NHS Estates

A risk-based methodology for establishing and managing backlog

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Executive summary

It is essential that the physical condition of the NHS estate is accurately assessed and maintained to ensure it is fit for purpose and safe for patients and staff. This document gives best practice advice on establishing and managing backlog maintenance costs (backlog).

It describes the steps involved in undertaking a detailed survey for the purpose of establishing backlog. It also introduces a model for measuring risk in relation to sub-standard assets so that investment can be prioritised. This model is based on one that has been tried and tested within NHS organisations.

Once the risks associated with sub-standard assets have been assessed, high and significant risk elements should be addressed as a priority as part of your estate investment planning process. The trust board should take account of both immediate investment needs and longer-term demands to upgrade and develop new facilities.

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Contents

1. Introduction

Background

1.1 Backlog maintenance cost (backlog) is the cost to bring estate assets that are below condition B in terms of their physical condition and/or compliance with mandatory fire safety requirements and statutory safety legislation up to condition B.

1.2 The condition rankings are based on those given in 'Estatecode' (NHS Estates, 2002) for the purpose of undertaking a property appraisal. See tables 3.1 and 3.2 in Chapter 3 for a definition of the rankings. Condition B is the minimum acceptable condition that must be achieved in order to avoid backlog costs.

1.3 Costs to replace, remove or upgrade assets that already meet condition A or B criteria (for example for modernisation or best practice purposes) should not be classified as backlog.

1.4 It is important that accurate figures for backlog are presented at local and national level (via the estates returns information collection (ERIC)) in order to monitor the condition of estate assets. This relies on a consistent methodology being used to regularly update the figures.

1.5 It is equally important that appropriate investment programmes are undertaken to improve the condition of sub-standard assets and maintain them at an acceptable level.

Scope of this document

1.6 This document gives best practice advice on establishing and managing backlog. It describes the steps involved in undertaking a detailed survey for the purpose of establishing backlog; that is, assessing the physical condition of your estate assets and their compliance with mandatory fire safety requirements and statutory safety legislation.

1.7 It introduces a model for measuring risk in relation to sub-standard assets so that investment can be prioritised. This model is based on one that has been tried and tested within NHS organisations.

1.8 It emphasises the need to address high and significant risk items as a priority as part of your estate investment planning process whilst taking account of ongoing maintenance requirements to prevent assets falling into condition C.

1.9 Since the condition of your assets is constantly changing, this document advocates an annual review of survey findings and risk assessments (at 31 March each year) to feed into your annual investment planning process.

1.10 This chapter and Chapter 7 will be of particular relevance to NHS trust boards. More detail is provided in a series of appendices, which will assist those directly involved in commissioning or undertaking the survey and costings.

Audience for this document

1.11 This document is targeted at:

- NHS trust directors of estates and facilities management and technical officers who are responsible for the establishment and reporting of backlog;
- chief executives, directors of finance and risk managers within NHS organisations responsible for strategic and business continuity planning, and capital investment decision-making;
- Private Finance Initiative (PFI) consortia.

Key steps to establishing and managing backlog

1.12 The following figure illustrates the key steps involved in establishing and managing backlog. These steps are explained more fully in the following chapters and summarised in Chapter 9.

Figure 1.1 Backlog management flowchart

2. Detailed survey

Overview

2.1 You should carry out a detailed survey to assess the physical condition of your estate assets and their compliance with mandatory fire safety requirements and statutory safety legislation (as they apply to the built environment).

Undertaking a survey provides a snapshot, at one point in time, of the current condition of your estate. It takes no account of plans for future changes in the use and development of your buildings but does provide indicators of potential future deterioration of assets.

2.2 This will enable you to allocate condition rankings (see Chapter 3 for details), establish costs to maintain assets in condition B or bring them up to condition B (see Chapter 4) and produce risk rankings for appropriate assets (see Chapter 5).

2.3 You should assess all premises currently used by your organisation in the support and delivery of healthcare, irrespective of ownership, including premises that are temporarily vacant but are due to be brought back into healthcare use.

2.4 Stand-alone property that is vacant awaiting disposal should not be assessed. However, vacant property that shares a common building structure with operational healthcare facilities and is awaiting sale and/or re-use for non-healthcare purposes should be assessed in respect of those elements that impact upon parts of the building still in use.

2.5 For the purpose of establishing backlog, the following assets should **not** be surveyed:

- fixed and portable medical equipment;
- general portable equipment;
- loose furniture and fittings;
- communications equipment (other than associated fixed wiring and distribution equipment, which should be included);
- information management and technology (IM&T) equipment (other than associated fixed wiring and distribution equipment, which should be included);
- transport vehicles.

The survey process

2.6 Internal assets should be surveyed on a room-by-room basis, with internal building services infrastructure assessed on a system basis. External works and building services should be surveyed on a system and site basis.

2.7 Roof voids and cellars should also be surveyed in order to assess statutory/mandatory compliance in terms of water storage, fire

compartmentation, fire protection etc and to note safe access provision, the condition/construction of roofs, roof trusses, any infestations and roof void insulation etc. Wherever practical, surveys should be non-intrusive and assets viewed without necessitating significant repairs to the building fabric.

2.8 Survey information should be collected either manually, using standard data collection survey sheets (see Appendix 1 for example sheets) in conjunction with relevant drawings and/or electronically via handheld computers. This information should then be summarised on a block basis.

2.9 The survey should be carried out by a professional estates surveyor or someone with suitable technical knowledge, skills and prior experience of carrying out this type of survey.

Physical condition

2.10 Physical condition should be assessed on the basis of 16 building and engineering elements, which should be broken down into a series of sub-elements. The 16 elements, together with typical sub-elements, are shown in Table 2.1.

2.11 The number of sub-elements in Table 2.1 is not exhaustive, and you may need to add/delete them, as appropriate, according to the assets being surveyed. (Appendix 2 highlights further information relating to sub-elements most commonly used.)

Mandatory fire safety requirements and statutory safety legislation

2.12 Compliance with mandatory fire safety requirements and statutory safety legislation should be assessed on the following:

Fire safety:

1. Compartmentation
2. Fire doors
3. Means of escape
4. Alarms and detection systems
5. Textiles and furniture relevant to fixed assets
6. Storage of flammable substances
7. Compliance with ‘Firecode’ (NHS Estates)

Statutory safety legislation:

1. Electrical services – supply and distribution
2. Asbestos
3. Control of legionellae
4. Compliance with Health & Safety at Work etc Act 1974
5. Food hygiene
6. Compliance with Control of Substances Hazardous to Health (COSHH) Regulations 2002

7. Compliance with safety provisons for the disabled (see also ‘Access to Health Service Premises: Audit Checklist’, DH)
8. Pressure systems
9. Maintenance and operation of equipment in confined spaces
10. Surface temperature of surface heat-emitting devices and/or mixers (safe temperatures).

2.13 As for physical condition, the fire safety and statutory safety elements should be broken down into sub-elements. (Appendix 2 provides helpful examples.)

Collect background information

2.14 Prior to conducting your survey, you will need:

- to identify key staff to interview who have an understanding of the history of the property;
- to identify impending legislative requirements;
- up-to-date drawings of each block, showing room layouts complete with room numbers (ideally, A3 or A4 format);
- records of the age of each block (when built);
- records of the age of all fixed plant and equipment (when installed);
- details of previous modernisation and upgrading schemes;
- history of previous defects and failures.

Information to be noted during the survey

2.15 A note should be made of the following information, supported by suitably marked-up drawings and/or photographs:

- type of building construction and component parts;
- type/manufacturer of engineering services;
- physical condition ranking of building and engineering sub-elements;
- ranking relevant to compliance with mandatory fire safety requirements and statutory safety legislation;
- identified failures or damage;
- for sub-elements in condition B, the period (in years) to remain in condition B;
- estimated remaining life of each block* (that is, time to reach condition D where the block is operationally unsound/unreliable and/or dangerously unsafe and in imminent danger of breakdown rendering it unfit for use).

Note: * For buildings that form part of the NHS estate this would effectively mean an update of the estimated remaining life assigned by the District Valuer during the previous survey.

Period to remain in condition B

2.16 For sub-elements in condition B, the period (in years) to remain in condition B should be judged using the following information:

- age of the asset;
- building construction dates;
- building services installation dates;
- evidence of residual robustness;
- evidence of deterioration;
- historical information on failures;
- effectiveness of planned maintenance;
- information on tests carried out over current life;
- knowledge of current and impending mandatory fire safety requirements and statutory safety legislation.

2.17 Where information is limited, findings may be compared with standard data on life expectancies as listed in Appendix 3. This data takes account of the concepts of durability and obsolescence and may further influence estimations of the assessed period.

2.18 If the age of the asset is not clear, you should compare the existing construction/provision against similar ones and make a best estimate.

2.19 Other factors to take into consideration include the design and style of installations. These often “fix” the era in which the building/services was/were built/installed. Local staff can also provide valuable information on the dates of particular upgrades.

2.20 Where the period to remain in condition B is five years or less, the sub-element should be recorded and assigned a B(C) ranking (see Chapter 3 for further details).

TABLE 2.1 PHYSICAL CONDITION ELEMENTS/SUB-ELEMENTS

ELEMENT		SUB-ELEMENT	
1.	**STRUCTURE**	FOUNDATIONS WALLS FRAMES FLOORS ROOFS	All below-ground work, foundations, ducts, structural frame, walls, DPC, floors (structure), roof structure All external structures *DPC = damp proof course*
2.	**EXTERNAL FABRIC**	WALLS & FINISHES	Brickwork, all external wall finishes, facade surface treatment – stone, brick, concrete, pointing, cement rendering, flashings etc
		WINDOWS	All windows
		DOORS	All doors
		EXTERNAL TIMBER/PVCu DETAIL	Cladding, timber/PVCu boarding, cladding panels and sealants *PVCu = Polypropylene with ultraviolet protection*
		DECORATION	Decoration quality
3.	**ROOFS**	COVERINGS – PITCH	Pitched roofs: slates, tiles, copper, aluminium etc, including insulation
		COVERINGS – FLAT	Flat roofs: bituminous felt, reinforced felt, asphalt, proprietary coverings
		ROOF LIGHTS	All types
		RAIN WATER GOODS	All types
4.	**INTERNAL FABRIC & FIXTURES**	WALLS & FINISHES	All internal finishes to walls, floors plus internal windows, glazed partitions, including plasterwork
		CEILINGS	All internal finishes ceilings, suspended ceilings
		FLOOR COVERINGS	All floor coverings including ceramic/quarry tiles
		DOORS	All internal doors and door furniture
		DOOR FURNITURE	
		UNIT FURNITURE	All built-in fitments: cupboards, cabinets, worktops, shelving
		DECORATION	Decoration quality
5.	**EXTERNAL BUILDING WORKS**	DRAINAGE	Surface water drainage gullies, main site sewers, treatment plants and drainage within the building infrastructure
		ROADS/CAR PARKS	All internal roads, parking areas, paved areas, tarmac For local blocks include only the immediate perimeter of the building
		PATHS	
		BLOCK/PAVED AREAS/ TARMAC AREAS/CONCRETE AREAS	
		WALLS	All types of boundary walls
		FENCING/GATES	All types of fences, gates
6.	**ENERGY CENTRE SYSTEMS**	FUEL SUPPLY/STORAGE/ DISTRIBUTION	Gas supply pipework and metering stations, gas storage (propane), oil storage and distribution
		BOILER PLANT	All types of boilers: steam, HTHW, MTHW, LPHW and associated plant and equipment. All flues directly connected up to, but not including, steel/brick/concrete stack *HTHW = High temperature hot water* *MTHW = Medium temperature hot water* *LTHW = Low temperature hot water*
		PRESSURISATION PLANT	Pressurisation plant for both heating and DHW systems *DHW = domestic hot water*
		BOILER TREATMENT PLANT	De-alk–De-gas plant, TDS control and softening plant *TDS = total dissolved solids* *De-alk–De-gas = a type of water treatment plant*
		CALORIFIERS/HEAT EXCHANGERS	Heating calorifiers, plate heat exchangers
		DHW STORAGE/NON-STORAGE	Storage calorifiers, storage cylinders, thermal stores, direct fired water heaters, plate heat exchangers *DHW = domestic hot water*
		FLUES – SEPARATE	Steel/brick/concrete stack/chimneys
		CONTROLS/METERS	Control systems for all energy-using equipment
		GENERATORS	All types

ELEMENT		SUB-ELEMENT	
7.	**HEATING SYSTEMS**	PIPEWORK	Steam and condensate pipework, all pipework associated with heating systems. Include both surface and under-floor/heated ceiling types
		HEAT EMITTERS	All types of heat emitters including fixed electrical heating
		INSULATION	Insulation to steam and heating pipework
		HEATING PUMPS	All types
8.	**HOT & COLD WATER SYSTEMS**	POTABLE COLD WATER TANKS	All water storage tanks, including water transfer tanks. Includes external water supplies – reservoirs
		DOMESTIC HOT WATER HEADER TANKS	
		GENERAL HEADER TANKS	
		WATER TREATMENT PLANT	Potable water treatment plant including tanks, softeners, local pipework, valves and controls
		DISTRIBUTION	All pipework, internal and external including fire hydrants and systems
		PUMPS	DHW pumps and associated booster pumps including water transfer *DHW = domestic hot water*
		SANITARY WARE/SANITARY FITTINGS	Including sanitary ware, cisterns, sanitary fittings, valves, taps and other fittings and waste piping but not electrically operated plant such as bedpan disposal equipment, wash-up, macerators etc (ie power-operated equipment)
		INSULATION	All pipework insulation
		ANCILLARY EQUIPMENT	Valves/controls
9.	**VENTILATION SYSTEMS**	VENTILATION PLANT	All types of supply and extract plant, modular, plenum etc including equipment installed to the plant such as filter units, sound attenuation, humidifiers, heater batteries, chiller coils etc including all insulation
		DISTRIBUTION	Ductwork and terminals including ductwork insulation
		ROOM SPLIT CHILLERS/ COMPRESSORS	All split chillers as installed in rooms and associated pipework/ insulation
		CHILLERS/COOLING SYSTEMS	Main chiller plant, cooling towers, local treatment plant for cooling towers
		CONTROLS	
		INSULATION	
10.	**MEDICAL GAS PIPELINE SERVICES**	VIE	Main storage (bulk liquid oxygen) *VIE = vacuum insulated evaporator*
		DISTRIBUTION	Excludes portable gas cylinders but includes distribution system, outlets, manifolds/storage and security alarm systems. Includes oxygen generators Includes medical air compressors and storage/manifold systems, vacuum plant and vessels
		MANIFOLDS	
		OUTLETS	
		ALARM SYSTEMS	
		MEDICAL AIR COMPRESSORS/VACUUM PUMPS	
11.	**LIFTS & HOISTS**	PASSENGER	All lift cars and drive mechanisms, rope, hydraulic, rope crawlers
		GOODS	
		HOISTS	
		CONTROL PANEL	Control panels and associated motor room safety gear

ELEMENT		SUB-ELEMENT	
12.	**FIXED PLANT/ EQUIPMENT**	STERILIZERS	All fixed installation types, porous load, downward displacement, path lab, but not including portable bench-top types
		BEDPAN DISPOSAL	All types, macerators, disinfectors
		DISINFECTION EQUIPMENT	Ultrasonic baths, anaesthetic equipment disinfectors and all other disinfectors as installed in sterile services units or related departments
		CATERING EQUIPMENT	All fixed catering equipment. Does not include bench top items as portable appliances. Small items such as cookers and fridges etc should also be omitted
		LAUNDRY EQUIPMENT	All fixed laundry equipment. Small domestic type laundry equipment should be omitted
		MISCELLANEOUS EQUIPMENT	Related equipment not included in the above
13.	**ELECTRICAL SYSTEMS**	WIRING SYSTEMS/BONDING	All types of wiring systems including wiring, outlets, support systems (conduit trunking tray systems etc), cables and main distribution cables from sub-stations. Includes both LV and HV systems as applicable *LV = low voltage* *HV = high voltage*
		DISTRIBUTION BOARDS	Main intake/section boards/distribution boards, switches, including domestic type installation
		SWITCHGEAR	Main switchgear and metering stations. Includes both LV and HV systems as applicable
		LUMINAIRES	Internal and external luminaires
		LUMINAIRES – EMERGENCY	Emergency lighting, including central supply systems
		LIGHTNING PROTECTION	All protection systems
14.	**ALARMS & DETECTION SYSTEMS**	FIRE ALARM WIRING SYSTEM	Wiring and support systems
		SECURITY SYSTEMS	All components, wiring, panel, detectors
		OTHER ALARM SYSTEMS	All components, wiring, panel, detectors
15.	**COMMUNICATION SYSTEMS**	TELEPHONE SYSTEMS	Wiring and cable support systems, central hubs and switchgear. Not including remote (plug-in type) hubs, point-of-use equipment
		DATA TRANSMISSION	Wiring and cable support systems, central hubs and switchgear. Not including remote (plug-in type) hubs, point-of-use equipment
		PAGING SYSTEMS	Transmitter and control equipment only
		NURSE CALL SYSTEMS	Wiring and cable support systems, control panels but not including point-of-use equipment
		RADIO & TELEVISION SYSTEMS	Wiring and cable support systems, control panels but not including point-of-use equipment
		BUILDING MANAGEMENT SYSTEM	Wiring and cable support systems, main terminals, local outstations, but not including point-of-use equipment
16.	**MISCELLANEOUS**	INDUSTRIAL GAS SYSTEMS	Gas systems as installed to path labs and other like uses
		WET AND DRY RISERS	Fire protection systems including sprinkler systems
		HYDROTHERAPY POOL	Hydrotherapy pool and all associated equipment, water treatment, pumps and calorifiers
		MISCELLANEOUS	Ad-hoc items not covered anywhere else

3. Condition ranking

Overview

3.1 You should allocate a condition ranking for each sub-element relating to physical condition and compliance with mandatory fire safety requirements and statutory safety legislation, as appropriate.

3.2 Where a particular sub-element (for example fire doors) is assessed on the basis of its physical condition and compliance with fire safety and/or statutory legislation, separate rankings should be assigned for physical condition, fire safety etc. (See Chapter 6 for guidance on how you should record the various rankings.)

Ranking for physical condition

3.3 Each sub-element of the 16 building and engineering elements should be ranked according to the definitions in Table 3.1. Appendix 2 provides a list of indicators to help you assign the correct rankings.

TABLE 3.1: RANKINGS FOR PHYSICAL CONDITION

The physical condition of each sub-element should be categorised as follows:	
A	**as new and can be expected to perform adequately to its full normal life**
B	**sound, operationally safe and exhibits only minor deterioration**
B(C)†	**currently as B but will fall below B within five years**
C	**operational but major repair* or replacement is currently needed to bring up to condition B**
D	**operationally unsound and in imminent danger of breakdown****
X	**supplementary rating added to C or D to indicate that it is impossible to improve without replacement**

* Expenditure for major repair would be expected to exceed one-third of the sub-element's replacement cost. This will usually be funded from capital although it could come from revenue as part of routine maintenance, depending on the investment solution adopted.

** Expenditure required to bring a condition D sub-element up to condition B would be expected to exceed 50% of its replacement cost. This will also usually be funded from capital.

† Sub-elements classified as B(C) should not be considered as backlog until such time as the condition of the sub-element has fallen to below condition B. Such sub-elements would be expected to be sustained in condition B by ensuring the required investment is made in sufficient time to prevent the sub-element falling below condition B.

Ranking for compliance with mandatory fire safety requirements and statutory safety legislation

3.4 Each sub-element of the seven mandatory fire safety elements and ten statutory safety elements should be ranked according to the definitions in Table 3.2. Appendix 2 provides a list of indicators to help you assign the correct rankings.

TABLE 3.2 RANKINGS FOR COMPLIANCE WITH MANDATORY FIRE SAFETY REQUIREMENTS AND STATUTORY SAFETY LEGISLATION

Each sub-element should be ranked according to compliance with mandatory fire safety requirements (including 'Firecode') and statutory safety legislation as follows:	
A	**complies fully with current mandatory fire safety requirements and statutory safety legislation**
B	**complies with all necessary mandatory fire safety requirements and statutory safety legislation with minor deviations of a non-serious nature***
B(C)†	**currently as B but will fall below B within five years as a consequence of unabated deterioration or knowledge of impending mandatory fire safety requirements or statutory safety legislation**
C	**contravention of one or more mandatory fire safety requirements and statutory safety legislation, which falls short of B**
D	**dangerously below conditions A and B**

* Minor deviation of a non-serious nature means a small breach in mandatory fire safety requirements or statutory safety legislation that is currently not of concern to the enforcement bodies and will be rectified through normal revenue expenditure. The minor breach will also present only a very insignificant impact on safety.

† Sub-elements classified as B(C) should not be considered as backlog until such time as the condition of the sub-element has fallen to below condition B. Such sub-elements would be expected to be sustained in condition B by ensuring the required investment is made in sufficient time to prevent the sub-element falling below condition B.

4. Costing

Backlog maintenance costs

4.1 For sub-elements currently in condition C and below you should establish the costs to bring them up to condition B (known as backlog maintenance costs).

4.2 Costs to bring a sub-element up to condition B should ensure that the sub-element will remain in condition B for at least the next five years. Where sub-elements require replacement, appropriate account should be taken within the costs to ensure that the new asset complies with relevant modern technology, legislation or improved operational efficiency requirements.

4.3 Where a particular sub-element (for example fire doors) is categorised as below condition B in terms of its physical condition and compliance with mandatory fire safety requirements and/or statutory safety legislation, you should identify costs relating to physical condition, fire safety etc separately, as well as total costs. (See Chapter 6 for guidance on how you should record backlog costs.)

4.4 Costs should be derived from the following sources:

- local knowledge/experience of similar projects recently implemented or costed;
- Departmental Cost Allowance Guides (DCAGs) (if you need to replace assets);
- cost information provided by professional specialist publications.

4.5 On occasion it may be necessary to use nominal costs based on professional judgement and experience.

4.6 All estimated costs should reflect current prices, even though the work might not be carried out until some future date.

4.7 Backlog costs should be expressed as works costs (that is, the base cost to undertake the work). Additional costs that are dependent upon the project solution chosen (for example fees, VAT, decanting and temporary services to other areas) should be excluded from backlog costs but included in the overall cost of investment required/requested.

4.8 Works costs should include all direct costs necessary to rectify the deficiencies and bring the element/sub-element up to condition B, inclusive of temporary diversions to pipework or facilities to gain access to the element/sub-element.

4.9 Where a period of time has elapsed since backlog costs were determined for a specific sub-element, the impact of market prices and further deterioration in its condition should be reviewed by inspection and by updating costs using the sources identified in paragraph 4.4.

4.10 Where the condition of the asset has remained relatively unchanged over the period and sufficently accurate backlog costs can be derived by updating backlog costs in line with inflation only, the Building Cost Index (BCI) as published by NHS Estates in Quarterly Briefing should be applied to works costs.

4.11 This index should be applied from the quarter (Q4) at the end of the year in which the backlog cost was determined to the end of the year (Q4) for which the index-adjusted costs are required. Indexed costs are calculated by multiplying the original cost figure by the ratio of the indexes between the years.

