

Scottish Health Planning Note 8

Facilities for rehabilitation services



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About this series

The Scottish Health Planning Note series is intended to give advice on the briefing and design of healthcare premises in Scotland.

These Notes are prepared in consultation with representatives of the National Health Service Scotland and appropriate professional bodies. Health Planning Notes are aimed at multidisciplinary teams engaged in:

- designing new buildings;
- adapting or extending existing buildings.

Throughout the series, particular attention is paid to the relationship between the design of a given department and its subsequent management. Since this equation will have important implications for capital and running costs, alternative solutions are sometimes proposed. The intention is to give the reader informed guidance on which to base design decisions.

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1. Scope of SHPN 08

Introduction

- 1.1 Rehabilitation means different things to different people. 'Rehabilitation – a guide' published by the Department of Health gives two quite different definitions:
- a process of active change by which a person who has become disabled acquires the knowledge and skills needed for optimum physical, psychological and social function;
 - the application of all measures aimed at reducing the impact of disabling and handicapping conditions, and enabling disabled and handicapped people to achieve social integration.
- 1.2 In reality the term “rehabilitation” is used in a way that encompasses both of the above definitions. Rehabilitation can thus be defined as a process that aims to restore personal autonomy in those aspects of daily living most relevant to individuals and their families. Rehabilitation services should focus on the rights of individuals to control their own lives and make informed choices.
- 1.3 Rehabilitation involves the use of appropriate and available medical treatments, therapies, prosthetics, social and environmental supports, and is likely to require the collaboration of health, social services and other public agencies.
- 1.4 It is not limited to the role of the recognised rehabilitation professionals (physiotherapists, occupational therapists and speech and language therapists), and should involve users and carers in the planning and development process.
- 1.5 There is a consensus that “rehabilitation” is a continual process which encompasses acute interventions, where the aim is to cure, and long-term care, with its emphasis on maintenance.
- 1.6 Rehabilitation services need to be provided in a variety of settings:
- on a day-care basis in primary healthcare centres, local healthcare resource centres and local authority day centres – together with other community-based settings;
 - on either a day-care, out-patient or in-patient basis in acute general hospitals and specialist rehabilitation units;
 - community hospitals may provide primary or secondary care services;
 - primary/community care services should also be available to individuals in their own homes.
- 1.7 For the users of rehabilitation services, rehabilitation may mean:

- reducing disability and impairment;
- acquiring new skills through which the impact of the impairment, disability or handicap could be minimised; and/or
- altering the environment, including the behaviour of non-disabled people, so that the impairment and disability no longer result in handicap.

- 1.8 Recent central policy and organisational changes have put greater emphasis on community-based services that focus on both the user and carer. Rehabilitation services are now seen as an integral part of health service provision and should be included in the care plans for individuals. The aim is to help restore the function and role of individuals, thereby enabling them to achieve independence and maintain self-esteem.
- 1.9 Rehabilitation services can help in the prevention of ill health through advice on healthy lifestyle and activity programmes. This is in line with the Scottish Executive's White Paper 'Towards a Healthier Scotland' which states: "Good health is more than not being ill: we need to work on a broad front to improve physical, mental and social well-being, fitness and quality of life."
- 1.10 A key element of maintaining independence for many people lies in their ability to work. This is recognised in the joint National Priorities Guidance 1999/2000–2001/2002, which sets out as a key priority the Government's commitment "to ensure the provision of services which help adults to achieve and sustain the maximum independence in their lives, including, for those of working age, their capacity to take up, remain in or return to employment". The Government has also announced changes to the benefits system to provide new incentives and reduce disincentives to work. This challenging agenda will require closer collaboration between agencies concerned with providing rehabilitation and social care and those providing education, training and employment services.
- 1.11 Demographic changes over the last decade have meant an increased demand for rehabilitation services, with the number of people aged 80 and above increasing significantly over the next 20 years (Source: Our National Health: A plan for action, a plan for change).
- 1.12 It is increasingly recognised that rehabilitation services offer opportunities for reducing unnecessary and inappropriate care home placements. They offer support for the short-stay policy operated by acute general hospitals and contribute to the NHSScotland's commitment to a continuum of care as outlined in the Department of Health document 'NHS Responsibilities for Meeting Continuing Health Care Needs'.
- 1.13 Co-ordination and co-operation in the development of rehabilitation services is being encouraged at all levels, including:
- at national and regional levels for policy development;

- at regional and local levels for service planning and development, including specialist facilities;
- locally across traditional service boundaries, including the voluntary and private sectors, to create a user-friendly, seamless service.

Inclusions

- 1.14 This document gives guidance on the planning and design of facilities, to meet the needs of people who require a wide range of rehabilitation services. These services may be provided in a variety of locations, for example acute general hospital or community-based, according to local planning and provision. They will be provided by a multidisciplinary team, often with multi-agency co-operation. Community-based services range from those provided within a community hospital to a simple administrative base for outreach workers.
- 1.15 The intention of this document is to provide ideas and guidance for separate elements of the service which, by a process of mixing and matching, can be put together to achieve good management and value for money in capital and revenue terms. [Chapter 3](#) discusses in detail facilities for separate elements of the service. These elements may vary according to local needs.
- 1.16 The discussion within this document is based on known examples of good practice as documented in two publications: 'Rehabilitation – a development challenge' published by the King's Fund; and 'Trends in Rehabilitation Policy – a review of the literature' jointly published by the King's Fund and the Audit Commission. Cost and clinical effectiveness will be a prime consideration for those planning the service.
- 1.17 For further guidance concerning the accommodation for rehabilitation services provided at community hospitals, this document should be read in conjunction with the forthcoming Property and Environment Forum Executive publication 'Community hospitals'. For further guidance on rehabilitation services provided within local healthcare resource centres and primary healthcare centres, this document should be read in conjunction with HBN 36 – 'Local healthcare facilities' (under review).
- 1.18 Other guidance about rehabilitation services is contained in SHPN 35 – 'Accommodation for people with mental illness' and NHS Estates Design Guide – 'Day facilities for people with severe learning disabilities'.

Exclusions

- 1.19 This document does not contain specific guidance concerning the accommodation for rehabilitation services provided at:
- local authority day centres;

- schools for children with special needs;
- centres providing artificial limbs and wheelchair services – Disablement Service Centres.

Building cost and revenue expenditure

General

- 1.20 General guidance on matters pertaining to building cost and revenue expenditure is given in Chapter 5 of SHPN 03: General design guidance.
- 1.21 When calculating the building cost of the Department described in this Note, allowance should be made for all accommodation, appropriate to the particular project, described in [Chapter 3](#) and listed in the [Schedules of Accommodation, the engineering services described in Chapter 5](#) and all Group 1 equipment. Primary engineering services should be costed from the boundary of the site and, where appropriate, an allowance should be made for a share of the central refrigeration plant and distribution system.

Functional units

- 1.22 The schedules of accommodation listed in [Chapter 6](#) have adopted a modular approach to the planning of appropriate units to enable project teams to “pick and mix” those facilities that are required.
- 1.23 Using this modular approach, examples have been built up for both a small and a large theoretical hospital department. The areas given are for guide purposes only and will alter depending on the design solution.
- 1.24 It is not expected that any of the main rehabilitation departments, with the exception of the hydrotherapy suite, will be built as stand-alone units, but that they will form a comprehensive service at each location. However, the possibility of building less than a full service has not been eliminated. The hydrotherapy suite may be required to be built as an addition to an existing department.

2. Service objectives

Organisation of the service

- 2.1 Rehabilitation is not an isolated process. It begins at diagnosis and assessment, and continues through treatment/acute care, respite care and continuing care. Thus the service should be organised in such a way as to create partnerships between service providers that cross traditional boundaries of care.
- 2.2 The multidisciplinary and multi-agency nature of the rehabilitation function and the flexibility needed to support care plans tailored to individual needs do not lend themselves to tightly defined management structures. Service providers need to identify appropriate management structures and assess the clinical and cost-effectiveness of each.
- 2.3 Services can be organised at three levels:
- primary care/community-based services provided by all the members of the care team including the voluntary and private sectors. Local health authorities commission long-term service agreements that rely on multi-agency co-operation;
 - secondary care – units in acute general hospitals and community hospitals. The multidisciplinary care team provides a range of services – including physiotherapy, occupational therapy, speech and language therapy – on a day- or out-patient basis. Some patients will be in-patients. These units also serve as a base for outreach and community service workers;
 - tertiary care – specialist units based in hospitals or stand-alone units within planned regional and supra-regional services. These units tend to concentrate on particular conditions and provide expertise for patients with recognised specialist needs, for example the Queen Elizabeth Spinal Injuries Unit at the Southern General Hospital, Glasgow, and the Head Injuries Unit at the Astley Ainslie Hospital, Edinburgh.
- 2.4 A balance needs to be struck between the development of centralised services on acute hospital sites, where economies of scale can be achieved, and local community-based services which provide easier access for users. Specialist units need to be developed to maintain the necessary skills and expertise, which may mean that they are not so readily accessible to users.

Service providers

- 2.5 Although the NHSScotland is likely to continue as the main provider of rehabilitation services, many others will play a crucial role. The voluntary and

private sectors are developing a wide range of services for people with disabilities:

- by acting as pressure groups they are helping to articulate the needs of users and involve them in planning and developments;
- by increasing the variety of settings from which services are provided. These services have not always been well co-ordinated but rather have developed from a perceived gap in statutory provision. They often focus on specific conditions (for example Headway), specialist skills and equipment (for example the British Epilepsy Association) and the needs of carers (for example Care for the Carers);
- voluntary organisations, particularly in the care home sector, are developing services for non-residents in the local community; for example, physiotherapy services for young disabled people at a Sue Ryder home in a rural area are also available to non-residents wishing to purchase them.

- 2.6 All providers of services will need to co-operate and agree on goals and strategies in order to create a cost-effective, seamless clinical service. This requires good communications and working relationships within and across all levels of care – from NHS acute general hospitals and specialist in-patient units to local authorities in day-care provision and education. Open access to care plans is needed to enable support programmes to be developed for use at home and in the community.
- 2.7 The Carers Act 1995, which amends the Social Work (Scotland) Act, recognises the needs of carers who provide or intend to provide a substantial amount of care on a regular basis. Under the Act a carer is entitled, on request, to an assessment when a local authority carries out an assessment of the person cared for in respect of community care services. The results of the carer's assessment should be taken into account when the local authority is making decisions about services to be provided to the user. Local and health authorities will need to ensure that hospital discharge procedures take account of provisions of the Act and that carers are involved once planning for discharge starts.
- 2.8 Primary care staff, including GPs and community nurses through their contact with users and carers, are in a good position to notice signs of stress, difficulty or rapidly deteriorating health, particularly in carers. When making a referral for a user's assessment they should inform the carer that they also may have a right to request an assessment.
- 2.9 The strategies of healthcare organisations in developing primary service plans will be to achieve clinical and cost-effectiveness within the framework of national policy. Service plans will be based on assessments of the needs of the populations being served, through demographic studies and morbidity data.
- 2.10 Mapping of facilities in the locality will provide a picture of what is available and identify gaps and overlaps which need to be addressed when creating new

facilities or upgrading current ones. Inevitably there will be some degree of overlap between general and specialist services.

