

Health Building Note 03-01: Adult acute mental health units



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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.

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 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.

Health Building Note structure

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

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

Core subjects are 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 is represented as follows:

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

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

“Health Building Note 04-01: Supplement 1 – Isolation facilities for infectious patients in acute settings”

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 – 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.

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.

Note

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

Executive summary

This guidance covers the design of acute in-patient units in England, for adults aged 18 years and upwards and supersedes HBN 35 Part 1 'The acute unit' (1996). The purpose of this guidance is to inform the planning and design of in-patient facilities that are fit for purpose, provide value for money and support the delivery of key service objectives and policy drivers.

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1 Scope of guidance

- 1.1 This guidance covers the design of acute in-patient units in England, for adults aged 18 years and upwards, and supersedes Health Building Note 35 – ‘Accommodation for people with mental illness’, Part 1: ‘The acute unit’ (1996). The purpose of this guidance is to inform the planning and design of in-patient facilities that are fit for purpose, provide value for money and support the delivery of key service objectives and policy drivers. It covers general aspects of building design, which should be considered when planning any mental health facility, for the following facilities:
- service user, staff and visitor facilities (which includes en-suite bedrooms, accommodation for therapy, treatment, recreational activities and other rooms as applicable);
 - Place of Safety (Section 136, Mental Health Act 1983) facilities (where applicable);
 - support accommodation (including multi-disciplinary team accommodation, the crisis and home treatment team base, tribunal suite, administration and meeting/interview rooms).
- 1.2 The guidance covers planning; site selection with consideration to the functional content of the proposed unit and its size; functional relationships and adjacencies relating to new-build and refurbishments. It considers best practice design in an adult acute mental health setting and details the individual room spaces that may be provided within a unit. However, it does not address the specific needs of older people. Environmental aspects are different in older patient settings, where there is more emphasis on preventing falls. Some new ward designs can positively disable older people, especially those with dementia.
- 1.3 Some technical and engineering principles relevant to adult acute mental health facilities are also included.

- 1.4 The content of an acute unit will depend on local circumstances and opportunities. The schedule of accommodation associated with this guidance aims to provide a “pick and mix” approach to the provision of facilities.

Department of Health guidance

- 1.5 In-patient services are provided to people with a wide range of mental health needs. Some of the services require specific planning and design considerations that are outside the scope of this guidance. The Department of Health (DH) publishes a range of advice and guidance on secure and specialist services.

Secure and specialist services

- 1.6 DH publishes guides for secure hospital services that provide specific advice on appropriate environmental design, security measures and building materials, fixtures and fittings. These should be used in conjunction with DH good practice policy guides for low and medium secure services, and for psychiatric intensive care. More information can be found on the [Department of Health’s website](#).

Out-patient services

- 1.7 To promote social inclusion and improve the acute care pathway, out-patient facilities are increasingly located within community team bases, health centres and general practitioner premises. However, where out-patient facilities are located next to an acute mental health unit, they should have their own separate entrance and reception area.
- 1.8 For guidance on facilities for out-patient mental healthcare, please refer to Health Building Note 11-01 – ‘Facilities for primary and community care services’ and Health Building Note 12 – ‘Out-patients department’.

2 Policy and service context

Purpose of acute in-patient care

2.1 The function of an adult acute in-patient unit is to provide safe care in the least restrictive environment, although units across the country may vary in size and in design. The needs of patients vary and may depend on a number of factors such as diagnosis, gender, age and length of stay. Some services may meet the needs of specific groups of patients, while others may provide for a wide range of needs.

Service policy background

2.2 When Health Building Note 35 was published in the mid-1990s, mental health policy and service development had been consistently moving away from the provision of large, isolated mental health hospitals and towards providing more locally based mental healthcare facilities. The publication of the DH National Service Framework for Adult Mental Health in 1999 led to a major modernisation of adult acute mental health services. In the last ten years, Crisis Resolution and Home Treatment Services, Early Intervention Teams and Assertive Outreach Teams have become well established, providing alternatives to hospital admission and enabling people to be treated in the community.

2.3 The Mental Health Act 1983 identifies the importance of addressing the impact of the environment on patient safety, privacy, dignity, behaviour and well-being. Providing a suitable environment involves recognising and respecting the diverse needs, values and circumstances of each patient, including their race, religion, gender, age, sexual orientation and any disability. These are the protected characteristics set out in the Equality Act 2010.

2.4 In-patient care is an important element of the wider system of mental health services. It remains a vital one for service users when they are at their most distressed and vulnerable. The planning of any in-patient provision must be undertaken in the

context of the local service, providing an integrated system with robust and effective care pathways.

2.5 The location of mental health in-patient facilities is a local decision dictated by many factors, including site availability. If facilities are located on an acute hospital site, they should be a separate identifiable entity. If they are not located on an acute site, there should be access to prompt support from other medical services.

Regulatory framework and policy drivers

2.6 The Care Quality Commission (CQC) registers all providers of regulated health and adult social care activities in England. The CQC's role is to provide assurance that the care that people receive meets essential levels of quality and safety.

2.7 The registration requirements are set out in the Health and Social Care Act 2008 (Regulated Activities) Regulations 2010 and include a requirement relating to safety and suitability of premises.

2.8 The CQC is responsible for developing and consulting on its methodology for assessing whether providers are meeting the registration requirements (see the CQC's (2010) 'Guidance about compliance').

2.9 The CQC also uses PEAT (Patient Environment Action Teams) data to inform 37 indicators across five essential standards of quality and safety.

2.10 Failure to comply with the requirements is an offence, and under the 2008 Act, CQC has a wide range of enforcement powers that it can use if the provider is not compliant. These include the issue of a warning notice that requires improvement within a specified time, prosecution, and the power to cancel a provider's registration, removing its ability to provide regulated activities.

2.11 Outcome 10 of the CQC's 'Guidance about compliance' focuses on the "safety and suitability of

premises” and decrees that “people receive care in, work in or visit safe surroundings that promote their wellbeing”.

2.12 Health Building Notes and Health Technical Memoranda are specifically referenced in the CQC’s “schedule of applicable publications” as a means of compliance with Outcome 10.

Care pathways

2.13 The acute care pathway – the journey a service user makes from initial referral to discharge from acute services – will have been developed for the local service through Step 2 of ‘Laying the foundations for better acute mental healthcare’ (DH, 2008).

2.14 In-patient care is an important element of the acute care pathway, as illustrated in Figure 1.

Physical environment

2.15 The environment provided by acute mental health services is a crucial element in the delivery of positive therapeutic outcomes for service users, their safety and the safety of staff and the wider community. Ward communities themselves are not that different from the communities we live in. When they feel positive and safe with common values, not only do service users recover more quickly, but staff are more content, suffer less

sickness and are likely to stay for longer. This means healthier, happier and more experienced staff and better continuity of service for service users. Initiatives such as “The Productive Ward” confirm this.

2.16 Maintaining high standards and continually improving the environment provided in in-patient mental health services helps improve the experience of service users, staff and visitors. The environment has a crucial role in supporting the delivery of higher-quality and more cost-effective care.

2.17 The design of the acute unit may therefore:

- provide comfort and a therapeutic environment for people at a time of acute distress and vulnerability who may be at risk from themselves or who may harm others;
- mitigate the effects of living in a restricted space with strangers, by preserving privacy, dignity and control over the environment as far as possible;
- ensure appropriate levels of safety and security;
- support meaningful activities and provide a high-quality environment;
- allow for the separation of different groups on the basis of gender, vulnerability, physical frailty and acuity of illness.

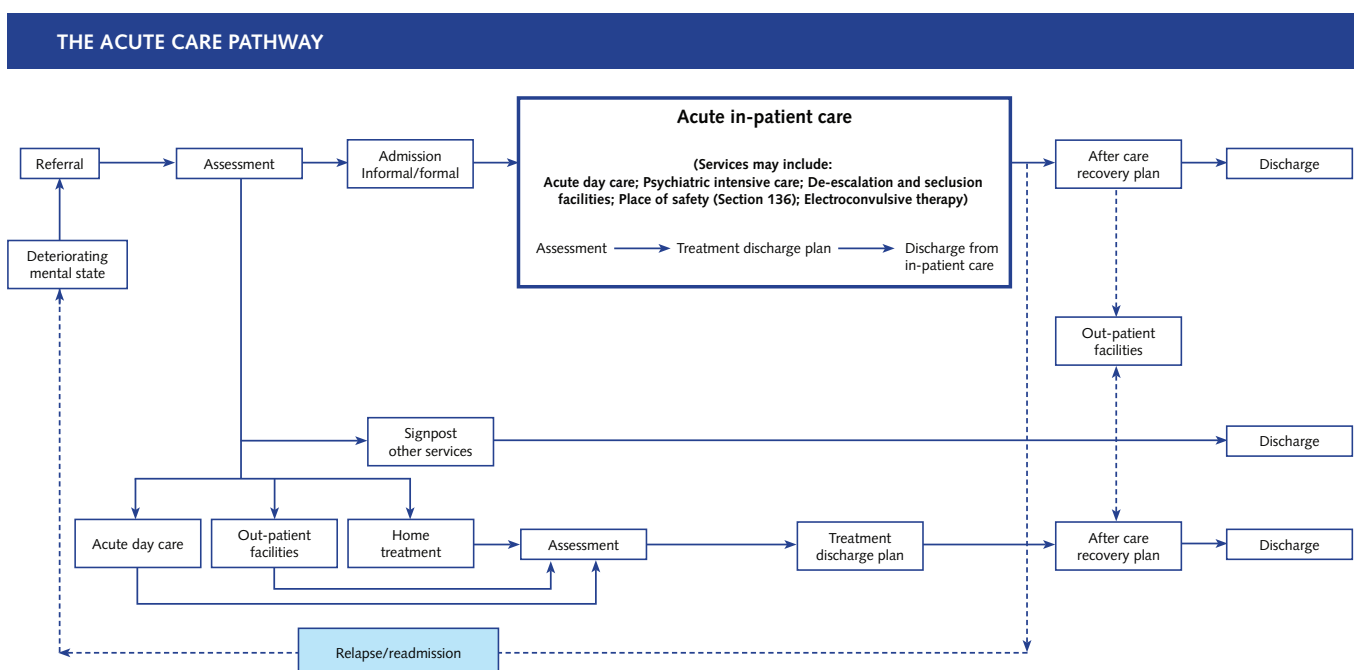


Figure 1 Acute care pathway

3 Principles of planning and design

- 3.1 Planning an adult acute in-patient unit should ideally centre on designing a service, not just a building.
- 3.2 Prior to commencing a capital project, project teams should refer to ‘Laying the foundations for better acute mental healthcare’ (DH, 2008) to help them analyse their current acute mental health provision and to plan services that meet the future needs of their local population. The process involves commissioners, service users, carers and acute care staff from an early stage. The strategic approach in the workbook may also help to decide whether new buildings are needed and to ensure best-value investment.

Stakeholder involvement

- 3.3 The planning of new in-patient mental health services should consider the needs of all relevant stakeholders. These stakeholders and the type of engagement they need may vary according to, for example, the location of the service planned. However, they may include some of the following:
 - service users;
 - carers, advocates and visitors;
 - staff including clinicians and service managers;
 - NHS commissioners;
 - professional bodies;
 - local residents and community groups;
 - police and other emergency services;
 - other healthcare staff including community, primary and secondary care services;
 - local authorities;
 - Care Quality Commission (CQC).
- 3.4 The needs of each group of stakeholders should be identified at an early stage during service planning. These needs inform the development of an overarching communication and engagement strategy for the whole project. Chapter 4 details

some of the specific needs these groups have raised. However, a service-specific needs assessment that is sensitive to local stakeholders should also be conducted.

- 3.5 Those responsible for mental health commissioning through their local commissioning strategy for mental health will plan the provision of a wide range of services to meet the needs of their local population.
- 3.6 See [Chapter 4, ‘Stakeholder needs’](#).

Clinical and operational involvement

- 3.7 There is consistent clinical and operational input into the project (from initiation right through to completion), to ensure that the design reflects the philosophy of the treatment programme and is operationally realistic. It is important that different rooms and spaces “fit together” and that the layout is informed by how life on the ward really needs to work so that services are accessible and effective. Trust project leads should not underestimate the amount of time this may require of some key staff and plan “business as usual” staffing levels accordingly, to ensure that any services running in parallel are sustained throughout the project.

Service user involvement

- 3.8 Service users in existing services, particularly those who may be transferring into the new service building, should have an early and continuing opportunity to contribute to the new service design and participate in the planning process. Every opportunity is taken to actively engage service users and their carers throughout the project. Service users’ perspective should especially be taken into consideration when planning furnishings and colour schemes. The King’s Fund’s ‘Enhancing the Healing Environment’ programme provides several examples of good practice in this area.

Community involvement

- 3.9 The local community is likely to make an important contribution to service user support and recovery. It is vital that local communities are helped to understand the treatment and care philosophy of the service and that they are given the opportunity to voice their questions or concerns. This is particularly important where an in-patient service is planned on a new geographical site.
- 3.10 From the very early stages of planning and throughout the process, design planners should build in opportunities to meet with the local community to discuss service proposals, and listen to concerns about risk, privacy, safety and design.
- 3.11 Services should develop an ongoing strategy for community engagement beyond the completion of the project that keeps channels of communication open and maximises understanding and co-operation.

Service user care and treatment

- 3.12 The provision of purposeful, therapeutic and safe services for service users is the primary aim of all mental health services. This means ensuring that the service design incorporates a range of internal and external communal spaces, rooms for therapy, arts, music and education for service users in addition to bedrooms, bathrooms, areas for visitors, external spaces and facilities for staff.
- 3.13 Some of the services that could be part of an acute unit include the following.

Acute day care

- 3.14 Acute day treatment services provide an alternative to admission for people who are acutely unwell, and are a means of facilitating early discharge and preventing re-admission. (See also 'Laying the Foundations for better acute mental healthcare' for more information on this service component.)
- 3.15 If acute day services are provided as an integral element of an acute unit, careful consideration needs to be given to the types of treatment and therapeutic activities that will be delivered on site, and the accommodation designed appropriately. Interviews and assessments, individual and group therapy sessions are key components of acute day services. The rooms for day sessions, associated staff and other support facilities may be shared with the unit as part of the integrated acute care pathway.

This is done to improve the patient's journey along the acute care pathway, and not purely for economies of scale.

Psychiatric intensive care

- 3.16 Trust project leads should consider the need to provide facilities in acute in-patient services for people requiring a period of intensive treatment.
- 3.17 Psychiatric intensive care (PIC) is an important element of care within the wider system of in-patient services. PIC is for service users experiencing an acute phase of mental illness that requires rapid assessment and stabilisation through active engagement and treatment.
- 3.18 PIC services are small and highly staffed and provide short periods of intensive treatment before or during a longer period of in-patient care.
- 3.19 The emphasis is on treatment combined with a range of physical, procedural and relational measures that will help to reduce risk, disturbance and vulnerability.
- 3.20 The care and treatment needs of service users requiring PICU will not be able to be managed safely in a general ward setting. Service users are likely to:
- display acute behavioural disturbance that seriously compromises the physical and/or psychological wellbeing of themselves and/or others;
 - be at notable risk of aggression, suicide and/or serious self-harm;
 - at risk of increased vulnerability because of sexual disinhibition or over-activity in the context of mental disorder.
- 3.21 See Department of Health guidance on Psychiatric Intensive Care Units.

De-escalation and seclusion facilities

- 3.22 Trust project leads should consider the need for incorporating a dedicated de-escalation area and separate seclusion facilities within acute service settings for people who may require care and treatment away from the main in-patient area. More information on the design of de-escalation areas and seclusion facilities is provided in the Planning and Design Manual within this topic.

Place of Safety (Section 136)

- 3.23 Some service users may have been detained by the police under Section 136 of the Mental Health Act and require psychiatric assessment. Every locality is required to have access to a “Place of Safety” facility, which is a suite of rooms located within an acute unit, designed to provide a safe environment for this assessment. The context for Places of Safety is detailed in the Code of Practice Mental Health Act 1983 (revised 2008).
- 3.24 The Royal College of Psychiatrists also provides a context document for Places of Safety.

Electroconvulsive therapy (ECT) suite

- 3.25 The provision of electroconvulsive therapy is determined by local policy. If provided, the ECT suite should be designed to meet the standards of the Royal College of Psychiatrists’ Electroconvulsive Therapy Accreditation Service (ECTAS), outlined in The ECT Handbook.

Visiting areas

- 3.26 The Mental Health Act Code of Practice (1983) covers visiting patients in hospital and refers to particular consideration for child visitors. There may be a dedicated child visiting area, close to the entrance of the unit, where children can visit safely. Separate baby changing facilities can be appropriately located close to this area.

Quality of life

- 3.27 Service users need spaces where they have privacy and are able to reflect quietly in addition to areas where they can engage with staff, meet visitors, socialise with other service users, participate in leisure activities (watching TV, listening to music, and indoor games, for example) and develop a sense of community. These areas can be well equipped and designed to feel comfortable and relaxed. Designs that have good acoustics (that is, that help reduce the level of noise and echo), minimise the risk of crowding, and have natural light and ventilation are important in helping to create a positive, therapeutic atmosphere.
- 3.28 Chapter 5 provides a useful checklist of key objectives in the design of an adult acute unit.

Social inclusion and recovery

- 3.29 The internal and external design of the unit may help service users and staff to feel valued and be an

integral part of the community. Trust project leads should consider access to local amenities and how the service and service users will be supported to take part in everyday activities outside the unit. This will be affected by the location of the service, transport links and accessibility of facilities such as shops and leisure centres. Working with local communities when considering appropriate locations increases the opportunities for finding appropriate sites, and helps build relationships.

- 3.30 A careful balance is to be achieved between providing dedicated facilities within the unit and accessing mainstream community facilities outside the unit.

Flexibility and value for money

- 3.31 Significant attention should be given to life-cycle costing, and the fit with the longer-term commissioning and service planning strategy.
- 3.32 A degree of “future-proofing” should be built into development plans to ensure that services can meet current and anticipated future need. This may include consideration of whether the location, site layout and design are flexible enough to allow for future expansion through modification or extension.
- 3.33 In the current “more for less” economic environment, healthcare buildings are required to be designed with flexibility and adaptability in mind. This is to help ensure that they can change use over time, if necessary, and remain “future proofed” to deal effectively with inevitable progress in healthcare and changes in care pathways and service user groups. Flexibility and value for money can be achieved by ensuring that rooms that are not in constant use, such as interview rooms, are planned and designed to accommodate other uses.
- 3.34 Bearing in mind the high turnover of service users in acute in-patient services, trust project leads should plan to build robust internal constructions, to ensure value for money over the life-cycle costs of the service (see also ‘Building fabric and materials’ below).

Building fabric and materials

- 3.35 Careful consideration should be given to the selection and detailing of products and components, to ensure that they are suitably robust and appropriate for a mental healthcare setting. While damage and wear and tear will inevitably

occur, the physical environment in a mental healthcare setting is likely to suffer more frequent damage. Building in more frequent redecoration or refurbishing than in other settings – and more frequent maintenance checks on furniture and fittings – is advisable. Maintaining a high standard in a building indicates to service users that their environment is an important part of the caring process.

