

Primary and community care
Health Building Note 11-01:
Facilities for primary and
community care services



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Description This document provides best practice on the design & layout for primary & community care premises and community hospitals. The document will become part of the already published suite of Health Building Notes to which the NHS already has access and to which HBN 11 will signpost as appropriate.

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For Recipient's Use

Primary and community care

Health Building Note 11-01: Facilities for primary and community care services

Delivering Same Sex Accommodation – Review of Health Building Note Guidance

The Department of Health's Delivering Same-Sex Accommodation (DSSA) programme aims to all but eliminate mixed-sex accommodation from hospitals in England by 2010. Although DSSA is primarily an operational issue, the design and layout of healthcare facilities can help support the provision of same-sex accommodation. With this in mind, the Department's Health Building Note (HBN) series of publications has been reviewed against DSSA requirements.

Amendments have been made to this document at **paragraphs 7.39, 7.82 and the fourth paragraph of Appendix 1.**

This review makes particular reference to the letter (PL/CNO/2009/2) from the Chief Nursing Officer and Director General NHS Finance, Performance and Operations at:

www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Professionalletters/Chiefnursingofficerletters/DH_098894

Full details of the DSSA programme are at:

www.dh.gov.uk/en/Healthcare/Samesexaccommodation/index.htm

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Preface

About Health Building Notes

Health Building Notes give “best practice” guidance on the design and planning of new healthcare buildings and on the adaptation/extension of existing facilities.

They provide information to support the briefing and design processes for individual projects in the NHS building programme.

Restructuring of the Health Building Note suite

Healthcare delivery is constantly changing, and so too are the boundaries between primary, secondary and tertiary care. The focus now is on delivering healthcare closer to people’s homes.

The traditional division of Health Building Notes into discrete books of information based on hospital departments is therefore no longer appropriate.

Instead, the new Health Building Note framework (shown below) is based on the patient’s experience across the spectrum of care from home to healthcare setting and back, using the national service frameworks (NSFs) as a model. This structure better reflects current policy and service delivery.

New Health Building Note structure

The Health Building Notes have been organised into a suite of 17 core subjects.

Care-group-based Health Building Notes will provide information about a specific care group or pathway but will cross-refer to Health Building Notes on **generic (clinical) activities** or **support systems** as appropriate.

Core subjects will be subdivided into specific topics and classified by a two-digit suffix (-01, -02 etc), and may be further subdivided into Supplements A, B etc.

All Health Building Notes are supported by the overarching Health Building Note 00 in which the key areas of design and building are dealt with.

Example

The Health Building Note on accommodation for adult in-patients will be represented as follows:

“Health Building Note 04-01: Adult in-patient facilities”

The supplement to Health Building Note 04-01 on isolation facilities will be represented as follows:

“Health Building Note 04-01: Supplement A – Isolation facilities in acute settings”

New Health Building Note number and series title	Type of Health Building Note
Health Building Note 00 – Core elements	Support-system-based
Health Building Note 01 – Cardiac care	Care-group-based
Health Building Note 02 – Cancer care	Care-group-based
Health Building Note 03 – Mental health	Care-group-based
Health Building Note 04 – In-patient care	Generic-activity-based
Health Building Note 05 – Older people	Care-group-based
Health Building Note 06 – Diagnostics	Generic-activity-based
Health Building Note 07 – Renal care	Care-group-based
Health Building Note 08 – Long-term conditions/long-stay care	Care-group-based
Health Building Note 09 – Children, young people and maternity services	Care-group-based
Health Building Note 10 – Surgery	Generic-activity-based
Health Building Note 11 – Primary and community care	Generic-activity-based
Health Building Note 12 – Out-patient care	Generic-activity-based
Health Building Note 13 – Decontamination	Support-system-based
Health Building Note 14 – Medicines management	Support-system-based
Health Building Note 15 – Emergency care	Care-group-based
Health Building Note 16 – Pathology	Support-system-based

Other resources in the DH Estates and Facilities knowledge series

Health Technical Memoranda

Health Technical Memoranda give comprehensive advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery of healthcare (for example medical gas pipeline systems, and ventilation systems).

They are applicable to new and existing sites, and are for use at various stages during the inception, design, construction, refurbishment and maintenance of a building.

All Health Building Notes should be read in conjunction with the relevant parts of the Health Technical Memorandum series.

Health Technical Memorandum Building Component series

All Health Building Notes refer to Health Technical Memorandum Building Component documents for specifications and design guidance on building components for healthcare buildings. All Health Building Notes should therefore be read in conjunction with the relevant parts of the Health Technical Memorandum Building Component series.

Activity DataBase (ADB)

The Activity DataBase (ADB) data and software assists project teams with the briefing and design of the healthcare environment. Data is based on guidance given in the Health Building Notes, Health Technical Memoranda and Health Technical Memorandum Building Component series.

1. Room data sheets provide an activity-based approach to building design and include data on personnel, planning relationships, environmental considerations, design character, space requirements and graphical layouts.
2. Schedules of equipment/components are included for each room, which may be grouped into ergonomically arranged assemblies.
3. Schedules of equipment can also be obtained at department and project level.
4. Fully loaded drawings may be produced from the database.
5. Reference data is supplied with ADB that may be adapted and modified to suit the users' project-specific needs.

For further information please refer to the Space for Health website: www.nhs.uk/spaceforhealth.

How to obtain publications

- To find out about publications that are finalised and currently being published, look under "Publications" on the Space for Health website at: www.nhs.uk/spaceforhealth.
NOTE that users should also check this site for latest versions of all publications, including Health Building Notes, and for any amendments to publications.
- Hard copies of published documents are also available from Space for Health.

For further information, contact Jock Graham on 0113 346 6071; email: jock.graham@coi.gsi.gov.uk.

Note

The new Health Building Notes have been progressively rolled out from spring 2007 onwards.

The sequence of numbering within each subject area does not necessarily indicate the order in which the Health Building Notes will be published/printed. However, the overall structure/number format will be maintained as described.

To find out how to access information on published documents, see the "How to obtain publications" section.

Executive summary

This document provides best practice guidance on the selection and zoning of facilities for delivering primary and community care services.

The guidance is applicable to the following building types:

- GP premises;
- Health centres;
- Primary care centres;
- Resource centres;
- Urgent care centres (including walk-in centres and minor injuries units);
- Community hospitals (also known as intermediate care hospitals).

It describes the following:

- the range of services that may be delivered from primary and community care buildings;

- the types of space needed to deliver these services (many of which are generic);
- the way to quantify these spaces for briefing purposes;
- the way spaces can be organised into zones to create efficient, flexible, user-friendly environments.

This document does not provide detailed design guidance on specific rooms and spaces. Planning and design teams should refer to the following publications for guidance on generic rooms and spaces:

- Health Building Note 00-02 – ‘Sanitary spaces’;
- Health Building Note 00-03 – ‘Clinical and clinical support spaces’;
- Health Building Note 00-04 – ‘Circulation and communication spaces’.

The need to refer to other Health Building Notes for guidance on specialist spaces will depend on the range of services to be delivered.

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Miscellaneous publications

1 Introduction

Scope of guidance

1.1 This document provides best practice guidance on the selection and zoning of facilities for delivering primary and community care services.

1.2 The guidance is applicable to the following building types:

- GP premises;
- Health centres;
- Primary care centres;
- Resource centres;
- Urgent care centres (including walk-in centres and minor injuries units);
- Community hospitals (also known as intermediate care hospitals).

1.3 It describes the following:

- the range of services that may be delivered from primary and community care buildings;
- the types of space needed to deliver these services (many of which are generic);
- the way to quantify these spaces for briefing purposes;
- the way spaces can be organised into zones to create efficient, flexible, user-friendly environments.

1.4 This guide has been written with the provision of new-build facilities in mind. The principles described apply equally to the refurbishment and extension of existing buildings.

How to use this document

Supporting Health Building Notes

1.5 This document does not provide detailed design guidance on specific rooms and spaces. Planning and design teams should refer to the following publications for guidance on generic rooms and spaces:

- Health Building Note 00-02 – ‘Sanitary spaces’;
- Health Building Note 00-03 – ‘Clinical and clinical support spaces’;
- Health Building Note 00-04 – ‘Circulation and communication spaces’.

1.6 The need to refer to other Health Building Notes for guidance on specialist spaces will depend on the range of services to be delivered.

Exclusions

1.7 This document does not provide design guidance on general in-patient wards. This information is provided in Health Building Note 04-01 – ‘Adult in-patient facilities’. However, it does recognise the need for community and therapy spaces on community wards. See [Appendix 1](#) for details.

1.8 Certain specialist services may be delivered from stand-alone units in acute or community settings (for example midwife-led birthing units). This document does not provide design guidance on such stand-alone units. The following Health Building Notes cover some of the specialist clinical services that may be provided as stand-alone units:

- Health Building Note 07-01 – ‘Satellite dialysis unit’;
- Health Building Note 09-02 – ‘Maternity care facilities’ (for information on midwife-led units);
- Health Building Note 10-02 – ‘Day surgery facilities’;
- Health Building Note 12-01 Supplement A – ‘Sexual and reproductive health clinics’;
- Health Building Note 52 Volume 2 – ‘Endoscopy unit’;
- Health Building Note 52 Volume 3 – ‘Medical investigation and treatment unit’;
- Health Building Note 54 – ‘Facilities for cancer services’ (for information on chemotherapy facilities).

- 1.9 The example briefing schedules include a large unit with community beds and separate day surgery, renal satellite dialysis and midwife-led birthing units.

Case studies supplement

- 1.10 A number of case studies have been written that support the service delivery and design principles outlined in this document. These are contained in Health Building Note 11-01: 'Facilities for primary and community care services', Supplement A: 'Case studies'.

Guiding principles

- 1.11 Primary and community care buildings should be:
- driven by strategic service and estate planning by PCTs, as informed clients, to avoid over-capacity and under-utilisation;
 - informed by consultations with clinicians, stakeholders, the public and relevant statutory bodies during the planning and design process;
 - underpinned by the use of generic spaces, as far as possible, to support multi-functional use;
 - able to explore the separation of patient/client areas from practitioner admin requirements;
 - adaptable to changing service needs and pathways;
 - safe, secure, physically accessible and welcoming to the communities they serve;
 - supportive of staff development, with an emphasis on appropriate training and learning facilities;
 - simply laid out to aid patient/client journeys, minimise staff movements and allow for efficient maintenance;
 - designed to deliver appropriate levels of emergency preparedness and resilience.

Strategic design issues

Design quality

- 1.12 The NHS places great importance on design quality, and a conscious effort has been made in recent years to raise the standards of primary and community care buildings.
- 1.13 Currently NHS Design Reviews are available for all schemes with an outturn cost above £15m. The

criteria for carrying out design reviews should be used on all schemes, regardless of size, as they provide a useful checklist of design quality requirements.

- 1.14 A design champion should be identified for every trust to ensure design vision is not lost as design work unfolds. For details of this and the design review mentioned above, go to www.dh.gov.uk/en/Managingyourorganisation/Estatesandfacilitiesmanagement/Designandcosting/DH_4122758.

Master planning

- 1.15 Schemes must respond to their local environment if they are to be adopted by local communities. This can be achieved by ensuring that the mix of services delivered reflects local needs, and the building demonstrates appropriate levels of urban design and civic presence.
- 1.16 Successful design solutions will stem from a full consultation with statutory authorities and a detailed site analysis (existing patterns of built heritage, topography, sun paths, flood risk, noise etc). From this a clear site strategy should emerge, defining access, building location and mass, orientation, car parking and landscape design. The resulting design should be coherent and legible, allowing users of the building to understand how it is put together and organised as they approach it.

Quality of place

- 1.17 Successful schemes have a clear design vision, reflecting the model of care and site strategy while adding an element of delight and striking a chord with the communities that they serve. Routes to and through buildings are important, as are issues of privacy, dignity and the nature of the healing environment.
- 1.18 The design of most spaces within primary and community care buildings will be driven mainly by functional considerations. In the public zone and the external expression of the building, however, there are opportunities to create special places through the careful use of scale, materials, colour, sound, scents and lighting.

Art and integrated design

- 1.19 Art within primary and community care sites should work with the building and landscape design to create a positive experience for users.



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Department

Health
Diagnostic
Services



1.20 On larger projects it may be beneficial to appoint an arts co-ordinator at an early stage to ensure that a comprehensive arts strategy is established and that artwork is properly integrated into the building fabric. The possibility of involving the local community in the production of artwork should be explored.

1.21 The following documents provide useful guidance on the use of art in healthcare premises:

- ‘A prospectus for arts and health’, DH/Arts Council England 2007;
- ‘Arts and community engagement in LIFT’, Community Health Partnerships 2007;
- ‘The art of good health: a practical handbook’ and ‘The art of good health: using visual arts in healthcare’, both NHS Estates 2002.

The Arts Council may be approached for advice on funding. For further details go to www.artscouncil.org.uk.

Sustainability

1.22 All buildings providing services to the public have an obligation to incorporate principles of sustainable development. Health Technical Memorandum 07-07 addresses sustainable development within health and community care facilities by looking at the main issues that should be addressed throughout a building’s life. It also explores the reuse of existing buildings and provides advice on possibilities for sustainable refurbishment.

1.23 Healthcare schemes are now required to use the BREEAM Healthcare methodology to demonstrate that healthcare projects are built with sustainability in mind. The threshold for capital projects requiring BREEAM certification can be found at www.breem.org.



1.24 Health Technical Memorandum 07-07 makes extensive references to BREEAM Healthcare and offers guidance on how to comply with its criteria. See www.dh.gov.uk/en/Managingyourorganisation/Estatesandfacilitiesmanagement/Sustainabledevelopment/DH_4119587 and www.breem.org/health for an overview of the BREEAM Healthcare methodology.¹

1.25 Strategies for ensuring primary and community care buildings are flexible and adaptable are explored in [Chapter 3](#).

1.26 The use of natural cross-ventilation (reliant on window openings on opposing sides of the building) is in line with reducing carbon footprints but may conflict with requirements for acoustic privacy. Project teams should consider this issue on an individual scheme basis, balancing specific privacy requirements against the capital and revenue cost benefits, as well as the improved sustainability profile, that a naturally ventilated solution can offer.

1.27 Building orientation and design and the use of designed-in background noise can be used to mitigate against the potentially adverse effects of natural cross-ventilation.

1.28 Natural ventilation should not be considered where it could jeopardise control of infection issues.

1.29 Further useful sustainability websites:

- www.sdu.nhs.uk
- www.carbontrust.co.uk.

NHS identity

1.30 Information on NHS branding can be found at www.nhsidentity.nhs.uk. Final decisions on branding should be made locally, in conjunction with all project stakeholders.

Functional design issues

Accessibility

1.31 For information on accessibility see the following:

- Disability Discrimination Act 1995 et seq;
- The Building Regulations 2000;
- Approved Document M. Access to and use of buildings;

1 BREEAM Healthcare also encourages the use of art in healthcare buildings, security of premises and the sharing of facilities through its credit-based system.

- FAQs on Approved Document M under the “Professional User” section of the Planning Portal at www.planningportal.gov.uk;
- BS 8300: 2009.

Infection control

- 1.32 The Health and Social Care Act 2008: Code of Practice for the NHS on the prevention and control of healthcare associated infections and related guidance has been introduced for NHS organisations. PCT advice should be sought on whether the code applies.
- 1.33 Infection control teams should be consulted from the outset of any new build/refurbishment project and should form part of the planning team. See ‘Infection control in the built environment’ (DH) for guidance on the role of the infection control team. This document should be the first point of reference for planning teams.

Wayfinding

- 1.34 See ‘Wayfinding’ (NHS Estates 2005) and Health Building Note 00-04 – ‘Circulation and communication spaces’.

Security

- 1.35 All schemes should be considered against the criteria set down by the Secure by Design initiative (www.securedbydesign.com). An individual should have responsibility for decisions on security matters. On small schemes it may be sufficient to

follow the principles of this guidance. For larger schemes a formal application should be made and sign-off achieved. The Secure by Design initiative covers the public realm in and around the building (see www.securedbydesign.com). Advice should also be sought from stakeholders and service providers relating to personal safety and protection of property.

Emergency preparedness

- 1.36 Primary and community care buildings may be designated as emergency centres for dealing with large-scale emergencies, mass casualties and pandemics, particularly outside major conurbations.
- 1.37 Such centres need to be resilient in terms of their engineering services, stock levels of consumables/emergency supplies and accessibility. They also require the capacity to manage high volumes of people.
- 1.38 The levels of resilience and capacity required will depend on the category of emergency centre, which may change over time and ranges from high to low resilience designations.
- 1.39 Emergency centres should be sited above flood plains in locations with multiple access roads. They may require extended car parks or easy access to adjacent public/commercial parking.
- 1.40 For further information, see Health Building Note 00-07 – ‘Resilience planning for the healthcare estate’.

2 Scope and organisation of services

Primary and community care services

2.1 A wide range of services falls under the heading of primary and community care. They include services delivered by the following practitioners:

- GPs;
- nurse practitioners;
- practice nurses;
- district nurses;
- school nurses;
- health visitors;
- community midwives;
- social workers;
- home care advisors;
- generic support workers;
- allied health professionals;
- pharmacists;
- general, personal and community dentists;
- mental health professionals;
- specialist consultants (on an outreach basis).

2.2 They may include the following specialist services:

- audiology;
- chemotherapy;
- child development/assessment;
- CAMHS;
- day surgery;
- diabetes management;
- endoscopy;
- ENT;
- eye care;
- in-patient care (step-up, step-down, rehabilitation, assessment);
- maternity;

- renal dialysis;
- rheumatology;
- sexual and reproductive health;
- medical investigations.

2.3 The mix of primary and community care services should be determined by local need and strategic service planning.

How do primary and community care services differ from acute clinical services?

2.4 Acute hospitals deliver specialist healthcare services to a large population. It is more cost-effective and safer to centralise specialist staff and equipment in acute settings, which most patients access less frequently. Acute hospitals are generally made up of a number of specialist departments, each tailored to deliver a specific service from dedicated accommodation.

2.5 Primary and community care buildings may deliver a wide range of frequently accessed, less specialised, primary and community care services. Many of these services can be delivered from shared generic accommodation. Such shared use of space is central to the successful design and operation of primary and community care buildings.

2.6 The range of services delivered from primary and community care buildings is likely to change more frequently than those delivered from acute hospitals (to reflect prevailing needs, policy and technology). The buildings that house them should be flexible enough to accommodate these changes, including where decisions are taken to deliver hospital services in primary and community care settings.

Non-NHS community, voluntary and commercial sector services

2.7 The following are examples of non-NHS community care services that can also be incorporated into the scope of the building:

- libraries;

- swimming pools;
- informal adult education;
- Sure Start nurseries;
- housing offices;
- benefits advice offices;
- Citizens Advice Bureaux;
- training kitchens (teaching cooking skills and nutrition);
- computer training rooms;
- gyms;
- crèches;
- dance studios;
- retail pharmacies;
- cafés;
- convenience stores.

2.8 For further information on such co-located services, see [Appendix 2](#). Any costs associated with co-locating services should be addressed at strategic planning stage.

Understanding your estate

- 2.9 ‘Transforming Community Services: enabling new patterns of provision,’ (DH, 2009) established a route map for PCTs to achieve the separation of their operational provider services from their commissioning functions.
- 2.10 The guidance considers how PCTs should address the ownership and management of assets and other infrastructure. The policy outlined in this document is that there is a presumption that responsibility for the provision of estate should normally remain with the commissioners.
- 2.10 PCTs are required to have a clear and realistic strategy for the future management of their estate that will ensure it is fit for purpose to deliver current and future commissioning intentions. Recent guidance has been issued on the scope and content of this document, which is known as ‘Art of the Possible’ (DH, 2009). The Department of Health is also currently working on the ‘Premises Assurance Model’, a model to assure the quality and safety of premises used in NHS services.
- 2.11 The development of a CIAMS (commissioners’ investment and asset management strategy) is a new approach to estate strategy that builds on

existing practice and promotes a complete alignment between a PCT’s commissioning strategy and plans for its estate. It is wider than was initially envisaged in ‘Transforming Community Services’, as it now seeks to include all estate from which primary and community services are delivered.

