

Health and Safety Executive		Sector Information Minute	
		SIM 07/2005/12	
Cancellation Date	21/06/2011	Open Government Status	Fully Open
Version No & Date	1: 21/06/2006	Author Unit/Section	Health Services Unit

Target Audience:
FOD Inspectors

SAFETY BY DESIGN IN THE CONSTRUCTION OF PUBLIC HEALTHCARE ESTATE

This SIM details the mechanisms used for funding the redevelopment of the public healthcare estate within England. It reports on an evaluation of how the principles of 'safety by design' were addressed in 'early wave' developments undertaken in 2001. The SIM provides guidance sources to support the activities to be undertaken by Operational Inspectors in support of the Health Services Inspection Plan 2005/6

BACKGROUND

- 1 In 1999 the Office of Government Commerce produced the document Achieving Excellence Through Health & Safety This requires the government as a client to set high standards of health and safety at the outset of a project and to ensure that management arrangements are in place to make them a 'best practice' client.
- 2 The NHS is presently one of the biggest procurers of civil engineering work in the UK, through its extensive investment schemes - from refurbishment of GP surgeries to Hospitals built under the Private Finance Initiative.
- 3 Many of the risks to staff & patients within healthcare — and in particular those strategic priority topics of: workplace transport; violence and aggression; slips, trips & falls; falls from height; and musculo-skeletal disorders, can be reduced if 'safety by design' principles are considered from the onset.

FUNDING MECHANISMS

- 4 The details of the relationships between parties involved in new builds or refurbishment are varied & detailed. Each specific case and the determination of who has responsibilities under various health and safety legislation should be considered upon its individual circumstances. There are however broadly three mechanisms for the funding of this type of construction activity:

- Direct NHS funding
- Public Private Partnership
- The Private Finance Initiative

5 Direct NHS funding: there a number of NHS funded capital schemes underway & developing across England. These represent the 'traditional' client / contractor relationship.

6 Public Private Partnerships (PPP): Some developments of the healthcare estate are being funded through joint partnerships between the Department of Health and the private sector, for example Partnership UK (PUK), NHS Local Improvement Financial Trust (LIFT) scheme. These schemes are aimed specifically at encouraging investment in primary care facilities in deprived inner city areas (where the health need is greatest and there are a disproportionately high number of existing sub-standard premises). The partnership aims to upgrade 3000 existing primary care premises and build 500 new primary care centres. These will then be 'leased' back to healthcare providers. Generally in these circumstances the Primary Care Trust or Partnership Trust will be the client, with a 'traditional' relationship with construction contractors.

7 Public Finance Initiative (PFI): There is an estimated £7.5 billion committed to PFIs to rebuild the public healthcare estate over the next 10yrs. This represents the majority of new build activity underway & being planned. The estate will be owned by private / commercial organisations, operating on 'contract' to the Trust. The aim of PFI is to transfer the financial risk of projects to the private sector. The process for such a contract is detailed in the Department of Health publication Design Development Protocol for PFIs

8 It has 4 broad stages:

- The Trust publishes its intentions to undertake a PFI in the Official Journal of the European Community (OCEJ) in the form of a Preliminary Invitation to Negotiate (PITN). The PITN is expected to provide sufficient information upon the clinical, architectural and engineering outputs required by the Trust to enable bidders to tender
- From all of the submissions the Trust short-list a small number of bidders (often around three) offering a 'Final Invitation to Negotiate' (FITN). At this stage a "whole development statement" including a detailed clinical output specification should provide bidders with sufficient information for them to detail their intended design
- The Trust chooses a Preferred Bidder and accepts or "sign off" the design and agrees the price.

- A 'Special Purpose Vehicle' (SPV) is formed, usually representing the construction partner and the on-going 'facilities management contractor' who will maintain the site and its services over the life-time of the property (30yrs)

9 The relationship between the NHS Trust and the SPV is not that of the traditional client & contractor. The SPV will become the 'client' in terms of Construction (Design & Management) duties, and will also be an employer, sharing the premises with the Trust upon completion. Both the Trust and the SPV will have duties under health and safety legislation, including the duty to co-operate & co-ordinate their activities (Reg.11 Management of Health & Safety at Work Regulations 1999).