- 3.36 Furnishings should be comfortable, and as domestic in style as possible, while being safe and robust. Furniture should not be easily breakable to avoid its potential use as a weapon, and consideration may be given to the issue of deliberate or accidental fire risks concerning furniture. Any damaged furniture or equipment should be removed from the unit straight away and any damage to the fabric or decoration of the building should be repaired as soon as possible.
- 3.37 Furnishings should also be capable of being cleaned, maintained and repaired by the trust's maintenance team, and should require minimum support from external specialists.

Safety

- 3.38 Providing a safe and therapeutic environment for service users, staff and visitors is integral to the provision of clinical care. It is particularly important to consider the impact that ward size and layout, service user numbers and population mix will have on the therapeutic environment and on safety.
- 3.39 The environment has a key role in encouraging service users to participate in life on the ward and actively engage with staff and in treatment. Importantly, the environment also has a part to play in minimising risk and maintaining motivated, confident staff.
- 3.40 The learning from serious untoward incidents and near misses may be valuable when considering estates design, layout and detailing. Listening to service users who may have experienced care and treatment in acute mental health services is useful feedback, whether this is from local or national surveys, such as those conducted by the Care Quality Commission (CQC).

Keeping people safe

- 3.41 In-patient units need to be safe and therapeutic. This includes the provision of adequate space to

prevent overcrowding and allow gender separation. The layout of the ward areas needs to be such that staff have good sight lines and visibility throughout most of the ward. Careful consideration needs to be given to entry to, and exit from, the unit – to ensure that staff to have good visibility of the unit entrance. Further information can be found in 'Strategies to reduce missing patients'.

The prevention of self-harm and suicide

- 3.42 Spaces where service users may not be continually supervised by staff (for example in bedrooms and toilets) should be designed, constructed and furnished to make self-harm or ligature as difficult as possible. All fixtures and fittings should be anti-ligature.
- 3.43 Spaces that are expected to be continually supervised by staff (for example communal areas or circulation spaces) should be comfortable and therapeutic. They encourage service users to participate in life on the ward and actively engage with staff, but minimise the risk of self-harm or injury to others.
- 3.44 The suicide prevention strategy should be guided by the National Suicide Prevention Strategy for England (DH, 2002).

Single-sex accommodation

- 3.45 The NHS Constitution states that every service user has the right to high-quality care that is safe, effective and respects their privacy and dignity. Same-sex accommodation (SSA) is a long-standing commitment across mental health services. Since 2000, all new-build units have been required to incorporate single bedrooms, ideally with en-suite facilities. Refurbishment of existing hospitals has also introduced more single rooms.

Security

- 3.46 Security plays a positive and supportive role in care and is considered as providing the structure within which clinical priorities can be safely carried out.
- 3.47 Security is a concept of three interdependent dimensions – relational, procedural and physical security. In any service, the balance between these three dynamics may shift, requiring some adjustment to meet the needs of particular service users or a changing situation. Nevertheless, all three must be in place and one should not substantially

compensate for the absence or ineffectiveness of another.

Relational security

- 3.48 Relational security is the knowledge and understanding that staff have of a patient and of the environment; and the translation of that information into appropriate responses and care.

Procedural security

- 3.49 Procedural security relates to the proper application of a set of procedures, routines and checking.
- 3.50 Establishing a comprehensive range of effective procedures across the service anchors the application of therapeutic activity to structure and routine. The routine application of procedures ensures that staff are able to quickly and efficiently establish clear boundaries and enables safe practices to be embedded and applied in a consistent way.

Physical security

- 3.51 The physical security requirements for the design of an adult acute unit are determined by the need to minimise the likelihood of unauthorised entry and exit, and the introduction of prohibited items onto the ward. The location of the service and its layout will also help to determine appropriate safety measures.
- 3.52 Where possible, physical security measures are unobtrusive, and are incorporated into the building fabric sensitively so that the living environment is as therapeutic and unrestrictive as possible. Safety concerns have to be balanced with maintaining the therapeutic focus of the unit.

Additional measures

- 3.53 The location and layout of some acute services may lead project leads to consider the need for additional measures to support the overall safety of service users, staff and visitors to the unit. For example, external CCTV may be considered an appropriate tool for areas such as car parks. It may also be considered appropriate to support overall safety. If used, cameras should only be included at ward entry and exit points and should not infringe the privacy and dignity of service users. CCTV systems should not cover bedrooms or toilet and shower areas.
- 3.54 The use of CCTV does not replace the need for staff to provide appropriate levels of observation and engagement.
- 3.55 The use of CCTV will need to meet guidelines set out in the CCTV Code of Practice 2008 guidance.

Infection control

- 3.56 A strategy for infection control should be agreed at an early stage in the planning process. This strategy, while minimising the risk of infection, also takes account of the different risks associated with mental health environments.
- 3.57 In some cases the fitting of carpet, whilst less clinical, may help to create a more therapeutic environment and reduce noise levels. Discussion with the infection control team may be necessary to determine the choice of materials, finishes and surfaces of fixtures and fittings.

4 Stakeholder needs

Table 1 Needs of service users

Service users	
Privacy & dignity	Service users should have their own en-suite bedroom. They should have control over their lighting (including reading light), natural light (if integral blinds are fitted), ventilation and, where appropriate, heating. A service user should have the ability to lock their bedroom door from both the outside and inside, with the capability for staff to override this to protect their safety.
Safety	Service users will not be able to engage with the therapeutic purpose of the ward unless they feel safe. This includes the safety of belongings in a lockable space.
Space	The size, furnishing and quality of spaces and circulation areas will influence how service users engage with and use it. A variety of different spaces should be provided to allow them a choice of environment.
Disabled accommodation	Appropriate accessible accommodation and facilities should be provided that ensures that the needs of disabled service users are met in a way that promotes inclusivity.
Space to meet others	Contact with the outside world is an important part of treatment and recovery. Service users need spaces where they are able to meet friends, family, carers and other professional visitors.
Gender-specific	Accommodation should be planned to be gender-specific and furnished and decorated in such a way that it meets the needs of different genders.
Access to outside areas	Direct access from internal spaces to outside areas offers service users greater freedom of movement and fresh air. The design provides staff with good sightlines to all entry and exit points.
Variety of activities	It is essential to provide a wide range of activities for group therapy, social and recreational use. The use of room and outdoor spaces can be maximised by early service user and clinical involvement and the application of a service's clinical philosophy.
Healthy lifestyle	Physical healthcare is an essential aspect of care, treatment and mental well-being. The unit design provides opportunities to improve the lifestyles of patients, including access to fresh air and exercise.
A space for contemplation	The design may provide for a suitable multi-faith room in which service users are able to spend time in worship, meditation or reflection.
Natural light and ventilation	These are essential attributes of a well-designed unit and the physical and mental well-being of service users.
Clean, well-maintained building	This conveys a positive message to service users, staff and carers and encourages pride in the ward environment. There may be a zero tolerance policy on damage in general. The ability to maintain a clean, homely service will be dictated by the material used to build and furnish it.
A domestic environment	Service users describe a preference for an environment that is comfortable, non-threatening and minimises institutional features.
Avoidance of noise	At initial planning stage, consideration should be given to the location of potentially noisy rooms (such as laundries and de-escalation suites) in relation to quiet accommodation such as bedrooms. Adequate soundproofing should be installed between rooms, and heavy-duty sound-reducing doors are used. Noisy engineering equipment, fans and light fittings should be avoided to promote a therapeutic environment.
Avoidance of overcrowding	Overcrowding can also create tension on a ward. Activity areas and dining rooms provide adequate space to avoid overcrowding.
Storage	There should be adequate facility for storing and accessing a reasonable number of patients' personal possessions.

Carers and visitors	
Welcome	It can be daunting to visit an acute unit, especially for the first time. Visitors need to feel welcome and reassured by the surroundings.
Privacy	There should be discrete areas for visiting. Care should be taken to accommodate child visiting as close to the entrance as possible.
Safety	Visitors need to feel reassured that there is someone on hand if needed.
Managers	
Flexibility	Managers need design solutions that build in a degree of flexibility. Where practical, rooms should be designed to allow for different functions or to respond to changing service user populations and needs.
Low levels of incidents	The design of the environment should give careful consideration to safety and security for service users, for staff and the public.
Stable staffing levels	A high-quality environment for staff can play an important role in improving staff morale, decreasing sickness absence and improving recruitment and retention. A good design enables staff to be deployed in the right areas, to engage with service users and to maximise the use of resources.
Staff	
A pleasant environment	Staff function better in environments that feel safe, calm and spacious. Staff can engage with service users and deliver a better quality of care if they are unconstrained by the design of the unit.
Safe working conditions	Better quality of care and staff experience will be enabled by a design, supported by appropriate technology, that reassures staff and facilitates rapid response and assistance when necessary.
Good layouts	Single-level patient accommodation will enable the safe movement, supervision and management of service users.
Private areas	Space should be provided for staff to do confidential work and hold meetings. There should also be areas for staff to rest; these should be located away from the main service user areas on the ward.
Storage	There should be adequate facilities for the secure storage of personal possessions.

5 Quality of life checklist

Table 2 Quality of life checklist

What are we trying to create?	What is required?	How do we achieve it?
Therapeutic Environment	1. Natural daylight is maximised and there are views out to landscape and the sky.	In areas where there is little or no natural light, clerestory windows, glazed corridors, and glazed doors opening out of the space should add to the amount of light entering the building. Bedroom windows and those in communal areas should look out to outdoor space.
	2. All areas look and smell clean.	Operational policy. Correct cleaning regimes, maintenance and replacement programmes should be in place.
	3. Ambient temperatures and ventilation are adequately controlled.	Thermostats and controls should be easily available for staff to alter the ambient temperature. Opening windows in all areas, particularly in bedrooms.
	4. Noise levels are adjusted to meet the needs of the people living/residing here.	Sound attenuation should be available where required. Textile floor coverings and furnishing should be used, where applicable, to deaden sound reverberation.
	5. There is access to external space that includes a covered area for use during inclement weather.	Garden areas, sufficiently large to accommodate all needs, should be available from the communal/social space within the ward area.
	6. Social spaces are located to provide views into external areas.	
	7. A quiet, low-stimulus area is provided.	Quiet rooms should be provided in areas away from communal areas.
	8. Areas that need to be quiet are located as far away as possible from any sources of unavoidable noise.	
Space	1. There is a perception of space, and overcrowding is avoided.	Planned spaces should be large enough to accommodate the persons expected to be in them.
	2. The ward is not accommodated on more than one floor.	Ground floor ward accommodation is recommended.
	3. Sleeping and day areas are separate.	See Functional relationship diagrams.
	4. All bedrooms should be single rooms with en-suite.	100% single bedroom accommodation.
	5. There are adequate quiet spaces for service users and staff.	Quiet rooms in ward areas for service users and staff rest rooms should be available either at ward level or centrally.
	6. The day rooms are open at night for people who cannot sleep.	Operational policy.
	7. Adequate private spaces are provided for interactions.	Sufficient multifunctional meeting/interview rooms should be available in the wards and in shared areas.

	8. The ward size and design is appropriate to the service user population.	Rooms and room areas should meet the requirements of the schedule of accommodation.
	9. The ward/unit provides suitable access and facilities for service users who require assistance.	Sufficient larger bedrooms/en-suites should be available. All areas should be accessible.
	10. The ward environment is sufficiently flexible to allow for specific individual needs in relation to race, religion, gender, age, sexual orientation and any disability.	Gender-specific male- and female-only areas should be available. All areas should be accessible for those with mobility difficulties and there should be accessible bedrooms with en-suite facilities.
	11. The ward offers a range of semi-public spaces outside the private bedroom, which allow service users a different level of participation with the life of the ward.	A range of multifunctional rooms including quiet, activity and interview rooms should be available.
Privacy, dignity and safety	1. Bedrooms should be within a gender-specific area.	There are a number of ways to achieve this. Planners should refer to DH guidance on single-sex accommodation (see below for link).
	2. Privacy in toilets and bathrooms is ensured.	En-suite bedrooms throughout will ensure that this requirement is met.
	3. Sightlines are unimpeded. All exits and entrances are within sight of staff.	Good visibility from and to all areas is important to ensure that safety is maintained for all.
	4. There is a designated space for service users to receive visits from children.	Child visiting rooms should be provided at the entrance to the unit or ward.
	5. There is at least one room for interviewing and meeting with individual service users and carers/relatives, which is furnished with comfortable seating.	Multifunctional rooms should be provided in shared areas and ward area. These rooms should have comfortable informal seating and can be used for interviewing/meetings.
	6. Privacy in receiving medication with the opportunity to ask and receive answers to questions regarding medication.	There should be self-medication lockers, a private room located adjacent to either the treatment room or the drug storage room, or medication should be taken to the bedroom (operational policy).
Security	1. Personal effects area safe and accessible.	Bedroom doors should be lockable by service users when inside the room and when leaving. Locked storage should be available within the room and a property store should also be available.
	2. Existing alarm systems are appropriate to the needs of the ward/unit.	Staff should have an appropriate personal attack alarm, with response protocols in place. Patient-to-staff call systems should be in place in assisted sanitary facilities, as required.
	3. While ensuring appropriate levels of security, the environment is open and does not unnecessarily restrict service users.	
Activity	1. There are activity areas inside and outside.	Therapy areas should be available for a range of activities, with outside space as required. There may be a physical activity area including a kick-about space, trim-trails, jogging track or internal gym or sports hall.
	2. The ward has direct access to an outside space for exercise and access to fresh air, which is safe and has seating available for relaxation.	In addition to outside space around the unit as a whole, there should be direct access from the communal ward area to a garden.
	3. There is a range of programmed activities available for service users throughout the day and at weekends.	Operational policy.

Access	1. Areas are accessible for someone using walking aids/wheelchair.	Suitable designs should incorporate full accessibility for service users, staff and visitors using walking aids and/or a wheelchair.
	2. The ward is managed to allow optimum and accessible use of available space and rooms.	Many areas should be open-plan to allow for continual access. Where there are rooms for general use, these should be unlocked for the majority of the day.
	3. Reception areas are well planned.	There should be a welcoming reception area, with clear wayfinding that enhances access to the building.
	4. Signage is clear and visible.	Wayfinding. See separate DH guidance on this (link below).

See 'Elimination of mixed-sex hospital accommodation', DH (2005) and 'Wayfinding – effective wayfinding and signage systems guidance for healthcare facilities'.

6 Planning considerations

- 6.1 Prior to starting work on a project, trust project leads should refer to the workbook ‘Laying the foundations for better acute mental healthcare’ (DH, 2008), as it provides a framework for planning services and considers the need for capital investment.
- 6.2 It is particularly necessary to embrace sustainable development guidance and practice in the early stages of planning and design, and this should engage the full project team including community stakeholders. The best practice guidance set out in BREEAM Healthcare and the Good Corporate Citizen Model (NHS) should form an essential part of the planning process.
- 6.3 A sustainable design should also support sustainable construction and operation to achieve a low energy/carbon solution, and should indicate the need to design out such environmental issues as solar gain, together with the need to design in water conservation measures and water recovery. The design should also indicate measures for waste minimisation both during construction and use, and should ensure a low energy profile when the building is in use. To promote a sustainable approach, the design should support evaluation using a lifecycle basis, and the planning/design team should investigate carbon offsets or low carbon technology. For more information see Health Technical Memorandum 07-07 – ‘Sustainable health and social care buildings: Planning, design, construction and refurbishment’.

Functional content

- 6.4 Once the care pathways and models of care have been established, the specific functional content, size, location and orientation of individual units can be considered in more detail. This involves identifying each individual acute care service provided. Such services could include acute admission wards, therapy and activity spaces, psychiatric intensive care, out-patient treatment, a Place of Safety (Section 136 suite), and multi-disciplinary team accommodation – or a combination of some or all of these.
- ### Size of functional content
- 6.5 Sizing the service will help to identify possible site locations and initiate project costs. While a unit may consist of a number of wards, each with their own function, staff and requirements, it may operate as a single administrative and managerial unit.
 - 6.6 Current practice suggests that 15-bed allocations are the optimum ward sizes for effective therapeutic engagement. Ideally there should be sufficient beds locally to achieve bed occupancy of 95% but less than 85% – this is a matter for agreement with commissioners.
 - 6.7 In addition to in-patient wards and depending on the nature of the service, a number of other functional spaces may be required; these might include administrative bases for community-facing services such as Community Mental Health Teams, Assertive Outreach Teams and Crisis Resolution and Home Treatment Teams.
- ### Site selection
- 6.8 Site selection also takes account of the broad environmental context, not only of the sites, but of what lies beyond them, and how accessible they and their surrounding areas may be. The consideration of proximity to the service catchment area is important, given the need to provide care “as close as possible to the service user’s home”.
 - 6.9 Social inclusion is an important consideration. Centralising all services on a single site may hamper connection with other agencies and can isolate the service from the community it serves. It may also reinforce an inward-looking, institutional culture rather than effective integration with the community.
 - 6.10 Ease of access for families, carers and staff is a key consideration, including the availability of, and

access to, public and private transport, parking and cycle routes.

6.11 Other key design issues include:

- site topography, landscape and ecology;
- sustainability aspects;
- site size, boundaries and constraints;
- size of facility relative to size of site and need for open space;
- orientation;
- planning constraints.

New-build accommodation

6.12 It is not to be assumed at the masterplanning stage that new-build accommodation is required. There will be a range of options for the provision of new mental healthcare facilities. Some will involve the acquisition of entirely new sites, while others will rely upon an existing site or sharing a site with another healthcare provider, organisation or company.

6.13 Where an existing site is to be used, options may include:

- moving mental health facilities off the current site – this option presents the possibility of land sales, which may contribute to the total development costs;
- campus development – the masterplan may indicate a reduction in the size of individual developments, which may result in relocating the mental health facilities to a smaller, distinct portion of a current site and, again, further development or acquisition of the remainder of the site;
- integration of a new unit into a mixed-use development on a current site – this releases parts of a current site for development by outside agencies whose interests fit with a development control plan or masterplan for the site.

6.14 With some of these options, opportunities may arise that help with the regeneration of the local community, which can help to overcome the barriers of isolation, institutionalisation and stigma and create a new, more inclusive setting. Such a transformation may be achieved through a shared masterplan involving a range of stakeholders.

Refurbishment

6.15 In some circumstances, the refurbishment of existing facilities may be the most viable or practicable option. Care should be taken to ensure that the environmental quality and functional suitability of the building are not compromised in order to satisfy immediate need and constraints on available capital, since this may affect long-term outcomes, particularly if the project is of a medium-to-large scale.

6.16 The provision of en-suite bedrooms should be considered. The size of bedrooms should not be compromised but instead the overall number of bedrooms should be reduced.

Functional relationships

6.17 Various configurations of facilities are often combined within one unit. For example, in-patient facilities may be grouped with therapy and activity spaces that may be used by people accessing the unit from the community or by other healthcare providers. It is important to ensure that operational procedures and local policies reflect the way the spaces are used and respect service users' need for privacy and dignity.

