Document Information Cover Sheet
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OUTLINE DESCRIPTION/COMMENTS ON CONTENT:
Provided as part of Whole Hospital Policy provision for the 3Ts scheme, following LOR queries raised in May, June and July 2010 *** This policy is now released for use on the 1:50 process. A review will be programmed to ensure that the design is adhering to the policy.* *** The prevailing 3Ts SOA takes precedence over any specific room sizes identified in this policy (SOAs will be removed from policies).* *** Circulation specifications will adhere to the new design guide for circulation (being finalised as at document date).* *** Disability access agreements resulting from the Access Workshop (due August 2010) will determine access design requirements for policies.*

Brighton and Sussex NHS University Hospitals NHS Trust

3Ts Hospital Redevelopment
Teaching • Trauma • Tertiary care

Brighton & Sussex University Hospitals NHS Trust

3Ts Programme

Whole Hospital Policy

Flexibility

Preamble

The 3Ts Programme – the development of a leading teaching, trauma and tertiary care centre for the south east region - is a generational opportunity for health care services across that region. It is more than just a building programme – it is a programme of development of complex secondary and tertiary care services to allow the Trust to realise its ambition to be amongst the best Teaching Hospitals in the Country. This will allow the Trust to provide the best and safest possible care for the residents of Brighton & Hove, Sussex and beyond.

It goes without saying that the facility must be of the highest possible quality and must meet the ambitions of the Trust and its staff in delivering this best and safest possible care. It also goes without saying that this will be a facility which will be a legacy for the region for 60-100 years: 100 years ago, most of the clinical services we take for granted such as complex imaging, specialised surgery, and developments in general medicine were not thought of. Many of the treatments that are provided are for conditions that were not yet discovered or understood.

In 100 years time, the building we are planning will have changed function many times and the developments in clinical care will be as unrecognisable to us as our current facilities and technology would be to our great-grandparents.

Although it is impossible to be able to anticipate precisely how the practice of medicine in its broadest sense will change in that time, what we can do is to ensure that the legacy, which is left to our successors, is as flexible as possible and can be adapted with relative ease to meet future requirements.

There is little empirical evidence as to what constitutes a truly flexible hospital (or indeed any other non-standard) facility. John Weeks' concept (from the 1960s) described a facility which was "long life and loose fit" with "indeterminism" built in from the start. These principles can be applied to hospital facilities today, but in a time of tightening economic circumstances and more specialised interventions this is a significant challenge.

General Overarching Principles

There are four key areas that will promote overall flexibility: in the site masterplanning, the structure of the building, in the mechanical and electrical services within the building and the overall internal design and layout of the facilities. Taking each one in turn:

- **Site masterplanning**: the design must allow, at some stage for the potential future removal of the Thomas Kemp Tower as this is now 40 years old. The new facilities must not be dependant upon systems and services which are currently in TKT. Any bridge links should be capable of removal;

- **The structure:** the structural grid of the facility should reflect the need to change the internal layout with relative ease – a grid which is too densely packed will mean that turning a series of smaller spaces into larger ones will mean that there will be intrusive columns in the new space. The grid should be as widely spaced as possible whilst not compromising the structural integrity of the building. The Principal Supply Chain and its designers will need to be able to demonstrate that the distance between columns is optimised and the value for money calculations which sit behind the proposals which are put forward. On the floors which are currently identified for provision of imaging services, the structure should allow for the future provision of much heavier imaging equipment – for example 5T magnets for MRI;

- **M&E services**: the distribution of M&E services should be optimised to ensure that these can be replaced and changed with the minimum of disruption to services within the building – it is no use tightly packing service distribution routes to the point at which additional power or ventilation supplies cannot be added later. At floor-by-floor level and room-by-room level, it should be possible to easily add small power (switched socket outlets) into the space – without introducing external trunking and inelegant spurs off the existing systems. It should also be possible to demonstrate how medical gas systems can be extended from the ward floor to other areas. The M&E design should also allow for mechanical ventilation to be introduced through the entire building at some future date;

- **Layout and internal design:** there has been a tendency in the NHS over the last 10 years to produce a building full of bespoke spaces. Although this is immediately convenient for the wishes of clinicians and planners this determines the building too rigidly. The Trust will provide a list of rooms that can be standardised across the facility. Odd-shaped and sized rooms must be strictly avoided – if space planning generates some "spare" space then this should be identified outwith the scope of the brief and should not be used to meet the brief. Where possible, room sizes should be multiples of each other so that rooms can be combined into larger usable spaces or sub-divided to achieve the same aim.

Specifically

The US-based Hospital Advisory Company in its report "Hospital of the Future" has identified some key high-value areas for flexibility that could be addressed – as this is one of the first times such an analysis has been presented in one place. The table below identifies these and provides a Trust commentary on desirability:

HAC Recommendation	Trust Commentary
Pre-wired vertical expansion easier if top floor shelled to minimise disruption when "building up"	It is unlikely that, given, the constraints on site development for heritage considerations, we will be able to achieve a shell floor on the top of either stage.
Pre-wired horizontal expansion easier if "building spine" concept incorporated with central ancillary and utility system; cheaper and less disruptive than vertical option but available land needed.	In principle, this should be adopted, especially if car parking goes underground and we are left with development space to the east of the Stage 1 building or beyond onto the St. Mary's site.

HAC Recommendation	Trust Commentary
Interstitial floors of 2-3m built between regular floors to house mechanical, electrical and plumbing system.	This would be desirable if the whole hospital could be rebuilt on this basis. Adoption of this throughout the development would be likely to increase the building height (difficult for heritage considerations) overall. It may be worth looking at this above the imaging and theatre floors.
Medical gas in headwalls, larger rooms, outboard toilets to allow room to flex from general inpatient accommodation to ITU.	Not required throughout the building. If the ITU floor is agreed, it may make sense to look at this on the floor above.
Allow large equipment to be installed through external walls via knock out panels.	Wherever possible and practical.
Provide support for future diagnostic and treatment equipment in upper floors.	Investigate implications up to floor 7 in Stage 1.
Perimeter layout of stairs, lifts and mechanical, electrical and plumbing systems; minimal use of load bearing structure in core inpatient areas to allow for easier reconfiguration.	Wherever possible.
Specialise ITUs sparingly.	Specialisation will be required (especially for neuro ITU) but, if the whole critical care function (except cardiac) is included, this should allow flex between units so long as they are designed to do this.
Multi-bed bays	Four bed bays should be easily convertible into single rooms in the future.
Reserve capacity for power and IT systems	Ample number of electrical sockets – double the number on standard RDS; Continuous wireless access required; RFID infrastructure to be in place.
Wall mounted IT versus computers on wheels	The future of patient entertainment systems is in some doubt. Each bed space should have the IT wiring, power supply and wall support to allow future migration for Trust IT systems into the same platform as the patient entertainment system.