Impending backlog

4.12 For investment planning purposes, you should estimate impending backlog over a five-year period based on knowledge of the anticipated rate of deterioration in asset condition and known future legislative requirements/changes to standards.

4.13 Impending backlog relates to B(C) sub-elements (sub-elements currently in condition B that will fall below B within five years).

4.14 The cost to bring B(C) sub-elements up to condition B at the future point in time at which you estimate they will have fallen below B (assuming no major investment in the interim) should be estimated and recorded under the appropriate years.

4.15 Account should be taken of impending backlog to ensure funding is available at the right time to expend on the assets and prevent them falling below condition B, and thereby becoming backlog.

4.16 Where a particular sub-element (for example fire doors) is categorised as condition B(C) in terms of its physical condition and compliance with mandatory fire safety requirements and/or statutory safety legislation, you should identify future costs relating to physical condition, fire safety etc separately, wherever possible, as well as total impending costs. (See Chapter 6 for guidance on how you should record impending backlog costs.)

Costs to maintain in condition B

4.17 Costs to sustain condition B sub-elements in condition B during the forthcoming financial year should also be established. These will usually be funded from revenue allocations.

4.18 The sum of these costs and B(C) costs identified in year one (usually funded from capital) will be the total expenditure required to ensure that assets currently in condition B remain in that condition by the end of year one.

5. Risk assessment

Overview

5.1 Sub-elements currently below condition B together with sub-elements in condition B(C) should be risk assessed in order to identify high risk factors in the estate that need to be addressed urgently and those that can be programmed into your estate investment planning process over a longer period. (See Chapter 6 for guidance on how you should record risk.)

5.2 Risks should be assessed according to the likelihood that the risk will be realised and the severity of the impact should failure occur. This will produce a final risk score and ranking for each sub-element.

The risk assessment process

5.3 For each sub-element being risk assessed, you should follow the process outlined in Figure 5.1. This is based on standard risk assessment theory (Risk management, Standards Association of Australia 1999).

5.4 See Figure 5.2 for a list of indicators to help you assign the correct consequence and likelihood scores.

5.5 When estimating the likelihood and potential consequences of an undesirable event or potential failure occurring, the assessor should use standard risk analysis techniques. This should include the use of:

- relevant historical data;
- professional/technical judgement.

5.6 Analysis of the potential consequences should consider:

- existing measures to mitigate the consequences together with all relevant conditions that have an effect on the consequence;
- both immediate consequences and those that may arise after a certain time has elapsed;
- the consequences of not undertaking the appropriate repairs/replacement. These include:
  - increased risk to patients;
  - potential for legal enforcement notices;
  - corporate manslaughter charges in the event of serious incidents;
  - significant disruption to clinical activity;
  - lowering of staff morale and recruitment difficulties;
  - escalation of capital investment requirements due to accelerated deterioration.

Figure 5.1 Risk assessment process

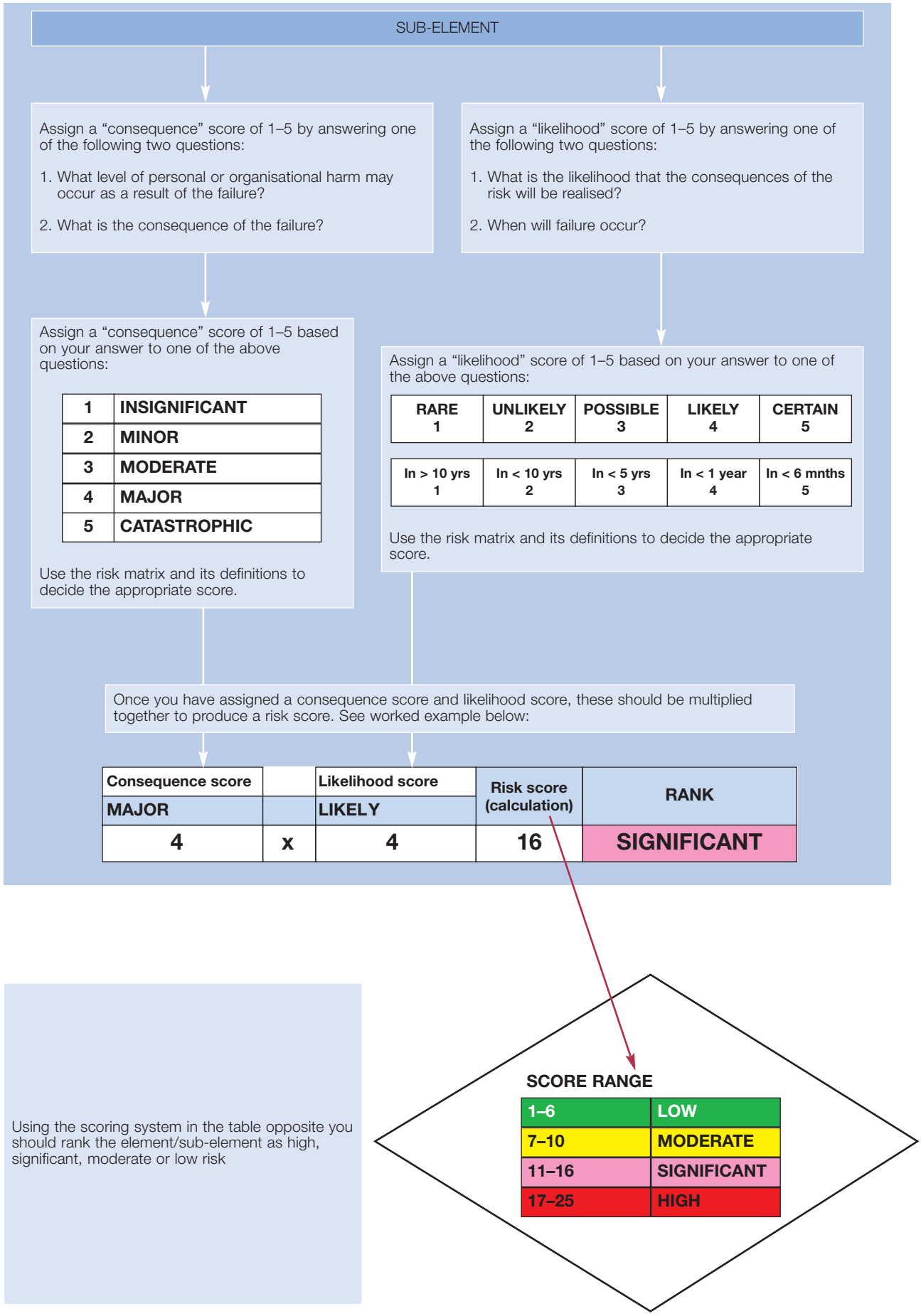


Figure 5.2 Risk matrix

SCORE RANGE	RISK RANKING
1–6	LOW
7–10	MODERATE
11–16	SIGNIFICANT
17–25	HIGH

							PROBABILITY OF FAILURE				
						Rating	1	2	3	4	5
						Failure descriptors	RARE	UNLIKELY	POSSIBLE	LIKELY	CERTAIN
							None or minimal remedial action required and/or new/recent upgrade. Estimated time to failure may be circa > 10 yrs	Normal wear and tear. Sound, operationally safe and exhibits only minor deterioration. Estimated time to failure may be circa < 10 yrs	Reasonable physical damage/ deterioration. Reassignment of life may be acceptable based on technical tests or residual robustness. Estimated time to failure may be circa < five yrs	Major physical damage/ deterioration. Failure apparent/ assessed as imminent or unacceptable built environment. Not appropriate to reassign life. Estimated time to failure may be circa < one yr	Failure occurred. Unacceptable built environment. Not appropriate to reassign life. Estimated time to failure may be circa < six months
	SEVERITY		Health & safety	Environment	Business	Operational/ building/ engineering element	**Fire/statutory** Complies with mandatory fire safety requirements and statutory safety legislation.	**Fire/statutory** Complies with mandatory fire safety requirements and statutory safety legislation with minor deviations of a non-serious nature	**Fire/statutory** Known contravention of one or more requirements – which falls short of "B".	**Fire/statutory** Dangerously below "B"	**Fire/statutory** Dangerously below "B"
POTENTIAL CONSEQUENCES	Rating	Descriptor									
	1	INSIGNIFICANT	No injury/breach of guidance/ procedures	No or minimal impact breach of guidance/ procedures.	Unlikely cause of complaint. Litigation remote. Minimal reputation loss/ limited awareness within organisation.	Minimal or no impact. Minimal or no disruption.	1	2	3	4	5
	2	MINOR	Minor injury/ill health (first aid or self-treatment). Breach of legal requirement.	Breach of legal requirement.	Possible complaint Litigation unlikely. Loss of reputation (widespread internal awareness).	Localised impact. Disruption to normal services.	2	4	6	8	10
	3	MODERATE	Moderate injury/ill health statutory obligations. Improvement notice issued.	Single breach of legal requirement. Improvement notice issued.	Possible complaint. Possible litigation. Loss of reputation. National paper reporting.	Moderate impact. Moderate disruption to normal services.	3	6	9	12	15
	4	MAJOR	Major/significant injury or long-term incapacity/disable-ment. Prohibition notice issued.	Multiple breach of legal requirement. Prohibition notice issued.	Litigation expected. Loss of reputation National reporting.	Major/significant impact. Severe disruption to normal services.	4	8	12	16	20
	5	CATASTROPHIC	Fatality and/or permanent incapacity/ disability. Prosecution.	Multiple breach of legal requirement. Prosecution.	Litigation certain. National adverse publicity.	Critical impact. Service closure.	5	10	15	20	25

5.7 Any risk ranking result should be compared against experience and other confirmatory data. This could mean reviewing the initial results using a small group of appropriate staff.

5.8 The risk assessment of B(C) sub-elements should be based on an estimate of the likelihood of failure between the time of the survey and the year in which the sub-element is expected to fall below condition B and the potential consequence should failure occur. This will provide an indication of the degree to which the asset is at risk of failure as it approaches condition C.

Risk categories

5.9 The results of your risk assessment exercise should feed into your immediate and longer-term investment planning process.

5.10 Low risk elements can be addressed through agreed maintenance programmes or included in the later years of your estate strategy.

5.11 Moderate risk elements should be addressed by close control and monitoring. They can be effectively managed in the medium term so as not to cause undue concern to statutory enforcement bodies or risk to healthcare delivery or safety. These items require expenditure planning for the medium term.

5.12 Significant risk elements require expenditure in the short term but should be effectively managed as a priority so as not to cause undue concern to statutory enforcement bodies or risk to healthcare delivery or safety.

5.13 High risk elements must be addressed as an urgent priority in order to prevent catastrophic failure, major disruption to clinical services or deficiencies in safety liable to cause serious injury and/or prosecution.

Risk-adjusted backlog

5.14 Backlog costs and associated risk rankings should be combined to produce a risk-adjusted backlog figure for comparative purposes and as a driver for the eradication of high-risk sub-elements and buildings with short remaining lives.

5.15 Organisations should use the results of the following formula to benchmark progress made towards eliminating backlog risk and to inform investment decisions to ensure occupied healthcare assets are safe and in an acceptable condition. This should be calculated for each building/block.

$$\text{Risk-adjusted backlog (£)} = \frac{\text{Non-critical backlog}}{\text{Remaining life of building/block}} + \text{Safety-critical backlog}$$

Where:

Non-critical backlog (£) = Total backlog cost relating to low and moderate risk sub-elements for the building/block

Remaining life (years) = Remaining life of the building/block

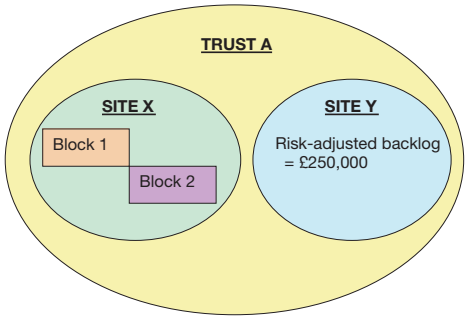
Safety-critical backlog (£) = Total backlog cost relating to significant and high risk sub-elements for the building/block

5.17 Remaining life should be based on the District Valuer's quinquennial survey which should be reviewed annually to take account of the impact of investments since the previous DV survey. Where DV information is not available, such as when a building has recently been purchased, the remaining life should be assessed on the basis of professional judgement following a review of the overall condition of the building assets. Estimated life expectancy figures as shown in Appendix 3 may assist with this process.

5.18 The risk-adjusted backlog formula is based on the premise that the eradication of safety-critical backlog will have a greater impact on the risk-adjusted figure than non-critical backlog (and hence will focus attention on reducing high- and significant-risk sub-elements). Similarly, the higher the remaining life of each building/block, the longer the period in which the lower-risk sub-elements can be addressed and therefore the lower the risk-adjusted backlog figure.

5.19 Risk-adjusted backlog figures derived for each building/block can then be summated to produce a figure at site or organisational level.

5.20 An example of how to calculate risk-adjusted backlog is as follows:



Trust A has two sites (X and Y).

Site X has two buildings (block 1 and block 2).

Block 2 has a risk-adjusted backlog figure of: £85,000

Site Y has a risk-adjusted backlog figure of: £250,000

Block 1 has the following backlog and remaining life figures:

- estimated remaining life = 30 years
- Sum of all high risk backlog sub-elements = £15,000
- Sum of all significant risk backlog sub-elements = £30,000
- Sum of all moderate risk backlog sub-elements = £200,000
- Sum of all low risk backlog sub-elements = £400,000

Total backlog cost = £645,000

Then:

Risk-adjusted backlog for block 1:

$$= \frac{(£200,000 + £400,000) + (£15,000 + £30,000)}{30}$$

= £20,000 + £45,000

= £65,000

Total risk-adjusted backlog for site X:

= block 1 + block 2

= £65,000 + £85,000

= £150,000

Total risk-adjusted backlog for trust:

= site X + site Y

= £150,000 + £250,000

= £400,000

6. Presentation of findings

6.1 Costs and ranks (condition and risk), together with relevant comments from the data collection forms, should be recorded on standardised survey report forms. (See Appendix 5 for a suggested format for the survey report forms.)

6.2 Once the survey report forms have been completed, this information may be transferred to a spreadsheet (called a backlog profile) that provides an overview of both current backlog maintenance costs and ranks and a forecast for the next five years. (See Appendix 6 for a suggested format for the backlog profile.)

6.3 Table 6.1 illustrates how the backlog profile should be completed.

6.4 Where a particular sub-element (for example fire doors) is in condition C or below in terms of physical condition and compliance with mandatory fire safety requirements and/or statutory safety legislation, you should record the condition rankings and associated backlog costs separately. However, you should only record the worst risk ranking as this will take precedence. (See example 5 of Table 6.1.)

6.5 Where a particular sub-element is in condition B(C) in terms of physical condition and compliance with mandatory fire safety requirements and/or statutory safety legislation you should record the condition rankings, costs and risk rankings separately. (See examples 10 and 11a of Table 6.1.)

6.6 However, if the estimated time for sub-elements in condition B(C) to fall below B is identical with respect to physical condition, fire safety and/or statutory safety legislation, and it is impossible or impractical to segregate costs, you should just record the total cost and worst risk ranking. (See example 11b of Table 6.1.)

Information on the condition of your estate assets should be available for reporting to external bodies so that, over time, national investment in the NHS estate can be matched to overall improvements in the condition of the estate.

6.7 Information should be summarised for your trust board and investment decision-makers in a way that is meaningful to them. This may include:

- a tabulated summary of the condition, cost and risk information at site or block level;
- graphs showing the proportion of backlog costs relevant to condition rankings;
- graphs showing the proportion of backlog costs relevant to risk rankings;
- site layout drawings with individual blocks marked up to identify key condition, cost and risk information;
- a narrative to describe problems identified by the condition survey and to explain the rationale for the condition and risk rankings.

Backlog cost summary

6.8 Following the completion of the backlog profile, you may produce a backlog cost summary for each hospital site and on a trust-wide basis (see Table 6.2). This brings together key information from the profile with existing investment and disposal plans.

TABLE 6.1 AID TO COMPLETION OF BACKLOG PROFILE (SEE ALSO APPENDIX 6)

✓ Denotes cell where a figure or number is required to be shown.

EXAMPLE CONDITION SCENARIOS	ASSET SUB-ELEMENT ASSESSMENT	CONDITION RANK			COST TO MAINTAIN IN CONDITION B	CURRENT BACKLOG COST				IMPENDING BACKLOG COST					RISK SCORE				CURRENT BACKLOG RISK	IMPENDING BACKLOG RISK					NOTES
		PHYSICAL CONDITION	MANDATORY FIRE SAFETY REQUIREMENTS	STATUTORY SAFETY LEGISLATION		PHYSICAL CONDITION	MANDATORY FIRE SAFETY REQUIREMENTS	STATUTORY SAFETY LEGISLATION	TOTAL BACKLOG COST	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	CONSEQUENCE SCORE	LIKELIHOOD SCORE	RISK SCORE	RISK RANK		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
		Rank	Rank	Rank	£	£	£	£	£	£	£	£	£	£	No.	No.	No.	Rank	Rank	Rank	Rank	Rank	Rank	Rank	
1	Physical condition: B. Fire safety condition: B Statutory safety condition: B	✓			✓																				Costs NOT classified as backlog but simply that necessary to maintain the sub-element in condition B for the forthcoming financial year. Risk not applicable. (Note: Only record condition B sub-elements where there is a cost to maintain that sub-element in condition B)
2	Physical condition: C. Fire safety condition: B Statutory safety condition: B	✓				✓			✓						✓	✓	✓	✓	✓						Costs classified as current backlog and related to physical condition. Risk related to physical condition
3	Physical condition: B. Fire safety condition: C Statutory safety condition: B		✓				✓		✓						✓	✓	✓	✓	✓						Costs classified as current backlog and related to fire safety. Risk related to fire safety
4	Physical condition: B. Fire safety condition: B Statutory safety condition: C			✓				✓	✓						✓	✓	✓	✓	✓						Costs classified as current backlog and related to statutory safety. Risk related to statutory safety
5	Physical condition: C. Fire safety condition: B Statutory safety condition: C	✓		✓		✓		✓	✓						✓	✓	✓	✓	✓						Costs are current backlog and apportioned between physical condition and statutory safety. Record worst risk ranking
6	Physical condition : B(C) Fire safety condition: B Statutory safety condition: C	✓										✓			✓	✓	✓	✓				✓			Sub-element in condition C for statutory safety. Expected to fall below condition B for physical condition in year 3. Costs related to statutory safety are current backlog but future backlog with regard to physical condition. Current risk related to statutory safety. Future risk based on physical condition falling below condition B in year 3
				✓				✓	✓						✓	✓	✓	✓	✓						
7	Physical condition: B(C) Fire safety condition: B Statutory safety condition: B	✓										✓			✓	✓	✓	✓				✓			Sub-element in condition B but expected to fall below condition B for physical condition in year 3. Costs are NOT currently backlog. Future risk based on physical condition falling below condition B in year 3
8	Physical condition: B. Fire safety condition : B(C) Statutory safety condition: B		✓								✓				✓	✓	✓	✓			✓				Sub-element in condition B but expected to fall below condition B for fire safety in year 2. Costs are NOT currently backlog. Future risk based on sub-element falling below condition B for fire safety in year 2
9	Physical condition: B. Fire safety condition: B Statutory safety condition : B(C)			✓							✓				✓	✓	✓	✓			✓				Sub-element in condition B but expected to fall below condition B for statutory safety in year 2. Costs are NOT currently backlog. Future risk related to sub-element falling below condition B for statutory safety in year 2
10	Physical condition : B(C) Fire safety condition: B Statutory safety condition : B(C)	✓									✓				✓	✓	✓	✓			✓				Sub-element in condition B but expected to fall below condition B for statutory safety in year 2 and below condition B for physical condition in year 4. Costs are NOT currently backlog. Apportion costs to bring sub-element back to condition B for statutory safety in year 2 and for physical condition in year 4. Future risks based on sub-element falling below condition B in terms of statutory safety and physical condition in years stated
				✓									✓		✓	✓	✓	✓					✓		
11a	Physical condition : B(C) Fire safety condition : B(C) Statutory safety condition: B	✓									✓				✓	✓	✓	✓			✓				Sub-element in condition B but expected to fall below condition B for both fire safety and physical condition B in year 2. Costs are NOT currently backlog. Apportion future costs between fire safety and physical condition. Record risks separately
			✓								✓				✓	✓	✓	✓			✓				
11b	Physical condition : B(C) Fire safety condition : B(C) Statutory safety condition: B	✓	✓								✓				✓	✓	✓	✓			✓				Same situation as example 11a - except it is not possible or appropriate for the costs to be separated and/or the repairs have to be carried out at the same time. If this is the case, record the total cost in the appropriate year and the worst risk ranking

TABLE 6.2

BACKLOG COST SUMMARY

TRUST:

DATE: 31 March XXXX year

NOTES:

1. The sum of backlog costs relating to each asset sub-element classified as currently below condition B can be grouped at building, site or organisational level in a number of ways in order to give meaning to the quantum and risk factors associated with backlog and to inform investment decisions.
2. The following illustrates recommended ways in which backlog costs should be grouped:

BREAKDOWN OF TOTAL BACKLOG COST

TOTAL BACKLOG COST BROKEN DOWN BY CATEGORY		OR	TOTAL BACKLOG COST BROKEN DOWN BY CONDITION		OR	TOTAL BACKLOG COST BROKEN DOWN BY RISK RANKING	
Sum of all backlog costs relating to PHYSICAL condition sub-elements	£9,250,111		Sum of all backlog costs relating to CONDITION C sub-elements	£9,560,936		Sum of all backlog costs relating to HIGH risk sub-elements	£98,238
Sum of all backlog costs relating to FIRE SAFETY sub-elements	£320,045		Sum or all backlog costs relating to CONDITION D sub-elements	£50,250		Sum of all backlog costs relating to SIGNIFICANT risk sub-elements	£303,459
Sum of all backlog costs relating to STATUTORY SAFETY sub-elements	£41,030					Sum of all backlog costs relating to MODERATE risk sub-elements	£2,106,672
						Sum of all backlog costs relating to LOW risk sub-elements	£7,102,817
TOTAL BACKLOG COST	£9,611,186	=	TOTAL BACKLOG COST	£9,611,186	=	TOTAL BACKLOG COST	£9,611,186

Extracted backlog costs:

NOTE: The following costs can be extracted from the above total backlog cost:

FREEHOLD PROPERTY of the NHS estate	Sum of all backlog costs relating to sub-elements within buildings/blocks that form part of the NHS estate (ie on balance sheet as an NHS asset)	£8,333,467
OR		
LEASED PROPERTY	Sum of all backlog costs relating to sub-elements within buildings/blocks that are leased from non-NHS organisations	£1,277,719
OR		
MAJOR CAPITAL INVESTMENT	Sum of all backlog costs relating to sub-elements within all buildings/blocks that are due to receive MAJOR CAPITAL INVESTMENT (ie above £1m) via schemes that have achieved trust board approval or full business case (publicly-funded) or financial close (private finance) approval. Such schemes would not necessarily be specifically targeting backlog maintenance but would contribute to its reduction as a consequence of the investment	£3,248,502
OR		
PROPERTY DISPOSALS/DISINVESTMENT STRATEGY	Sum of all backlog costs relating to sub-elements within buildings/blocks that are to be vacated and disposed of within five years as part of a trust board approved disinvestment strategy	£2,115,099

Costs to maintain assets currently in condition B (ie not classified as backlog)

COST TO MAINTAIN CONDITION B ASSETS THROUGHOUT THE FOLLOWING YEAR	Sum of all costs (revenue and capital) associated with sub-elements classified as currently in condition B but expected to fall below condition B during the forthcoming year (1). This will be a combination of assets in Impending backlog condition B(C) and assets that require minor maintenance to sustain them in condition B	£423,867

7. Estate investment planning

Overview

7.1 Your backlog profile and backlog cost summary should be considered by your director of estates (or informed client) and fed into your estate investment planning process.