6.18 Functional relationships also depend on where the service is sited – whether in existing premises such as a hospital, or in stand-alone units. Whichever model is adopted, all acute adult mental health facilities should be treated as physically discrete operational units.

Designating and grouping spaces

6.19 Acute services are used by a wide range of people, including service users, staff, carers, visitors, other support services staff and, where out-patient facilities are available, day patients.

6.20 In order to maintain safety, privacy and dignity, it may be useful at the planning stage to identify different “zones” within each unit. Typically, there are three main zones: public, semi-public and private. Identifying the functions and the range of users who may need to access each of these areas will help to determine the key elements of design and layout, and inform the development of the unit's operational policy.

6.21 Zones may also help in identifying effective circulation routes, access to external spaces and areas designated as staff-only.

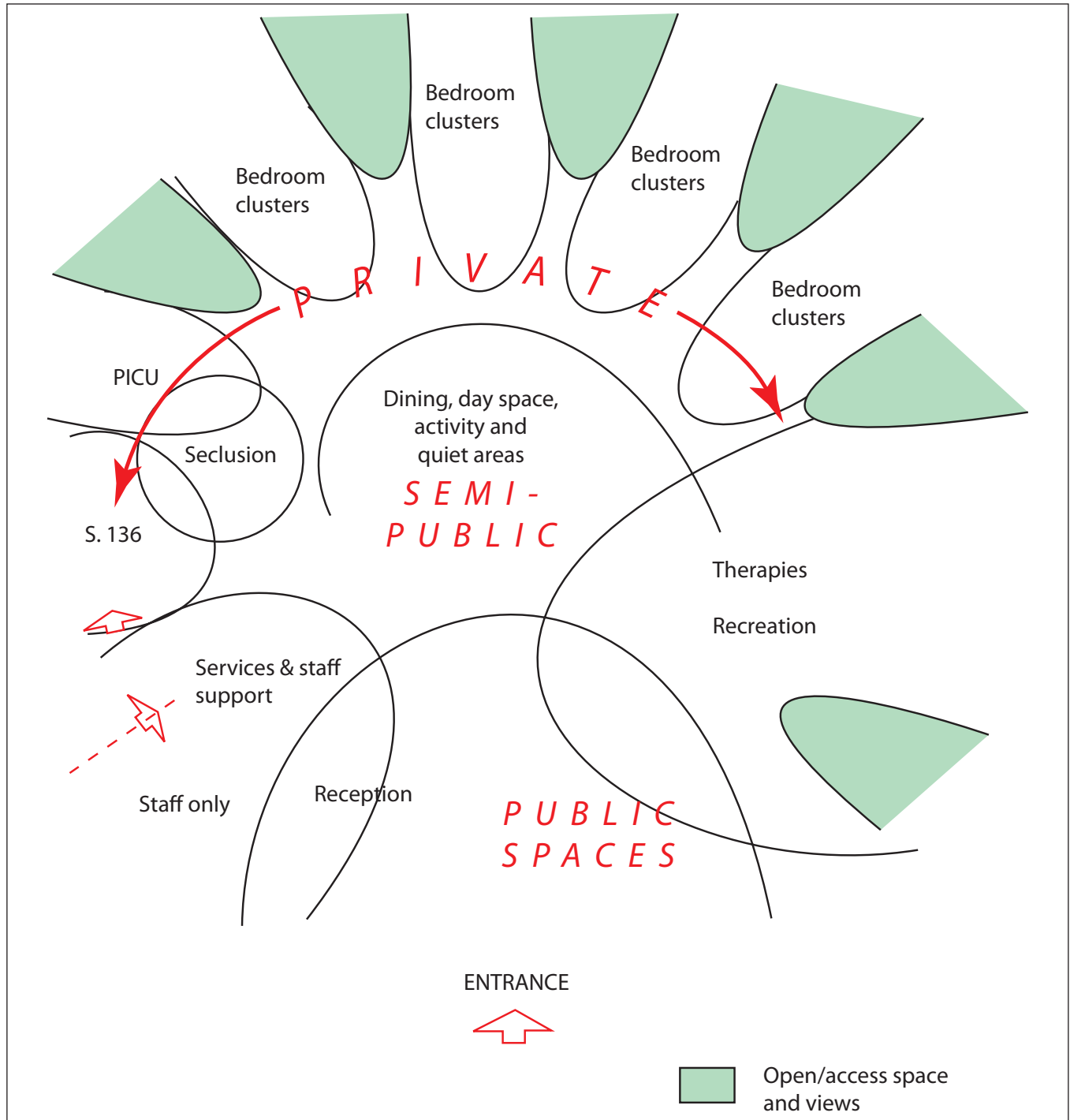


Figure 2 Designating and grouping spaces

Grouping spaces by function

6.22 Grouping rooms or other spaces according to their functions helps to establish the functional organisation of a facility. Within each main group, there will be a number of sub-groups. The component spaces within each group will be project-specific. For example, grouping certain functions close to the entrance will ease visitor access without disrupting care.

6.23 Grouping bedrooms close to communal spaces will allow a restless service user to move around without disrupting the service or obscuring sight lines. This functional grouping typically comprises the bedroom areas within the ward.

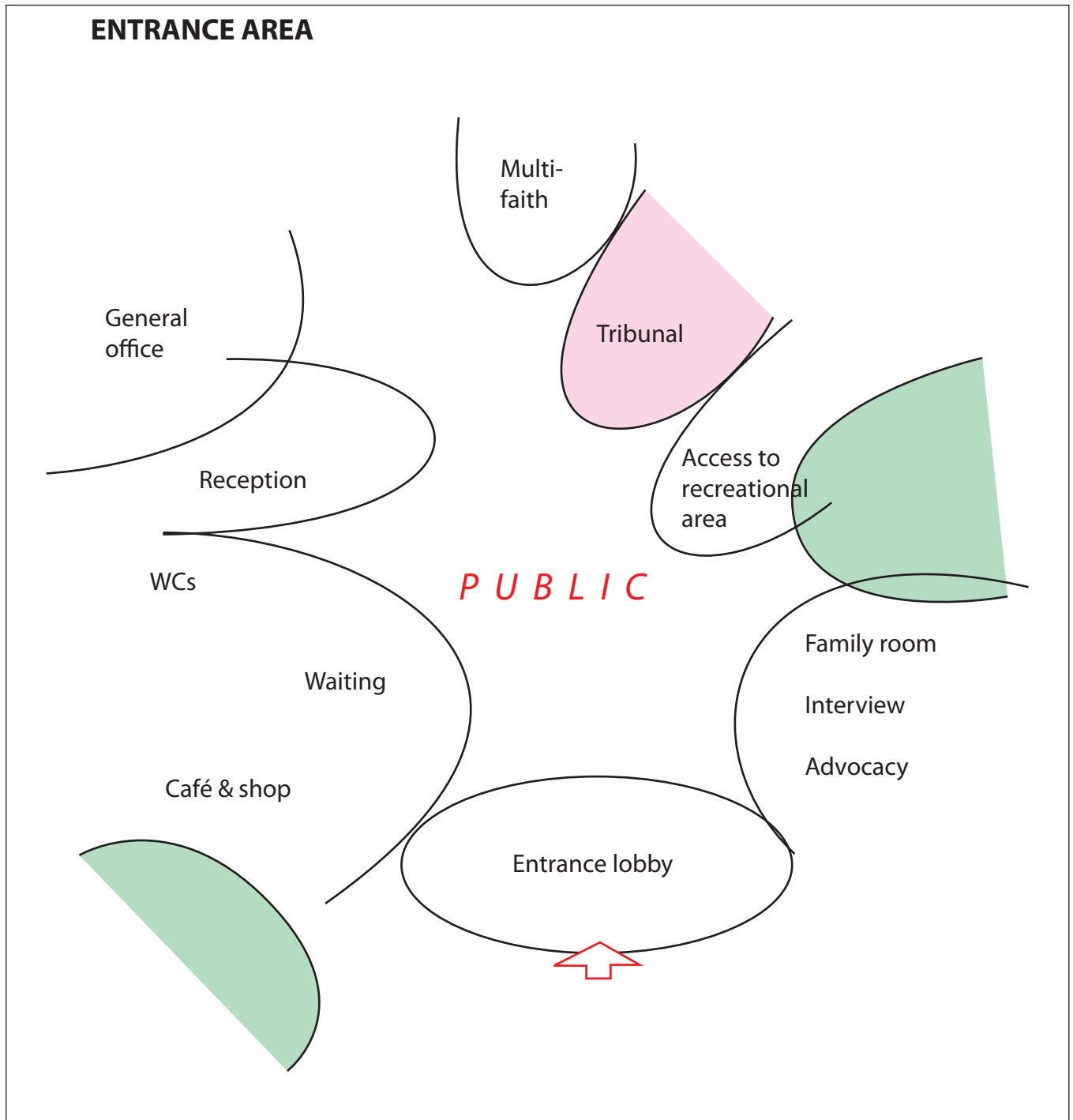


Figure 3 Entrance area

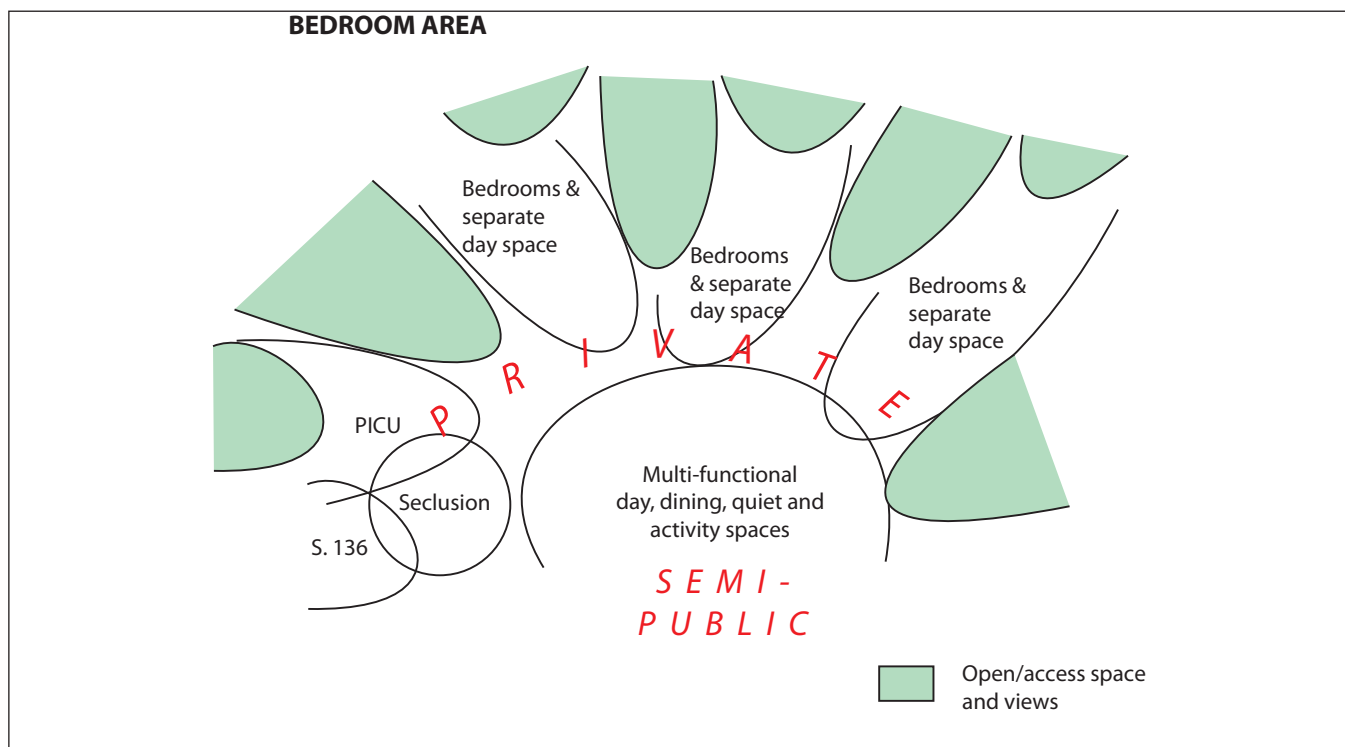


Figure 4 Bedroom area

6.24 There are a number of different groups of staff-only areas. They may be located centrally and shared by staff across the unit or they may be located within each ward area.

6.25 Therapy and treatment rooms may be located in a ward area or within a therapy department. Recreational and gym spaces may be shared with visitors to the unit or the wider community.