Assessment of requirements

2.11 Patients' needs change as they progress through their treatment programme – from acute/specialist rehabilitation to the ultimate goal of achieving total (or some degree of) independence – and these changing needs should be catered for.

2.12 Assessment of patients' abilities and setting goals for their rehabilitation, based on a holistic approach, will help identify the range of services needed. Rehabilitation is a continuous process and includes:

- assessing physical and cognitive abilities and any perceived impairment;
- support for independent living, including physical changes to the environment and specialised equipment;
- psychological support and counselling.

A co-ordinated programme of rehabilitation will include psychological, social and environmental dimensions. Re-assessment will be necessary as and when an individual patient's needs change.

2.13 Rehabilitation is best undertaken in a similar environment to that in which the new skills, or knowledge, will normally be used. Activities of daily living can be developed in a variety of settings, from a specialist occupational therapy unit, to an in-patient unit, to a community clinic or the individual's home. However, actual home, work and public areas continue to be preferred to "artificial" settings in many cases.

2.14 A wide spectrum of services can be provided on an out-patient or day-care basis. Outreach teams operating from acute general hospitals, community hospitals or healthcare resource centres will be able to meet some of the needs in the community. Drop-in centres can also be particularly valuable as a community resource.

General planning issues

2.15 Two particular space planning and functional issues require special mention: the flexibility of functional spaces, and accessibility for those people requiring rehabilitation. These issues apply to rehabilitation services provided within community settings and acute general hospitals. As well as accessibility into and around any healthcare premises, consideration should be given to transport options for patients, visitors and staff to and from the facility. Healthcare providers should contact their local authority transport service to discuss the level and type of service it is able to provide.

Flexibility

- 2.16 The need to create flexible healthcare environments has never been greater, and nowhere is this more appropriate than in rehabilitation facilities.
- 2.17 Many space utilisation and functional suitability studies have reviewed rehabilitation “departments” and found them to be under-used or over-sized and, frequently, very expensive to adapt for alternative uses. This is despite a continuing and growing need for rehabilitation services.
- 2.18 The revenue costs of owning, operating and staffing these facilities are considerable, and increase in direct proportion to the quantity of floor space provided. It is therefore incumbent on the planners and designers of rehabilitation services and facilities to ensure that they are as flexible and as fully used as is practicable.
- 2.19 It should be remembered that many general multi-purpose spaces may be suitable for providing rehabilitation functions with little or no modification. This approach meets requirements of sustainable construction, saves money from expensive redevelopments, and maintains service provision. Similarly, specialist rehabilitation facilities should be designed to maximise the opportunities for the flexible use of those areas for alternative functions at different times.
- 2.20 Flexibility can be increased by using:
- “open-plan” construction systems;
 - proprietary demountable partition systems;
 - standard-sized consulting and examination rooms, interview and counselling rooms, seminar/training rooms etc;
 - locations which have space to grow laterally (either internally or externally) – for example, located next to “soft areas” which can be easily moved elsewhere;
 - locations which have hardstandings adjacent for “mobile” facilities.
- 2.21 Just-in-time (JIT) stock systems can also be employed to alleviate floor space pressures and to unlock seemingly inaccessible and inflexible spaces.
- 2.22 The need for flexibility should be balanced with the need for patient privacy and confidentiality, as well as practical issues such as storage space for equipment.

Accessibility

- 2.23 The Disability Discrimination Act 1995 states that disabled people must not be discriminated against by additions and adaptations to the built environment. Much guidance has been produced by many agencies (see References) to clarify what is required to fulfil these obligations, and planners of rehabilitation facilities must clearly follow these requirements. However, the special nature of rehabilitation

facilities means that there is an even greater obligation to ensure accessibility into and around these spaces. For example:

- Simple wheelchair accessibility is not sufficient. Many patients using rehabilitation services will have specially extended and adapted wheelchairs. These should be able to negotiate the corridors, lifts and doorways, and turn within the facility.
- Similarly, rehabilitation facilities frequently feature mechanical lifting hoist and tracks so that, for example, a patient may be transported from a bed to a bathroom/WC. Such requirements will affect the room dimensions, internal layout and ceiling specifications.
- A significant amount of space is required for storing equipment. Space will often be required for equipment whilst it is in use, and for its storage elsewhere when not in use. Equipment which is used in an inappropriate space or stored inappropriately rapidly becomes viewed as an accessibility issue and has health and safety implications.
- If ramps cannot be avoided, they should be constructed to a gradient suitable for patients in self-propelling wheelchairs, with hard-wearing, non-slip surfaces, and wide enough for the accompanying carer. A continuous handrail along the ramp should be provided for ambulant users.
- If lifts are to be installed they will need to be spacious enough to accommodate large mobile hoists or a wheelchair user and carer, and be able to be operated by sitting users or those with sensory impairments. Lifts should be fitted with visual, as well as audible, alerting systems in the case of fires or other emergencies. Systems need to be in place to inform a deaf patient, when pressing a lift alarm, that help is coming.
- Arrangements may have to be considered to enable dogs (whether guide dogs for the visually impaired or hearing dogs for those with hearing impairments) to attend with the patient. A canine relief facility should be introduced at a location close to the entrance and waiting area.

Further guidance on access is given in SHPN 03: General design guidance and in Chapter 4. See also SHFN 14 – ‘Disability access’.

- 2.24 As well as ensuring that the built environment is easily accessible to people with disabilities, it is essential that clear signposting allows those with both physical and sensory disabilities to find their way around the facility. For further information please refer to the Property and Environment Forum Executive publication ‘Wayfinding – guidance for healthcare facilities’.

Health and safety

- 2.25 Normal health and safety risk assessments will need to be made. Some units may choose to relax controls in the “activities of daily living” (ADL) flat to create a more domestic environment. For example:

- hot water temperatures – hot water in patient areas in hospitals is controlled at 43°C to prevent scalding. This is significantly lower than the hot water temperature in most domestic households;
- catering hygiene – hygiene standards in hospital kitchens are higher than would be expected in a normal household.

See [Chapter 3 \(paragraphs 3.88-3.97\)](#) for further details on ADL flats.

- 2.26 Where it is felt that there would be some advantage in departing from current guidance in order to prepare a patient for more independent living, the extent of any such relaxation should be based on a thorough risk assessment and agreed by all members of the multi-agency team. Each of the enforcement agencies must be satisfied that the action is within the limits of discretion allowed by the relevant legislation. Under no circumstances is it acceptable to lower fire standards. It is suggested that the ADL flat should be fitted with emergency call facilities.

Control of substances hazardous to health (COSHH)

- 2.27 As well as the normal risk assessment of each potentially harmful substance, it is important that the risk associated with particular patients having access to them is assessed. Supervision may be required.

Personal safety

- 2.28 All users of a facility – including patients, carers, visitors and staff – may be vulnerable to violence, and may need to be protected not only from violent patients in the facility but also from the risk of violence and attack from people in the wider community.
- 2.29 Project teams are reminded that where violent incidents are foreseeable, employers have a duty under Section 2 of the Health and Safety at Work etc Act 1974 to identify the nature and extent of the risk, and to devise measures which would provide a safe workplace and a safe system of work. Such measures should reflect the guidance given in the Health Services Advisory Committee report 'Violence and aggression to staff in health services', issued in 1997.
- 2.30 Although violence is not as prevalent as some public perceptions suggest, operational policies should minimise the risk of violence and security problems by allowing for:
- good observation – direct and unimpaired visual contact with colleagues is important;
 - good communication systems taking account of the perception of staff towards their own levels of security. Consideration should be given to alarm call systems for use by clients and staff. Alarm call points should be situated so that they can be operated if the door or exit is blocked.

- 2.31 As well as operational policies, the design of the building will play an important role in reducing the risk of violence and security problems. Consideration should be given to the creation of a pleasant environment as well as the need to allow for good observation.

Hospital clinical and operational policies

- 2.32 General guidance on Hospital clinical and operational policies is set out in SHPN 03: General design guidance. The following paragraphs describe clinical and operational requirements specific to facilities for rehabilitation services, and should be used in conjunction with the guidance given in SHPN 03.

Catering facilities

- 2.33 The more independent patients will prepare their own meals, and many premises will have facilities for teaching patients to prepare their own meals, or at least prepare snacks. However, in some facilities patients will need to have their meals prepared for them. These could be prepared on the premises from basic ingredients, but as this tends to be expensive in terms of labour costs it is assumed that in most of these cases meals will be prepared elsewhere and brought in.

Domestic services

- 2.34 The domestic cleaning arrangements are likely to be different according to the type of premises involved. For those that are based on a hospital site or not open 24 hours a day, it is probable that a domestic services or facilities manager will be responsible for organising the cleaning services. In these situations most of the work will be carried out by domestic services staff regularly attached to, or based in, the premises. Less frequent major cleaning work will probably involve staff of contract services brought in for the purpose, and may involve equipment not normally held on the premises. In premises which provide residential accommodation, some of the cleaning may be done by the residents with appropriate levels of assistance. This has implications for the degree of access to cleaning materials which the residents will have. In some situations residents will have full independent access, while in others it may be more appropriate for access to be supervised. The choice of cleaning materials/detergents used will be based on COSHH procedures to identify not only health and safety risks, but also environmental risks.

Supply, storage and disposal

- 2.35 Project teams should give careful consideration to supply, storage and disposal systems. The quantity and distribution of storage space can only be specified in terms of known policies. Space will be required for various types of waste, allowing for proper segregation procedures as outlined in SHTN 3 – 'Management



and disposal of clinical waste'. It will be necessary to have dedicated secure storage if clinical waste is created.

- 2.36 Project teams need to consider the frequency of deliveries, whether supplies are bought from local shops or ordered through a central system. The amount and type of storage space required is directly related to the frequency and size of deliveries.

3. Specific functional and design requirements

Introduction

- 3.1 People who use rehabilitation services are not a homogeneous group; they have widely differing needs and require a range of services in a variety of settings. Getting the balance of provision right is a difficult task given the number of different agencies involved and the variations in resource availability. Facilities may range from a simple administrative base for an outreach team to wider-ranging facilities provided within acute general hospitals and community hospitals.
- 3.2 This Chapter describes facilities for separate elements of a general rehabilitation service that can be put together as circumstances dictate. NHS Estates' HBN 36 – 'Local healthcare facilities' (under review) makes specific reference to rehabilitation services within primary healthcare centres and local healthcare resource centres. For other community-based services refer to 'Community hospitals' (to be published as an SHPN in due course).
- 3.3 Facilities for rehabilitation will vary depending on the medical conditions being treated. It is essential that architects consult with the appropriate professionals and users to determine the necessary range of facilities.
- 3.4 The facilities required for general rehabilitation can be broken down into a series of spaces as follows.

