HEALTH TECHNICAL MEMORANDUM 59

Building Component Series
Ironmongery

2005

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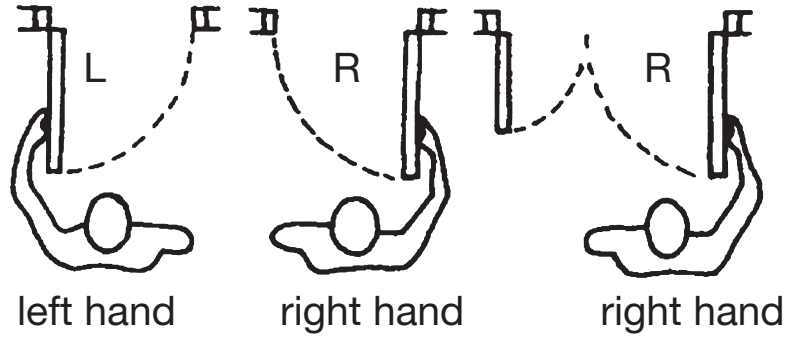

HTM 59
Ironmongery

HTM BUILDING COMPONENTS SERIES

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HTM 59
Ironmongery

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Contents

1 Introduction

BACKGROUND

1.1 This is one of a series of Health Technical Memoranda which provides specifications and design guidance on building components for health buildings.

1.2 The numbers and titles of the HTMs in the series are:

54 User manual

55 Windows

56 Partitions

57 Internal glazing

58 Internal doorsets

59 Ironmongery

60 Ceilings

61 Flooring

62 Demountable storage system

63 Fitted storage system

64 Sanitary assemblies

66 Cubicle curtain track

67 Laboratory fitting out systems

68 Duct and panel assemblies

69 Protection

71 Materials management modular storage.

SCOPE AND STATUS

1.3 This HTM offers guidance on the correct selection, fitting and use of items of ironmongery for doorsets to meet the user requirement and service conditions in health buildings.

1.4 The information in this HTM will be of value to all those involved in health buildings from briefing and design through to commissioning and maintenance.

1.5 Whether for use in remedial and upgrade works or in new build projects, whether with door assemblies or with doorsets, responsibility for the selection and specification of ironmongery remains with the architect/designer.

1.6 The content of this HTM does not diminish either the manufacturer's responsibility for fitness for purpose of products or the design team's responsibility for selection and application of products to meet project requirements. Design teams are also reminded of their obligations under the Construction (Design and Management) [CDM] Regulations 1994 (as amended 2000) to ensure safe construction.

RELATIONSHIP TO OTHER DATA

1.7 The main sources of data used in the preparation of this HTM are listed in the References section.

1.8 This HTM was prepared for publication in January 2005. After this date, readers should ensure that they use the latest or new edition of all building legislation, British Standards etc, which may post-date the publication of this document.

1.9 First preference should be given to products and services from sources which have been registered under BSI Quality Assurance procedures or other certification schemes. Suppliers offering products other than to British Standards should provide evidence to show that their products are at least equal to such Standards.

1.10 Any enquiries regarding the technical content of this HTM should be e-mailed to nhsestates@dh.gsi.gov.uk.

TERMINOLOGY

1.11 Throughout this document the following definitions apply:

- Ironmongery – components intended for the functional operation of doorsets (also sometimes referred to as "architectural ironmongery" and as "builders' hardware").
- Doorset – a manufactured component comprising frame, leaf (or leaves) and ironmongery pre-assembled and delivered as one unit.

- Door assembly – a frame, leaf (or leaves) and ironmongery intended for use as an assembly after fitting together on site.
- Configuration (of a doorset or door assembly) – the number of leaves, their swing pattern, hand, and how they open.
- Grade – the functional duty of a doorset or door assembly.
- Hand (of a doorset or assembly) – the position of the hinges (or pivots) on a single leaf when seen from the pull side (see Figure 1).

