APPENDIX H
Shell and Core Outline Specification

CONTENTS

1. DOCUMENT ISSUE HISTORY 3
2. DOCUMENT REVISION RECORD 3
3. INTRODUCTION 4
4. MAIN BUILDING WORKS SPECIFICATION 10
.2 ANY PUBLIC STAIRS TO HAVE SUITABLY ENHANCED FINISHES, INCLUDING GLASS AND STAINLESS STEEL BALUSTRADES. 12
5. EXTERNAL ENVELOPE 14
6. INTERNAL DOORS (WHERE PROVIDED AS PART OF DEVELOPER'S BASE BUILD) 16
7. INTERNAL FINISHES 18
8. PASSENGER/TROLLEY/PLATFORM LIFTS 18
9. STAIRCASES 19
10. ENGINEERING DESIGN STANDARDS (WHERE PROVIDED AS PART OF DEVELOPER'S BASE BUILD) 20
11. PLANT ROOMS, RISERS AND SERVICE CORRIDORS 21
12. ANCILLARY ROOMS (E.G. STORE ROOMS, WASTE ROOMS ETC) 22
13. UTILITIES 22
14. EXTERNAL WORKS 23
15. EXTERNAL SIGNAGE 24
16. DRAWINGS – DETAIL TO BE AGREED BETWEEN THE PARTIES 25
17. HANDOVER AND COMMISSIONING 26

1. DOCUMENT ISSUE HISTORY

VERSION NR	MAIN ISSUE DESCRIPTION	DATE	BY WHOM
1	Initial document	28/021/20	Gardiner & Theobald LLP

2. DOCUMENT REVISION RECORD

VERSION NR	MAIN ISSUE DESCRIPTION	DATE	BY WHOM

3.1. Scope

.1 This outline Specification describes the Shell and Core for schemes undertaken by a third party developer but where NHSPS will enter into a Head Lease.

.2 This document describes the general level and quality of design and specification for the development.

.3 NHSPS shall be responsible for carrying out the Interior fit-out works to the respective areas of the Centre.

3.2. Layout

.1 All space planning will be done by NHSPS's design team. The area for the health is therefore to be left as open as possible and shall not be compromised by structural columns unless agreed otherwise with NHSPS in writing.

3.3. General Description

.1 The health facility is likely to be a mixed use building comprising of primary care services (GP practices), outpatients, therapies, diagnostics and a number of services focussed on wellbeing.

3.4. General Description Specification, Workmanship and Materials

.1 The works shall be designed in accordance with statutes, by-laws and regulations relevant at the time of design and construction or as amended by agreement with the relevant statutory bodies. For health buildings delivered by the NHS, the published Department of Health's Health Technical Memorandum and Health Building Notes must be acknowledged and adhered to so the developer shall be cognisant of these conditions so that the subsequent NHS facility is not compromised in any way by the shell and core provided. The latest documents shall apply at the time of appointment.

.2 The building shall be assessed under a single Building Regulations Part L 2013 calculation (and as required under any superseding legislation) which shall then form part of the fit out requirements of each part of the building.

3.5. Environmental Performance

.1 NHSPS would like to see a new approach to sustainability, focussing on development of efficient, ultra-low energy and flexible facilities. Construction and operation practices should help NHSPS achieve buildings that are good for the environment and the people within them. What NHSPS builds and uses should reflect its mission of providing the best health-promoting environments while using natural resources efficiently and effectively.

.2 No one certification or framework is likely to satisfy the numerous needs of NHSPS, but for simplicity and continuity we would expect to achieve performance consistent with BREEAM "Excellent" (new build) and "Very Good" (existing build), while embodying new best practices contained in frameworks such as the WELL Building Standard. Our overall goal is not to attain a design

certification level but rather to promote and maintain efficient, flexible, ultra-low energy and healthy facilities over time.

The developer shall propose a best practice approach to this in its tender for consideration.

In doing so the following shall be considered:-

1. Reflect best practice and current thinking in sustainability, demonstrated by such guidance issued by the NHS Sustainability Development Unit and the like. Information on the Sustainability Development Unit can be found at www.sdu.nhs.uk.
2. HSPS will be issuing its Sustainable Development Management Plan (SDMP). In addition to the sustainability requirements of NHSPS the Contractor shall also be aware that Commissioning organisations should also issue an SDMP or equivalent. These requirements shall be identified by the NHSPS PM and agreed with the Contractor at pre-design or design stage. The Contractor shall take account of the Sustainable Development Strategy 2014-2020 which sets out the key drivers for the move towards more sustainable healthcare provision, together with any other locally generated strategy documents issued.
3. Sub-metering of energy users and for each tenant's demise and/or department/wing/section will be installed to allow energy use to be monitored effectively. Energy-efficient plant and equipment should be specified. This will include sub-metering for heating and cooling networks. The Contractor shall illustrate a sub-metering strategy based on demised plans for approval by the Project Manager. Metering should be used to inform pro-active, preventative energy-efficient maintenance.
4. Water efficiency measures should be incorporated including sub-meters, leak detection and, where relevant, Sustainable Urban Drainage Systems (SUDS).
5. Site ecology should be examined prior to development to mitigate the ecological impact of the development and enhance site biodiversity where practicable.
6. Sustainable travel should be promoted by incorporating safe, secure and suitable facilities for bicycles and cyclists, safe cycle and pedestrian routes and providing appropriate facilities to enable travel information to be presented.
7. Sustainable travel considerations should also make provision for appropriate staff changing, shower and storage facilities.
8. A healthy travel plan should be developed in consultation with building users and developed in conjunction with the Project Manager.
9. The contractor shall meet any Local Authority planning stipulated sustainability targets and requirements, especially in relation to Section 106 requirements
10. The developer should consider a range of options to promote renewable energy, minimise waste and otherwise use natural resources as efficiently as possible. Options to consider and address include: onsite generation; renewables, electric vehicle charging; recycling facilities; and smart building features (controls, lighting, sensors, etc.)
11. The contractor will consider the principles of health and wellbeing and work with others to provide a strategy that uses design, materials and systems that enable good air quality, natural light, comfortable conditions (thermal, acoustic, etc) that are conducive to a good patient and staff experience. For guidance on health and wellbeing criteria, the WELL Building Standard can provide elements of good practice.