Parking spaces

- 3.5 Dedicated parking spaces for people with disabilities who are able to drive, should be as near as possible to the entrance and wide enough to enable an independent wheelchair transfer. Such spaces should be clearly identified by adequate signage. Consideration should be given to controlling the misuse of these facilities. Additional space may be required for driving assessment equipment. The distance between the car parking area for people with disabilities and the entrance should be level or sloped, of sufficient width, and of an appropriate surface. See also HFN 21 – 'Car parking'.

Entrance, reception and waiting spaces

Entrance

- 3.6 Ideally the entrance should be a true, level access with wide, electronically operated, automatic doors. Depending on the size of the building, the entrance may include an entrance canopy, a draught lobby, a foyer and a reception desk.

Whatever its size, the entrance should be well signposted and fully accessible to people with disabilities, including patients on trolleys. There should be a two-way communication system at the entrance door for carers and patients to call for assistance as necessary. Communication systems should be accessible to people in wheelchairs, and those with cognitive learning difficulties, sensory impairments (including deaf people, for whom a voice transfer system will be inappropriate) and reduced manual dexterity.

Reception desk

- 3.7 The reception desk should be clearly signed and adequately illuminated and should provide a low, open, friendly facility that does not give any sense of a physical or organisational barrier. One section of the desk should be low enough for children and patients in wheelchairs. Where security considerations dictate the use of window grilles (see [paragraphs 2.28-2.31](#) on personal safety) or where the reception area is noisy, consideration should be given to the use of an induction loop and/or voice transfer system. Such systems should be clearly advertised and staff should know how to operate them.
- 3.8 This is the control point for access to the facility, and its position by the entrance facilitates the greeting of each patient on arrival. It should overlook the entrance lobby and the waiting area. Systems to alert patients that it is their turn to be seen should take account of those with sensory disabilities. Consideration should be given to visual, as well as audible, systems.

Waiting area

- 3.9 This area will cater for patients who need to wait with escorts prior to changing or proceeding to treatment areas. Patients may require walking aids or may be in wheelchairs. The area should contain a bay for the safe and secure parking of wheelchairs used for the internal transport of patients. It should also contain a selection of chairs of varying heights and types suitable for patients with varying disabilities. Consideration should be given to providing a selection of payphones that are suitable for patients with varying disabilities (see SHPN 03: General design guidance).
- 3.10 The waiting area is a useful place to display information leaflets for people to take away and study. Any written material should take account of the needs of blind and partially-sighted patients.

WC

- 3.11 WC facilities should be provided for staff, patients and visitors. Their location should be obvious, to spare people the need to ask directions. They should be accessible for disabled people, and the route to them should be easy to navigate. Consideration should be given to providing left- and right-handed access WCs that will allow patients to practise transfers on each type. Consideration should also be

given to providing automatic WCs which allow patients to attend to their own hygiene needs. Because of the patient population, it may be prudent to provide more than the usual number of accessible WCs. These should be large enough to accommodate a mobile hoist, plus at least one nurse or therapist. Foot-operated waste bins are inappropriate in accessible WCs. Baby changing facilities may need to be considered.

- 3.12 Maintaining privacy is important. Individual toilets should be designated as single-sex, and users should be spared the need to go through or near to opposite gender areas when they are wearing nightwear or theatre gowns or are otherwise exposed. This may mean that each department needs its own WCs, although dependent upon layout it may be possible for facilities to be shared (for instance between different therapy areas). It is not usually necessary to provide separate staff WCs, except in staff changing areas.

Cloakroom

- 3.13 A cloakroom where patients and visitors can leave hats, coats etc may be provided. Coat hooks should be positioned so that patients in wheelchairs can reach them.

Administration spaces

- 3.14 Office accommodation should be planned to be as flexible as possible. It may not be necessary to have a separate staff office for each discipline; in fact, sharing office space can improve communication and facilitate multidisciplinary team working. Open-plan offices with demountable partitions to create cellular offices are much more flexible than traditional cross-wall constructed offices. Consideration should be given to employees with physical and/or sensory disabilities to enable them to access their workstations without risk to their health. This will apply to all areas.

Office (single person)

- 3.15 A single-person office should accommodate a workstation with VDU and keyboard, seating for up to three other people, and storage for books and files.

Office (multi-person)

- 3.16 A multi-person office with office workstations is required for a variety of staff. The number of workstations will need to be determined locally.
- 3.17 Activities include the exchange of information by telephone and through a computer system, together with the written work associated with patient care and treatment. Care plans and assessment work can generate vast amounts of paper, so plenty of storage space for files will be required. Project teams will need to consider local arrangements for Information Management and Technology (IM&T).

- 3.18 If the office also functions as a reception, it should be located so that staff in the office can see patients coming and going through the front door. This is particularly important in residential accommodation with an “open door” policy, when the main entrance is not locked and residents are free to come and go.
- 3.19 Community healthcare staff – for example community physiotherapists – who work mainly in the local community may need an office base where they can carry out administrative and clerical duties and communicate with colleagues. Consideration should therefore be given to the provision of a few “hot desks”. The number of hot desks required will vary depending on individual working situations.

Case conference room

- 3.20 A large room is required for staff meetings, case conferences etc. Furniture and equipment may include semi-easy chairs, upright stacking chairs, bookcases, a wall-mounted whiteboard and display panel, and facilities for storing various items. Consideration should be given to the provision of an induction loop and/or voice transfer system.
- 3.21 Project teams should consider the options for using this room as flexibly as possible. Case conferences are likely to be limited to office hours. With judicious choice of furniture, floorings and lockable storage, the space may be useful for general meetings, seminars, one-to-one interviews, counselling and evening group activities.

Records store

- 3.22 The need for a records store will depend on the local operational policy for storing and accessing health records. The size of the store will be determined by the method of storage and the number of records to be kept, which in turn is dependent on the number of patients in contact with the service. The [schedules of accommodation in Chapter 6](#) list the records store as optional, as records may either be held by the patient or stored electronically.

Clinical and therapeutic spaces

Sub-waiting space

- 3.23 A small sub-waiting space may be required for patients who need to wait for treatment, or for any other purpose. Staff should be able to observe waiting patients.

Consultation/examination room(s)

- 3.24 A consultation/examination room(s) may be used for procedures of a clinical nature, as well as for pre-admission assessment clerking and examination of

patients on admission. An office workstation that includes space for a VDU and keyboard should be provided in all consultation/examination rooms. Requirements for resuscitation equipment will vary depending on the nature of the facility.

Assessment/interview room(s)

- 3.25 A room is required in which patients who require privacy can be assessed and treated. Treatments include psychological assessment, perceptual training and the use of a personal computer. The room should also be used for general interviewing purposes and study. It should be carpeted.

Physiotherapy spaces

Patients' changing facilities

- 3.26 Some patients will need to change for treatment. They will require the privacy of changing accommodation for this. Others may be directed into individual treatment cubicles or into the activity area. During treatment patients may need to move from one area to another. Adequate circulation space is also needed for the movement of patients in wheelchairs or using walking aids. A WC must be provided which is suitable for use by disabled people.

Activity areas

- 3.27 Active treatment of patients will be undertaken in the activity area, with individual patients or groups of patients whose treatment does not usually require privacy. The activities taking place generally need more space than is available in individual treatment cubicles.
- 3.28 The treatment may involve using equipment which needs an ample amount of space. Some items of equipment are free-standing, others are fixed. Some equipment will need all-round space, for example exercise tables, benches, parallel bars, weight systems and exercise ergometers. In addition to the space for free-standing equipment there must be room for patients to participate in group exercises, including activities using and throwing balls.
- 3.29 The overall space will need to accommodate a wash-hand basin, some chairs and a small desk/table for use by therapists. In planning the whole area, account should be taken of the diverse needs of patients using the facilities.
- 3.30 Two distinct activity areas may be required, described in this document as the "large" and "small" activity areas. Each area requires a direct entrance from the circulation corridor. In a small department a sliding folding partition between the "large" and "small" activity areas may provide flexibility of use. Equipment storage space may be common if the areas are adjacent.
- 3.31 The planning of both areas should take into account the need for supervision, from every point in the room, by therapists; the grouping of the equipment in relation to

the open area; the avoidance of patient/staff cross traffic; the possibility of the two spaces communicating with each other; and the need to have access to an outdoor space to enable patients to take exercise in the open air. The main requirements for the layout of the equipment are for sufficient wall space, and enough floor space around apparatus for patients to be assisted by therapists from two, three or four sides depending on the piece of equipment being used. It is important to ensure free wheelchair circulation space between items of equipment. The space around equipment should be clearly identifiable by suitable visual, tactile and audible contrast.

- 3.32 As the overall space is likely to be relatively large, a minimum ceiling height of about 3.2 m is recommended so as to prevent the space becoming oppressive, and to provide sufficient height for some activities. At least some part of the “large” activity area will require a minimum ceiling height of 4.5 m to allow patients to practise “over-shoulder” activities and to be accommodated on the top of practice stairs and exercise steps. The walls and floors need to be strong enough to take the load from equipment. As there will be a lot of movement, a hard, smooth, non-slip floor finish should be provided. The ceiling needs to have acoustic absorbent properties, and windows should be placed mainly at a high level, although some floor-to-ceiling glazing judiciously placed will improve the area visually. Good ventilation is necessary because of the nature of the activities in this area. The ventilation may have to be supplemented by cooling in some cases. Lighting should be protected and recessed where necessary. In the “small” area, some carpeting may be needed to enable patients to practise mobility on different surfaces.
- 3.33 The activity area should be easily accessible from the sub-waiting area, the staff base, physiotherapists’ office and the patients’ changing accommodation. It should be adjacent to the individual cubicle area.

Treatment cubicles

- 3.34 Treatment in the cubicles may include traction and electrotherapy. This area should be easily accessible from the staff base, physiotherapists’ office and the patients’ changing accommodation. There should be access to hand-washing facilities and water for treatments in the cubicles. The Chartered Society of Physiotherapy produces guidelines which may be useful.
- 3.35 The cubicles will be formed by washable curtains hung from ceiling tracks, and require adequate space for a couch, chair, mobile equipment and a shelf for small equipment. Provision is required for the hanging of outer clothes. Some cubicles may need to be larger to enable traction apparatus or larger electrotherapy equipment to be used. A welded steel mesh may be required above, behind and/or alongside some of the treatment couches to provide a means of attaching pulleys or other equipment.
- 3.36 Adequate space is needed within the area to enable wheelchairs and trolleys to pass between the cubicles when the curtains are closed. A locked cupboard is

required for storage of substances which have undergone COSHH assessments. Where necessary, mechanical ventilation should be provided, and interior designers should consider the need for ventilation when planning and specifying curtain tracks. If the location of the curtains is likely to affect the ventilation, the curtains should be provided with net headings.