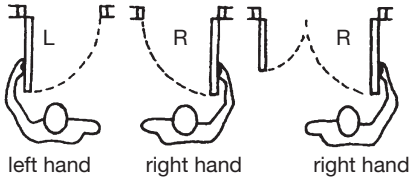


Figure 1

The hand of doorsets with unequal leaves is determined by reference to the larger leaf. Doorsets with double equal leaves are symmetrical in plan and are not handed.

- Detente – an electrically-powered magnetic hold-open device used in association with fire doors. Activation of the fire alarm releases the magnetic hold and allows the fire door to close.
- Self-closing device (door closer) – any door-closing mechanism in which the energy for closing is generated by the user upon opening the door, and which returns the door to the closed position under control.

2 General guidance

INTRODUCTION

2.1 Ironmongery represents a very small proportion of the capital cost of any building, but it can have a disproportionate effect on the users' perception of the building and the satisfaction they feel in its use. To be satisfactory, ironmongery must be:

- appropriate to its function;
- of the right grade and good quality;
- well designed and unobtrusive;
- correctly fitted;
- properly maintained.

2.2 Health buildings are used by a wide cross-section of people – both general public and staff – ranging from the young and able-bodied to the elderly and infirm. But, by virtue of their function, it is likely that healthcare facilities have a higher proportion of physically weakened and disabled users coming through their doors than any other type of building.

2.3 Users' needs can be met from the range of standard ironmongery components readily available throughout the UK. An improved range of components is available to respond to the needs of disabled people and to comply with the requirements of the Disability Discrimination Act 1995.

2.4 Ironmongery selection is primarily influenced by the doorset of which it forms part: the reader should refer to HTM 58 – 'Internal doorsets' for more detailed information on the grade, configuration and type of doorsets appropriate to health buildings.

2.5 Extensive research and testing has established that rebated edges to the meeting stiles of double-leaf doors serve no useful purpose but cause confusion and reduce performance. HTM 58 makes no provision for them; consequently this HTM makes no reference to components for rebated stiles.

2.6 In existing installations, if it is not possible to replace rebated doors, specially adapted ironmongery components will be required and manufacturers' advice should be obtained.

SELECTION

2.7 The designer is advised to use the guidance contained in this HTM to select generic items of ironmongery based upon user requirements. It is desirable to identify ironmongery requirements as sets for specific door types. That selection can then be matched to commercially available products using the services of ironmongery suppliers and specialists who can prepare schedules and supply sample ironmongery sets for approval.

Classification of components

2.8 Ironmongery components can be classified into groups according to their primary functions as follows:

a. Hanging: components which support the door leaf and allow it to move (to operate).

b. Operating: components which control the operation of the door leaf, both in the sense of moving it and of preventing its movement.

c. Securing: components which secure a door leaf in the closed position.

d. Furniture: components which are attached to the surface of the doorset and contribute to its functional performance.

Assessment of functional requirements

2.9 Costs in use – the combination of initial capital cost and subsequent maintenance costs – can be significantly reduced by the careful choice of ironmongery based upon:

- using only the minimum of ironmongery in each particular situation;
- being consistent so that users are not faced with different ironmongery in situations which are otherwise similar;
- choosing robust components from standard product ranges;
- ensuring the components are correctly fitted and maintained.

2.10 Selection of appropriate ironmongery must begin with consideration of the functional requirements of each individual doorset. Although HTM 58 deals only with internal doorsets, ironmongery is also required for use on external doors where the service conditions may be more extreme.

2.11 The following factors are all relevant to selection:

- location of doorset;
- frequency of door operation;
- severity of use;
- configuration;
- weight and width of door leaf;
- special requirements.

Location of doorset

2.12 Consider doorset location and assess the degree of exposure to sudden changes of pressure or to differential pressure on opposite faces.

- Entrance doors and lobby doors are frequently affected by wind pressures: doors to theatres, sterile laboratories and pressurised escape routes will be subject to a constant differential pressure. Such pressures will affect the selection of hinges and of closing devices, and may indicate a preference for sliding and/or automated operation**.**

Frequency of door operation

2.13 Consider the frequency of use of the door and assess its effect upon wear and tear of moving parts – such as hinges and closers – as well as the convenience to users.

