

Appendix 1

Part 4

Completion Criteria

Item No	Element of the Works	Completion Standard	Completion Criteria	Independent Tester's Methodology (to be completed by the IT)
1	GENERAL			
1.1	The Design and the Works	The Works have been designed and the Works completed so that the Works: (a) meet the requirements of Project Co.'s Proposals (Schedule 8 part 4), (b) are in accordance with the terms of Schedule 8 Parts 3 and 4, including energy performance; and (c) satisfies the requirements of the Trust's Construction Requirements; and the obligations in sub-paragraph (a), (b) and (c) above are independent obligations, including all as built drawings and associated documentation.	This completion criteria shall be deemed satisfied when 2.1 – 12.4 are satisfied.	Covered within our methodology for 2.1 – 12.4
2	DESIGN			

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2.1	Design Data in Constructing the Works	Design Data used in constructing the Works comply with the Project Documents; in particular, that it is based on that reviewed for Clinical Functionality and/or that subsequently developed under RDD.	This completion criteria shall be deemed satisfied when 2.2 – 12.4 are satisfied.	Covered within our methodology for 2.2 – 12.4
2.2	Design Data	Compliance with Level A RDD items or Level B 'amendments as noted' are satisfied and no Level C or D matters are outstanding.	This completion criteria shall be deemed satisfied when 2.1 and 2.3 – 12.4 are satisfied.	Monitor RDD progress / completion status. Within our quarterly QA auditing we will review the implementation of the Design Quality Plan, which will encompass a review of the preparation and approval of the detailed working drawing and specifications. Otherwise covered within our methodology for 2.1 & 2.3 – 12.4

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2.3	Site and Building Inter Relationships, Access Points and Adjacencies.	Compliance with the floor layouts shown in the Drawings.	The building inter relationships, access points and adjacencies in the Facility comply with the 1:500 scale drawings included in Project Co.'s Proposals. In determining whether this completion criteria has been met, the Independent Tester will be required to carry out a random sample of not less than 50% of the rooms that have a 1:500 scale drawing applicable to it, save that all theatres, Cath Labs, Hybrid Theatres, ITU and CCU spaces will be tested.	<p>Within our quarterly QA auditing we will review the implementation of the Design Quality Plan, which will encompass a review of the preparation and approval of the detailed working drawing and specifications.</p> <p>At an early stage we will validate Contractors QA process for site set out.</p> <p>At a later stage our review of construction compliance against 1:500 drawings to validate Site and Building Inter Relationships, Access Points and Adjacencies will precede our detailed Room Checks.</p>

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2.4	Departmental and Room Inter-Relationships, Access Points and Adjacencies.	Compliance with the floor layouts shown on the Drawings.	<p>The departmental and room inter relationships, access points and adjacencies in the Facility comply with the 1:200 scale drawings included in Project Co.'s Proposals.</p> <p>In determining whether this completion criteria has been met, the Independent Tester will be required to carry out a random sample of not less than 50% of the rooms that have a 1:200 scale drawing applicable to it, save that all theatres, Cath Labs, Hybrid Theatres, ITU and CCU spaces will be tested.</p>	<p>Within our quarterly QA auditing we will review the implementation of the Design Quality Plan, which will encompass a review of the preparation and approval of the detailed working drawing and specifications.</p> <p>Within this review will be incorporated a check of departmental and room inter-relationships, access points and adjacencies as included in the Project Co.'s Proposals.</p> <p>At a later stage our review of construction compliance against 1:200 drawings will precede our detailed Room Checks.</p>

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2.5	Room Design: Content, Layout, Internal Room Elevations, Ceiling Layouts, Size and Shape of all Spaces.	Compliance with contents listed on Room Data Sheets and 1:50 Drawings.	<p>The content, layout, internal room elevations, ceiling layouts (where identified), size and shape of rooms in the Facility comply with the 1:50 scale drawings included in Project Co.'s Proposals as developed in accordance with the Reviewable Design Data.</p> <p>In determining whether this completion criteria has been met, the Independent Tester will be required to carry out a random sample of not less than 50% of the rooms that have a 1:50 scale drawing applicable to it, save that all theatres, Cath Labs, Hybrid Theatres, ITU and CCU spaces will be</p>	<p>Within our quarterly QA auditing we will review the implementation of the Design Quality Plan, which will encompass a review of the preparation and approval of the 1:50 drawings for compliance with the RDD.</p> <p>We will conduct detailed room checks to validate compliance of the completed works with design data. We will random sample at least 50% of rooms and 100% of theatres, Cath Labs, Hybrid Theatres, ITU and CCU spaces, capturing samples of every room type specified.</p>