Individual treatment room(s)

- 3.37 An individual treatment room or rooms will be needed for extra privacy, and for some treatments such as ultra-violet light, laser irradiation and respiratory therapy. Good ventilation, blackout, and hand-washing facilities are necessary. An oxygen supply and medical vacuum will be required for respiratory therapy. These may be provided by either portable apparatus or by terminal outlets from the hospital medical gases installations if the latter are located nearby.

Wax treatment and ice preparation

- 3.38 The use of paraffin wax and ice will require the provision of a room adjacent to treatment cubicles, and with easy access to the activity areas. This must have a washable non-slip floor from which wax, ice and water can be easily cleared. The area should be very well ventilated.
- 3.39 The ice-making machine will require appropriate plumbing. Storage space for wax, treatment towels and packs is essential, together with arrangements for drying towels. A sink which will also allow the safe filling of a foot bath and draining board are required. Facilities for the washing of patients' hands and feet are also needed.

Splint preparation

- 3.40 The splint preparation room is required for the construction of made-to-measure splints. The room should be large enough to accommodate a patient on a trolley, and should ensure privacy for patients being measured and fitted with splints. Mechanical extract ventilation will be required because of the heat and dust. Adequate space for the storage of equipment and materials is required. If plaster is used, a sink with a drainage filter must be installed. A workstation for making wheelchair-pushing gloves or pressure garments for patients may be needed.
- 3.41 The facilities will be used by both physiotherapists and occupational therapists, and should be easily accessible from the physiotherapy and occupational therapy treatment areas. They may therefore be located within the occupational therapy spaces rather than here within the physiotherapy spaces.

Storage

- 3.42 In addition to the general store, secure storage is required for the various items of equipment likely to be used in the activity areas, including mobile equipment and walking aids. This space must be sited adjacent to or within the activity areas: it should be possible to move apparatus easily into and out of the storage space and

to withdraw or replace individual items without disturbing other items. Secure storage is also required in the treatment cubicles area for small items of equipment such as portable electrotherapy appliances.

Hydrotherapy spaces

- 3.43 Hydrotherapy should take place in water heated to a temperature of between 34°C and 40°C. The suite should be a self-contained operational unit so that it can be closed for maintenance or other reasons without affecting the rest of the physiotherapy facilities.

Entrance

- 3.44 The entrance consists of: a staff base; a bay for parking wheelchairs, stretchers, trolleys etc; and a subwaiting area for transferring patients from ward stretchers to pool trolleys. The staff base should provide facilities for the storage of patient records, and administrative activities related to patient and pool management. It should have easy access to the whole of the hydrotherapy suite, with an overview of the pool entrance and rest area. Appropriate resuscitation equipment should be centrally located and immediately accessible. Consideration may be given to sharing the entrance facilities with other spaces.

The pool

- 3.45 There is no single pool design that will cater for the needs of all categories of patient with entire satisfaction. Consideration should be given to a wide range of available options of size, shape and depth at the planning stage. The requirements of prime users should be identified and met.
- 3.46 The pool arrangement is usually classified according to whether it is constructed above floor level with the water contained behind a parapet, or sunk below floor level.
- 3.47 A parapet pool needs a “freeboard” of at least 100–150 mm to prevent water escaping when the level is displaced by patients and staff entering the pool. Scum channels should be positioned at this level to control the water depth and remove pool surface contaminants. A similar arrangement of scum channels should be provided in a sunken pool where the water level is below the surrounding floor level. An alternative arrangement can be considered for a sunken pool whereby horizontal gratings above channels are provided at the surround level so that the water surface is literally at floor (or “deck”) level. The surround would have drainage cross-falls to the gratings. The channels of a deck-level pool are wider than the conventional scum channels and have to be connected to an appropriately-sized balancing tank, usually installed under the pool surround, to cater for water displacement when patients and staff enter the pool.
- 3.48 Access to and exit from a deck-level pool is often easier for patients with disabilities and in an emergency evacuation, but eye-level surveillance of patients

in the water may be better in a parapet pool. It is possible to consider a deck-level pool which has a sunken staff access along one side only to provide supervision at parapet level. Occasionally the inherent geological or geophysical features of a particular site will inhibit the practicability of constructing a pool below existing ground levels.

- 3.49 Hydrotherapy pools generally need to be between 1.0 and 1.2 m deep, but no single pool depth can meet the optimum requirements for the treatment needs of all patients. Two different depths can be provided in one pool by constructing a “stepped” bottom, but it will be necessary to define clearly these different areas by means of contrasting pool floor and wall colours. No attempt should be made to lower the normal water level of a pool to accommodate different treatment depths, as this will negate the function of the scum or deck level channels. These channels are an integral part of the water recirculation and treatment system, which maintains water quality including the removal of surface-borne contaminants.
- 3.50 [Figure 3.1](#) illustrates a pool design which is considered to cover an acceptable range of potential usage by a variety of patients, including those who will need to enter and exit the water by means of an appropriately operated adjustable hoist. The use of rails and well-defined nosing to steps will improve access to the pool for patients not requiring a hoist.

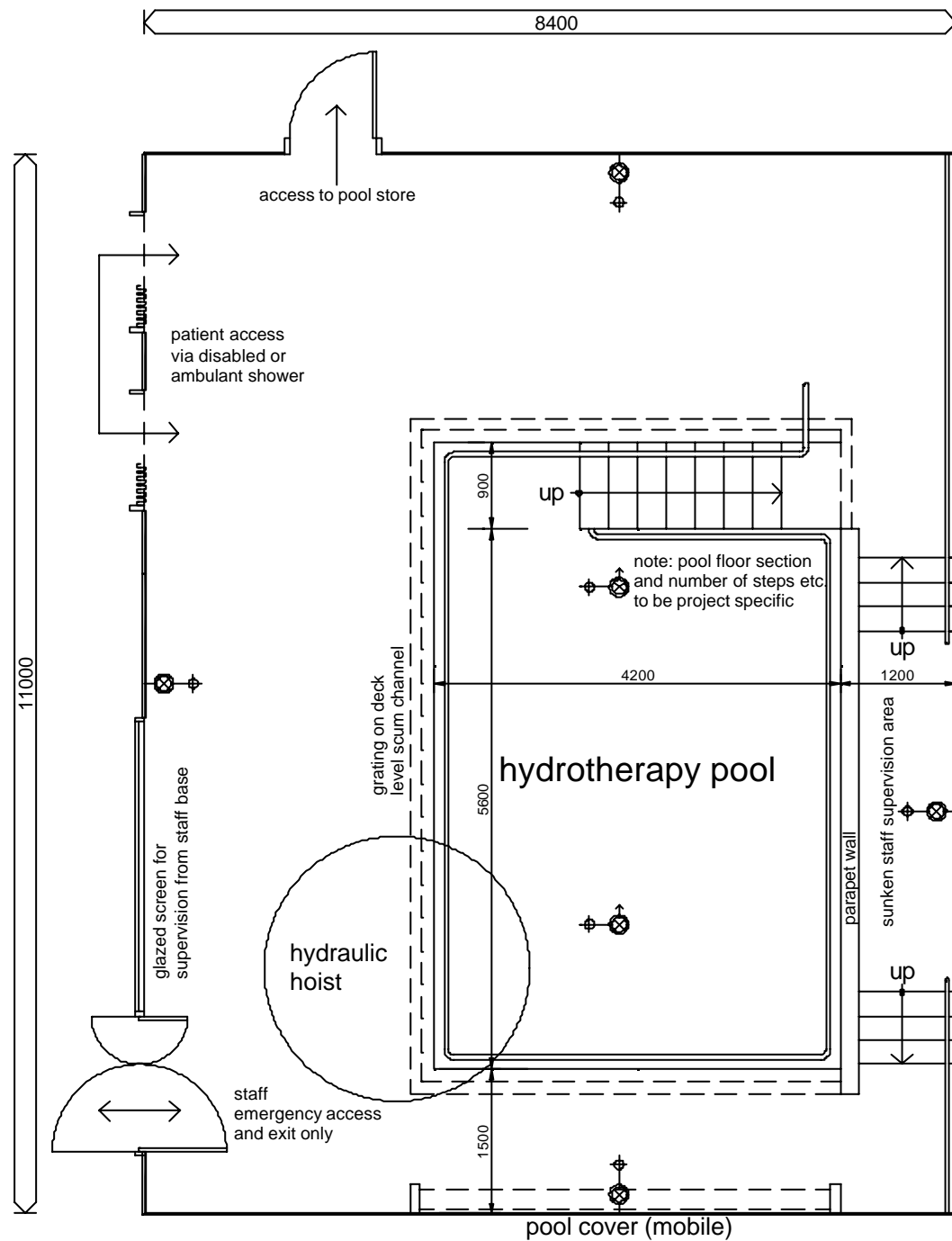


Figure 3.1 Hydrotherapy pool

- 3.51 The structure forming the hydrotherapy pool tank is usually reinforced concrete, but other forms of construction have been used for parapet-type pools. A reinforced concrete tank construction, finished with ceramic tiles using water- and chlorine-resistant adhesive and grouting is assumed here. Tile finishes should be matt, and tiles for the floor should contrast with the walls.

Pool services

- 3.52 Continuous filtration and disinfection of the hydrotherapy pool water is essential to control water quality within acceptable limits. Details of the guidance on the chemical and microbiological aspects of the health risks to patients and staff, and of the engineering plant and chemical dosing equipment required, are given in [Appendix 1](#). Detailed guidance on the microbiological aspects of the health risks and the advantages and disadvantages of the various options for chemical dosing treatments are given in 'Hygiene for Hydrotherapy Pools', published by the Public Health Laboratory Service.
- 3.53 The hydrotherapy suite air environment will be demanding because evaporation from the pool will produce an excessive chemically-aggressive humidity at a high ambient temperature. This will require appropriate ventilation and heating systems, for which detailed engineering design guidance is given in [Appendix 1](#), and must also be taken into account in the design and choice of building materials and components.
- 3.54 The pool hall floor and all surrounding areas including changing facilities and toilets should be covered in non-slip, easy-to-clean materials. The area surrounding the pool should be free of obstructions, allowing access to the poolside by a crash team with a resuscitation trolley to attend a patient who is having a cardiac arrest. Cardio-pulmonary resuscitation will begin at the poolside, but patients should be transferred to an adjacent dry area with a trolley (for example a changing room) before defibrillation is carried out.
- 3.55 Natural lighting of the hydrotherapy pool hall is desirable, but privacy and safety should be considered. Double-glazing of windows will minimise condensation. However, care must be taken to ensure that sunlight does not reflect off the water's surface, causing distraction or glare. Similar considerations apply to artificial lighting, which should be installed so that replacement of lamps and fittings is not unduly difficult. Detailed engineering design guidance for the pool lighting installation is given in [Appendix 1](#).
- 3.56 An emergency alarm call system should be provided, and pull cords to activate it, both from within the pool and from the surrounding area, need to be sited within reach of the therapist. Guidance on alarm call systems is given in more detail in SHPN 03: General design guidance.
- 3.57 Essential features for the economical operation of a hydrotherapy pool are the provision of energy recovery plant for the pool hall ventilation system and a thermally insulated, floating cover which should be in position at all times when the

pool is not in use. This cover should be stored on a manually operated floor or wall-mounted roller – usually located at the pool end remote from the access steps to avoid obstruction. A flexible floating pool cover constructed from a high-density closed-cell core bonded to a woven covering, and a heat pump unit integrated into the pool hall ventilation plant for energy recovery is assumed here.