REVIEW OF EARLY 'WAVE' PFIS

10 Following concerns raised with the Sector in 2001 that newly built or refurbished healthcare projects were not adequately addressing 'safety by design'; representatives of both Health Services & Construction Sector visited a number of projects. A range of health & safety problems were identified, commonly stemming from the uncertainty over the relationship & responsibility for 'safety by design' between the Trust, and the PFI SPV (Special Purpose Vehicle). These included:

- Failure to comply with the Construction (Design & Management) Regulations 1994: sites were not notifying until the appointment of the 'preferred bidder' (therefore construction was imminent), by which time the design aspects of the project were set. The purpose of early notifications, during the planning phase of construction is to allow HSE to influence design, where appropriate. If notification is delayed, such an opportunity is missed.
- A lack of health and safety information given to contractors, for example asbestos information where the work involves existing buildings.
- Use of architects who are unfamiliar with UK health & safety legislation or its application within healthcare

11 This resulted in a number of examples where health and safety issues for the operation of the building had not been addressed, for example:

- Poor layout of Accident & Emergency departments (violence to staff)
- Lack of space within ward areas to use or store mechanical aids which were required to assist in the movement of patients (manual handling)
- Suspended ceilings of insufficient strength to support the installation of overhead tracking hoists (manual handling)
- Inappropriate floor surfaces (slips)
- Water temperatures at baths not being controlled (scalds risks to patients)
- Lack of window restrictors in mental health assessment units (patient risks)

- Confusion between SPV & Trust over the responsibilities for the routine maintenance of equipment, including statutory inspection requirements

12 The Sector's opinion was that these problems arose from a misinterpretation that contractual conditions of a PFI preclude the Trust from influencing those elements of the design that impact upon the safety of 'users' in the future.

13 HSE has contributed to the revision of this guidance, which was re-launched in September 2004. It is therefore hoped that such concerns will not arise in future 'waves' of PFI.

TRUST DESIGN CHAMPIONS

14 At the 2001 Building A Better Patient Environment Conference, the Secretary of State for Health stated that **"Each hospital embarking on a new development will nominate a local Design Champion from the Trust board to ensure that the new building provides a high quality, patient-focused environment with good working conditions for staff and buildings that make a positive contribution to the local neighborhood"**. Every Trust has therefore been asked to nominate a 'Design Champion'. Training & support mechanisms are available for Design Champions via the Centre for Healthcare Architecture & Design.

OPERATIONAL INPUT

15 Inspectors are asked to visit PFI, major PPP or NHS capital funded projects at the design / planning stage to ensure that the principals of 'safety by design' are appropriately addressed. Inspectors should aim to contact the Trusts' Design Champion to ensure that output specifications produced by the Trust adequately address 'safety by design issues' such as:

- The layout of ward areas provide sufficient space for the use & storage of mechanical lifting aids
- The risks of violence to staff and its control are considered, for example in the design & layout of Accident & Emergency & ward areas, lighting of external areas etc
- Floor surfaces with appropriate anti-slip properties are specified
- Safe means of access are considered for window / facade cleaning, plant & equipment maintenance
- Vehicular transport routes segregate pedestrians & vehicles
- Patient safety issues such as hot water, legionella, hot surface temperatures and falls from windows

16 Trusts should be also be reminded of:

- Their duties as a client under the Construction (Design & Management) Regulations.
- The need for clear contractual and leasing arrangements covering the responsibilities for the maintenance of plant and equipment, including statutory examinations.
- The need for effective communication mechanisms between the employers sharing a workplace (PFI sites) and specifically the duties under regulation 11 of the Management of Health & Safety at Work.

17 The Health Services Inspection Plan 2005/06 - guidance has yet to be issued on the numbers of visits to be carried out.

IDENTIFYING PFI/PPPS

18 To effectively influence the design considerations of a project early contact with the Trust should be achieved; therefore the use of construction site notifications (F10s) is unsuitable. Inspectors may be able to identify proposed / developing PFI or PPP projects from local knowledge or via ongoing liaison with Trusts. Information upon PFIs 'approved' is contained upon Department of Health (England) websites by Strategic Health Authority PFIs by Strategic Health Authority Details of those PFI projects approved by the Department of Health (England) during the Summer 2004 are listed in appendix 1

19 With the more 'traditional' relationship between client and contractor in PPP & direct / NHS funded schemes F10 notifications may be used as a source of information. Details of approved NHS Lift schemes (English) may be found via NHS Lift Schemes and via the link contained upon that page entitled 'details of schemes in progress'. Information on NHS Capital schemes (England) can be found via links on Capital Schemes

20 Inspectors should consider approaching Construction Division colleagues to inform them of their activities with specific Trusts or to propose joint visits. As part of an ongoing project within the Construction Division Work Programme, the NHS has been identified as a target in their project plan 'Government as a Client'.

SOURCES OF GUIDANCE

21 There is a range of guidance material produced by NHS Estates covering the priority risks within healthcare. Inspectors should seek to ensure that the risks identified within such publications are addressed, ideally at the output specification stage, either by adherence to the guidance or by 'equally effective' solutions. Sources of NHS Estates guidance related to those areas identified in para 14 are referenced in appendix 2.

22 Full lists of NHS Estates publications are available from NHS Estates guidance. More recent NHS Estates publications can be directly downloaded from the Knowledge and Information Portal. This website requires registration for access. Contacting the Health Services Unit, by email on healthservices@hse.gsi.gov.uk, can provide a password or can source older publications not within the Portal.