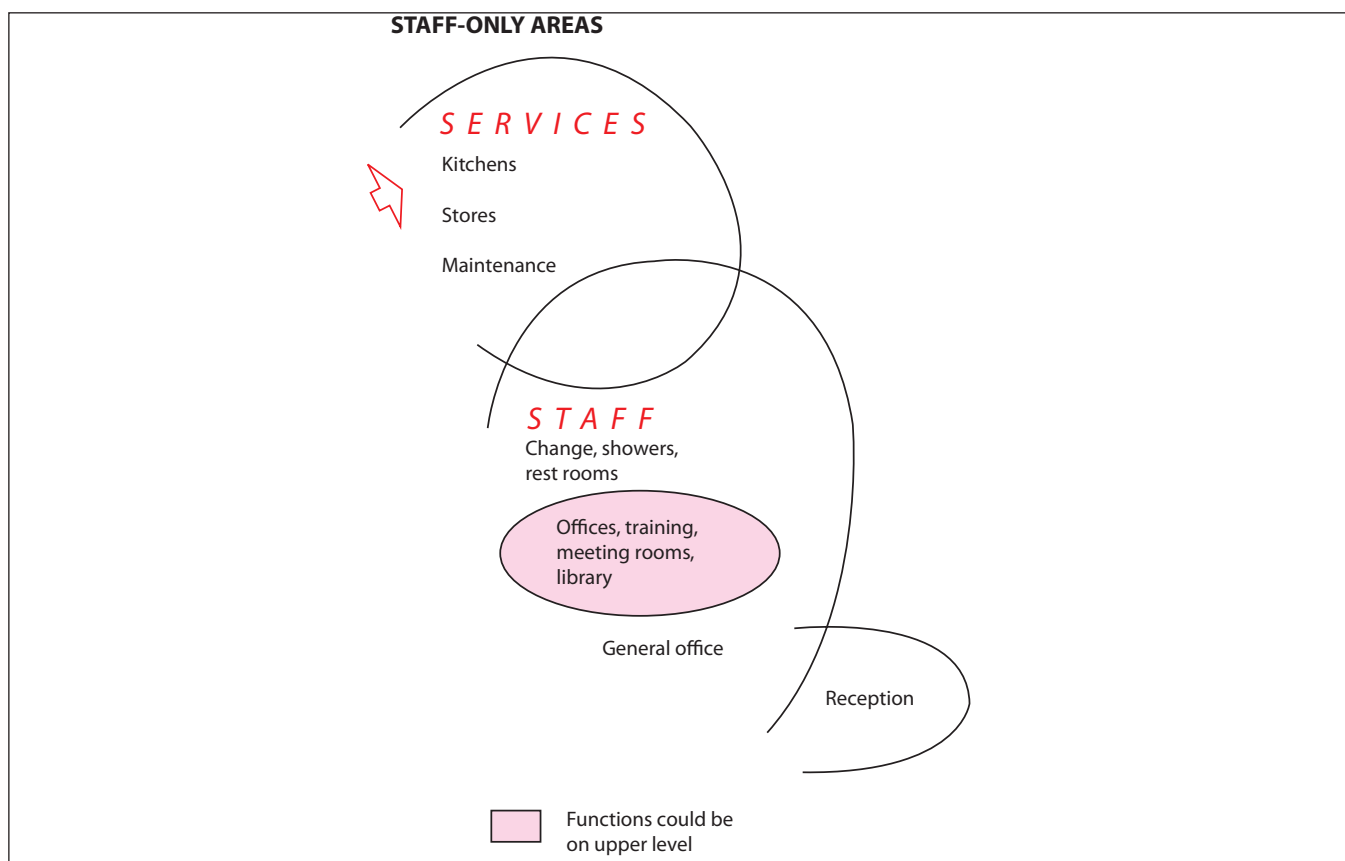


Figure 5 Staff-only areas

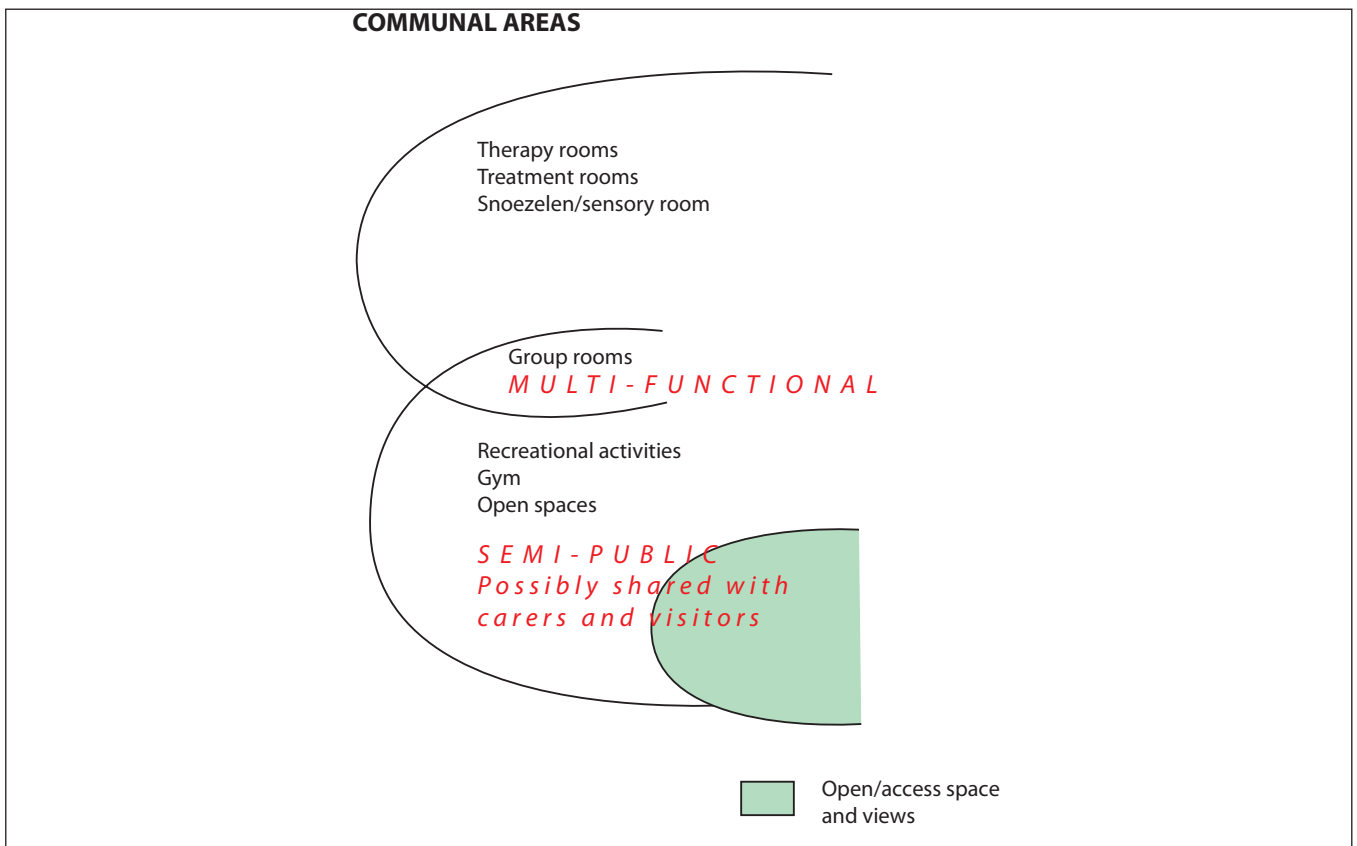


Figure 6 Communal areas

7 Design considerations

- 7.1 This chapter covers issues to consider in the design development phase and outlines the key principles that will help to create a therapeutic healing environment, and ways of achieving flexibility in design. The key challenge in the design and specification of a new or refurbished mental health facility is creating a calm, comfortable and non-institutional atmosphere, while meeting the functional requirements for the unit.
- 7.2 Although the effectiveness of relational security measures will largely be determined by operational staff, the design of the site and internal construction and building layouts can contribute in a significant way to promote the efficacy of these measures, and to avoid the requirement for additional staffing or technological systems.
- 7.3 Physical security includes the use of physical and structural measures and technological measures. They are an integral part of the design and specification, and should be considered at inception and throughout the design process. The aim should be to use physical security measures primarily as far as is practicable, and, where required, technological measures should be self-sufficient and supported by an emergency power supply.
- 7.4 The design of all facilities should prevent the unauthorised exit or entry of people and the passing of contraband.
- 7.5 The principles of sustainable development should guide the design team from the very earliest stages of design. For more information see Health Technical memorandum 07-07 – ‘Sustainable health and social care buildings: Strategic overview’.
- 7.6 When designing the layout of the buildings and their geographical location on site, service users’ privacy and dignity needs will be a key consideration. In addition, the following principles should be taken into account:
- 7.7 The adjacencies and proximity of buildings and services.
- 7.8 Providing a single main entrance with reception facilities will support safety in services. The main entrance acts as the gateway to all the unit’s services: there are no further entry or exit points for service users to or from on-site services.
- 7.9 Clear circulation routes are provided between different areas to give service users appropriate freedom of movement within the service.
- 7.10 External areas are planned and laid out so that they are as easy as possible to observe and do not provide opportunities for hiding or concealment.
- 7.11 Units require good lines of sight to maximise visibility and support safety. Blind corners, hidden recesses, dead-ends, isolated and dark areas, and long corridors are to be avoided.
- 7.12 The layout of the ward areas should facilitate good sight lines enabling visibility of most of the ward, and particularly of the ward entrance. This can be achieved by locating certain rooms, such as staff offices or bases, adjacent to the entrance or by ensuring that the main entrance is visible from the main ward area. Likewise, open planning of communal areas within the ward improves sight lines.
- 7.13 Access to engineering spaces (for example housing plant and equipment) is from non-service user areas, or should be accessed directly from outside the internal space wherever possible.
- 7.14 The route from the main entrance to the child visiting room is as short as possible. Ideally, a dedicated room may be located within the entrance area to the unit, and away from the main service user areas.

Site layout planning

- 7.6 When designing the layout of the buildings and their geographical location on site, service users’ privacy and dignity needs will be a key consideration. In addition, the following principles should be taken into account:

Vehicle access

- 7.15 The aim in an acute unit is to minimise vehicular movement, with the majority of vehicles accessing buildings via the service entrances. When planning

vehicular access, planners should consider the following:

- 7.16 Sufficient turning space and access for vehicles is allowed at the main entrance and all service entrances to buildings.
- 7.17 Access requirements for service deliveries and collections. These should not interfere with the daily access of service users, staff and visitors to and from the building.
- 7.18 Local policy determines the arrangements for routes shared between pedestrians and vehicles.

Vehicular access arrangements for visitors, including location and extent of car parking

- 7.19 Lighting designs in these areas should be sufficient to prevent dark areas.

Entrance and exit

- 7.20 Most adult acute units have some form of security arrangements on entrance doors. Where access to the entrance is controlled or monitored, or where the reception does not have 24-hour staffing, planners may consider the use of a doorbell, video and intercom provision. The service's operational policies should allow for out-of-hours access, particularly for emergency admissions.
- 7.21 There should ideally be only one entrance to an acute in-patient unit, through which all staff, service users and visitors gain access.
- 7.22 If the service includes a Place of Safety suite, this will require a dedicated and discrete entrance for vehicles.

Anti-ligature design

- 7.23 All fixtures and fittings such as window and door furniture, door closers and hinges, taps, showerheads and coat hooks should be anti-ligature, robust and able to withstand sustained attack, and meet national safety requirements. In general, all fixtures and fittings should be specified, manufactured, fitted and maintained to help prevent the possibility of accidents, misuse or use as weapons or to aid self-harm. Local risk assessment is necessary, with fitting according to manufacturers' instructions. Projections, level surfaces that could form hook points, and horizontal rails or similar are also to be avoided.
- 7.24 All fixtures and fittings should be anti-ligature.

- 7.25 As a rule, any fixture or fitting that could provide a ligature support should safely break free under weight.
- 7.26 The National Patient Safety Agency launched the Preventing Suicide Toolkit in 2008. The toolkit contains best practice guidance regarding the acute in-patient unit environment.



All fixtures and fittings should be anti-ligature

Medicines management

- 7.27 The environment for dispensing medicines should be designed for their effective and safe delivery. The environment should be designed to provide privacy, and be well lit to enable the clear interpretation of prescriptions within a well maintained and clean space. See the 'Mental Health Medicines Management Self Assessment Toolkit' (DH, 2008). See also 'Safe management of healthcare waste'.
- 7.28 Project teams should consider alternative options, such as:

- providing self-medication lockers located within the bedroom or in another designated room within the unit;
- providing a well-lit private room, close to the dispensing room, where service users may take their medication or hold discussions with staff in private; or
- taking medication to a service user in their bedroom.

Creating a therapeutic environment

7.29 Units that are pleasant and comfortable and that feel safe but not institutional have an important effect on service users and staff.



Pleasant, comfortable and non-institutional surroundings help create a therapeutic environment. Photograph courtesy of Devereux Architects.

7.30 Imaginative lighting, good acoustics and thoughtful grading of spaces will influence the atmosphere in a unit. This could be achieved with an appropriate choice of materials, furniture and fittings, with consideration to replacement and repair.

- 7.31 The Star Wards initiative has published two handbooks to help signpost good practice regarding the environment on in-patient mental health wards: *Star Wards 1: The Original* (Bright, 2006); and *Star Wards 2: The Sequel* (Bright, 2008). These can be downloaded from the Star Wards website.
- 7.32 All external areas and landscaping should use shading to minimise solar gain, encourage natural ventilation and ensure storm surge capture in drainage.



Use of shading to prevent solar gain. Photograph courtesy of Race Cottam Associates

Scale and space

- 7.33 Scale is a key factor in helping to create a sustainable therapeutic environment and needs careful consideration. In general, the larger the unit, the more complicated wayfinding becomes. Planners need to think about the potential for service users feeling or becoming isolated from the main unit community, as this will influence positioning and layout of spaces on units as well as within the wider service.
- 7.34 The report ‘Not just bricks and mortar’ (Royal College of Psychiatrists, 1998) stresses the need to avoid the “pressure cooker” effect of cramped accommodation. It is equally important to avoid excessively large and high spaces that are likely to be noisy and distressing to service users.
- 7.35 Spaces for social interaction may range from small, quiet spaces to larger, open-plan communal areas – depending on the needs of service users at any one time – to support and enhance therapeutic engagement.
- 7.36 A simple layout is preferable, with direct access and communication routes and identifiable focal points, eliminating the need for excessive signage.

Artworks, varying colours and flooring patterns and views across gardens and courtyards may also help with wayfinding and could be incorporated in the design and planning stages.

Light, colour and texture

- 7.37 All spaces used by service users and staff can benefit from natural light. Where natural light is not readily available, design solutions should be sought to increase the amount of light in the building.
- 7.38 A well-considered lighting scheme will help to promote a pleasant and restful environment. It will also consider which spaces may require higher lighting levels and will plan for them accordingly.
- 7.39 Glare and shadow should be minimised to allow faces to be seen clearly.
- 7.40 Colour and texture may help to differentiate spaces throughout the service and support wayfinding and orientation.
- 7.41 Certain patterns should be avoided in an acute mental health setting, such as checkerboard, lines and grids, as they can generate optical and kinaesthetic illusions. Similarly, glass partitions, stainless steel mirrors and other shiny reflecting surfaces and floors are to be avoided. The use of glass bricks can be assessed with this in mind.

Noise

- 7.42 The environment should be designed to minimise noise and promote a sense of calm and safety – for example by locating bedrooms away from communal areas.
- 7.43 Silent fire alarm systems should also be considered, linked to staff alarm pagers. This can avoid creating anxiety and may be beneficial in the case of a full evacuation.
- 7.44 Noise attenuation is also linked with privacy issues. In areas where personal and confidential discussions will take place, good sound insulation is essential. Measures to achieve good sound attenuation through surface finishes should be balanced with other requirements, such as infection control.

Ventilation

- 7.45 Certain fragrances may have the potential to reduce blood pressure and heart rate and can therefore have a positive effect in mental health to support therapy.

- 7.46 Unpleasant smells can have the opposite effect – and are often a problem in in-patient units. Good ventilation is required in en-suite bedrooms, and to prevent strong odours from areas such as kitchens and dining rooms spreading to adjacent areas.

External areas and landscaping

- 7.47 Access to fresh air and outdoor spaces, and the opportunity for reflection and social engagement, all play a significant role in supporting well-being and recovery. The external space accessed from the unit is viewed as a functional and therapeutic part of the service.
- 7.48 Park-like spaces with open grassy areas, herbs, textured plants and shrubs that attract wildlife can alleviate stress and help service users to feel more connected with nature. Raised flower beds may be considered, as these could incorporate seating and support therapeutic activities.
- 7.49 The following points are to be considered when designing external areas:
 - New sites should be large enough to provide more than just a buffer zone around the building.
 - Units should provide a range of external areas for service users, staff and visitors. Outdoor spaces should offer a range of activities, such as gardening, ball games, sitting, walking, resting and quiet contemplation. There should be a shaded area and also some cover from inclement weather.
 - Planting schemes should be imaginative, encourage use of the space and reflect the passing of seasons.
 - There should be level access from the unit to an external space. This space should be dedicated to the unit, and designed so that service users can be observed easily. This should provide a space where service users can relax or exercise and should be of sufficient size to accommodate at any one time all the service users on the unit.
 - External spaces should be orientated to maximise sunlight and maintain privacy.
 - All service user areas and bedrooms should have external views, preferably to gardens or courtyards, while maintaining users' need for privacy. Where possible, views out to the wider community are also desirable, to decrease the

feeling of isolation and institutionalism which can arise from looking inward.

- 7.50 Maintenance requirements should also be taken into account. Access for maintenance should ideally be from a corridor or directly from outside.
- 7.51 Gardens with green or relatively verdant foliage or flowers can be arranged in such a way that they offer a feeling of privacy but do not obscure sight lines or present opportunities for service users to conceal themselves.
- 7.52 Planners should avoid the possibility of contaminants, particularly glass and metals that could be picked up by service users. Sieved and screened topsoil is to be used.
- 7.53 Water features may be incorporated, following a local risk assessment and according to guidance on the control and prevention of Legionella.



An "external room" created to offer an extension of indoor facilities. Photograph courtesy of Devereux Architects

Artwork

- 7.54 The inclusion of artwork can be beneficial for service users, staff and visitors; it can lend a special identity to spaces and a sense of locality (wayfinding). Users may be consulted when selecting artworks; pieces created by therapists and users could be incorporated in the building designs.
- 7.55 Artwork may take many forms, such as paintings, murals, prints, photographs, sculptures, textile hangings, decorative tiles and ceramics. Pictures showing landscapes and seascapes are generally considered to be relaxing. Internal "views" can be created with murals and artwork.
- 7.56 See 'Enhancing the Healing Environment' (King's Fund, 2008) for a number of best practice examples.

7.57 Advice may be sought from experts on:

- obtaining grants. In some cases, funds for art within a capital scheme can be matched by grants from charities or regional arts boards;
- ensuring quality and suitability of types of art and craft work (for example in terms of safety and maintenance);
- locating art and craft works;
- selecting artists and craftspeople.

Visiting

- 7.58 Adult visiting may take place in a number of areas, such as the entrance area, a dedicated visiting area at the front of the unit or in specified areas within the unit or garden, to be decided locally.
- 7.59 Child visiting policies will be determined locally; the Mental Health Act Code of Practice highlights that wherever child visiting takes place, the accommodation is child-friendly. This guidance assumes provision of a multi-functional, child-friendly space close to the entrance, away from service user areas.

Food preparation

- 7.60 Food is an important part of recovery. Service users should be able to advocate on food matters, and have a say on decisions that affect catering on the unit.
- 7.61 With appropriate risk assessment, it is important that service users are able to carry out basic food and drink preparation themselves and that they are able to obtain a drink and snack at any time of day or night. Where visitors provide food for service users, there may be a local policy in place to address issues with the reheating of such food.
- 7.62 See also [paragraph 8.112 'Service users' pantry/ Refreshment room'](#).

Smoking

- 7.63 Smoking in any enclosed or substantially enclosed part of any mental health establishment was made illegal in 2008. Local policy should reflect this, with consideration to the paragraph below.
- 7.64 While smoking cessation help is offered to service users, a survey undertaken by the Mental Health Foundation showed that the prohibition of smoking could lead to secret smoking, which in turn poses a fire risk and an increase in violence

and aggression. Consideration may be given to the provision of external space for smoking, particularly for those service users who are unable to leave the unit. Outside space may be built into new units for those unable to benefit from smoking cessation programmes.

8 Room spaces

8.1 This chapter should be read in conjunction with the following chapters:

- Chapter 9, 'Furniture, fixtures and fittings';
- Chapter 10, 'Building construction and components';
- Chapter 11, 'Engineering considerations'.

Entrance area

Main entrance/reception

- 8.2 One main entrance to an acute mental health in-patient unit, for service users, staff and visitors, needs to be clearly visible from the outside and appear welcoming.
- 8.3 The main entrance may also have an external canopy to provide cover in inclement weather and a draught lobby for energy conservation.

Reception area

- 8.4 The reception area should have comfortable seating, good lighting, clear signage and an interior design that provides for a positive first impression for users and visitors.
- 8.5 Reception staff should be clearly visible, both from outside and from the lobby, in order that human contact is immediately established and an institutional effect is avoided.
- 8.6 The need for, and use of, CCTV in reception areas may be considered.

Reception desk

- 8.7 All visitors and service users will report to the reception desk. This may serve as a signing-in point for security and fire management registration. The desk/counter may be open rather than enclosed.

Reception office

- 8.8 It may be appropriate to locate the office with, or adjacent to, the reception desk, so that it can be

used as a safe room for personal security if necessary. If possible, the reception office should have a second exit leading away from the reception area into a staff-only area. In the design of this office, it is important to ease communication and access to staff.

8.9 This room should be the location for:

- specified indicator panels including those for fire, nurse call and staff attack alarms;
- monitors or controls for local CCTV.

Waiting area

- 8.10 The waiting area should be visible from the reception desk. It should be comfortably furnished, well-lit and welcoming and may benefit from the incorporation of artwork. Access to snacks and beverages should be available, possibly in the form of vending machines.
- 8.11 The size of the waiting area will depend on the projected number of service users and visitors to the unit.

Café

- 8.12 The inclusion of a café may improve the ambience of the entrance area and will provide additional space and seating for visitors.
- 8.13 The facility may be run by service users, voluntary sector organisations, franchised out to a third party or to healthcare providers' own catering suppliers. The planning and design requirements for kitchen and storage space will depend on whether food is prepared on site or ordered in.

Shop

- 8.14 A shop or retail outlet may be provided, possibly co-located with the café, depending on local circumstances. Storage facilities may be required depending on how the shop is to be run and the type of goods sold.

Sanitary facilities

- 8.15 Male, female and accessible WCs will be required within the entrance area; the exact number will be determined at the design stage. Separate baby changing facilities should also be appropriately located, either within the entrance area or close to the child/family visiting room.

Child/family/carer visiting room

- 8.16 It is advisable for child visiting to take place away from the main ward area whenever possible. A centralised room in the entrance/reception area to the building is the most appropriate to ensure that a child goes no further into the unit than necessary. This will be a local policy decision. However, if this is not possible, a multi-purpose interview/visiting room at the entrance to the unit should be provided.
- 8.17 The room should be simply furnished with easy chairs and an occasional table, leaving space for play. It is required to be easy to clean and maintain, with natural light and views to the outside and easy access to baby changing facilities.



Views to outside are important for patients

General office, service user bank and safe

- 8.18 The general office functions as the administrative office for the unit. It may also be the location for a safe in which to store service users' valuables. Wherever the safe is located, it should be contained within either a lockable room or a room with access control measures so that only authorised persons can enter.
- 8.19 Typically, two to three workstations may be provided, with storage space as required.
- 8.20 Indicator panels and CCTV may also be located in the general office if not within the reception office.
- 8.21 A service user bank facility may also be located here or in a separate office. A pass-through reception screen will be required. If in a separate office, a workstation and safe will be needed in that room.

Advocacy office

- 8.22 An office workspace may be required, located close to the main entrance for use by service user and carer support organisations. The room should be able to accommodate one person for office work and up to two visitors.

Interview room

- 8.23 An interview room is required for confidential interviews. This room is required to have comfortable seating, access to a telephone and outside views. Good soundproofing will be required for privacy. For further information see Health Technical Memorandum 08-01 – 'Acoustics'.

Tribunal/conference suite

- 8.24 The service should provide appropriate facilities and accommodation for tribunals. The tribunal room could be used for more than one function and may be designed accordingly, for maximum flexibility.
- 8.25 Special consideration should be given to the acoustic quality of the environment. For further information see Health Technical Memorandum 08-01 – 'Acoustics'.
- 8.26 A dedicated sub-waiting area with access to beverages is required.
- 8.27 Access should be given to an office with the appropriate number of workstations for the Mental Health Act administrators (this could be shared depending on location).

- 8.28 Easy access should be given to interview and multifunctional rooms for private consultations. These may be provided within a dedicated suite or co-located with a meeting/training room area.

Multi-faith room/suite

- 8.29 This space should be large enough to hold between four and eight people. It will be used as a quiet room for worship, meditation, reflection and counselling and should be available to everyone who attends the unit. Consideration needs to be given to local needs, including the range of denominations and faiths wishing to use the accommodation.

- 8.30 The room will require:

- space for coats;
- suitable storage cupboard for accessories of worship;
- suitable table or box platform to support the symbols of worship when in use;
- easy and upright chairs;
- appropriate washing facilities.