3.6. Security and Secured by Design

.1 The Developer shall in the discharge of its design obligation apply all relevant guidance contained in the "Secured by Design" scheme documentation. In addition the Developer shall liaise with all relevant parties, including the NHSPS Health and Safety lead and proposed tenant (where applicable) via the Project Manager on specific areas of design including locking requirements, CCTV, security alarms, component specification and perimeter fencing etc.

.2 All appropriate measures shall be incorporated to assure the security and safety of patients, staff and visitors and their property within the Premises and its immediate vicinity. The Premises must also include adequate provision for safeguarding the security of equipment, patients' records, drugs, etc.

.3 The project shall be certified as having been Secured by Design

.4 The design and specification of Facilities shall be carried out in consultation with the local Police Architectural Liaison Officer/Crime Prevention Officer and the stakeholders' safety representatives.

3.7. Life Span of Building Elements

.1 The major elements of the Building shall have varied minimum life spans as follows:

- Structure 60 years
- Cladding 30 years
- Mechanical Services 30 years
- Electrical Services 30 years

3.8. Accessibility Strategy

.1 The building design shall meet but ideally exceed the compliance required using relevant Building Regulations; The Equality Act 2010 and best practice current at the date of the agreement. In the assessment of designs, particular attention will be given to the provision for disabled people, including people with impaired hearing (e.g. induction loops) and vision (e.g. effective use of colour, texture and lights, etc).

.2 The design shall ensure that equal access is given to all areas of the building and shall provide good access for everyday and emergency situations, avoiding the need for stairs and ramps.

.3 All routes, including escape routes and assembly points shall be clearly and properly illuminated (in accordance with regulations/guidance) and where practicable access from car parks should link to the general footpath provided. Use of both private and public transport is to be provided must be available for all, irrespective of physical ability and way finding and signage which is clear and an integral part of the design solution and part of the fire strategy documentation and Building Control approval process.

.4 Entry and exit positions must be well illuminated (in accordance with regulations/guidance and should open onto public areas to maximise security.

.5 Elements for consideration (not exhaustive):

- Provision of 'Changing Places' bathroom (likely to be considered for larger facilities – NHSPS to stipulate if required)

- Provision of family WC / changing facilities
- Entrance door thresholds
- Range of waiting room seating to suit accessible requirements
- Audible and visual call systems and alarm systems
- Induction loops (including portable units and fixed units at reception desks)
- Car park design (location and number of accessible bays and appropriate access paths to the building entrances and fire escapes) (subject also to planning constraints and requirements and the agreed sustainability strategy)
- Consideration of the increase in use of mobility scooters and how these are to be managed/accommodated generally
- Main approach to building (appropriate levels, signage etc.)
- Need for patient hoists (fixed or mobile) (the structure shall allow for such to be fitted)
- Consideration of specific patient group needs such as dementia

.6 NHSPS will set out any requirement for the provision of bariatric facilities on a project by project basis.

.7 Consideration should be given at the Entrance to the building to ways of minimising the ingress of dirt and water.

.8 The Developer should provide a range of options for barrier matting at the main entrance and seek PM approval. In design of the building entrance access for the disabled must be considered a high priority with no raised thresholds, spacious entrance lobbies and clear signage etc.

.9 As tenants operational hours will vary the facility must allow for access to tenant demises whilst others remain locked/armed

3.9. Activity Levels (and out of hours access)

.1 The Developer shall take account of the following:

- The different occupants of the building are likely to operate different hours of service with each of the tenant demises needing to be secured individually outside of their own operating hours. Each occupant must have the ability to enter their own demise without disarming other areas of the building wherever possible. Circulation and access routes must also be considered carefully to avoid unnecessary access through demised areas i.e. location of shared staff rooms, IT hub rooms etc.
- In respect of the above, provision should be made in the design for all Departments/Service Areas to be individually controlled in respect of security and zoned for lighting, heating, ventilation etc. Where appropriate zoning of the fire alarm system may also reflect this separation of services.
- It is possible that the proposed facility may in the future operate up to 24 hours per day, 7 days per week, 365 days of the year. This intensity of use may not be required at the outset of the buildings operation but future proofing access and alarm systems etc. is required to accommodate future changes in operational hours etc. If this requirement prevents any consideration as to the use of thermal mass for night time cooling, this shall be discussed with the NHSPS PM.

- There is a necessity to monitor and meter/sub-meter all energy sources and usage throughout the building on a service by service and user basis, linked electronically back to the proposed new BMS for logging and billing. This will is also likely to be advantageous under the agreed sustainability strategy. There are specific NHSPS requirements for BMS systems which should be discussed directly with the NHSPS Estates Team via the PM (refer to section 8.0 for further details). Should BMS not be proposed for this interface separate arrangements shall be agreed with NHSPS and adopted.

3.10. Means of Escape and Escape Strategy

.1 The development shall satisfy the relevant parts of Part B of the Building Regulations and BS 5588 Part 6 Fire precautions (and any superseding legislation as relevant) in the design, construction and use of buildings: Code of practice for places of assembly.

.2 The strategy will be designed in accordance with the relevant Fire Code HTM 05-02 Department of Health Guidance. This requires that where the floor plate is in excess of 1,000 square metres an evacuation lift will need to be installed with a dedicated power supply.

.3 Means of escape from the upper levels shall be provided by protected escape stairs to meet travel distance limitations. Means of escape from the basement shall also be provided by protected escape stairs.

.4 In order to minimise stair widths and meet travel distances, the central circulation stair from the basement to ground level shall also be used for escape.

3.11. Deliveries

.1 Adequate provision for access, manoeuvring and safe off-loading shall be made. Separate external transportation routes should be identified and clearly marked for service vehicles as opposed to general site vehicular or pedestrian movements.

.2 Consideration shall be given to the movement of service vehicles including refuse and delivery vehicles as well as emergency services.

.3 The developer shall work with NHSPS to determine the type of vehicles required to access the site and ensure that the required access provisions are included within the design.

.4 A separate staff entrance, which avoids the need to pass through public spaces is generally required and should be provided as part of the scheme. This should be discussed with the users and the scheme PM and documented as part of the building access strategy.

3.12. Mobile Diagnostic Facilities

.1 Provision for mobile diagnostics facilities should be made as part of the overall design as required by NHSPS and as established on a project by project basis. This may include MRI, Breast Screening, Ultrasound services.