7.2 The principal aim of estate investment planning is to bring all estate assets up to condition B as quickly as possible. You should ensure that risks to patients, staff and visitors are minimised and that statutory enforcement bodies have no major concerns; in other words you should ensure that high and significant risk items are eradicated as a priority.

7.3 Lower risk items may be dealt with over a more extended time-scale but should still be eradicated as early as practical.

7.4 Estate investment planning should form part of the process of developing your estate strategy and reflect the overall strategic direction of your organisation.

Estate investment planning

7.5 Estate investment planning should take account of all costs (for example works costs, fees, VAT etc) to be funded and the solution(s) likely to be adopted to bring assets up to condition B (for example as part of a major capital development or separately funded).

7.6 It should identify your immediate investment needs, including costs to address risk-prioritised sub-standard assets and costs to maintain assets in condition B.

7.7 It should also identify your longer-term investment needs, including ongoing costs to maintain assets in condition B and, possibly, costs to address low and moderate risk items that cannot be rectified in the short term.

Contingency planning

7.8 Where a major capital scheme is planned, which will bring some or all of your assets up to condition B, it may be prudent to identify alternative means of tackling your sub-standard assets in case the main scheme fails to get final approval.

Disinvestment planning

7.9 Where assets are earmarked for disposal, you should allow for appropriate expenditure on these assets to reduce risk up to the date when the asset becomes vacant and/or is disposed of.

7.10 During the period leading up to disposal, efforts should be made to bring all assets up to condition B. However, where this is not feasible for economic or practical reasons, high and significant risk items should be addressed to minimise the risk of prosecution, catastrophic failure, continuity of healthcare delivery and safety to persons.

Funding

7.11 Backlog will be funded using mainly operational capital, which will come out of the overall allocation for your trust for use at your discretion.

7.12 It may also be funded from the following:

- strategic capital, allocated for major service developments;
- national earmarked capital, allocated by DH for particular programmes that derive from the 'NHS Plan'.

7.13 Maintaining assets in condition B will usually be funded from normal day-to-day maintenance revenue budgets.

7.14 In practice the chosen investment solution to eradicate sub-standard assets and maintain assets in condition B will be funded from a mixture of revenue and capital.

8. Annual review

8.1 The condition of your estate assets is constantly changing due to ongoing deterioration, together with replacement, repair and disposal, of existing assets and acquisition of new assets.

8.2 It is recommended that you carry out a detailed survey of all your assets **on a five-yearly basis**. This should be done in conjunction with a full property appraisal (see Chapter 4 of 'Estatecode' for details). The full appraisal goes much further than the survey described in this document as it also considers the functional suitability, space utilisation, quality and environmental management of assets.

8.3 You may survey all your assets at the same time or survey assets in batches; either way you should ensure that all your assets are subject to a detailed assessment every five years.

8.4 You should update the findings of your detailed survey (condition and risk rankings and associated costings) **on an annual basis** (at 31 March). This will inform your investment planning process and ensure your assets are safe and fit for purpose.

8.5 The level of detail required for each update will depend on the degree of deterioration of your assets since the previous survey and any proposed strategic shift in service provision.

8.6 Assets that have not received investment since the previous detailed survey may only require a visual inspection. However, where investment has taken place, a more detailed assessment may be required to determine the impact of that investment.

8.7 Appropriate visual inspections will determine the rate at which assets are deteriorating and together with an analysis of estate records this will enable an annual review of previous risk assumptions.

8.8 Your annual update should take account of the following:

- inflation;
- service schedules;
- vacant assets awaiting disposal;
- new sub-standard elements;
- further deterioration of previously identified elements;
- recent acquisition of property;
- refurbishments/alterations since previous survey;
- regulatory changes;
- proposed strategic shift in service provision.

9. Summary of recommended process for establishing and managing backlog

1. Collect background information

- Block/building room drawings, site plans and engineering schematics
- Historical information – ages of buildings, services, plant and equipment
- Maintenance schedules
- Known defects and failure problems
- Planned major investment

2. Carry out a survey

- For each block, on a room by room basis for internal services and across site for external services
- Collect data using electronic/manual data collection sheets and drawings (see Appendix 1)
- Take photographs, where appropriate, as memory joggers and/or for inclusion in reports
- Estimate remaining lives using historic information, standard data, experience and observation of assets in-situ
- Record provisional condition rankings for physical condition, mandatory fire safety requirements and statutory safety legislation
- Record factors related to risk

3. Collate the information and produce a report

- Firm up condition rankings for physical condition, fire safety and statutory safety
- Complete risk assessments/produce risk rankings – taking account of the views of your estates department
- Complete survey report forms (see Appendix 5)
- Complete a five-year backlog profile for each block, produce a summary for each site and the entire trust (see Appendix 6)
- Produce a backlog cost summary for each site and on a trust-wide basis (see Table 6.2)
- Write a report for investment decisions, presenting the survey results and investment needs

4. Estate investment planning

- To eradicate backlog as quickly as possible
- Prioritise high and significant risk items
- Take into account existing and future investment plans
- Include all costs relevant to the suggested scheme(s) (for example works costs, fees, VAT etc)
- Follow your trust's financial standing orders or 'Capital Investment Manual' requirements, as appropriate
- Seek trust board approval for funding

5. Undertake the required works and carry out annual review

- Project manage the execution and completion of approved schemes
- Carry out an annual review of progress made
- Update survey information to ensure accuracy of figures as at 31 March of each year
- Ensure a detailed condition survey is undertaken for each block over a 5-year cycle

Appendix 1 – Data collection survey sheets: worked examples

NOTE: Data collection survey sheets are intended to aid data collection by recording relevant information to use during the write-up and reporting phase (see Appendix 5). The various headings below are not exhaustive and therefore may not include all relevant assets found in every building. Where this is the case you will need to add additional relevant headings/notes as necessary.

EXTERNALS (Use on a building block basis)		
DÉCOR **1** = Sub-standard – urgent attention **2** = Poor – nearing end of life – grubby **3** = Average – middle of life – average wear and tear **4** = Good – minimal defects – as new **5** = As new – recent décor within last six months	**PROPERTY**	**Sample**
	BLOCK	**1**
		Comment/remaining life estimate

DECORATION QUALITY	1 – paint work very badly peeling
BUILDING CONSTRUCTION	Brick
SOLID OR CAVITY?	Cavity – no insulation
FLAT ROOF	Part. Built up felt. B8 (condition B, 8 years remaining life)
PITCHED ROOF	Slate – same age as building
SLOPING ROOF	–
FACIA	Timber – rotten in parts
RAIN WATER GOODS	PVC – joints leaking. C1
DOWNPIPES	PVC. C1
ROOF LIGHTS	Wired armoured glass – cracked in places
LIGHTNING CONDUCTOR	Yes
EXTERNAL LIGHTING	Poor – inadequate provision
TARMAC	Scrubbing with holes in places. C1
CAR PARKS	Scrubbing with holes in places. C1
FOOTPATHS	As below
PAVING SLABS	Paving slabs cracked – 70 noted
BOUNDARY WALLS	Brick cement render to part – 80 m x 1 m high
FENCING	Timber panels to part – 20 m x 2 m
LANDSCAPING	Acceptable
OTHER	Manholes cracked behind boilerhouse

Note: Estimate remaining life of finishes per room. For all other components note estimated age either globally or individually as appropriate. Note quantities, as appropriate, in order to assess compliance with statutory legislation and mandatory fire safety requirements for elements such as fire points, emergency luminaires, fire doors, illumination levels, etc. Add information for elements not listed as found, for example electrical distribution boards, wall boilers.

INTERNALS (Complete on a room by room basis)						**code**
DÉCOR **1** = Sub-standard – urgent attention **2** = Poor – nearing end of life – grubby **3** = Average – middle of life – average wear and tear **4** = Good – minimal defects – as new **5** = As new – recent décor within last six months	**PROPERTY**	**Sample**				**CP = carpet** **DC = door closer** **F = fluorescent** **IS = intumescent strip** **NSF = non-slip floor** **PL = plaster finish** **PVCs = PVC sheet flooring** **SD = smoke detector** **S = single glazed** **SP = steel panel radiator** **SSac = acoustic suspended ceiling** **SSmt = metal suspended ceiling** **T3= type 3 thermostatic mixer** **TRV = thermostatic radiator valve** **WHB = wash hand basin** **WP = wall paper** **LST = low surface temperature radiator** **Electrical distribution: F = hazard flash, L = lockable, S = circuit schedule**
	BLOCK	**1**				
	ROOM/NO	**OP 25A**	**OP 25**	**OP 29**	**OP 30**	**OP 31**
		Comment/remaining life estimate				
DECORATION QUALITY		3	3	4	3/4	3/4
CEILING FINISH		SSac	PL	PL	SSac	SSmt
FLOOR FINISH/QUALITY (remaining life)		CP 12	NSF 15	CP 8	CP 1	PVC
WALL FINISH (class O)		Plaster	WP (no)	Plaster	Plaster	Plaster
LUMINAIRE TYPE		1 F	3 F	3 F	4 F	3 F
LUMINAIRE (age estimate)		12 years	12 years	12 years	12 years	12 years
HEAT EMITTER TYPE (TRV/LST/guards – appropriate)		SP	LST	LST	LST	LST
HEATING DISTRIBUTION PIPEWORK TYPE		Steel	Steel	Steel	Steel	Steel
FIRE ALARM POINTS/FIRE SIGNAGE		SD	SD	SD	SD	SD
ROOM VENT FAN/GRILLE TYPE		–	–	–	–	–
EMERGENCY LUMINAIRES		–	–	–	–	
ELECTRICAL DISTRIBUTION (schedules, signs)			–	–	–	S, F, L
ELECTRICAL DISTRIBUTION (adequacy of power provision, extension leads = inadequate provision)		Okay	Okay	Extension leads	Okay	Okay
SANITARY WARE TYPE		WHB	WHB	–	–	–
SHOWER/MIXERS TYPE (appropriate for use)		T 3		–	–	–
SAFE WATER TEMPERATURES (mixers to outlets type 3?, signs as appropriate to room use)			Spray	–	–	–
LEGIONNAIRES DEVIANCE (long deadlegs, uninsulated pipework unused sanitary ware)		No insulation	No insulation	–	–	–
CALL ALARMS		Yes	Yes	Yes	–	–
FIRE DOORS (rebate size, DC, smoke/IS, signage, hazard room)		10 mm DC/IS/signage	10 mm DC/IS/signage	10 mm DC/IS/signage	10 mm DC/IS/signage	10 mm DC/IS/signage
WINDOW FRAME MATERIAL		Timber	Timber	Timber	Timber	Timber
SINGLE/DOUBLE GLAZED		S	S	S	S	S

PLANT ROOMS (Complete on a plant room basis)	
PROPERTY	**Sample**
BLOCK	**1**
PLANT ROOM/NO	**Main**
	Comment/remaining life estimate
BOILERS TYPE	3 no. Hamworthy. Ref: 12 T. Serial nos: 9987, 9988, 9989 Circa 1982
DOMESTIC HOT WATER TYPE	Ryco Vertical 1982. Ref: 600 L. Serial no.: 15642 Drain okay No anti-strat pumps No non-return valve to cold feed Twin secondary pumps
COLD WATER STORAGE TYPE	2 no. GRP. Circa 1 x 1.5 x 1 m Lids – screwed. Vent screens okay. Pipework on same side. Insulated Poor access – safety issue Tanks dirty internally
HEATING CONTROL TYPE	BMS Sautter
CIRCULATORS TYPE	Grundfos. Twin head circulators
FUEL CONTROL/LEAK SHUT OFF/ALARMS	Kingsway valve Gas alarm
VENTILATION PLANT TYPE	Package unit. Bartlet. Circa 1982
DRAINS AS FITTED TO VENT PLANT (TYPE/CONFORMS)	Solid copper type – no air break
EMERGENCY LUMINAIRES	Yes. Signs not to requirements. Circa 12 years old
LEGIONNAIRES DEVIANCE (uninsulated pipework, DHW storage, circulation to standards)	Cold water pipework not insulated in roof void – circa 15 m As above – includes standby circulator to secondary
ENVIRONMENT (clean/dirty)	Very dirty
SAFE WORKING (is plant accessible safely)	Inadequate safe access to water storage. No effective boards around tank or safe access to tank – joists access only

Appendix 2 – Condition ranking indicators

1. **The following tables are not intended to be exhaustive, particularly in respect of quoted guidance, but are intended to demonstrate the range of parameters that should be considered. All references to guidance/legislation/British Standards must be compared to those current at the time of the survey. Latest published guidance always takes precedence.**
2. **The tables do not include indicators for rank 'A'. This is because rank 'A' is as new or a recent upgrade**

BUILDING ASSETS – WHAT TO LOOK FOR?				
ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
1. STRUCTURE	FOUNDATIONS	INDICATORS • No defect	INDICATORS • Partial subsidence noted • Major cost implications	INDICATORS • Significant subsidence noted • Replacement is the only option • Substantial/significant cost implications
	WALLS	INDICATORS • Minimal deterioration of brickwork • Shrinkage cracks to bricks, not substantial, generally surface cracks or with minimal impact • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Flaking/crumbling brickwork and showing significant signs of deterioration • Extended areas of cracking either to brickwork directly or following mortar joints • Walls pulling away, internal evidence showing, extensive cracking noted and/or floors dropping • Major cost implications	INDICATORS • Brickwork failed • Walls bulging/leaning and/or unstable • Extensive areas of cracking either to brickwork directly or following mortar joints • Significant evidence of walls pulling away, internal evidence showing, significant cracking noted and/or floors dropping • Substantial/significant cost implications
	FRAMES	INDICATORS • No distortion defect • Minimal insect infestation • Some minor repairs may be required • Minimal cost implications for minor repairs only	INDICATORS • Frame distortion noted • Insect infestation severe • Timber rot/corrosion evident in many areas • Major cost implications	INDICATORS • Significant failure/frame distortion/major rot/corrosion • Inadequate frame design • Significant safety concerns • Replacement is the only option • Substantial/significant cost implications

BUILDING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
1. STRUCTURE	FLOORS	INDICATORS • No distortion defect • Minimal insect infestation • Some minor repairs may be required • Minimal cost implications for minor repairs only	INDICATORS • Floor distortion noted/bowing of floor joists • Floor plates corroded/ distorted • Insect infestation severe • Timber rot/corrosion evident in many areas • Major cost implications	INDICATORS • Significant failure/distortion/ major rot/corrosion • Inadequate frame design • Significant safety concerns • Replacement is the only option • Substantial/significant cost implications
	ROOFS	INDICATORS • No distortion defect • Minimal insect infestation • Some minor repairs may be required • Minimal cost implications for minor repairs only	INDICATORS • Frame distortion noted • Bowing of roof timbers • Insect infestation severe • Timber rot/corrosion evident in many areas • Major cost implications	INDICATORS • Significant failure/frame distortion/major rot/corrosion • Inadequate frame design • Significant safety concerns • Replacement is the only option • Substantial/significant cost implications
2. EXTERNAL FABRIC	WALLS & FINISHES	INDICATORS • Minimal deterioration brickwork, rendering sound • Pointing good or minimal improvement required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Rendering loose and cracked • Extended areas of pointing required • Major cost implications	INDICATORS • Brickwork finishes failed • Significant areas of rendering loose/cracked/missing • Substantial/significant cost implications
	WINDOWS	INDICATORS • Minimal deterioration, seals and mechanisms in good order • Some minor repairs may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Frame and mechanisms showing obvious signs of fatigue • Rot/corrosion evident in many areas • Timber cracking and breaking up • Patch repairs becoming untenable • Major cost implications	INDICATORS • Significant failure/major rot/ corrosion • Significant safety concerns • Replacement is the only option • Major cost implications

BUILDING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
2. EXTERNAL FABRIC (continued)	DOORS	INDICATORS • Minimal deterioration, seals and mechanisms in good order • Some minor repairs may be required • Minimal cost implications for minor repairs only	INDICATORS • Door and mechanisms showing obvious signs of fatigue • Physical impact/damage obvious • Rot evident or door stiles weak • Major cost implications	INDICATORS • Significant failure/major rot • Significant safety concerns • Replacement is the only option • Major cost implications
	EXTERNAL TIMBER/PVCu DETAIL	INDICATORS • Minimal deterioration • Some minor repairs may be required • Minimal cost implications for minor repairs only	INDICATORS • Showing obvious signs of fatigue/damage • Rot/cracking evident • Missing sections • Major cost implications	INDICATORS • Significant failure/major rot/ damage • Significant safety concerns • Replacement is the only option • Major cost implications
	DECORATION	INDICATORS • Recent décor within last six months	INDICATORS • Wear and tear obvious	INDICATORS • Significant peeling of paint/ coatings or missing finish. Grubby wall finishes
3. ROOFS	COVERINGS – PITCH	INDICATORS • Minimal deterioration. Slates/tiles generally all securely fixed • Cement pointing good and no improvement required • Sarking felt in good condition • “Torching” mortar behind the slates in good condition • No indications of damp patches • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Roof leaks apparent • Cracked/loose/slipped slates/tiles • Tile fatigue beginning. Moderate safety concerns • Ridge tiles loose/missing • Gable edge cement finishes loose/cracked/missing • “Torching” mortar behind the slates crumbling • Sarking felt torn and deteriorating • Major cost implications	INDICATORS • Serious level of roof leaks apparent • Significant cracked/loose/ slipped/missing slates/tiles • Tile fatigue evident. Serious safety concerns • Ridge tiles loose/missing • Gable edge cement finishes loose/cracked/missing • “Torching” mortar behind the slates mostly missing • Sarking felt rotten • Replacement or removal/ reinstatement is the only option • Major cost implications

BUILDING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
3. ROOFS (continued)	COVERINGS – FLAT	INDICATORS • Minimal deterioration • Some minor repairs to rectify bubbles etc may be required • Reflective finish in place • Good provision of chippings to built-up felt roofs • Any defects repaired so as to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Roof leaks apparent • Cracking evident to roofing material • Increased level of bubbling to roofing material • Significant pooling of surface water • Bitumastic showing signs of breaking down • Recoating of reflective finish required • Provision of chippings to built-up felt roofs sparse • Built-up felt edging lifting • Major cost implications	INDICATORS • Serious level of roof leaks apparent • Significant level of cracking evident to roofing material • Significant level of bubbling to roofing material • Badly distorted surface • Bitumastic broken down • Reflective finish worn completely away • No provision of chippings to built-up felt roofs • Built-up felt edging lifting • Replacement is the only option • Major cost implications
	ROOF LIGHTS	INDICATORS • Minimal deterioration. Seals and any opening mechanisms in good order • Any defects repaired so as to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Cracked or broken glazing • Partly discoloured/warped polycarbonate • Leaks at joints apparent • Major cost implications	INDICATORS • Cracked or broken glazing • Blackened/discoloured/ warped polycarbonate • Leaks at joints apparent • Replacement is the only option • Major cost implications
	RAIN WATER GOODS	INDICATORS • Minimal deterioration • Some minor repairs may be required • Any defects repaired so as to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Showing obvious signs of fatigue • Joints leaking • Mountings starting to fail • Broken/missing sections • Major cost implications	INDICATORS • Significant failure/missing sections • Joints failed • Mountings failed • Replacement is the only option • Major cost implications
4. INTERNAL FABRIC & FIXTURES	WALLS & FINISHES	INDICATORS • Minimal deterioration. Plaster and other finishes sound but minor repairs may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Plaster and other finishes starting to fail. Bonding of finish loose • Some areas of bulging plasterwork • Wall cracks significant • Major cost implications	INDICATORS • Large areas of sub-standard finish • Bulging plasterwork • Wall cracks severe • Replacement is the only option • Major cost implications

BUILDING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
4. INTERNAL FABRIC & FIXTURES (continued)	CEILINGS	INDICATORS • Minimal deterioration. Plaster and other finishes sound • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Plaster and other finishes starting to fail. Bonding of finish loose • Some areas of bulging plasterwork • Ceiling cracks significant • Major cost implications	INDICATORS • Large areas of sub-standard finish • Bulging plasterwork • Ceiling cracks severe • Replacement is the only option • Major cost implications
	SUSPENDED CEILINGS Be aware of possible asbestos	INDICATORS • Minimal deterioration. Suspended tiles • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Suspended tiles starting to fail. Deformed tiles, broken edges • Over painted ceiling tiles • Major cost implications	INDICATORS • Large areas failing. Deformed tiles, broken edges • Replacement is the only option • Major cost implications
	FLOOR COVERINGS	INDICATORS • Minimal deterioration. Normal wear & tear • Some minor repairs may be required to joints etc • Minimal cost implications for minor repairs only	INDICATORS • Extensive wear either in patches or overall • Patch repair • Non-slip function very worn • Taped over cracks/loose finishes • Major cost implications	INDICATORS • Significant failure – holes in floor coverings • Significant safety concerns. Non-slip function not evident • Replacement is the only option • Major cost implications
	DOORS	INDICATORS • Minimal deterioration • Some minor repairs may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Frame and/or door showing obvious signs of fatigue • Major cost implications	INDICATORS • Significant failure • Replacement is the only option • Major cost implications
	DOOR FURNITURE	INDICATORS • Door furniture of good standard	INDICATORS • Door furniture failing or failed in parts	INDICATORS • Significant failure
	UNIT FURNITURE	INDICATORS • Doors and worktops and fitted cupboards etc have minimal wear & tear • Minimal cost implications for minor repairs only	INDICATORS • Doors and fitted cupboards etc in poor condition damaged and/or hinges worn and loose • Worktops worn and damaged • Units tired • Major cost implications	INDICATORS • Significant damage to doors and fitted cupboards etc • Door hinges falling apart • Worktops worn and damaged • Units tired • Replacement is the only option • Major cost implications