Medical records store

- 8.31 Planners may consider whether a dedicated records store is required.
- 8.32 The current requirement for the storage of mental health records is 20 years after the date of last contact between the service user and any healthcare provider, or eight years after the service user's death if sooner.
- 8.33 For in-patient units, local policy will determine the location of storage of current in-patient records. This guidance assumes that the unit holds current records and that those not in use are stored in a remote archive or with other records elsewhere.
- 8.34 The size of the records store required is dependent on the number of records to be kept, how advanced the move to electronic service user records is, and the method of storage. The store is required to be enclosed and lockable, or have a fail-safe means of securing records, should an emergency arise.

Patient areas

Bed areas

- 8.35 Bedrooms may be grouped into small clusters of about five rooms to help create a more pleasant

environment. Quiet rooms and small day rooms can be made into suites with the bedrooms. This may allow for greater flexibility to create a small sub-unit within the unit to cater for specific needs, such as providing same-sex accommodation.

Swing zones

- 8.36 Swing zones allow flexibility – for example to alter the ratio of male to female bedroom accommodation or to create sub-areas based on service user need, acuity or vulnerability. For example, an area between a male and female bedroom wing with seven bedrooms on one side and eight on the other side, that are accessed from separate areas, could be changed to give six and nine or five and ten bedrooms. Other rooms – such as a quiet sitting-room dining-room and even external space – may be required within the zones to give further flexibility.
- 8.37 Swing zones are often achieved by opening or shutting doors within the corridor, so that spaces can be flexed in, flexed out and closed off, depending on service user need and fire safety. This only works effectively if the accommodation can be accessed from two directions, thereby increasing or decreasing the number of rooms on either side; numbers of rooms would be dependent on the design and the project-specific requirements. A swing zone might ideally therefore be located at the intersections of accommodation wings, to allow more flexibility. Courtyard plan types may be an effective way to achieve this, and offer some advantages over conventional linear plans with dead-end corridors.
- 8.38 If a swing zone is used to create a sub-area, other rooms – such as a quiet sitting room, dining room and even external space – may be required within the zone to give further flexibility.
- 8.39 Swing zones, with the placing of doors within the corridor, are required not to detract from the ambience of the unit nor significantly reduce sight lines. Care needs to be taken to ensure that they do not create hazard areas, or opportunities for hiding, concealment or barricading. Fire safety should also be carefully considered.

Single bedroom

- 8.40 Service user bedrooms should be single rooms and provide facilities to cater for the sleeping, personal, living and sanitary needs of service users.

- 8.41 The bedroom should be a minimum of 15 m² including an en-suite facility. If en-suite facilities are not achievable with projected numbers of beds, planners may wish to consider reducing the number of beds.
- 8.42 Each bedroom should have a staff-call facility.
- 8.43 The layouts of rooms, fixed furniture and equipment ideally should ensure that the service user is not able to position themselves unseen in the room.
- 8.44 The design should ensure that access to and egress from the room are not compromised in the event of a fire or other emergency.
- 8.45 The design should allow for such facilities as television, radio, personal media equipment and internal communications.
- 8.46 Bed height should be such that users can easily get in and out. Beds may be of a divan type to avoid problems with bed-making.
- 8.47 Anti-ligature wardrobe, drawers or shelves, a desk or work surface and a chair should be provided. Furniture and fittings within the bedroom should be built-in, where possible, including for TV and CD players.
- 8.48 Lockable personal storage facilities for clothing and possessions should be provided within each bedroom. Self-medication lockers may also be available within the bedroom, depending on local policy.
- 8.49 Speech privacy is very important, as service users may be interviewed in their rooms. An adequate level of sound attenuation is required.
- 8.50 Bedrooms should not be overlooked, and it should not be possible to approach the window closely from the outside to look into the room.
- 8.51 The window should be positioned to allow the service user to see out when seated.
- 8.52 Standard hospital bed-head units, piped oxygen and suction are not required, since service users with more serious physical illness would be cared for in an acute hospital setting.
- 8.53 Each room should have tamper-proof mechanical and electrical services fittings and fixings. The lighting, water and electrical override controls should be located external to the bedroom.
- 8.54 Bedroom doors should have a vision panel to allow staff observation into the room. Some means of obscuring the vision panel, controlled by the service user but with staff over-ride, will be required. A number of solutions are available, including observation panels that change from white to clear.
- 8.55 Generally, the use of inward-opening, single-leaf doors is considered to be more conducive to a homely, less institutionalised environment.
- 8.56 Doors should be capable of being opened outwards in an emergency situation, so that service users may not barricade themselves in. Care is required to ensure that sound privacy is not compromised and that the emergency anti-barricade system does not allow a view into the room.
- 8.57 Service users should be able to lock their rooms both when they are inside the room and on leaving it to safeguard their property and to increase the feeling of safety, privacy and dignity. However, staff will need the facility to override the lock.
- 8.58 The number of electrical socket-outlets provided will depend on lighting and cleaning requirements and on the allowance for personal electronic equipment. These will be determined by the project requirements and local policy.
- 8.59 A single socket should be located close to each doorway so that cleaning can be undertaken easily in each room.
- 8.60 Provision may be made for data points within the room. If a built-in unit is to be constructed for media equipment, the socket-outlets should be located close to the unit. See Health Technical Memorandum 06-01 – ‘Electrical services supply and distribution’.
- 8.61 Wherever possible, rooms should be arranged in pairs so that they share common services. All pipework and services should be located in a secure duct adjacent to the room and should only be accessible from the circulation area or non-service user areas.

Single accessible bedroom

- 8.62 Accessible bedrooms are usually larger than standard rooms to accommodate a person in a wheelchair or someone who may require assistance because of mobility problems. Accessible bedrooms are to be between 17 m² to 19 m² including an en-suite.
- 8.63 Generally, the same principles for bedrooms apply to this room, except that a variable-height bed may

be provided if a service user has difficulty with the height of a divan-type bed.

- 8.64 Separate storage may be needed for these beds when not in use.
- 8.65 A full-length unbreakable mirror will be required either in the accessible bedroom or the associated en-suite facility.

En-suite facilities

- 8.66 All bedrooms should be provided with an en-suite facility, comprising WC, wash-hand basin and shower, which is directly accessible from within the bedroom and is not shared.
- 8.67 En-suite facilities should be for sole use only.
- 8.68 En-suites will be accessible directly from the bedroom and are required to be for sole use only (that is, not shared).
- 8.69 The following principles apply to all en-suite and communal bathroom facilities:
- 8.70 Fixtures and fittings should be robust, anti-ligature, prevent opportunities for concealment and meet infection control requirements.
- 8.71 En-suites are fitted with toilets, shower and wash-hand basin, unbreakable mirror and a floor drain.
- 8.72 Water supplies to taps, shower, bath and the flushing of the WC are “wave-on/ wave-off” technology or have a push-button or electric sensor with timer control.
- 8.73 All ductwork, plumbing and pipework is concealed.
- 8.74 All services have individual, local, separate means of isolation, for maintenance purposes.
- 8.75 The water and electrical supplies to the bathroom can be isolated by staff from outside the room.
- 8.76 Finishes should be slip-resistant, and walls have a seamless finish.
- 8.77 Some of the en-suite facilities should be fully accessible for wheelchair users; the number of en-suites is to be determined locally. For service users who are disabled, removable grab bars are required in the accessible en-suites; these should be kept in a store and fixed with secure means only when needed. There may be a requirement for service user/staff call systems.
- 8.78 Light switches should be located in the bedroom area, outside the en-suite door.

8.79 The door to the en-suite facilities should have a roller catch to enable access by staff if required.

- 8.80 The door opens out but should not obscure the bedhead completely or mask any part of the bedroom from the bedroom door vision panel. There is a requirement for staff to be able to lock the bathroom door in both the open and closed positions.

Accessible bathrooms and WCs

- 8.81 Each ward should have a bathroom for service user use that is also fully accessible for wheelchair users, as this could enable staff to care for a service user on the unit who is physically unwell. Where a ward is mixed-sex, it may be necessary to locate one assisted bathroom within each of the same-sex bedroom areas.
- 8.82 The bathroom should be a minimum of 15 m² and suitably located within easy access of the bedrooms.
- 8.83 A mobile hoist should be available for use in this room and may be stored in a specially designed recess with a locked shutter within the bathroom. This may increase the size of the room.

WC: independent wheelchair

- 8.84 Each ward is required to provide the appropriate number of WCs accessible from communal and activity spaces. They need to be located close to where staff are based, as it is likely that they will be kept locked and opened by staff when required.
- 8.85 The door is required to be fitted with a privacy lock and indicator bolt that can be overridden by staff from the outside.

Communal areas

- 8.86 Service users, staff and visitors are likely to use communal areas more than any other areas. These help to create a therapeutic feel to the unit, and may be open-plan, enhancing the environment by creating a light and airy space at the heart of the unit. Welcoming, functional communal spaces will also help staff engage with service users.

Sitting area/room

- 8.87 This is one of the main areas where service users may relax and socialise. A beverage point may be available close by.
- 8.88 In order to increase flexibility and to create a central, light, communal space to the unit, this



Communal areas may be open-plan. Photograph courtesy of Devereux Architects

room could be open-plan with other spaces, for example the dining room or activity room.

- 8.89 The sitting room may be located to give good views of the general activity in the area, with level access to the garden area. Good sightlines through the room to the garden may be conducive to service user relaxation; the garden could be considered as a “room without a roof”.
- 8.90 Views to outside are important for service users.
- 8.91 Fittings and furniture may include:
- storage for games, books and magazines;
 - coffee tables and semi-easy and easy chairs;
 - entertainment facilities.
- 8.92 The use of different floor finishes, fabrics, fittings, seating, storage units and other means of partitioning the space can assist in creating smaller areas for a more domestic feel. Care can be taken in the design and furnishings to reduce the impact of noise reverberation.
- 8.93 Consideration may be given to the location of the television, particularly if the sitting/dining area is to be of open-plan design.

Dining area

- 8.94 The size of the dining area will depend on the number of service users catered for and the amount of storage required in the area.
- 8.95 If opting for central dining – that is, one dining area for a number of wards – careful consideration is required regarding the extent and location of dining provision on the unit for those service users who are unable to leave the ward areas, as it may involve duplicating furniture and equipment as well as space.

- 8.96 The dining area could be multifunctional, potentially used for games, social activities and meetings, particularly if designed as part of an open-plan communal space as described above.
- 8.97 The quality of the decor and furnishings is important in creating a comfortable, relaxed environment. Round tables and seating to accommodate four to five people are recommended.
- 8.98 The type of catering used depends on local decision. Options for serving food include:
- self-service;
 - serving at the servery;
 - serving at the table;
 - a plated meal or tray service.
- 8.99 The space requirements for equipment and storage will need to be assessed locally. Cutlery and crockery may need to be stored in locked cupboards within the dining area rather than in the kitchen.

Quiet room

- 8.100 Quiet rooms provide an alternative to a larger communal sitting room, especially when the communal space is open-plan. It may be important to have at least one same-sex quiet room; inclusion of a quiet room within same-sex bedroom areas will assist in the functionality of these areas.
- 8.101 Quiet rooms may offer a number of uses depending on where they are located within the unit. For example, they could be used for de-escalation, meetings or one-to-one therapy sessions. This would depend on local policy.

Activity area

- 8.102 An activity area may be provided for games such as snooker or pool, table tennis and/or interactive computer games. The space requirements for equipment and storage will need to be assessed locally.
- 8.103 Physical activities such as ball games or gym workouts may take place elsewhere in the unit, but it is important to provide an activity area for those service users who are not permitted to leave the unit.

Service user telephone

- 8.104 Control of access to mobile phones will be determined by local policy.
- 8.105 Where access to a telephone is required close to the communal living areas, this may be either a small booth or a dedicated area, but privacy and confidentiality should be ensured through careful positioning and adequate sound attenuation.
- 8.106 The telephone should be fixed to either a vertical or horizontal surface and at a level suitable for wheelchair users. A chair should be available for those with mobility difficulties.
- 8.107 See also [Chapter 11, 'Engineering considerations'](#).

Staff communication base/ward base

- 8.108 The ward base acts as the hub and focal point of the unit, with good sightlines to the main service user areas, including the unit entrance and garden area.
- 8.109 The base could be an open-plan space or an office space. A clearly defined but open-plan space may encourage greater engagement of and accessibility to staff. Where an open-plan solution is in use, separate areas for confidential working and storage will be important.

Unit support spaces

Unit kitchen/servery

- 8.110 The size and equipping of a kitchen will depend on the type of catering planned as part of the wider service lifestyle and eating strategy (whether cook-chill/ cookfreeze or traditional service) and whether it operates as a central kitchen for several wards, a satellite facility or a single kitchen for the unit or ward. If the solution is a central kitchen or a satellite facility, a kitchen/servery will be required.
- 8.111 The servery may be located adjacent to the dining area and with ease of access to the unit entrances for deliveries. It would be designated as a staff-only area, and security and access may be considered within the local policies and procedures. The following may be given consideration:
- Boilers and other heating devices are able to be locked and isolated, or locked away, or rendered inoperable by staff when required.

- All food preparation and waste disposal equipment within the kitchen are able to be individually locked and isolated by staff when required.
- All cupboards and drawers in the kitchen are lockable.
- If a servery hatch is provided between the kitchen/servery and dining room, it is designed to lock securely closed when not in use and is fire-resistant.
- The primary food preparation area complies with all hygiene regulations for public services. Independent hand washing facilities are required.
- Regeneration ovens and a dishwasher may be provided, depending on operational policy.

Service users' pantry/Refreshment room

- 8.112 If located in a bay, a fire shutter will be required for fire safety purposes and to allow staff to lock off the area if necessary. Cupboards and drawers may be lockable. Appropriate storage and washing-up facilities will be required.

Service users' property store

- 8.113 A secure property store will hold service users' personal items on either a temporary or longer-term basis at the discretion of staff. Staff will control access to the store, which could be a subsection of a larger store shared by other wards or units, depending on local policy.

Service users' utility

- 8.114 A laundry room should be provided in each unit or ward for service users to undertake the laundering of personal clothing. Space will be required for work surfaces, to allow the folding of clothes; a washing machine; tumble drier; ironing board and iron. A suitable sink unit for washing delicate items should be included. These facilities should not be used for the washing of bed linen or other unit laundry. Staff should be able to lock this area when not in use.

Dirty utility

- 8.115 Local policy will determine the requirements for this room, including whether or not bedpan processing is required.

Disposal hold

- 8.116 The local waste disposal policy will determine the requirements for this room.

Clinical/therapy areas

Treatment room

- 8.117 Space will be needed to assemble and prepare equipment for clinical procedures, and secure storage will be needed for drugs, medicines, lotions plus a small working stock of clean and sterile supplies. A secure-locked controlled drugs cupboard should be located within this room for the secure storage of drugs and medicines. Prescribed drugs and medicine may be dispensed from this room. Stable doors are to be avoided for issues of privacy and dignity.
- 8.118 Consideration should be given during the design process to the administering of medication, injections, first aid, physical examinations and other clinical procedures such as venepuncture that may be carried out in this room.
- 8.119 Mobile resuscitation equipment including a crash bag and an integrated defibrillator/ECG machine may also be stored here. This equipment will require a power supply to facilitate charging. Local arrangements will ensure this equipment is immediately available when needed and complies with the latest guidance from the Resuscitation Council (UK) for the minimum equipment for In-Hospital Adult Resuscitation. Reference should be made to 'Resuscitation in mental health and learning disability settings' (NPSA 2009) and 'Seven steps to patient safety in mental health' (NPSA 2008).
- 8.120 Project teams may consider the alternative options available, such as providing a small private room with access to either the treatment/clean utility, or a dedicated drug storage room (which would be a staff-only room and would not require a window). Self-medication lockers, or taking medication to a service user in their bedroom, are other alternatives. If a private room is provided, it could contain two comfortable chairs, an occasional table and space for leaflets.

Therapy rooms

- 8.121 The number and type of rooms required may be decided locally following the advice of clinicians and other specialist practitioners. The local service

model of care will inform the type of therapy rooms included within a unit. The rooms referred to below serve only as an indication of the type and range of rooms that could be provided, and should not therefore be considered as a prescriptive or exhaustive list.

- 8.122 The therapy area may form a part of the unit, or be provided in a separate dedicated area. If provided in a dedicated area, it may be necessary for additional multifunctional space to be added in the ward area for those service users unable to leave the ward.
- 8.123 Most therapy activities do not require specific equipment, so flexibility of design will ensure that each room can accommodate a variety of therapies, and other functions such as counselling and training. Natural light and access to outside spaces are important.
- 8.124 Certain therapies may require additional specifications and fittings, to be advised on a project-specific basis.

Arts and craft room

- 8.125 This room may be equipped for a range of activities, such as painting and pottery. Sink facilities and easy-to-clean flooring are required. If a kiln is provided, this could be located in a separate secure area with controlled access. Extract ventilation is essential, so external wall access is necessary.
- 8.126 Lockable storage is required, including storage for flammable liquids. Drying space may also be required for artwork.
- 8.127 The full range of activities will be decided locally and the operational policies will need to reflect the need for supervision and storage of some tools and materials.

Group therapy rooms

- 8.128 Group therapy rooms have similar requirements to therapy rooms, but need to accommodate larger group activities, which may range from relaxation (where people may be prone or supine), to dance, drama, therapy and other physical activities.
- 8.129 Storage space may be required for larger equipment such as musical instruments or media equipment.

Therapy kitchen

- 8.130 The kitchen should be “domestic” in appearance and size, capable of accommodating a small group, and containing equipment similar to that found in the home.
- Both gas and electric cookers may be made available, but the cookers should not be located in corners.
 - Equipment required may include a microwave oven, a dishwasher and other portable electrical equipment such as mixers and blenders.
 - Lockable storage will be required.
 - There should be space for two or three service users to work with staff and to sit down and eat.

Sports room/gym

- 8.131 An indoor exercise facility should be made available for use in inclement weather. This could be provided either within the building or as a covered/three-sided area located externally.
- 8.132 The size of the sports room will depend on local requirements and whether or not it incorporates a gym. Provision of a dedicated gym will be a local decision. The layout and equipping of this room will depend on local decisions and operational policies, especially those relating to supervision within the area.
- 8.133 If the space is a dedicated sports hall, a wooden or soft vinyl sports floor is appropriate.
- 8.134 Space will be required for storage of sports or gym equipment. Access to drinking water should be provided. Cooling may be required.

Sensory room/Snoezelen

- 8.135 A sensory room incorporates the use of lighting and other sensory equipment to create a stimulating and relaxing environment.
- 8.136 If provided, it is important to obtain a clear understanding of the equipment required within the room to ensure that structural and service requirements can be met. For example, there may be a need to hang equipment from the walls or ceilings, and additional power sources may be required for some of the equipment.

Therapy office

- 8.137 Depending on the size and location of the therapy suite, multi-disciplinary office accommodation may be required within the service. However, this could be included within the office administration area of the unit.