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3	DOCUMENTATION			
3.1	Health and Safety File	Satisfaction of CDM Co-ordinator	The Health and Safety File satisfies the CDM Co-ordinator. This completion criteria shall be deemed satisfied by Project Co producing written confirmation from the CDM Co-ordinator	Monitor the preparation of the Health and Safety File to assess suitability and confirm acceptable format with the Planning Supervisor. Sample and assess the Development Control Plan and/or method statements for compatibility with the Health and Safety File; this

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			confirming satisfaction with the draft health and safety file which will be made available immediately prior to the Completion Date.	will demonstrate that the file is project specific rather than simply generic.
3.2	Planning Conditions	Satisfaction of planning authority	The planning conditions satisfy the relevant planning authority. This completion criteria shall be deemed satisfied by Project Co producing written confirmation from the relevant Planning Authority confirming that each of the planning conditions, relevant to construction, (as set out in Clause 16.2 and Schedule 8 Part 1 of this Agreement and for which Project Co is responsible for satisfying) have been	Our checklist will include a section on Planning Conditions. This will be established immediately to record reserved matters and to monitor their "close out". We will maintain a separate file to record all correspondence with the Planning Authority; this will identify milestones and major approvals.

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			met.	
3.3	Building Control (Approved Inspector)	Compliance of Works with all applicable building regulations	The Facility is compliant with all applicable building regulations. This completion criteria shall be deemed satisfied by Project Co producing written confirmation from the Approved Inspector HCDC confirming such compliance.	Similar approach will be used to that for Item 3.2 above. In addition to the initial approval, the process of on-going notices, inspections, approvals and variations to design will be monitored and recorded.

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3.4	Fire Safety. HTM 81 - 87 Trust Fire. Strategy / Project Co.'s Fire Strategy.	Satisfaction of the Approved Inspector that the requirements set out in the Trust's / Project Co.'s Fire Strategies have been met	The Approved Inspector is satisfied that the requirements set out in the Trust's / Project Co.'s Fire Strategies have been met.	Similar approach will be used to that for Item 3.3 above, but noting that we will maintain a focus upon fire safety matters throughout the construction we would typically engage with the Fire Officer during the build to 'compare notes' and understand any concerns.
3.5	Health Building Notes.	Compliance with notes	The Facility is in compliance with the health building notes.	We would seek Design Team confirmation that the design achieves compliance. In addition we will conduct our own desk top review against the HBN requirements and subsequently through site examinations / observations we will validate compliance with the design.

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3.6	Health Technical Memoranda (HTMs), including Fire Practice Notes (FPNs).	Compliance with HTMs and FPNs	<p>The design of the Facility complies with the elements of the HTMs and FPNs referred to in Appendix A to the Trust's Construction Requirements which are mandatory as each have been amended and / or derogated from pursuant to Document 7.2F – The Technical Compliance Document.</p> <p>This completion criteria will be deemed satisfied insofar as the design is included within Project Co.'s Proposals.</p>	<p>We would seek Design Team confirmation that the design achieves compliance.</p> <p>In addition we will conduct our own desk top review against the HTM and FPN requirements and subsequently through site examinations / observations we will validate compliance with the design.</p>

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3.7	British Standards, European Standards, DIN Standards, Codes of Practice and Acts of Parliament.	Compliance with standard	The design of the Facility complies with the elements of the British Standards, European Standards, DIN Standards, Codes of Practice and Act of Parliaments. This completion criteria will be deemed satisfied insofar as the design is included within Project Co.'s Proposals.	We would seek Design Team confirmation that the design achieves compliance. In addition we will conduct our own desk top review against the standards and subsequently through site examinations / observations we will validate compliance with the design.
3.8	Radiation Protection Requirement.	The Ionising Radiation (Medical Exposure) Regulations 2000 (together with notes on good practice) incorporating its approved Code of Practice (ACOP). The Radioactive Substances Act (RSA) 1993 and subsequent changes, the Medicines Act 1968, The Health Act 2006, High Activity Sealed Source (HASS) Regulations Medical and Dental Guidance Notes (MDGns)	The Facility complies with Ionising Radiation (Medical Exposure) Regulations 2000 ((together with notes on good practice) incorporating its approved Code of Practice 9ACOP)). The Radioactive Substances Act (RSA) 1993 (and subsequent changes), the Medicines Act 1968 The Health Act 2006, High Activity Sealed	Review accordance with relevant standards and documentation. This is to be achieved through both a desk top design review and interface with Contractor / design team and through subsequent site examinations / observations where we will validate compliance. Throughout the construction we would typically engage with the Trust RPA during the build to 'compare notes' and understand