.2 The relevant HBN/HTM documentation should be utilised in planning these areas which will require a suitable hard-standing, logical link with the building layout in terms of patient journey and sub-waiting etc.

.3 The necessary service connections are also required and particular attention should be noted on the

proximity to surrounding services and any impact these may have on the medical equipment or adjustments to layouts to enable mobile diagnostics facilities.

.4 These mobile facilities and provision of the necessary infrastructure form an important part of a scheme and should be considered from the outset of design work.

.5 Particular points for consideration are:

- The requirement for a hard-standing to site the mobile equipment
- An access strategy and swept path analysis proving that all necessary trailers/portable appliances can access the site safely and without significant operational impact
- External plug in points and service requirements are provided/satisfied.
- Conflict with other electrical services which may cause interference to the medical equipment.

.6 NHSPS have standardised 'plug-in' arrangements to accommodate a range of portable appliances and their service requirements. Details can be provided via the NHSPS PM.

3.13. Parking

.1 Separate easily identifiable designated parking should be provided at the facility for the following:

- Doctors/Clinicians Spaces (for on call clinicians only)
- Disabled Persons Spaces
- Parent and Child Spaces (where possible)
- Ambulance Space and associated turning area - ground to be marked
- Electrical vehicle recharging points (where applicable)
- Patient Transfer Service vehicles (where applicable)
- Motorcycle parking bays
- Cycle storage (public and staff)
- Vehicle drop off facility
- MRI/diagnostic vehicles bays where required
- Service vehicle delivery and waiting areas
- Staff and patient parking shall be segregated unless agreed otherwise in writing
- Use of barriers, access control and payment systems shall be considered on a project by project basis

.2 Provision for secure and weather protected bicycle storage is to be accommodated within the site with adjacency to the main building entrance (in accordance with any specific requirements of the agreed sustainability strategy).

.3 Though the design of car parking should be as efficient as possible in terms of provision of parking spaces, the ease of manoeuvring around the car park and parking vehicles should be considered. The Contractor should note the NHSPS parking policy (copy obtainable from the PM) in design of parking areas.

.4 The design of any parking areas should address the requirements of Secure by Design and also comply with Park Mark. The contractor shall pay all fees and charges associated with such.

.5 The design and capacity of any parking areas shall comply with any planning stipulations, implications and the like and shall also be in accordance with the agreed sustainability strategy.

3.14. Waste Disposal

.1 Storage areas shall be sufficient and secure with some facilities for waste segregation and recycling in line with NHSPS (and our partners) Waste Management Policies. The location shall be discrete and away from patient/user sight and access. Unless advised otherwise by NHSPS this shall be provided near the rear door and of minimum dimensions of 3500 x 3000 x 2400mm high.

.2 The Developer shall liaise directly with the NHSPS waste manager to ensure type, size and location of the waste compound are appropriate. The Waste Manager shall also provide guidance on requirements for internal bins, recycling, disposal routes and the requirement for any disposal 'holds' internally or externally.

.3 External bin stores shall be located away from the building to avoid any potential spread of fire. They should be lockable and have a roof or 'lid'

.4 The approach to waste management needs to be co-ordinated with the agreed sustainability strategy.

.5 Wash down facilities shall be provided to all refuse stores and the like, including associated below ground drainage installations, gullies and the like.

3.15. Centre Policies

.1 All NHSPS premises operate a no smoking policy. This will apply to all areas of the proposed building and grounds. Site specific policies will be developed by the NHSPS managed user groups and implemented as appropriate within the completed facility.

.2 The Developer shall allow for assisting in preparation of these operational documents where appropriate and where technical input is required - for example with regard to access control, and car park management etc.

.3 Operational policies of this facility will include access control, opening hours, security, fire plans, fire strategy, car park management etc. all of which will be developed under the management of the PM with specialist input from the Contractor.

4. MAIN BUILDING WORKS SPECIFICATION

4.1. Substructure

.1 The Developer shall design and construct suitable sub-structures and foundations and the like etc. for the building and its intended uses.

4.2. Structural Frame

.1 The Developer shall design and construct suitable structural frame solution and the like etc. for the

building and its intended uses, taking account of:-

- Service zones
- Ceiling heights
- Grid spacing
- Soft structural zones for future risers and plant
- Hard structural zones for future on-floor plant
- Vibration
- Loading requirements
- Flat slab soffit

.2 The development shall be split over no more than 2 floors (layout to be agreed with NHSPS) with scope for residential apartments above it (where applicable).

.3 A minimum of 3075mm is to be provided from top of structural slab to underside of the slab on the ground floor and a minimum of 3325mm on the first floor from top of slab to underside of slab.

.4 The requirements of HTM08-01 Department of Health Guidance Note in terms of acoustic and vibration performance must be considered and met in the design of the structure for the possible clinical use of the intended facility, now or in the future to ensure that the subsequent fit-out will achieve the requirements of HTM08-01.

4.3. Fire Protection

.1 Where Building Regulations require it, adequate measures will be taken to provide the necessary fire protection to beams, columns, ceilings etc.

4.4. Underground Drainage

.1 The developer will provide all necessary drainage connections from the health facility to the main sewer, in coordination with design team acting on behalf of the Tenant. Internal manholes will not be permitted.

4.5. Loading Criteria

.1 The floor slabs are to be generally designed to accommodate the following live loads (kN/m²):

Floors generally	3.5 KN/m²
X-Ray Rooms and other specialist digital imaging rooms and the like (where applicable)	To be confirmed
Records storage	3.5 KN/m²

Plant areas	7.5 KN/m²(with specific allowances for items of designated plant, tanks etc. where these exceed the above allowance)

4.6. Wind Loadings

.1 The wind loads on the building have been calculated in accordance with the "Standard Method" detailed in Section 2 of BS 6399: Part 2. This considers the geographic location, local topography and building geometry.

4.7. Stairs

.1 The stairs shall be of either precast or reinforced concrete standardised stair units and half landings.

.2 Any public stairs to have suitably enhanced finishes, including glass and stainless steel balustrades.

4.8. Lightning Protection

.1 The whole building will be provided with a lightning protection system in accordance with BS EN 62305-1: 2011; Protection against Lightning" and BS 7671 "IET Wiring Regulations".