Seclusion suite (optional)

- 8.138 The requirement for a seclusion suite in an adult acute unit would be a local decision and would form part of the local service model of care. However, a seclusion suite is more frequently associated with the accommodation for a psychiatric intensive care unit (PICU), rather than with an acute unit where it may be preferable to have a dedicated de-escalation area.
- 8.139 The seclusion suite is a single-function space; it should be en-suite and specifically designed for low levels of stimulus and to ensure the safety and physical wellbeing of the service user. All fixtures, furniture and fittings are required to limit substantially the risk and ability of service users to harm themselves or others.
- 8.140 The design and location are required to protect service users’ privacy and dignity and minimise interaction between secluded and non-secluded service users. In addition:
- a clock should be visible to a service user in seclusion;
 - seclusion facilities should be located away from other service users’ rooms. Locating seclusion facilities at points where wards meet will enable rooms to be available for either ward;
 - wherever possible, seclusion facilities should be arranged so that they share common services with ward areas;
 - all pipework and services should be located in a secure duct adjacent to the room and should only be accessible from the non-service user area;
 - the seclusion suite should be located away from main thoroughfares and in an area that is not visible by other service users;
 - staff should be able to observe the entire suite. Consideration should be given to how staff will use the approach to and space within and around the suite to manage, observe and support service users;

- the area staff use in the seclusion suite during the time they are supporting and observing service users should not be used as office space;
- each seclusion suite should have tamper-proof mechanical and electrical services fittings. The lighting, water and electrical override controls should be external to the suite;
- the suite should provide adequate ventilation, heating, cooling and water: these may be controlled by staff from outside the suite. The window should not open and ideally needs to have an integral blind controlled from outside the room by staff;
- the service user seclusion bedroom should be a minimum of 15 m² including the en-suite facility. Any door between the bedroom and en-suite should be fitted with a fully encased lock-back facility.

De-escalation area

- 8.141 The de-escalation room or area can provide a quiet, low-stimulus space for service users experiencing high levels of arousal who may not require a period of seclusion. It can also be used as part of the therapeutic process, for example when service users are moving out of seclusion (where provided) and back into the main ward area.
- 8.142 The de-escalation space is planned as a single-purpose area or room; it may be close or connected to the seclusion suite. Planners should consider how staff will use the space during the therapeutic process and, although a low-stimulus space, thought should be given to providing centrally controlled music. Spaces used for de-escalation should be:
- minimally furnished with either robust furniture that cannot be lifted and thrown, or lightweight furniture (for example foam) that would not cause injury or damage if thrown;
 - soothing in décor, with muted and restful colours;
 - quiet, without a telephone or television.

Place of Safety (Section 136 facility) (optional)

- 8.143 A “Place of Safety” facility is a suite of rooms located within an acute unit, designed to provide a safe environment for the psychiatric assessment of service users who may have been detained by the police under Section 136 of the Mental Health

Act. The context for Places of Safety is detailed in the Code of Practice: Mental Health Act 1983 (revised 2008). Overall, a place of safety should enable a service user’s privacy and confidentiality to be respected.

- 8.144 The 136 suite may be located with easy access to a psychiatric intensive care unit (PICU) or a ward. This allows direct transfer to an appropriate facility once the initial assessment has been undertaken and an appropriate treatment regime agreed.
- 8.145 The facility will require a discrete vehicle entrance that is not overlooked, to allow for the transfer of people who may be greatly distressed and with a police escort to and from the suite. This may also be the Section 136 suite entrance.
- 8.146 A waiting area will be required, with WC facilities and a beverage point, possibly in the form of a vending machine, for escorts.
- 8.147 The interview/assessment room should accommodate up to six people, with space for assessment and restraining where necessary. A door may be required at opposite ends of the room for safety reasons. Adequate sound attenuation is required so that conversations are not overheard outside the room.
- 8.148 The room may also need to accommodate the following:
- a phone line with outside dialling;
 - a choice of fixed upright and easy chairs;
 - good lighting;
 - good observation into the room from a vision panel in the door or wall;
 - CCTV.
- 8.149 An office will be required within the suite of rooms. If a lockable drugs cupboard is provided within the suite it should be located within this office. The room will need:
- a desk with space for a computer;
 - a phone line with outside dialling;
 - good lighting.
- 8.150 A bedroom/rest room with en-suite may be provided for occasions when a person remains in the facility for a prolonged period. This should be located close to other staffed areas and be easily accessed by a team trained in physical intervention and the use of resuscitation equipment.



An entrance that is not overlooked will allow for the transfer of people who are greatly distressed. Photograph courtesy of Race Cottam Associates

Electroconvulsive therapy (ECT) suite (optional)

- 8.151 Planners may consider the need for and location of ECT provision, and whether this will be a shared service for the wider organisation or a dedicated facility. Planners may also consider proximity to local acute hospital services and arrangements for transport in the event of an emergency.
- 8.152 If provided, the ECT suite should be designed to meet the standards of the Royal College of Psychiatrists' Electroconvulsive Therapy Accreditation Service (ECTAS), outlined in 'The ECT Handbook' (2005).
- 8.153 Circulation and service user flow needs to avoid incoming and outgoing service users passing one another. A separate entrance or lobby/ante-room should therefore be provided.
- 8.154 A small waiting area is required to accommodate up to four people, preferably with external views and access to an assisted WC.
- 8.155 The service user flow through the suite is from the waiting area to the treatment room, to the primary

recovery room to post-ECT recovery and then out of the suite without accessing or returning to the waiting area.

- 8.156 Flexibility and value for money can be achieved by ensuring that rooms that are not in constant use are planned and designed to accommodate other uses. For example, the ECT suite's waiting area, post-ECT lounge and office could all be used for other functions.

Treatment room

- 8.157 The trolley bed should have a low-level tray for personal effects.
- 8.158 Service users waiting should not have a view of the treatment room when the door is opened.
- 8.159 This room needs good soundproofing from the waiting area or to be separated by a lobby.
- 8.160 Anaesthetic gases will be used in this room, so appropriate scavenging ventilation will be required.
- 8.161 This room also functions as a clean utility room where equipment and drugs are prepared. Work surfaces, cupboards and a small pharmacy fridge should be provided.
- 8.162 Colour-corrected lighting of high and low intensity is required. Translucent or high opaque glass in the window is preferable to curtains. Consideration should be given to the distraction of shadows and reflections through glazing sections.
- 8.163 Provision for positive pressure respiration is required, with oxygen, suction and emergency resuscitation; this can be supplied by mobile units or via a central piped medical gas system (see Health Technical Memorandum 02-01 – 'Medical gas pipeline systems', Part A).
- 8.164 A sink with hot and cold water should be provided.
- 8.165 Trolley access is required from the treatment room to the recovery room.
- 8.166 While this room does not lend itself easily to being used for other purposes, when not in use for ECT, it could be equipped to carry out electrocardiograms, phlebotomy and to undertake other clinical and physical health assessments and treatments.

Primary recovery area

- 8.167 The number of trolley spaces will depend on local throughput. Adequate space to manoeuvre in and

out, including in emergency situations, will be required.

- 8.168 A system is needed to call the anaesthetist from the treatment room in the event of an emergency.

Post-ECT lounge

- 8.169 When service users are re-orientated and able to walk, they are taken to the post-ECT lounge where they may sit, rest and take refreshments before leaving the suite. This room should be large enough to accommodate all service users for that session and should include access to beverages and snacks.
- 8.170 An office and additional storage space may be required for medical gases and equipment, disposal, coats and clothing.

Staff and office accommodation

- 8.171 Each project will need to tailor its requirements for in-patient unit staff accommodation to the number of staff working or based within the unit:
- depending on the location of the administrative suite, a small waiting area may be required if it is inappropriate to use the waiting area at the main entrance/reception;
 - if not provided elsewhere, office space may be required for various teams including: Crisis Resolution Home Treatment Teams, social workers, consultants, other medical staff, psychologists, physiotherapists, occupational therapists, secretaries, other professions allied with medicine, and managers, including nurse managers;
 - office machine rooms;
 - interview/meeting room;
 - seminar room/library;
 - staff rest room and mini-kitchen;
 - if on-call accommodation is required, this needs to be specified as per the requirements of the Royal College of Psychiatrists for junior doctors;
 - staff WCs, changing rooms and showers.
- 8.172 A variety of office space may be required in the unit, ranging from single-person offices with informal meeting space to multi-person offices.

Ancillary accommodation

- 8.173 The service needs to provide a range of facilities and accommodation for support staff and service functions. Some of these facilities will be required on each unit or department and some can be provided centrally.
- 8.174 Ancillary accommodation requires provision for the adequate management of healthcare and general waste, and should also allow for safe recycling where appropriate. See 'Safe management of healthcare waste'.
- 8.175 Cleaners' rooms should be located in every unit area and throughout the wider service.
- 8.176 Storage is required for linen, office supplies, equipment, furniture, medical supplies, medical equipment and drugs. The location and amount of storage required will depend on the size and nature of the facility.
- 8.177 Some spaces, such as furniture storage, may be shared with other facilities, for example if the unit is part of a larger development.
- 8.178 Storage for linen supplies may be either in a linen store or on a linen exchange trolley. The amount of linen storage will depend on the local linen supplies policy and the number of beds.
- 8.179 Bathrooms may not be used for the storage of hoists except where a specially designed recess with locked shutter has been included.
- 8.180 Items such as weighing chairs or sanitary chairs may not be stored in bathrooms but should be located within locked storage rooms within the area they serve.

Circulation routes

- 8.181 Circulation areas should be designed to accommodate informal social activity through local widening, windows, door clustering and by keeping sections short.
- 8.182 When planning circulation routes, consideration should be given to the purpose and likely function of each space in order to ensure that the design creates a safe environment and matches the operational realities of the service.
- 8.183 Spaces in which service users are likely to be escorted or restrained should be of adequate width and have minimal physical obstructions. Corridors should be a minimum width of 1800 mm excluding any opened door, in order to be

sufficiently wide to allow three abreast, and to allow easy movement of furniture and equipment.

- 8.184 Corridors should provide for good lines of sight. Dead ends and long internal corridors should be avoided where possible.
- 8.185 Designs incorporating annexes and smaller corridors off the main route should also be avoided.
- 8.186 Recessing doors to bedrooms, to maintain a clear corridor width, is a common design feature that should be considered, providing the depth and the angle of recess does not restrict visibility.

- 8.187 Where blind spots do occur, a means of monitoring them should be integrated into the design. At corners, visibility can be improved by various means including, for example, a suitably sized chamfer or a high-level mirror.
- 8.188 Natural light to all corridors or circulation spaces should be maximised, along with external views where possible.
- 8.189 Demarcation of circulation routes can be achieved by changes of floor colour or finishes. This can assist in maintaining a more open and spacious quality to recreational and activity areas.

9 Furniture, fixtures and fittings

- 9.1 The design and specification of all furniture, fittings and fixings to be used in service user-accessible areas will be carried out in liaison with the healthcare provider's supplies, estates and facilities and risk management teams and in accordance with the purchasing strategy of the provider. Anti-ligature design will be a key consideration.
- 9.2 Design criteria, whether to incorporate built-in furniture or have some movable furniture, will be a local decision. All furniture and fittings are required to be robust, anti-ligature, prevent opportunities for concealment and meet infection control requirements, while being as domestic in style as possible and not offering opportunities for easy lifting or breakage. This is particularly important in rooms where service users are unsupervised, such as the bedrooms and en-suites. Styles, patterns and colours need to reflect the ambience and design required for each area.
- 9.3 Fixed furniture should be designed and installed in liaison with the risk management advisor to ensure that appropriate safe access is provided for service users and staff. Generally, the location of fixtures such as smoke detectors, light fittings and ventilation grilles should be out of the reach of service users – even when standing on furniture or beds – and securely fixed in a way that they cannot be vandalised or used as a potential weapon.
- 9.4 Anti-ligature fixtures should safely break free under weight. Consideration needs to be given to their potential to inflict harm.
- All pipework and electrical conduit should be concealed. Surface-mounted services are not recommended. Heating panels should be underfloor, ceiling-mounted or wall-mounted. Pipework, vents and the like should be boxed or set into the wall.
 - Wash-hand basins, baths, and WCs in service user-accessible areas should have concealed traps and pipework. They should not have overflows or plugs.
 - Taps and other service fittings should be anti-ligature.
 - All taps and WCs in service user-accessible facilities should be “wave-on/wave-off” technology with electric sensor and timer control, to enable automatic off or periodic flushing to aid prevention of Legionella, or should have push-button control.
 - The water outlet (spout) should avoid presenting any possible ligature point.
 - Baths should not have moulded or built-in handles.
 - Taps in staff areas may be of a conventional design.
 - In service user-accessible areas, proprietary type shower and WCs should not be used.
 - Service user showers should be of an anti-vandal, anti-ligature type, with all service pipework concealed.
 - The shower controls should be a proprietary “wave-on/wave off” activation, button/push-button or electronic sensor. The sensor control should be able to limit the time (adjustable by technical staff) in which water is allowed to flow.
 - The water and electrical supplies to the bathroom should be able to be isolated by ward staff from outside the room, in case of emergency.

Sanitary facilities

- 9.5 All sanitary facilities and fittings should be of robust construction, ligature-free and constituted of materials that will withstand sustained attack. WC cisterns are to be concealed behind secure panels and activated by a pressure switch or sensor. Measures to prevent flooding should be incorporated.

- Finishes should be slip-resistant, and the wall finishes around the bath and splash-back areas should have a seamless finish.
- For service users who are disabled, removable support bars should be provided but kept in a store and fixed only when needed.
- WC pans should be rimless to avoid the concealment of contraband and a single unit that does not have a removable toilet seat.
- Toilet roll holders and paper towel dispensers should be of anti-ligature design and should not have removable components.

Floor gratings

- 9.6 Floor gratings and drains should be secured with security screws.

Other specific fixtures/fittings

- 9.7 Generally, the location of fixtures such as smoke detectors, light fittings and ventilation grilles need to be out of reach or inaccessible to the occupants – even when standing on furniture or beds – and securely fixed in a way that they cannot be vandalised or used as a potential weapon. Works of art and picture frames could be mechanically fixed to the wall in such a way that they may not be tampered with, removed or lend themselves to use as a weapon.

Mirrors

- 9.8 Mirrors should be non-breakable, not easily removable, should be constructed and fitted in such a way as to withstand sustained attack, and should not give a distorted image of the service user.

Coat hooks

- 9.9 If coat hooks are fitted in service user-accessible areas, they should be anti-ligature and break free safely under weight.

Blinds and curtains

- 9.10 Where blinds are fitted in service user areas, they should be anti-ligature, integral to the window structure and controllable by the service user.
- 9.11 The mountings or tracking of curtains should not provide a ligature opportunity. They should not be removable to cause harm.

Shelves/soap dishes

- 9.12 Shelves or soap dishes should be of robust design, anti-ligature, non-breakable, designed and fabricated in such a way as to withstand sustained attack, and securely fixed.

Fixings

- 9.13 The fixing of building components is an important consideration when thinking about value for money, maintenance and life-cycle planning. At times, fixings may need to withstand physical force and attempts to tamper with or vandalise them. There is also the need when fitting anti-ligature equipment that the manufacturer's instructions be followed, which may require that fixings do not withstand physical force.
- 9.14 Screws and fixings should be of security design and capable of withstanding sustained attack and/or tampering. Skirting boards should have restricted projection and/or bevels to avoid any possibility of them being levered off.

10 Building construction and components

- 10.1 This section should be read in conjunction with Health Building Note 00-10 Parts A – ‘Flooring’, B – ‘Walls and ceilings’ and C – ‘Sanitary assemblies’.

External walls

- 10.2 In general, external walls should be designed, fabricated and constructed to restrict unauthorised access or egress.
- 10.3 Where the external walls of a building form part of the building line, the construction should make it difficult to break through.
- 10.4 Junctions between single storey and two storey buildings should be avoided but, where they do occur, the junction detail should prevent stepping or climbing between buildings.
- 10.5 Walls and external facades should be vertical and the elevations detailed to make wall scaling as difficult as possible with smooth joints, no hand or footholds, or projections, or configurations that can be used as an aid to climbing (for example “ladder effect” because of glazing bars or chimney effect because of proximity of other walls). Where there are projections, they need to have rounded or sloping tops.
- 10.6 Rainwater pipes should be far enough away from an internal corner to prevent climbing and be a minimum of 900 mm from any opening or projection. All fittings, such as lights or cameras, should be a minimum of 900 mm apart and be designed with smooth and sloped surfaces to make climbing difficult.

Internal walls

- 10.7 All internal walls should be of sound, robust construction.
- 10.8 Internal walls in service user areas (and in particular those in seclusion /ICU areas) should be able to resist sustained attack and achieve good sound attenuation. In the interest of minimising

opportunities for harm, the wall finish in service user areas should not be removable.

- 10.9 Protective bumper rails should be securely fixed with any edges and corners rounded. Internal walls in non-service user accessible areas may be of standard construction. Internal walls in service user areas may be of solid construction, for example plastered blockwork, or they could be of lightweight construction, for example using steel or timber stud framing lined to resist damage together with sound deadening material as a cavity fill.
- 10.10 To reduce sound transmission between rooms, partitions must be carried up to and fixed to the structural soffit. Glazing in partitions must achieve similar standards to those for external windows. See Health Technical Memoranda 56 – ‘Partitions’ and 69 – ‘Protection’.

Roofs

- 10.11 Complicated roof designs should be avoided and wherever possible any activity on the roof should be able to be viewed from ground level.
- 10.12 Where building roofs form part of the building line they should be protected against climbing by either:
- a gooseneck capping (this may be the most aesthetic in healthcare settings); or
 - a flexible secure topping (FST).

Windows in service user areas

- 10.13 Access to fresh air, natural light and views contribute significantly to quality of life. However, careful consideration should be given to the design of windows, the way they are fixed to the building structure and all their associated fixtures and fittings.
- 10.14 Window frames should be able to withstand determined attempts at being damaged.
- 10.15 All fixings to the structure should be concealed.

- 10.16 All opening windows should be robustly constrained to provide a maximum opening of 100 mm to avoid a service user being able to climb out;
- 10.17 They should be constructed with a secure mesh where the passage of drugs, contraband or weapons is a risk. (Some window designs open to greater dimensions with the opening area protected by a secure ventilation grille);
- 10.18 They should be tested to ensure that they maintain their integrity against escape.
- 10.19 They should, as far as possible, be ligature-free. All catches, restraints, and where applicable the controls for integral blinds, should be designed to minimise the risk of use as a ligature point. The facility for staff to lock a window in the open position as well as in the closed position reduces the opportunity to use the opening light as a ligature point.
- 10.20 The use of polycarbonate, toughened or laminated glass in windows in service user areas is recommended. The glazing system should be fixed from the outside. The glazing beads should be tamper-/vandal proof on the inside pane to avoid the window being dismantled and should be adequate size to retain the pane.
- 10.21 Where there are high ceilings with clerestory windows, it may be possible for these to be opened without restriction to allow more natural ventilation to flow through the communal area.
- 10.22 Internal windows (with borrowed light) enhance views to the outside from internal rooms/corridors and assist in providing good lines of sight for staff.
- 10.23 Where privacy is required, there are a number of solutions including curtaining or remotely adjustable micro-venetian blinds in the cavity between panes of glass.

Window frames

- 10.24 Window frames should be constructed of steel or hardwood timber. Where steel-reinforced PVC, box section aluminium, small section aluminium and PVC frames are used, a risk assessment should be made with regard to flexing and deformation, which may offer opportunities for absconding and passing of contraband. Aluminium frames are unsuitable for opening lights as they can be flexed or twisted out of shape.