- Doors in health buildings, especially those in busy clinical areas, may be operated as much as 600 times a day (that is, 200,000 times per annum).
- The doorways on busy routes may be used very frequently, but the door leaves may well be held open on detentes linked to the fire-alarm system and only be operated as part of the fire-alarm testing programme. Doors which are operated very infrequently may well need fewer ironmongery components or ones of a lighter grade. Doors which are normally kept locked (such as those to ducts and stores) may well be very substantial because of the need to provide fire protection but be very rarely operated; such doors therefore require very few components to allow them to function adequately.
- Doors which are normally kept closed but are frequently used may be operated manually or automatically; their ironmongery provision should ensure ease of operation and be robust to withstand frequent use.

Severity of use

2.14 Consider the severity of operation by assessing the attitudes of people using the door.

- Porters encumbered by heavy loads or pushing trolleys, beds or bulky equipment are likely to operate doors more roughly than patients or staff with their hands free. On routes where emergency movement is likely – as at the approaches to an accident and emergency department – automated operation is probably a better solution than applying surface protection to the doors.

Configuration

2.15 Consider the configuration of each doorset and how it limits the choice of components.

- Whilst hinges are the most economical means of hanging doors, double-swing doors must be set on floor springs.
- Automatic operation of doors may be easier to achieve with sliding doors hung from overhead track or – if the doors are very heavy – set on rollers on a floor track.

Weight and width of door leaf

2.16 Consider the weight and width of each door leaf and assess their effect upon the ironmongery components in terms of wear and tear.

- Door leaves will weigh approximately 20 kg for a 500 mm wide leaf to 65–70 kg for a 900 mm wide, 60-minute fire-resisting leaf; different weights and sizes of leaf necessitate different sizes and numbers of hinges and different grades of closer.

Special requirements

2.17 Consider any special requirements which apply – such as panic escape, emergency operation, X-ray shielding, radio-frequency shielding, laser protection, high-security situations, fire resistance and smoke containment. Also consider safety issues, for example protection against children trapping fingers in closing doors etc.

- BS EN 1125:1997 and BS EN 179:1998 classify panic and emergency exit devices, respectively.
- Fire-resisting and smoke-containing doorsets must be tested, evaluated and certified with essential ironmongery fitted: test results could well be invalidated by the fitting of components different from those tested. Further information is contained in paragraphs 2.18–2.42.

IRONMONGERY FOR FIRE-RESISTING DOORSETS

2.18 HTM 58 – 'Internal doorsets' gives information on fire-resisting doorsets.

2.19 Warrington Fire Research Centre and the British Standards Institution have jointly established the CERTIFIRE scheme for the independent evaluation and certification of fire protection products (http://www.wfrc.co.uk/certification/certifire/certifire_overview.htm). Certification is based on valid test evidence and compliance with performance and quality assessment schedules.

2.20 Doorsets which are designed for fire resistance and/or smoke containment will (hopefully) never be required to perform those functions. Nevertheless, they must remain at all times capable of such performance whilst still functioning normally in all other respects.

2.21 The greatest single contribution to fire/smoke containment is made by the door being shut, but there are many situations in health buildings where it is more convenient for doors to remain open in normal circumstances. This apparent conflict of interests can be resolved by careful analysis of user requirements followed by selection of the best combination of ironmongery to suit the particular circumstances.

2.22 Three functional categories of fire/smoke door can be identified:

a. normally held in the open position;

b. normally held in the closed position;

c. normally shut and locked.

Door normally held open

2.23 When a doorway which is frequently used has to be protected against fire and/or smoke transmission, it may be more convenient for that door to be left open during normal use. That is acceptable provided the doorset is equipped with ironmongery which will ensure the door will close automatically should fire or smoke occur. There are several ways to achieve that:

- the door may be fitted with an overhead closing device and be held open by a detente linked to the fire/smoke detection system;
- the door may be fitted with an overhead closing device which incorporates a hold-open provision linked to the detection system;
- the door may be controlled by a "free-swing" closer which only exerts a closing action when the detection system is activated.