.2 This will also include mains and sub-mains surge protection to protect sensitive equipment installed throughout the building.

.3 At this stage, it is proposed that the support steelwork and structural steel frame shall be utilised as part of the lightning conductor system, with electro-mechanical continuity assumed from the support steel work to foundation slab reinforcing.

.4 Final connection to earth would be provided via earth rods, within lockable polymer inspection housings, connected to the base of designated steel columns via PVC sheathed lightning protection tape. Testing of the system would be via the inspection housings.

.5 The lightning protection system is to be discrete with no visible surface mounted conductors down the side of the building. All conductors are to be concealed within the building walls.

.6 Cross bonding of metalwork, plant, containment, aerials etc particularly at roof level shall be provided.

.7 Lift shaft steelwork shall be cross bonded to the lightning protection system at high and low level.

.8 An overall resistance reading to earth of less than 10 ohms shall be proposed.

4.9. Energy Efficiency, Renewable & low Carbon Technology

.1 The developer will provide a shell which will enable the NHS fitted unit to meet at least a BREEAM excellent rating including a minimum EPRnc score of 0.54 in the areas of energy efficiency.

.2 This may include and the developer will allow for (at his cost) appropriate connections to Combined Heat and Power, Roof level Photo Voltaic Panels, ground source heat pumps and/or such other means of reaching the above energy efficiency score as required.

.3 The developer will provide evidence of the building energy calculation using the simplified

.4 The Developer will organise, host and attend a series of workshops to review the agreed sustainability strategy assessment criteria to ensure that NHSPS exploit every possible opportunity to

achieve the agreed sustainability strategy energy rating throughout the design development and construction stages, achieved within the overall project budget. Adopting energy efficient solutions will be a fundamental requirement of the project.

.5 The Developer will ensure optimum energy minimising features are incorporated into the building wherever appropriate.

.6 The Developer shall develop an energy and sustainability strategy and design that delivers compliance with the following;

- Building Regulations Part L – project compliance with the Building Regulations Part L is a statutory requirement with Part L2A for new build. The Developer shall confirm the requirements with the Building Control officer at an early stage.
- Planning Requirements – The local council may have energy target requirements over and above those of the Building Regulations Part L. The Developer shall ascertain the Local Authority requirements with the Planners at an early stage and implement into the design strategies accordingly.
- The Developer shall develop the base building design to deliver a low energy solution prior to the design of the engineering services system and selection of plant.
- The selection of plant with high operational efficiencies contributes a very large part in driving down energy use. The efficiencies set out in Building Regulations and associated documents shall be met as a minimum.

7. Below is list of engineering services measures that shall be considered in the design solutions where part of the Developer base build, driving energy down to the project target. This list is not exhaustive and shall be reviewed on a project by project basis.

- Ventilation system heat recovery – Minimum 70%
- Specific fan powers shall be 1.8W/l/s
- Variable speed drives on all motors.
- High efficiency motors to IE4 minimum.
- Low loss pipework system design.
- Low velocity ductwork design to also minimise noise.
- Optimum use of automated building energy management systems.
- Fully Zoned engineering services systems and controls.
- Night time setback on heating systems in 12 hour areas.
- PIR flushing of toilets/ urinals and/or waterless urinals.
- PIR lighting control to areas such as toilets and stores.
- Daylight sensors in offices.
- Rooms to have multiple lighting circuits to enable part switching.
- Power Factor better than 0.96.
- Electrical Harmonic filtration.
- Weather compensated heating circuits.
- Optimum start/stop control.

- Thermostatic devices (TRV's) on all heat emitters.
- Domestic water services pipework to be a minimum 25 mm thickness and have insulation thermal conductivity of no greater than 0.025W.mK to reduce HWS losses.
- High efficiency lamp sources such as LED to achieve minimum 65 luminaire lumens per circuit watt

4.10. Air Permeability

.1 Design air permeability – 4 cum/h mtrsq @50Pa

4.11. Thermal Bridging

.1 Calculated using Accredited Construction Details where applicable.

5. EXTERNAL ENVELOPE

The Developer shall design and construct a suitable external envelope and the like etc. for the building and its intended uses.

5.1. Cladding

.1 The design of the cladding system is required to provide good thermal control while permitting high levels of daylight, to minimise the energy requirements of heating, cooling and lighting. U values:- External wall 0.14 W/sq mtr deg C.

5.2. Roof

.1 The roof slab shall be of either reinforced or post tensioned concrete construction including single layer polymer membrane, insulation and vapour control barrier and mansafe safety system.

5.3. External Doors

.1 Main entrance doors and staff entrance doors to be glass polyester powder coated double leaf automated revolving or sliding (to be agreed with NHSPS) aluminium to 60 micron, commercial quality, with automatic operation to the front entrance fitted with double glazed laminated glass units. Polyester powder coated aluminium is to be installed to BS6262 and compliant with Secured by Design. This requirement may be varied on a project by project basis should existing building and/or planning conditions stipulate otherwise.

.2 Automatic doors are to be controlled by infrared detection with local isolation required for out-of-hours usage if necessary and be fitted with double weather- stripping, complete with threshold. The doors should have a fail open device in the event of fire alarm or failure. All automatic doors shall be fitted with suitable safety barriers, systems and the like to safeguard all using the building.

.3 All single and double leaf doors within the external cladding shall be metal or solid core timber doors with hardwood frame system and ironmongery including cut outs for security readers to be installed by others.

.4 As the layout of healthcare facilities will generally place a reception point near to the main entrance (and possible waiting room seating) the design, configuration and operation of the main entrance doors should look to minimise draughts to staff and patients.

.5 Locking shall as a minimum meet the requirements of BS 3621:1998. Multi-point locking to be fitted where possible.

.6 The doors shall be provided with security hinges and where appropriate concealed panic bars to provide multi point locking and fitted by proprietary door manufacturer. Operation and key suiting to suit door use. Minimum 10 year guarantee is to be provided.

.7 Where the doors also act as a staff entrance, the ironmongery shall be appropriate for the dual use and be fitted with security controlled access system/card reader to enable keyless entry during normal working hours.

.8 A separate staff entrance shall be provided to avoid health centre staff having to use the main entrance. Staff entrances should be of the same standards and specification as the main entrance doors, however they shall not be automatic and may not contain any glazed section.