- 3.58 The diffusion of high air temperature and humidity from the pool hall into the changing accommodation and patients' rest area should be mitigated as far as is reasonably practicable. Precise control will be physically impossible, but acceptable conditions can be achieved by appropriate design of the ventilation systems (see [Appendix 1](#) for details) in conjunction with restricting the number of access points into the pool hall. These should be limited to standard door height openings, respectively positioned in the walk-through showers and in the partition separating the staff base from the pool. If the latter opening does not give adequate supervisory overview, the separating partition should be glazed. It is anticipated that the pool hall will generally be of substantially greater internal height than the adjacent ancillary accommodation in the hydrotherapy suite. This will provide a natural "canopy" above the pool which will greatly assist the desired air movement control.

Pool counter-current unit (optional facility)

- 3.59 Some patients may benefit from a treatment programme which includes sustained "swimming". This is not normally practicable within the relatively small dimensions of a hydrotherapy pool. However, counter-current generating units are available which permit "swimming" to be undertaken without lateral or forward motion. These consist of a local pumping assembly which sucks water from the pool and then returns it to just below pool water level via a nozzle which can be regulated to give varying strengths of discharge jet. These units must be securely fixed at the side of the pool and are usually supplied with appropriate base plates and/or strands suitable for bolting to the pool surround. They also require a permanent electrical supply and controls which comply with safety requirements (see [Appendix 1](#)).

Patients' changing

- 3.60 An area in which patients can change in privacy with nearby lockers to securely store their clothing and valuables is required. It should be adjacent to the showers. Mixed sex sessions will be the norm, therefore male and female changing accommodation will be required. Changing cubicles should be provided for use by ambulant patients who need little or no assistance. Patients who require help in dressing and undressing may change in one of the larger cubicles, which could be unisex, provided in the adjacent recovery area, or in the trolley access shower area. Appropriate space will be required for the reception and transfer of these patients, and for parking their bed or trolley during treatment. Staff may use this area if alternative suitable facilities are not conveniently located.

Patients' rest area

- 3.61 An area where patients can lie down, rest and rehydrate on couches after treatment is necessary. The area should be adjacent to the patients' changing accommodation and may be combined with the changing area if this is a practical option. Couches should be provided in curtained cubicles, some of which should be large enough to accommodate a patient on a trolley. These cubicles would also be used by such patients for changing. A drinking-water point and beverage station should be provided in this area in accordance with whole hospital policies. Such facilities should be accessible to people with disabilities, including those with reduced manual dexterity.

Showers

- 3.62 Shower facilities are required for all users before entering and on leaving the pool. Consideration should be given to the provision of a range of showers to suit patients with varying disabilities (see also [paragraph 3.94](#)). Overhead tracking for the use of hoists may be necessary.
- 3.63 Adequate toilet accommodation is required to maintain patients' privacy within this facility. See [paragraphs 3.11–3.12](#)).

Storage

- 3.64 Space is required for rinsed hydrotherapy equipment to be dried and stored while not in use. Storage space is also required for hydrotherapy suite cleaning materials and equipment, and the water testing materials and apparatus.

Laundry/utility room

- 3.65 Space and facilities are required for clothing to be rinsed and dried after use. Space is required for storage of fresh towels and towels in use, gowns, swimwear, pillows and linen required in the rest area, and also the storage of dirty linen items pending collection.

Plantrooms

- 3.66 Plantrooms will need to house the equipment for pool water treatment and ventilation. Detailed information is provided in [Appendix 1](#).

Occupational therapy spaces

Activity areas

- 3.67 In small-sized accommodation it may be unnecessary to provide both light and heavy activity areas, and one large area may fulfil both functions. It is important that the layout of the room allow for heavy/noisy activities (see [paragraph 3.66](#) and [3.77](#)) to be at one end of the room, leaving the other available for cleaner, more clerical-orientated activities, as identified in [paragraph 3.69](#) and [3.70](#). The room

may also be used for group activities when its overall space availability will be important.

- 3.68 The safety of patients and the need to comply with all statutory regulations and protection requirements must be taken into account in the layout and design. It must be possible to switch off all electrically-operated therapy equipment in an emergency. All such equipment must be guarded and maintained in accordance with health and safety requirements.

Light activities area

- 3.69 The light activities area requires desk and table space, some of which will need to be at varying heights. Patients will sit or stand and can undertake:

- clerical and office tasks, for example writing;
- copying, typing, guillotining;
- educational work, for example mathematics;
- remedial activities;
- various creative activities;
- light assembly work;
- work with a personal computer.

- 3.70 The activities detailed in [paragraph 3.69](#) can be divided into those requiring space for:

- work tables for writing, playing board games and undertaking small assembly tasks. Sufficient space will be needed to allow a therapist to sit on one side of the table with the patient sitting opposite, as well as tables with space on either side of the patient;
- work tables with equipment requiring space on either side of the patient to undertake tasks, for example using a computer for therapeutic purposes;
- free-standing equipment;
- positioned activities, for example wall games.

- 3.71 The overall layout needs to take into account the space requirements of different activities such as printing press, driving assessment and so on. (If a printing press is installed an overhead mesh may be required.)

- 3.72 Changing philosophies relating to treatment of patients, for example early discharge from hospital and/or treatment, may affect the amount and choice of equipment required in the occupational therapy heavy and light activities areas.

- 3.73 The area contains equipment and apparatus which will assist patients to regain motor, cognitive and sensory skills. Some of the activities may be used to

stimulate interest and concentration. Acoustic treatment of surfaces, screening and skilful illumination should be used by the designer to reduce distraction.

- 3.74 Adequate space will be required for attendance on patients by staff, for wheelchair access, and for flexibility in positioning patients and equipment.
- 3.75 The area requires a ready access to stores and needs to be easily supervised. An open, rectangular plan rather than an L-shape or long and narrow plan should be adopted. A hard and smooth floor finish is required. Walls should be washable and capable of taking adjustable wall fixings. Many of the activities will be intricate and will require a good standard of natural and artificial light as well as a pleasant external aspect to allow eyes to rest after a period of concentration. Access to an outdoor/garden area would be welcome. Adequate storage is necessary for equipment, materials and ongoing work.

Heavy activities area (optional)

- 3.76 Heavy activities can include, and may require space for:

- sawing, hammering, drilling, sanding, light metal work;
- painting and varnishing;
- the use of hand or electromechanical equipment.

Benches and equipment may need to be at varying heights to accommodate wheelchair users and patients who may be sitting or standing.

- 3.77 The general layout must take account of the varying space and environmental requirements of different activities. In addition, external access is desirable to enable direct delivery of materials to the heavy activity storage area.
- 3.78 The layout of machines, benches and storage cupboards will be determined on individual merit depending on the shape of the room, position of entrance, position of windows and work to be undertaken. The spacing of equipment items should be such as to enable ease of supervision, arrangement and removal of benches, ease of servicing machines, the easy supply of materials, and ease of movement of patients in wheelchairs.
- 3.79 Floor finishes should be non-slip, hard and impervious to oil spillages. The ceiling should be acoustically absorbent to reduce noise levels. A good standard of natural and artificial lighting is necessary. The latter should be well balanced between task and background lighting. Washing facilities are required within the area for washing and brush cleaning. Secure storage in cupboards will be necessary for small tools and items of equipment.
- 3.80 The safety of patients and the need to comply with all statutory regulations and protection requirements must be taken into account in the layout and design. It must be possible to switch off all electrically-operated therapy equipment in an

emergency. All such equipment must be guarded and maintained in accordance with health and safety requirements.

IT therapy room

3.81 Access to IT systems has been found to have several benefits. It:

- develops new skills which can be used to obtain employment or for numerous leisure purposes;
- provides a source of education and information;
- aids communication with other people in similar circumstances;
- provides a welcome source of recreation;
- supports creative activities;
- frees up specialist staff and carers' time.

The IT therapy room will include one (or more) computer bays which are accessible to patients in wheelchairs. A Braille keyboard and/or keyboard with large function keys should be available for blind/partially-sighted patients, as well as speech facilities for those with reduced manual dexterity. A computer touch screen may also be required. The room could be adjacent to or part of a library/information centre.

Storage

- 3.82 Designers should consider the possibility of combining activity areas and associated storage spaces where it is appropriate to do so, particularly in small-sized accommodation. Long lengths of timber, mostly mopstick handrail and large sheets of ply, will need to be stored. These can sometimes be accommodated down the long wall of the heavy end of the activity area, provided there is proper racking both to prevent warping and for safety reasons. For small departments, the timber and metal store and material and equipment store can probably be combined with additional storage space for loan wheelchairs. These are used by in-patients awaiting the arrival of their own chair and are not used for assessment. Attention should be paid to the storage of flammable items, to ensure compliance with statutory requirements. Security should also be adequate to minimise the risk of unauthorised entry and pilfering.
- 3.83 A dry, ventilated room with racks and shelves is required for the secure storage of timber and metal (of varying lengths up to 5 m) used in the heavy activity area. Direct or easy external access for the delivery of such materials is essential, but it is equally important for the store to be sited so that materials can be manoeuvred easily to their point of use. Some room shapes and dimensions may preclude the buying of economical sizes of timber.
- 3.84 Space is required in which to store patients' ongoing work. Racking and shelving will be required. Easy access to both light and heavy activity areas is necessary.