BUILDING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
4. INTERNAL FABRIC & FIXTURES (continued)	DECORATION **Average decoration life (internal) – 5–7 years**	INDICATORS • Recent décor within last six months	INDICATORS • Wear and tear obvious	INDICATORS • Significant peeling of paint/ coatings or missing finish. Grubby/torn wall finishes
5. EXTERNAL BUILDING WORKS	DRAINAGE	INDICATORS • Minimal deterioration • No indication of system problems • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Manholes/culverts – flaking/ crumbling brickwork and showing signs of major deterioration • Corroded manhole frames • Collapsed sections giving rise to system problems – repeated jetting/unblocking required • Tree root invasion • Internal drainage systems leaking and failing • Major cost implications	INDICATORS • Failure of large sections of the drainage system • Significant tree root invasion • Substantial/significant cost implications
	ROADS/CAR PARKS	INDICATORS • Minimal deterioration to surface finish • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Crumbling surface finish with potholes and severe damage to surface • Compressed stone finish badly distorted with heavy surface water pooling • Significant damage to kerbs and edgings – twisted/ broken off or sunk • Major cost implications	INDICATORS • Surface totally disintegrated • Severe and significant damage to kerbs and edgings – missing/twisted/ broken off or sunk • Major cost implications
	PATHS/BLOCK/ PAVED AREAS	INDICATORS • Minimal deterioration to finished level • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Significant number of cracked/broken paving slabs • Surface level distorted with raised/sunk edges • Major cost implications	INDICATORS • Severe and significant damage – cracked/broken paving slabs • Major cost implications
	TARMAC AREAS	INDICATORS • Minimal deterioration to surface finish • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Severe damage to surface – crumbling surface finish with potholes • Compressed stone finish badly distorted with heavy surface water pooling • Significant damage to kerbs and edgings – twisted/ broken off or sunk • Major cost implications	INDICATORS • Surface totally disintegrated • Severe and significant damage to kerbs and edgings – missing/twisted/ broken off or sunk • Major cost implications

BUILDING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
5. EXTERNAL BUILDING WORKS (continued)	CONCRETE AREAS	INDICATORS • Minimal deterioration to surface finish • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Crumbling surface finish with potholes and severe damage to surface • Compressed stone finish badly distorted with heavy surface water pooling • Significant damage to kerbs and edgings – twisted/ broken off or sunk • Major cost implications	INDICATORS • Surface totally disintegrated • Severe and significant damage to kerbs and edgings – missing/twisted/ broken off or sunk • Substantial/significant cost implications
	WALLS	INDICATORS • Walls and features have minimal defects • Some minor repairs may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Walls and features have flaking/crumbling brickwork and showing significant signs of deterioration • Patch repairs becoming untenable • Major cost implications	INDICATORS • Walls and features/brickwork failed • Walls bulging/leaning and/or unstable • Significant areas of rendering loose/cracked/missing • Significant safety concerns • Major cost implications
	FENCING/ GATES (METAL)	INDICATORS • Minimal deterioration • Some minor repairs may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Bent, damaged or rusty components • Sections missing or failing with some missing sections • Major cost implications	INDICATORS • Significant failure/corrosion • Significant safety concerns • Replacement is the only option • Major cost implications
	FENCING/ GATES (TIMBER)	INDICATORS • Minimal deterioration • Some minor repairs may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Distorted installation • Large areas of rot evident – missing sections • Major cost implications	INDICATORS • Significant failure/major rot • Collapsed fencing – large sections missing • Significant safety concerns • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
6. ENERGY CENTRE SYSTEMS	FUEL SUPPLY/ STORAGE (GAS)	INDICATORS • Correctly installed (supports) • Minimal cost implications for minor repairs only • Test records on gas tightness up-to-date • Propane installation sound	INDICATORS • Evidence of pipework corrosion • Pipework supports failing • Major cost implications • Serious evidence of corrosion to pipework/storage vessels	INDICATORS • Severe/significance evidence of pipework corrosion • Replacement is the only option • Major cost implications
	FUEL SUPPLY/ STORAGE (OIL)	INDICATORS • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Corrosion evident • Leaks at tank/joints or pipework connections • Major cost implications	INDICATORS • Oil storage tank failed • Replacement is the only option • Major cost implications
	ENERGY DISTRIBUTION	INDICATORS • Good reliability record • Steam distribution meets good design practice – acceptable fall • Pipework hangers sound • Insulation effective • Minimal leaks at flanges/ expansion joints/steam taps etc • Maintenance of components may be required (eg leaking valves etc)	INDICATORS • Distribution design poor – fall questionable • Pipework hangers failing – loose and part ineffective • Significant leaks at flanges/ expansion joints/steam taps etc • Evidence of extensive pipework corrosion/leaks • Major cost implications	INDICATORS • Unsafe steam distribution with incorrect design and supports • Severe/significant leaks at flanges/expansion joints/ steam taps etc • Replacement is the only option • Evidence of extensive pipework corrosion/leaks • Major cost implications
	ENERGY DISTRIBUTION – CONDENSATE SYSTEMS	INDICATORS • Minimal leaks in condensate system • Minimal deterioration to condensate pumping sets • Mountings fixings and guards are secure and in place • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Significant leaks in condensate system • Condensate pumping sets leaking/poor reliability • Mountings fixings and guards insecure/inadequate • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Severe/significant leaks at flanges/expansion joints etc • Collapsed supports • Condensate pumping sets/ receiver failed • Replacement is the only option • Major cost implications
	ENERGY DISTRIBUTION – INSULATION	INDICATORS • Insulation in good order • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Insulation damaged/missing sections • Major cost implications	INDICATORS • Insulation severely damaged or missing completely • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
6. ENERGY CENTRE SYSTEMS (continued)	BOILER PLANT	INDICATORS • Good reliability record • Covers in place and components in working order • Service of plant noted – steam boiler inspection/water treatment information available • Maintenance of components may be required (eg leaking valves etc) • Mountings fixings and flue guards are secure and in place • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Records indicate inadequate water treatment etc • Covers in poor condition (dented or missing) • Insulation missing • Leaks to boiler section • Repeated problems with burners • Flue mounting fixings are not secure – evidence of corrosion noted • Flue guards are damaged or missing • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Records indicate inadequate water treatment etc • Significant boiler leaks • Significant safety concerns – high production of carbon monoxide. Burners corroded and difficult to maintain combustion conditions • Replacement is the only option • Controls/parts obsolete • Major cost implications
	PRESSURISATION PLANT	INDICATORS • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Persistent failure • Major cost implications	INDICATORS • Very poor reliability record • Units failed • Major cost implications
	BOILER TREATMENT PLANT (DE-ALK-DE-GAS PLANT, TOTAL DISSOLVED SOLIDS & SOFT WATER CONTROL)	INDICATORS • Good reliability record • Effective operation • Maintenance of components may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Inability to maintain adequate levels of treated water • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Unit failed. Cannot produce soft water • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
6. ENERGY CENTRE SYSTEMS (continued)	CALORIFIERS/ HEAT EXCHANGERS	INDICATORS • Good reliability record • Maintenance of components may be required (eg leaking valves etc) • Mountings, fixings and guards/insulation is secure and in place • Complies with legionellae design guidance • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Mountings, fixings and guards/insulation not secure/missing • Persistent leaks • Non-compliance with legionellae design guidance, eg HTM 2040 'The control of legionellae in healthcare premises' • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Plant in very poor condition with missing covers/ insulation etc • Repeated failure of heat exchanger bundle • Non-compliance with legionellae design guidance • Controls/parts obsolete • Replacement is the only option • Major cost implications
	DOMESTIC HOT WATER – DOMESTIC TYPE CYLINDERS	INDICATORS • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Persistent leaks • Non-compliance with legionellae design guidance	INDICATORS • Very poor reliability record • Evidence of leaks • Major cost implications
	DOMESTIC HOT WATER – DIRECT FIRED WATER HEATERS	INDICATORS • Good reliability record • Covers in place and components in working order • Service of plant noted • Maintenance of components may be required (eg leaking valves etc) • Mountings fixings and flue guards are secure and in place • Complies with legionellae design guidance • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Covers in poor condition (dented or missing) • Insulation missing • Leaks to water section • Repeated problems with burners • Flue mounting fixings are not secure – evidence of corrosion noted • Flue guards are damaged or missing • Non-compliance with legionellae design guidance • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Significant boiler leaks • Significant safety concerns – high production of carbon monoxide. Burners corroded and difficult to maintain combustion conditions • Controls/parts obsolete • Non-compliance with legionellae design guidance • Replacement is the only option • Major cost implications
	FLUES – SEPARATE	INDICATORS • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Evidence of deterioration, corrosion, cracking of brickwork/stonework etc • Evidence of corrosion to base of chimney/flue • Gassing from base of chimney	INDICATORS • Evidence of significant deterioration, corrosion, cracking of brickwork/ stonework etc • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
6. ENERGY CENTRE SYSTEMS (continued)	CONTROLS/ METERS	INDICATORS • Good reliability record • Effective operation • Maintenance of components may be required (eg motorised valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Controls on override – automatic control failed • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Total failure of control system – not operating within design parameters • Controls/parts obsolete • Replacement is the only option • Major cost implications
	GENERATORS	INDICATORS • Good reliability record • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Generator repeatedly failing • Not able to maintain rated output • Oil leaks • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications
7. HEATING SYSTEMS	PIPEWORK	INDICATORS • Good reliability record • Maintenance of components may be required (eg leaking valves etc) • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Evidence of extensive pipework corrosion/leaks • Major cost implications	INDICATORS • Very poor reliability record • Evidence of major system leaks • Replacement is the only option • Major cost implications
	HEAT EMITTERS	INDICATORS • Good reliability record • Covers in place and components in working order • Fan convector noise levels within limits • Maintenance of components may be required (eg leaking valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Covers in poor condition (dented or missing) • Fan convector noise levels excessive • Evidence of corrosion to heating elements • Partial replacement of heat emitters/pipework • Major cost implications	INDICATORS • Very poor reliability record • Significant leakage • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
7. HEATING SYSTEMS (continued)	INSULATION	INDICATORS • Insulation in good order • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Insulation damaged/missing sections • Major cost implications	INDICATORS • Insulation severely damaged or missing completely • Replacement is the only option • Major cost implications
	HEATING PUMPS	INDICATORS • Good reliability record • Maintenance of pumps seals may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record. Motor windings failing (earth leakage) • Pumps leaks evident • Part failure of pumping sets	INDICATORS • Very poor reliability record • Pump units failed/seized/ leaking • Replacement is the only option • Major cost implications
8. HOT & COLD WATER SYSTEMS	POTABLE COLD WATER TANKS	INDICATORS • Minimal deterioration • Maintenance of components may be required (eg leaking valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only • Complies with legionellae design guidance, eg HTM 2040	INDICATORS • Severe corrosion • Break-up of glass/reinforced plastic • Failure of lining • Leaks at tank/joints or pipework connections • Non-compliance with legionellae design guidance • Major cost implications	INDICATORS • Water storage tank failed • Replacement is the only option • Major cost implications
	DOMESTIC HOT WATER HEADER TANKS	INDICATORS • Minimal deterioration • Maintenance of components may be required (eg leaking valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only • Complies with legionellae design guidance	INDICATORS • Severe corrosion • Break-up of glass/reinforced plastic • Failure of lining • Leaks at tank/joints or pipework connections • Non-compliance with legionellae design guidance • Major cost implications	INDICATORS • Water storage tank failed • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
8. HOT & COLD WATER SYSTEMS (continued)	GENERAL HEADER TANKS	INDICATORS • Minimal deterioration • Maintenance of components may be required (eg leaking valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Severe corrosion • Break-up of glass/reinforced plastic • Failure of lining • Leaks at tank/joints or pipework connections • Major cost implications	INDICATORS • Water storage tank failed • Replacement is the only option • Major cost implications
	WATER TREATMENT PLANT	INDICATORS • Good reliability record • Effective operation • Maintenance of components may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Inability to maintain adequate levels of soft water output • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Unit failed. Cannot produce soft water • Replacement is the only option • Major cost implications
	HOT & COLD WATER DISTRIBUTION (LOCAL)	INDICATORS • Insulation effective • Correctly installed (supports) • Minimal leaks at flanges/ expansion joints etc • Minimal cost implications for minor repairs only	INDICATORS • Significant evidence of pipework corrosion/leaks • Significant leaks at flanges/ expansion joints etc • Pipework supports failing • Major cost implications	INDICATORS • Severe/significant leaks to pipework • Replacement is the only option • Major cost implications
	HOT & COLD WATER MAIN DISTRIBUTION (SITE)	INDICATORS • Distribution within grounds sub-surface – minimal deterioration to valve/meter chambers • Distribution within duct system – insulation in place and sound • Some minor repairs may be required • Temperature of environment within recommended legionellae guidelines, eg HTM 2040 • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Distribution within sub-surface – major deterioration to valve/meter chambers • Distribution within duct system – insulation missing/damaged/not adequate for environment • Pipework corroding/valves encrusted/problems with repeated system leaks • Temperature of environment in excess of recommended legionellae guidelines • Major cost implications	INDICATORS • Significant failure/pipework severe corrosion/valves encrusted significant system leaks • Distribution within duct system – insulation completely missing • Significant safety concerns • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
8. HOT & COLD WATER SYSTEMS (continued)	PUMPS	INDICATORS • Good reliability record • Maintenance of pumps seals may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record – motor windings failing (earth leakage) • Pumps leaking significantly • Parts difficult to obtain or obsolete • Part failure of pumping sets	INDICATORS • Very poor reliability record • Pump units failed/seized/ leaking • Replacement is the only option • Major cost implications
	SANITARY WARE/ FITTINGS	INDICATORS • Minimal damaged or faulty fittings • Draw off points generally good shut-off • Minimal cost implications for minor repairs only	INDICATORS • Damaged or faulty fittings • Plastic cisterns tired & worn • External staining from overflows • Draw off points generally poor shut-off • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Broken fittings • Extensive failure of draw-off points • Parts obsolete • Replacement is the only option • Major cost implications
	INSULATION	INDICATORS • Insulation in good order • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Insulation damaged/missing sections • Major cost implications	INDICATORS • Insulation severely damaged or missing completely • Replacement is the only option • Major cost implications
	ANCILLARY EQUIPMENT – VALVES/ CONTROLS	INDICATORS • Good reliability record • Effective operation • Maintenance of components may be required (eg motorised valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Controls on override – automatic control failed • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Total failure of control system • Controls/parts obsolete • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
9. VENTILATION SYSTEMS	VENTILATION PLANT	INDICATORS • Good plant reliability record • Mountings fixings/guards are secure • Access door/seals acceptable • Maintenance of components may be required (eg drainage traps/leaking valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Noisy fan units • Mounting fixings failing (anti-vibration mountings etc) • Access door/seals failed • Drainage traps failed/ inadequate design • Evidence of corrosion noted to plant • Air filter units failing (obvious pass-through) • Humidification system failed • Significant leaks to heating/ cooling systems • Parts difficult to obtain or obsolete • Does not comply with legionellae design guidance, eg HTM 2040 • Major cost implications	INDICATORS • Very poor reliability record • Significant safety concerns • Controls/parts obsolete • Replacement is the only option • Major cost implications
	DISTRIBUTION	INDICATORS • Covers in place • Access doors securely in place • Air terminal grilles in place and in good order • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Covers in place • Access doors poor fitting/ missing • Air terminal grilles worn and damaged/corroded • Missing air terminal grilles • Ductwork pitted/leaking • Aluminium ductwork breaking down • Steel ductwork corroding • Major cost implications	INDICATORS • Ductwork/system/air terminals very poor condition – damaged/missing parts/ covers/terminals • Replacement is the only option • Major cost implications
	ROOM SPLIT CHILLERS/ COMPRES-SORS	INDICATORS • Good plant reliability record • Mountings fixings/guards are secure • Minimal vibration • Maintenance of components may be required (eg leaking chilled water valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Unable to maintain set temperatures • Mounting fixings failing (eg anti-vibration mountings etc) • Persistent oil leaks • Significant leaks to chilled water cooling systems • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • General plant failure • Controls/parts obsolete • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
9. VENTILATION SYSTEMS (continued)	CHILLERS/ COOLING SYSTEMS	INDICATORS • Good plant reliability record • Mountings fixings/guards are secure • Access door/seals acceptable • Water spray systems functioning correctly • Chemical dosing equipment operating correctly • Maintenance of components may be required (leaking chilled water valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Significant evidence of deterioration/corrosion • Access door/seals failing • Water spray systems corroding and inefficient • Repeated failure to maintain biocide levels at specified limits • Chemical dosing equipment failing • Significant leaks • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Severe corrosion/ deterioration • General plant failure • Controls/parts obsolete • Replacement is the only option • Major cost implications
	CONTROLS	INDICATORS • Good reliability record • Effective operation • Maintenance of components may be required (eg motorised valves etc) • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Controls on override – automatic control failed • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Total failure of control system • Controls/parts obsolete • Replacement is the only option • Major cost implications
	INSULATION	INDICATORS • Insulation in good order • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Insulation damaged/missing sections • Major cost implications	INDICATORS • Insulation severely damaged or missing completely • Replacement is the only option • Major cost implications
10. MEDICAL GAS PIPELINE SYSTEMS	VACUUM INSULATED EVAPORATOR (VIE)	INDICATORS • Installation to HTM 2022 'Medical gas pipeline systems' • Mountings/fixings etc are secure and in place • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Installation not to HTM 2022 • Failure of bursting disc • Failure of vaporiser • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Installation inappropriate for use • Replacement is the only option • Repeated failure of vaporiser • Significant cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
10. MEDICAL GAS PIPELINE SYSTEMS (continued)	DISTRIBUTION	INDICATORS • Installation to HTM 2022 • Mountings/fixings etc are secure and in place • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Installation not to HTM 2022 • Pipework installation badly distorted • Persistent leaks at valve units • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Installation inappropriate for use • Replacement is the only option • Major cost implications
	MANIFOLDS	INDICATORS • Good plant reliability record • Any defects repaired to provide continued life as new • Cylinder mounts provided with safety chains • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Tailpipes – repeated failure • Changeover valves controls – repeated failure • Persistent leaks • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • General plant failure • Controls/parts obsolete • Replacement is the only option • Major cost implications
	OUTLETS	INDICATORS • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Persistent leaks at outlets • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Persistent leaks at outlets • Controls/parts obsolete • Replacement is the only option • Major cost implications
	ALARM SYSTEMS	INDICATORS • Effective operation • Maintenance of components may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Alarm system repeated failure • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Total failure of alarm system • Controls/parts obsolete • Replacement is the only option • Major cost implications
	MEDICAL AIR COMPRES-SORS	INDICATORS • Good plant reliability record • Mountings fixings/guards are secure • Minimal vibration • Maintenance of components may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Unable to maintain set pressures • Mounting fixings failing (anti-vibration mountings etc) • Persistent oil leaks • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • General plant failure • Controls/parts obsolete • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
10. MEDICAL GAS PIPELINE SYSTEMS (continued)	VACUUM PUMPS	INDICATORS • Good plant reliability record • Mountings fixings/guards are secure • Minimal vibration • Maintenance of components may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Unable to maintain set vacuum • Mounting fixings failing (anti-vibration mountings etc) • Persistent oil leaks • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • General plant failure • Controls/parts obsolete • Replacement is the only option • Major cost implications
11. LIFTS & HOISTS	PASSENGER	INDICATORS • Installed to current guidance • Good plant reliability record CAR • Minimal deterioration/damage • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only DRIVE/CONTROLS • Minimal deterioration/damage • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record CAR • Significant wear and tear • Door mechanism slack/badly worn • Safety gate mechanism badly worn DRIVE/CONTROLS • Poor reliability record • Frequent breakdowns • Persistent oil leaks • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Significant safety concerns • Controls/parts obsolete • Replacement is the only option • Major cost implications
	GOODS	INDICATORS • Good plant reliability record CAR • Minimal deterioration/damage • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only DRIVE/CONTROLS • Minimal deterioration/damage • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record CAR • Significant wear & tear • Door mechanism slack/badly worn • Safety gate mechanism badly worn DRIVE/CONTROLS • Poor reliability record • Frequent breakdowns • Persistent oil leaks • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Significant safety concerns • Controls/parts obsolete • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
11. LIFTS & HOISTS (continued)	HOISTS	**INDICATORS** • Good plant reliability record **CAR** • Minimal deterioration/damage • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only **DRIVE/CONTROLS** • Minimal deterioration/damage • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	**INDICATORS** • Poor reliability record **CAR** • Significant wear and tear • Door mechanism slack/badly worn • Safety gate mechanism badly worn **DRIVE/CONTROLS** • Poor reliability record • Frequent breakdowns • Persistent oil leaks • Parts difficult to obtain or obsolete • Major cost implications	**INDICATORS** • Very poor reliability record • Significant safety concerns • Controls/parts obsolete • Replacement is the only option • Major cost implications
	CONTROL PANEL	**INDICATORS** • Good reliability record • Effective operation • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	**INDICATORS** • Poor reliability record • Repeated control failure • Parts difficult to obtain or obsolete • Poor electrical safety • Major cost implications	**INDICATORS** • Very poor reliability record • Total failure of control system • Controls/parts obsolete • Replacement is the only option • Major cost implications
12. FIXED PLANT & EQUIPMENT	STERILIZERS	**INDICATORS** • Good reliability record • Covers in place and equipment in good working order • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	**INDICATORS** • Poor reliability record • Equipment repeatedly failing • Repeated difficulty in meeting test requirements as detailed in current published guidance, eg HTM 2010 'Sterilization' • Covers in poor condition (dented or missing) • Parts difficult to obtain or obsolete • Major cost implications	**INDICATORS** • Very poor reliability record • Equipment failed • Replacement is the only option • Substantial/significant cost implications
	BEDPAN DISPOSAL	**INDICATORS** • Good reliability record • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	**INDICATORS** • Poor reliability record • Equipment repeatedly failing • Repeated difficulty in meeting test requirements as detailed in current published guidance, eg HTM 2030 'Washer-disinfectors' (not macerators) • Parts difficult to obtain or obsolete • Major cost implications	**INDICATORS** • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
12. FIXED PLANT & EQUIPMENT (continued)	DISINFECTION EQUIPMENT	INDICATORS • Good reliability record • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Equipment repeatedly failing • Repeated difficulty in meeting test requirements as detailed in current published guidance, eg HTM 2030 • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications
	CATERING EQUIPMENT	INDICATORS • Good reliability record • Covers in place and equipment in good working order • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Equipment repeatedly failing • Covers in poor condition (dented or missing) • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications
	LAUNDRY EQUIPMENT	INDICATORS • Good reliability record • Covers in place and equipment in good working order • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Equipment repeatedly failing • Covers in poor condition (dented or missing) • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications
	MISCELLAN-EOUS EQUIPMENT – BODY FRIDGE	INDICATORS • Good reliability record • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Equipment repeatedly failing • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications
	MISCELLAN-EOUS EQUIPMENT – WATER HEATERS	INDICATORS • Good reliability record • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Equipment repeatedly failing • Repeated difficulty in meeting test requirements as detailed in current published guidance, eg HTM 2027 'Hot and cold water supply, storage and mains services' • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
13. ELECTRICAL SYSTEMS	WIRING SYSTEMS	INDICATORS • Installation to BS 7671/HTM 2020 'Electrical safety code for low voltage systems' • Electrical installation test records available • Evidence of bonding (non-invasive observation – usually beneath hand-wash basin) • Socket-outlets and light switches in good order • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Installation not fully in accordance with BS 7671/ HTM 2020 • Electrical installation test records not available • Mixture of wiring systems, PVC singles, twin and earth, mineral insulated copper conductor etc • Inadequate cable protection – overcrowding/poor fixings • Bonding erratic • Major cost implications	INDICATORS • Installation not in accordance with BS 7671/HTM 2020 • Electrical installation test records not available • No bonding • Major cost implications
	WIRING SYSTEMS/ BONDING	INDICATORS • Installation to BS 7671 • Electrical installation test records available • Evidence of bonding (non-invasive observation – usually beneath hand-wash basin) • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Installation not fully in accordance with BS 7671 • Electrical installation test records not available • Bonding erratic • Major cost implications	INDICATORS • Installation not in accordance with BS 7671 • Electrical installation test records not available • No bonding • Major cost implications
	DISTRIBUTION BOARDS	INDICATORS • Installation to BS 7671 • Lockable provision • Circuit schedules up-to-date and posted • Electrical installation test records available • Adequate signs and signals • Evidence of bonding (non-invasive observation) • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Installation not fully in accordance with BS 7671 • Inadequate barriers • Distribution boards not lockable • Circuit schedules out-of-date/missing • Electrical installation test records not available • Inadequate signs and signals • No evidence of bonding (non-invasive observation) • Major cost implications	INDICATORS • Installation not in accordance with BS 7671 • Electrical installation test records not available • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
13. ELECTRICAL SYSTEMS (continued)	SWITCHGEAR	INDICATORS • Installation to BS 7671 • Lockable provision • Circuit schedules up-to-date and posted • Electrical installation test records available • Adequate signs and signals • Evidence of bonding (non-invasive observation) • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Installation not fully in accordance with BS 7671 • Inadequate barriers • Switches not lockable • Circuit schedules out-of-date/missing • Electrical installation test records not available • Inadequate signs and signals • No evidence of bonding (non-invasive observation) • Major cost implications	INDICATORS • Installation not in accordance with BS 7671 • Electrical installation test records not available • Major cost implications
	LUMINAIRES – INTERNAL	INDICATORS • Installation to BS 7671 • Electrical installation test records available • Minimal deterioration • Luminaire diffusers in place and not discoloured • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Luminaires failing with replacements noted over time • Luminaire diffusers part missing/discoloured • Controls/parts difficult to obtain or obsolete • Inadequate test records • Major cost implications	INDICATORS • Luminaires diffusers missing/discoloured/damaged • Luminaires generally failed with replacements over time • Replacement is the only option • Controls obsolete • Components not available • Major cost implications
	LUMINAIRES - EXTERNAL	INDICATORS • Installation to BS 7671 • Electrical installation test records available • Adequate signs and signals • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Luminaires failing with replacements noted over time • Luminaire diffusers part missing/discoloured • Controls/parts difficult to obtain or obsolete • Inadequate test records • Major cost implications	INDICATORS • Luminaires diffusers missing/discoloured/damaged • Luminaires generally failed with replacements over time • Replacement is the only option • Controls obsolete • Components not available • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
13. ELECTRICAL SYSTEMS (continued)	LUMINAIRES – EMERGENCY	INDICATORS • Installation to BS 5266-1 • Operating within design parameters • Test records available • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Still operating within design parameters but high maintenance requirements • Luminaires starting to fail • Diffusers discoloured • Controls/parts difficult to obtain or obsolete • Inadequate test records • Major cost implications	INDICATORS • Luminaires failed • Controls obsolete • Components not available • Major cost implications
	LIGHTNING PROTECTION	INDICATORS • Installation to BS 6651 • Test records available • Adequate earth resistance path	INDICATORS • Poor reliability record • Corrosion evident at joints • Inadequate earth resistance path • Inadequate test records • Major cost implications	INDICATORS • System failed – not able to offer adequate protection in line with BS 6651 • Major cost implications
14. ALARMS AND DETECTION SYSTEMS	FIRE ALARM WIRING SYSTEM See 'Fire safety' elements for non-compliance to mandatory fire safety requirements	INDICATORS • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Repeated faults to wiring systems • Poor reliability record • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Wiring failed • Equipment failed • Replacement is the only option • Major cost implications
	SECURITY SYSTEMS AND OTHER ALARM SYSTEMS	INDICATORS • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Repeated faults to wiring systems • Poor reliability record • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Wiring failed • Equipment failed • Replacement is the only option • Major cost implications
15. COMMUNICATION SYSTEMS	TELEPHONE SYSTEMS	INDICATORS • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Wiring failed • Equipment failed • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
15. COMMUNICATION SYSTEMS (continued)	DATA TRANS-MISSION	INDICATORS • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Wiring failed • Equipment failed • Replacement is the only option • Major cost implications
	PAGING SYSTEMS	INDICATORS • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Wiring failed • Equipment failed • Replacement is the only option • Major cost implications
	NURSE CALL SYSTEMS	INDICATORS • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Wiring failed • Equipment failed • Replacement is the only option • Major cost implications
	RADIO & TELEVISION SYSTEMS	INDICATORS • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Wiring failed • Equipment failed • Replacement is the only option • Major cost implications
	BUILDING MANAGEMENT SYSTEM – DISTRIBUTION NETWORK	INDICATORS • Good reliability record • Minimal deterioration • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Connections/terminations/ joints repeatedly failing • Cable supports/tray collapsing/corroding • Major cost implications	INDICATORS • Very poor reliability record • Wiring failed • Equipment failed • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
15. COMMUNICATION SYSTEMS (continued)	BUILDING MANAGEMENT SYSTEM – HEAD END CONTROL	INDICATORS • Good reliability record • Any defects repaired as on-going maintenance to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Equipment repeatedly failing • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications
	BUILDING MANAGEMENT SYSTEM – ZONE CONTROL PANELS (OUTSTATIONS)	INDICATORS • Good reliability record • Minimal deterioration • Any defects repaired as on-going maintenance to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Equipment repeatedly failing • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications
16. MISCELLANEOUS	WET & DRY RISERS	INDICATORS • Systems well maintained (good records) • Minimal leaks at valves etc • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Persistent leaks to valves/ joints	INDICATORS • Very poor reliability record • Failure of valves – seized, corroded valves • Pipework joints leaking • Replacement is the only option • Major cost implications
	HYDRO-THERAPY POOL	INDICATORS • Good reliability record • Effective operation • Maintenance of components may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Parts difficult to obtain or obsolete • Surface finish of pool – damaged/cracked/broken tiles – unacceptable standards • Heat exchanger unable to maintain pool temperatures • Major cost implications	INDICATORS • Very poor reliability record • Surface finish of pool – extensive damaged/cracked/ broken tiles • Heat exchanger failed • Replacement is the only option • Major cost implications
	HYDRO-THERAPY POOL WATER TREATMENT	INDICATORS • Good reliability record • Effective operation • Maintenance of components may be required • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Backwash system ineffective • Difficulty in providing consistent water quality in line with variable bathing load • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Backwash system failed • Unable to provide adequate water quality in line with variable bathing load • Replacement is the only option • Major cost implications