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		National/International (IPEM)	Source (HASS) Regulations, the Medical and Dental Guidance Notes (MDGNs) National/International (IPEM).	any concerns
3.9	Air Quality (Operating Theatres and Cath Laboratories).	Environmental Sampling to HTM 03-01	The air quality (in the operating theatres and cath laboratories comply with the environmental sampling (HTM 03-01).	We will conduct our own desk top review of the air handling system design, site witness the commissioning of the systems, conduct a room check of the built fabric, and review the test certification / sampling records for each of the operating theatres and cath laboratories.
3.10	Environmental Health Office (EHO) Approval.	Building Control sign off	See 3.3.	We will maintain a separate file to record all relevant correspondence and monitor the closing out of any matters arising and the receipt of written confirmation from the Approved Inspector that the facility is

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				compliant.
4	BUILDING OUTPUT SPECIFICATION			
4.1	BUILDING ENVELOPE			
4.1.1	Thermal Requirements.	In accordance with the Building Regulations.	See 3.3.	Further to the RDD review, we will undertake a random sample of witnessing of testing and desktop analysis of results against design criteria (including sampling of data sheets).
4.1.2	Infiltration.	Leakage rates up to a maximum of 10 cubic metres/hour per sq m at pressure of 50 Pascals	The building envelope's leakage rates do not exceed 10 cubic metres/hour per sq m at a pressure of 50 Pascals	Throughout construction we will be observing the attention to detail, with particular emphasis applied to the interfaces between different components, e.g. where a window meets a cladding panel, to mitigate risk of failure to achieve standard. We will review the test methodology and in particular the extent of temporary sealing to be employed, and then witness the leakage rate testing and review the certification.

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4.1.3	Resistance to Water Penetration.	In accordance with BS 8000	The design of the Facilities relating to its resistance to water penetration is in accordance with BS8000. This completion criteria will be deemed satisfied insofar as the design is included within Project Co.'s Proposals.	For roof and cladding systems we would expect that manufacturer representatives would attend site to ensure that accredited installers are working correctly. We would seek site of their reports, and ultimately Certification. Throughout construction we will also be observing the attention to detail, with particular emphasis applied to the interfaces between different components, e.g. where a window meets a cladding panel.
4.1.4	Wind Resistance.	In accordance with BS EN 12211:2000.	The design of the Facilities relating to its wind resistance is in accordance with BS EN	As for 4.1.3

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4.2	Windows.	Thermal requirements, air infiltration, resistance to water penetration and wind resistance covered as part of Building Envelope in item 2.1 above)	The windows thermal requirements, air infiltration, resistance to water penetration and wind resistance comply with HTM 57, the Building Regulations Approved Documents, BS 6375-1 Part 1, BS EN ISO 10077-1, BS EN ISO 10077-2 and the requirements of CWCT (Centre for Window & Cladding Technology) technical notes.	Review in accordance with relevant standards and documentation. This is to be achieved through both a desk top exercise and subsequent site examinations / observations. Within our room Checks we will validate operability and maximum opening restrictions.
4.2.1	Light Levels Through Windows At Lower Levels In Courtyards.	Project Co design proposals approved before FC.	The light levels through the windows at the lower levels in the courtyards are compliant with the Project Co Proposals approved before	Compliance with the Project Co.'s Proposals will be validated by the witnessing of light level testing in the relevant areas.