- 2.12 The purpose behind this change is to ensure that PCTs take into account all sites from which services can be or are being delivered, whether directly owned by the PCT or not. It does not presuppose that one particular form of property management is superior to others or should be dominant. The key is to find the right blend of arrangements that suit the needs of a particular locality.
- 2.13 The result should be the development of a comprehensive document, which will be a step towards ensuring that world class commissioning competencies are reflected in the approach to strategic estates planning.
- 2.14 The process is in two phases:
- Phase 1: Understanding your estate and the planning function. This is the interpretation of the service outputs from the commissioning strategy and the mapping of these to the current estates provision. Any “gap” will be identified together with an assessment of the options to close it. The ultimate end product will be a CIAMS.
 - Phase 2: The implementation of the CIAMS. This consists of the development of plans and strategies to close the gap and seamlessly integrate commissioning with infrastructure management and investment so that plans are continually updated. The CIAMS document should provide further details on the approaches and process for each phase.

Developing a service brief for a potential development

- 2.15 At various stages in the life of a project, many terms are loosely used, to describe the scope of services delivered from a scheme: service plan, output specification, operational policy etc. At the inception stage, it is important to focus on the key information that is required to test the feasibility of a proposal, as follows:
- the functional content of the scheme – a simple statement listing the range and broad scope of services to be delivered from the building;

- anticipated activity levels expressed in a consistent format, for example patient contacts per annum;
 - operational assumptions – a statement identifying opening hours, average duration of appointments and target utilisation;
 - models of care – a description of service standards and how they will be organised and measured;
 - workforce capacity, recording numbers of WTE (whole-time equivalent) staff working in various settings.
- 2.16 It is suggested that this information be brought together for each potential project in the form of a service brief. This is a date-tracked document that will require formal sign-off once complete, before it is used to generate the briefing schedule. It is produced as part of an iterative process, being updated and modified as more detailed information appears and as commitment from stakeholders is made.

Project inception and validation

- 2.17 Once a CIAMS and service brief have been prepared, a briefing schedule can be generated (see [Chapter 4](#)) which will predict, within acceptable bounds of accuracy, the likely size of the new development. In conjunction with other information available, this will enable a range of potential physical solutions to be evaluated:
- against the PCT's and SHA's strategic objectives;
 - in terms of site fit and local authority planning policy;
 - to test potential to deliver appropriate design standards;
 - for affordability and value for money.

Compliance with PCT's and SHA's strategic objectives

- 2.18 Different site solutions can be tested qualitatively against a CIAMS and service brief.

Site fit and compliance with local authority planning policy

- 2.19 The briefing schedule will advise on the approximate area of the building, which in conjunction with a high-level knowledge of local planning policy objectives (relating to use, siting, massing, access, landscape etc) can be used to decide on likely numbers of floors, orientation and the ability to provide on-site car parking.
- 2.20 A guide to town planning for NHS staff and a guide to the NHS for local authorities can be found on KIP.

Achieving acceptable design standards

- 2.21 The preliminary building solution that appears as part of testing for site-fit can be evaluated against high-level strategic and functional design issues to establish whether the potential site is likely to have the characteristics to deliver a scheme that meets acceptable design and organisational standards.

Affordability and value for money

- 2.22 The approximate capital cost of any development can be established from the briefing schedule. This, combined with staffing numbers from the service brief and information about other likely development stakeholders, can be used to establish options for the scheme's procurement, affordability and value for money.

3 Strategies to maximise flexibility and adaptability

Introduction

- 3.1 As described in [Chapter 2](#), because the mix and range of services to be delivered from primary and community care buildings can change over time, it is important that the accommodation is flexible and adaptable. Strategies to promote flexibility and adaptability include:
- use generic patient/client contact spaces;
 - limit the number of specialist spaces;
 - standardise room sizes and position of built-in equipment;
 - consider future engineering service requirements at the outset;
 - consider flexible and adaptable forms of construction;
 - develop a modular approach to planning and construction;
 - provide space for future expansion, if relevant.
- 3.2 Most primary and community care services involve one or more of the following activities:
- counselling;
 - consultation;
 - examination;
 - diagnosis;
 - treatment;
 - physical therapy.
- 3.3 These activities may occur on a planned basis (for example specialist outreach consulting), unplanned basis (for example urgent care or walk-in services) or a combination of the two (for example GP consultation). This affects the way services are managed rather than the facilities required.
- 3.4 Most activities involve a practitioner and an individual patient/client, although certain forms of physical therapy and counselling may take place in groups.
- 3.5 Most activities can be delivered from the following generic patient/client contact spaces:
- interview room;
 - consulting/examination room;
 - treatment room (that is, with mechanical ventilation);
 - examination/physical therapy room;
 - group room.
- 3.6 This is illustrated in [Figure 1](#), the primary and community care room directory, which matches services to room type based on an understanding of the activities involved.
- 3.7 Generic patient/client contact spaces should be shared on a timetabled basis to maximise their use unless required on a dedicated basis for full-time use.
- 3.8 For further information on the generic spaces listed above, see Health Building Note 00-03.
- 3.9 Treatment activity requires special consideration. Treatments given in primary and community care settings fall under a number of categories, and can occur in different room types.
- 3.10 Non-invasive and minimally invasive treatments may take place in a consulting/examination room, treatment room or examination/physical therapy room, depending on space requirements. (A non-invasive procedure is one that does not break the skin, for example changing a dressing. A minimally invasive procedure is one that breaks or punctures the skin, for example injections and taking blood.)
- 3.11 An invasive procedure is one that cuts the superficial layers of the skin, for example removal of moles, warts or corns, biopsies or any endoscopic procedure accessing any body orifice. A local anaesthetic or sedation may be required with an invasive procedure. Most invasive procedures and certain procedures using rigid endoscopes can take place in a generic treatment room. In addition,

Figure 1 Primary and social care room directory

Primary and community care service activity	Minimum recommended room type		HBN reference
	Generic room (possibly with some specialist equipment or minor modifications)	Specialist room	
Acupuncture	Examination/therapy room*		HBN 00-03
ADL assesment: dressing, bedtime skills		ADL bedroom	HBN 8
ADL assesment: kitchen skills		ADL kitchen	HBN 8
ADL assesment: bath and shower skills		ADL bathroom	HBN 8
Aromatherapy	Examination/therapy room*		HBN 00-03
Arts and craft therapy	Group room		HBN 00-03
Baby clinic	Large group room		HBN 00-03
Benefits advice consultation	Interview room		HBN 00-03
CAMHS interview and counselling (individual)	Interview room		HBN 00-03
Chemotherapy treatment	Examination/therapy room*		HBN 00-03
Chiropody/podiatry	Treatment room		HBN 00-03
Citizens advice bureaux consultation	Interview room		HBN 00-03
Consultation and examination	C/E room		HBN 00-03
Continence consultation and treatment	Treatment room		HBN 00-03
Contraceptive advice and dispensing	C/E room		HBN 00-03
Contraceptive advice and fitting	Treatment room		HBN 00-03
Dental recovery	Sitting recovery area or reclining recovery room		HBN 00-03
Dental surgery		Dental treatment room	Not yet available
Diabetes consultation and treatment	C/E room		HBN 00-03
Dietetics consultation (group)	Group room		HBN 00-03
Dietetics consultation (individual)	Interview room		HBN 00-03
Discussion group (up to 8 people)	Group room		HBN 00-03
District nurse treatment	Treatment room		HBN 00-03
ECG	Examination/therapy room*		HBN 00-03
Echocardiography	Treatment room		HBN 00-03
ENT consultation (high volume)		ENT C/E room	HBN 12-01C
ENT consultation (low volume)	C/E room		HBN 00-03
Family planning	C/E room		HBN 00-03
Foot health	Treatment room		HBN 00-03
Free movement exercise (with mats/handheld equipment)	Large group room		HBN 00-03
Surgical consultation and examination	C/E room		HBN 00-03
GP consultation and examination	C/E room		HBN 00-03
GP training (consultation and examination)	C/E room		HBN 00-03
Group activity (up to 8 people)	Group room		HBN 00-03
Health visitor consultation and treatment	C/E room or treatment room**		HBN 00-03
Hearing testing, adult		Adult hearing test room	HBN 12-01C
Hearing testing, child		Paediatric hearing test room	HBN 12-01C
Housing advice consultation	Interview room		HBN 00-03
Immunisation	C/E room		HBN 00-03
Innoculation	C/E room		HBN 00-03
Leg ulcer treatment	Treatment room		HBN 00-03
Marriage guidance consultation	Interview room		HBN 00-03

Primary and community care service activity	Minimum recommended room type		
	Generic room (possibly with some specialist equipment or minor modifications)	Specialist room	HBN reference
Massage	Examination/therapy room*		HBN 00-03
Mental health interview & counselling (individual)	Interview room		HBN 00-03
Midwife consultation	C/E room		HBN 00-03
Musculoskeletal/rehab physiotherapy (individual)	Examination/therapy room*		HBN 00-03
Musculoskeletal/rehab physiotherapy (large equipment)	Large group room		HBN 00-03
Music therapy	Group room		HBN 00-03
Near patient testing (blood gas, etc)	Near patient testing room		HBN 00-03
Nurse practitioner consultation and treatment	C/E room or treatment room**		HBN 00-03
Ophthalmology consultation and examination (high volume)		Ophthalmology C/E room	HBN 12-01D
Ophthalmology consultation and examination (low volume)	C/E room		HBN 00-03
Outpatient consulting and examination	C/E room		HBN 00-03
Pharmaceutical consultation	Interview room or C/E room		HBN 00-03
Phlebotomy	Examination/therapy room*		HBN 00-03
Physical measurement room	Examination/therapy room*		HBN 00-03
Physiotherapy specialist treatment (wax, splint, ice)		Splint room	Not yet available
Physiotherapy treatment (individual)	Examination/therapy room*		HBN 00-03
Plaster treatments (fitting and removing)		Plaster room	HBN 00-03
Practice nurse consultation and examination	C/E room		HBN 00-03
Practice nurse treatment	Treatment room		HBN 00-03
Preparation for parenthood classes	Large group room (minimum 40 sq m)		HBN 00-03
Rehabilitation therapy (individual)	Examination/therapy room*		HBN 00-03
Remembrance group discussion up to 8	Group room		HBN 00-03
School nurse consultation and treatment	C/E room or treatment room**		HBN 00-03
Sexual health consultation and examination	C/E room		HBN 00-03
Sexual health treatment	Treatment room		HBN 00-03
Smoking cessation group, up to 8	Group room		HBN 00-03
Social work interview and counselling session	Interview room		HBN 00-03
Specialist nurse consultation and examination	C/E room		HBN 00-03
Speech and language consultation (group)	Group room		HBN 00-03
Speech and language consultation (individual)	Interview room		HBN 00-03
Spirometry	Examination/therapy room*		
Stroke club	Large group room		HBN 00-03
Toe nail clipping service	Treatment room		HBN 00-03
Ultrasound investigation	Treatment room		HBN 00-03
Urgent care assessment	C/E room		HBN 00-03
Urgent care assessment and treatment	C/E room or treatment room**		HBN 00-03
Venepuncture (see phlebotomy)			
X-rays		X-ray room	

* Where activity levels do not justify a separate examination/therapy room, a consulting/examination room may be used

** Depending on nature of treatments

procedures that generate heat (for example ultrasound) and/or unpleasant odours (for example tissue viability clinic) should only take place in a treatment room (that is, with mechanical ventilation).

- 3.12 Some invasive procedures may require all-round couch access, including access to the head of the couch.

Limit the number of specialist spaces

- 3.13 Certain activities require specialist spaces, that is, rooms with special environmental characteristics (for example lead shielding for X-ray diagnosis, acoustic protection for hearing tests) or containing fixed specialist equipment (for example dental equipment).
- 3.14 Some specialist spaces can also be used for generic activities. However, they are more expensive to equip and less adaptable, and so should only be specified where absolutely necessary. Reasons for specifying a specialist space should be justified and recorded.
- 3.15 See Figure 1 for a list of specialist spaces that may be required in primary and community care buildings.

Standardise room sizes and position of built-in equipment

- 3.16 Room sizes and dimensions should be standardised wherever possible. This may mean sizing up to some extent, but results in rooms that can be adapted (for alternative use) more easily.
- 3.17 Experience and ergonomic analysis suggests the following room sizes provide a good fit for most generic rooms in primary and community care buildings:
- 8 m²;
 - 12 m²;
 - 16 m²;
 - 32 m².
- 3.18 The ability to standardise the position of built-in equipment (for example clinical wash-hand basin) will further enhance adaptability.
- 3.19 This idea is shown diagrammatically in Figure 2.
- 3.20 The 16 m² consulting/examination room in Health Building Note 00-03 shows access to three sides of the couch. This is not generally required in primary

and community care settings, where the couch can be aligned against one wall, leaving additional space for patients, escorts and mobile equipment. The couch should be correctly handed, however, and the clinical wash-hand basin should remain within the cubicle area. See Figure 3.

- 3.21 The 12 m² consulting/examination room with single-sided couch access identified in Health Building Note 00-03 is not recommended for use in primary and community care buildings as it offers less space for equipment and patients/escorts than the 16 m² room.

Consider future engineering service requirements at the outset

- 3.22 At the beginning of the design process consideration should be given to which room functions are likely to change over time and the impact this will have on engineering service requirements. Two broad approaches are possible:
- install sufficient engineering services at the outset to accommodate future uses of the room;
 - provide adequate infrastructure capacity, plantroom and containment space to upgrade engineering services at a later date.
- 3.23 Decisions over which approach to employ will be influenced by the ability to predict future changes in use, economic constraints, and the need to satisfy any emergency preparedness provisions, which may require rapid conversion from one room type to another.
- 3.24 Where it is decided to install engineering services at the outset to accommodate future use, controls can be used to set ventilation, temperature control and lighting systems at the appropriate levels.
- 3.25 Where it is decided to provide sufficient space to accommodate the necessary additional engineering services at a later date, suitable local connection and access points should be arranged to minimise future disruption to the normal operation of the premises.
- 3.26 Clinical wash-hand basins may be included in interview or group rooms to increase their flexibility and adaptability. This must be balanced on a project basis against the more “clinical” character required by the inclusion of a basin, for example, by necessitating vinyl flooring.
- 3.27 An alternative solution is to provide some or all rooms with the capacity to easily retrofit a basin.

Figure 2 Modular sizing concept

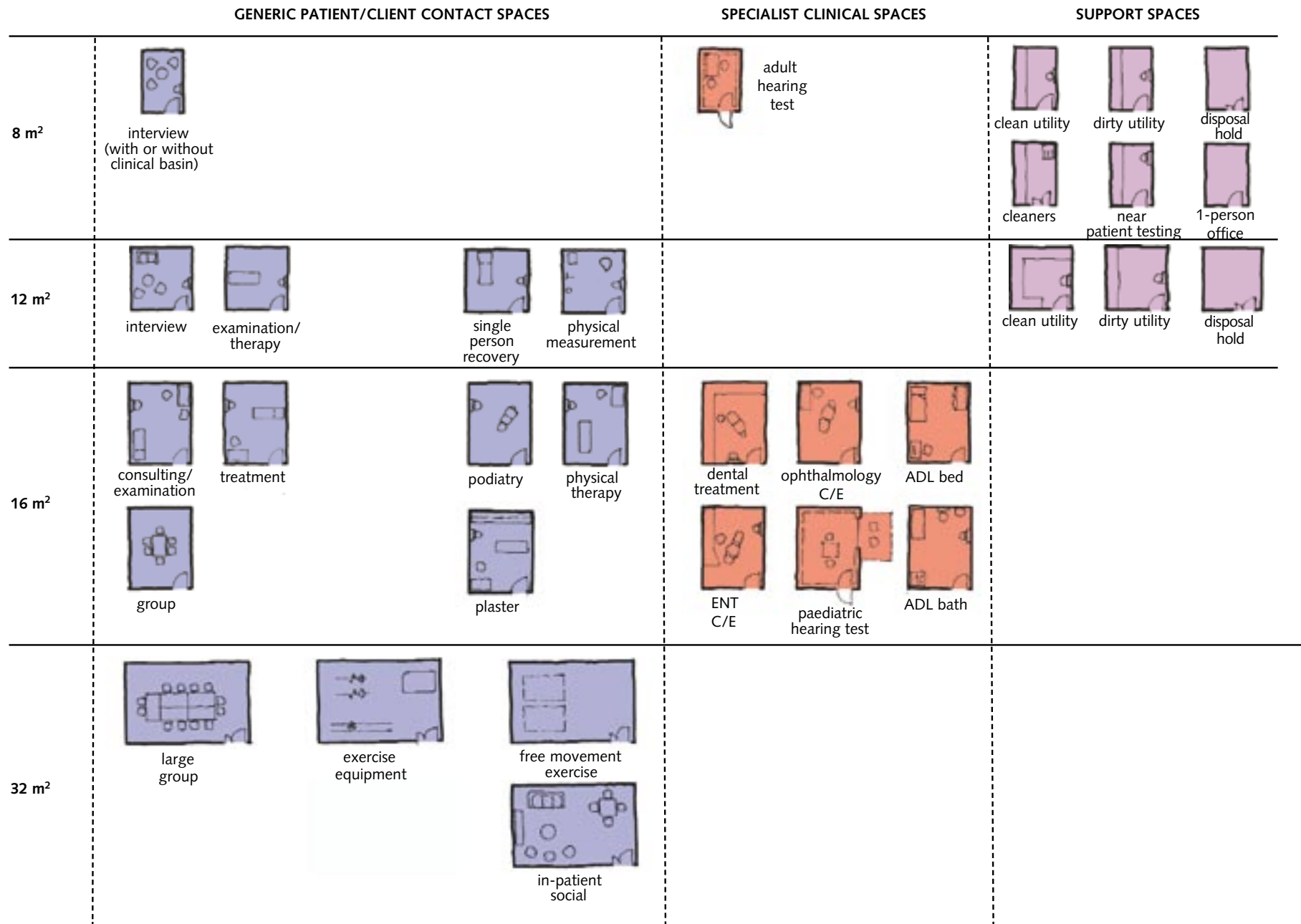
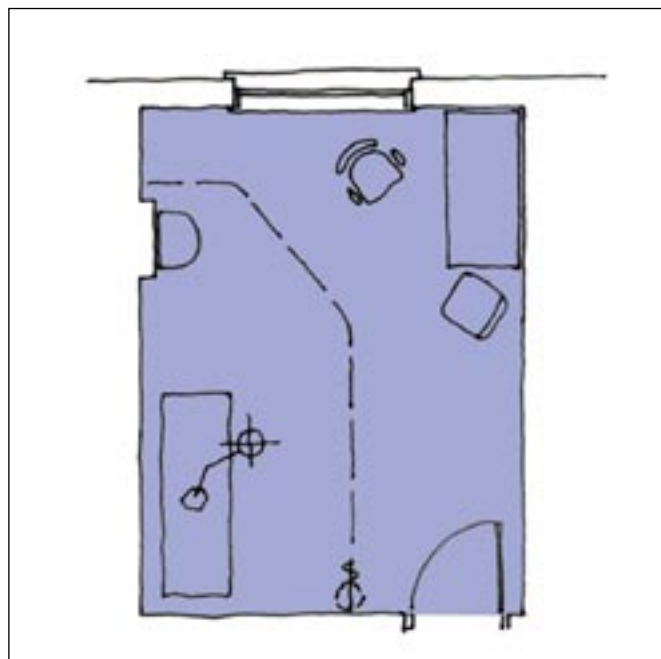


Figure 3 Alternative layout for 16 m² consulting/ examination room with couch against wall



This can be achieved with blank, plumbed IPS panels or (*Legionella*-compliant) capped hot and cold water supply tails in ceiling voids and capped wastes.

3.28 Reference should be made to ADB datasheets to establish the specific engineering requirements for the different room types. See also [Chapter 10](#).

Consider flexible and adaptable forms of construction

3.29 To ensure day-to-day flexibility, consider the use of:

- acoustically treated folding partition walls between adjoining group rooms, allowing rooms to be opened up to create larger spaces;
- changeable signage, allowing room names and routes to be easily modified for individual sessions;
- mobile, rather than fixed, equipment and furniture;
- wireless and/or internet protocol technology, where appropriate;
- standard data outlets (for example RJ45) and common structured wiring infrastructure to create a network for telephones, data and video.

