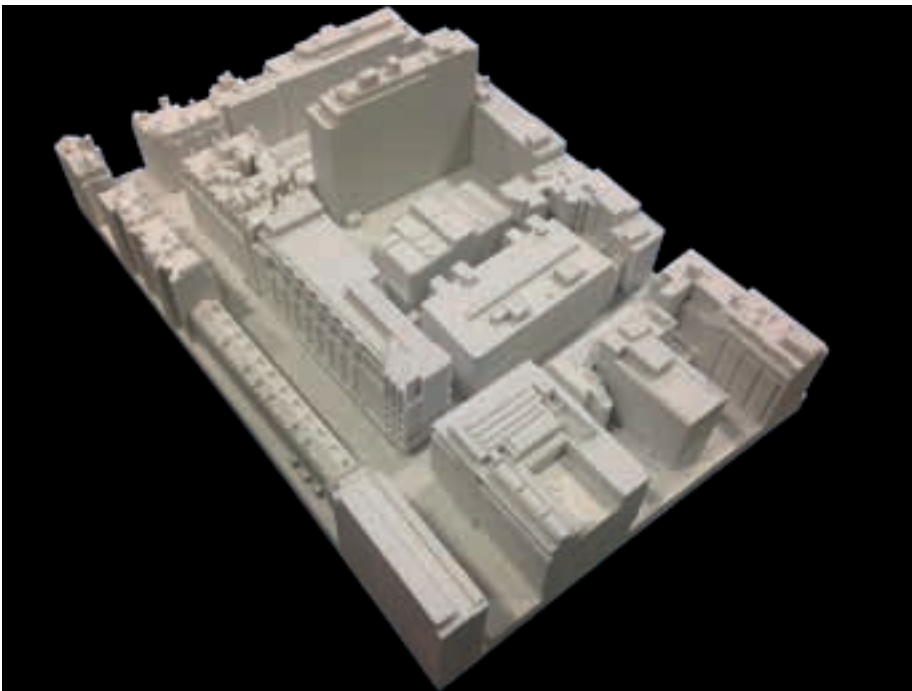
Following the CABE design panel review the design team developed a solution which allowed for the removal of the Copper Street façade.

This solution created the opportunity to create a new central core to the north of the floor plate and by so doing offered the most efficient and functional clinical plate to the Phase 5 building. This solution greatly enhanced the flow of patients and staff to offer the best clinical and architectural solution to the compact linear site.

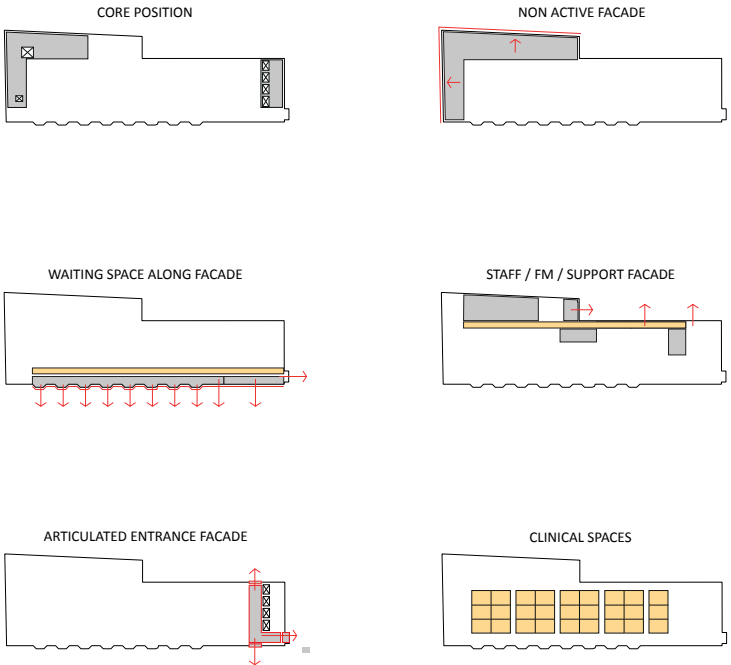
The waiting area facades along Huntley Street were developed to mirror the architectural bay treatment of Gordon Mansions to create animated waiting bays along the primary façade of Huntley Street.

The new north core was developed and optimised technically to ensure that the building had the most efficient clinical solution to service the floor plate. The introduction of the staircase as a key design feature to the north core offered the opportunity to further articulate this key part of the new building and provide a vertical totem or way finding device for the users.