2.24 Suitable devices are described in BS EN 1155: 1997. The provision must "fail safe" in the event of a power failure.

2.25 A floor spring may be technically suitable, but its cost is unlikely to be justifiable on a door which is normally open and seldom operated.

Door normally held closed

2.26 In fire-rated doorways which are less frequently used, it is preferable for the door to be normally held shut, and this can be achieved by use of an overhead closer or a floor spring.

2.27 The use of a latch in conjunction with a controlled door-closing device (floor spring or overhead closer) is not recommended.

Door normally locked shut

2.28 Doors to ducts and stores are often fire-rated: they should be secured shut by means of a dead lock; they do not require any closing device.

2.29 Tests of fire-resisting doorsets have demonstrated several basic principles governing the selection of suitable components. These are discussed in paragraphs 2.30–2.42.

Hanging

2.30 Hinges must be capable of supporting the door at temperatures of 800ºC and higher. Aluminium and alloy hinges are therefore not suitable; steel or brass hinges should always be used.

Operating

2.31 Closers mortised into the doorset are difficult to fireproof and are not therefore covered in this HTM.

2.32 The arms of overhead closers must not include any material with a melting point less than 800ºC.

2.33 In the case of floor springs, the operating unit is protected by its position within the floor/screed; the door should be supported either on a shoe without a heel or on a bottom strap of the same length as the floor cover plate.

2.34 A polished cover plate may reflect radiation which can burn through the bottom of an unprotected door leaf.

Securing

2.35 Most locks, latches, catches and bolts are set into mortises cut into the door leaf; this involves the removal of the solid fire-resisting core material and its replacement by a metal case partly filled with heavy metal parts. As a result, not only is the fire resistance of

the doorset reduced, but the metal components form a heat sink which accelerates heat transfer and can result in failure. Other metal parts, including lock cylinders, spindles and bolt-through fixings, may also weaken overall resistance and must be carefully considered.

2.36 All mortises should be formed as tight as possible to suit the mortised component; intumescent material is required to protect components mortised into 60-minute doorsets.

Furniture

2.37 Components attached to the faces of a doorset – including bolts, lever handles, pull handles and plates – have no effect on fire door performance and may be of low-melt material.

Seals

2.38 A closed and close-fitting door is essential to fire and smoke containment. Gaps between leaf and frame should always be as small as practicable (see HTM 58 – 'Internal doorsets').

2.39 Most fire-resisting doorsets – including those outlined in HTM 58 – rely for their successful performance on the use of intumescent edge seals which, on being activated by high temperature, expand and secure the leaf into the frame. The ironmongery on such doors has therefore to ensure the door is shut and held in the frame when the seals activate.

2.40 Standardised test procedures to evaluate fire and smoke-rate doorsets do not normally require the gap between floor and door to be sealed, but the specifier may wish to consider sealing it to achieve improved smoke sealing and/or good acoustic and thermal containment.

2.41 If seals are to function correctly, it is essential they be accurately aligned and not interrupted by hinges, forends and keeps; it is also imperative the doorsets be carefully maintained.

2.42 Recent developments in seal designs allow fire-sealing and smoke-sealing functions to be combined in one insert.

3 Component selection and maintenance

3.1 This section contains advice on the selection of components in each of the functional groups defined in paragraph 2.8 (namely hanging, operating, securing, and furniture) and offers guidance on maintenance.

HANGING

Introduction

3.2 This group includes components which support the weight of a door and allow it to be operated, namely hinges and sliding gear; the size and grade of these components must be matched to the size and weight of door leaf to be supported.

Standards

3.3 BS EN 1935:2002 specifies requirements, static strength and endurance testing of single-axis metal hinges for doors up to 2400 mm high x 1200 mm wide weighing up to 160 kg. The standard hinges are classified according to the maximum mass of the door they support (including its ironmongery) and the maximum number of operations per annum (see paragraph 2.13).