3.30 To ensure that buildings are adaptable in the longer term, consider the following:

- the use of framed construction allowing partition walls to be altered;
- the installation of suitable surface fixed trunking to allow engineering services outlets to be added or altered, particularly where large numbers and types of outlet are concentrated in a small space. This is subject to infection control requirements being met;
- the use of structured wiring for IT and communication systems and modular wiring systems for lighting and small power;
- provision of adequate spare plant and service access space, including ceiling void depths and service risers, to have sufficient capacity to accommodate anticipated future M&E expansion and equipment replacement;
- developing a modular approach to planning and construction.

3.31 Adopting a limited number of room sizes can lead to building layouts that use economic structural spans, stack efficiently and allow for natural cross-ventilation.

3.32 The planning grid chosen will depend on site conditions and the form of construction being used (steel or concrete frame or load-bearing). This approach can also be adopted when converting existing commercial buildings into primary and community care accommodation.

3.33 As well as encouraging simple layouts of rooms around a central corridor with standardised building spans and grids, the modular approach can be extended to provide additional benefits:

- locating electrical trunking on exterior walls also helps with the flexibility of office space, in particular, as it makes it easier to move dividing cross walls, at a later date;
- off-site fabrication can be viable on larger schemes, if not for the room itself, then for elements such as standard plumbing modules.

3.34 It is not always possible to use the same modular sizes for in-patient and out-patient accommodation. This is particularly the case if corridor-side en-suite shower rooms are used in wards, as this leads to a deep-plan form that is often difficult to locate above naturally ventilated and lit ground-floor out-patient accommodation. A modular approach can be adopted by stacking in-patient accommodation in a separate block,

adjacent to the out-patient space, or by placing it above accommodation that does not require so much natural light and ventilation, such as imaging or FM space.

Conversions and alternative uses

- 3.35 A loose-fit, non-bespoke approach to space planning will lead to flexible buildings that are suitable for conversion to alternative uses. This is particularly useful in schemes where building costs may not be fully recouped during the lease period or where significant reductions in service provision are anticipated.
- 3.36 Consideration should be given to forms of construction, storey heights, structural grid, floor loadings, fire stair and riser locations etc which, in conjunction with a modular approach to room sizing, can result in buildings that have increased residual value, should needs change in the future. Such decisions should not, however, jeopardise functionality in the short term.
- 3.37 Consideration should be given at the early planning stage to how the building might expand or contract over time, as activity levels change.
- 3.38 If expansion space is provided, it should be adjacent to the relevant part of the building. The impact of expansion on circulation routes, fire strategy and provision of daylight needs to be addressed.
- 3.39 Should mains services, public spaces and the car park be sized to accommodate the extension from the outset, or is a strategy in place to enable this support accommodation to expand over time too?
- 3.40 If it is likely that services and activity will contract, consideration should be given to how the building can be sub-divided, or how areas can be let for non-core activity.

Provide space for future expansion, if relevant



4 Sizing a development and creating a briefing schedule

Introduction

- 4.1 This chapter describes the process by which the spaces in primary and community care buildings (excluding community wards) are quantified, and from that, how a briefing schedule can be generated.
- 4.2 This analysis can be undertaken manually, following the methodology set out below. The Department of Health is currently developing an interactive online standard space scheduling system to aid this process.
- 4.3 The briefing schedule will be used to produce an informed construction cost and hence to determine whether the scheme is viable or whether basic assumptions (such as functional content, opening hours etc) have to be adjusted to achieve affordability. It is vital that the briefing schedule is created very early in the development process to avoid abortive work being undertaken.
- 4.4 The briefing schedule can also be used to establish approximate car parking numbers to assist with site capacity planning and inform discussions with local authority planners.
- 4.5 For information on how to size community wards see the example briefing schedules.

Primary and community care spaces

- 4.6 This is the most complex element to define because, as indicated in Chapter 3, most primary and community care spaces will be shared by a variety of users on a timetabled basis. Primary and community care spaces can be established using the following steps:
- establish the range of primary and community care services to be delivered;
 - establish the anticipated activity levels for each service;
 - establish the types of patient/client contact space required for each service;

- state operational assumptions;
- calculate the number of patient/client contact spaces required for each service;
- calculate the total number of patient/client contact spaces required;
- establish the number of support spaces required.

4.7 These steps are discussed in more detail below.

Establish the range of primary and community care services to be delivered

4.8 The service brief (see [paragraphs 2.15–2.16](#)) will provide this information.

Establish the anticipated activity levels for each service

- 4.9 The number of patient/client contacts per annum for each service can be calculated using:
- access rates applied to the relevant catchment population; and/or
 - outputs from service redesign pathways; and/or
 - historical activity levels, modified to reflect planning assumptions on trends.

Establish the types of patient/client contact space required for each service

- 4.10 The primary and community care room directory may aid this process (see [Figure 1](#)). These spaces can be generic or specialist.
- 4.11 Most individual services will require access to more than one room type, for example general medical services require access to both consulting/examination and treatment rooms.
- 4.12 Where an individual service requires access to more than one room type it is necessary to identify the percentage of patients/clients using each room type; for example, analysis may show that 100% of GMS patients/clients require access to a consulting/examination room but only 20% require access to a treatment room.

State operational assumptions

4.13 To enable patient/client contact spaces to be quantified, assumptions about the following operational issues will be required:

- number of weeks the building will be open per year;
- opening hours per week;
- average duration of each appointment by service and room type;
- average room utilisation rate.

4.14 The room utilisation rate allows for non-attendees, unplanned activity and the complexity of scheduling a variety of staff. A utilisation rate of at

least 60% should be achieved. However, the impact on room requirements of using a higher utilisation rate should be investigated.

Calculate the number of patient/client contact spaces required for each service

4.15 The examples below illustrate how this can be done for general medical services using the steps outlined above.

4.16 Requirements for specialist patient/client contact spaces should be determined in the same way. However, the decision to provide a specialist room will also depend on whether the service can be delivered in a generic room.

Calculating number of consulting/examination rooms required for general medical services:

Catchment population:	10,000
Access rate:	5260 per 1000 population
Anticipated annual contacts:	$10 \times 5260 = 52,600$
Assume 100% patients use C/E room: Patients accessing a C/E room:	52,600
Assume open 50 weeks a year: Patients per week:	$52,600/50 = 1052$
Appointment duration	15 minutes
Patient appointment time per week	$1052 \times 15/60 = 263$ hours per week
Assume building operational	60 hours per week
Assumes room utilisation	60%
Rooms available	36 hours per week
Number of C/E rooms required:	$263/36 = 7.3$

Calculating number of treatment rooms required for general medical services:

Catchment population:	10,000
Access rate:	5260 per 1000 population
Anticipated annual contacts:	$10 \times 5260 = 52,600$
Assume 20% patients use a treatment room: Patients accessing a treatment room:	$52,600 \times 0.2 = 10,520$
Assume open 50 weeks a year: Patients per week:	$10,520/50 = 210$
Assume appointment duration	20 minutes
Patient appointment time per week	$210 \times 20/60 = 70$ hours per week
Assume building operational	60 hours per week
Assumes room utilisation	60%
Rooms available	36 hours per week
Number of treatment rooms required:	$70/36 = 1.9$

Calculate the total number of patient/client contact spaces required

4.17 Once these room quantification calculations have been undertaken for all services, and all room types, the results can be added together to establish overall requirements for patient/client contact spaces for delivering primary and community care. At this point, room numbers should be rounded, as appropriate. These spaces will effectively become the “schedule drivers” for the project.

Establish the number of support spaces required

4.18 In order to function efficiently, patient/client contact spaces require access to a range of support spaces (for example utility rooms, storage spaces etc). The number and mix of support spaces required should be identified from an analysis of the number and mix of patient/client contact spaces.

Staff spaces

4.19 Staff spaces can be quantified as follows:

- shared-use admin workstations for building-based practitioners: the number of practitioners working in the building can be calculated from the number of patient/client contact spaces in the primary and community care zone. The number of workstations required will depend on the level of sharing;
- shared-use admin workstations for community-based practitioners: the number of community staff can be derived from the service brief and business case assumptions. The number of workstations required will depend on the level of sharing and maximum number of community staff likely to be in the building at any one time;
- continuous-use admin workstations: requirements will be based on the number of permanent admin staff. This information can be derived from the service brief and an overview of activity levels;
- reception spaces: requirements for reception spaces can be based on the size of the waiting area (see below for details).

4.20 It is assumed that admin areas will be open-plan and associated with a series of ancillary office spaces. See [Chapter 7](#) for further details. Requirements for ancillary office spaces should be driven by numbers of workstations.

4.21 Single-person offices should be kept to a minimum. The number required will depend on local operational policies.

Public spaces

4.22 Requirements for waiting spaces and public WCs (except independent wheelchair WCs) may be based on the number of patient/client contact spaces in the primary and community care zone. Independent wheelchair WCs should be quantified according to the size of the building.

4.23 Community and commercial partners should advise on the number of attendances that their accommodation is likely to generate over and above those already attending for primary and community care appointments, per day and at peak times, to ensure that adequate public spaces are provided.

Facilities management spaces

4.24 The amount of space required for facilities management depends on operational policies and working practices.

4.25 Space estimates for specialist FM space (regeneration kitchens, commercial cafés etc) should be validated from potential service providers as soon as the scheme is deemed to be potentially viable.

Compiling the briefing schedule

4.26 Using the steps outlined above, a briefing schedule can be produced. The example briefing schedules clearly set out all the assumptions used to calculate requirements for public, clinical support, staff and FM spaces.

4.27 Example briefing schedules are useful for overall costing purposes, but do not indicate how spaces might be put together into a coherent design. This is described in subsequent chapters.

5 Creating zones within primary and community care buildings

Introduction

- 5.1 All primary and community care buildings include the following types of space:
- public spaces;
 - primary and community care spaces;
 - staff spaces.
- 5.2 These different categories of spaces should be grouped together to create separate zones within the building.

Public zone

- 5.3 The public zone comprises the main entrance, reception and waiting area, public WCs and health information points. This zone should be located at the front of the building.
- 5.4 The public zone should have a non-clinical character, relevant and inviting to the community that it serves, who it is hoped will develop a sense of ownership for it.
- 5.5 See [Chapter 6](#) for further details on how to design the public zone.

Primary and community care zone

- 5.6 This zone accommodates the core patient/client contact spaces, most of which will be generic.
- 5.7 Public access to this zone will be from the public zone. Ideally, it should have direct staff-controlled access to the staff zone. Public access to individual patient/client contact spaces will be controlled by staff.
- 5.8 The primary and community care zone should inspire confidence through order, cleanliness and efficiency.
- 5.9 See [Chapter 7](#) for further details on how to design the primary and community care zone.
- 5.10 Some buildings contain community beds and stand-alone specialist clinical units, located outside

the primary and community care zone. See [paragraphs 1.7 and 1.8](#) for details.

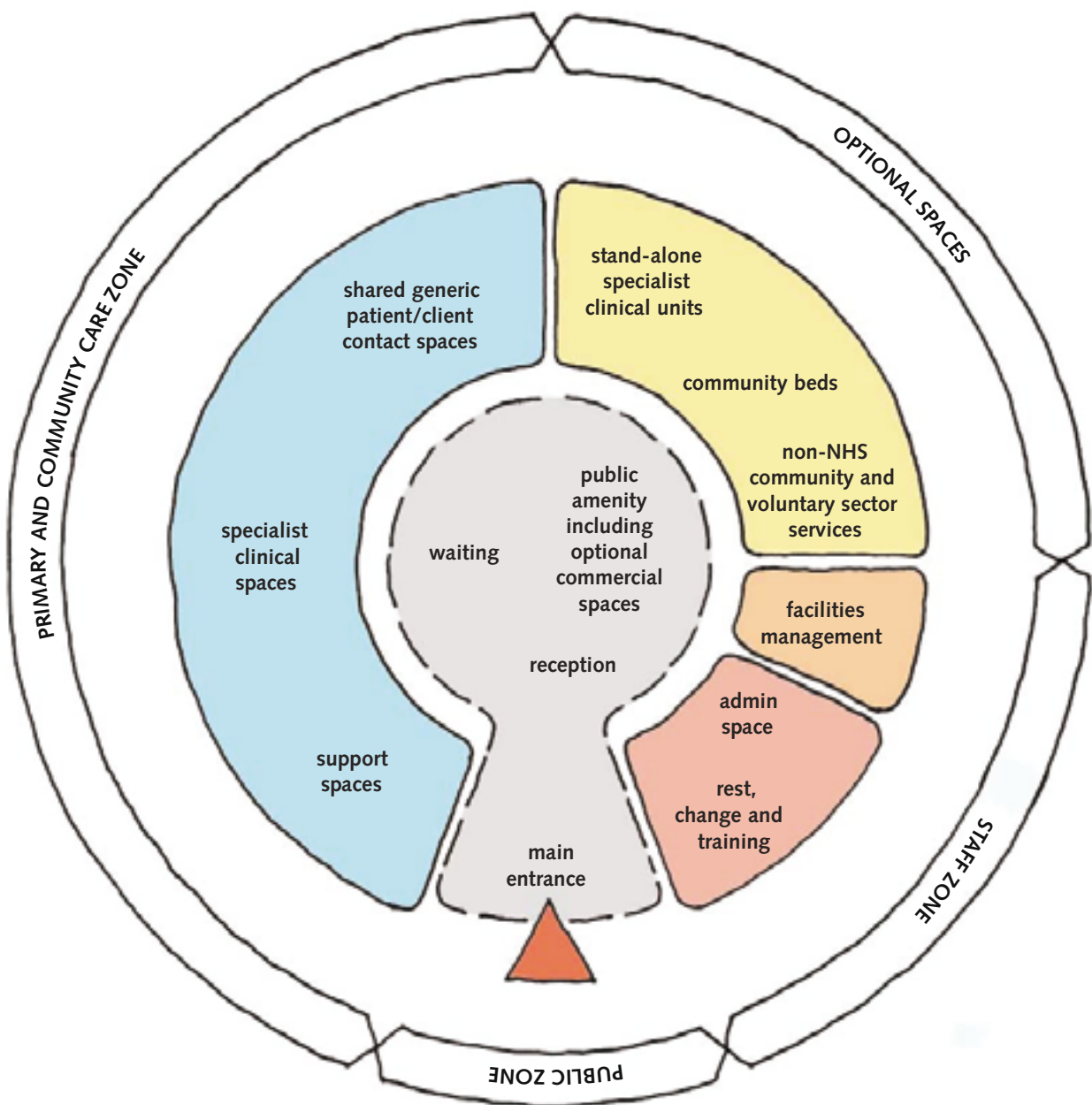
Staff zone

- 5.11 The staff zone may include:
- admin areas;
 - rest rooms;
 - changing areas;
 - training spaces.
- 5.12 The staff zone should generally only be accessible to staff.
- 5.13 Most staff areas can be shared by different groups of staff, including community-based staff. They should therefore be easily accessible to staff from the main entrance (or staff entrance, where provided).
- 5.14 Admin areas should be designed on the basis of open-plan working.
- 5.15 Staff rest rooms should provide good-quality environments to encourage their use and promote staff interaction.
- 5.16 Accommodation for staff training may be located in the staff zone, although it is useful if this is also accessible from the public zone.
- 5.17 All buildings will require some level of facilities management (FM) services, which may be provided by directly employed staff or through contracts with third parties. Certain services, especially laundering, catering and some maintenance, can be contracted off-site. However, most buildings will require central space for sorting and storing incoming supplies and outgoing waste. These spaces should be located together, near the service or staff entrance to the building.
- 5.18 See [Chapter 8](#) for further details on how to design the staff zone.

Diagrammatic representation of the zoning concept

5.19 The idea of creating zones within the building is represented diagrammatically in Figure 4. The optional spaces represent those facilities that are not provided in every building and may or may not fall outside the public, primary and community care, and staff zones.

Figure 4 Zoning concept diagram



6 Public zone



Introduction

- 6.1 The public zone, made up of the main entrance, reception and associated spaces, should be:
- open and welcoming;
 - visible from outside the building, to aid building legibility;
 - naturally lit, with good views of external spaces.
- 6.2 Most buildings will include one or two waiting or foyer spaces, which may be double-storey to provide views to suites located at different levels. These “reference spaces” are useful, as they aid orientation and wayfinding. They should provide easy access to WCs, baby changing, vending and car park payment machines.

Main entrance and reception

- 6.3 Ideally, only one public entrance to the building should be provided, as this avoids confusion and aids security. A draught lobby is usually required.
- 6.4 Secondary public entrances may be required, however, where standalone specialist clinical units are included within the development.
- 6.5 The main entrance point should be overseen by a desk, which is staffed whenever the building is open. In larger buildings this first desk may simply provide an information and greeting point, and is often staffed by volunteers and/or non-clinical staff. Alternatively this security function can be fulfilled from the main reception desk. Situations should be avoided where visitors can access areas of the building without having passed a desk.
- 6.6 All buildings require a main reception desk, monitoring the waiting area and managing appointments. The reception desk should be visible and welcoming and will usually have a number of stations to which patients/clients can report.
- 6.7 Ideally all reception staff should be trained to manage the full range of enquiries. This pattern is more efficient and cost-effective, provides better cover at non-peak times and gives a better quality service to patients.
- 6.8 Receptionists will inform staff running clinics and/or the relevant practitioner that the patient/client has arrived. They will also book follow-on appointments once the consultation is complete, though self-booking points may also be provided. In larger facilities, follow-on appointments may be

made at staff communication bases or secondary reception desks associated with specific suites.

- 6.9 There should be an interview room close to the main reception desk, either as part of the counselling suite or as an additional space, depending on the size and layout of the building. This is used for private discussions on an unplanned basis, and so should not be blocked for sessional activity.
- 6.10 There may be an open-plan office behind the main reception desk for general administration tasks associated with appointments and clinics. Paper records, if used, may be stored here. Where an office is provided behind reception, it should have direct access to the primary and community care zone.
- 6.11 The post room function may be located behind the main reception desk, in a quiet corner, in the adjacent office if provided, or in the porters’ room.

Waiting and patient/client information points

- 6.12 As waiting and patient facilities make up a large part of the public zone of the building, project teams should decide on the nature of the resulting overall space. In smaller primary care buildings, servicing a local community, the space may require a quiet, intimate, domestic character that provides confidentiality by placing small-group seating in bays and screened-off areas. In larger buildings it may be appropriate for the space to have a much more civic character, more akin to a shopping centre environment, with continuity maintained between a complex pattern of waiting areas and ancillary activities by the use of double-storey spaces, atria or glazed courtyards.
- 6.13 It is more efficient to provide a shared main waiting area to serve a number of different suites, rather than a series of individual waiting spaces. This makes it easier to manage peaks in attendance numbers and also means that less “contingency” needs to be built into each space.
- 6.14 Large waiting areas will need to be broken down with smaller groups of seats, to make the space less daunting and institutional, and to enable patients to sit close to the suite to which they will be called.
- 6.15 These seating clusters can be distinguished from each other by different colours, changes in level, different floor finishes etc and may be divided

by screens, plants or, in larger buildings, accommodation such as a catering outlet or retail stall. The layout of seating should enable confidentiality to be maintained at the main reception desk, by providing suitable space around the desk or by using glazed screens.

- 6.16 The layout should be flexible enough to accommodate patient flow at peak times, and to allow children's play areas and quiet areas to be shared by different patient groups.
- 6.17 A range of different seating, of varying heights and styles should be provided, including sofas and high-backed chairs.
- 6.18 Dining table arrangements should also be considered, particularly if wireless Internet access is provided, to enable patients to use laptops or deal with paperwork while they wait.
- 6.19 Consideration should be given to providing patient/client information points, with direct access to online health information, such as NHS Choice.

Self check-in can also be managed at these points. Appropriately located health pods for recording a person's height, weight, blood pressure and other core screening data may also be provided. These terminals should be networked to the practitioner computer system for direct data entry.

- 6.20 Wayfinding within the waiting area is important, particularly in larger buildings. Colour, pendants or large icons may be useful in helping patients to orientate themselves within the space.

Public WCs and baby care facilities

- 6.21 In small buildings it is often sensible to provide individual WC cubicles containing a toilet and wash-hand basin. In larger buildings multi-cubicle public WCs will be appropriate (see the Building Regulations). Separate baby changing and feeding facilities should be provided.
- 6.22 See Health Building Note 00-02 for details on sanitary spaces.