ENGINEERING ASSETS – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
16. MISCELLANEOUS (continued)	INDUSTRIAL GAS SYSTEMS (PATHOLOGY LABORATORY ETC)	INDICATORS • Good reliability record • Pipework distribution meets good design practice • Manifolds well maintained – effective records • Pipework hangers sound • Maintenance of components may be required (eg leaking valves etc)	INDICATORS • Distribution design poor • Pipework hangers failing – loose and part ineffective • Manifolds worn repeated failures • Evidence of extensive pipework corrosion/leaks • Major cost implications	INDICATORS • Distribution design inadequate • Pipework hangers failed • Replacement is the only option • Repeated failure of system • Major cost implications
	MISCELLAN-EOUS EQUIPMENT	INDICATORS • Good reliability record • Covers in place and equipment in good working order • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Poor reliability record • Equipment repeatedly failing • Covers in poor condition (dented or missing) • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Very poor reliability record • Equipment failed • Replacement is the only option • Major cost implications

FIRE SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
1. COMPARTMENTATION	INTERNAL SPACES/ROOF SPACES/VOIDS ELECTRICAL SWITCH POSITIONS	INDICATORS • Compartmentation: <30 metres (HTM 85 'Fire precautions in existing hospitals') • Compartmentation at designated fire barrier positions extends through suspended ceilings to overhead construction • Fire barriers in roof voids generally conform to section 28 of HTM 85 (ie every 20 metres) – minimal deviance • Roof void access doors through fire barriers generally conform to HTM 85 (ie 30 minute fire-resisting doors and self-closing) – minimal deviance • Fire protection to electrical switchrooms in accordance with standards • Effective barriers to rising services ducts/ventilation shafts and services penetration • New hopitals conform to requirements of HTM 81 'Fire precautions in new hospitals'	INDICATORS • Compartmentation: 30–40 metres • Fire barriers in roof voids in excess of 20 metres • Roof void access doors either missing or do not conform to current published guidance • Inadequate compartmentation at designated fire door/barrier positions. Failure to extend through suspended ceilings to overhead construction • Inadequate fire protection to electrical switchrooms Ceilings/walls breached • Inadequate fire protection to services penetration • Inadequate fire protection to rising services ducts/ ventilation shaft ducts	INDICATORS • Compartmentation: >40 metres • Fire doors missing or incorrect type • No fire barriers • No protection to services penetration or service ducts/ ventilation shaft ducts
2. FIRE DOORS	FIRE DOOR SETS TO CIRCULATION SPACES/FIRE HAZARD ROOMS/ROOF SPACES/VOIDS	INDICATORS • Schedule of fire hazard rooms available • Glazing to fire door partitions correctly rated and marked as safety glass or pyroglass • Correctly rated fire doors are installed to designated fire hazard rooms • Fire door sets comprise of 12 mm rebate, door closer, intumescent/smoke strip* and fire door sign • Minimal deviance from BS 8214 requirements * *Note: The requirement for either an intumescent or a smoke strip is determined by a risk assessment*	INDICATORS • Inadequate designation of fire hazard areas • Glazing does not conform to current requirements as described in current legislation/published guidance • Incorrectly rated doors installed • Erratic provision of fire door sets • Fire door set provision as installed – worn and not providing the original protection intent	INDICATORS • Significant deviances from requirements • No fire door sets installed • Incorrect door sets installed for use application

FIRE SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
3. MEANS OF ESCAPE	SIGNS & SIGNALS/ SURFACE FINISHES/ EMERGENCY LIGHTING	INDICATORS • Signs and signals generally meet requirements of Health and Safety (Safety Signs and Signals) Regulations 1996 – minimal deviance • Surface finishes meet class "0" requirements • Clear exit pathways (exit routes and doors are not obstructed) • Effective test regimes on emergency/escape lighting • Emergency/escape lighting indicates clearly and unambiguously the escape routes • Emergency/escape lighting allows safe movement towards and through exits • Emergency/escape lighting is within two metres of fire alarm call points and fire-fighting equipment • Emergency/escape lighting is suitably marked, tested and maintained *BS 5266-1 provides guidance on emergency/escape lighting*	INDICATORS • Signs and signals do not meet requirements • Wall coverings do not meet class "0" requirements • Poor provision of emergency/ escape lighting. Inadequate location/illumination levels • Failure of installed luminaires noted • Exit pathways prone to clutter and debris obstruction	INDICATORS • Significant deviances from requirements • No emergency/escape lighting installed • Exits inadequate/dangerous condition/location
4. ALARMS & DETECTION SYSTEMS	SYSTEMS/ PANELS/ DETECTORS	INDICATORS • Installation in accordance with HTM 82 'Alarm and detection systems'/BS 5839–1* • Effective test regimes • Test records available • Minimal deterioration • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Installation not in accordance with HTM 82/BS 5839–1 • Minimal provision of automatic detection – simple break glass units (BGU) and heat detectors* • Fire panels not to current standards. Poor reliability record • System deteriorated with repeated failures • Parts difficult to obtain or obsolete • Major cost implications	INDICATORS • Significant deviances from requirements • No fire alarm system installed* • Equipment failed • Major cost implications
		** The provision of automatic detection is determined by a risk assessment as described in BS 5839-1. This should be considered when assessing the installation type*		

FIRE SAFETY – WHAT TO LOOK FOR?				
ELEMENT	**SUB-ELEMENT**	**CONDITION B**	**CONDITION C**	**CONDITION D**
5. TEXTILES & FURNITURE	TEXTILES/ FURNISHINGS	INDICATORS • Fully labelled in accordance with current legislation/ published guidance, eg HTM 87 'Textiles and furniture'* • All laundered items are certified as protected to the original specification on return (ie comply with fire retardant requirements) * *All textiles/furniture should be correctly labelled as fire retardant*	INDICATORS • Erratic provision of correctly labelled textiles/furniture • No quality control of laundered items	INDICATORS • Significant deviances from requirements • No fire retardant materials noted
6. STORAGE OF FLAMMABLE SUBSTANCES	LIQUIDS/ GASES/OTHER	INDICATORS • Location of store complies with current limits to occupied buildings • Built environment suitable for flammable storage • Signs are provided as required in current legislation/ published guidance • Adequate ventilation/vent pipes located in accordance with design/statutory guidance • Suitable means to restrict access • Storage amounts do not exceed permitted levels • Electrical installation complies with flammable requirements • Electrical test records available • Suitable spillage kit is available with detailed disposal protocols • Emergency isolation point clearly marked • Any defects repaired to provide continued life as new • Minimal cost implications for minor repairs only	INDICATORS • Location of store does not comply with current limits to occupied buildings • Built environment not suitable for flammable storage (building materials unsuitable/ inadequate) • Poor/inadequate provision of signs and signals • Inadequate ventilation • Vent pipes not located in accordance with design/ statutory guidance • Unrestricted access • Storage amounts exceed permitted levels • Electrical installation does not comply with flammable requirements • Electrical test records not available • Inadequate protocols for spillage control disposal • Inadequate emergency isolation controls/signs • Major cost implications	INDICATORS • Significant deviances from requirements

FIRE SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
7. COMPLIANCE WITH FIRECODE	SURVEY FOR COMPLIANCE/ ACTIONS IDENTIFIED AND COSTED	INDICATORS • Full survey (in accordance with 'Firecode') completed • Actions identified and costed	INDICATORS • Limited survey completed • No or limited actions identified and costed • Likely impact of impending legislation	INDICATORS • Significant deviances from 'Firecode' requirements
NOTE: SIGNS & SIGNALS	LIQUIDS/ GASES/OTHER	**Health and Safety (Safety Signs and Signals) Regulations 1996: Schedule 1 part 1 2.1.1** • Permanent signboards must be used for signs relating to prohibitions, warnings and mandatory requirements and location and identification of emergency escape routes and first aid facilities • Regulation 4: Based on a risk assessment, signboards and/or a safety colour must be used to permanently mark the location and identification of fire-fighting equipment • Communication is key to any risk assessment, and occupants should be aware of the location of fire equipment and alarm points. A suitably positioned sign will provide a constant reminder of these locations and alarm points *Part of a formal risk assessment is to ensure that all fire-fighting equipment can be easily located when required. The risk assessment should also ensure that equipment displays the correct classes of fire for which it can be safely used. Appropriately displayed signs at the fire point will make a positive contribution to fire safety*		

STATUTORY SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
1. ELECTRICAL SERVICES – SUPPLY AND DISTRIBUTION	DISTRIBUTION BOARD REQUIREMENTS/ ADEQUACY OF PROVISION (SOCKET-OUTLETS)	INDICATORS • Electrical installations meet the requirements of the Electricity at Work Regulations 1989, as detailed within BS 7671 and HTM 2020 • Some improvements may be required to make distribution board/switches secure and/or provide up-to-date circuit schedules and/or provide up-to-date system schematics and/or provide hazard signs • Rooms containing electrical switchgear/distribution boards are below 25°C **OR** • Ventilation in electrical switchrooms/at distribution board positions maintains ambient temperatures below 25°C • Adequate provision of power outlets • Electrical distribution boards/ switches/isolators/switchgear are capable of being securely protected to prevent unauthorised persons gaining access – by locks to distribution boards or individual circuits	INDICATORS • Does not conform to current legislation/published guidance or significant improvements are required • Inadequate barriers installed • Poor contacts causing overheating. Thermal imaging shows overheating • Ambient room temperatures in electrical switchrooms/at distribution board positions persistently at 25°C or above • Inadequate ventilation in electrical switchrooms/at distribution board positions • Use of trailing leads indicates an inadequate provision of power sockets • Cracking, hardening, burning of back of insulation at connection points • Inadequate mechanical supports • Electrical testing demonstrates serious failings	INDICATORS • Significant safety concerns – electrical distribution systems very old and associated earthing systems in poor condition or failures reported • Seriously high temperatures in electrical switchrooms/at distribution board positions. Evidence of cable joint failure due to melting of compounds
	WORKING SPACE, ACCESS AND LIGHTING	INDICATORS • Adequate provision of lighting in plant/access areas • Emergency luminaires provided to significant electrical distribution positions and plant/access areas • Adequate access to equipment • Adequate working space around equipment *Regulation 15 of the Electricity at Work Regulations 1989: "Adequate working space, access and lighting shall be provided at all electrical equipment on which work is done that may give rise to danger and to prevent injury"*	INDICATORS • Inadequate provision of lighting to plant/access areas • Emergency luminaires to significant electrical distribution positions and plant/access areas • Inadequate access to equipment • Inadequate working space around equipment to facilitate safe working	INDICATORS • Total lack of lighting, which could result in serious injury • Access and working space prevents safe working

STATUTORY SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
2. ASBESTOS References: CONTROL OF ASBESTOS AT WORK REGULATIONS 2002 AND RELATED LEGISLATION	ASBESTOS SURVEY/ REGISTER/ NECESSARY ACTIONS IDENTIFIED	INDICATORS • A survey and risk assessment has been completed to determine the extent and nature of asbestos within the premises • NO asbestos products noted **OR** • Limited asbestos has been identified, marked and is effectively sealed • The nature and location of test points is recorded in an asbestos register • Suitable schematic drawings are included as appropriate • A programme of inspections is undertaken in all areas where asbestos is located • A written report is generated after each inspection, which identifies the condition of asbestos in each area inspected	INDICATORS • A survey has been partially completed or is out of date • The nature and location of asbestos is not fully recorded in an asbestos register • Asbestos has been found in a variety of locations and control measures are inadequate • Suitable schematic drawings are not fully accurate • A programme of inspections is not undertaken in all areas where asbestos is located • No reporting mechanism is in place	INDICATORS • Surveys have not been completed or not fully completed • No asbestos register in accordance with current legislation • Exposed asbestos is noted with inadequate warning signs or information posted or available • Asbestos is damaged and in serious breach of legislation
3. CONTROL OF LEGIONELLAE References: APPROVED CODE OF PRACTICE AND RELATED HTMs	COLD WATER STORAGE	INDICATORS • Water storage conforms to the requirements of HTM 2040 and Health & Safety Executive (HSE) approved code of practice (ACOP) L8 • Tanks are clean • Tanks are fitted with close-fitting lids • Tanks have securable inspection hatches • Tanks are insulated • Tanks have insect screens fitted to overflow/vent pipework/tank vent • Tanks have circulation via an inlet and outlet, which are on the opposite sides of the tank • Tanks have a sparge pipe on the cold fill to effectively mix the inlet water on operation • Pipework to and from tanks is effectively insulated • Tank room is insulated • Records are kept of maintenance activities • Minor defects to installed insulation • Storage appropriate for application	INDICATORS • Tank installation has one or more deviances from requirements as detailed in current published guidance	INDICATORS • Tank installation has significant deviances from requirements • The installation is totally inappropriate for the application

STATUTORY SAFETY – WHAT TO LOOK FOR?				
ELEMENT	**SUB-ELEMENT**	**CONDITION B**	**CONDITION C**	**CONDITION D**
3. CONTROL OF LEGIONELLAE (continued)	HOT WATER STORAGE (CALORIFIERS)	INDICATORS • Shunt pump installed (see paragraph 158 of ACOP L8 and HTM 2040) **OR** • Calorifier design complies with alternative convective mixing arrangements (see paragraph 159 of ACOP L8 and HTM 2040) • A check valve is fitted in accordance with HTM 2040* * *HTM 2040, paragraph 5.9: ". . . to prevent warming of the tanked cold feed, a check valve should be fitted within 300 mm of the calorifier. In such a case an open vent should be arranged to discharge over a separate tundish arrangement with a type 'A' air gap"*	INDICATORS • No shunt pump installed • Calorifier design does not comply with alternative convective mixing arrangements • Calorifier base not convex • Calorifier prone to corrosion • A check valve is not fitted in accordance with current published guidance	INDICATORS • Significant deviances from requirements • Cold water feed is hot for significant distances
	PIPEWORK INSTALLATION	INDICATORS • Return connections fitted to pipework at final position (hot water system) • Spurs 5 metres or less (hot water system) • Secondary spurs 2 metres or less (hot water system) • Hot water at 50°C at furthest draw-off point within one minute (see paragraph 152 c of ACOP L8) • Cold water services not installed in confined hot areas or adjacent to hot services • Cold water pipework not installed behind radiators • Single circulation pumps provided (see paragraph 5.23 of HTM 2040: "In-line standby pumps should not be provided . . .")	INDICATORS • Return connections not provided to pipework at final position • Spurs greater than 5 metres • Secondary spurs greater than 2 metres • Pipework installed behind heated surfaces • Dual installation circulation pumps provided	INDICATORS • Significant deviances from requirements

STATUTORY SAFETY – WHAT TO LOOK FOR?				
ELEMENT	**SUB-ELEMENT**	**CONDITION B**	**CONDITION C**	**CONDITION D**
3. CONTROL OF LEGIONELLAE (continued)	**PIPEWORK INSULATION**	INDICATORS • Pipework insulated to prevent uncontrolled heat loss or gain (see paragraph 152 of ACOP L8 and HTM 2040) • Pipework insulated in roof voids • Pipework insulated in service ducts • Pipework insulated in rooms	INDICATORS • Partial insulation as fitted	INDICATORS • Significant deviances from requirements
	VENTILATION PLANT	INDICATORS • Glass traps installed in accordance with HTM 2040* • Drainage trap assembly should discharge via a type "A" air gap in accordance with BS EN 13076 and BS EN 13077 • Glass traps are clean. (Each trap must be of the quick release type and be transparent to show (visibly) the integrity of the water seal, and should be provided with a means of filling) • Water level permanent markers are fitted to the glass traps • Pipework installed in accordance with guidance • Drip tray design is in compliance with current standards ** HTM 2040: "Cooling coils/humidifiers, fan scrolls, eliminators and heat recovery systems fitted with drainage traps"*	INDICATORS • Drainage pipework not installed in accordance with guidance • Incorrect pipework fall • Inadequate section drainage • Drip tray design is not in compliance with current published guidance • Glass traps – inadequate provision • Copper traps installed • Erratic or no adequate water seal – markers inadequate • No air gap	INDICATORS • Significant deviances from requirements