Window opening

- 10.25 Health Technical Memorandum 55, ‘Windows’, paragraph 2.11 states that:

“Project teams must decide on the needs for safety in health buildings . . . restricted opening of not more than 100 mm is recommended for use within reach of service users, particularly the elderly, those with learning difficulties or mental illness, and is essential where windows are accessible to children.”
- 10.26 Some manufacturers are producing solutions that avoid the passage of contraband, do not allow access or egress and will allow an opening of a greater dimension. If project teams are considering a variation to the Health Technical Memorandum recommendation, this should be risk assessed and “signed off” by a senior responsible officer within the organisation.
- 10.27 The opening mechanism should be robust, tamper-proof and anti-ligature. Lock open/lock closed windows avoid the opportunity to fix a ligature in an open window and then secure it by closing the window. Additional ventilation may be achieved by suitable non-ligature trickle vents. Windows should be designed to maximise potential for natural ventilation, with reference to the CIBSE design guide for natural ventilation (see Health Technical Memorandum 55 – ‘Windows’).

Glazing

- 10.28 Polycarbonate is flexible and difficult to break but it can be scratched and must be secured with large glazing beads to avoid it springing out of the opening when it flexes. Glazing beads up to 25 mm may be necessary depending on the size of individual panes. Over a period of years it degrades due to the action of ultraviolet light, and develops a milky haze. At this stage, the flexibility is reduced and it becomes more brittle and can break like glass providing shards of material that can be used as weapons.
- 10.29 Toughened glass will withstand general attacks, including billiard balls, and furniture being thrown at it. The possibility still remains that it will shatter if hit by a sharp object with a very fine point, or if the edge of the pane is attacked. In both cases, the glazing will disintegrate into small granules, which may be used to self-harm, be ingested or be used to harm others. The window opening will no longer provide a resistance to service users absconding.

- 10.30** Laminated glazing consists of several layers of glass bonded together with inter-layers of film. The properties of the glass depend on the combination of types and thickness of glass and the number of interlayers. If attacked, the glazing will crack but will retain its integrity, delaying anyone from leaving the area through the window. When using laminated glass, consideration should be given to providing an internal skin of 6 mm (seclusion suites 9.5 mm) scratch-resistant polycarbonate that is bedded in structural silicone and mechanically secured within the frame separately from the double-glazed unit.
- 10.31** Care needs to be taken with the size of the glazed area in relation to the width of the beading, to ensure that there is no risk of “pop-out” when impact is applied.
- 10.32** Where glazing forms part of a fire-rated compartment line in service user-accessible areas, the glazing should be physical-attack resistant glass or Georgian wired/polycarbonate sandwich.

Doors

- 10.33** Careful consideration should be given to the design of doors, frames and associated furniture, to ensure that individually and collectively, they minimise the opportunity for ligature risk, the means to barricade or prevent the door from being opened and the concealment of contraband, and they avoid including parts that could be removed by service users.
- 10.34** Generally, the use of inward opening, single-leaf doors is considered to be more conducive to a homely, less institutionalised environment.
- 10.35** Doors should have an override facility for staff to be able to open them outwards if a service user barricades themselves in.
- 10.36** Doors should have no protrusions on the outside face except the security lock handle.
- 10.37** All doors in service user-accessible areas should be fitted with either vision panels or, if the door is within a screen, adjacent glazed panels should be fitted. In bedroom areas and other areas where privacy may be required or to prevent corridor light imposing into the room at night, these may include an integral blind controlled by the service user inside the room with staff override outside. The solution will be for local decision.
- 10.38** There should be a clear opening width of 850–900 mm.

Ward main entrance doors

- 10.39** The unit should be designed in order that staff are able to easily observe those entering and leaving the unit. The main entrance door should have an intercom or a doorbell to a central location on the unit or department.
- A call system should be provided at the main entrance door to all wards.
 - The system should comprise of an illuminated push button with a sounder located at the staff base.
 - The sounder should be distinguishable from all other sounders installed for other systems, for example fire alarms, emergency alarms etc.

Bedroom doors

- 10.40** The design of corridors and bedrooms should ensure that bedroom doors cannot be levered against open corners, architraves, doorstops or the like which could cause damage to the door, hinge or frame and make it impossible to close.
- 10.41** Emergency anti-barricade systems sometimes create a space between the door and frame. Project teams should ensure that visual and sound privacy is not compromised in the design solution.

Door furniture/hinges

- 10.42** Door furniture should be of a heavy duty design.
- 10.43** Door hinges should have captive pins.
- 10.44** WCs in general areas and bathrooms should be fitted with a privacy lock and an indicator bolt capable of being overridden from the outside.

Door glazing and beading

- 10.45** To reduce the risk of failure under attack, vision panels should be constructed with metal surrounds that can be securely fixed into the opening in the door.

Doorframes

- 10.46** Doorframes should be of solid construction and not have planted-on stops.

Architraves

10.47 There should be no hidden shelves or any other opportunities for concealment. Architraves, beading and all other timber components of doors or glazing panels provide a risk of being damaged and used as weapons. If they are used:

- They should be screwed, glued and pelleted in such a way as to prevent removal of sections that may be used as weapons or to aid self-harm;
- Nails and pins should not be used.

Door handles

10.48 Door handles with integral locks should not be used in service user-accessible areas.

10.49 Open “D” door handles should not be used in service user-accessible areas. Handles should be either of a finger grip or “anti-ligature knob” type.

10.50 The handle on the outside of any door in a service user-accessible area should provide greater purchase than the handle on the inside of the same door.

10.51 The operating handle for the service user privacy lock on the inside of the bedroom door should be ligature-free.

Locks and ironmongery

10.52 A locking and suiteing policy is required at an early stage in the design to ensure maximum freedom of movement about the building for service users whilst providing a safe environment for everyone using the building including service users, staff and visitors. Consideration will also need to be given to fire escape procedures within the building.

Security locks

10.53 A variety of locking mechanisms are available for use in mental health facilities. The term “key” is used throughout this guidance but refers to any of the following systems:

- electro-mechanical
- traditional manual keys
- magnetic
- swipe card
- proximity readers

- biometric readers.

10.54 All these systems can be combined with keypad systems.

10.55 Biometric reader systems such as finger, thumb or palm readers are increasingly being used at entry points to buildings. Use of electronic systems should be co-ordinated with the fire strategy for the premises to ensure the means of escape is controlled but not compromised.

10.56 Each system has benefits and limitations and decisions on locking strategy should be made at an early stage of the design solution as part of the locking policy.

Privacy locks

10.57 Bedroom doors should be fitted with approved privacy locks. All locks should be:

- suited – so that staff have an overriding key and service users have an individual key to their own room;
- fitted with an override facility so that staff can gain rapid access in an emergency.

Treatment room/dispensary locks

10.58 Treatment room and dispensary cupboard doors should be fitted with a suited lock. Each ward’s treatment room/dispensary should be an individual suite.

Sanitary facilities

10.59 All sanitary facilities need to have robust fittings, securely fixed in place. WC cisterns need to be concealed behind secure panels and activated by pressure switch or sensor. Measures to prevent flooding or repeated flushing of WCs are required to be incorporated. Water sensors as a project option may be incorporated into bathrooms at low level to prevent flooding.

10.60 Wash basins should have concealed traps and anti-ligature taps and other fittings. Mechanical or electronically activated taps are available that avoid ligature issues and can be timed to restrict the flow of water and the duration between flows; these may also help to prevent and control Legionella.

10.61 All shower components are required to be anti-ligature with fixed shower heads, either wall- or ceiling-mounted with a mechanical or electronically activated water supply. Timed supply

of water may need to be considered to avoid flooding.

- 10.62** All pipework and electrical conduit should be concealed behind maintenance-accessible panels. Surface-mounted services are not appropriate. Heating panels may be underfloor, ceiling-mounted or wall-mounted. Pipework, vents and the like should be boxed or set into the wall. Light fittings, door hinges, architraves and skirting boards should have restricted projection and/or bevels to avoid any possibility of them being levered off. Pull cords to light fittings and emergency call should not be specified due to ligature risk.
- 10.63** The requirements of the Equality Act 2010 and the Public Sector Equality Duty present issues regarding potential ligature points. Consideration should be given to the use of fittings that can be removed to a safe store when not required, provided always that the remaining fixed points do not offer any ligature or self-harm potential. For example, the drop-down arms on an accessible WC should be removed to storage if the service user is able-bodied.

Finishes

- 10.64** Smooth internal surfaces are generally required. Finishes need to be robust and easy to clean and maintain, and be graffiti-proof. These requirements need to be balanced with the requirement to create a quiet environment with good sound absorption.
- 10.65** Ceiling heights should be profiled so that light fittings, detectors etc are out of reach, and no element can be used as a ligature point. Ceiling heights are generally set at a minimum height of 2700 mm in mental health design and 3000 mm in a secure unit. Grid-type suspended ceilings should not be designed into service user-accessible areas, and emergency escape hatches should not discharge into service user areas.
- 10.66** Ceilings should be able to withstand damage by implementing plywood backing or the like. Consideration should also be given to the proportions of the rooms in relation to the height. Removable suspended ceiling panels should not be used, as they provide spaces for the concealment of prohibited objects and are sometimes constructed with materials that can be used for self-injury.

Floorings

- 10.67** Flooring appropriate to the function of the space is to be used. Consideration should be given to using textile flooring in some areas as this can deaden noise. For example, if televisions and music equipment are located within bedrooms, textile flooring will assist in reducing some of the noise. Likewise where hard flooring is used in the corridors outside bedrooms, the noise of staff walking up and down during the night can disturb service users. The use of carpet with an impervious backing and an anti-bacteriological treatment together with the correct cleaning regime and replacement programme can reduce infection control issues.
- 10.68** In the communal spaces, particularly where these have been open-planned, different floor coverings can assist in marking the differing areas, subject to any Equality Act 2010 and Public Sector Equality Duty considerations.

Finishes

- 10.69** A risk assessment should be conducted in relation to floor coverings. This should take account of infection control but also address the need to create comfortable living environments for service users that maximise the opportunities for normalisation and a domestic-type environment, while minimising the risk of environments being “tense” through high noise levels.
- 10.70** In general, all floorings, and flooring fittings such as expansion strips, should be specified, manufactured, fitted and maintained to help prevent the possibility of accidents, misuse or use as weapons or to aid self-harm.
- 10.71** Flooring appropriate to the function of the space should be used.
- 10.72** The use of an impervious backing that has had an anti-bacteriological treatment, together with the correct cleaning regime and replacement programme, can reduce infection control issues.
- 10.73** In communal spaces, particularly where these have been open-planned, different floor coverings can assist in marking the differing areas.
- 10.74** See also Health Building Note 00-10 Part A – ‘Flooring’.

Expansion joints

- 10.75 Expansion joints should be designed to accommodate thermal and shrinkage movement in accordance with current best practice, but these joints should be specified, manufactured, fitted and maintained so that the expansion material cannot be easily removed, or so that any substances or items cannot be easily concealed.
- 10.76 Expansion joints should not coincide with seclusion rooms or other high-dependency areas.

Secure ducts and concealment of services

- 10.77 All pipes, ventilation ducts and cabling in service user-accessible buildings or areas should be enclosed within secure ductwork.

- 10.78 Access for maintenance and servicing should where possible be from non-service user areas through secure locked doors or panels. Secure ducts generally should be of a walk-in size.
- 10.79 Over-ride controls, accessible by staff only, are required for lighting, water and power for bedrooms, seclusion en-suites and communal WCs.

11 Engineering considerations

11.1 This chapter provides general guidance on the engineering, technical and environmental aspects of healthcare building design in relation to adult acute mental health facilities.

General

- 11.2 The design, construction and operation of adult acute mental health facilities is required to comply with all relevant aspects of statutory requirements, and it is also recommended that it follows best practice and Health Technical Memorandum guidance, to ensure high-quality engineering installations and services suitable for their application.
- 11.3 The design and operation of adult acute mental health premises should take full account of planned and potential future changes in care pathways, clinical and business continuity risks appertaining to the functions of the premises and to 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 service users, staff and visitors.
- 11.4 This includes consideration of engineering service requirements during loss of normal incoming utility and local supplies and during activation of emergency preparedness plans.

Maintenance

- 11.5 In designing any service user-accessible facility, it is important that proper consideration is given to the future maintenance of the installation and plant, particularly with respect to the limitations on access in service user areas.

External services

- 11.6 Adult acute in-service user mental health facilities generally operate over a 24-hour period. As a consequence, engineering plant and equipment located externally, particularly security CCTV cameras and utility service equipment, pedestrian

walkways and car-park lighting, needs to be suitably protected to minimise the risk of vandalism or tampering, and to be positioned to ensure the provision of a safe external environment for staff and visitors at night.

- 11.7 The design of all facilities should help to prevent the unauthorised exit or entrance of people and the passing of contraband. External lighting and CCTV surveillance of the secure perimeter may be appropriate and may also include parking areas; this will be a local project decision.

Resilience of engineering services

- 11.8 Sufficient secondary sources of supply may be installed to ensure that risks and potential consequences mentioned under paragraph 11.6, 'External services' are eliminated or suitably minimised.
- 11.9 Where further resilience through mobile units is to be considered, suitable docking stations should be provided in suitable locations close to the point at which connection to the primary engineering services being maintained is required.
- 11.10 For more information, including a list of relevant legislation, see 'Emergency preparedness and resilience' in Health Technical Memorandum 00 – 'Best practice guidance for healthcare engineering'.

Engineering service outlets and controls

- 11.11 Engineering service outlets, fixtures and fittings, including heat emitters, ventilation grilles, luminaires, drainage systems etc, are required to be of robust high-quality construction, and in all service user areas should be designed to be tamper-proof and to minimise the potential for use as ligature points. Where it is not possible to provide anti-ligature fixtures, the engineering service fixture should not be able to bear weight. All such instances should be agreed with the service user group service provider.

- 11.12 While maintaining a domestic style, wherever practicable fixtures and fittings such as fire detectors, light fittings and ventilation grilles should be located out of reach of service users – even when standing on furniture or beds – or otherwise protected to avoid tampering and use as ligature points.
- 11.13 Appropriate tamper-proof fixtures and fittings devices should be installed to enable staff external to the room to control and isolate individually electrical power, lighting, heating and water services to each service user bedroom/en-suite area and isolation room. These devices should be located either within the adjacent lobby or corridor or at a central point elsewhere within the unit as required.
- 11.14 Provision should be incorporated within the M&E design to allow staff to temporarily shut down and isolate separately building services to individual bedrooms or staffed and ward areas as considered appropriate.

Space for engineering plant and services

- 11.15 The building design should incorporate adequate space to enable the full range of engineering plant and services to be installed and kept operational. Where possible, engineering plant and equipment should be accessible from non-service user areas. Where this is not possible, all services should be located in a secure duct or room.
- 11.16 All engineering service distribution, pipework, ventilation, ductwork and cabling within service user areas is to be routed and concealed within cavity wall spaces, roof/ceiling voids, vertical shafts and suitable enclosures so as not to be directly exposed or accessible to service users. Surface-mounted services and removable access panels are not generally appropriate in these areas. Suitable tamper-proof access provisions should be installed to ensure adequate access for authorised inspection, commissioning and maintenance of the various engineering services. These provisions should allow access only from non-service user areas and be fitted with suitable tamper-proof lockable devices where security provisions are required.

Mechanical services

Piped medical gases

- 11.17 It is very unlikely that piped medical gas installations will be required within adult acute mental health facilities in preference to portable medical gas equipment for use in areas such as ECT rooms. In circumstances where piped medical gas installations are considered viable they should be designed in accordance with Health Technical Memorandum 02-01, 'Medical gas pipeline systems'.

Heating services

- 11.18 Heating is a primary area for the application of sustainable development technologies. Note that if under-floor heating is to be used, sustainable technologies such as ground-source heat pumps or air-source heat pumps may be an option. Wind power, solar, thermal or PV should be considered where appropriate.

General space heating requirement

- 11.19 Under-floor heating systems and ceiling-mounted radiant panels can reduce infection risk and increase safety and useable space compared with wall-mounted radiators. These are the preferred choice of heat emitter throughout service user areas of adult acute mental health premises. Radiators are not recommended for use within service user areas.
- 11.20 Localised, zoned controls should be provided to enable service users to adjust the temperature of their bedroom.
- 11.21 Account should be taken in the design of heating systems to minimise the impact of heat gains, especially those arising from solar heat, which may result in unacceptably high room temperatures being experienced. This will apply particularly to rooms located against outside walls in service user areas where security restrictions could significantly limit the ability of naturally ventilated spaces to keep temperatures within an acceptable range. In such cases the control system and thermal delay associated with the local heat emitting devices/system should be designed to react sufficiently quickly to variations in room temperature so as to minimise the potential for the heating system itself to contribute to the overheating processes.

- 11.22 Where service user accessible-rooms are located against outside walls, the security restrictions that apply could significantly limit the ability of naturally ventilated spaces to keep temperatures within an acceptable range. In such cases, the control system and thermal delay associated with the local heat emitting devices/system should be designed to react sufficiently quickly to variations in room temperature so as to minimise the potential for the heating system itself to contribute to the overheating process.
- 11.23 The surface temperature of heat emitters should not exceed 43°C. Ceiling-mounted radiant panels can operate at higher surface temperatures provided the surface accessible to service users does not exceed 43°C.
- 11.24 Heating pipework should not be exposed to touch within service user-accessible areas and should be encased and insulated to prevent the exterior surface temperature of the containment facilities exceeding 43°C. Where heating pipework is exposed and accessible to touch, such as in staff-only areas, they should be sufficiently insulated to prevent surface temperatures exceeding 43°C.
- 11.25 See Health Guidance Note, “Safe” hot water and surface temperatures’.

Ventilation and cooling

- 11.26 Ventilation and cooling may be provided by a combination of mechanical and natural ventilation systems. Natural ventilated spaces are the preferred choice unless such means are incapable of providing the necessary air change rates to adequately control space temperatures, provide appropriate volumes of fresh air and reduce unwanted smells. However, in some area such as seclusion, cooling may be the only viable solution.
- 11.27 Where ventilation grilles are accessible to service users in unsupervised areas they should be comprised of steel plate to Home Office standards and requirements. The grilles should be securely fixed and installed flush with the wall or ceiling and should not be capable of being removed by the service user.
- 11.28 In areas where service users are supervised, securely fixed conventional grilles and diffusers should be used. The diffusers should not have components that can be removed without the use of tools.
- 11.29 For more information see Health Technical Memorandum 03-01 – ‘Specialised ventilation for healthcare premises’ and the Department of Health Heatwave Plan.