7 Primary and community care zone

Introduction

- 7.1 It is usually the responsibility of the health planner and/or architect to translate the briefing schedule into a project accommodation schedule, by re-ordering it first into individual suites and then in a manner that better expresses the way in which the building will operate. This process is informed from a service viewpoint by the model of care and operational policies, and practically by site constraints and the design vision for the scheme.
- 7.2 This process will usually entail making adjustments to the briefing schedule, to reflect the number of storeys in the building, local policy etc.

Organising spaces into suites

- 7.3 The first task in structuring a project accommodation schedule is to consider how the primary and community care zone should operate.
- 7.4 This zone will usually be mainly composed of shared generic spaces, the flexibility of which can be maximised by arranging spaces in clusters or strings to create different suites.
- 7.5 Spaces may be organised into generic suites based on the common activities identified in [paragraph 3.2](#):
- Counselling suite;
 - Consulting/examination suite;
 - Treatment suite;
 - Physical therapy suite.
- 7.6 The size of each suite is determined by the number of patient/client contact rooms that can be effectively managed by a team of practitioners. Each suite should be large enough to maximise work efficiency but not so large that it becomes impersonal or difficult to navigate. These suites may host a range of different speciality clinics throughout the week or month, on a timetabled basis.

- 7.7 Specialist rooms may also be required. These may be distributed across suites or concentrated to form a specialist suite.
- 7.8 Certain specialist spaces and associated support spaces, regardless of the design solution chosen, will be grouped together. These groups of spaces have been defined as clusters.
- 7.9 [Figure 5](#) illustrates how specialist spaces may be organised.

Factors affecting the composition and design of suites

- 7.10 The design of the suites within the primary and community care zone depends additionally on a number of factors, including:
- routes, reception and control points;
 - system of patient call;
 - storage and management of paper patient records;
 - storage of consumables and portable equipment;
 - shared support spaces.

Routes, reception and control points

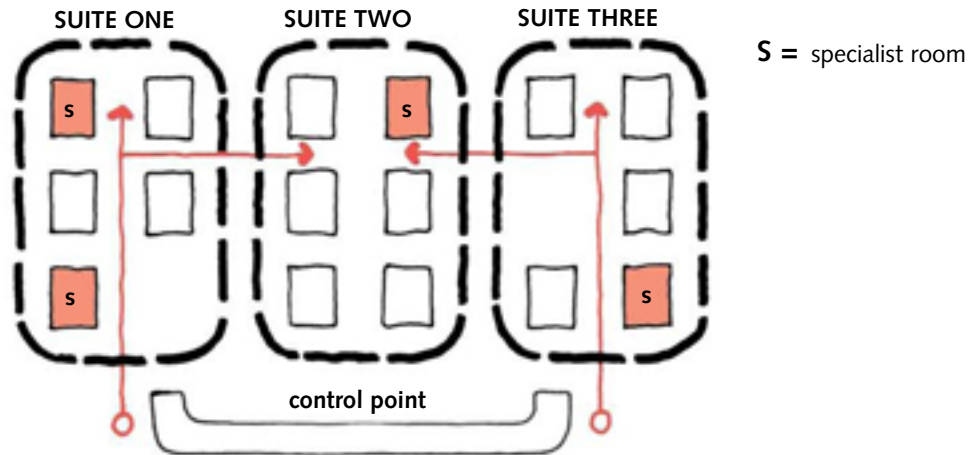
- 7.11 Public access to the various suites within the primary and community care zone needs to be controlled, and to be as direct as possible, from waiting areas. In small buildings this control may be provided by the main reception desk. In larger buildings, with more suites, a number of additional control points (staff communication bases) may be required. Key factors affecting this are discussed in [Chapter 10](#).

System of patient call

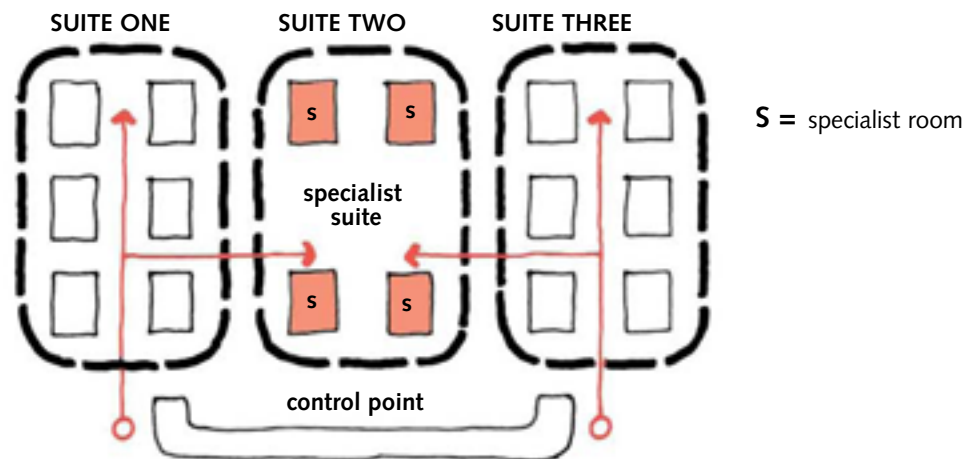
- 7.12 At the appropriate time the patient/client will be called, preferably in person, and directed or accompanied to the relevant room. Confidentiality and the needs of those with impaired sight or

Figure 5 Suite concept diagram – arranging specialist rooms

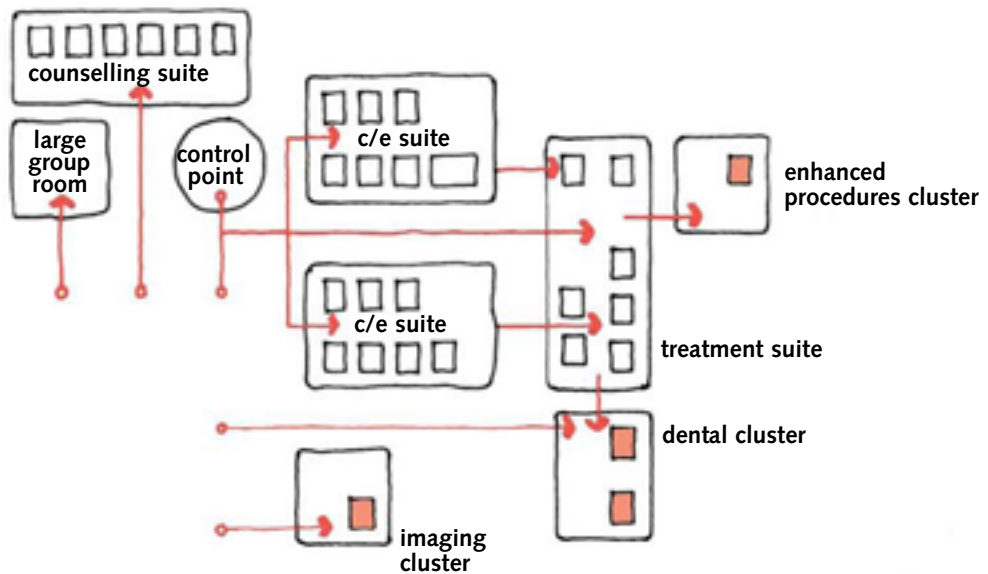
Distributed around suites:



Concentrated in specialist suite:



In cluster, adjacent to generic suite:



hearing should be considered when selecting call systems.

Storage and management of paper patient records

- 7.13 The NHS is moving towards electronic patient records, so the need for storing paper records is likely to diminish over time.
- 7.14 In the meantime project teams may need to consider requirements for storage of paper records, both those held permanently in the building (that is, GP and/or community care records) and those on loan from the acute sector for specific clinics.
- 7.15 Spaces used to store paper records should be designed and located so that they can be adapted for alternative use in the future.
- 7.16 Generally, community records should be stored within or adjacent to the open-plan admin area. GP records and records on loan from the acute sector should be stored close to the main reception desk or appropriate control point.
- 7.17 All records need to be held securely, with carefully controlled access arrangements.
- 7.18 Routes for taking delivery of incoming boxed files from the acute sector should be considered in deciding where to locate storage space for acute records.

Storage of consumables and portable equipment

- 7.19 In order to maximise the flexibility and adaptability of patient/client contact spaces, and for control of infection reasons, fixed storage cupboards within rooms are not recommended. Instead, this guidance is based on the following principles:
- working stocks of sterile supplies and consumables, when and where required, should be held on supplies trolleys in patient/client contact spaces. Supplies trolleys should be restocked in clean utility rooms;
 - portable equipment and consumables should be stored in dedicated storerooms when not in use. Equipment may be mounted on wheels/trolleys. Trolleys may be pre-prepared for particular clinics;
 - loose items such as crutches and walking aids may be stored on racking and wall hooks. A small store may be provided within each suite for this purpose, or part of a larger store may be set aside for this;

- larger equipment stores may be provided and shared between suites. Bulky and infrequently used items may be stored here, on large trolleys or mobile cages (see [paragraph 7.89](#) for storage associated with large group rooms);
- space should be provided, in accessible strategic positions, for storing a resuscitation trolley or grab bag containing a defibrillator. Access to medical gas cylinders and a portable suction machine may also be required;
- small captive key lockers should be provided for staff within each suite, for handbags, wallets and mobile phones.

Shared support spaces

- 7.20 The briefing schedule will identify the number of cleaners' rooms, disposal holds and utility spaces required to satisfy clinical functionality. Additional rooms may be required, however, because of the layout of the building or based on facilities management operational policies. The numbers of such rooms may consequently be adjusted in the project accommodation schedule. Additional rooms may be located within suites or between them or adjacent to lift and stair cores.

Counselling suite

- 7.21 A counselling suite may comprise the following rooms:
- interview rooms for individual discussions/counselling (for use by mental health services, therapists, community services and the voluntary sector);
 - group rooms for group discussions/counselling and patient support meetings, for example speech and language therapy, smoking cessation clinics, remembrance discussions, weight loss clinics etc;
 - a small store for consumables and portable equipment.
- 7.22 This suite would be appropriate for use by a wide range of primary and community care providers (see [Figure 1](#)). If provided, it should be located close to the main entrance and reception so that it is readily available for commercial or out-of-hours use when the rest of the building is closed.
- 7.23 Group rooms may be used for a variety of activities such as family therapy, child protection work (social services) and child psychology work. Where appropriate, the group room may be fitted with

audiovisual CCTV linked to suitable monitoring and recording equipment, which is portable and may be temporarily housed in another room.

- 7.24 Interview rooms and group rooms for speech and language therapy should be in a quiet location.
- 7.25 Interview rooms and group rooms may be clustered in groups of up to eight rooms. The ratio of interview rooms to group rooms will depend on the range of services to be delivered.
- 7.26 At least one interview room should be suitable for violent or disturbed patients with double entry and egress.
- 7.27 The interview rooms may be used for unplanned activity, for example referrals from the main reception desk and/or for staff to see clients without appointments. In larger facilities, additional dedicated interview rooms should be located adjacent to the main reception desk for private discussions.
- 7.28 This suite will usually have a “non-clinical” character, sometimes using carpet and soft furnishings to create a more social atmosphere. Clinical wash-hand basins may be required in some interview and group rooms, which may affect the ambience of the spaces. See [paragraph 3.26](#) for further details.
- 7.29 The flexibility of the suite will greatly increase if there is easy access to a large group room and beverage-making facilities (see [paragraphs 7.87–7.90](#)).
- 7.30 See [Figure 6](#) for an illustration of the counselling suite concept.

Consulting/examination suite

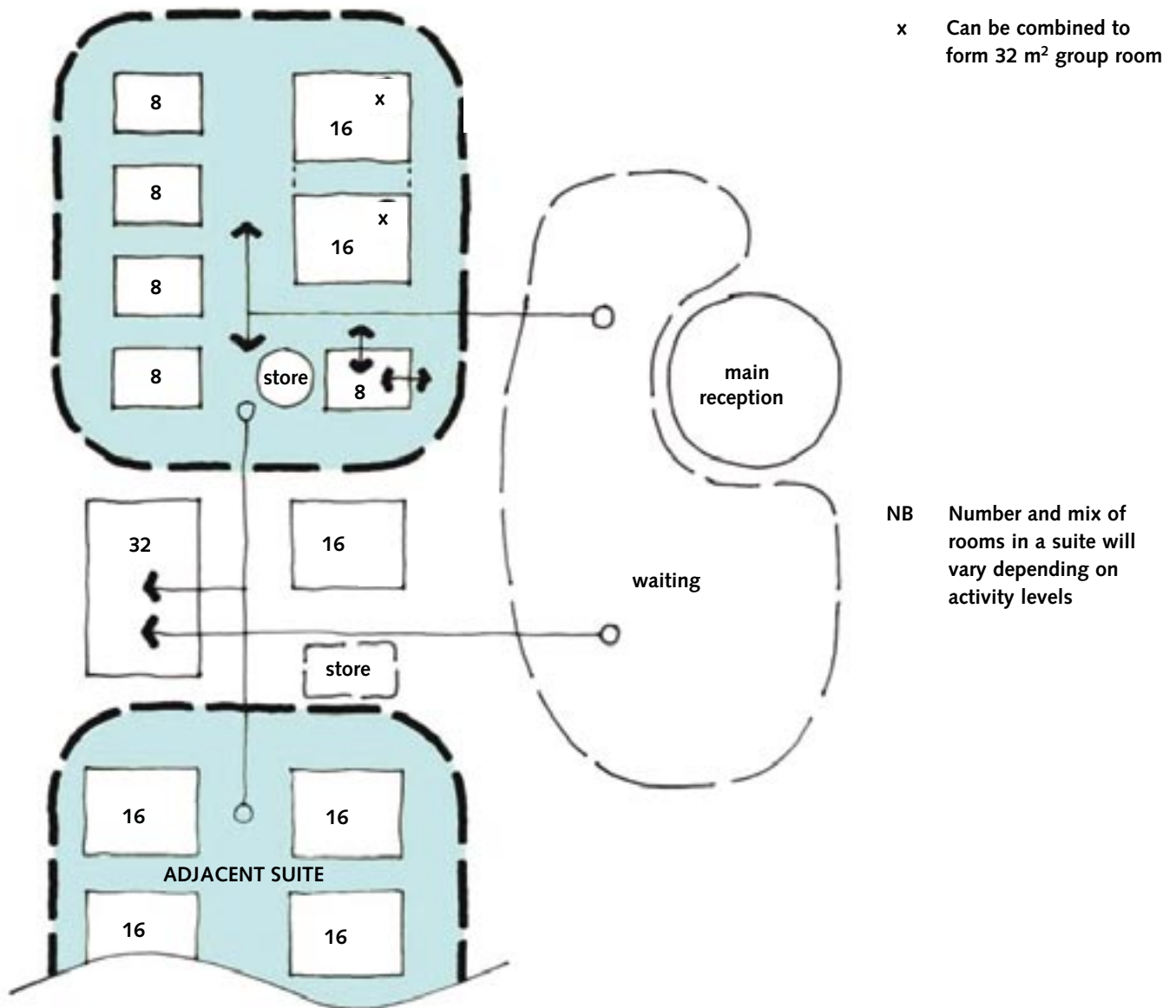
- 7.31 A consulting/examination suite may comprise the following rooms:
- consulting/examination rooms for consultations and examinations. Non-invasive and minimally invasive procedures may also take place here;
 - interview room(s) for discussions/counselling;
 - a small store for consumables and portable equipment.
- 7.32 This suite would be appropriate for use by GPs, nurse practitioners, allied health professions and outreach consultants.
- 7.33 Consulting/examination rooms may be clustered in groups of up to eight rooms.

- 7.34 If shared-use clean and dirty utility rooms are not available nearby, these should be provided within the suite.
- 7.35 Patients may have their medical history taken and weight/height checked by a nurse prior to their consultation. This can occur in a consulting/examination room or examination/physical therapy room.
- 7.36 Specialist consulting/examination rooms may be disbursed with generic consulting/examination rooms across a number of different suites or concentrated to form a specialist consulting/examination suite.
- 7.37 See [Figure 7](#) for an illustration of the consulting/examination suite concept.
- 7.38 Consulting/examination suites should be arranged with a direct relationship to the main waiting area, and possibly an adjacent suite to enable patients to be referred on from their initial consultation to a specialist consulting/examination suite or treatment suite. [Figure 8](#) illustrates the arrangement of consulting/examination suites and treatment suites at Bunny Hill Customer Service Centre.
- 7.39 It may be beneficial to include one or two treatment rooms in the same suite as the consulting/examination rooms; for example, where the number of treatments undertaken does not justify a separate treatment suite, to offer a one-stop shop for ECGs, echocardiograms and ultrasound scans or to enable delivery of urgent care or out-of-hours GP services when the treatment suite is closed. This effectively creates a mixed consulting/treatment suite. Preservation of patients’ modesty, particularly at points of transfer between changing, sub-waiting and treatment facilities, should be given high priority, and in some cases men and women should be segregated. This may be achieved operationally or by providing separate facilities.

Treatment suite

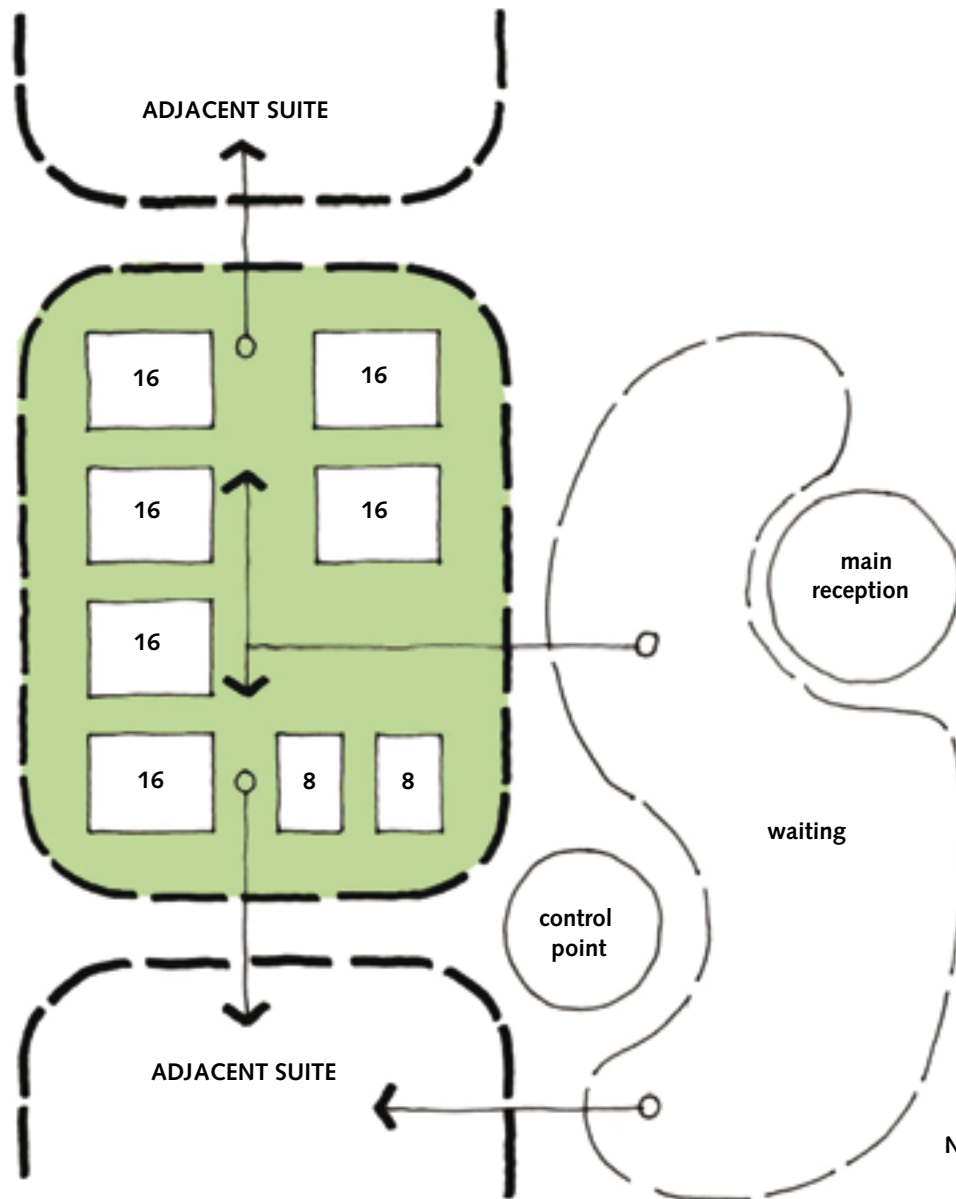
- 7.40 A treatment suite may comprise the following rooms:
- treatment rooms for invasive procedures and procedures that produce odours, for example leg ulcer clinics. Podiatry work may take place in a treatment room with a podiatry couch rather than a standard couch;
 - interview rooms for discussions/counselling only;