3.4 BS EN 1527:1998 covers most of the main types of sliding and sliding/folding application, giving details of product performance criteria, test apparatus, testing methods, door mass, durability, fire and corrosion resistance.

Selection

3.5 Doors may be hung on hinges or on sliding gear, the door being fitted to its frame at the joinery manufacturer (see HTM 58 – 'Internal doorsets').

OPERATING

Introduction

3.6 The opening and closing of a door can be affected either manually or mechanically. Manual operation is obviously much cheaper in terms of both initial cost and maintenance. The provision of mechanical operating devices should be clearly based on user needs as referred to in Chapter 2.

Standards

3.7 BS EN 1154:1997 covers both floor springs and overhead closers.

3.8 BS 7036:1996 deals with automatic, power-operated pedestrian door systems and covers general requirements for swinging doors, sliding doors, low-energy doors and revolving doors.

3.9 Hold-open devices are covered by BS EN 1155:1997 which deals with specifications and test methods for electrically powered hold-open devices for swing doors.

Selection

3.10 The choice of operating devices will be influenced by the functional requirements detailed in Chapter 2. Specifiers are advised to consult individual manufacturers' data when making their final selection.

SECURING

Introduction

3.11 This covers ironmongery components used for securing doors in the closed position.

Standards

3.12 BS EN 12209:2003 covers locks, latches and looking plates.

3.13 BS EN 1303:1998 deals with cylinders and provides for different grades of security covering resistance to drilling out, to attack with a chisel etc.

3.14 'Firecode: Part 1 – functional standards' and HTM 83 – 'Fire safety in healthcare premises' describe the requirements for emergency escape from health buildings; they explain overall concepts and planning principles governing escape routes and the user requirements relating to doorsets on those routes.

3.15 BS EN 1125:1997 deals with the requirements and test methods for panic exit devices operated by a horizontal bar.

3.16 BS EN 179:1998 describes emergency exit devices operated by a lever handle or push pad.

Selection

3.17 Securing devices should not normally be fitted to doors operated by a controlled door-closing device (floor spring or overhead closer).

3.18 Doors should only be fitted with locks (as distinct from latches or catches) after careful consideration of user requirements.

3.19 Two forms of lock can be identified: dead locks and sprung locks. A dead lock requires the action of a key or thumb turn to move the bolt into and out of the keep; included in this group are budget locks and mortised cylinder locks. A spring lock closes automatically by virtue of its shaped bolt; it must be operated by a key or knob or lever to withdraw the bolt. From this distinction it can be seen that a dead lock requires a positive decision by the user to lock the door and unintentional locking is avoided.

3.20 The means of locking and latching a door are often combined into one "unified" case for mortising into a door. This practice is not recommended in health buildings. Unified lock/latch cases require large mortises, which adversely affects the doorset performance in fire tests. Functional requirements for door locking are better served by fitting the smallest possible lock case at approximately eye level (see Appendix), a position which makes it easier to insert the key.

3.21 If additional security is required, the specifier should consider fitting a second mortised dead lock at low level to give two-point fastening of the door leaf. Dead locks are also available with a "double throw" mechanism which gives greater security by virtue of a greater projection of the bolt into the keep. Where locking of double-leaf, double-swing doors is required, it is advisable to specify a double-throw dead lock.

Final exit doors

3.22 The requirement to allow people to escape to a place of safety in the open air in the event of a fire may conflict with the need to secure external doors against unauthorised access; in such cases the need to ensure safe evacuation must take priority.

Lock suiting and mastering

3.23 Any number of cylinders can be specified as "to pass one key", which is a cheap and effective way of allowing users access through a number of doors without the burden of multiple keys. Alternatively a suite of cylinders, each operated by a unique key, may be mastered by one key which will operate all of the cylinders in the suite.

3.24 The mastering facility can be extended to allow several suites, each with its master key, the complete range of suites being covered by a grand master key. Mastered suites are manufactured to order, and sufficient time must always be allowed for their manufacture (see Figure 2).