.9 Where required on plant room doors, ventilation grilles will only be permitted if factory installed as part of an integral feature, grilles fitted afterward are not permitted.

.10 External doors shall be equipped with access control and CCTV monitoring of such where stipulated.

5.4. Windows (all the below criteria shall apply unless agreed otherwise by NHSPS in writing)

.1 Windows shall comply with HNB's and HTM's, with restricted openings and supporting natural ventilation, unless agreed otherwise with NHSPS in writing.

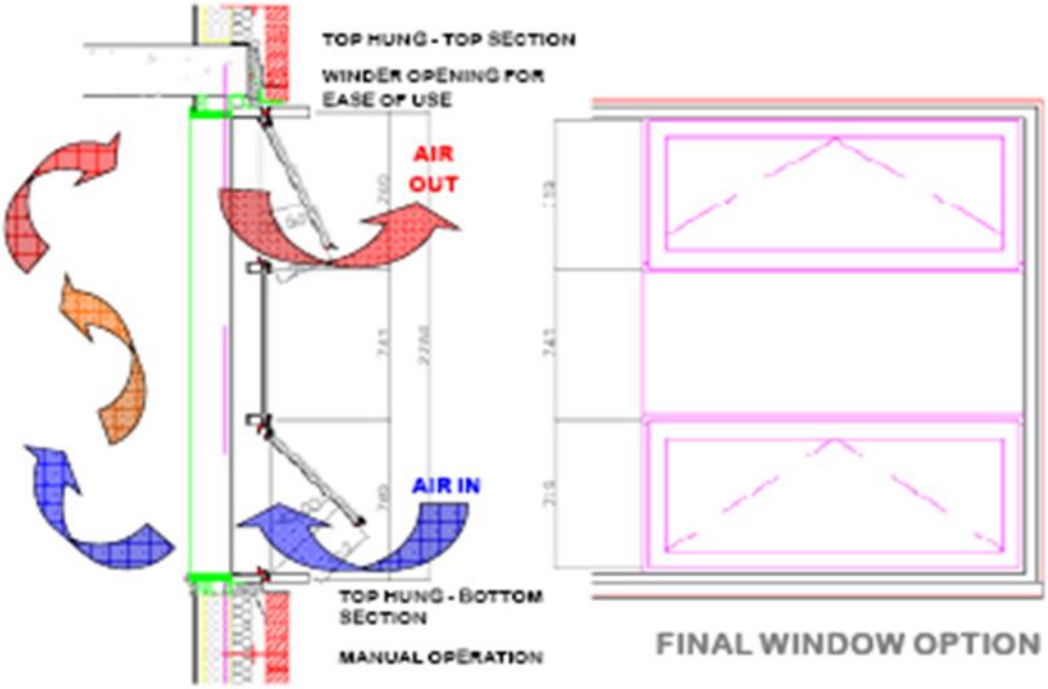
.2 Opening lights, when required, shall have an approved opening mechanism fitted with key controlled restricted friction hinges and espagnolette locking. Restrictors shall limit openings to a 100mm CLEAR maximum opening (in conformity with HTM's) for day to day operation (on 'reachable' openings only) with override to facilitate external cleaning. Window locks to be provided to all openable windows. Openable lights shall be capable of being locked in the open position for night time cooling. Any opening not proposed to be restricted will be risk assessed and agreed with NHSPS in writing.

.3 Openable lights shall be on friction stay hinges to achieve an open gap to the top of the opening sash to aid airflow. The opening sash should appear to "drop" when open. The clear openable gap shall be defined by the measurement of the "clear gap" and not simply from the front of frame to the inside of sash – this measurement is usually less than the clear opening permitted and due consideration needs to be given to external obstructions such as projecting sills or frame overhangs etc. to maximise clear vent area.

.4 All external doors and windows shall be thermally broken to prevent cold spots and all frames shall be effectively draft and acoustically sealed when closed.

.5 Window frames are preferred to be of a low maintenance PPC Aluminium, all to be finished to a 60 micron level. NHSPS corporate preference is for grey frames but the actual colour selection is to be agreed with the Project Manager on a project by project basis.

.6 High and low level opening lights should be provided to encourage airflow through the room.



.7 Windows shall be provided to Clinical rooms, Waiting rooms, and designated Waiting and Sub-waiting areas, Offices and Staff/Administration areas, together with the staircase, in accordance with details first approved by NHSPS, to provide a glazed area of not less than 10% of the floor area of the room thereby lit and an openable area of not less than 5% of each room area (unless specifically not required due to the room's function or due to site and/or planning restrictions or security issues or the like, or as amended by Building Regulation requirements).

.8 Provision shall be made for acoustic baffles where required where confidentiality is to be observed.

.9 Double glazed with hard low E coating: frame factor of 0.8, g value of 0.4 and u value of 1.4 W/sqm deg C

.10 Where window films are required for glare control and/or privacy the contractor shall arrange for suggested types and arrangements of materials to be supplied to the PM for consideration / discussion. Film is however generally not preferred over obscured glazing.

6. INTERNAL DOORS (WHERE PROVIDED AS PART OF DEVELOPER'S BASE BUILD)

.1 Doors shall be of solid core construction. The surface finish of all doors and the reception counters shall be Oak (or other agreed) veneer other than Treatment Suites/Minor Operations Suites/High Clinical Content Rooms where a chemical resistant scrub down laminate finish is required to the clinical side. In public areas a high quality finish is required of consistent appearance throughout. NHSPS is open to discussion around the use of laminate faced doors in lieu of oak veneer doors, subject to a convincing case being made, both economically and on a comparable quality and life cycle cost basis.

.2 Doors to Consulting, Treatment, Interview and Examination rooms are to have acoustic seals to head and jambs to achieve a close fit and are to have drop down acoustic seals rebated into the bottom of the door to reduce the passage of sound (the full life cycle costing impact and in-use maintenance etc of such shall be established and discussed with NHSPS on a scheme by scheme basis ahead of adoption).

.3 In accordance with HTM 08-01 double doors to be 30dB and single doorsets to be 35dB.

.4 Lever handles, lock cases, locks, cylinders, roses, push plates, pull handles and thumb turns etc. shall be provided where necessary. Ironmongery to be 25mm diameter brushed stainless steel.