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			Financial Close.	
4.3	INTERNAL WALLS PARTITIONS			
4.3.1	Components/Assembly.	Components are obtained from prescribed manufacturer and assembled in a manner in accordance with the specification and the manufacturer instructions and BS5234, BS8212, BS7364	The components are obtained from a prescribed manufacturer and assembled in a manner in accordance with the specification and the manufacturer instructions and BS5234, BS8212 and BS7364.	Material sourcing will part of our QA Audit. Correct assembly is an item which we observe during our periodic site inspections, including appropriate support frame, panel build up and focus upon detail at soffit and walls.
4.3.2	Acoustic Performance.	Compliance with standard BS 5821 Part 1 1984 and BS 2750 Part 3 and 4 1980.	The acoustic performance of the Facility is in compliance with the standards set out in BS 5821 Part 1 1984 and BS 2750 Part 3 and 4 1980.	As part of 4.3.1 we pay particular attention to adherence to design detailing specified with the Acoustic Report (e.g. avoiding back to back electrical sockets). We will review the test methodology and challenge test locations if appropriate.
				Witnessing of testing and review of resultant report / certification

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				against design criteria.
4.3.3	Fire Performance.	Check and confirm that perimeter sealing has been completed to the required standard including around services penetrations and other perforations to maintain required levels of fire resistance	The perimeter sealing has been completed to the required standard (including around services penetrations and other perforations) to maintain the required levels of fire resistance.	We examine this detailing during our periodic inspections throughout the build and then re-capture through review and sampling of the Void Closure process.
4.4	CEILINGS			We will interface as appropriate with the Trust Fire Officer to 'compare notes' on this item.
4.4.1	Fire Resistance.	Constructed to achieve design standards in accordance with Schedule 8 Parts 3 and 4	The Facility has been constructed to achieve the fire resistance design standards in accordance with Schedule 8 Parts 3 and 4.	Material sourcing will part of our QA Audit. Correct assembly is an item which we observe during our periodic site inspections, including appropriate support frame, panel build up and focus upon detail at walls.

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4.4.2	Acoustic Performance.	Constructed to achieve design standards	The acoustic performance in the Facility complies with the 1:50 scale drawings included in Project Co.'s Proposals as developed in accordance with the Reviewable Design Data. In determining whether this completion criteria has been met, the Independent Tester will be required to carry out a random sample of not less than 50% of the rooms that have a 1:50 scale drawing applicable to it, save that all theatres, Cath Labs, Hybrid Theatres, ITU and CCU spaces, all bedroom spaces with 15 ach/hr and Sleep study bedrooms will be tested.	As part of 4.4.1 we pay particular attention to adherence to design detailing specified with the Acoustic Report. As part of Room Checking we will validate correct ceiling type installed. We will review the Acoustic test methodology and challenge test locations if appropriate. Witnessing of testing and review of resultant report / certification against design criteria.
4.4.3	Access Panel Sealing.	Check that access panels in plasterboard ceilings have mastic seal at perimeter in locations defined on project	The access panels in the plasterboard ceilings have a mastic seal at the perimeter in the	Sample checking of construction against specified standards. We will add to our Room Check

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		Co.'s drawings (high hygiene areas)	locations defined on the Project Co.'s drawings (e.g. high hygiene areas).	template. NB We anticipate that these checks will predominantly be required within the 100% Room Check spaces.
4.4.4	Construction of Ceilings.	Check that ceilings have been completed to specified standard and BS 8290 Parts 1, 2 and 3 1991	The ceilings have been completed to the standard specified in BS 8290 Parts 1, 2 and 3 1991	Material sourcing will part of our QA Audit. Correct assembly is an item which we observe during our periodic site inspections, including appropriate support frame, panel build up and focus upon detail at walls.
4.5	Stair Ramps Balustrades.	In accordance with British standards listed in Schedule 8 Parts 3 and 4 and relevant Laws.	The stairs, ramps and balustrades are constructed in accordance with the British standards listed in Schedule 8 Parts 3 and 4 along with the relevant laws.	Sample checking of construction against specified standards and statutory requirements.
4.6	DOORS - HTM 58			
4.6.1	Fire Resistance Test Certification.	In accordance with Schedule 8 Parts 3 and 4	The doors shall be constructed in accordance with	Inspect the installed works for compliance as part of our Room Checks – door type, seals, gaps,