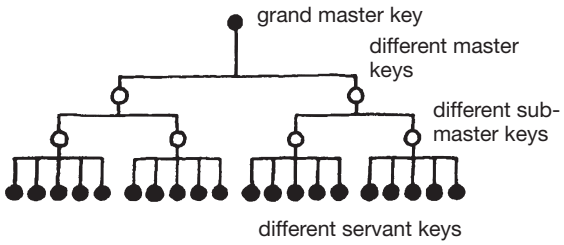


Figure 2

3.25 Contrary to common belief, the mastering of locks does not make for maximum security; it does require management procedures to ensure control of keys at all levels.

Electro-mechanical keeps

3.26 These may be used in conjunction with locks to facilitate remote operation by means of a swipe card, keypad or push-button control. Remote control over the door can be combined with a telephone/speaker link and/or a television camera.

DOOR FURNITURE

Introduction

3.27 This deals with the selection of components which are attached to the surfaces of the doorset and do not directly affect its hanging, operating or securing.

Standards

3.28 BS EN 1906:2002 covers requirements and test methods for lever handles and knob furniture.

Selection

3.29 On doors fitted with a latch, lever handles are to be preferred because they are more easily operated by encumbered and/or incapacitated users. Levers should be spring-loaded and of sufficient length and diameter to afford a full handed grip with the end of the lever turned towards the door face to minimise the risk of catching clothing.

3.30 Pull handles for use on non-latched doors should be of adequate size and diameter to match the size and weight of the door leaf and its degree of use. Cranked handles offer advantages in certain situations, for example where the leading edge of the door is close to a return wall.

3.31 An important consideration in selecting items of door furniture is to ensure matching appearance. It will not always be practicable or possible to choose items from one manufacturer's coordinated range; items manufactured from different metals by different manufacturing processes cannot always support identical surfaces and finishes. The specifier is advised to select by reference to samples, bearing in mind that the use of special materials, finishes or colours can lead to difficulties in obtaining matching items for replacement, repair and extension.

MAINTENANCE MANUAL

3.32 An operation and maintenance manual should be compiled by the project architect and should be handed to the maintenance staff immediately following the practical completion of the contract with the following information concerning ironmongery:

- a copy of the ironmongery schedule (see Figure 3);
- names and addresses of manufacturers, with copies of relevant trade literature;
- manufacturer's reference number for each component;
- name and address of merchant who supplied the components;
- manufacturer's instructions for care and maintenance.