- 3.85 Secure storage is required for materials and equipment issued for use in patients' treatments. Some equipment may also be loaned to patients. Some racking and shelving will be needed.
- 3.86 Secure storage will be needed for equipment belonging to community services (usually social services departments) which can be issued to patients before discharge (raised toilet seats, walking frames, eating aids, dressing aids etc). If located outside the rehabilitation department, the store should be easily accessible and be sufficiently secure to ensure appropriate access only. Space will be required for unpacking and sorting. It is assumed that records of these items will be maintained in the occupational therapy department. Returned equipment will need to be cleaned prior to storage. If this is done on-site, adequate cleaning facilities will be required. Jointly resourced and managed equipment and adaptation services are now being encouraged and facilitated. See 'Community Care: A Joint Future – report by the Joint Future Group'.
- 3.87 Storage is required for a range of wheelchairs and accessories used for assessment purposes and for associated equipment and attachments. Space is required within the storage area to manoeuvre wheelchairs. Consideration should be given to security to ensure that wheelchairs are not moved away from the department and used for other purposes. This space needs to be associated with the light activities area and to be accessible to physiotherapists.

Activities of daily living

- 3.88 Wherever possible, patients should relearn and practise procedures of daily living in their own homes or in the real environment. Ideally, purpose-built facilities for "activities of daily living" (ADL) should only be used for more complicated tasks with specific equipment requirements.
- 3.89 These purpose-built facilities should aim, as far as possible, to simulate domestic environments. This will not be possible in the bathroom, where additional space is required for comprehensive assessments using equipment with which patients will need to practise. The kitchen will also need to be larger overall, but the design should allow the space to be divided into two areas – one housing an electric cooker, the other a gas cooker – which will reduce the workspace to more domestic dimensions.
- 3.90 ADL flats tend to be under-utilised. To prevent this happening, consideration should be given to designing the ADL flat as a multi-function space which may also be used at agreed times for meetings, counselling, evening classes etc. Care should also be taken at the planning stage to avoid duplicating facilities already available locally.

Bed sitting room

- 3.91 One room containing appropriate bedroom furniture is required to undertake the assessment and training of patients in dressing and undressing, grooming, bed-

making and the use of bedroom furniture. Sufficient space should be allowed for patients to practise using a variety of chairs. Training and advice will be necessary in some cases in the use of lifting poles and manual or electric hoists. An electric hoist should be positioned in order to lift a patient – from sitting or lying position – over and into a bed. Two bedrooms may be required in the largest units due to the number of patients and the time taken to practise dressing and undressing. It is not necessary to equip the second bedroom with an electric hoist. A carpet floor finish is appropriate for the bedroom.

Bathroom

- 3.92 Some patients will need to learn new methods of bathing, washing and using the WC while therapists assess patients' requirements with appropriate equipment. Space is required to enable patients with walking aids or in wheelchairs to approach the equipment in a similar manner as they would in their own homes. This space will also allow patients to practise with different pieces of equipment. Consideration should be given to the use of variable height washbasins to suit both ambulant and wheelchair patients.
- 3.93 The bathroom should accommodate the use of a mobile hoist by providing the necessary space beneath the bath. Practice with this type of equipment will be necessary for both patient safety and the instruction of relatives. A fixed hoist should also be provided. It should be positioned in order to lift a patient – from sitting position – into the bath or over the WC.
- 3.94 In view of the fact that many patients find it difficult to have a bath, it is recommended that a shower is also incorporated. This should have level access for wheelchair users and a thermostatically controlled water inlet. The shower controls should be within the shower but accessible from outside the shower area and positioned at a height appropriate for a wheelchair user. Controls should be easy to identify and operate. The bath, shower, WC and washhand basin should be fully operational. The WC should be accessible by wheelchair from either side, but otherwise should be of normal domestic type.

Kitchen

- 3.95 The kitchen will provide the area in which therapists assess and rehabilitate patients in the preparation and cooking of food, the serving and eating of meals, and washing up. Patients will be assessed in their use of eating utensils and their need for the prescription of appropriate equipment. Space should be provided to display the many items currently available. Storage is required for food, cooking utensils and disability equipment. Mechanical extract ventilation should be provided.
- 3.96 A gas cooker, an electric cooker, a microwave oven and a fridge-freezer should be provided and all should be fully operational. The two main cookers should be placed at opposite sides of the room to each other, allowing the room to be divided. This will reduce the actual workspace of each "kitchen" to more domestic

dimensions. Controls to cookers and other kitchen appliances may have adhesive markings to assist those with poor vision. A variable-height sink, for use by both areas, that can accommodate both seated and standing users is recommended. This will maximise the assessment opportunity for therapists needing to recommend optimum sink heights for individual patients. Worktops, shelves and cupboards should be suitable for both ambulant and wheelchair patients. The front edge of worktops should enable equipment to be clamped onto them. A section of the worktop should have a lip to reduce the potential of spilled liquids falling upon the floor. There should be the provision of local lighting on the worktops to increase the visibility of objects. There should be a space for a normal height table suitable for at least four patients to eat meals.

Utility/laundry room (optional)

- 3.97 If a utility/laundry room is considered necessary, it should contain a domestic automatic washing machine, a tumble dryer and a domestic ironing board. All should be fully operational. Within this space, therapists will assess and rehabilitate patients in undertaking washing and ironing of personal clothing. Adequate space is required to enable ambulant patients, with or without walking aids, and wheelchair users to move around the space with the therapist.

Speech and language therapy spaces

Individual treatment room

- 3.98 This room should be large enough to accommodate a therapist and patient (who may be in a wheelchair) plus one or two family members or carers and/or an assistant speech and language therapist. The room should have natural light. It must also be mechanically ventilated and acoustically treated, making it suitable for recording, and sound-sensitive, equipment. There should be storage for files, clinical materials and small assessment items and a trolley for equipment (e.g. computer), flip chart and/or dry wipe boards. Hand-washing facilities and a full-length mirror, either fixed or free-standing, are also required. If children's services are provided, child size furniture and large play equipment will be required in addition to the normal adult furniture.
- 3.99 A large speech and language therapy section may require more than one individual treatment room. In large units it is good practice to separate office from clinical space. Where the therapist is single-handed, a combined office/treatment room may make more efficient use of space. For further information on acoustically treated rooms please refer to SHTM 2045 – 'Acoustics'.

Group treatment room

- 3.100 The group treatment room should be sufficiently large to accommodate up to ten patients (some of whom may be in wheelchairs) plus a therapist and two assistants. Flexible table configurations should be possible and storage for tables

not in use is required. As groups of patients may attend for several hours, beverage making and hand-washing facilities should be provided.

Viewing facilities

- 3.101 In order to demonstrate treatment programmes to partners/carers and also for student teaching purposes, CCTV/video facilities should be installed in one of the treatment rooms. Alternatively, a one-way viewing window and wiring for sound may be used. This can be between the group and the individual treatment rooms or, to avoid putting one of the treatment rooms out of action, a small viewing room may be installed between the two rooms. Many therapists will also use the video/TV screen for reviewing videofluoroscopy films.

3.102 *Storage*

It is important that communication aids and other expensive micro-electronic equipment such as computers on trolleys, are securely stored and that there is adequate space for this storage. Facilities for recharging battery powered equipment, such as voice output communication aids, should be located in this area.

Podiatry spaces

Patients' changing facilities

- 3.103 Patients may share changing facilities with physiotherapy patients. Alternatively, the treatment room should include a curtained-off area to allow patients to change in privacy. The area should be large enough to accommodate a patient in a wheelchair and contain a chair for ambulant patients and a hook for coats.

Treatment room

- 3.104 The overall space will need to accommodate a wash-hand basin, a range of equipment (see [paragraph 3.105](#)) and a small desk/table for use by the podiatrist. It should be fully accessible to a patient in a wheelchair or a patient with physical and/or sensory disabilities. A height-adjustable chair/trolley that can recline into a horizontal position will be required for patients being treated. The podiatrist will be seated in a height-adjustable chair on castors and will require a good quality adjustable light. The room should be well ventilated and have vinyl flooring. Consideration should be given to a multi-purpose treatment room that is shared with other therapists.
- 3.105 Podiatrists need the following equipment:
- bench-top autoclave and ultrasonic instrument cleaner;
 - vacuum cleaner;
 - nail drill;

- trolley for transporting and storing equipment;
- bin for the safe temporary disposal of sharps (see SHPN 03: General design guidance).

Splint preparation

- 3.106 A splint preparation room may be required for the construction of made-to-measure splints (see [paragraphs 3.40–3.41](#)). This will usually be located within the physiotherapy or occupational therapy spaces and ideally should be adjacent to the podiatry spaces.

Garden/outdoor spaces

- 3.107 A garden or outdoor space is particularly useful for occupational therapy and physiotherapy. It should accommodate the needs of patients with sensory deficits as well as wheelchair users and the ambulant, and be sited close to the occupational therapy and physiotherapy spaces. Shared areas for occupational therapy and physiotherapy mobility assessments would ideally be sited here.
- 3.108 The construction of steps and stairs with handrails, as well as areas with a variety of surfaces, may be incorporated into the landscape. Consideration should be given to the safety of users, for example by use of toughened glass in a spacious greenhouse or conservatory (if provided), wheelchair accessibility, and variable-height work surfaces for potting and storage indoors and planting outdoors. Further detail is provided in SHPN 45 – ‘External works for health buildings’.

Complementary therapy spaces

- 3.109 Space may be required for the provision of complementary medicines, for example acupuncture, aromatherapy and osteopathy. These services are likely to share treatment rooms with other therapies.

In-patient accommodation

- 3.110 In some hospitals, patients requiring rehabilitation are cared for in specialist rehabilitation wards. Standard design and building guidance will apply (see SHPN 04 – ‘In-patient accommodation: options for choice’); however, rehabilitation wards do have some specific needs. In particular, it may be necessary to provide some or all of the following satellite facilities:
- a larger than usual treatment room;
 - overhead tracking for hoists etc;
 - a modest gymnasium;
 - ADL assessment facilities (see [paragraphs 3.88–3.97](#));
 - a sound-attenuated room for speech and language therapy assessment;

- easy, level access to garden/outdoor spaces (see [paragraphs 3.107 and 3.108](#));
- a larger than usual bed space to support patients learning wheelchair skills;
- storage facilities to accommodate a larger than usual number of wheelchairs and free-standing hoists;
- battery-charging facilities for electrically powered wheelchairs;
- accessible toilet and bathroom facilities which allow easy transfer from wheelchairs with or without assistance.

3.111 Specific requirements are heavily dependent on the needs of the patient population; it is essential that local professionals and service users are consulted from an early stage.

Staff accommodation

Rest room

- 3.112 A staff rest room is required where staff can relax and consume snacks and beverages. The rest room should have windows with a pleasant outlook, be comfortably furnished and include a telephone.
- 3.113 The rest room may include a beverage bay (see [paragraph 3.119](#)).