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			Schedule 8 Parts 3 and 4 to achieve fire resistance test certification.	labelling, and closers. Confirm receipt of relevant test certification.
4.6.2	Acoustic Performance Test Certification.	In accordance with Schedule 8 Parts 3 and 4	The doors shall be constructed in accordance with Schedule 8 Parts 3 and 4 to achieve acoustic performance test certification.	As per 4.4 .2
4.7	IRONMONGERY - HTM 59			Visual check and record certification.
4.7.1	Keylock Suiting / Programming.	Lock operation works. Suiting / Programming is correct	The locks in the Facility shall be fully operational and the suiting / programming in the Facility are correct.	Test keys in lock and sample reconcile with suiting schedules. 50% witness check.
4.8	Fixtures & Fittings.	Complete and fully operational	The fixtures and fittings are complete and fully operational.	This will be undertaken as part of our Room Checks to validate compliance to 1:50 drawings and associated schedules.
4.9	Individual Rooms.	Compliance with RDS and	See 2.5.	Further to the RDD review a physical check of at least 50% of

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		1:50 loaded plans		completed rooms and 100% of all identified key clinical areas will be undertaken, capturing samples of every room type specified. Snagging lists will be produced and interfaced with the contractor's own snagging system and the closing out of these snags monitored.
4.10	Wayfinding / Signage.	Complete including lighting in accordance with Schedule 8 Parts 3 and 4	The signage shall be complete (including lighting) and constructed in accordance with Schedule 8 Parts 3 and 4.	Site inspection with reconciliation of drawings / schedules and statement of suitability in comparison to HTM requirement and whole hospital policy.
5	M&E OUTPUT SPECIFICATION			Lighting lux levels will be samples where appropriate (e.g. emergency lighting illumination of exit signage)
5.1	PUBLIC HEALTH ENGINEERING			
5.1.1	External Drainage	As BS EN 752:2008	The external drainage system shall comply	Sample checking of drains during construction and at

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	System.		with BS EN 752:2008.	completion against specified standards and capacities, including appropriate interfacing with existing estate. Checking will encompass completeness, integrity and cleanliness testing, including confirmation of CCTV examinations.
5.1.2	Internal Drainage System.	AS BS EN 12056:2000	The internal drainage system shall comply with BS EN 12056:2000.	Sample checking of construction against specified standards. Witness pressure testing and confirm accessibility of rodding eyes.
5.1.3	Sanitary Fittings.	In accordance with Schedule 8 Parts 3 and 4	The sanitary fittings shall comply with Schedule 8 Parts 3 and 4.	This will be undertaken as part of our Room Checking programme to validate compliance with 1:50 drawings and associated schedules.
5.1.4	Mounting Heights.	In accordance with Schedule 8 Parts 3 and 4	The mounting heights shall comply with Schedule 8 Parts 3 and 4.	This will be undertaken as part of our Room Checking programme to validate compliance with 1:50 drawings and associated schedules.
5.1.5	Taps/Showers Overflows:	In accordance with Schedule	The taps / shower overflows shall comply	Although included within our room checking we typically

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	Operation.	8 Parts 3 and 4	with Schedule 8 Parts 3 and 4.	undertake a separate 100% witness to validate contractor test records of tap & shower temps and anti-scald operation.
6	M&E ENGINEERING			
6.1	M&E Systems, Materials, Plant And Components.	In accordance with Schedule 8 Parts 3 and 4	The M&E systems, materials, plant and components shall comply with Schedule 8 Parts 3 and 4.	Review accordance with relevant standards and documentation. This is to be achieved through both a desk top exercise and site examinations / observations of each system.
6.2	Quality Of M&E Systems Workmanship.	In accordance with Schedule 8 Parts 3 and 4	The quality of the M&E systems workmanship shall comply with Schedule 8 Parts 3 and 4..	Sample checking of construction against specified standards as part of our periodic site inspections and then by sampling sub-Contractors QA pre testing of installed works.
6.3	Commissioning Method Statements and Programme.	In accordance with Schedule 8 Parts 3 and 4 and Appendix 7	The commissioning method statements and programme shall comply with Schedule 8 Parts 3 and 4 and Appendix 7.	Desktop review, workshop analysis and working with Commissioning manager to develop a suitable programme and associated test methodologies.