Hygiene and cleaning

3.33 A new "model cleaning contract" for hospitals has been developed. This has three key aspects:

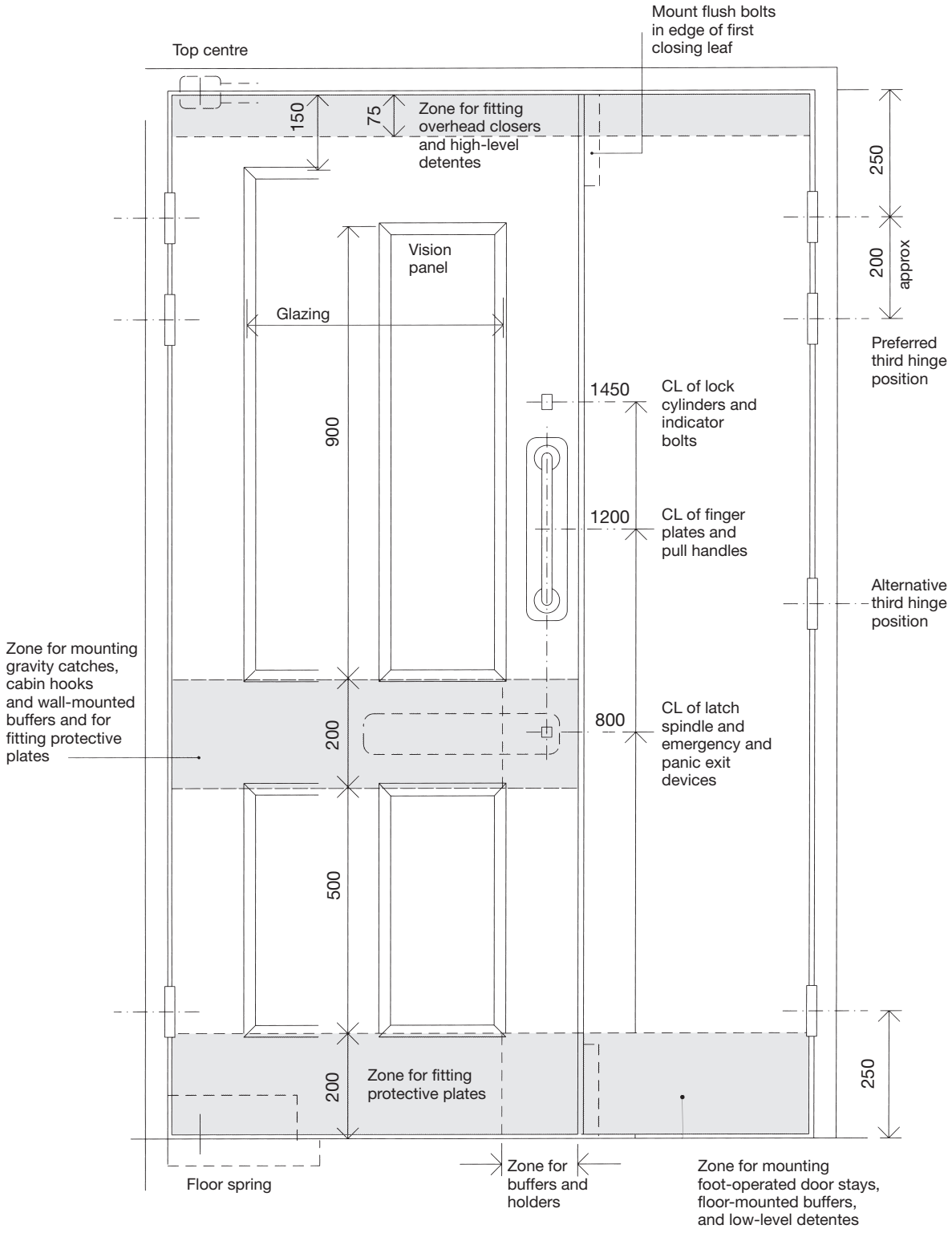
- National Standards of Cleanliness (introduces measures for HCAI cleaning and disinfection);
- NHS Cleaning Manual (sets out best practice methods for cleaning);
- cleaning frequencies (these should be determined to address the element of risk identified in accordance with the National Standards of Cleanliness and taking into account any further advice and guidance in the model cleaning contract and the NHS Cleaning Manual).

3.34 The above guidance should be followed with regard to the cleaning and maintenance of ironmongery.

1/12/2004	**XX Royal Infirmary**	**Hardware Set 8 page 1**
Quantity	**Description**	
1.5 pr	Butts 100 x 75 mm	
1 each	Door closer adjustable power	
1 each	Sashlock c/w backbox	
1 each	Profile double cylinder	
1 pair	Lever assembly	
2 each	Covered profile cylinder rose	
2 each	Fire door keep shut	
1 each	Floor door stop	
1 each	Kicking plate	

Figure 3 Example of an ironmongery schedule

Appendix – Recommended fixing positions for ironmongery components



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NHS ESTATES RESOURCES

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National Standards of Cleanliness http://patientexperience.nhsestates.gov.uk/clean_hospitals/ch_content/home/home.asp

BRITISH STANDARDS

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BS 7036-2:1996 Code of practice for safety at powered doors for pedestrian use. Straight and curved sliding doors and prismatic and folding doors. British Standards Institution, 1996.

BS 7036-3:1996 Code of practice for safety at powered doors for pedestrian use. Swing doors and balanced doors. British Standards Institution, 1996.

BS 7036-4:1996 Code of practice for safety at powered doors for pedestrian use. Low energy swing doors. British Standards Institution, 1996.