Figure 6 Counselling suite concept



- | | |
|-------------------------------|--|
| 8 m ² room types: | interview
store |
| 16 m ² room types: | group
meeting |
| 32 m ² room types: | exercise equipment
free movement exercise
meeting
large group |

Figure 7 Consulting/examination suite concept



8 m² room types:

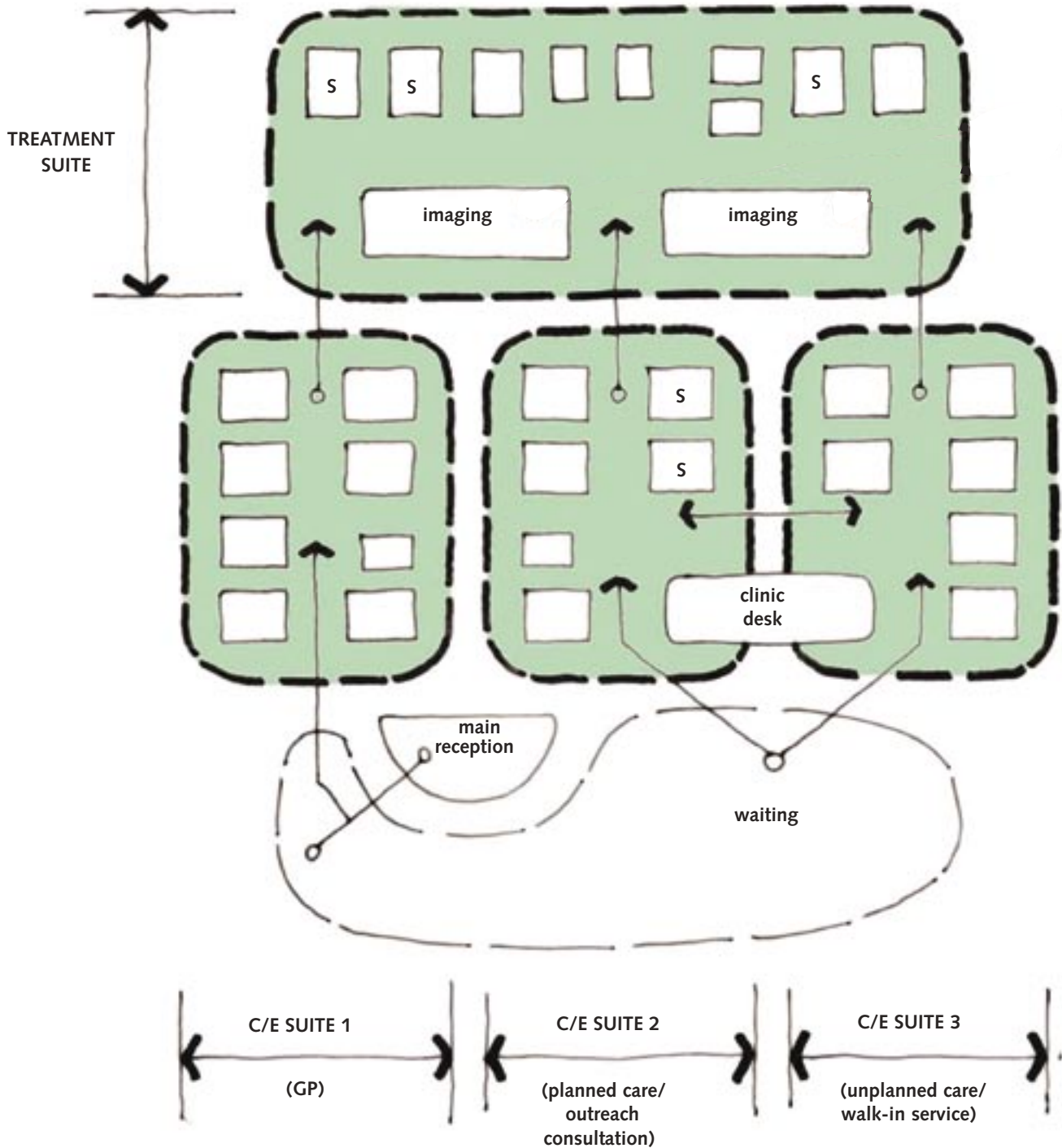
- interview
- store
- clean utility
- dirty utility
- specialist (eg adult hearing test)

16 m² room types:

- consulting/examination
- treatment (in small facilities, or for one-stop-shop services, creating a mixed consultation/treatment suite)
- specialist consultation (ENT, etc)
- group/meeting

NB Number and mix of rooms in a suite will vary depending on activity levels

Figure 8 Arrangement of consulting/examination suites and treatment suites at Bunny Hill Customer Service Centre



S = specialist room

- clean utility room. May be shared with other suites;
- dirty utility room. May be shared with other suites;
- a small store for consumables and portable equipment.

- 7.41 This suite would be suitable for use by practice nurses, visiting specialist nurses and allied health professionals, for example podiatrists. It may also be used for urgent care services.
- 7.42 Treatment rooms may be clustered in groups of up to six rooms. The number of support rooms should be determined locally depending on infection control policy and the layout of the building.
- 7.43 Plaster rooms and ultrasound rooms may be located alongside generic treatment rooms.
- 7.44 Locating treatment rooms together to create a treatment suite, used by different staff on a timetabled basis, provides a number of advantages:
- enables rooms to be designated for particular activities, for example clean versus dirty procedures, planned versus unplanned work, fast versus slow throughput;
 - improves control of infection performance;
 - reduces the number of clean and dirty utility rooms required;
 - reduces stocking levels and waste;
 - maximises opportunities for peer support and specialisation for staff.
- 7.45 See [Figure 9](#) for an illustration of the treatment suite concept.
- 7.46 This model may require changes in working patterns, stock accounting and space charges.

Physical therapy suite

- 7.47 Physical therapists, including physiotherapists and occupational therapists, require access to a range of different room types to enable them to see patients/clients individually and/or in groups. Activity may be couch- or desk-based, or may require access to equipment (portable and fixed) and/or open spaces.
- 7.48 The design of accommodation for delivering physical therapy will differ depending on the level and mix of services provided.

Non-dedicated facilities

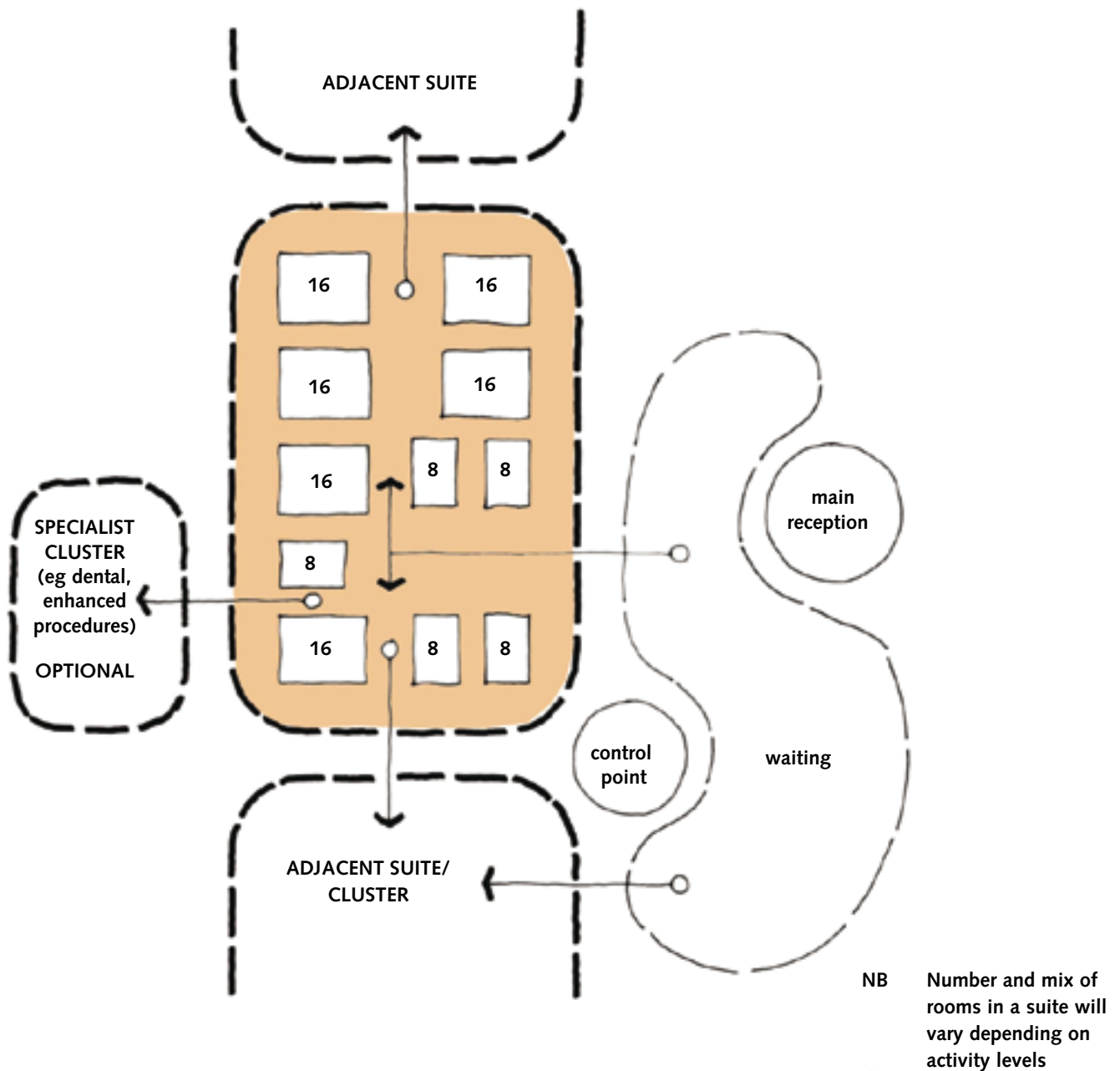
- 7.49 Where activity levels for physical therapy are low, generic rooms may be used on a timetabled basis as follows:
- consulting/examination rooms equipped with an electric couch for consultations/examinations and couch-based physical therapy;
 - interview rooms, with a clinical wash-hand basin, for individual patient/client discussions undertaken by physical therapists. Interview rooms for occupational therapy should be in a quiet location;
 - group rooms for group discussions/counselling and patient support meetings undertaken by physical therapists;
 - large group room for physical therapy and associated physical activities requiring open space and/or use of handheld equipment. Equipment will be brought into the room from an adjacent store for sessional use of the room. See [paragraph 7.90](#) for further details;
 - small store for consumables and portable equipment.
- 7.50 Where physical exercise occurs, it is assumed that any patient changing will take place in a consulting/examination room and that heavy exercise, requiring patient showering, will be avoided.
- 7.51 Physical therapy activity should be taken into account when quantifying requirements for the rooms listed above. This will enable a virtual physical therapy suite to be created on a timetabled basis as required.
- 7.52 See [Figure 10](#) for an illustration of the non-dedicated physical therapy suite concept.

Dedicated facilities

Therapy treatment cluster

- 7.53 Where activity levels justify dedicated facilities, the following dedicated spaces may additionally be required (that is, on top of those used on a sessional basis):
- examination/physical therapy rooms for individual physical therapy (usually in place of consulting/examination rooms);
 - a splint room with splint oven, ice machine and possibly a wax bath.

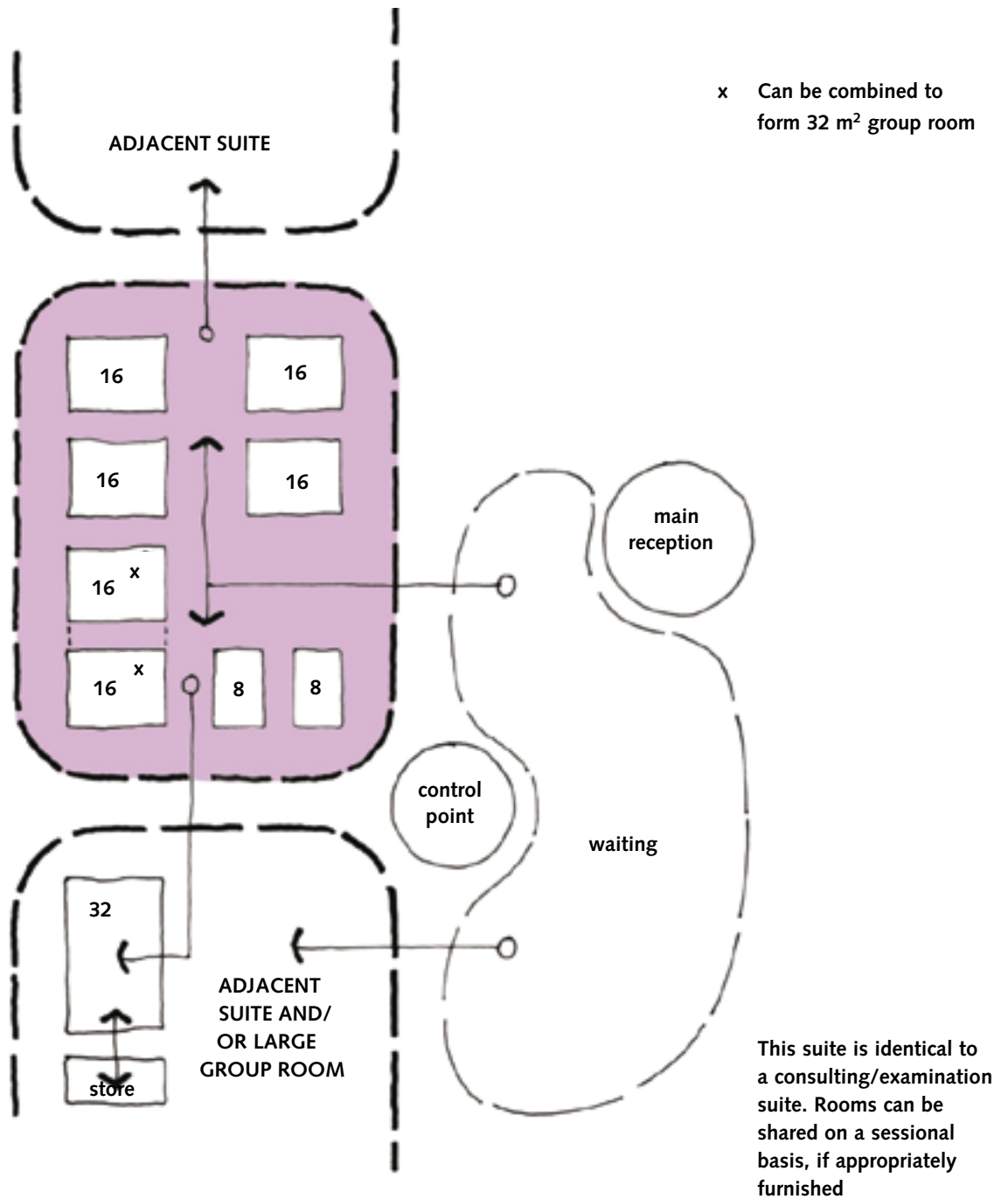
Figure 9 Treatment suite concept



8 m² room types: clean utility
dirty utility
store
near patient testing
cleaners'

16 m² room types: generic treatment (with furniture/fittings options)
specialist treatment
store

Figure 10 Non-dedicated physical therapy suite concept



8 m² room types:

store
clean utility
dirty utility
interview

NB

Number and mix of rooms in a suite will vary depending on activity levels

16 m² room types:

consulting/examination
group

32 m² room types:

free movement exercise
exercise equipment

- 7.54 Providing individual physical therapy rooms, rather than bays, has the advantage of allowing enhanced privacy, better segregation of patients (useful if running mixed specialty clinics) and improved flexibility in use.
- 7.55 Any number of examination/physical therapy rooms can be linked together, provided that travel distances to the large group rooms are manageable. They will be attractive to other couch-based services, such as acupuncture and massage. If possible they should therefore be located with easy access from the public zone.
- 7.56 There may be an occasional need to access clean or dirty utility rooms, to obtain medication or dispose of fluids. If such facilities are not available nearby, dedicated rooms may be required within the physical therapy cluster.

Therapy exercise cluster

- 7.57 A physiotherapy activity area containing exercise equipment, space for mobile bobath plinths (behind moveable screens) and a free movement exercise area may be provided. If the activity area is provided, a storeroom will be required nearby for storing walking aids etc. Showering and changing facilities may also be provided.
- 7.58 See example briefing schedules for further details of space requirements.

ADL cluster

- 7.59 There may be a need to assess a patient's daily living ability and provide settings for rehabilitation and retraining in life skills. This is best performed in the patient's home. In some cases, however, the following rooms may be required:
- ADL bedroom containing a divan bed, bedside table and wardrobe, if a domestic-style bedroom (for example relatives' overnight stay) is not available;
 - ADL bathroom containing a domestic bath, shower and toilet (use of a toilet may also be assessed in an assisted WC with access from both sides, one of which should be located nearby. See Health Building Note 00-02);
 - ADL kitchen containing electric and gas assessment areas, with adjustable height fittings.
- 7.60 If ADL rooms are provided they should be drawn together into a domestic pattern, accessed from a cul-de-sac corridor. For further details on ADL facilities see Health Building Note 8.

- 7.61 See [Figure 11](#) for an illustration of the dedicated physical therapy suite concept.

Diagnostic facilities

- 7.62 As technology improves, more direct diagnosis will be undertaken in primary and community care settings. This may involve:
- near-patient testing using bench-top equipment;
 - digital diagnosis, most commonly ultrasound scans, resting electrocardiograms and X-rays.
- 7.63 Some of these activities may be delivered on a timetabled basis from the following generic rooms:
- consulting/examination room equipped to carry out resting electrocardiograms;
 - treatment room equipped to carry out ultrasound scans and/or resting echocardiograms (easy access to a WC is required for antenatal scanning);
 - near-patient testing room for blood-gas analysis.
- 7.64 A docking station may also be required to accommodate mobile vehicles carrying diagnostic equipment such as MRI, CT and mammography scanners. The internal route to the docking station should be well planned, passing the main reception desk and waiting area. See [paragraphs 10.17–10.19](#) for further details.