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6.4	MECHANICAL PIPELINES FOR WATER			
6.4.1	Sectional Pressure Testing.	Schedule 8 Parts 3 and 4	The sectional pressure testing of the mechanical pipelines for water shall comply with Schedule 8 Parts 3 and 4.	Review 100% results and 50% witness of system tests.
6.4.2	Flushing and Cleaning. Chemical Closing.	Schedule 8 Parts 3 and 4	The flushing and cleaning / chemical closing elements of the mechanical pipelines for water shall comply with Schedule 8 Parts 3 and 4.	Review 100% results and 50% witness of system tests.
6.4.3	Balancing of Water Flow Rates And Rooms.	As per Schedule 8 Parts 3 and 4 and data sheets	The balancing of water flow rates for the mechanical pipelines for water shall comply with Schedule 8 Parts 3 and 4 and the data sheets.	Review 100% results and 50% witness of system tests.
6.4.4	Quality of Specialist Water (e.g. RO, DI etc.)	Schedule 8 Parts 3 and 4	The specialist water (e.g. RO, DI etc.) shall comply with the quality requirements in	Review 100% results and 100% witness of system tests.

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			Schedule 8 Parts 3 and 4.	
6.5	DUCTWORK AND AIR FLOW SYSTEMS			
6.5.1	Sectional Pressure Testing.	Schedule 8 Parts 3 and 4	The sectional pressure testing of the ductwork and airflow systems shall comply with Schedule 8 Parts 3 and 4.	Review 100% results and 50% witness of system tests, save that all theatres, Cath Labs, Hybrid Theatres, ITU and CCU spaces will be witnessed.
6.5.2	Cleaning.	Schedule 8 Parts 3 and 4	The cleaning elements of the ductwork and airflow systems shall comply with Schedule 8 Parts 3 and 4.	Review 100% results and 50% witness of system tests, save that all theatres, Cath Labs, Hybrid Theatres, ITU and CCU spaces will be witnessed.
6.5.3	Balancing Of Air Flow Rates.	As relevant CIBSE commissioning codes listed in Schedule 8 Parts 3 and 4	The balancing of water flow rates of the ductwork and airflow systems shall comply with the relevant CIBSE commissioning codes listed in Schedule 8 Parts 3 and 4.	Review 100% results and 50% witness of system tests, save that all theatres, Cath Labs, Hybrid Theatres, ITU and CCU spaces will be witnessed.

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6.5.4	Actual Flow Rates And Noise Levels.	As relevant CIBSE commissioning codes listed in Schedule 8 Parts 3 and 4	The actual flow rates and noise levels of the ductwork and airflow systems shall comply with the relevant CIBSE commissioning codes listed in Schedule 8 Parts 3 and 4.	Review 100% results and 50% witness of system tests, save that all theatres, Cath Labs, Hybrid Theatres, ITU and CCU spaces will be witnessed.
6.6	MEDICAL GAS PIPELINES			
6.6.1	Sectional Pressure Testing.	Schedule 8 Parts 3 and 4	The sectional pressure testing of the medical gas pipelines shall comply with Schedule 8 Parts 3 and 4.	In this area we will stress the importance of the involvement of the Trust QA Pharmacist and the medical gas AP. Review 100% results and 50% witness of system tests.
6.6.2	Purity and Flow Rates.	Schedule 8 Parts 3 and 4	The purity and flow rates of the medical gas pipelines shall comply with Schedule 8 Parts 3 and 4.	In this area we will stress the importance of the involvement of the Trust QA Pharmacist and the medical gas AP. Review 100% results and 50% witness of system tests.

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6.6.3	Anti-Confusion Tests	Schedule 8 Parts 3 and 4	The anti-confusion tests of the medical gas pipelines shall comply with Schedule 8 Parts 3 and 4.	In this area we will stress the importance of the involvement of the Trust QA Pharmacist and the medical gas AP. Review 100% results and 100% witness of tests.
6.7	Packaged Plant (e.g. Boilers, Chillers, Generators, Medical Gases).	To manufacturers requirements, CIBSE, IET and HTM recommendations and requirements	The packaged plan (e.g. boilers, chillers, generators and medical gasses) shall comply with the manufacturer's requirements, CIBSE, IET and HTM recommendations and requirements.	In this area we will stress the importance of the involvement of the Trust QA Pharmacist and the medical gas AP. Review 100% results and 50% witness of tests.
6.8	BUILDING MANAGEMENT SYSTEMS			
6.8.1	Operability.	CIBSE, IET and manufacturers requirements	The operability of the building management systems shall comply with CIBSE, IET and the manufacturer's requirements.	Review of design & Description of Operations. Review QA documentation. Sample contractors pre-testing and 50% witness on final testing