Staff changing

- 3.114 The design of the changing facilities will depend on the local operational policy for staff changing. In premises with centralised changing facilities, a small locker room should be provided within or close to the rehabilitation area for staff to hang coats and to keep personal items secure in small personal lockers.
- 3.115 In premises without central changing accommodation, full changing facilities are required. Provision should be made for the secure storage of outdoor clothing and personal items and for the temporary storage of damp clothes. It is assumed that uniforms will be collected from a central point such as a manned uniform store or an automatic dispenser.
- 3.116 The accommodation should comprise:
- full-length lockers for the storage of clothing, uniforms and personal items;
 - space for changing and a curtained cubicle for those requiring privacy;
 - provision for the temporary (secure) change of wet clothes;
 - a shower;
 - washbasins.

WC

- 3.117 WCs and wash-hand basins should be associated with the staff changing accommodation. At least one WC should be accessible to disabled staff.

Training/seminar room

- 3.118 Access to a seminar room will be needed for informal conferences, discussions and tutorials. This room can also be used as appropriate for instruction to, or discussion with, groups of patients. This may be dedicated to the department or, with careful planning, might be a shared facility with an adjacent department.

Optional accommodation

Beverage bay

- 3.119 The rest room may include a beverage bay with facilities for preparing snacks and beverages, for washing and storing crockery and cutlery, for storing a limited quantity of dry goods, and for storing milk etc in a refrigerator. Equipment should include a stainless steel sink and drainer, an electric water boiler, a microwave cooker, a worktop with cupboards, and a wash-hand basin. The need for a dishwasher will depend on whether staff will be using crockery or disposable cups.

Library/information resources

Library/information centre

- 3.120 The need for rehabilitation can bring with it significant worries and stresses. Many patients find that these new concerns can be better managed if they have access to a broad base of information which starts to answer their questions. Information should be provided in formats which are suitable for blind and visually-impaired patients. Any video material should be subtitled.
- 3.121 A rehabilitation facility will therefore be improved by the addition of a modest library/information centre. This may or may not be staffed full-time, but will certainly need to be managed.
- 3.122 The library could provide information on:
- equipment;
 - welfare benefits;
 - employment;
 - health and social services;
 - voluntary organisations;
 - transport and access;

- holidays and leisure.

The space might be part of a larger room or circulation space, or a separate room.

- 3.123 The floor area required will depend on the number and type of users, the range of information, types of source, whether it is staffed or unstaffed, whether the space is a room or an alcove, and so on.
- 3.124 The library could use a simple wall racking or shelving system, island units, tables, chairs and various modern technologies. Whatever furniture is provided, space will need to be allowed for wheelchair access. The space should be well illuminated and clearly signed.

Support spaces

Clean utility room

- 3.125 This room may be used to store clinical supplies and possibly medications. The room serves as the temporary storage point and testing area for specimens. A stock of colour-coded disposal bags for the bagging of waste materials should be kept here.

Dirty utility

- 3.126 The disposal room is the temporary storage point for all items of supplies and equipment which have to be removed for cleaning, reprocessing or destruction, for example linen and sterile services department items.
- 3.127 The waste disposal of used items should be consistent with the current hospital policy for the disposal of clinical waste. Adequate space should be provided for the storage of clinical waste. Where wheelie bins are used, the storage hold should be able to store wheelie bins between 360 to 1100 litres in capacity.

Disposal hold/bay

- 3.128 A disposal hold/bay should be located close to the service entrance. Adequate space should be provided for the storage of waste.

Domestic services/cleaners' room

- 3.129 The domestic services/cleaners' room is the base from which domestic service staff provide the immediate day-to-day cleaning service. A clinical wash-hand basin and bucket sink should be provided. It should include storage for cleaning materials and equipment in daily use, and facilities for the routine servicing and cleaning of equipment. The room should be well lit and ventilated; mechanical ventilation may be required. Bulky equipment has to be moved out of the room, and this should be taken into account in its location.

Storage

- 3.130 Adequate space should be provided for storage.
- 3.131 Adequate space should be provided for linen storage.

Optional specialist areas

Rehabilitation engineering

- 3.132 This discipline centres on workshops which provide engineering solutions to alleviate the problems of disability alongside rehabilitation therapies.
- 3.133 Rehabilitation engineering produces one-off devices – “bent metal sections”:
- electronic engineering (similar to medical physics devices);
 - special seating (similar to wheelchairs);
 - various miscellaneous “imaginative” components;
 - plastic mouldings.
- 3.134 Workshops must be able to design and fabricate engineering devices and could be within either the NHSScotland or private companies. They must comply with the Factories Act 1961 and the Health and Safety at Work etc Act 1974.

Orthotics

- 3.135 Orthotic devices can be defined as body-worn devices which aid mobility. Various types of boot, shoe and calliper fall into this category.
- 3.136 Many of these devices are manufactured and supplied by commercial companies, but they frequently use NHS premises to facilitate measurement and fitting, commonly in the physiotherapy department. However, fitting may involve multiple minor adjustments which in turn require a small workshop. Adaptations to wheelchairs and seating may also be undertaken in the workshop. Thus some trusts make a small workshop available (which must comply with the Factories Act 1961 and the Health and Safety at Work etc Act 1974). The workshop should be suitable for simple metalwork, plastic moulding etc. It may be combined with the splint-preparation room.

4. General functional and design requirements

Introduction

- 4.1 This Chapter contains guidance which supplements the general guidance given in SHPN 03: General design guidance. The latter should be implemented as appropriate for the project under consideration.

Internal environmental conditions

Noise and sound attenuation

- 4.2 Any unwanted sound is a noise and may disturb patients and staff. Noise-sensitive areas should be located as remotely as possible from internal and external sources of unavoidable noise. Consideration should be given to the provision of an induction loop system to enable those users with a hearing aid to listen to sound sources, such as a television or public address system, without background noise or distance from the source being a problem. The Royal National Institute for the Deaf provides “loop” stickers to indicate that an induction loop is available.

Floors

- 4.3 Floor-coverings and skirtings should contribute to the provision of a non-clinical environment and be hardwearing. HTM 61 – ‘Flooring’ should be consulted for advice on user requirements and performance selection.

Doors and frames

- 4.4 Except in sanitary facilities there may be a requirement for all doors to areas occupied by patients to have vision panels. In the interests of privacy and safety, panels should be capable of being obscured.
- 4.5 All patient area doors must be capable of being opened outwards in an emergency.

Windows

- 4.6 Windows should have a pleasant outlook if possible. The use of low window sills enables views from the window even when seated. Any windows that staff/patients/visitors are allowed to open should be designed such that this can be done easily, including from a seated position.

Ventilation

- 4.7 Natural ventilation is preferred unless there are internal spaces or clinical reasons that call for mechanical ventilation or comfort-cooling systems. See HFN 26 – ‘Refurbishment for natural ventilation’, SHPN 03 – General design guidance and paragraph 3.32.

Colour

- 4.8 Decoration should be light and pleasant, with sufficient contrast to help partially-sighted people distinguish obstacles. “Warm” colours are preferable. Some colours are considered to be relaxing and others stimulating, so clinical advice should be taken as to the appropriate use of colour.

Finishes

- 4.9 The quality of finishes in all areas should be to a high standard. Finishes should be capable of being patch repaired in the event of damage. Guidance on the selection of finishes is given in the relevant Building components Health Technical Memoranda (HTMs).

Natural and artificial lighting

- 4.10 Wherever possible, spaces to be occupied by patients, visitors or staff should have natural daylight with an outside view. Bay windows that allow seating in comfort may be suitable. Consideration should be given, however, to the need for privacy. Further guidance is given in CIBSE Lighting Guide LG 10 1999 – Daylighting and Window Design.
- 4.11 Artificial light should minimise glare and shadow to allow facial expressions to be seen more easily and to aid communication, particularly lip-reading.

Internal rooms

- 4.12 “Racetrack” corridors around internal rooms should be avoided, as they can hinder staff trying to observe patients.

People with disabilities

- 4.13 Where residential accommodation is being provided for a patient with a disability, any modifications to the building will be specific to the needs of that patient. In this situation there is a distinct advantage in the use of flexible support to the patient in their own accommodation rather than the patient being required to move each time their support needs change.

- 4.14 As well as patients and staff, the needs of carers should be taken into account when designing new healthcare buildings or refurbishing existing ones. Architects and service providers are advised to consult The Carers Act 1995, which amends the Social Work (Scotland) Act, in respect of this matter.

5. Engineering services

Introduction

- 5.1 There are few specific engineering requirements for rehabilitation services. Design teams should therefore refer to the general engineering services guidance given in SHPN 03: General design guidance which will acquaint the engineering members of the multi-disciplinary design team with the design criteria and material specification needed to meet the functional requirements.
- 5.2 For engineering services relating to hydrotherapy pools see [Appendix 1](#) to this document.

6. Schedules of accommodation

- 6.1 The [example schedules of accommodation \(pages 59-72\)](#) are based on the text in Chapter 3, and are illustrative of the acceptable accommodation for the functional units detailed.
- 6.2 The Schedules include Essential Complementary Accommodation (ECA) and Optional Accommodation and Services (OAS). For a definition of these terms and for an explanation of the use of dimensions and areas and the provision of circulation space, communications space and engineering space, please refer to SHPN 03: General design guidance.
- 6.3 The schedules are preceded by area guides for the various accommodation modules. These may be put together to build up a rehabilitation services unit as appropriate to meet local requirements. Further details of these spaces are available in the latest version of NHS Estates Activity Data Base (see SHPN 03 Chapter 6).