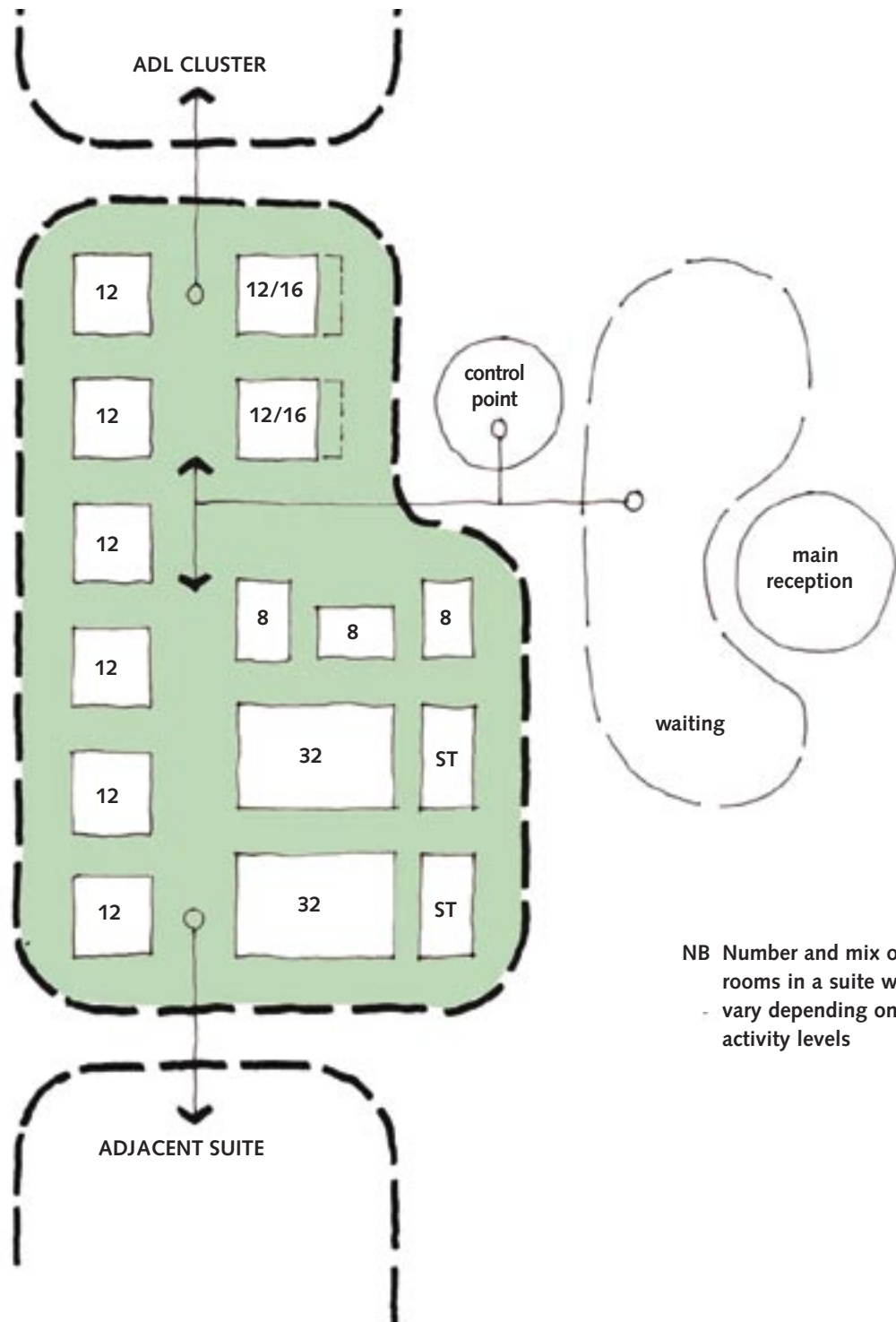
Imaging cluster

- 7.65 Where X-rays are undertaken, the following facilities will be required:
- X-ray rooms;
 - image control/reporting room;
 - changing rooms.
- 7.66 These facilities should be clustered together. For further details see the example briefing schedules.
- 7.67 If other dedicated imaging rooms are provided, these may be located alongside X-ray facilities.
- 7.68 See [Figure 12](#) for an illustration of the imaging cluster concept.

Dental cluster

- 7.69 Where general personal or community dental services are to be provided from new or significantly refurbished facilities, the following facilities will be required:
- dental treatment room;

Figure 11 Dedicated physical therapy suite concept



NB Number and mix of rooms in a suite will vary depending on activity levels

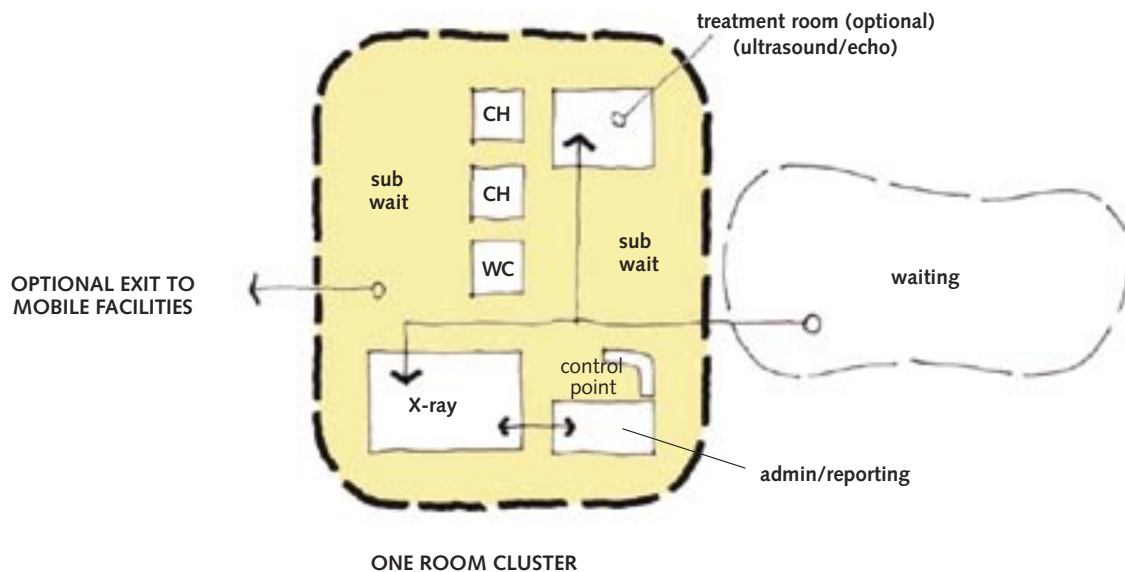
8 m² room types: clean utility
dirty utility
store

16 m² room types: consulting/examination

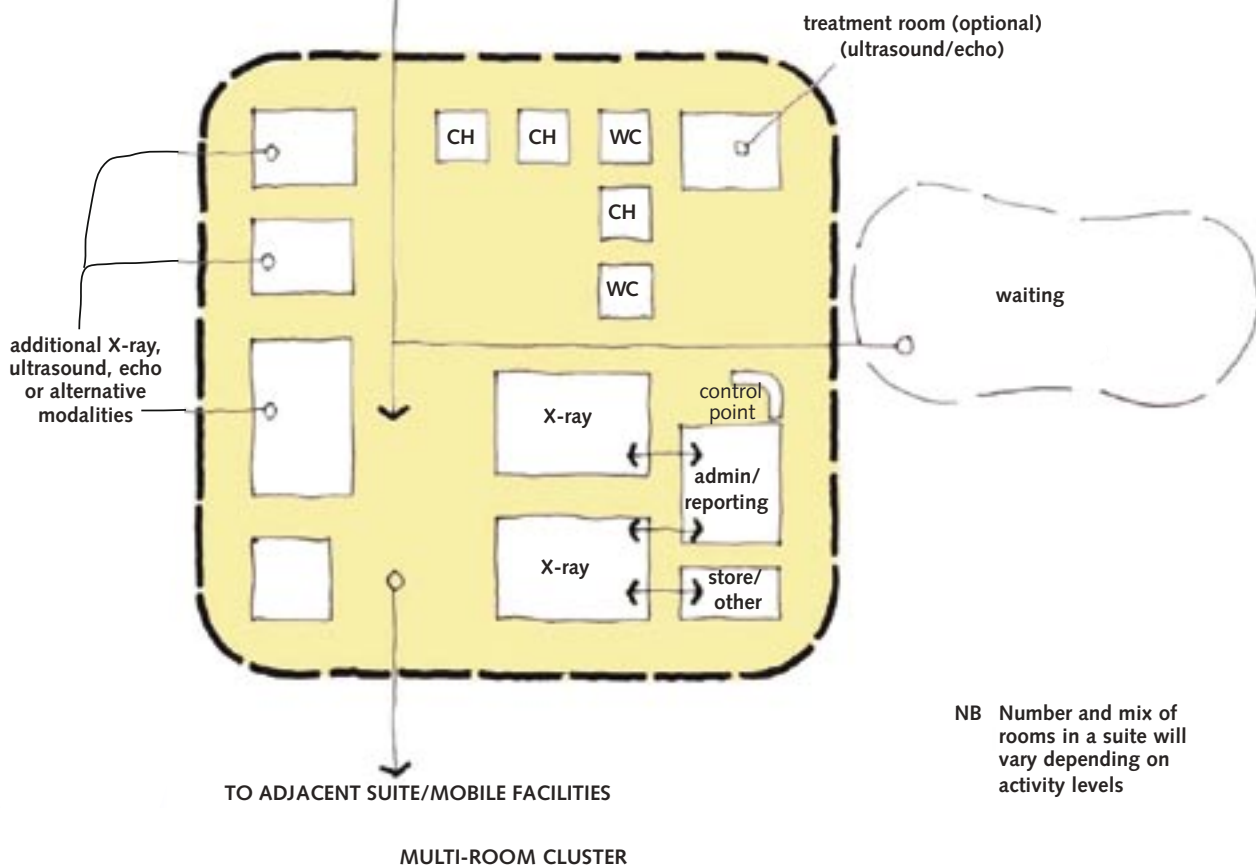
12 m² room types: examination/therapy
clean utility
dirty utility
store

32 m² room types: free movement exercise
exercise equipment
large group

Figure 12 Imaging cluster concept



ADJACENT SUITE



NB Number and mix of rooms in a suite will vary depending on activity levels

CH = changing room

- decontamination suite;
- clean utility room;
- sub-wait/sitting recovery area.

- 7.70 For further details of space requirements see the example briefing schedules.
- 7.71 Some centres will require facilities to treat patients whilst in their wheelchairs. This requires larger treatment rooms, which may also be used for training purposes. Local policy will determine how the larger dental treatment rooms are distributed across the locality.
- 7.72 Decontamination should be carried out in accordance with Health Technical Memorandum 01-05 – ‘Decontamination in primary care dental practices’. Where new practices are being commissioned or new premises contemplated, it is advised that the full best practice provisions of this guidance are utilised wherever reasonably practicable. For details go to www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_089245.
- 7.73 The dental treatment room will contain specialist built-in cabinetry, a reclining chair, ceiling-mounted lamp, wall-mounted inter-oral periapical X-ray machine and a console adjacent to the chair supplying dental gases.
- 7.74 Specialist advice should be sought on the need for X-ray protection.
- 7.75 The plant for the suction unit should be located in a nearby compressor room, which requires ventilation and acoustic treatment. Amalgam from waste water will be captured and stored here.
- 7.76 Dental gases may be piped from a central manifold or provided from bottles. If a bottle store is provided, it should be located on an outside wall with good ventilation. When nitrous oxide is used, a gas scavenging system must be fitted.
- 7.77 If intravenous sedation is carried out, a reclining recovery room will be required. If only one couch space is required, an examination/physical therapy room may double up for this purpose. A resuscitation trolley should also be provided nearby.
- 7.78 This cluster should be close to the treatment suite, with which it may share support accommodation.
- 7.79 Requirements for reception, admin and records storage space should be agreed locally, although the principles of shared reception and separating admin space from clinical space apply.

Enhanced procedures cluster

- 7.80 Some enhanced procedures may be performed in treatment rooms with all-round couch access rather than operating theatres (see the BADS directory of procedures 2009, published by the British Association of Day Surgery, for a list of procedures that may be undertaken in a procedures room).
- 7.81 If this is the case, the following facilities may be required:
- treatment room with all-round couch access;
 - changing rooms;
 - recovery facilities;
 - clean utility room;
 - dirty utility room.
- 7.82 Requirements for recovery space (sitting and/or reclining) will depend on the types of surgery undertaken and whether patients are sedated. If only one reclining couch space is required, an examination/physical therapy room may double up for this purpose. Planning decisions should take account of patient culture and preferences in terms of privacy, modesty and same-sex accommodation.

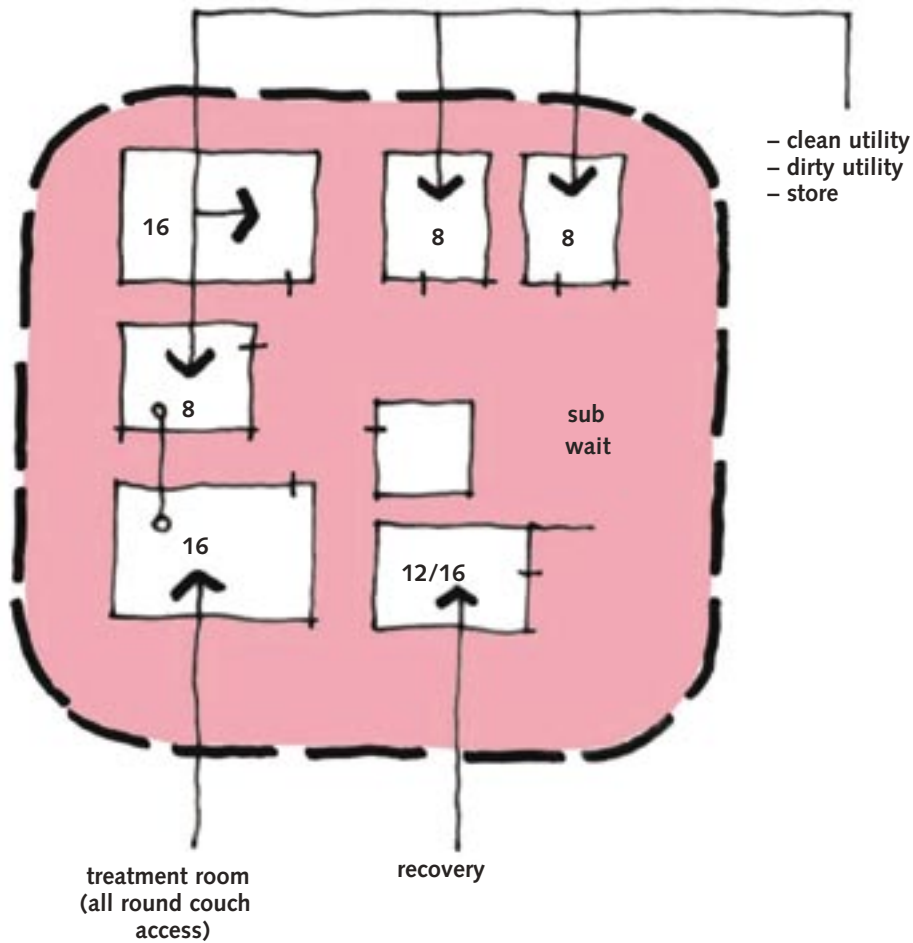
Note

Principles (Ref: PL/CNO/2009/2):

- Decisions should be based on the needs of each individual patient, not the constraints of the environment, or the convenience of staff.
- Greater segregation should be provided where patients’ modesty may be compromised (for example when wearing hospital gowns/nightwear, or where the body, other than the extremities, is exposed).
- Staff should make clear to the patient that the trust considers mixing to be the exception, never the norm.
- Greater protection should be provided where patients are unable to preserve their own modesty (for example following recovery from a general anaesthetic or when sedated).

- 7.83 See example briefing schedules for further details.
- 7.84 Certain procedures may require a larger treatment room due to the amount of equipment and/or number of staff present.

Figure 13 Enhanced procedures cluster concept



NB Access required to decontamination facilities

- 7.85 Where provided, this cluster should be located in a quiet area, close to the treatment suite, with which it may share support accommodation.
- 7.86 See Figure 13 for an illustration of the enhanced procedures cluster concept.

Multi-purpose group rooms and associated stores

- 7.87 One or more large group rooms are usually provided within the primary and community care zone. The best location is usually near the counselling suite and main waiting area. This room will be used on a timetabled basis for:
- physical therapy requiring a large open space and access to handheld equipment;
 - baby clinics;

- health promotion/disease management events;
- ante-natal classes;
- keep-fit classes;
- voluntary sector classes, such as stroke club;
- large meetings;
- social events.

- 7.88 Spaces should be sized to suit activity. Consideration should be given to providing one large space, sub-divided by acoustic folding walls.
- 7.89 Storerooms with wide-opening doors should be located immediately adjacent to enable furniture to be wheeled away when not in use.
- 7.90 The provision of catering facilities nearby should be considered.

8 Staff zone

Introduction

- 8.1 The staff zone should be separate from the primary and community care and public zones, possibly on a separate floor. Generally patients and visitors should not enter the staff zone.
- 8.2 Ideally, the staff zone should have direct access to the primary and community care zone.
- 8.3 The design brief should address the need for a dedicated staff entrance and car park. Staff car parks, where provided, should be well lit and observed to ensure staff safety and security.
- 8.4 Staff spaces include the following:
- admin spaces for practitioners and desk-based staff;
 - rest rooms;
 - changing areas;
 - training spaces (some staff training can take place in patient/client contact spaces).
- 8.5 Detailed guidance on each of these spaces is given below.
- 8.10 The IT system should enable any worker to log on at any workstation.
- 8.11 Interview rooms should be provided for private discussions. Quiet workspaces should be available for making confidential phone calls and breakout spaces for informal discussions.
- 8.12 Telephones should be cordless to enable confidential calls to be taken in quiet areas.
- 8.13 Open-plan work areas may need to be subdivided using acoustic screens to reflect team working patterns and/or for space charging reasons.
- 8.14 Single-person offices may be provided where full-time access to workstations and constant privacy are required.
- 8.15 Space for hanging coats should be provided.
- 8.16 An area for making hot beverages should be provided. It should not be over-specified, since staff should be encouraged to use the shared staff rest room for long breaks.
- 8.17 For further information on administration spaces, see Health Building Note 00-03.

Admin spaces

- 8.6 Admin spaces should be open-plan, as this supports multidisciplinary working and provides greater flexibility and adaptability.
- 8.7 Dedicated workstations should be provided for desk-based staff (for example team secretaries, service managers and other staff in non-clinical roles).
- 8.8 Practitioners requiring intermittent access to workstations for paperwork and other admin activities can have a designated area provided for this purpose. This will prevent patient/client contact spaces being blocked for admin work.
- 8.9 The workstations within the practitioner admin area should be shared. However, dedicated lockable storage units should be provided for personal items and files.

Staff rest rooms and changing areas

- 8.18 Staff rest rooms, changing rooms and WCs should be shared by different groups of staff.
- 8.19 Good quality environments should be provided in staff rest areas, to encourage their use and the resulting interaction that occurs. For design guidance see Health Building Note 00-03.
- 8.20 Separate male and female staff changing and showering areas should usually be provided in the staff zone.
- 8.21 Staff WCs may be distributed around the building, including within the staff zone.
- 8.22 For design guidance on staff changing areas and WCs see Health Building Note 00-02.

Staff meeting and training spaces

- 8.23 Team meetings will tend to take place in shared group rooms within the primary and community care zone. If a dedicated meeting room for staff is justified, this may be located in the staff zone.
- 8.24 Consulting/examination rooms and treatment rooms have been sized to accommodate training.
- 8.25 Seminar rooms, possibly with videoconferencing, may be required for training undergraduates and postgraduates. A library may also be required.
- 8.26 Premises with links to universities may require additional training facilities. Advice should be sought from the appropriate deanery.
- 8.27 It may be beneficial to draw staff meeting and training spaces together into a training suite, accessible from the public zone so it can be used out-of-hours.



9 Creating integrated primary and community care facilities

Introduction

- 9.1 Previous chapters describe the different types of functional space within primary and community care buildings and how they can be arranged to create zones.
- 9.2 This chapter explains how to bring the different types of space/zone together to create a coherent, user-friendly building. This design process is complex, but some of the issues to be considered include:
- arrangement of zones relative to one another;
 - adjacency requirements and routes;
 - design and layout of circulation spaces;
 - out-of-hours access arrangements.
- 9.3 The resultant design solution should integrate all these elements in a creative manner that reflects a high level of design quality and lifts the spirits of patients, staff and visitors entering the building. The case studies document that accompanies this publication (Health Building Note 11-01 – ‘Primary care and community facilities – Case studies’) indicates the quality of design that is achievable.