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6.8.2	Optimising Energy Efficiency.	CIBSE, IET and manufacturers requirements	The energy efficiency of the building management systems shall comply with CIBSE, IET and the manufacturer's requirements.	Full witness of BMS operation compliance with Description of Operations
6.9	HV Systems.	To industry standards and as agreed with supply authority, and as noted in Schedule 8 Parts 3 and 4	The HV systems shall comply with industry standards, as agreed with the authority and as noted in Schedule 8 Parts 3 and 4.	Sample checking of construction against specified standards. Factory Acceptance Visit to panel manufacturer. 100% review of Contractors QA & 100% witness of HV cable tests
6.10	LV Systems (including Final Circuits).	As BS 7671 and Schedule 8 Parts 3 and 4	The LV systems (including Final Circuits) shall comply with BS 7671 and Schedule 8 Parts 3 and 4.	Factory Acceptance Visit to panel manufacturer. 100% review of Contractors QA. Witness cable testing and panel wiring for 50% panels. 100% witness testing of auto changeover units.

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6.11	Lighting and Emergency Lighting.	As defined in Schedule 8 Parts 3 and 4	The lighting and emergency lighting shall comply with Schedule 8 Parts 3 and 4.	Checking of design against PA. Sample witness of lighting lux levels and functionality of controls. 100% QA check and 100% Emergency lighting check.
6.12	Fire Alarm.	BS 5839, HTM 82 and Schedule 8 Parts 3 and 4	The fire alarms shall comply with BS 5839, HTM 82 and Schedule 8 Parts 3 and 4.	Checking of design against PA. 100% witness of system to confirm functionality against Cause & effect matrix, confirming integrity of installed components and correct interfacing to associated systems. Validate resilience & recovery from power fail
6.13	Nurse Call and other Communication Systems.	As defined in Schedule 8 Parts 3 and 4	The nurse call systems (and other communication systems) shall comply with Schedule 8 Parts 3 and 4.	Checking of design against PA. 50% witness of system against Cause & Effect matrix to confirm functionality, and to confirm integrity of installed components. Validate resilience & recovery from power fail

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6.14	Lightning Protection.	BS 6651:1999	The lightning protection shall comply with BS 6651:1999.	Review accordance with relevant standards and documentation. This is to be achieved through both a desk top exercise and 50% site witness of field testing of the completed system.
6.15	Security Systems And CCTV Installations.	As defined in Schedule 8 Parts 3 and 4	The security systems and CCTV installations comply with Schedule 8 Parts 3 and 4.	<p>Checking of design against PA, scenario testing and observations.</p> <p>Review QA documentation and selectively witness test systems.</p> <p>100% witness staff attack system.</p> <p>50% witness access control system to confirm functionality of field devices and head end, and to confirm integrity of installed components (common soft spot).</p> <p>View camera type and locations, and witness to validate functionality of head end and</p>

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				<p>recording facilities against specified standards. Witness integration of camera system to associated security systems including staff attack.</p> <p>Review confirmation that meets PSDB Secure by Design requirements.</p> <p>Validate resilience & recovery from power fail</p> <p>Checking of design against output specifications – scenario testing and observations.</p>
6.16	Site Wide Infrastructure.	In accordance with Schedule 8 Parts 3 and 4	The site wide infrastructure complies with Schedule 8 Parts 3 and 4.	This is captured within our responses to individual systems.
6.17	Lift Installations (all Lift Categories).	Schedule 8 Part 3 HTM 08-02 BS 5655 BS/EN/81 BS 846-1	The lift installations (including all lift categories) comply with HTM 08-02, BS 5655, BS/EN/81, BS 846-1 and Schedule 8 Parts 3 and 4.	Review accordance with relevant standards and documentation through both a desk top exercise and site examinations / observations. Validate load testing performed and 100% witness the functional operation prior to handover, including external interfaces inc Fire Alarm