BS 7036-5:1996 Code of practice for safety at powered doors for pedestrian use. Revolving doors. British Standards Institution, 1996.

BS 8214:1990 Code of practice for fire door assemblies with non-metallic leaves. British Standards Institution, 1990.

BS EN 179:1998 Building hardware. Emergency exit devices operated by a lever handle or push pad. Requirements and test methods. British Standards Institution, 2003.

BS EN 1125:1997 Building hardware. Panic exit devices operated by a horizontal bar. Requirements and test methods. British Standards Institution, 1997.

BS EN 1154:1997 Building hardware. Controlled door-closing devices. Requirements and test methods. British Standards Institution, 1997.

BS EN 1155:1997 Building hardware. Electrically powered hold-open devices for swing doors. Requirements and test methods. British Standards Institution, 1997.

BS EN 1303:1998 Building hardware. Cylinders for locks. Requirements and test methods. British Standards Institution, 1998.

BS EN 1527:1998 Building hardware. Hardware for sliding doors and folding doors. Requirements and test methods. British Standards Institution, 1998.

BS EN 1527:1998 Building hardware. Hardware for sliding doors and folding doors. Requirements and test methods. British Standards Institution, 1998.

BS EN 1906:2002 Building hardware. Lever handles and knob furniture. Requirements and test methods. British Standards Institution, 2002.

BS EN 1935:2002 Building hardware. Single-axis hinges. Requirements and test methods. British Standards Institution, 2002.

BS EN 12209:2003 Building hardware. Locks and latches. Mechanically operated locks, latches and locking plates. Requirements and test methods. British Standards Institution, 2003.

TRADE ASSOCIATIONS

(The) Association of Builder Hardware Manufacturers, 42 Heath Street, Tamworth, Staffs B79 7JH.
http://www.abhm.org.uk/

Automatic Door Suppliers Association, 411 Limpsfield Road, The Green, Warlingham, Surrey CR6 9HA.
http://www.adsa.org.uk/

(The) Guild of Architectural Ironmongers, 8 Stepney Green, London E1 3JU.
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The Agency has a dynamic fund of knowledge which it has acquired over 40 years of working in the field. Our unique access to estates and facilities data, policy and information is shared in guidance delivered in four principal areas:

Design & Building

These documents look at the issues involved in planning, briefing and designing facilities that reflect the latest developments and policy around service delivery. They provide current thinking on the best use of space, design and functionality for specific clinical services or non-clinical activity areas. They may contain schedules of accommodation. Guidance published under the headings Health Building Notes (HBNs) and Design Guides are found in this category.

Examples include:

HBN 22, Accident and emergency facilities for adults and children
HBN 57, Facilities for critical care
HFN 30, Infection control in the built environment: design and planning

Engineering & Operational (including Facilities Management, Fire, Health & Safety and Environment)

These documents provide guidance on the design, installation and running of specialised building service systems and also policy guidance and instruction on Fire, Health & Safety and Environment issues. Health Technical Memoranda (HTMs) and Health Guidance Notes (HGNs) are included in this category.

Examples include:

HTM 2007, Electrical services supply and distribution
HTM 2021, Electrical safety code for high voltage systems
HTM 2022 Supplement 1
Sustainable development in the NHS

Procurement & Property

These are documents which deal with areas of broad strategic concern and planning issues, including capital and procurement.

Examples of titles published under this heading are:

Estatecode
How to cost a hospital
Developing an estate strategy

NHS Estates Policy Initiatives

In response to some of the key tasks of the Modernisation Agenda, NHS Estates has implemented, project-managed and monitored several programmes for reform to improve the overall patient experience. These publications document the project outcomes and share best practice and data with the field.

Examples include:

Modernising A & E Environments
Improving the Patient Experience – Friendly healthcare environments for children and young people
Improving the Patient Experience – Welcoming entrances and reception areas
National standards of cleanliness for the NHS
NHS Menu and Recipe Books

The majority of publications are available in hard copy from:

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