Arrangement of zones relative to one another

- 9.4 The way in which zones are arranged relative to one another depends on the nature and scale of the building.
- 9.5 In small facilities, zoning will be simple and may not be expressed in the architectural treatment of the building. In larger projects the way in which zones overlay one another will be more complex, and may require architectural devices such as double-height spaces, hospital streets or external reference spaces to clarify the way in which the building is organised.
- 9.6 Whatever the scale of the building, the use of zones should aid wayfinding, simplify user journeys,

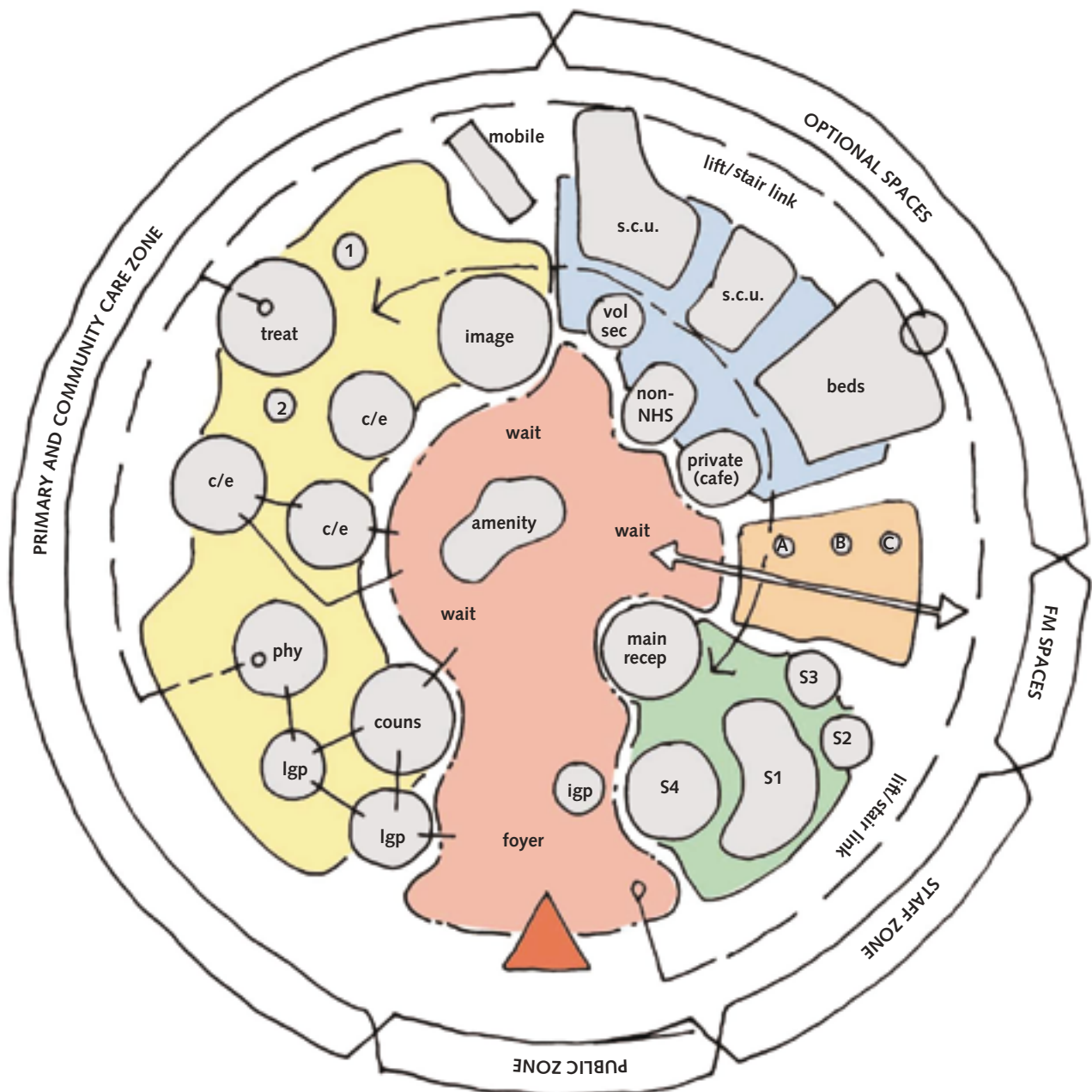
segregate users, and demonstrate the function of the different areas within the building.

Adjacency requirements and routes

- 9.7 In order to create a coherent, user-friendly building it is essential to achieve the correct adjacencies for the different functional spaces and zones.
- 9.8 Once the space requirements for the building have been established it should be possible to create an adjacencies diagram, which builds on the zoning concept diagram (Figure 4 in Chapter 5).
- 9.10 See Figure 14 for an illustration of an example adjacencies diagram.
- 9.11 Figure 14 illustrates some of the key organisational principles already highlighted in this document:
- single main entrance to the building overseen by a main reception desk;
 - a centrally placed waiting area, serving the core accommodation;
 - the counselling suite is adjacent to the public zone;
 - there is good access to the diagnostics cluster from the waiting area;
 - access to some suites is controlled from local staff communications bases or secondary reception desks;
 - the in-patient accommodation is separated from the rest of the core accommodation;
 - there is easy access to the physical therapy suite from the in-patient accommodation (avoiding the public zone);
 - most administration spaces are located in the staff zone, separate from the primary and community care zone;
 - staff rest areas are located in the staff zone, linked by stairs and accessible lifts to the primary and community care zone;

Figure 14 Example of an adjacencies diagram

s.c.u.	stand-alone clinical unit	S1	admin space
beds	community beds	S2	staff rest
non-NHS	non-NHS community care	S3	staff changing
vol sec	voluntary sector spaces	S4	staff meeting and training
private	commercial spaces		



couns	counselling suite	igp	info and greeting point
c/e	consulting/examination suite	amenity	public WCs, vending, lockers etc
treat	treatment suite	A	regen kitchen
phy	physical therapy suite	B	stores
image	imaging cluster	C	waste
1	dental cluster		
2	enhanced procedures cluster		
lgr	large group room		

- utility spaces are distributed around the primary and community care zone, but central stores, decontamination areas, disposal holds and maintenance accommodation are located in a separate non-patient FM services area, with discrete access. Vehicular access serving this entrance is separated from public vehicular and pedestrian routes;
- the regeneration kitchen is located in the FM services area, adjacent to the public café (with which it will share kitchen facilities) and with easy access to the wards.
- in centralised facilities management and staff zones, it is normal for accommodation to be accessed from both side of the circulation route, using double-banked corridors. These corridors can be utilitarian in nature;
- in the primary and community care zone, efforts should be made to provide a more attractive, naturally-lit pattern, with parts of the circulation route having windows and views to the outside;
- the public zone of the building is more likely to be planned around a central space, with minimal corridors.

9.12 **Figure 14** shows how considering zoning and key adjacencies can assist in achieving clarity in the layout, as well as enabling like elements to be co-located, rationalising construction and servicing.

9.13 The following routes/journeys can be overlaid onto the adjacencies diagram to ensure they are efficient and user-friendly:

- a variety of client/patient journeys through the building, reflecting individual needs, from arrival on site to leaving the facility;
- a variety of staff routes;
- routes for the collection and removal of waste;
- routes for the delivery and distribution of supplies;
- routes for emergency evacuation;
- design and layout of circulation spaces.

9.14 Circulation and communication spaces should be sized and located to support the efficient flow of users and the delivery of goods and services. See Health Building Note 00-04 for further details on circulation and communication spaces.

Horizontal circulation

9.15 The width of corridors is generally determined by the traffic carried. For pedestrian and wheelchair access, corridors should be 1500 mm wide, with 1800 mm wide passing places. In parts of the building where trolleys need to be manoeuvred this may increase to 1800 mm, or 2150 mm for bed movement. Corridors may also be designated as “hospital streets” in Firecode-compliant buildings, in which case they need to be 3000 mm wide.

9.16 The design of horizontal circulation spaces within different zones of the building may vary, particularly in larger facilities:

Vertical circulation

9.17 Staircases should be sized and designed in accordance with Firecode or the Building Regulations, as appropriate.

9.18 Multi-storey primary and community care buildings will include wheelchair-accessible lifts. Trolley lifts and/or bed lifts may also be required. Trolley lifts are required where in-patients beds are provided on an upper floor or where treatments there require patients to be moved on a trolley (including for ambulance evacuation). If beds are moved from floor to floor, a bed lift should be provided. In general, more than one lift of the same type should be provided to enable continuation of services should one lift be temporarily inoperable.

9.19 Dedicated facilities management lifts (for supplies and waste) will only be provided in the largest community facilities. Policies for moving clean and dirty items using shared-use lifts should be agreed with the local infection control team.

Out-of-hours access arrangements

9.20 The following facilities may remain open to the public even when the rest of the building is closed:

- in-patient accommodation;
- the counselling suite;
- “out-of-hours” urgent care, including diagnostic facilities, if provided;
- waiting spaces, WCs and information points (not usually the whole of the daytime waiting area);
- a suite of meeting rooms, with WC and beverage facilities.

9.21 Public access to the building during this time will need to be well monitored and controlled from a reception point.

9.22 Staff may additionally require out-of-hours access to:

- administration spaces;
- staff rest facilities.

9.23 Facilities required for out-of-hours access should be located together, where possible, to enable the rest of the building to be shut down, easing security arrangements and reducing operating costs. This will also minimise user journeys around the building during this time.



10 Engineering services

Introduction

- 10.1** This chapter provides general guidance on the engineering, technical and environmental aspects of healthcare building design.
- 10.2** Consultation should take place at project and design team level to ensure understanding of key issues, healthcare delivery and the appropriate standards for healthcare engineering services.
- 10.3** Designers should ensure that they read this publication as a whole, since further engineering guidance may be outlined in and cross-referenced within other sections.
- 10.4** The Health Technical Memorandum series is supported by an overarching publication, 'Policies and principles – Best practice guidance for healthcare engineering' (Health Technical Memorandum 00), which covers the following issues:
- a. overview of engineering services guidance;
 - b. statutory and legislative requirements;
 - c. professional support;
 - d. operational policy;
 - e. training and workforce development;
 - f. emergency procedures and contingency planning;
 - g. training, information and communications;
 - h. maintenance;
 - j. engineering services.
- 10.5** Guidance on specific types of engineering services can be found within the Health Technical Memorandum '00' series of documents as follows:
- a. Decontamination (Health Technical Memorandum 01);
 - b. Medical gases (Health Technical Memorandum 02);
 - c. Ventilation systems (Health Technical Memorandum 03);
 - d. Water systems (Health Technical Memorandum 04);
 - e. Fire safety (Health Technical Memorandum 05);
 - f. Electrical services (Health Technical Memorandum 06);
 - g. Environment and sustainability (Health Technical Memorandum 07);
 - h. Specialist services (Health Technical Memorandum 08);
 - j. other existing HTM 2000 series guidance documents.

General

- 10.6** The design, construction and operation of primary and community care facilities should comply with all relevant aspects of Health Technical Memoranda, statutory requirements and best practice to ensure high-quality engineering installations and services suitable for their application.
- 10.7** Changes in clinical practices have resulted in an increasing provision of clinical functions within the primary and community care sector that were previously undertaken within the acute sector. As a consequence, clinical risk, business continuity risk and safety factors within the primary and community care sector are becoming more critical, and with these, the requirement for safe and resilient engineering services in support of the environment and equipment used to fulfil the functions of the premises.
- 10.8** The design and operation of primary and community care premises should therefore take full account of planned and potential future increases in clinical and business continuity risks appertaining to the functions of the premises, and should ensure that all key engineering services are sufficiently robust to continue operating

satisfactorily during emergency situations so as to minimise the risk of harm to patients, staff and visitors.

- 10.9** This should include consideration of engineering service requirements during loss of normal incoming utility and local supplies and during activation of emergency preparedness plans.

System capacity

- 10.10** All engineering systems and equipment should be fit for purpose and designed to have an initial capacity to safely accommodate peak maximum loads plus an additional allowance of 25% for future expansion.

Utility supplies

- 10.11** Where new or changes to existing incoming utility services are required, discussions should take place with each utility company concerned to establish incoming service routes, capacity requirements, tariffs, meter locations, access provisions and wayleave requirements as soon as practical during the design process.

Life expectancy of engineering plant and equipment

- 10.12** All principal items of plant and equipment should have a minimum life expectancy as described in CIBSE Guide M.
- 10.13** Materials and components that will require maintenance and replacement during the life of the facility should be selected, located and fixed in such a way as to minimise future inconvenience and disruption and to avoid temporary closure of all or part of the facility.

External services

- 10.14** Primary and community care facilities generally do not operate over a 24-hour period. External engineering plant and equipment, particularly security cameras and engineering service supplies, should therefore be positioned and suitably protected to minimise the risk of damage or interference when the premises are closed.

Metering

- 10.15** Primary and community care premises should be fitted with adequate provisions to monitor all primary incoming and sub-distribution

engineering services sufficient to comply with statutory legislation and to support energy efficiency.

- 10.16** Many primary and community care facilities sub-lease tenanted areas to commercial organisations such as pharmacies. Energy and water supplies to such areas should be sub-metered in order to facilitate billing arrangements by the landlord.

Mobile units

- 10.17** Certain clinical services may be delivered from mobile units. The following types of mobile unit may be provided within the grounds of primary and community care premises:

- mobile breast screening units;
- mobile CT/MRI scanning units;
- mobile theatres.

- 10.18** These units may be self-contained or may need to be connected to mains services.

- 10.19** Where connection to mains services is required, these should be provided in appropriate locations taking into account the following factors:

- external access arrangements;
- supplies capacities;
- the need for isolation and protection of mains services;
- earthing arrangements;
- the need for weatherproofing of external equipment;
- type of connection and security.

Access to engineering service outlets and controls

- 10.20** The design and positioning of engineering service outlets and controls should take account of safety and access requirements. This includes consideration of the following:

- the height of light switches, socket outlets, taps and controls;
- the temperature of hot water and surfaces of radiators, heat emitters and hot water pipes;
- the provision of audio-visual indicators and signage where appropriate (for example fire alarm systems).

Control of infection

10.21 Informed by a clinical risk assessment, the design and installation of engineering services should incorporate adequate measures to minimise infection control risks so far as is practicable. In particular, precautions should be incorporated to ensure that within areas occupied by patients, staff and visitors:

- ventilation provisions are adequately filtered, with air changes and pressure differentials maintained in accordance with Health Technical Memorandum 03-01 – ‘Specialised ventilation for healthcare premises’ and other guidance to reduce the risk of HCAI;
- all exposed surface finishes of engineering services and equipment are generally smooth, accessible and easy to wipe clean;
- engineering services pipework, heat emitters, electrical trunking, luminaires, accessories and specialist fixed control equipment are appropriately encased to present a smooth exposed surface with gaps sealed with a suitable substance to control the potential harbouring and propagation of bacterial growth;
- sloped surfaces are provided instead of horizontal surfaces to reduce the build-up of dust;
- all engineering components and equipment that are regularly handled by patients, such as light switches, nurse call units, door entry controls, TV sets etc are capable of being wiped clean and disinfected or sterilized between patient use.

Space requirements for engineering plant and services

10.22 The building design must incorporate adequate space to enable the full range of engineering plant and services to be installed and kept operational.

10.23 Space for plant and services should provide:

- an easy and safe means of access;
- secure accommodation protected from unauthorised access;
- adequate space around the plant and services to permit inspection, maintenance and replacement;

- for the installation of further plant and services at a later date where this is anticipated to be required.

10.24 Guidance on spatial requirements for engineering plant and services is contained in Health Technical Memorandum 00.

10.25 Further useful information on the provision of space for plant is contained in BSRIA TN 9/92, and for building services distribution systems in BSRIA TN 10/92.

10.26 With the exception of drainage and some heating pipework, engineering services should not be brought from the ceiling void of the floor below. Service distribution to a particular area should be contained within the service spaces on that floor.

10.27 Plantrooms, particularly for air-conditioning and ventilation, should be located as close as possible to the areas they serve, thus minimising the amount of space necessary to accommodate large ducts.

10.28 Care should be taken to ensure that noise and structure-borne vibration cannot be transmitted beyond the plantroom. Further guidance on acoustics and vibration can be found in Health Technical Memorandum 08-01 – ‘Acoustics’.

Mechanical services

Piped medical gases

10.29 Piped medical gases should be designed in accordance with Health Technical Memorandum 02-01 – ‘Medical gas pipeline systems’.

Heating

10.30 General space heating requirements may be met by a variety of systems including under-floor pipework, radiators or ceiling-mounted radiant panels, or by an air-conditioning system. Notwithstanding this, designers should ensure that the most appropriate method is employed with regard to the healthcare environment being provided.

10.31 The surface temperature of radiators should not exceed 43°C. Ceiling-mounted radiant panels can operate at higher surface temperatures as long as the surface is not easily accessible.

10.32 Exposed heating pipework, accessible to touch, should be encased and/or insulated. Further information is given in Health Guidance Note –

“Safe” hot water and surface temperatures’. Special care should be taken when facilities are being provided for older, confused or mental health patients.

- 10.33 Care should be taken to ensure that heat emitters do not adversely affect the local temperature conditions of adjacent storage and preparation areas.
- 10.34 Heat emitters should be located under windows, against exposed walls or in the ceiling above windows.
- 10.35 Where radiators are installed there should be space between the top of the radiator and the windowsill to prevent curtains reducing the output. There should also be adequate space underneath to allow cleaning equipment to be used.
- 10.36 Ceiling-mounted radiant panels should preferably run around the perimeter of the building. The panels should not be located over beds, patient trolley positions or in other locations where they might radiate directly onto a patient or member of staff for a prolonged period.
- 10.37 Ceiling-mounted radiant panels should be selected to match the appearance of the adjacent ceiling and should be sealed to the adjacent ceiling by means of a gasket or similar device. Where appropriate, heating controls should be provided to modulate heating circuit flow temperatures to maintain the desired air temperature.
- 10.38 Radiators or radiant panels may also be used to offset building fabric heat losses in mechanically ventilated spaces. The system should be designed to ensure that the heating and ventilation systems operate in a coordinated manner and do not cause the space to overheat.
- 10.39 In comparison with wall-mounted radiators, ceiling-mounted radiant panels can reduce infection risk and increase useable space. For these reasons, they are often the preferred choice of heat emitter within primary and community care premises.

Ventilation and cooling

- 10.40 Ventilation systems should be designed in accordance with the requirements of Health Technical Memorandum 03-01.
- 10.41 Theoretical modelling of summer temperatures should be undertaken to ensure that the

ventilation system is able to control air temperatures within an acceptable range.

- 10.42 It is important to achieve a balance between economy in capital and energy costs and creating appropriate levels of comfort through mechanical ventilation/comfort cooling.
- 10.43 Air movement induced by mechanical ventilation should be from clean to dirty areas, where these areas can be defined. The design should allow for an adequate flow of air into any spaces having only mechanical extract ventilation, via transfer grilles in doors or walls. However, such arrangements should avoid the introduction of untempered air and should not prejudice fire safety (through the introduction of uncontrolled air) or privacy (through the positioning of transfer grilles).
- 10.44 Local exhaust ventilation (LEV) will be required where exposure (by inhalation) to substances hazardous to health cannot be controlled by other means. The Health and Safety Executive (HSE) publishes guidance notes, updated annually, on occupational exposure limits (Guidance Note EH 40) for the control of exposure by inhalation of substances hazardous to health. The limits specified form part of the requirements of the Control of Substances Hazardous to Health (COSHH) Regulations.

Hot and cold water systems

- 10.45 Water storage and distribution systems should be designed in accordance with Health Technical Memorandum 04-01 – ‘The control of *Legionella*, hygiene, “safe” hot water, cold water and drinking water systems’.
- 10.46 Exposed hot water pipework, accessible to touch, should be encased and/or insulated. Special care should be taken when facilities are being provided for older, confused or mental health patients.

Building management systems

- 10.47 All engineering plant and equipment associated with the internal environment should, where possible, be monitored and controlled by a building management system (BMS) in accordance with Health Technical Memorandum 2005 – ‘Building management systems’.
- 10.48 Requirements for the monitoring and control of specific types of plant and system are also covered in the relevant Health Technical Memorandum.

Internal drainage

- 10.49 A system of soil and waste drainage including anti-siphon and ventilation pipework should be provided in accordance with BS EN 12056.
- 10.50 Where plastic pipework is used, suitable intumescent collars should be fitted when breaching fire compartments, and acoustic wrapping should be applied where drainage pipework runs above wards and other sensitive areas.
- 10.51 The gradient of branch drains should be uniform and adequate to convey the maximum discharge to the stack without blockage. Practical considerations such as available angles of bends, junctions and their assembly, as well as space constraints, will normally limit the gradient to about 1:50 (20 mm/m).
- 10.52 For larger pipes, for example 100 mm in diameter, the gradient may be less, but this will require high-quality workmanship if an adequate self-cleaning flow is to be maintained.
- 10.53 Provision for inspection, rodding and maintenance should ensure “full bore” access and be located outside user accommodation. The location of manholes within the building should be avoided.
- 10.54 To prevent the ingress of bacteria, waste outlets from distillation and refrigeration plant should discharge via a trapped tundish or gully to the drainage system at a point where infection risks are minimal.
- 10.55 Drainage/waste systems from air-conditioning units should be installed to prevent Legionnaires’ disease and back-feeding of bacteria into the unit.
- 10.56 Where diagnostic imaging is carried out, and providing that there is adequate dilution and the silver content has been effectively recovered, effluent can be discharged into the internal drainage system. Project teams should establish acceptable levels for silver and other processing chemicals at the planning stage.
- 10.57 All drainage that may be used for the passage of contaminated effluent should be clearly labelled.
- 10.58 At an early stage in the design process, proposals for the collection and discharge of chemical and radioactive contaminated effluent should be discussed and verified with the sewerage undertaker. Some water authorities may impose

restrictions on the quantity and rate of discharge of such effluent into public sewers.