STATUTORY SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
4. COMPLIANCE WITH HEALTH & SAFETY AT WORK etc ACT 1974 Reference: WORKPLACE (HEALTH, SAFETY AND WELFARE) REGULATIONS 1992 AND RELATED LEGISLATION	LIGHTING (ADEQUACY OF PROVISION)	INDICATORS • Visual observation indicates adequate lighting levels for safe working and movement • Lighting in corridors and circulation/waiting areas provides good coverage with no shadows (shadows can cause difficulties for partially-sighted people) • Computer workstations – based on a risk assessment, category 2/3 luminaires or diffusers have been provided *Guidance on lighting levels is found in CIBSE guide – 'Code for lighting'*	INDICATORS • Visual observation indicates work areas gloomy • Very old lighting • Luminaire diffusers discoloured • Missing or broken diffusers • None or erratic provision of category 2/3 luminaires or diffusers at computer workstations • Likely impact of impending legislation	INDICATORS • Significant deviances from requirements
	FALLS (FROM PLATFORMS, LOADING BAYS AND FLAT ROOFS) AND FALLING OBJECTS	INDICATORS • Access to high risk areas is limited to specified people and a suitable formal written "permit-to-work" system is adopted • Access to plant installed on raised platforms or on top of local single-storey structures is protected by either safe edge protection or by using a suitable fall arrest system • Loading platforms have safe edge protection and have secure handholds • Tanks, pits and structures are securely covered or have safe edge protection • Safe edge protection is at least 1100 mm high with two guard-rails • Fragile roofs or surfaces are clearly identified • Safety signs (safe working) are provided *NOTE: Fencing must be provided if a person might fall two metres or more, or might fall less than two metres and risk serious injury*	INDICATORS • Access to high risk areas is not restricted • Permit-to-work systems not fully functional • Inadequate provision of safety signs • Inadequate edge protection to raised platforms and/or top of local single-storey structures etc • Inadequate signs and signals	INDICATORS • Significant deviances from requirements

STATUTORY SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
4. COMPLIANCE WITH HEALTH & SAFETY AT WORK etc ACT 1974 Reference: WORKPLACE (HEALTH, SAFETY AND WELFARE) REGULATIONS 1992 AND RELATED LEGISLATION	LADDERS	INDICATORS • Fixed ladders are of sound construction and securely fixed • Fixed ladders or other suitable means of access/ egress are provided in pits, tanks, and similar structures into which workers need to descend • Rungs are horizontal and give adequate foothold. Stiles extend at least 1100 mm above the landing • Fixed ladders that are more than 2.5 metres high are at an angle of less than 15° to the vertical • Safety hoops are fitted every 900 mm and commence at a height of 2.5 metres above the base of the ladder. The top hoop is in line with the top of the fencing on the platform served by the ladder. Where a ladder rise is less than 2.5 metres but is elevated so that it is possible to fall from a distance of more than two metres, a single hoop is provided in line with the top of the fencing • Alternatively a permanently fixed fall-arrest system is provided • Fixed ladders with a vertical distance of six metres have landings every six metres • Ladder runs are out of line with previous run • Safety signs are provided • Where a ladder passes through a floor the opening is as small as possible **AND** • The opening is fenced and a gate is provided to prevent falls (where the top of a ladder passes through a fenced hole in the floor a hoop need not be provided at that point)	INDICATORS • Inadequate provision • Deviances from current published legislation/ guidance – inadequate "hoop" provision, incorrect angle etc • Minimal safety signs • Access equipment poorly maintained • Failure of access equipment possible. Evidence of poor fixings – severe corrosion/ loose rails etc • Where a ladder passes through a floor, the fence around the opening is loose and wobbly **AND** • Safety chain not fitted **AND** • Gates not provided	INDICATORS • Significant deviances from requirements

STATUTORY SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
4. COMPLIANCE WITH HEALTH & SAFETY AT WORK etc ACT 1974 Reference: WORKPLACE (HEALTH, SAFETY AND WELFARE) REGULATIONS 1992 AND RELATED LEGISLATION	SAFETY GLAZING	INDICATORS • Glazing provided in accordance with BS 6262-4, Building Regulations approved document 'N' and Regulation 14 of the Health & Safety at Work etc Act 1974 • Safety glazing marked in accordance with above	INDICATORS • Glazing provision not in accordance to current published legislation/ guidance – erratic provision • Wired armoured glass not safety glazing • Incorrect dimensions to glass panels • Incorrect dimensions to door vision panels • Glazing not marked	INDICATORS • Significant deviances from requirements
	GAS SAFETY Reference: GAS REGULATIONS AND RELATED LEGISLATION	INDICATORS • Line diagrams and schematics posted at main meter and in prominent locations to indicate position of gas pipework of internal size >25 mm, meters, valves, controls, pressure test points and electrical bonding • Current gas soundness certificates* are available * *Gas systems should be subject to regular soundness tests. Care needs to be taken when such tests are carried out on large diameter pipe systems to ensure results are correctly interpreted. Refer to the industrial gas soundness guidance issued by TRANSCO*	INDICATORS • Inadequate provision of line diagrams and schematics • Record of gas soundness testing is out of date • Likely impact of impending legislation	INDICATORS • Significant deviances from current published legislation/ guidance – no record of gas soundness certificates • Soundness testing not carried out
	VENTILATION STANDARDS/ AIR QUALITY	INDICATORS • Ventilation grilles are clean (see paragraph 33 of regulation 6 of the Work Regulations) • Ventilation plant obviously well maintained with air pressure manometer (when fitted) within operating tolerances • Limits are clearly marked at the manometer position • Computer connected plant has effective filter failure warnings, which are promptly dealt with • Telecoms/computer/server rooms are temperature controlled by adequate ventilation/cooling in accordance with design guides and manufacturers' requirements	INDICATORS • Ventilation grilles have significant staining • Plant air filtration monitoring has failed • Old dirty/contaminated filters are left within the plantroom • Likely impact of impending legislation • Room ventilation by convection only • Ambient room temperatures persistently at circa 25°C or above	INDICATORS • Significant deviances from requirements • Ventilation plant air filtration sections failed resulting in significant pass-through • Doors left open to try to reduce heat build-up

STATUTORY SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
4. COMPLIANCE WITH HEALTH & SAFETY AT WORK etc ACT 1974 Reference: WORKPLACE (HEALTH, SAFETY AND WELFARE) REGULATIONS 1992 AND RELATED LEGISLATION	FLOORS AND TRAFFIC ROUTES	**INDICATORS** • Floor finishes are sound and free from wear and tear • Visibility mirrors provided for blind bends where vehicles, including electric tugs, have access	**INDICATORS** • Floor finishes starting to lift with obvious wear and tear • No visibility mirrors provided for blind bends where vehicles, including electric tugs, have access	**INDICATORS** • Significant deviances from requirements, eg Workplace (Health, Safety and Welfare) Regulations 1992
	LIFTS & HOISTS	**INDICATORS** **CAR** • Adequate lighting in car • Emergency luminaire installed • Emergency alarm system installed • Car doors have adequate inward swing prevention mechanisms installed **PLANTROOM** • Handrails and access chain fitted to raised platform in accordance with requirements (height at 1100 mm from floor level) • Guards fitted to rotating parts • Pulley wheel guarded • Control panel doors securely locked • Electrical controls lockable design • Lifting beam marked with safe working load (SWL) • Access hatch marked with SWL • Effective barriers available when hatch is opened for maintenance access • Electrical safety mats to electrical control panel • Hand winding kit clearly located on wall with easy access • Emergency luminaire fitted to motor room giving clear lighting to hand winding position **SIGN & SIGNALS** • Electrical shock notices • Electrical resuscitation notices • Electrical hazard flash posted	**INDICATORS** **CAR** • Inadequate lighting in car • No or faulty emergency luminaire installed • No emergency alarm system installed or is not economically repairable • Car doors' inward swing prevention mechanisms are worn **PLANTROOM** • Handrail and access chain provision inadequate • Guards to rotating parts not fitted • Pulley wheel guard not fitted • Control panel door interlock defeated by maintenance staff • Electrical controls not lockable • Lifting beam not marked with SWL • Access hatch not marked with SWL • Ineffective barriers to access hatch when opened for maintenance access • Dirty or missing electrical safety mats to electrical control panel • Hand winding kit not mounted or missing • No or inadequately located emergency luminaire to motor room **SIGN & SIGNALS** • Poor or partial provision of the following: – electrical shock notices – electrical resuscitation notices	**INDICATORS** • Significant safety concerns • A large part of the requirements for safe lift use and operation are missing or have failed • Major cost implications

STATUTORY SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
4. COMPLIANCE WITH HEALTH & SAFETY AT WORK etc ACT 1974 (continued)	**LIFTS & HOISTS (continued)**	• Lift schematics posted • Hand winding instructions posted • Emergency contact named (including lift service company) **LIFT SHAFT** • Shaft lighting installed • Physical barrier between lift shafts of more than one lift • Lift safe isolation switch at lift shaft pit • Lighting to lift shaft pit • Portable safety barriers available to be used and easily accessible **LIFT CAR TOP** • Low voltage safety lighting installed (wander lead) • Car top controls fitted • Edge protection provided • Maximum height limit trip installed • Safety notices provided **PLANT ACCESS** • Vertical ladder is fitted with a safety hoop in accordance with statutory requirements • Access ladder is secured against unauthorised access/use • Access hatch is easily manoeuvred with adequate restraints against adverse swing • Collapsible concertina ladders or drop down stage ladders are adequately restrained against rapid drop down • Security of access hatch is designed to prevent unauthorised access • Roof walkways to either plant or plantroom are well lit and have adequate handrails or edge protection • Safety signs are posted • Minimal cost implications for minor repairs only	– electrical hazard flash – lift schematics – hand winding instructions – emergency contact (including lift service company) **LIFT SHAFT** • No or inadequate shaft lighting installed • Inadequate physical barrier between lift shafts of more than one lift • No lift safe isolation switch at lift shaft pit • No lighting to lift shaft pit • No portable safety barriers available to be used and easily accessible **LIFT CAR TOP** • No low voltage safety lighting installed (wander lead) • No or untested car top controls • Inadequate edge protection provided • No maximum height limit trip • Inadequate safety notices **PLANT ACCESS** • Vertical ladder installation not to requirements • Access ladder is not secured against unauthorised access/use • Access hatch is hard to manoeuvre with inadequate restraints against adverse swing • Collapsible concertina ladders or drop down stage ladders are not adequately restrained against rapid drop down • Security of access hatch is not designed to prevent unauthorised access • Roof walkways to either plant or plantroom are poorly lit and have inadequate handrails or edge protection • Safety signs are not posted • Major cost implications	

STATUTORY SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
5. FOOD HYGIENE	WALLS/ FLOORS/ SURFACES/ WASHING FACILITIES/ REFRIGER-ATION	INDICATORS • Ceilings, doors, drainage, floors and walls etc in good condition • Suitable washing-up facilities in good condition • Food preparation surfaces are clean, dry, impervious and in good condition • Refrigerators are clean and regularly defrosted • Dry foods are kept in appropriate separate storage • Fly screens are fitted to windows • Adequate flying insect killers are installed	INDICATORS • Difficult to ensure adequate cleaning • Inadequate washing-up facilities • Food surfaces are damaged • Refrigerators are not subject to adequate defrost cycles • Inadequate fly screens/flying insect killers • Cracked tiles • Poor fly screens – dirty/ damaged/poorly fitted	INDICATORS • Significant deviances from requirements
6. COMPLIANCE WITH COSHH REGULATIONS 2002	STORAGE/ VENTILATION/ SAFE HANDLING/ SIGNS AND SIGNALS/RISK ASSESSMENTS	INDICATORS • Storage facility is in accordance with current published guidance • Correct storage of chemicals taking into account the amounts stored • Adequate ventilation provided to store room • COSHH safety signs posted • COSHH information available • COSHH assessments current and available	INDICATORS • Inadequate storage facility • Inadequate ventilation to storage room • Incorrect storage of chemicals • Minimal provision of COSHH notices • Old COSHH assessments/ information	INDICATORS • Significant deviances from requirements, eg COSHH Regulations 2002
7. COMPLIANCE WITH SAFETY PROVISIONS FOR THE DISABLED	EXTERNAL APPROACH/ ENTRANCE RECEPTION/ CIRCULATION/ INTERNAL SPACES/ SANITARY FACILITIES/ EVACUATION MANAGEMENT AND IMPLEMENTA-TION	INDICATORS Minimal deviance from requirements for: • external approach • entrance and reception • horizontal and vertical circulation • internal spaces • sanitary facilities • evacuation, management and implementation	INDICATORS • General deviance from requirements in most areas	INDICATORS • Significant deviances from requirements
8. PRESSURE SYSTEMS Reference: PRESSURE SYSTEMS SAFETY REGULATIONS 2000 AND RELATED LEGISLATION	WRITTEN SCHEME OF EXAMINATION	INDICATORS • Written scheme of examination in place and effectively managed	INDICATORS • Written scheme of examination not controlled/ monitored in accordance with agreed schedules	INDICATORS • Significant deviances from requirements

STATUTORY SAFETY – WHAT TO LOOK FOR?

ELEMENT	SUB-ELEMENT	CONDITION B	CONDITION C	CONDITION D
9. MAINTENANCE AND OPERATION OF EQUIPMENT IN CONFINED SPACES Reference: CONFINED SPACES REGULATIONS 1997 AND RELATED LEGISLATION	ACCESS/ ENVIRONMENT TEMPERATURE/ VENTILATION/ SAFE SYSTEM OF WORK	INDICATORS • Adequate and safe means of access • Adequate ventilation • Safety signs posted • Documented safe system of work available	INDICATORS • Access inadequate – poor access provision • Temperature too high – poor ventilation • Minimal provision of safety signs and signals • Inadequate documented safe system of work	INDICATORS • Significant deviances from requirements
10. SURFACE TEMPERATURES OF HEAT-EMITTING DEVICES AND/OR MIXERS	HOT WATER OUTLETS	INDICATORS • Mixers installed to "risk" areas (see HGN '"Safe" hot water and surface temperatures' for advice on provision of thermostatic mixing valves for hot water outlets) • "Danger hot water" signs posted* * *It is a requirement that the use of uncontrolled point of delivery outlets should be subject to a risk assessment. Where it is decided that uncontrolled point-of-delivery outlets are appropriate, a warning sign should be provided that clearly says: "Very hot water". Staff should receive training on the dangers in use of the outlet*	INDICATORS • Partial provision of mixers • Partial provision of safety signs	INDICATORS • Significant deviances from requirements, eg Workplace (Health, Safety and Welfare) Regulations 1992
	SURFACE TEMPERA-TURES OF HEATING DEVICES	INDICATORS • Low surface temperature – should not exceed 43°C • Low surface temperature radiators installed and pipework boxed in* **OR** • Radiator guards provided (size of mesh must prevent small hands reaching hot surfaces) and pipework boxed in* * *Vertical and horizontal pipe runs of surface mounted pipework that is exposed at low level ie two metres off the floor must be securely insulated or "boxed" in* *HGN '"Safe" hot water and surface temperatures' provides advice on protection of heated radiator surfaces*	INDICATORS • Partial provision of heated surfaces protection	INDICATORS • Significant deviances from requirements

Appendix 3 – Estimated life expectancies for physical condition elements/sub-elements

Column A should be used as the base point against which you determine remaining life. If circumstances require, use either the range given (column B) or other published data to inform the decision process. The figures provided are derived from experience and knowledge and should not be confused with any estimates the DV may provide				A (years)	B (years)
				Typical life from new	Range
01	STRUCTURES	SUB-STRUCTURE	Foundations	110	60–175
		FRAME STRUCTURES	Steel frame	85	60–115
			Concrete frame	80	55–105
			Timber frame	70	40–110
			Pre-fab type timber	45	30–60
			Laminated timber frame	65	40–95
			Space frame	75	50–95
		FLOOR STRUCTURES	Profiled steel & reinforced concrete floor	70	55–95
			Pre-cast concrete slab	80	50–105
			Timber joists	90	45–115
		ROOF STRUCTURES	Timber	70	40–110
			Steel	85	60–115
02	EXTERNAL FABRIC	WALLS AND FINISHES	Stone, brick, concrete	85	45–125
			Cement rendering etc	55	35–80
			Pointing	40	30–80
			Plastic/glass fibre	25	20–35
			Cladding – PVCu	30	20–35
			Cladding – Timber boarding/panels/sealants	30	15–40
		WINDOWS, DOORS, FASCIA ETC	Powder coated aluminium	45	30–60
			PVCu coated aluminium	45	30–60
			Steel (Crittal type)	50	30–65
			Softwood	35	20–55
			Hardwood	50	25–70
			PVCu	35	25–50
			Timber barge boards/fascias	30	15–40
			PVCu barge boards/fascias	30	20–35
		DOORS EXTERNAL	Powder coated aluminium	30	25–40
			PVCu coated aluminium	30	25–40
			Softwood	15	15–25
			Hardwood	35	25–45
			PVCu	30	25–35
			Automatic	20	15–25
03	ROOFS	ROOF LIGHTS	Polycarbonate	20	15–25
			Timber frame/wired armoured glass	25	20–30
			Proprietary	20	15–25
		RAIN WATER GOODS	Lead	70	60–80
			Cast iron	50	30–75
			PVC	25	20–40
			Aluminium	30	25–50
		FLAT/SLOPING	Elastomeric	20	15–25
			Bituminous felt	20	10–25
			PVC covering	25	15–35
			Proprietary	25	15–35
			Asphalt hot laid	35	20–55
		PITCHED	Slate	75	45–110
			Synthetic tiles	30	25–50
			Concrete tiles	40	25–50
			Clay tiles	65	40–105
			Copper	60	35–80
			Aluminium	40	30–50

Column A should be used as the base point against which you determine remaining life. If circumstances require, use either the range given (column B) or other published data to inform the decision process. The figures provided are derived from experience and knowledge and should not be confused with any estimates the DV may provide				A (years)	B (years)
				Typical life from new	Range
04	INTERNAL FABRIC AND FIXTURES	WALLS	Hardwall or carlite	40	35–60
			Plasterboard	40	25–55
			Tiled	35	20–50
			Board or panel lining	30	25–45
			Vinyl	20	15–30
			Proprietary (or see guarantee)	25	15–30
			Glazed partition	30	20–35
		FLOORS	Lino	20	15–30
			Rubber	25	20–30
			Wood block strip	40	20–55
			Carpet	15	10–20
			Sheet vinyl	15	10–25
			Non-slip vinyl	25	15–30
			Vinyl tiles	20	10–25
			Granolithic (terrazzo etc)	40	30–55
			Quarry tiles	40	30–55
			Ceramic tiles	30	20–35
			Proprietary	30	20–35
		CEILINGS	Lath & plaster	30	25–55
			Plasterboard – skimmed	50	25–55
			Boarded	30	25–40
			Compressed fibre	30	25–40
			Suspended – acoustic	25	15–35
			Suspended – metal	25	15–35
		INTERNAL DOORS	Softwood circulation doors	25	20–60
			Hardwood circulation doors	35	30–60
			Softwood room doors	35	20–60
			Hardwood room doors	45	30–60
			Access panels	50	30–60
			Ironmongery	15	10–20
		BUILT IN FITMENTS/ UNIT FURNITURE	Kitchen units	15	10–25
			General units ward/department	20	10–25
			Worktops/shelving	15	10–20
05	EXTERNAL BUILDING WORKS	DRAINAGE SYSTEMS	Drainage systems – grounds	35	30–40
			Manholes	35	30–40
			Internal drainage	35	30–40
			Internal manholes (sealed)	35	30–40
			Water distribution	35	30–40
		SURFACE WATER DRAINAGE	Kerbs/channels/gulley traps	40	30–50
		ROADS/PAVING/PARKING	Concrete	30	20–40
			Tarmac	20	15–30
			Asphalt	15	10–25
			Paving slabs	30	20–40
			Blockwork	30	20–40
			Gravel	12	10–15
			Compressed chippings	12	10–15
		BOUNDARY WALLS	Brick	40	30–50
			Stone	50	40–60
			Concrete block	30	30–50
			Cement rendered	25	20–30
		FENCES	Concrete post & wire	25	15–45
			Timber post & wire	20	10–30
			Timber panels	12	10–15
			Timber boards	15	10–20
			Ranch style	15	10–20
			Concrete posts	25	15–45
			Chain link	20	15–25
			Mild steel railings	12	10–15
			Wrought iron railings	25	20–30
			Galvanised/painted	20	15–25

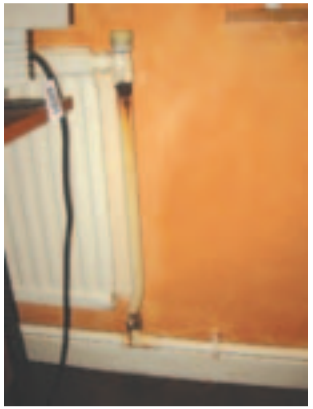
Column A should be used as the base point against which you determine remaining life. If circumstances require, use either the range given (column B) or other published data to inform the decision process. The figures provided are derived from experience and knowledge and should not be confused with any estimates the DV may provide				A (years)	B (years)
				Typical life from new	Range
05	EXTERNAL BUILDING WORKS (CONTINUED)	GATES	Wrought iron	25	20–30
			Timber	12	10–15
			Galvanised	20	15–25
		COVERED WAYS	Plastic corrugated sheet	18	15–20
			PVCu	25	20–30
06	ENERGY CENTRE SYSTEMS	STEAM PLANT	Control equipment	15	12–20
			Steam pipework installations	30	25–30
			Condensate systems	15	10–15
			Combustion controls	18	15–20
			Feed pumps	18	15–20
			Feedwater treatment plant	18	15–20
			Firing equipment gas	20	15–25
			Firing equipment oil	20	15–25
			Firing equipment coal	15	10–20
			Fuel handling liquid	25	15–30
			Fuel handling solid	15	10–20
			Grit and ash handling	12	10–15
			Hotwells & makeup tanks – cast iron	25	15–30
			Hotwells & makeup tanks – mild steel	15	10–20
			Induced draught and forced draught fans	15	10–20
			Instrumentation	15	10–20
			Other boiler equipment	15	15–25
			Brick chimneys	35	35–45
			Steel chimneys/flues	15	8–20
			Stainless steel chimneys/flues	20	15–25
			Gas pipework	30	20–35
		LOW PRESSURE AND HIGH PRESSURE HOT WATER BOILERS and CALORIFIERS/DOMESTIC HOT WATER STORAGE VESSELS	Sectional – cast iron	25	20–30
			Domestic gas boiler	20	15–25
			Domestic combination boiler	20	15–25
			Condensing boiler	20	15–25
			Heating calorifiers	25	15–30
			Domestlc hot water (DHW) storage	25	20–30
			DHW load levellers	25	20–30
			DHW direct fired water heaters	20	15–25
			Copper cylinder	20	15–25
		GENERATOR	Generator prime movers diesel	30	25–35
			Generator standby prime movers	30	25–35
07	HEATING SYSTEMS		Low pressure hot water pipework installations	25	20–30
			Pumps	20	10–25
			Radiators – cast iron	35	15–40
			Radiators steel	20	10–25
			Convectors	25	15–30
			Plastic pipe under-floor heating	35	25–40
			Suspended ceiling heating	25	20–30
			Embedded panel heaters	25	15–30
			Controls (TRV)	15	10–20
08	HOT & COLD WATER SYSTEMS		Tanks – cast iron	35	30–40
			Tanks – mild steel	15	10–20
			Tanks plastic	35	25–40
			Tanks – glass reinforced plastic	35	25–40
			Copper pipework installations	35	30–40
			Pumps	20	5–25
			Valves and controls	20	15–25
			Softening plant	20	10–25
			Insulation	25	15–30
			Sanitaryware – general/kitchens/sluice/ bathrooms	35	20–40