Hot and cold water systems

- 11.30 Exposed hot water pipework should be encased and/or insulated sufficiently to achieve adequate energy efficiency and, where accessible to touch, should not have a surface temperature higher than 43°C. Special care is to be taken when facilities are being provided for older, confused mental health service users.
- 11.31 Electronic sensor-operated taps to control hot and cold water flows from taps and showers should be installed in service user areas where there is a risk of damage to the device or self-harm to the service user. In such circumstances, the water outlet should be designed to not present any possible ligature point and the sensor control should be able to limit the time (adjustable by staff) in which water is allowed to flow. Consideration should also be given to providing controls that minimise the risk of overflowing wash-hand basins, baths and showers should the drain become blocked and the service user repeatedly attempt to switch on the water flow.
- 11.32 See Health Technical Memorandum 04-01 – ‘The control of Legionella, hygiene, “safe” hot water, cold water and drinking water systems’ – this document contains information specific to mental health units.

Internal drainage

- 11.33 So as to reduce the effects of deliberate blockage, consideration should be given to specifying soil and vent stacks in service user areas of a minimum of 150 mm diameter and all underground water drains being a minimum of 150 mm diameter.
- 11.34 Any pipework mounted on the outside face of the building should be anti-climb, anti-ligature and protected by a shroud.
- 11.35 See Health Technical Memorandum 07-04 – ‘Water management and water efficiency: best practice manual’.

Fire safety

- 11.36 Fire safety standards in adult acute mental health premises should be high, owing to the vulnerability of occupants. To ensure appropriate fire safety standards, the design and operation of adult acute

mental health buildings should meet the objectives of the 'Firecode' suite of manuals) or provide a fire-engineered solution that achieves similar or better objectives.

- 11.37 It is important that during the design process, design team members discuss their proposals with the relevant Building Control/Approved Inspector and the rest of the planning team to establish those aspects of fire safety that affect the building design. Consideration should be given to the implementation of sprinkler systems within secure facilities as part of a fire-engineered solution, always bearing in mind the necessity for anti-ligature design.
- 11.38 Bedroom doors, which should be of fire-resisting construction, need not be fitted with self-closing devices in accordance with current Firecode guidance. However, in all circumstances a risk assessment should be undertaken to assess the level of risk, including that of the need for anti-ligature design. Where the findings of a risk assessment indicate that self-closing devices are necessary, free-swing type devices complying with BS EN 1154 or BS EN 1634-1 should be fitted.
- 11.39 For detailed information on fire safety, see the Firecode series, in particular Health Technical Memorandum 05-02 – 'Guidance in support of functional provisions for healthcare premises'.

Fire detection and alarm systems

- 11.40 Particular attention should be given to the design and choice of fire safety equipment to minimise the potential for false fire alarm activations and the disruption and impact they may have on service users and staff. Where service users are likely to cause considerable problems with the operation of manual call points and where all other preventative measures may fail, the use of key-operated call points may be considered appropriate.
- 11.41 In service user areas, careful consideration should be given to the siting, number and alarm call of devices in order to alert staff without causing unnecessary anxiety to the service users.
- 11.42 When using alternative means to alert staff to a fire call other than fire alarm system audible sounders (for example PA system or security paging device), which may not be constructed to the same high standard of equipment protection and self-monitoring for failure as a fire alarm system, then at least two alternative methods should be used.

- 11.43 For security purposes, it is paramount that final exits do not release immediately on actuation of the fire alarm system. The release mechanism needs to form part of the overall strategy for managing the evacuation.
- 11.44 For detailed information on fire safety, see the Firecode series.

Electrical services

General

- 11.45 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.
- 11.46 For more information, see Health Technical Memorandum 06-01 – 'Electrical services supply and distribution'.

Resilience of electrical supplies

- 11.47 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) needs to be established following the assessment of security, clinical and business continuity risks.

Small power systems

- 11.48 All electrical accessories within service user areas should be robust, tested and approved by the project team and secured in such a way as to make them sufficiently robust and tamper-proof as to minimise the risk of harm, damage or self-harm.
- 11.49 All power outlets within each service user bedroom should be able to be isolated by staff from outside the room.

Computer access

- 11.50 If internet facilities are not provided in the bedrooms they may be provided in a separate room or a bay within the communal area. Local policies will set out the extent and nature of internet access.

General lighting systems

- 11.51 While trying to maintain a domestic ambience, all luminaires installed within service user areas need to be sufficiently robust and tamper-proof to minimise the risk of harm or self-harm. In these areas, all ceiling-mounted light fittings should be suitably sealed around the edges to minimise the creation of potential ligature points. Similarly, decorative wall-mounted light fittings should not have gaps between the wall and luminaire and should not present any possible projection that could be used as a ligature point.
- 11.52 Staff need to be able to control lighting within individual service user bedrooms locally from outside the room. The control of lighting is required to be as follows:
- bedroom main light – service user-controllable but able to be overridden by staff from outside the room;
 - bedroom night light – controlled from outside the room by staff;
 - en-suite light – service user-controllable but able to be overridden by staff from outside the room;
 - bedroom bed/desk lights – service user-controlled locally.
- 11.53 The design of lighting within service user-accessed areas is such that they cannot be plunged into total darkness. Subject to these constraints, the use of time switches or presence detector controls using passive infrared, acoustic or ultrasonic detectors is to be encouraged to reduce energy.
- 11.54 The use of pull cord switches is not permitted in service user-accessed areas.
- 11.55 For more information, see CIBSE's Lighting Guide for Hospitals and Health Care Buildings.

Emergency lighting

- 11.56 In addition to the general provision of emergency lighting, all rooms and areas occupied by service users are required to contain an adequate number of emergency lights to ensure that there is sufficient continuity of illumination during occasions when electrical supplies to the normal artificial lighting have failed.
- 11.57 Appropriate levels and types of illumination should be provided sufficient to see movement for

security and CCTV purposes, inclusive of infrared lighting for night observation.

- 11.58 The use of uplighters to highlight protective perimeter fencing, when installed, may be considered appropriate.

External lighting

- 11.59 External lighting within internal courtyards used by service users during evening and night-time is an important aspect of adult acute mental health units, and particular care will be required in the design to determine the most appropriate configuration and type of luminaires that fulfil the functional requirements.
- 11.60 Where practical, the control of external lighting needs to be automatic and to take into consideration the employment of energy conservation techniques such as the use of energy-efficient lamps, photocell control, passive infrared switching, and reduced illumination during late night-time periods. Whatever combination of control techniques are adopted, these are required not to compromise the functional and security requirements of the premises.
- 11.61 The possibility of light pollution is to be taken into consideration when planning external lighting installations, particularly to minimise excessive light shining into service user bedrooms or adjacent properties.

Emergency call systems

- 11.62 Provision is required for the installation of “service user to staff” and “staff to staff” emergency call systems to enable service users to summon help from staff when they need it and for staff to summon assistance from other staff during incidences when they may be attacked or are faced with a threatening situation. The “service user to staff” call systems may need to be limited to elderly or infirm service user groups to prevent the incidence of nuisance calls.

Service user to staff alarm system

- 11.63 Service user to staff system call points should be provided in spaces where a service user or attendee may be left alone temporarily, for example within service user bedrooms, en-suite WCs, disabled WCs and therapy or education areas. This could be achieved using wi-fi and portable call or paging systems.

Staff to staff emergency alarm system

- 11.64 Staff to staff emergency call systems, used primarily as a staff attack alarm (SAA), should be capable of accurately identifying the location of the space in which the staff member who activated the call is present and should operate satisfactorily from anywhere within the perimeter of the premises. Care should be taken when considering large external spaces. A number of integrated technologies may be required to give overall coverage.
- 11.65 Facilities should be incorporated into the system to record and archive data for future analysis and reporting purposes.
- 11.66 All relevant staff should carry a single portable device that allows them to raise an emergency alarm. The system should have the facility for designated staff to remotely receive information regarding emergency calls raised by others.
- 11.67 The call device should be simple to operate and, when activated, should not rely entirely on “line of sight” between the call device and local detector to enable the system to operate even if a coat or other item of clothing covers the device.
- 11.68 All calls should be relayed to a main indicator panel located in the reception or suitable control room manned by staff.
- 11.69 A suitable visual and audible warning test facility needs to be available to confirm to reception staff and staff users whenever a call device is operational.
- 11.70 Consideration should be given to providing a system which has at least two levels of alarm to enable staff to communicate various degrees of severity and urgency of the call to other members of staff. For example, staff may wish to convey to other staff that they are currently safe but involved with an escalating volatile situation and in need of extra staff presence rather than requiring an urgent and comprehensive response to an actual physical attack.
- 11.71 Staff call devices should be stored and charged at a suitably central staff location in readiness for staff to collect and deposit them prior to entering or leaving the premises.

Operating the staff alarm system

- 11.72 All staff should carry a single device, which allows them to raise an emergency alarm and to receive

information regarding emergency alarms raised by others.

- 11.73 All calls should be relayed to a main indicator panel located in the reception or suitable control room manned by staff. This panel should provide a visual text description of all relevant alarms along with audible warning and include the name and location of the person carrying the device.
- 11.74 When activated, suitable easy to read and interpret visual, audible and text messages should automatically convey details of the call quickly to all members of staff who are able to respond.
- 11.75 On drawing the device it should provide an audible annunciation that it is turned on and operational.
- 11.76 The system should be capable of providing an audible warning to users and reception staff if a member of staff attempts to leave the premises with the device.

Coverage

- 11.77 The staff alarm system should provide for coverage in all areas within the secure perimeter and be capable of identifying multiple zones.
- 11.78 Selected buildings outside of the secure perimeter may also need to be covered as determined by local policy.

System resilience

- 11.79 The staff alarm system should be robust and be capable of sustained operation in harsh conditions.

CCTV installation

- 11.80 The installation of CCTV systems within adult acute mental health premises can significantly assist in the reduction of assaults and inappropriate access to and from the premises and in resolving false accusations of attack between service users or with staff.
- 11.81 CCTV should not be regarded as a substitute for good sight lines being designed into a facility.
- 11.82 CCTV systems should not cover service user bedrooms or toilet and shower areas (other than the entrance/exit to these areas) or any intrusive observation of adjacent private properties.
- 11.83 Internal CCTV systems should include the monitoring of areas such as service user corridors, day rooms, interview rooms, therapy rooms,

vocational services, education spaces, visits room and reception lobbies.

- 11.84 External CCTV provisions should include the monitoring of secure perimeters, air-locks, vehicle access routes, car parking, pedestrian walkways, internal courtyards and main entrances to the building.
- 11.85 Reference should be made to the ICO CCTV Code of Practice.

CCTV specification

- 11.86 Consideration should be given to the best currently available technology but any CCTV system as a minimum should:
- have the capability to record images 24 hours a day, 7 days a week;
 - retain images for determined period of time identified by the client;
 - be user-friendly;
 - easy to configure and adjust;
 - be capable of providing good night coverage.
- 11.87 CCTV systems, including remote monitoring and recording facilities, should meet the design, installation, functional, operational and performance requirements of BS EN 50132-5, BS EN 50132-7, BS 7958, BS 8418 and BS 8495.
- 11.88 CCTV cameras should be integrated into the main site CCTV system (with the exception of seclusion cameras), sited in accordance with the healthcare organisation's security strategy and supported by local procedures.
- 11.89 The design of the internal CCTV system should be carried out three-dimensionally taking into account the physical features of the area within which it is located. Rooms should also be designed to ensure that they are configured to maximise the views and minimise the numbers of the cameras required, and that configurations of installation are able to eliminate blind spots.
- 11.90 In addition, CCTV camera installations should be designed to:
- produce high-quality digital images (colour images during the day);
 - be able to provide optimum viewing of the area required to be observed from each location;

- be tamper-proof and non-ligature, minimise the opportunity for damage, and not be capable of being used as a climbing aid;
- where possible, incorporate a housing that obscures the camera from view;
- be operable under artificial lighting conditions, with or without natural lighting, avoiding the potential for flare due to nearby lamp intensities; and
- include stops to avoid any possibility of intrusive observation of adjacent private properties.

Viewing, recording and reviewing

- 11.91 When designing a CCTV system, the local policy for accessing images should be considered and take into account the following:
- storage of data
 - recording
 - reviewing of recorded images
 - automatic deletion
 - retention of images
 - the location of viewing facilities, for example locally and/or remote.
- 11.92 The system should be interfaced with management control systems and be observed, operated and controlled from a central secure location, manned 24 hours per day, where images cannot be viewed or the control equipment accessed by unauthorised persons. Local monitoring and review systems may be required.
- 11.93 The system should be capable of allowing various levels of access to users that is password-protected and auditable in accordance with local policy.
- 11.94 The detail of images and whether continuous, intermittent or motion detected recording is appropriate, should be determined by the project team. The system should be capable of continuous recording of all cameras with the ability to switch to "real time" recording when required.
- 11.95 All recordings should be retained and stored for at least one month with consideration being given to the provision of viewing facilities, locally and/or remote, for the reviewing of recorded images and manual or automatic deletion.

- 11.96 Software systems should not require the input of the original manufacture when interfaces with other systems are required (that is, they should be open architecture systems).

Door access control systems

- 11.97 Adult acute mental health premises will generally require controlled access to the building at the staff entrances and, internally, to ward and staff areas. Where door access control systems are required, these could be proximity (touch) cards/fobs. If proximity cards/fobs are used, they must have the facility to be securely attached to staff at all times, and should a card/fob be lost there should be the facility to deactivate it with the least possible delay.
- 11.98 Where magnet type door restraining units are to be used, they should be selected to provide adequate holding of the imposed shear force. Full transom magnets may be required in secure facilities.

Telecommunication systems

- 11.99 Telephone facilities for service users should be provided in each unit in accordance with local policy and in a location with good sight lines for staff to observe their use.

IT systems

- 11.100 IT systems within adult acute mental health premises will primarily be installed to serve computers and communication systems used by staff, although consideration should also be given to the provision of controlled internet access to service users.

Entertainment systems

- 11.101 Entertainment services, in the form of fixed or portable television and multi-media radio/music systems, may be provided in service user bedrooms and in specified specialist service user areas to help facilitate the creation of a personal domestic environment and a relaxing atmosphere. Service user access to media, TV channels, internet and email facilities (where provided) may

be restricted to that controlled by staff, according to local policy. Where possible, the entertainment system should be capable of modifying access to each service user room or service user area to enable varying restrictions, or relaxation of restrictions, to be applied when considered appropriate.

Lifts

- 11.102 Engineering access to lifts should be secure at all times and from non-service user areas.

Controlled drugs storage

- 11.103 Controlled drug cupboards within adult acute mental health facilities will be located in secure lockable environments within treatment rooms/a drug store. These rooms should be capable of being locked.
- 11.104 Consideration should be given to environmental conditions within treatment rooms, as the storage and administering of certain drugs may require some form of cooling to the space.
- 11.105 The method of dispensing drugs to service users should be by means of a secure hatch in a manner which is sufficiently coordinated and controlled so as not to involve service users having to queue with other service users.

Audio induction loop systems

- 11.106 Audio induction loop systems should be provided where necessary in areas such as service user communal areas, main receptions, seminar rooms, waiting areas and in public telephones, to facilitate the hard of hearing in compliance with the Public Sector Equality Duty and the Equality Act 2010. They should be of the fixed wired or portable device type as appropriate.
- 11.107 Consideration should be given to these systems if service user discussions are confidential.
- 11.108 See also the Royal College of Psychiatrists' report 'Improving Inpatient Psychiatric Services for Black and Minority Ethnic Communities' (OP71, Royal College of Psychiatrists 2010).

12 References

- Health Building Note 35 – ‘Accommodation for people with mental illness’, Part 1: ‘The acute unit’. DH, 1996.
- Health Building Note 11-01 – ‘Facilities for primary and community care services’.
- Health Building Note 12 – ‘Out-patients department’.
- National Service Framework for Adult Mental Health. DH, 1999.
- Mental Health Act 1983.
- Equality Act 2010.
- Health and Social Care Act 2008 (Regulated Activities) Regulations 2010.
- ‘Guidance about compliance’. CQC, 2010.
- 37 indicators. CQC.
- ‘Laying the foundations for better acute mental healthcare’ (DH, 2008).
- ‘The Productive Mental Health Ward: releasing time to care’. NHS Institute for Innovation and Improvement.
- The King’s Fund’s ‘Enhancing the Healing Environment’ programme.
- Department of Health guidance on Psychiatric Intensive Care Units.
- Code of Practice Mental Health Act 1983 (revised 2008).
- Royal College of Psychiatrists website.
- The ECT Handbook.
- ‘Strategies to reduce missing patients’.
- National Suicide Prevention Strategy for England. DH, 2002.
- ‘The Delivering Same-Sex Accommodation programme’. DH, 2009.
- CCTV Code of Practice 2008 guidance.
- ‘Elimination of mixed-sex hospital accommodation’. DH, (2005).
- Wayfinding – effective wayfinding and signage systems guidance for healthcare facilities. DH, 2007.
- BREEAM Healthcare.
- Good Corporate Citizen Model (NHS Sustainable Development Unit).
- Health Technical Memorandum 07-07 – ‘Sustainable health and social care buildings: Planning, design, construction and refurbishment’.
- Preventing Suicide Toolkit. National Patient Safety Agency, 2008.
- Mental Health Medicines Management Self Assessment Toolkit. DH, 2008.
- Safe management of healthcare waste. DH, 2012.
- Star Wards website.
- Not just bricks and mortar. Royal College of Psychiatrists, 1998.
- Health Technical Memorandum 08-01 – ‘Acoustics’.
- Health Technical Memorandum 06-01 – ‘Electrical services supply and distribution’.
- Resuscitation Council (UK).
- Resuscitation in mental health and learning disability settings. NPSA, 2009.
- Seven steps to patient safety in mental health. NPSA, 2008.
- The ECT Handbook. Royal College of Psychiatrists’ Electroconvulsive Therapy Accreditation Service (ECTAS), 2005.
- Health Technical Memorandum 02-01 – ‘Medical gas pipeline systems’, Part A. DH, 2006.
- Health Building Note 00-10 Part A – ‘Flooring’.
- Health Building Note 00-10 Part B – ‘Walls and ceilings’.
- Health Building Note 00-10 Part C – ‘Sanitary assemblies’.
- Health Technical Memorandum 56 – ‘Partitions’.
- Health Technical Memorandum 69 – ‘Protection’.
- Health Technical Memorandum 55 – ‘Windows’. See also ‘Window restrictors alert’.

Equality Act 2010.

Public Sector Equality Duty.

Health Technical Memorandum 00 – ‘Best practice guidance for healthcare engineering’.

Health Guidance Note – ‘“Safe” hot water and surface temperatures’. DH, 1998.

Health Technical Memorandum 03-01 – ‘Specialised ventilation for healthcare premises’.

Department of Health Heatwave Plan.

Health Technical Memorandum 04-01 – ‘The control of Legionella, hygiene, “safe” hot water, cold water and drinking water systems’.

Health Technical Memorandum 07-04 – ‘Water management and water efficiency: best practice manual’.

Health Technical Memorandum 05-02 – ‘Guidance in support of functional provisions for healthcare premises’.

BS EN 1154.

BS EN 1634-1.

BS EN 50132-5.

BS EN 50132-7.

BS 7958.

BS 8418.

BS 8495.

Lighting Guide for Hospitals and Health Care Buildings. CIBSE.

ICO CCTV Code of Practice.

Improving Inpatient Psychiatric Services for Black and Minority Ethnic Communities. OP71, Royal College of Psychiatrists, 2010.