23 Specific sites concentrating on providing guidance in healthcare construction include The Centre for Healthcare Design or NHS ProCure21

APPENDIX 1

SUMMER 2004 APPROVED PFI SCHEMES

Bedfordshire & Hertfordshire: estimated £880 million.

Acute services reconfiguration. Expansion/redevelopment at Watford, new hospital at Hatfield including a new cancer centres. Up to 15 treatment centres.

North Bristol & South Gloucestershire: estimated £310 million.

Relocation of specialist acute services from Frenchay & Southmead Hospitals to one site. New community facilities including at least seven community hospitals.

Papworth Hospital Trust: estimated £148 million.

New cardio thoracic centre, either on the existing Papworth site or with Addenbrooke's Hospital on the Cambridge biomedical campus.

Sandwell & West Birmingham Hospitals NHS Trust: estimated £591million

Leeds Teaching Hospitals NHS Trust: estimated £204 million.

New children's & maternity hospitals to be based upon the St James' campus.

Hillingdon Hospital NHS Trust: estimated £271 million.

Redevelopment of the Hillingdon hospital site

Royal National Orthopaedic Hospital NHS Trust: estimated £121 million.

New hospital to be built alongside the existing buildings, then the older buildings will be demolished & a housing development, including affordable homes for NHS staff to be built.

Great Ormond Street Hospital: estimated £225 million.

Although not technically at PFI, £75 million of public monies supplemented by charitable donations to fund second phase hospital redevelopment & a new inpatient block & cardiac research institute.

Leicestershire Partnerships NHS Trust: estimated £52 million.

Replacement of existing mental health units on the Leicester General Hospital site with 150 beds in two units.

Tees & North East Yorkshire NHS Trust: estimated £73 million.

Demolition of St Lukes' Hospital & its replacement with a number of community based specialist units.

Taunton & Somerset NHS Trust: estimated £75 million.

New surgical centre

Southend Hospitals NHS Trust: estimated £130 million.

A mix of PFI & NHS capital to include a new ward block, cancer care centre & redevelopment of outpatients, along with a number of community services & an independent treatment centre.

North Merseyside Healthcare Project: estimated £1.01 billion.

A consortium of Trusts, PCTs & local authorities, to include developments at the Royal Liverpool Childrens, Royal Liverpool & Broadgreen University Hospitals Trust, Aintree Hospitals Trust & Mersey Care Trust

South of Tyne & Wearside Mental Health NHS Trust: estimated £50 million.

Provision of new facilities at Cherry Knowle Hospital in Ryehope, Sunderland

North West London Hospitals NHS Trust: estimated £305 million.

A new 600-bed hospital at the Northwick Park & St Marks' site.

APPENDIX 2

NHS ESTATES GUIDANCE RELATED TO 'SAFETY BY DESIGN' PRIORITIES

The layout of ward areas provides sufficient space for the use and storage of mechanical lifting aids;

NHS Estates Health Building Note 40: Common Activity Spaces 0113221843 (limited use re manual handling, but does address wheelchair use / access)

Vol 2: Treatment Areas 0113221851 (tables of space requirements for hoisting, assisted movements etc)

Vol 3: Staff Areas 011322186x (disability access)

The risks of violence to staff and its control are considered, for example in the design and layout of A&E and ward areas, lighting of external areas, etc;

NHS Estates Health Building Note/ Scottish Health Planning Note 22:
A & E Departments In Accute General Hospitals. 0113221835.

NHS Estates Health Building Note 35: Accommodation for Persons with Mental Illness. 0113222483

Part2: Treatment & Care in the Community 0113221282

NHS Estates Design Guide: Medium Secure Psychiatric Units, 0113223315.
(Includes references to Learning Disabilities Units)

NHS Estates Health Facilities Note 21: Car Parks 01133220499

Floor surfaces with appropriate anti-slip properties are specified;

NHS Estates Health Technical Memorandum 61: Flooring 0113222013 (not available as an electronic download, no mention of the importance of micro roughness etc). NB – this is in the process of being revised, in conjunction with HSE. An 'interim' update will be issued in Autumn 2005, with new cross-sector guidance including good practice guidance on all aspects of slips management. This research is led by the Construction Industry Research and Information Association (CIRIA) and jointly funded by HSE, Department of Health, and others.

Safe means of access are considered for window/facade cleaning, plant and equipment maintenance;

General references in a number of Estates publications, none specifically on falls from height'.

Vehicular transport routes segregate pedestrians and vehicles;

NHS Estates Health Building Note 45: External Works for Health Buildings,
0113215193

NHS Estates Health Facilities Note 21: Car Parks 01133220499

Patient safety issues:

NHS Estates Health Technical Memorandum 2040: The Control of Legionellae in
Healthcare Premises: A Code of Practice: Management Policy

NHS Estates Health Guidance Note: "Safe" Hot Water & Surface Temperatures
0113221584

Reduction in Hospital Acquired Infection by Design:
Research reference B01(06)

NHS Estates Health Technical Memorandum 55: Windows