Item No	Element of the Works	Completion Standard	Completion Criteria	Independent Tester's Methodology (to be completed by the IT)
				and Red Care. Check Insurance Certificate in place
7	CIVIL AND STRUCTURAL OUTPUT SPECIFICATION			
7.1	Any Required Load Restriction Signage.	In accordance with the Civil and Structural Engineering Output specifications	The load restriction signage complies with the Civil and Structural Output Specifications.	Validate 100% signage installed as per output specification.
7.2	All Civil And Structural Elements.	Visible elements apparently generally in accordance with the relevant design drawings	The visible civil and structural elements generally comply with the relevant design drawings.	This will be undertaken as part of our periodic site inspections, and where appropriate also incorporated within Room Checks.
8	COMPUTER NETWORK AND TELEPHONY SERVICES OUTPUT SPECIFICATION			
8.1	Main Component Selections, Including Telephone Switch Routers and Switchers	To be in accordance with Schedule 8 Parts 3 and 4.	The main component selections (including telephone switches, routers and switchers)	Validate installed equipment in accordance with Schedule 8 via desktop review and site inspection. Consider and

Item No	Element of the Works	Completion Standard	Completion Criteria	Independent Tester's Methodology (to be completed by the IT)
	etc.		comply with Schedule 8 Parts 3 and 4.	respond to any comments from Trust IT personnel.
8.2	Backbone Cabling.	In accordance with Schedule 8 Parts 3 and 4	The backbone cabling complies with Schedule 8 Parts 3 and 4.	We will review 100% QA results and witness test 50% fibre backbone cabling performance.
8.3	Hub Rooms and Cabinets.	In accordance Schedule 8 Parts 3 and 4	See 2.5.	Room check 100% data rooms to validate construction, finish, and performance of cooling systems. Issue Beneficial Access certification.
8.4	Cabling and Outlets.	As per Schedule 8 Parts 3 and 4	The cabling and outlets comply with Schedule 8 Parts 3 and 4.	We will review 100% QA results and witness test 50% copper cabling from cabinet to outlet, validating Pass / Fail results; cable lengths; correct cable and outlet identification; outlet shutter operation; and cable segregation and bend radii.
8.5	IM&T Installation.	In accordance with Schedule 8 Parts 3 and 4	The IM&T installations comply with Schedule 8 Parts 3 and 4.	Our validation will apply to the Passive elements of the system as described within 8.1 to 8.4. WE understand that Active components will be Trust responsibility to supply, install, commission and provide

Item No	Element of the Works	Completion Standard	Completion Criteria	Independent Tester's Methodology (to be completed by the IT)
				appropriate certification. As noted within 8.10 we will witness network performance testing.
8.7	Telephone System.	As defined in Schedule 8 Parts 3 and 4	The telephone systems comply with Schedule 8 Parts 3 and 4.	We will review 100% QA results and witness a network performance test prior to PC
8.8	CCTV.	As defined in Schedule 8 Parts 3 and 4	The CCTV's comply with Schedule 8 Parts 3 and 4.	View all camera type and locations, and 100% witness to validate functionality of head end and recording facilities including resilience under power fail, against specified standards. Witness integration of camera system to associated security systems including staff attack.
				Review confirmation that system meets PSDB Secure by Design requirements.
8.10	Network Performance Test.	As defined in Schedule 8 Parts 3 and 4	The network performance tests comply with Schedule 8 Parts 3 and 4.	We will review QA results and witness a network performance test prior to PC and not less than 3.5 months after PC. Testing to validate network coverage, data capacity and speed.

Item No	Element of the Works	Completion Standard	Completion Criteria	Independent Tester's Methodology (to be completed by the IT)
9	EXTERNAL WORKS OUTPUT SPECIFICATION			
9.1	Hard Landscaping Generally.	Complete in accordance with Schedule 8 Parts 3 and 4	The hard landscaping complies with Schedule 8 Parts 3 and 4.	Review QA records and sample check construction against Schedule 8 requirements.
9.1.1	Steps and Ramps Rises, Going, Gradients, Balustrades and Handrails.	In accordance with Building Control approval.	The steps, ramp rises, going gradients, balustrades, and handrails comply with the building control approval. This completion criteria shall be deemed satisfied by Project Co producing written confirmation from the Approved Inspector HCD confirming such compliance.	Review accordance with Building Control requirements. We will review these aspects within our periodic site visits with objective of early identification of issues. At completion we will review Approved Inspector Certificate.
9.1.2	Watering Points.	Fully operational	The watering points are operational.	Review QA and confirm operation of watering points.