Column A should be used as the base point against which you determine remaining life. If circumstances require, use either the range given (column B) or other published data to inform the decision process. The figures provided are derived from experience and knowledge and should not be confused with any estimates the DV may provide				**A (years)**	**B (years)**
				Typical life from new	**Range**
09	**VENTILATION and AIR-CONDITIONING**		Controls	**15**	**15–25**
			Distribution systems	**35**	**20–40**
			Humidification	**15**	**10–20**
			Fans large (low-speed)	**20**	**15–25**
			Fans general	**20**	**10–25**
			Filter housings	**15**	**10–20**
			Copper heater batteries	**25**	**25–30**
			Package plant internal	**25**	**15–30**
			Package plant external	**15**	**10–20**
			Fan coil units	**15**	**12–20**
			Split fan coil units	**15**	**10–20**
			Refrigeration plant	**20**	**15–25**
10	**MEDICAL GAS PIPELINE SERVICES**		Distribution pipework	**35**	**30–40**
			Manifolds	**20**	**15–25**
			Outlets	**15**	**10–20**
			Alarm systems	**15**	**10–20**
			Compressors	**25**	**20–30**
			Vacuum pumps/plant	**25**	**20–30**
			Medical gas and suction equipment	**25**	**20–30**
11	**LIFTS & HOISTS**		Lifts and hoists car	**30**	**20–40**
			Lifts and hoists electric controls	**15**	**10–20**
			Lifts and hoists hydraulic car	**30**	**20–40**
			Lifts and hoists hydraulic controls/hydraulics	**20**	**15–25**
			Lifts and hoists pneumatic car	**30**	**20–40**
			Lifts and hoists pneumatic and controls	**20**	**15–25**
12	**FIXED PLANT/ EQUIPMENT**		Sterilizing equipment	**15**	**10–20**
			Disposal units	**15**	**10–20**
			Cooking equipment	**20**	**15–25**
			Washing machines	**20**	**15–25**
			Other laundry plant	**20**	**15–25**
			Fixed fire installations	**20**	**15–25**
			Fire hydrant systems	**35**	**30–40**
			Miscellaneous equipment	**20**	**15–25**
13	**ELECTRICAL SYSTEMS**		Main distribution cables	**25**	**25–30**
			Metering equipment	**25**	**20–30**
			Switchgear and distribution equipment	**25**	**25–30**
			Local distribution boards	**25**	**20–30**
			Final circuits and outlets	**22**	**20–25**
			Lighting installations	**22**	**20–25**
			Luminaires	**15**	**10–20**
			Luminaires low voltage	**10**	**5–15**
			Street lighting	**15**	**12–20**
			Electric motors	**20**	**15–25**
			Lightning conductor protection systems	**25**	**20–30**
14	**ALARMS and DETECTION SYSTEMS**		Fire alarm systems wiring	**25**	**20–30**
			Panels	**12**	**10–15**
			Call points	**12**	**10–15**
			Detectors	**12**	**10–15**
			Call systems	**20**	**15–25**
			Batteries lead acid	**5**	**3–10**
			Batteries nickel	**20**	**15–25**
15	**COMMUNICATION SYSTEMS**		Telephones	**20**	**15–25**
			Paging systems	**20**	**15–25**
			Data transmission	**20**	**15–25**
16	**MISCELLANEOUS**		Fixed fire installations	**20**	**15–25**
			Fire hydrant systems	**35**	**30–40**
			Industrial gas systems	**25**	**20–30**

Appendix 4 – Risk matrix: worked examples

ELEMENT	PHOTOGRAPH	EVIDENCE	RANK	Consequence scoring 1–5	Likelihood scoring 1–5	SCORE	RISK RANK	COMMENTS
Unit furniture		**INDICATORS** • **Nearing or at end of assessed life.** • Doors in poor condition damaged and/or hinges worn and loose. • Worktops worn and damaged. • Units tired.	C	2	3	6	LOW	Area used for simple tea making etc. No food preparation. No action currently needed.
Windows		**INDICATORS** • **Nearing or at end of assessed life.** • Frame and mechanisms showing obvious signs of fatigue. • Rot/corrosion evident.	C	2	5	10	MODERATE	Metal windows corroded. Does not constitute a significant safety hazard. Glazing – small panes and no evidence of loosening.
Flat roofs		**INDICATORS** • **Nearing or at end of assessed life.** • Roof leaks apparent. • Cracking evident to roofing material. • Increased level of bubbling to roofing material. • Provision of chippings to built-up felt roofs sparse. • Built-up felt edging lifting. • Major cost implications.	C	4	5	20	HIGH	Internal damage beginning to occur.

ELEMENT	PHOTOGRAPH	EVIDENCE	RANK	Consequence scoring 1–5	Likelihood scoring 1–5	SCORE	RISK RANK	COMMENTS
Structure		**INDICATORS** • Brickwork/finishes failed. • Walls bulging/leaning and/or unstable. • Significant areas of rendering loose/ cracked/missing. • Substantial/significant cost implications.	**Dx**	**4**	**5**	**20**	**HIGH**	Building – derelict.
Electrical installation Installed 1960 Age 43 years		Electrical installation assessed as end of operational life based on: Electrical installation mainly pyrotanex – circa 40 years life **INDICATORS** • **Nearing or at end of assessed life.** • Poor reliability record. • Installation not fully in accordance with BS 7671/HTM 2020. • Electrical installation test records not available. • Mixture of wiring systems, PVC singles, twin and earth, etc. • Major cost implications.	**C**	**4**	**4**	**16**	**SIGNIFICANT**	This installation is still functional. However, extensive maintenance is required to ensure that it continues to meet safety requirements. Repeated exposure of components to meet testing requirements is causing additional failure problems.

ELEMENT	PHOTOGRAPH	EVIDENCE	RANK	Consequence scoring 1–5	Likelihood scoring 1–5	SCORE	RISK RANK	COMMENTS
Electrical installation Installed 1970 Age 33 years		**INDICATORS** • **Nearing or at end of assessed life.** • Poor reliability record. • Installation not fully in accordance with BS 7671/HTM 2020. • Electrical installation test records not available. • Mixture of wiring systems, PVC singles, twin and earth etc. • Major cost implications. • Building asbestos lined.	**Cx**	**4**	**4**	**16**	**SIGNIFICANT**	This installation is still functional. Repeated exposure of components to meet testing requirements is causing additional failure problems. Not possible to renew as building lined internally with asbestos board.
Heating system		**INDICATORS** • **Nearing or at end of assessed life.** • Poor reliability record. • Evidence of extensive pipework corrosion/leaks. • Major cost implications.	**C**	**4**	**5**	**20**	**HIGH**	Heating system leaking. System shut down for temporary repair.

ELEMENT	PHOTOGRAPH	EVIDENCE	RANK	Consequence scoring 1–5	Likelihood scoring 1–5	SCORE	RISK RANK	COMMENTS
Boilers		Boiler assessed as end of operational life based on: **INDICATORS** • **Nearing or at end of assessed life.** • Poor reliability record. • Covers in poor condition – dented or missing. • Repeated problems with burners. • Flue guards are damaged or missing. • Parts difficult to obtain or obsolete. • Major cost implications.	C	4	5	20	HIGH	Gas boiler isolated. Dangerous levels of carbon monoxide. Internal corrosion and burner failure.

SCORE RANGE

1–6	LOW
7–10	MODERATE
11–16	SIGNIFICANT
17–25	HIGH

For the element being assessed on a score of 1–5

(a) Decide the potential consequences

(b) Decide the probability of failure

(c) Multiply the two numbers

(d) Compare the score obtained with the "score range" table

(e) Record the "risk" this identifies, ie low, moderate, high etc

	PROBABILITY OF FAILURE				
Rating	**1**	**2**	**3**	**4**	**5**
Failure descriptors	**RARE**	**UNLIKELY**	**POSSIBLE**	**LIKELY**	**CERTAIN**
	None or minimal remedial action required and/or new/recent upgrade. Estimated time to failure may be circa > 10 yrs	Normal wear and tear. Sound, operationally safe and exhibits only minor deterioration. Estimated time to failure may be circa < 10 yrs	Reasonable physical damage/deterioration. Reassignment of life may be acceptable based on technical tests or residual robustness. Estimated time to failure may be circa < 5 yrs	Major physical damage/ deterioration. Failure apparent/assessed as imminent or unacceptable built environment. Not appropriate to reassign life. Estimated time to failure may be circa < one yr	Failure occurred. Unacceptable built environment. Not appropriate to reassign life. Estimated time to failure may be circa < six months
	Fire/statutory Complies with mandatory fire safety requirements and statutory safety legislation	**Fire/statutory** Complies with mandatory fire safety requirements and statutory safety legislation with minor deviations of a non-serious nature	**Fire/statutory** Known contravention of one or more requirement – which falls short of "B".	**Fire/statutory** Dangerously below "B"	**Fire/statutory** Dangerously below "B"
POTENTIAL CONSEQUENCES					
SEVERITY					
Rating	**Descriptor**	**Health& safety**	**Environment**	**Business**	**Operational / building/ engineering element**					
1	**INSIGNIFICANT**	No injury/breach of guidance/ procedures	No or minimal impact breach of guidance/ procedures.	Unlikely cause of complaint. Litigation remote. Minimal reputation loss/ limited awareness within organisation.	Minimal or no impact. Minimal or no disruption.	**1**	**2**	**3**	**4**	**5**
2	**MINOR**	Minor injury/ill health (first aid or self-treatment). Breach of legal requirement.	Breach of legal requirement.	Possible complaint Litigation unlikely. Loss of reputation (widespread internal awareness).	Localised impact. Disruption to normal services.	**2**	**4**	**6**	**8**	**10**
3	**MODERATE**	Moderate injury/ill health statutory obligations. Improvement notice issued.	Single breach of legal requirement. Improvement notice issued.	Possible complaint. Possible litigation. Loss of reputation. National paper reporting.	Moderate impact. Moderate disruption to normal services.	**3**	**6**	**9**	**12**	**15**
4	**MAJOR**	Major/significant injury or long-term incapacity/disable-ment. Prohibition notice issued.	Multiple breach of legal requirement. Prohibition notice issued.	Litigation expected. Loss of reputation National reporting.	Major/significant impact. Severe disruption to normal services.	**4**	**8**	**12**	**16**	**20**
5	**CATASTROPHIC**	Fatality and/or permanent incapacity/ disability. Prosecution	Multiple breach of legal requirement. Prosecution.	Litigation certain. National adverse publicity.	Critical impact. Service closure.	**5**	**10**	**15**	**20**	**25**

CONSEQUENCE		PROBABILITY	SCORE	RANK
SEVERITY		LIKELY		
4	X	4	16	SIGNIFICANT

Appendix 5 – Survey report forms

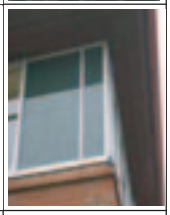
Note: The following sheets provide a few examples illustrating how information noted on the data collection survey sheets are transferred to the survey report forms (see also Appendix 1).

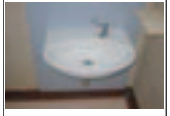
PHYSICAL CONDITION SURVEY REPORT FORM

FORM REFERENCE:		**DATE:**
SURVEYED BY:	**BUILDING/BLOCK AGE:**	**TRUST NAME:**
OVERALL AREA (m²):	**REMAINING LIFE:**	**SITE NAME:**
OVERALL VOLUME (m³):	**NUMBER OF FLOORS:**	**BUILDING/BLOCK NAME:**

NOTES:
1. Only assets that are designated below condition B require risk assessment.
2. The list of sub-elements shown is not exhaustive. Add or delete as circumstances dictate.
3. The identification of sub-elements that are assessed to remain in condition B for more than five years is optional. Examples are shown should organisations wish to record such assets.

	CONDITION RANK	COST TO MAINTAIN IN CONDITION B (£'000)	ASSESSED PERIOD TO REMAIN IN CONDITION B (YEARS)	BACKLOG COSTS - CURRENT & IMPENDING (£'000)	CURRENT & IMPENDING BACKLOG RISK ASSESSMENT: CONSEQUENCE SCORE	LIKELIHOOD SCORE	OVERALL RISK SCORE	RISK RANK	
BUILDING									**PHOTOGRAPH**
1. STRUCTURE									Steel frame, concrete slab, brick built and pitched roof construction. 100 bed Nucleus design with inner landscaped courtyards.
FOUNDATIONS	B		68						
WALLS	B		68						
FRAMES	B		68						
FLOORS	B		68						
ROOFS	B		38						
2. EXTERNAL FABRIC									Cavity wall construction with in-built insulation. 6 mm single glazed aluminium windows. Main entrance – automatic door. External steel stair between levels at junction of concrete barrier wall. Galvanised. Greater than 1/3 of the windows are assessed to be at condition C.
WALLS & FINISHES	B		68						
WINDOWS	B		18						
WINDOWS	C			20	3	3	9	M	
DOORS	B		13						
AUTOMATIC DOOR	B		13						
EXTERNAL TIMBER / PVCu DETAIL	B		13						
DECORATION	C			10	2	3	6	L	
3. ROOFS									Flat roof areas failed. Roof lights discoloured and starting to warp.
COVERINGS – Pitch	B		28						
COVERINGS – Flat	B(C)		5	9	3	3	9	M	
COVERINGS – Flat	D			10	5	5	25	H	
ROOF LIGHTS	B(C)		3	5.5	2	3	6	L	
RAIN WATER GOODS	B		12						
4. INTERNAL FABRIC & FIXTURES									Door furniture beginning to show signs of wear. Floor coverings becoming quite worn.
WALLS & FINISHES	B		38						
CEILINGS	B		38						
CEILINGS SUSPENDED	B		11						
FLOOR COVERINGS	B(C)		2	16	4	3	12	S	
DOORS	B		18						
DOOR FURNITURE	B(C)		2	5.5	1	3	3	L	
UNIT FURNITURE	B		11						
DECORATION	B(C)		3						
5. EXTERNAL BUILDING WORKS									Immediate surroundings grass areas with block path. Attention required to section of drainage.
DRAINAGE	C			10	3	4	12	S	
DRAINAGE – REPARS TO CULVERT	B	2.5							
ROADS / CAR PARKS									
PATHS									
BLOCK / PAVED AREAS	B		32						
TARMAC AREAS									
CONCRETE AREAS									
WALLS									
FENCING / GATES									
ENGINEERING									
6. ENERGY CENTRE SYSTEMS									Steam distribution system very poor, hangers loose, many leaks, uneconomical to repair. Replacement the only option. Boiler plant starting to fail (breakdowns more regular). Non-return valve required to DHW calorifier cold feed.
FUEL SUPPLY / STORAGE / DISTRIBUTION									
ENERGY DISTRIBUTION	C			55	4	4	16	S	
ENERGY DISTRIBUTION – INSULATION									
BOILER PLANT	B(C)		3	15	4	4	16	S	
PRESSURISATION PLANT									
BOILER TREATMENT PLANT									
CALORIFIERS / HEAT EXCHANGERS	B		13						
DOMESTIC HOT WATER STORAGE/NON-STORAGE	B	0.3							
FLUES – SEPARATE									
CONTROLS / METERS									
GENERATORS									
7. HOT & COLD WATER SYSTEMS									Sanitary fittings failed.
POTABLE CW TANKS	B		8						
DHW HEADER TANKS									
GENERAL HEADER TANKS									
WATER TREATMENT PLANT									
HOT & COLD DISTRIBUTION [LOCAL]	B		28						
HOT & COLD MAIN DISTRIBUTION [SITE]	B		18						
PUMPS	B		13						
SANITARY WARE	B		28						
SANITARY FITTINGS	C			6	1	4	4	L	
INSULATION	B		13						
ANCILLARY EQUIPMENT – VALVES / CONTROLS									





PHYSICAL CONDITION SURVEY REPORT FORM

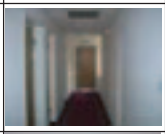
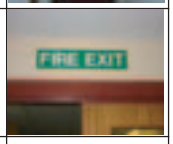
FORM REFERENCE:		**DATE:**
SURVEYED BY:	**BUILDING/BLOCK AGE:**	**TRUST NAME:**
OVERALL AREA (m²):	**REMAINING LIFE:**	**SITE NAME:**
OVERALL VOLUME (m³):	**NUMBER OF FLOORS:**	**BUILDING/BLOCK NAME:**

	CONDITION RANK	COST TO MAINTAIN IN CONDITION B (£'000)	ASSESSED PERIOD TO REMAIN IN CONDITION B (YEARS)	BACKLOG COSTS - CURRENT & IMPENDING (£'000)	CURRENT & IMPENDING BACKLOG RISK ASSESSMENT: CONSEQUENCE SCORE	LIKELIHOOD SCORE	OVERALL RISK SCORE	RISK RANK	
8. HEATING SYSTEMS									Pump failed.
PIPEWORK	B		13						
HEAT EMITTERS	B		13						
INSULATION									
HEATING PUMPS	C			0.3	2	4	8	M	
9. VENTILATION SYSTEMS									Fit glass traps to vent plant.
VENTILATION PLANT	B	0.6							
EXTRACT FANS	B(C)		3	5.5	2	4	8	M	
DISTRIBUTION	B	2							
ROOM SPLIT CHILLERS / COMPRESSORS	B		12						
CHILLERS / COOLING SYSTEMS	B		12						
CONTROLS	B(C)		2	7	4	4	16	S	
INSULATION	B		12						
10. MEDICAL GAS PIPELINE SYSTEMS									
VACUUM INSULATED EVAPORATOR (VIE)									
DISTRIBUTION	B		28						
MANIFOLDS ETC	B		13						
OUTLETS	B		13						
ALARM SYSTEMS	B		13						
MED AIR COMPRESSORS									
VACUUM PUMPS	B	0.5							
11. LIFTS & HOISTS									
PASSENGER	B		28						
GOODS									
HOISTS	B		28						
CONTROL PANEL	B	2							
12. FIXED PLANT/EQUIPMENT									Replace steam header.
STERILIZERS	B	1							
BEDPAN DISPOSAL	B		13						
DISINFECTION EQUIPMENT									
CATERING EQUIPMENT	B		8						
LAUNDRY EQUIPMENT									
MISCELLANEOUS EQUIPMENT									
13. ELECTRICAL SYSTEMS									External lighting fittings - cracked glasses/ corroding flanges etc. Not economical to repair.
WIRING SYSTEMS	D			35	5	5	25	H	
WIRING SYSTEMS – BONDING	D			5	4	4	16	S	Wiring systems – test results inadequate – failed circuit protective conductor – conduit corroded at joints etc. Wiring hard at fittings.
DISTRIBUTION BOARDS	B		18						
SWITCHGEAR	B		18						
LUMINAIRES – INTERNAL	C			20	3	4	12	S	
LUMINAIRES – EXTERNAL	C			3	4	4	16	S	
LUMINAIRES – EMERGENCY	C			5	4	4	16	S	
LIGHTNING CONDUCTORS	B		13						
LUMINAIRES – EMERGENCY [CORRIDORS]	B(C)		2	5	3	3	9	M	
14. ALARMS & DETECTION SYSTEMS									"Protec" addressable fire alarm system.
FIRE ALARM WIRING SYSTEM	B		13						
SECURITY SYSTEMS									
OTHER ALARM SYSTEMS									
15. COMMUNICATION SYSTEMS									
TELEPHONE SYSTEMS	B	1							
DATA TRANSMISSION	B		13						
PAGING SYSTEMS									
NURSE CALL SYSTEMS									
RADIO & TELEVISION									
BUILDING MANAGEMENT SYSTEM	B(C)		2	20	4	4	16	S	
16. MISCELLANEOUS									
WET & DRY RISERS									
HYDROTHERAPY POOLS	B(C)		3	2.5	4	4	16	S	
INDUSTRIAL GAS SYSTEMS									
MISCELLANEOUS EQUIPMENT									
BODY FRIDGE	B	2							

NOTES:
1. Only assets that are designated below condition B require risk assessment.
2. The list of sub-elements shown is not exhaustive. Add or delete as circumstances dictate.
3. The identification of sub-elements that are assessed to remain in condition B for more than five years is optional. Examples are shown should organisations wish to record such assets.

FIRE SAFETY SURVEY REPORT FORM

FORM REFERENCE:		**DATE:**
SURVEYED BY:	**BUILDING/BLOCK AGE:**	**TRUST NAME:**
OVERALL AREA (m²):	**REMAINING LIFE:**	**SITE NAME:**
OVERALL VOLUME (m³):	**NUMBER OF FLOORS:**	**BUILDING/BLOCK NAME:**

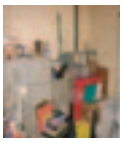
	CONDITION RANK	COST TO MAINTAIN IN CONDITION B (£'000)	ASSESSED PERIOD TO STAY IN CONDITION B (YEARS)	BACKLOG COSTS - CURRENT & IMPENDING (£'000)	CURRENT & IMPENDING BACKLOG RISK ASSESSMENT: CONSEQUENCE SCORE	LIKELIHOOD SCORE	RISK SCORE	RISK RANK	
1. COMPARTMENTATION									Fire barriers required above ceiling. 
INTERNAL SPACES	B		20						
ROOF SPACES/VOIDS	D			20	5	5	25	H	
ELECTRICAL POSITIONS	B		24						
PLANT RISERS	B		24						
2. FIRE DOORS									Fire doors required to corridors. 
FIRE DOOR SETS TO CIRCULATION SPACES	C			6	3	4	12	S	
FIRE HAZARD ROOMS	B		24						
ROOF SPACES/VOIDS	B		24						
3. MEANS OF ESCAPE									Not all signs and signals are as requirements. Emergency lighting requires new batteries. 
SIGNS AND SIGNALS	B		12						
SURFACE FINISHES	B		15						
EMERGENCY LIGHTING	B (C)		2		3	3	9	M	
4. ALARMS & DETECTION SYSTEMS									Automatic system as noted.
SYSTEM	B								
PANELS	B (C)		3	5	3	3	9	M	
DETECTORS	B (C)		3	20	3	3	9	M	
5. TEXTILES & FURNITURE									Ensure all textiles/furniture are correctly labelled to indicate fire retardant to stipulated requirements. All laundered items should comply with fire retardant requirements. Ensure that fabric continues to provide protection.
TEXTILES - CURTAINS/BEDDING ETC	B	1							
FURNISHINGS									
6. STORAGE OF FLAMMABLE SUBSTANCES									Propane compound does not conform to best practice guidance. 
LIQUIDS									
GASES	B (C)		1	2	4	3	12	S	
OTHER									
7. COMPLIANCE WITH FIRECODE									A risk assessment based on 'Firecode' should be available.
SURVEY COMPLETE /UP-TO-DATE	C		1	5	4	4	16	S	
ACTION PLAN IN PLACE									
OTHER									

NOTES:
1. Only assets that are designated below condition B require risk assessment.
2. The list of sub-elements shown is not exhaustive. Add or delete as circumstances dictate.
3. The identification of sub-elements that are assessed to remain in condition B for more than five years is optional. Examples are shown should organisations wish to record such assets.