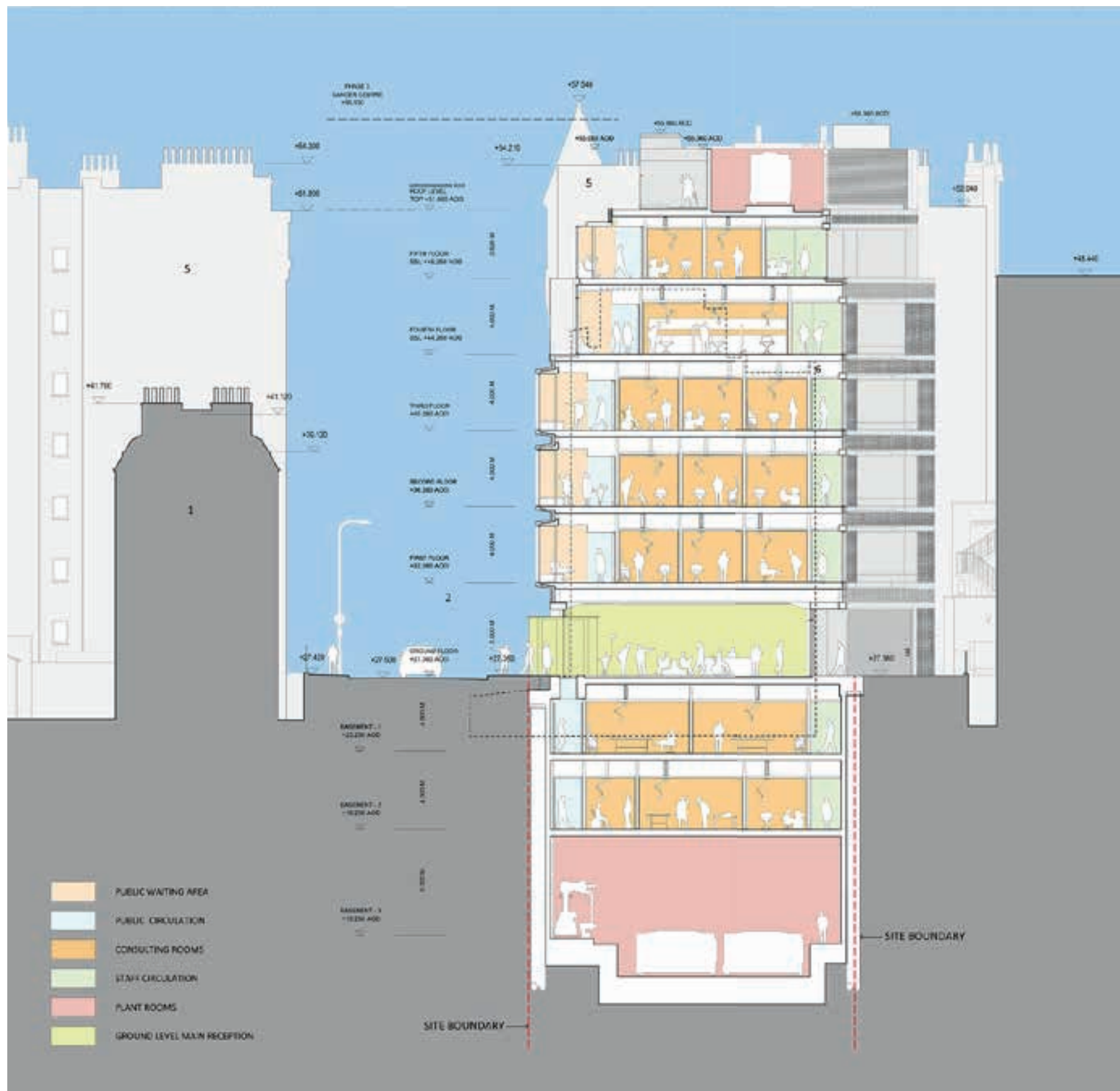
The development of this north core and its integration of with the façade has been developed further to offer the final and current solution submitted as part of this planning application.