Acoustics

- 10.59 Consideration should be given at the earliest opportunity to the requirements for privacy and noise control. Guidance on sound attenuation requirements is given in Health Technical Memorandum 08-01.
- 10.60 Whenever background music or PA systems are installed, the sound quality should be such that it is intelligible and not subject to unwanted reverberations.

Fire safety

- 10.61 Fire safety standards in healthcare premises need to be high owing to the vulnerability of occupants.
- 10.62 In order to ensure appropriate fire safety standards, the design and operation of primary and community care buildings should meet the objectives of ‘Firecode’ (Health Technical Memorandum 05 suite of documents) or provide a fire-engineered solution that achieves similar objectives. Firecode is not exhaustive, and signposts out to Approved Document B of the Building Regulations as appropriate.
- 10.63 It is important to establish those aspects of fire safety that affect building design. During the design process, design team members should discuss their proposals with the relevant Building Control/Approved Inspector and the rest of the planning team.
- 10.64 All staff should be familiar with the operational aspects of fire safety.

Fire detection and alarm systems

- 10.65 The design of fire detection and alarm systems should take account of the number of fire zones (compartments) within the building, which in turn will be informed by an assessment of fire risk. It is important that the architect and design engineer work together to ensure that all fire risks are properly understood and addressed in the design solution.
- 10.66 For specific guidance see Health Technical Memorandum 05-03 Part B – ‘Fire detection and alarm systems’.

Electrical services

General

- 10.67** Electrical installations should comply with the current edition of BS 7671 IEE Wiring Regulations together with Guidance Note 7 – Special Locations (Institute of Engineering and Technology (IET)) and Health Technical Memorandum 06-01 – ‘Electrical services supply and distribution’.
- 10.68** Where applicable, electrical installations should also comply with ‘Medical Electrical Installation Guidance Notes’ (MEIGaN; Medicines and Healthcare products Regulatory Agency (MHRA)).
- 10.69** Prior to final design, a full assessment should be made of the clinical and business continuity risks, the range of room types (including equipment requirements), occupation levels and resilience requirements. This will influence the extent and location of electrical services, the availability of alternative sources of electrical supply and the need for secondary power sources if appropriate.

Electromagnetic compatibility

- 10.70** Steps should be taken to prevent mains-borne and electrical radio frequencies from affecting diagnostic and monitoring equipment, computers or other sensitive electronic equipment. Guidance on the avoidance and abatement of electrical interference is given in Health Technical Memorandum 06-01.

Primary electrical infrastructure

- 10.71** The primary electrical infrastructure (PEI), comprising the public electrical supply (PES) and electrical distribution system equipment for the facilities, should be an integral part of the whole site/building network and provide adequate capacity for both normal and all assessed business-critical needs.
- 10.72** The PES supply together with the facilities electrical distribution equipment should be sited in areas where access by the PES or healthcare authorities to inspect and/or replace plant would not disrupt normal communication routes. Careful consideration should also be given to the impact from flooding, pipework leaks and mechanical damage.

Resilience of electrical supplies

- 10.73** The resilience of the electrical supply and distribution system and the capacity of any secondary power sources such as emergency standby generators and uninterruptible power supplies (UPS) should be established following the assessment of clinical and business continuity risks.
- 10.74** It may be appropriate to provide separate essential and non-essential small power distribution systems or a dual unified system. This will enhance the resilience of the electrical services as well as facilitating the ability to test and repair faulty system components whilst sustaining continuity of supply to operational areas.
- 10.75** Electrical supply resilience provisions should comply with the requirements of Health Technical Memorandum 06-01.

Socket-outlets for cleaning equipment

- 10.76** Sufficient socket-outlets (RCBO protected) should be provided to enable the use of cleaning equipment without the need to use extension leads. Most floor scrubbers and polishers have 9 m-long power cables.

Lighting systems

- 10.77** Lighting services, including lighting controls, should comply with the following CIBSE guidance: ‘Code for Lighting’, Lighting Guide 2 – ‘Hospitals and health care buildings’ and Guide F – ‘Energy efficiency in buildings’.
- 10.78** In areas where VDUs are in use, lighting should be designed to comply with CIBSE Lighting Guide 3 – ‘The visual environment for display screen use’.
- 10.79** To achieve energy efficiency, lighting systems should be designed to:
- maximise use of natural daylight;
 - avoid unnecessarily high levels of illumination;
 - incorporate efficient luminaires, control gear and lamps;
 - incorporate effective controls.
- 10.80** Lighting and the appearance of luminaires should be coordinated with architectural design. In particular, decorative finishes should be compatible with the colour-rendering properties of lamps and spectral distribution of the light source. See also ‘Lighting and colour for hospital design’ (Dalke et al, 2004).

- 10.81** Light switches should be provided in easily accessible positions and at appropriate locations in corridors and general circulation areas. In areas with multiple luminaires, switches should permit the selection of luminaires appropriate to the area requiring illumination.
- 10.82** Where local circumstances permit, the use of time switches or occupancy controls using infrared, acoustic or ultrasonic detectors should be encouraged. In corridors and general circulation areas, lighting levels should be automatically controlled to allow reduced levels of lighting (for example with only up to 50% of luminaires switched on) when the space is not occupied during normal opening hours.
- 10.83** Low-energy or ultra-low-energy lighting should be considered as the primary lighting source.
- 10.84** Fluorescent lighting in areas where clinical procedures are carried out and/or medicines are handled, including stores, must be derived from lamps having suitable colour-rendering characteristics.
- 10.90** Patient/staff call points should be provided in all spaces where a patient/attendee may be left alone temporarily, for example clinical rooms and WCs.
- 10.91** Staff emergency call points are for a member of staff to call for assistance from another member of staff. They should be provided in all spaces where staff consult, examine and treat attendees/patients.
- 10.92** Consideration should be given to the use of modern technology and location of staff emergency call points to ensure that the risk of accidental operation is minimal and that, where necessary, they can act as a deterrent to potential aggressors in addition to enabling a response to an incident.
- 10.93** Patient/staff and staff emergency call systems may be hard-wired or may form part of a multiplexed data or radio system.
- 10.94** Dedicated call points for summoning the crash team may be provided. These are not standard installation, and need to be specified for individual rooms where patients are at a high risk of suffering a cardiac arrest.

Emergency lighting

- 10.85** Emergency lighting, incorporating escape lighting and standby lighting, should be provided in accordance with BS 5266 and building control and fire officer requirements.
- 10.86** Escape lighting should also be provided in accordance with Health Technical Memorandum 06-01, Health Technical Memorandum 05-02 – ‘Fire safety in the NHS: Guidance in support of functional provision for healthcare services’ and CIBSE Lighting Guide 2.
- 10.95** A visual and audible indication of the operation of each system should be provided at a suitable staff base to identify the nature and origin of the call.
- 10.96** Over-door indicator lamps and corridor indicator lamps should be appropriately located to guide staff quickly to the origin of the call.

Safety and security

- 10.87** The issue of light pollution should be taken into consideration when planning external lighting. Where possible, external lighting should not shine excessively into adjacent properties.
- 10.88** The following steps should be taken:
- avoid excessive lighting;
 - use sensor-activated luminaires;
 - ensure luminaires are correctly orientated.
- 10.89** Patient/staff and staff emergency call systems should comply with Health Technical Memorandum 08-03 – ‘Bedhead services’.
- 10.97** Measures should be incorporated in the design of all primary and community care buildings to help protect the safety of staff, patients and visitors and the security of the premises.
- 10.98** The project team should discuss security with the local police crime prevention officer and the trust’s nominated local security management specialist (LSMS) at an early stage in the design process.
- 10.99** The local fire officer and LSMS should be consulted concurrently to avoid the possibility of the demands of security and fire safety conflicting.
- 10.100** Before a security system is installed, a local risk assessment and crime prevention survey should be carried out for both daytime and out-of-hours use of the premises.
- 10.101** For further guidance, see the Directions to NHS bodies on Security Management Measures

2004 (Amendment) Directions 2006 and 'A Professional Approach to Managing Security in the NHS' (DH, 2003).

CCTV installation

10.102 CCTV systems should be installed to monitor internal and external areas where there is a risk of attack or vandalism. Areas such as receptions, external entrances, car parking and pedestrian walkways may be at particular risk at night.

Car park barriers

10.103 To improve site security, and control unauthorised parking, it may be necessary to install car park barriers. Where barriers are required, all electrical services to them should be installed using external cable runs routed below ground level as far as is practical.

Door access control systems

10.104 Primary and community care premises will generally require controlled access to the building at the staff entrance and, internally, to staff areas.

10.105 Where door access control systems are required, these should consist of an electronic keypad, fob or other approved door entry system installed in conjunction with a separate door entry intercom system.

10.106 External door entry systems should be compatible with insurance requirements.

10.107 External entry systems should be weatherproof and vandal-resistant. Internal systems should be vandal-resistant.

IT and telephone wiring systems

General

10.108 Where possible, a structured wiring system as described in Health Guidance Note – 'Structured cabling for IT systems' should be provided. This will permit a unified approach to the provision of cabling for:

- voice systems;
- data systems;
- imaging systems;
- alarm systems.

10.109 While such a "universal" cabling system is initially more expensive than separate voice and

data systems, it may be more cost-effective in the long run.

10.110 In determining the nature of the IT system to be provided, it is necessary to identify:

- the areas to be served;
- whether structured cabling will be used;
- the density of RJ45 data and telephone outlets to be provided;
- whether wiring will be on a "flood" or "as required" basis.

10.111 Where appropriate, specialists should be employed to assist in the design and installation of IT and telephone systems, including interfacing with service wiring and equipment suppliers to ensure a fully operational and reliable system.

Telecommunication systems

10.112 The telecommunication system should comply with the requirements of the public telephone operator (PTO), various Codes of Practice and British Standard specifications, in particular BS EN 6506 and BS 6701 Part 1.

10.113 Public telephones should be provided where required, complete with coin box and acoustic hoods, as appropriate. Consideration should be given to disabled persons in relation to the height of payphones.

IT systems

10.114 The IT system should include the installation, termination, testing and commissioning of all switches, routers, hubs, distribution cabling complete with cable containment system, and required RJ45 terminal outlets.

Entertainment systems

10.115 Entertainment facilities, such as television and radio/music systems, may be provided in waiting areas to mask sound transfer for confidentiality purposes or in staff rest areas to create a relaxing atmosphere.

10.116 The entertainment services should comply with Health Technical Memorandum 08-03.

Pneumatic tube transport systems

10.117 If a new pneumatic tube system is to be installed, significant investigation needs to be undertaken

to ensure that the system will meet required needs. For further guidance on the design of pneumatic tube systems, see Health Technical Memorandum 2009 – ‘Pneumatic air tube transport systems’ (due to be revised as Health Technical Memorandum 08-04).

Lifts

- 10.118 Lifts may be required for general passenger transportation, bed/stretchers transportation or service use. They may also be required in order to comply with the requirements of the Disability Discrimination Act 2005 and/or Approved Document M of the Building Regulations.
- 10.119 Consideration may be given to the installation of lifts that do not require a separate machine room, particularly in buildings with fewer than three floors and/or where there is limited space available. For further guidance on the design of lift installations, see Health Technical Memorandum 08-02 – ‘Lifts’.

Controlled drugs storage

- 10.120 Controlled drugs cupboards should be fitted with a red lamp indicating when the cupboard is unlocked. An indicator lamp should be sited outside the doorway of the room in which the cupboard is located. In addition a secondary repeat lamp may be taken to a permanently staffed area.
- 10.121 The normal power supply for each cupboard should be backed up by a small integral battery to cover the short period between mains failure and an alternative power supply becoming available.
- 10.122 To assist in keeping their contents secure, controlled drugs cupboards should be fitted with a seven-lever mortice lock designed to meet BS 3621.

Lightning protection systems

- 10.123 Lightning protection systems should be evaluated and, if necessary, installed in accordance with BS EN 62305.

Audio induction loop systems

- 10.124 Audio induction loop systems should be provided in main receptions, seminar rooms and waiting areas in accordance with the Disability Discrimination Act. They may be fixed or portable.

- 10.125 They should comply with the requirements of BS EN 60118-4, IEC 60118-4, where applicable.
- 10.126 Audio loop systems should be able to provide an interface with any PA or music system. In areas with televisions, they should be interfaced to provide TV sound into the local area loop system.

Sustainability and energy efficiency

- 10.127 Engineering services should use renewable and natural energy sources, wherever feasible. The energy consumption of engineering services should be further minimised through the use of low/zero energy solutions and/or energy-saving devices.
- 10.128 Account should be taken of the recommendations in the following documents:
- current editions of Building Regulations and Approved Codes of Practice;
 - Energy Efficiency Office and Carbon Trust best practice guidance;
 - ‘Sustainable development in the NHS’;
 - ‘New environmental strategy for the NHS’;
 - Health Technical Memorandum 07-02 – ‘Encode – making energy work in healthcare’;
 - Health Technical Memorandum 07-07 – ‘Sustainable healthcare buildings’;
 - Building Services Research and Information Association (BSRIA) publications;
 - CIBSE publications – design guides, energy codes, technical memoranda, lighting guides, climate change levy.
- 10.129 The following factors should be considered in order to minimise energy consumption:
- use of natural lighting and ventilation, wherever feasible;
 - use of passive solar design, including the use of solar heating panels, the use of reflective glass and/or blinds to minimise solar gain, where appropriate, and locating heat-sensitive accommodation away from south-facing fascias;
 - use of energy-efficient equipment, including high-efficiency condensing boilers and motors, and energy-efficient luminaires;
 - use of electronic inverter speed control devices on air handling equipment instead

of alternatives such as belt pulleys or pole-changing motors;

- power factor correction to major plant;
- use of presence detection, photocell and multi-circuit systems to control lighting;
- use of a BMS system to provide automatic time control switching (to shut down plant when not required) and performance monitoring (to ensure plant is operating at optimum levels);
- implementation of heat recovery, particularly for ventilation systems;
- use of ground source heat pumps;
- use of sensory taps, urinal controls, low-volume toilet cisterns and grey water (that is, rainwater harvesting or recycled water) to reduce water usage;
- use of combined heat and power plant (including micro CHP plant) to reduce consumption of incoming electrical supplies as well as carbon emissions;
- use of thermostatic controls to limit temperature increases and heat wastage;
- increased pipe insulation to limit temperature losses.

10.130 Consideration should be given to using the thermal properties of the building when the facility is not in use, for example at night or weekends, where circumstances permit.

10.131 Engineering plant and equipment should be recycled, wherever practical. Ideally any disposal of plant and equipment should not require a special licence. Where a licence for disposal is necessary, these should be acquired as prescribed by statute.

10.132 Specific guidance can be found in Health Technical Memorandum 07-01 – ‘Safe management of healthcare waste’, Health Technical Memorandum 07-05 – ‘The treatment, recovery, recycling and safe disposal of waste electrical and electronic equipment’ and Health Technical Memorandum 07-06 – ‘Disposal of pharmaceutical waste in community pharmacies’.

Validation and handover of engineering installations

10.133 It is important that, on completion of an installation and prior to hand-over, the performance of the installation is fully tested and validated.

10.134 The final acceptable performance details should be recorded and, together with full manufacturers’ operating and servicing details, test results, certificates, as-fitted drawings, manuals etc, made available to users and the maintenance organisation before the installation is handed over.

10.135 Once the installation is fully operational, its performance should again be tested. This will check that it is operating to the designed criteria.

10.136 Any risk management plans, operational procedures and contingency plans should be fully evaluated and tested with staff. Opportunities should also be taken as soon as practical after physical completion of the facilities to familiarise and train staff in the use of all relevant equipment and services and to practise any procedures to ensure staff members understand what is required of them.

Appendix 1 – Community wards

Community wards may be located on ground and/or upper floors with their own internal entrance from the public zone and good access to the primary and community care zone.

For guidance on the design of in-patient bed spaces and associated support spaces see Health Building Note 04-01.

Social and therapy spaces

In acute hospitals there is a limited need for social and therapy space at ward level, as patient stays are short. In community settings, patient stays tend to be longer so the need for social and therapy space is much greater, particularly on rehabilitation wards.

There are a number of questions that project teams can ask, to achieve a good balance of social and therapy spaces for any particular client group. Planning decisions should take account of patient culture and preferences in terms of privacy, modesty and same-sex accommodation:

- If multi-bed rooms are provided, what additional “private” space will be needed? A group room furnished as a restricted access or same-sex lounge?
- Should televisions be confined to bedrooms, to make shared spaces more social?

- Is there access to outside space either directly from the ward, or from a common area, away from the public zone of the building?
- Are dedicated sitting, dining and social spaces required, or can spaces be multifunctional?
- How is dining handled? Should a space be provided that allows all patients to eat together, or should it be assumed that a proportion will eat in their bedrooms? Alternatively, should patients come together in groups of, say, 12 or 24 to dine? Should there be separate dining areas for people who may have difficulty eating, such as stroke patients?
- What are the special social requirements for accommodation for palliative care?
- What therapy (discursive and physical) can occur in the patient’s bedroom?
- If therapy spaces are provided, should they be shared by more than one ward?

Therapy and social spaces should be designed so they are flexible and adaptable. They are often best located at the centre of the ward, close to the entrance and between nursing units, to increase privacy in the bedded areas.

Appendix 2 – Co-located services

Non-NHS community, voluntary sector and commercial spaces may be co-located alongside primary and community care services if their addition accords with the philosophy of care and can improve affordability.

Facilities for delivering non-NHS community and commercial services tend to be self-contained units with their own internal front door and branding. They may open off the public zone or be accessed from it. In some cases, they may have their own external door.

Voluntary sector services often simply require access to generic group rooms in the primary and community care zone, on a sessional basis, for meetings and activities such as keep fit or stroke clubs. This is often out-of-hours.

Space requirements for co-located services should be determined by discussions with the relevant provider at an early stage of the project.

Co-locating services may provide the following benefits:

- focal point for the community;
- promotion of healthy lifestyles as part of an integrated health and community care policy;
- increased footfall to the building/site and hence activity levels;
- creation of a critical mass of linked services;
- increased convenience for users;
- improved funding;
- improved transport links;
- reinvigoration of deprived areas;
- job creation.

The following criteria will increase the chances of the successful co-location of services:

- early involvement and sign-up by all partners;
- commitment at the highest levels (chief executive or board level for the LA or PCT);
- sharing of partners' strategic plans at an early stage;

- taking bold steps but with a managed approach to risk;
- learning progressively together;
- a default position where a partnership approach is assumed.

Potential stakeholders may be treated as development partners or tenants. The partnership approach may provide the additional benefits:

- engagement of the partners in health equity audits and health impact assessments;
- sharing of data and expertise among partners.

In designing such facilities, early resolution of the following points is advised:

- How self-contained or integrated should these co-located services be?
- How should they be branded? As part of the overall building, or should they express their own identity, separate from that of the NHS?
- Can staff share rest, changing and administration facilities with primary and community care staff, possibly invoiced through a service charge?
- Is the local authority a tenant in the building, or is the development put together on a partnership basis, with capital injections from more than one stakeholder at the outset?
- How long is the franchise or lease on the space? What alternative uses could this space have in the future?
- Are voluntary sector users charged for using the space, and if so, is this at a commercial rate or a nominal one, with the balance being borne by other stakeholders?
- How are engineering services in the building organised? Is there separate metering and billing?

- How is IT networked in the building (for example shared hub room)?
- How can the building be designed to allow operation of different parts of the building at different times?
- How can the different design, construction and operational standards for healthcare delivery aspects of the building be communicated in the client's brief?

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