.5 Kick plates, door stops shall be required to all doors. Note: Healthcare facilities require larger kickplate depths than standard installations. 400mm depth is required for NHSPS projects.

.6 Fully adjustable door closers shall be required to all FR doors and may be required elsewhere depending on user requirements - all to be agreed with PM.

.7 Patient toilets will require a locking device with an external quick release facility for use by staff in the case of an emergency and outward opening over ride. Attention is drawn to the latest Part M guidance

.8 In addition to room designation/wayfinding signage on the doors themselves all internal doors are to be fitted with a room identification tag to the upper RH corner. The PM shall advise on this numbering system as part of agreeing the signage schedules. Doors also require a sign as shown in section 3.19 and any required FR identifiers 'FD30' / 'FD60' etc.

.9 The Developer shall provide all statutory signage generally.

.10 Doors generally:-

- Doors are to be suitable for easy use by disabled persons. Care should be taken to ensure orientation of doors particularly in toilet cores and access routes favors ease of use by wheelchair users.
- Doors within or across areas of general circulation shall be provided with high and low level vision panels with clear safety glazing, to permit inter-visibility as required by statute. Glazing to be secured within hardwood beads secured with countersunk fixings.
- Doors providing general staff access between patient accessible areas and staff areas shall be operated by an access control system to avoid the reliance on keys.
- Doors serving common circulation routes to be fitted with hold open devices where necessary. In all instances, the hold open devices shall be linked to the fire alarm system.
- Fire doors to be provided and constructed in accordance with relevant Firecode requirements (and Building Regulations BS. 476), complete with intumescent fire and smoke seals; and fully marked up using the TRADA ‘Q-Mark’ system (or similar) - coloured door jamb inserts to indicate fire door type.
- Ironmongery shall be selected to provide the required colour contrast to the proposed door finish / colour as required under the Building Regulations.
- Ironmongery generally shall be from approved healthcare ironmongery approved suppliers and of quality solid stainless steel.
- Lever handles to be 25mm diameter minimum on sprung concealed fixed roses; with heavy sprung profile 72 mm c/cs sash lock. Associated items (pull handles, push plates, kick plates, etc) to match.
- Kick plates and push plates shall be provided on the 'common areas' side of all doors, and additionally on both faces of doors to WCs and doors across staircases or corridors.

- All doors opening back onto an adjacent wall or against equipment/fittings shall be provided with door mounted rubber door stops.
- WCs shall be provided with large easy action snibs, with indicators and provision for unlocking. Hat and coat hooks with door stop buffers shall be provided.
- All doors excluding stores and cupboards (others may be specified as part of agreed fire strategy) shall be fitted with adjustable overhead closers offering low resistance to opening and, where applicable, delayed action closing. Self-closers are to be provided to all fire doors.
- Doors shall address and cater for the likelihood of children being in the buildings in accordance with best practice, for example with the use of finger guard devices and the like. This shall apply to all public areas, with an extra over cost quoted for it to apply throughout the facility.

7. INTERNAL FINISHES

7.1. Floors

.1 Screed or power float concrete floor of sufficient quality to receive sheet vinyl and carpet. Upper floor u value between practice and heated apartment areas 0.13W/sqmtr deg C

.2 Step free access shall be provided up to the healthcare facility and throughout internally.

7.2. Walls

.1 Plasterboard/dry lining/exposed blockwork common party walls (between practice and unheated space) u value 0.19 W/sq mtr deg C.

7.3. Skirtings

.1 None

7.4. Doors

.1 None

8. PASSENGER/TROLLEY/PLATFORM LIFTS

.1 A minimum total of two passenger lifts will be provided by the developer (fire rated for escape purposes – see 3.8.2) (final number required to be confirmed by NHSPS)

.2 A platform lift will also be installed by the developer for the transportation of goods and clinical waste.

.3 The passenger and trolley lifts shall be of the machine room less hydraulic type.

.4 Lifts shall be provided in accordance with the specific brief provided by the NHS and be in full accordance with all current and relevant British and European Standards, including BS/EN 81/1 and BS/EN 81/2abd BREEAM.

.5 Lift car in internal finishes to be confirmed by the developer. The option for hanging heavy duty drapes shall be allowed for in order to prevent damage to surface finishes within the lift car when handling large goods.

.6 The passenger lifts will also be in line with the requirements of the Equality Act 2010 BS8300 Design of Buildings and their Approaches to Meet the Needs of Disabled People, EN 81-70 and Part M of the Building Regulations.

.7 A telecommunications link will be provided for remote monitoring of the lift installation by an approved Alarm Receiving Centre (ARC).

9. STAIRCASES

1. Floors: Precast or concrete standardised stair units with half landings.
2. Walls: Emulsion paint to dry lined substrate fixed back to concrete or blockwork or masonry paint to blockwork or concrete.
3. Soffits: Exposed concrete stair soffits.
4. Doors: Fire rated solid core doors with a hardwood frame and paint finish, fitted with ironmongery.
5. Fittings: Statutory and directional signage as required by the Building Regulations.

10. ENGINEERING DESIGN STANDARDS (WHERE PROVIDED AS PART OF DEVELOPER'S BASE BUILD)

10.1. Standards

.1 The following standards, current at the time, shall be utilised by the Developer to inform the design proposals.

1. .British and European Standards
2. .NHS Publications including HBN's and HTM's
3. .Building Regulations
4. .CIBSE Guides, Commissioning Coder, Application Manuals and Technical Memoranda

.2 A considerable amount of information available to the Developer is contained in Health Technical Memoranda (HTM) which provide specification and design guidance on building components for healthcare buildings which are not adequately covered by British Standards.

.3 The design shall be compliant with the above standards, although it is recognised there are areas where the guides are not aligned or do not match current best practice.

.4 In addition, in terms of refurbishment projects, there may be reliance on some existing services which may be non-compliant due to their age.

.5 In these instances, a design compliance statement schedule is to be provided, developed and discussed with the NHSPS key stakeholders for sign-off at every design gateway.

.6 The extent of primary MEP distribution and plant to be provided under te base-build shall be agreed in writing with NHSPS.

10.2. General Guidance

.1 The Developer shall follow a structured design process in line with RIBA Stages as defined in BSRIA Guide BG6.