3D printed massing model



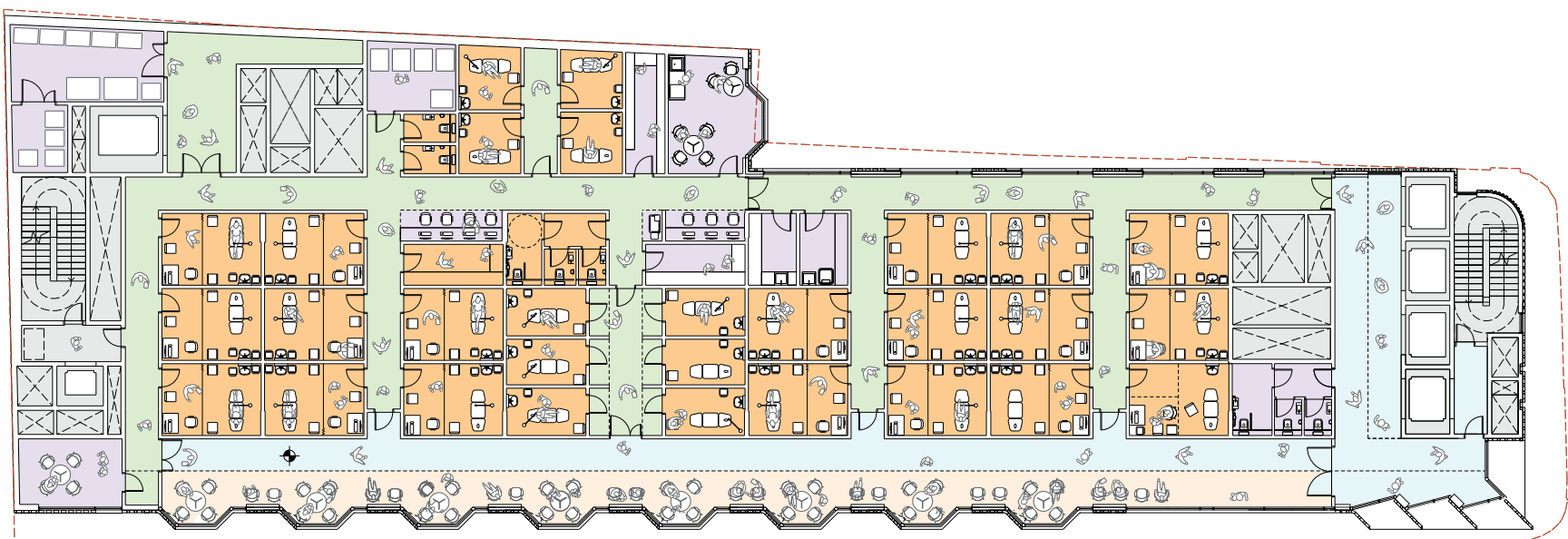
Key design drivers



4.0 Design Evolution

4.1 Internal Organisation

Planning Submission Scheme



Floorplate of typical level

The current planning application floor plate has been analysed to illustrate the key benefits and characteristics of the concept.

A new north core along Capper Street provides an efficient central core to the main building creating an efficient clinical floor plate and providing the opportunity to create a new architectural dialogue with the UCH Macmillan Cancer Centre building.

The central FM core and service plate is located in the non active zone of the floor plate to provide the maximum active frontage to the floorplate. To allow future redevelopment of the 1-19 Torrington Place (not owned or occupied by UCLH) the design team have not developed a solution to provide windows on the elevation facing Torrington Place.

A new articulated entrance façade along Huntley Street provides a clear main entrance for ease of way finding along Huntley Street.

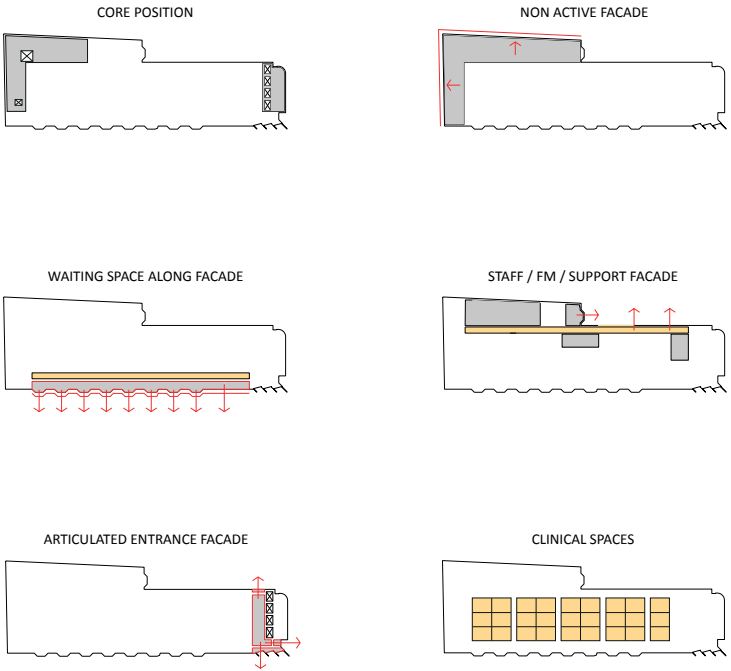
The primary façade along Huntley Street provides an articulated façade which is animated with waiting areas to provide a patient friendly waiting zones within the building.

The FM and staff support spine are closely linked to the FM zones and entrance on Shropshire Place. All key zones are linked with a segregated staff corridor with views and natural light along Shropshire Place.

The primary staff waiting areas have key views and vistas along Shropshire Place which also provides a key focal point for views looking back into Shropshire Place from Capper Street.



3D printed massing model



Key design drivers