STATUTORY SAFETY SURVEY REPORT FORM

FORM REFERENCE:		**DATE:**
SURVEYED BY:	**BUILDING/BLOCK AGE:**	**TRUST NAME:**
OVERALL AREA (m²):	**REMAINING LIFE:**	**SITE NAME:**
OVERALL VOLUME (m³):	**NUMBER OF FLOORS:**	**BUILDING/BLOCK NAME:**

	CONDITION RANK	COST TO MAINTAIN IN CONDITION B (£'000)	ASSESSED PERIOD TO REMAIN IN CONDITION B (YEARS)	BACKLOG COSTS - CURRENT & IMPENDING (£'000)	CURRENT & IMPENDING BACKLOG RISK ASSESSMENT: CONSEQUENCE SCORE	LIKELIHOOD SCORE	RISK SCORE	RISK RANK	Notes / Comments
									Notes: 1. Only assets that are designated below condition B require risk assessment. 2. The list of sub-elements shown is not exhaustive. Add or delete as circumstances dictate. 3. The identification of sub-elements that are assessed to remain in condition B for more than five years is optional. Examples are shown should organisations wish to record such assets.
1. ELECTRICAL SERVICES – SUPPLY & DISTRIBUTION									Improvements required in accordance with the regulations. Provide locks/schedules/signs etc. Electrical distribution positions should be kept locked and free from storage of materials/equipment and debris.
DISTRIBUTION BOARD STANDARDS	B		15						
IMPENDING CHANGES	B (C)		3	40	5	3	15	S	
ADEQUACY OF PROVISION (SOCKET-OUTLETS)	B		15						
WORKING SPACE, ACCESS & LIGHTING	B		10						
2. ASBESTOS									Asbestos removal E-wing.
ASBESTOS SURVEY	D			30	5	5	25	H	
ASBESTOS REGISTER	B		10						
3. CONTROL OF LEGIONELLAE									Remove deadlegs. Anti-stratification pump required.
COLD WATER STORAGE	B		20						
HOT WATER STORAGE	C			1	4	5	20	H	
PIPEWORK INSTALLATION	C			3	3	3	9	M	
PIPEWORK INSULATION	B		15						
VENTILATION PLANT	B		15						
4. HEALTH & SAFETY AT WORK etc ACT 1974									Boiler 3 high CO.
LIGHTING (ADEQUACY OF PROVISION)	C			8	2	3	6	L	
FALLS & FALLING OBJECTS	C				4	4	16	S	
LADDERS	B		10						
SAFETY GLAZING	B		10						
GAS SAFETY	B		10						
BOILER SAFETY	C			5	4	5	20	H	
VENTILATION STANDARDS (AIR QUALITY) CLEANING									
FLOORS & TRAFFIC ROUTES	B		20						
FLOOR DRAINS									
5. FOOD HYGIENE									
WALLS									
FLOORS									
SURFACES									
WASHING FACILITIES	B(C)		3	6	4	3	12	S	
REFRIGERATION	B		10						
6. COSHH REGULATIONS 2000									Improve provision of COSHH signs. Provide risk assessments in accordance with requirements. Signs cost only.
STORAGE	B		10						
VENTILATION	B		10						
SAFE HANDLING									
SIGNS & SIGNALS	B	0.6							
RISK ASSESSMENTS	C			2	3	5	15	S	
7. DISABLED ACCESS									See DDA survey form. External approach improvements required. Ramp required. Internal spaces - significant changes needed to meet requirements. Management decision required. Disabled WC required.
EXTERNAL APPROACH	C			1.5	2	4	8	M	
EXTERNAL APPROACH RAMP	C			8	4	5	20	H	
ENTRANCE & RECEPTION									
HORIZONTAL & VERTICAL CIRCULATION									
INTERNAL SPACES									
SANITARY FACILITIES	C			2	3	4	12	S	
EVACUATION, MANAGEMENT, IMPLEMENTATION	C			15	3	4	12	S	
8. PRESSURE SYSTEMS									Domestic hot water/low pressure hot water system only. See written scheme of examination – safety valves. Schematics required.
WRITTEN SCHEME OF EXAMINATION	B	2.5							
9. EQUIPMENT IN CONFINED SPACES									Water storage tanks in first floor plant room. Documented safe system of work should be used (not costed).
ACCESS – IN & OUT	B								
ENVIRONMENT TEMPERATURE	B								
VENTILATION									
SAFE SYSTEMS OF WORK PROVISION	C			4	3	5	15	S	
10. SAFE TEMPERATURES									Provide radiator guards to wait area based on a risk assessment. Minimal provision of type 3 mixers (approx 20%). Provide warning signs.
HOT WATER OUTLETS	C			0.6	3	4	12	S	
SURFACE TEMPERATURES OF HEATING DEVICES	C			1	3	4	12	S	



Appendix 6 – Backlog profile (see also Table 6.1)

The spreadsheet opposite illustrates an example for a **BUILDING/BLOCK**.

DATE:	**31 March [year]**
TRUST NAME:	**ABC NHS Trust**
SITE NAME:	**Mid-Hill**
BUILDING/BLOCK NAME:	**Jubilee House – E Wing**
BUILDING/BLOCK TENURE:	**NHS freehold/leased**
INVESTMENT STATUS:	**FBC approved/financial close achieved**
DISINVESTMENT STATUS:	**To be vacated in [X] years**
REMAINING LIFE OF BUILDING/BLOCK:	**25 years**
BUILDING/BLOCK GROSS INTERNAL FLOOR AREA (m^2):	**912 m^2**

1. The examples provided in the "Aid to completion" table (Table 6.1) clarify the basis on which this form should be completed to avoid duplication of figures.
2. All costs are works costs. For business case purposes add fees, decant costs, VAT etc as per 'Capital Investment Manual' or your trust's financial standing instructions.
3. Condition, costs and risk levels are compiled from a survey of each room together with relevant building and engineering services infrastructures. Condition B sub-elements should only be recorded where there are costs required within the forthcoming financial year to maintain the sub-element in condition B.
4. Backlog costs are as at 31 March. Year 1 begins on 1 April following the 31 March when backlog costs are determined.
5. Condition B(C) sub-elements do not have associated backlog costs as they are currently in condition B. A backlog cost is assigned at the point in the future at which it is predicted the sub-element will fall below condition B.
6. The elements and sub-elements shown are not inclusive of all elements/sub-elements and are for example purposes only. The list of elements/sub-elements recorded will vary from building to building dependent upon the identified condition of the asset.
7. The remaining life of the building/block should be based upon its assessed remaining life during the survey and/or the remaining life provided by the District Valuer.
8. The backlog profile proforma for each building/block should be summated to provide figures for the whole site and/or the trust.

Appendix 6 – Backlog profile (example for a building/block)

EXAMPLES FROM AID TO COMPLETION TABLE 6.1

- CONDITION HEADING
- *SUB-HEADING*
- Example 1: Physical condition: B (with cost); Fire Safety Condition: B (no cost); Statutory Safety Condition: B (no cost)
- ELEMENT
- *SUB-ELEMENTS*
- Example 2: Physical condition: C; Fire Safety Condition: B (no cost); Statutory Safety Condition: B (no cost)
- Example 7: Physical condition: B(C); Fire Safety Condition: B (no cost); Statutory Safety Condition: B (no cost)
- Example 3: Physical condition: B (no cost); Fire Safety Condition: C; Statutory Safety Condition: B (no cost)
- Example 11a: Physical condition: B(C); Fire Safety Condition: B(C); Statutory Safety Condition: B (no cost)
- Example 8: Physical condition: B (no cost); Fire Safety Condition: B(C); Statutory Safety Condition: B (no cost)
- Example 11b: Physical condition: B(C); Fire Safety Condition: B(C); Statutory Safety Condition: B (no cost)
- Example 9: Physical condition: B (no cost); Fire Safety Condition: B (no cost); Statutory Safety Condition: B(C)
- Example 6: Physical condition: B(C); Fire Safety Condition: B (no cost); Statutory Safety Condition: C
- Example 5: Physical condition: C; Fire Safety Condition: B (no cost); Statutory Safety Condition: C
- Example 4: Physical condition: B (no cost); Fire Safety Condition: B (no cost); Statutory Safety Condition: C
- Example 10: Physical condition: B(C); Fire Safety Condition: B (no cost); Statutory Safety Condition: B(C)

ELEMENT/SUB-ELEMENT	CONDITION RANK: Physical	Fire safety	Statutory safety	Cost to maintain condition B sub-elements in that condition (year 1) (£'000)	CONDITION PROFILE: CURRENT BACKLOG COST £'000: Physical condition	Fire safety	Statutory safety	Total backlog cost	IMPENDING BACKLOG COST £'000: Year 1	Year 2	Year 3	Year 4	Year 5	RISK PROFILE: RISK SCORE & RANK: Consequence score (1–5)	Likelihood score (1–5)	Total risk score (1–25)	Risk rank	CURRENT BACKLOG RISK	IMPENDING BACKLOG RISK: Year 1	Year 2	Year 3	Year 4	Year 5
PHYSICAL CONDITION																							
BUILDING																							
Structure																							
Repairs to wall	B			3.0				0.0															
External fabric																							
Repairs to pointing	B			0.5				0.0															
Windows	C				20.0			20.0						3	3	9	MODERATE	MODERATE					
Roof																							
Roof covering (flat)	B(C)							0.0					9.0	3	3	9	MODERATE						MODERATE
Roof covering (flat)	D				10.0			10.0						5	5	25	HIGH	HIGH					
Rooflights	B(C)							0.0			5.5			2	3	6	LOW				LOW		
Internal fabric and fixtures																							
Internal doors	B							0.0															
Door furniture	B(C)							0.0		5.5				1	3	3	LOW			LOW			
Floor coverings	B(C)							0.0		16.0				4	3	12	SIGNIFICANT			SIGNIFICANT			
Sanitary fitments	C				6.0			6.0						1	4	4	LOW	LOW					
External works																							
Repairs to manholes/culvert	B			2.5				0.0															
Drainage	C				10.0			10.0						3	4	12	SIGNIFICANT	SIGNIFICANT					
ENGINEERING																							
Energy centre systems																							
Boiler 1 & 2	B(C)							0.0			15.0			4	4	16	SIGNIFICANT				SIGNIFICANT		
Heating systems																							
Circulation pumps	C				0.3			0.3						2	4	8	MODERATE	MODERATE					
Steam pipework	C				55.0			55.0						4	4	16	SIGNIFICANT	SIGNIFICANT					
Hot and cold water systems																							
Provide NRV	B			0.3				0.0															
Ventilation systems																							
Replace traps (fit glass trap)	B			0.6				0.0															
Extract fans	B(C)							0.0		5.5				2	4	8	MODERATE			MODERATE			
Controls	B(C)							0.0	7.0					4	4	16	SIGNIFICANT		SIGNIFICANT				
Medical gas pipeline systems																							
Repairs to compressor	B			0.5				0.0															
Lifts and hoists																							
Replace control panel	B			2.0				0.0															
Fixed equipment																							
Replace steam header to autoclave	B			1.0				0.0															
Electrical systems																							
External lighting	C				3.0			3.0						4	4	16	SIGNIFICANT	SIGNIFICANT					
Emergency luminaires	C				5.0			5.0						4	4	16	SIGNIFICANT	SIGNIFICANT					
Luminaires	C				20.0			20.0						3	4	12	SIGNIFICANT	SIGNIFICANT					
Electrical wiring	D				35.0			35.0						5	5	25	HIGH	HIGH					
Communication systems																							
Replace control panel	B			1.0				0.0															
Alarm systems																							
Building management system	B(C)							0.0		20.0				4.0	4.0	16	SIGNIFICANT			SIGNIFICANT			
Miscellaneous																							
Hydrotherapy pool treatment plant	B(C)							0.0			2.5			4	4	16	SIGNIFICANT				SIGNIFICANT		
Repairs to chiller plant to body fridge	B			2.0				0.0															
FIRE SAFETY																							
Compartmentation																							
Provide roof void barriers above suspended ceiling		D				20.0		20.0						5	5	25	HIGH	HIGH					
Fire doors																							
Replace fire doors to corridors		C				6.0		6.0						3	4	12	SIGNIFICANT	SIGNIFICANT					
Means of escape																							
Emergency luminaires	B(C)							0.0		6.0				3	3	9	MODERATE			MODERATE			
		B(C)						0.0		15.0				3	3	9	MODERATE			MODERATE			
Alarm/detection systems																							
Detectors and fire panel		B(C)						0.0		10.0				4	3	12	SIGNIFICANT			SIGNIFICANT			
Textiles and furniture																							
Re-treat curtains (not now flammable – laundered)		B		1.0				0.0															
Storage of flammable substances																							
Propane compound	B(C)	B(C)						0.0	2.0					4	3	12	SIGNIFICANT		SIGNIFICANT				
Compliance with Firecode																							
Update survey		C				1.0		1.0						3	4	12	SIGNIFICANT	SIGNIFICANT					
STATUTORY SAFETY																							
Electrical Services – Supply & Distribution																							
Impending changes to requirements			B(C)					0.0			40.0			5	3	15	SIGNIFICANT				SIGNIFICANT		
Asbestos																							
Asbestos removal to corridor – part 'E' wing			D			30.0		30.0						5	5	25	HIGH	HIGH					
Control of legionellae																							
Removal of deadlegs			C			1.7		1.7						3	4	12	SIGNIFICANT	SIGNIFICANT					
DHW storage including provision of Anti-stratification pump	B(C)							0.0			10.0			4	4	16	SIGNIFICANT				SIGNIFICANT		
			C			1.0		1.0						4	4	16	SIGNIFICANT	SIGNIFICANT					
Compliance with Health & Safety at Work etc Act																							
Boiler 3 High CO. Poor combustion control and refractory lining	C		C		2.5	2.5		5.0						4	5	20	HIGH	HIGH					
Improve lighting to VDU workstations			C			8.0		8.0						2	3	6	LOW	LOW					
Roof edge protection			C			12.0		12.0						4	4	16	SIGNIFICANT	SIGNIFICANT					
Food hygiene																							
Improve washing facilities			B(C)					0.0		6.0				4	3	12	SIGNIFICANT			SIGNIFICANT			
Control of Substances Hazardous to Health Regulations																							
Improve storage room ventilation			C			0.5		0.5						2	3	6	LOW	LOW					
Compliance with Disability Discrimination Act																							
Surface failing and handrails unsafe	B(C)							0.0				1.5		2	3	6	LOW					LOW	
			B(C)					0.0		1.0				2	3	6	LOW		LOW				
Provide additional ramps			C			10.0		10.0						3	4	12	SIGNIFICANT	SIGNIFICANT					
Pressure systems																							
Provide system schematics and post in plantrooms			B	2.5				0.0															
GRAND TOTALS				16.9	166.8	27.0	65.7	259.5	9.0	85.0	73.0	1.5	9.0										

D BACKLOG COSTS (£'000)	95.0
C BACKLOG COSTS (£'000)	164.5
TOTAL BACKLOG COST (£'000)	259.5

HIGH RISK COST (£'000)	100.0	0.0	0.0	0.0	0.0	0.0
SIGNIFICANT RISK COST (£'000)	124.7	9.0	52.0	67.5	0.0	0.0
MODERATE RISK COST (£'000)	20.3	0.0	26.5	0.0	0.0	9.0
LOW RISK COST (£'000)	14.5	0.0	6.5	5.5	1.5	0.0
TOTAL BACKLOG COST – RISK (£'000)	259.5	9.0	85.0	73.0	1.5	9.0

Appendix 6 – Backlog profile (example for an external site)

ELEMENT/SUB-ELEMENT	CONDITION RANK			Cost to maintain condition B sub-elements in that condition (Year 1) (£'000)	CONDITION PROFILE										RISK PROFILE										
					CURRENT BACKLOG COST £'000				IMPENDING BACKLOG COST £'000						RISK SCORE & RANK					IMPENDING BACKLOG RISK					
	Physical	Fire safety	Statutory safety		Physical condition	Fire safety	Statutory safety	Total backlog cost	Year 1	Year 2	Year 3	Year 4	Year 5		Consequence score (1–5)	Likelihood score (1–5)	Total risk score (1–25)	Risk rank	CURRENT BACKLOG RISK	Year 1	Year 2	Year 3	Year 4	Year 5
PHYSICAL CONDITION																									
BUILDING																									
External fabric																									
Out-buildings – walls and finishes repairs	B			1.0				0.0																	
Out-buildings – external timber detail	C				1.0			1.0							1	4	4	LOW	LOW						
Roof																									
Out-buildings – coverings – flat	C				1.0			1.0							2	4	8	MODERATE	MODERATE						
External building works																									
Drainage	B			2.0				0.0																	
Roads and car parks	B			10.0				0.0																	
Paths	B			3.0				0.0																	
Block/paved/tarmac areas	B			4.0				0.0																	
Walls	B			3.0				0.0																	
Fencing/gates	B(C)							0.0					10.0		2	3	6	LOW							LOW
Fencing/gates	C				10.0			10.0							3	4	12	SIGNIFICANT	SIGNIFICANT						
ENGINEERING																									
Heating systems																									
Pipework insulation repairs	B			4.0				0.0																	
Heating pumps	B(C)							0.0				1.5			3	3	9	MODERATE					MODERATE		
Hot and cold water systems																									
Pipework insulation repairs	B			2.0				0.0																	
DHW pumps	B(C)							0.0				1.0			4	4	16	SIGNIFICANT					SIGNIFICANT		
Replace fire hydrant valves	B(C)							0.0	10.0						4	3	12	SIGNIFICANT		SIGNIFICANT					
Medical gas pipeline systems																									
Repairs to pipework hangers in ducts	B			3.0				0.0																	
Electrical systems																									
Electrical distribution cables	B(C)							0.0			60.0				3	3	9	MODERATE				MODERATE			
Electrical intake switchgear	B(C)							0.0			30.0				3	3	9	MODERATE				MODERATE			
Street lighting cables	C				90.0			90.0							4	4	16	SIGNIFICANT	SIGNIFICANT						
Street lighting luminaires	C				40.0			40.0							4	4	16	SIGNIFICANT	SIGNIFICANT						
Communication systems																									
Replacement of telephone distribution	B(C)							0.0					25.0		3	3	9	MODERATE							MODERATE
FIRE SAFETY																									
Alarm/detection systems																									
Replace alarm distribution network		B(C)						0.0			60.0				4	3	12	SIGNIFICANT	SIGNIFICANT				SIGNIFICANT		
Storage of flammable substances																									
Remove redundant petrol storage tank		C				12.0		12.0							4	5	20	HIGH	HIGH						
STATUTORY SAFETY																									
Asbestos																									
Asbestos work to duct C. Removal required			D				30.0	30.0							5	5	25	HIGH	HIGH						
Control of legionellae																									
Removal of deadlegs – part system redundant			D				5.0	5.0							4	5	20	HIGH	HIGH						
Compliance with Health & Safety at Work Act																									
Road traffic calming measures			C				15.0	15.0							3	3	9	MODERATE	MODERATE						
Compliance with Disability Discrimination Act																									
Additional signs and signals			C				2.0	2.0							2	3	6	LOW	LOW						
GRAND TOTALS				32.0	142.0	12.0	52.0	206.0	10.0	0.0	150.0	2.5	35.0												

D BACKLOG COSTS (£'000)	35.0
C BACKLOG COSTS (£'000)	171.0
TOTAL BACKLOG COST (£'000)	206.0

HIGH RISK COST (£'000)	47.0	0.0	0.0	0.0	0.0	0.0
SIGNIFICANT RISK COST (£'000)	140.0	10.0	0.0	60.0	1.0	0.0
MODERATE RISK COST (£'000)	16.0	0.0	0.0	90.0	1.5	25.0
LOW RISK COST (£'000)	3.0	0.0	0.0	0.0	0.0	10.0
TOTAL BACKLOG COST - RISK (£'000)	206.0	10.0	0.0	150.0	2.5	35.0

Appendix 6 – Backlog profile (see also Table 6.1)

The spreadsheet opposite illustrates an example for an **EXTERNAL SITE**.

DATE:	**31 March [year]**
TRUST NAME:	**ABC NHS Trust**
SITE NAME:	**Mid-Hill**
INVESTMENT STATUS:	**FBC approved/financial close approval**
DISINVESTMENT STATUS:	**To be vacated in [X] years**
LAND AREA (HECTARES):	**1.2**

1. All costs are works costs. For business case purposes add fees, decant costs, VAT etc as per 'Capital Investment Manual' or your trust's financial standing instructions.
2. Condition rankings, costs and associated risk rankings are built up from a survey of external sub-elements. Condition B sub-elements should only be recorded where there are costs within the financial year to maintain the sub-element in condition B.
3. Backlog costs are as at 31 March. Year 1 begins on 1 April following the 31 March when backlog costs are determined. Costs to maintain in condition B are costs to the end of the financial year.
4. Condition B(C) sub-elements do not have associated backlog costs as they are currently in condition B. A backlog cost is assigned at the point in the future at which it is predicted the sub-element will fall below condition B.
5. The elements and sub-elements shown are not inclusive of all elements/sub-elements and are for example purposes only. The list of elements/sub-elements will vary from site to site.
6. The backlog profile proforma for each site should be summated to provide figures for the whole trust.

Appendix 7 – References

Acts and Regulations

Health & Safety at Work etc Act 1974. HMSO, 1974.

Confined Spaces Regulations. SI 1713: 1997. TSO, 1997.
http://www.legislation.hmso.gov.uk/si/si1997/97171301.htm

Control of Asbestos at Work Regulations. SI 2675: 2002. TSO, 2002.
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Capital Investment Manual. HMSO, 1994.

NHS Estates

Health Guidance Notes

'"Safe" hot water and surface temperatures'. TSO, 1998.

Health Technical Memoranda

HTM 81 – 'Fire precautions in new hospitals'. TSO, 1996.

HTM 82 – 'Alarm and detection systems'. TSO, 1996.

HTM 85 – 'Fire precautions in existing hospitals'. HMSO, 1994.

HTM 87 – 'Textiles and furniture'. TSO, 1999.

HTM 2010 – 'Sterilization'. TSO, 1994/1995/1997.

HTM 2020 – 'Electrical safety code for low voltage systems'. TSO, 1998.

HTM 2022 – 'Medical gas pipeline systems'. TSO, 1997/2003.

HTM 2027 – 'Hot and cold water supply, storage and mains services'. HMSO, 1995.

HTM 2030 – 'Washer-disinfectors'. TSO, 1997.

HTM 2040 – 'The control of legionellae in healthcare premises'. HMSO, 1994.

Miscellaneous

Firecode: Policy and principles. HMSO, 1994.

Estatecode – Essential guidance on estates and facilities management. TSO, 2002.

British Standards

BS 5266-1: 1999. Emergency lighting. Code of practice for the emergency lighting of premises other than cinemas and certain other specified premises used for entertainment. British Standards Institute (BSI), 1999.

BS 5839-1: 2002. Fire detection and alarm systems for buildings. Code of practice for system design, installation, commissioning and maintenance. BSI, 2002.

BS 6262-4: 1994. Glazing for buildings. Safety related to human impact. BSI, 1994.

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