.2 The purpose of this section of the specification is to give an indication of the required quality of installations and to provide details of specific client requirements where applicable. This shall also include all new incoming services and any necessary works to off-site infrastructure. It sets out the design requirements and standards of any new Engineering Services Installations. Guidance is also given as to the overall design philosophy of the various engineering services installations.

.3 Notwithstanding any guidance contained in the specification, the Developer shall be responsible for formulating and developing the design of the various systems to provide complete installations which satisfy all aspects of the design requirements and standards. It shall be noted that existing systems will continue to be the responsibility of NHSPS though the Designer is responsible for ensuring any interface with these systems is adequate.

.4 The Developer shall produce a suite of specifications utilising the NES Department of Health approved version software package, or approved equivalent. This shall be utilised as it is a direct replacement of the archived NHS Model Engineering Specification.

.5 The Developer shall explore varied additional avenues to achieve alternative technologies and techniques for energy efficiency and ecological construction as these are not well referenced at present in the HTM's and HBN's.

.6 Soft landings was introduced into the industry to deliver operationally ready buildings that perform to expectations, reducing costs and operational issues. The Designer shall adopt a soft landings approach from the outset to develop working practices and designs such that they are sustainable, maintainable and appropriate for the life cycle of the building.

10.3. Engineering installations and plant provided by Developer

.1 Any centrally provided Mechanical, Electrical and/or Public Health engineering installations or plant shall be fully HBN and HTM compliant and not compromise the possible clinical use of the intended facility, now or in the future.

.2 Provide all above and below ground drainage installations, including drainage stacks, risers and the like to enable the fit-out works, including connections as necessary to all toilets and sanitary fittings through the future clinical areas.

11. PLANT ROOMS, RISERS AND SERVICE CORRIDORS

.1 The Contractor shall allow for whatever plant space is necessary in respect of the engineering design for this building. Sufficient space shall be allowed for maintenance access and due consideration of the replacement of all parts must be demonstrated however particular care should be taken to ensure that plant rooms are not oversized.

.2 This will be reviewed at the design stage by the CDM-C with the appropriate design consultant and the Contractor, along with a nominated engineer from NHSPS to assess access and safety.

.3 The design needs to encompass any specific areas for third party installations i.e. for independent installations by a pharmacy, private dental surgery etc.

.4 Size, location, layout and access to plant areas is a key element of the design and the NHSPS Operational Estates team will require early input into this.

.5 Floors: Exposed concrete finish.

.6 Walls / Columns: Exposed blockwork or concrete.

.7 Soffits: Exposed concrete.

.8 Doors: Fire rated solid core doors, single and double leaf, with a hardwood frame and paint finish, fitted with ironmongery. Powder coated steel doorsets and frames where instructed by NHSPS.

.9 Fittings: Statutory and directional signage as required by Building Control Officer.

.10 A number of additional openings will be required within the first floor slab to allow the routing of ventilation services. Active ventilation louvres shall be required within the ground floor façade.

.11 Provide bunds where required.

.12 All plant and switchgear to be sized with a minimum of 25% spare capacity.

.13 All plant rooms and risers to include 25% additional space for expansion.

12. ANCILLARY ROOMS (E.G. STORE ROOMS, WASTE ROOMS ETC)

.1 Floors: Exposed concrete finish.

.2 Walls / Columns: Exposed blockwork or concrete.

.3 Soffits: Exposed concrete.

.4 Doors: Fire rated solid core doors, single and double leaf, with a hardwood frame and paint finish, fitted with ironmongery.

13. UTILITIES

13.1. Electrics

.1 The developer will provide a new 3 phase low voltage metered power supply as preliminary indicated on the drawings.

.2 The NHS will order the energy meter with their preferred energy supplier.

.3 The preliminary maximum demand assessment for the health facility has been estimated at 340kVA. (Please note this includes assumed loads associated with Ultrasound and X-ray specialist equipment loads).

13.2. Water

.1 Mains water will be provided via a [50mm] diameter MDPE pipe. The supply will enter the premises in the plant room and be fitted with a meter stop cock and check valve in accordance with the WRAS regulations in suitable location for extending to serve the medical practice.

The supply shall be capable of delivering a minimum of 1.6 l/s at 1.5 bar

13.3. Gas

.1 Mains gas will be provided supply pipe to the ground floor boiler room. The supply will enter the premises in the plant room and be fitted with meter, gas governor and isolation valve

The supply shall be capable of delivering 30 cum/hr at low pressure

14. EXTERNAL WORKS

.1 All external works, both on and off site shall be provided, including stopping up, junctions and accesses, service roads, pavements, car parking, drainage, lighting, fencing, and hard and soft landscaping as required by the nature of each project. Note the use of internal manholes will not be permitted under any circumstances. The Developer shall be responsible for any Section 278 Highways works, including all crossovers and shall pay all fees, charges and the like in connection therewith.

.2 All elements of external work shall be designed to approval of both the local planning authority and Secured by Design lead.

.3 The external site is to be hard and soft landscaped to maximise patient enjoyment; views from the facility, ease of site navigation and the maximisation of parking locations. Small and large scale planting will be required and external signage provision. External landscaping paving, planting and parking shall be designed to meet the requirements of the Planning Approval. The scheme proposed should be aesthetically pleasing but easily maintainable and should pre-empt accidental damage to reduce future maintenance and repair costs.

.4 An external night and dusk lighting scheme will be required with due consideration given to the close proximity of neighbouring dwellings.

.5 An external night and dusk lighting scheme will be required with due consideration given to the close proximity of neighbouring dwellings.

.6 External garden areas, internal courtyards and roof gardens shall be considered as part of the scheme and may feature seating, planters, and lighting (subject to the adopted sustainability strategy/BRE light pollution requirements). Consideration shall be given to the use of internal planting.

.7 Planting should be specified in view of keeping maintenance to an absolute minimum and specifications should be agreed with the Operational Maintenance team, via the NHSPS PM, in advance. Consideration shall be given to the re-use of existing plants and shrubs removed from the existing site during site clearance for integration into the proposed landscaping scheme.

.8 The Contractor shall include for maintenance and replacement of any plant failures for a period of 24 months from Practical Completion including watering as necessary. An extended maintenance programme shall be prepared and issued to the PM prior to completion.

.9 The primary access to all sections of roof shall be by internal staircase. Landscaping and access around the building should be designed to permit access to all elevations from access equipment without the need to apply for road closures or seek licences from any third party or adjacent occupier/owner.

.10 Landscaping should be designed in order to enhance drainage from the site rather than impede it.

.11 The Developer shall establish whether any new mains connections are required in respect of water, fire mains, power, gas, IT, telecoms and the like and shall pay all fees, charges and the like associated therewith, including the provision of all necessary substations, external generator plant and the like as required.

15. EXTERNAL SIGNAGE

.1 A complete signage scheme both internally in the building and externally on the site will be required. All directional signage should be in accordance with NHS Way Finding guidance.

.2 Signage shall provide the client with information in line with general NHS guidelines and NHSPS identity guide (available from the NHSPS Project Manager).

.3 The Developer will be required to liaise with the Highways Management Section of the relevant Local Authority to develop an offsite road signage proposal to direct users and visitors to the facility as part of the contract.

.4 The main building sign should be 'halo lit' and the necessary cabling needs to be incorporated to allow this.

.5 Signs to consist of individual 3D lettering in stainless steel (unless agreed otherwise) (all text to be agreed).

.6 Signage proposals to be issued to the planning authority either as part of an initial planning application, or as part of a condition discharge, to ensure all proposals are acceptable to the relevant Local Authority.

.7 The contractor shall analyse the building shape, size and orientation advising on the most appropriate locations and sizes for building signage. The recommendations should take into account views from surrounding areas in order to maximise prominence of the signage.

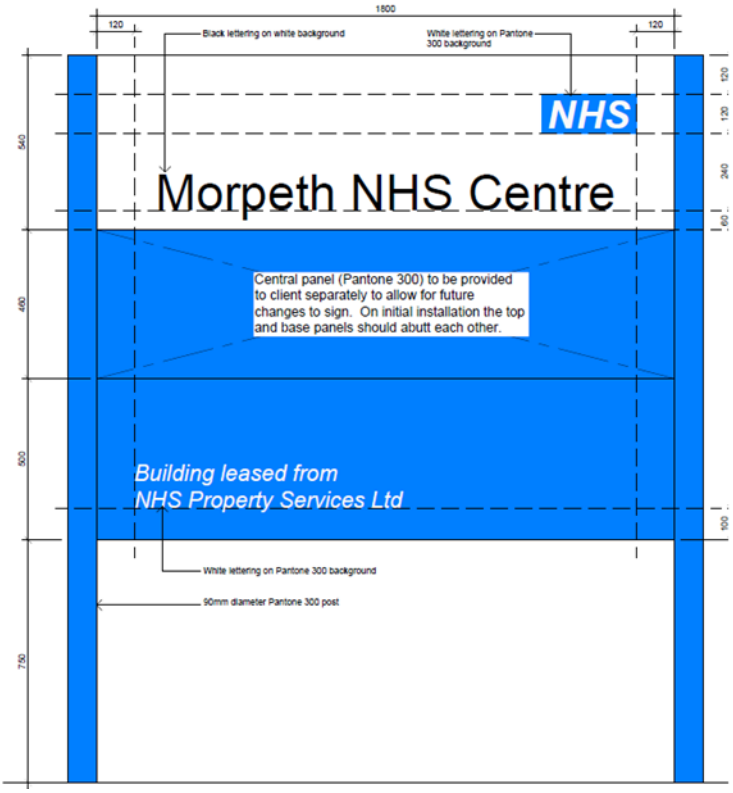
.8 Within the curtilage of the site NHSPS require standard corporate signage to be displayed.

.9 A '2 post' sign as shown below may be required near to the main site entrance. Further signage (in the same style) may also be required near to the main entrance of the building and may include details of occupants (where the building is multi- occupancy) etc. This requirement may vary from project to project and shall be assessed for relevance on specific project locations.

.10 Standard graphics for NHSPS and partner organisations are available via the NHSPS PM for insertion into signage designs where required.

.11 Further external signage required may include the following

- Notice of CCTV recordings
- No smoking
- Opening times
- Fire notices (including assembly points)
- Speed restriction
- Directional signs
- Accessible parking
- Parent and child parking
- Electro-bay parking
- Car park use liability signage (wording to be advised by PM)



16. DRAWINGS – DETAIL TO BE AGREED BETWEEN THE PARTIES

.1 The Developer will co-operate with the NHS on design development of the unit to ensure the location, orientation, natural light, footprint, layout, dedicated staff and patient car-parking provision for and general design of the unit enables the NHS to fit out and provide fit for purpose health care facilities from the unit and comply with all relevant obligations as published by the Department of Health or other government/statutory bodies.

.2 Separate staff entrances will be provided unless agreed otherwise with NHSPS in writing.

17. HANDOVER AND COMMISSIONING

.1 The Developer shall, towards the end of the project, formulate and agree a strategy for snagging with the NHSPS PM. The PM shall be directly responsible for carrying out snagging and overseeing rectification of highlighted items however they may wish to utilise external consultants to assist (particularly likely with regard to engineering services and specialist installations such as fire stopping).

.2 Where provided as part of the Developer's base build engineering installations will be inspected and signed off by an Authorising Engineer in accordance with the HTM's. These include but may not be limited to:-

- Electrical installations
- Water installations
- Air installations
- Medical gas installations
- Lift installations
- Fire detection and protection installations

.3 The Developer will be required to provide the Authorising Engineers but NHPS will advise on a project by project basis if these personnel are available within NHSPS and are to be provided to the contractor.

.4 The Contractor shall fully assess the new development when approaching completion and remedy any defects prior to inviting the NHSPS PM and team to site to carry out snagging. This 'pre-snagging' by the contractor is essential on all schemes.

.5 The scope of pre-snagging shall be agreed in advance with the NHSPS PM and may consist of a sample of rooms covering different room types and locations within the development. It is to both the Contractors and NHSPS benefit to prepare a sample room as early as possible in the project to agree standards of installation and finish

.6 It is expected that any and all works to rectify defects are carried out within 21 days of Practical Completion.

.7 The Developer shall comply with the Completion, Handover and Defects processes as set out in Appendix B to the main NHS PS Primary Care/Community Care Health Premises Standard Specification and Design Requirements document (available on request).