Modules for rehabilitation services

Space	Area Guide m ²
MODULE 1	
Entrance and Reception Spaces	
Foyer	
public telephones	
wheelchair bay	7.0
Reception desk 2-person	10.0
Reception desk 3-person	13.5
Waiting area 10-person	13.0
Waiting area 15-person	20.0
Draft lobby (optional)	11.0
Cloakroom (optional)	7.0
Cloakroom (optional)	10.0
MODULE 1A	
Patient Sanitary Provision	
<i>not including hydrotherapy</i>	
Patient dual access wheelchair WC (HBN 40 Vol. 2 type 6):	
entrance foyer area	
near physiotherapy	
near occupational therapy	
near speech/general	5.5 for each required
Patient ambulant WC (HBN 40 Vol. 2 type 2):	
Female	
entrance foyer area	
near physiotherapy	
near occupational therapy	
near speech/general	2.5 for each required
Male	
entrance foyer area	
near physiotherapy	
near occupational therapy	
near speech/general	2.5 for each required

<i>Space</i>	<i>Area Guide m²</i>
MODULE 2	
Administration Spaces	
Office – general administration	
single	9.0
4 workstations	24.0
Office – physiotherapy	
single	9.0
6 workstations	27.5
10 workstations	43.5
Office – occupational therapy	
single	9.0
6 workstations	27.5
10 workstations	43.5
Case conference room	20.0
Records store (optional)	4.0
Records store (optional)	6.0
MODULE 3	
Clinical/Therapy Shared Spaces	
Patient assessment/interview room	10.0
Consulting/exam room (optional)	16.5
Splint preparation	19.0
Patient sub-waiting 3-person (optional)	5.0

Space	Area Guide m²
MODULE 3A	
Physiotherapy	
Therapy activity area	
5-place	50.0
10-place	80.0
Therapy activity area – gym	
15-place	100.0
20-place	120.0
Individual treatment	12.0
Individual treatment UVL	12.0
Multi-cubicle treatment area	
10-place	100.0
15-place	150.0
Wax treatment and ice preparation	16.0
Patient changing (includes shower)	
female	15.5
male	15.5
Equipment store – activity area	6.0
Equipment store – activity area	9.0
Equipment store – activity area	12.0
Equipment store – treatment cubicles	6.0
MODULE 3B	
Hydrotherapy	
Staff base (includes resuscitation trolley)	6.0
Patient waiting	5.0
Patient transfer	6.0
Wheelchair/trolley parking bay	5.0
Patient/staff changing (male)	10.0
Patient/staff changing (female)	10.0
Patient dual access wheelchair WC (HBN 40 Vol. 2 type 6)	5.5
Ambulant shower – pool entry area	2.5
Trolley shower – pool entry area	10.0
Pool area	92.5
Patient recovery/rest 4-place	25.0
Equipment store	7.0
Utility room/linen store	10.0
Plantroom – pool water treatment and circulation	18.0
Plantroom – pool area ventilation	20.0

Space	Area Guide m²
MODULE 3C	
Occupational Therapy	
Light activities area	
10-place	70.0
15-place	110.0
Heavy activities area	
5-place (optional)	50.0
10-place (optional)	90.0
IT therapy room	
2-place	10.0
3-place	15.0
Store – on-going work	7.0
Store – on-going work	14.0
Store – materials and equipment	20.0
Store – timber and metal (optional)	20.0
Store – community disability equipment	20.0
Store – assessment wheelchairs	15.0
MODULE 3D	
Activities of Daily Living (ADL)	
ADL bedroom with living assessment	18.0
ADL bedroom (optional)	15.0
ADL bathroom/shower	13.0
ADL kitchen	22.0
ADL utility/laundry (optional)	11.0
MODULE 3E	
Speech and Language Therapy	
Individual therapy room	15.0
Group therapy room 8-place	24.5
Viewing room	5.0
Store	6.0
MODULE 3F	
Podiatry	
Treatment room with patient changing	15.0
Splint preparation (may be located elsewhere)	19.0

Space	Area Guide m ²
MODULE 3G	
Complementary Therapy	
Consulting/exam room (optional)	16.5
MODULE 4	
In-patient Accommodation	
Please note that space requirements for bedrooms may exceed figures given here, which are taken from the latest version of Scottish Health Planning Note (SHPN) 04 – 'In-patient accommodation: options for choice'. Please refer to SHPN 04 for details of the 8-bed clusters, which include sanitary facilities and family and clinical support.	
8-bed cluster, all single bedrooms	225.8
8-bed cluster, 50% single bedrooms	220.4
ADL assessment areas	see module 3D
Speech/language room	see module 3E
Wheelchair parking bay with battery charging	6.0
Occupational therapy area	15.0
Physiotherapy gym/therapy area	15.0
MODULE 5	
Staff Accommodation	
Staff training/seminar (may be located elsewhere)	40.0
Staff restroom	
10-place	15.0
15-place	20.0
Beverage bay	6.0
OR	
Staff restroom with beverages	
10-place	16.0
15-place	22.5
Staff locker room – male	
10-person	6.0
20-person	8.0
Staff locker room – female	
20-person	8.0
30-person	14.0
OR	
Staff changing/locker room – male	
10-person	15.0
20-person	18.0
Staff changing/locker room – female	
20-person	18.0
30-person	24.0

Space	Area Guide m ²
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Staff Accommodation (cont)

Staff wheelchair WC (HBN 40 Vol. 2 type 5)	4.5
Staff ambulant WC (HBN 40 Vol. 2 type 1)	2.0
Staff shower	2.5

MODULE 6

Patient Library/Information

Patient information area	15.0
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MODULE 7

Support Spaces

Clean utility	9.0
Dirty utility	7.5
General storage	6.0
General storage	12.0
Linen store (optional)	3.5
Cleaners room	5.5
Disposal holding bay	3.0
Disposal holding bay	6.0
Electrical switchgear	2.0

MODULE 8

Rehabilitation Engineering

Please note that support facilities required will depend on integration with the main accommodation of a rehabilitation unit, for example staff accommodation.

Specialised wheelchair assessment area	40.0
Wheelchair workshop	40.0
Store – assessment wheelchairs	60.0
Store – workshop	20.0
Office – engineers – 3 workstations	18.0

MODULE 9

Orthotics – Manufacture and/or Adjustment

Please note that support facilities required will depend on integration with the main accommodation of a rehabilitation unit, for example staff accommodation.

Workshop	24.0
Store	7.0



<i>Space</i>	<i>Area Guide m²</i>
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MODULE 9A	
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Orthotics – Supply and Fitting	
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Please note that support facilities required will depend on integration with the main accommodation of a rehabilitation unit, for example staff accommodation.

Consult/examination/fitting room	14.0
Store	25.0
Administration section – 2 workstations	14.0

Example Schedule of Accommodation for a theoretical rehabilitation services unit (small)

<i>Activity space</i>	<i>Space area sq.m.</i>	<i>Qty</i>	<i>Total area sq.m</i>
MODULE 1			
Entrance and Reception Spaces			
Foyer – public telephones			
wheelchair bay	7.0	1	7.0
Reception desk 2-person	10.0	1	10.0
Waiting area 10-person	13.0	1	13.0
Draft lobby	11.0	1	11.0
Cloakroom	7.0	1	7.0
Net Total			48.0
ADD – planning provision	5%		2.5
Sub-Total			50.5
ADD – engineering zone	3%		1.5
ADD – circulation	23%		11.6
Gross Total			63.6
Module area			64 sq.m.

MODULE 1A

Sanitary Provision (excluding hydrotherapy)

Patient dual access wheelchair WC (HBN 40 Vol. 2 type 6)			
entrance foyer area	5.5	1	5.5
near physiotherapy	5.5	1	5.5
near speech/general occupational therapy	5.5	1	5.5
Patient ambulant WC (HBN 40 Vol. 2 type 2)			
entrance foyer area	2.5	3	7.5
near physiotherapy	2.5	3	7.5
near speech/general occupational therapy	2.5	3	7.5
Net Total			39.0
ADD – planning provision	5%		2.0
Sub-Total			41.0
ADD – engineering zone	3%		1.2
ADD – circulation	23%		9.4
Gross Total			51.6
Module area			52 sq.m.

Activity space	Space area sq.m.	Qty	Total area sq.m.
MODULE 2			
Administration Spaces			
Office general admin 4 workstations	24.0	1	24.0
Office physiotherapy			
Single	9.0	1	9.0
6 workstations	27.5	1	27.5
Office occupational therapy			
Single	9.0	1	9.0
6 workstations	27.5	1	27.5
Case conference room	20.0	1	20.0
Net Total			117.0
ADD – planning provision	5%		5.8
Sub-Total			122.8
ADD – engineering zone	3%		3.7
ADD – circulation	23%		28.3
Gross Total			154.7
Module area			155 sq.m.

MODULE 3 AND 3G			
Clinical/Therapy Shared Spaces			
Patient assessment/interview room	10.0	1	10.0
Consulting/exam room	16.5	1	16.5
(general & complementary therapy)			
Splint preparation	19.0	1	19.0
Net Total			45.5
ADD – planning provision	5%		2.3
Sub-Total			47.8
ADD – engineering zone	3%		1.4
ADD – circulation	23%		11.0
Gross Total			60.2
Module area			61 sq.m.

Activity space	Space area sq.m.	Qty	Total area sq.m.
MODULE 3A			
Physiotherapy			
Therapy activity area 5-place	50.0	1	50.0
Therapy activity area 15-place (includes gym accommodation)	100.0	1	100.0
Individual treatment	12.0	1	12.0
Individual treatment UVL	12.0	1	12.0
Multi-cubicle treatment area 10-place	100.0	1	100.0
Wax treatment and ice preparation	16.0	1	16.0
Patient changing (includes shower)			
female	15.5	1	15.5
male	15.5	1	15.5
Equipment store – activity area 1	6.0	1	6.0
Equipment store – activity area 2	9.0	1	9.0
Equipment store – treatment cubicles	6.0	1	6.0
Net Total			342.0
ADD – planning provision 5%			17.1
Sub-Total			359.1
ADD – engineering zone 3%			10.8
ADD – circulation 23%			82.6
Gross Total			452.5
Module area			453 sq.m.

Activity space	Space area sq.m.	Qty	Total area sq.m.
MODULE 3B			
Hydrotherapy			
Staff base (includes resuscitation trolley)	6.0	1	6.0
Patient waiting	5.0	1	5.0
Patient transfer	6.0	1	6.0
Wheelchair/trolley parking bay	5.0	1	5.0
Patient/staff changing (male)	10.0	1	10.0
Patient/staff changing (female)	10.0	1	10.0
Patient dual access wheelchair WC dedicated to hydrotherapy (HBN 40 Vol. 2 type 6)	5.5	1	5.5
Ambulant shower – pool area entry	2.5	1	2.5
Trolley shower – pool area entry	10.0	1	10.0
Pool area	92.5	1	92.5
Patient recovery/rest 4-place	25.0	1	25.0
Equipment store	7.0	1	7.0
Utility room/linen store	10.0	1	10.0
Plantroom – pool water treatment and circulation	18.0	1	18.0
Plantroom – pool area ventilation	20.0	1	20.0
Net Total			232.5
ADD – planning provision 5%			11.6
Sub-Total			244.1
ADD – engineering zone 3%			7.3
ADD – circulation 10%			24.4
Gross Total			275.8
Module area			276 sq.m.

MODULE 3C			
Occupational Therapy			
Light activities area 10-place	70.0	1	70.0
Heavy activities area 5-place	50.0	1	50.0
IT therapy room 2-place	10.0	1	10.0
Store – on-going work	7.0	1	7.0
Store – materials/equipment	20.0	1	20.0
Store – timber/metal	20.0	1	20.0
Store – community disability equipment	20.0	1	20.0
Store – assessment wheelchairs	15.0	1	15.0
Net Total			212.0
ADD – planning provision 5%			10.6
Sub-Total			222.6
ADD – engineering zone 3%			6.7
ADD – circulation 23%			51.2
Gross Total			280.5
Module area			281 sq.m.



Activity space

	Space Area sq.m.	Qty	Total area sq.m.
MODULE 3D			
Activities of Daily Living (ADL)			
ADL bedroom with living assessment	18.0	1	18.0
ADL bathroom/shower	13.0	1	13.0
ADL kitchen	22.0	1	22.0
Net Total			53.0
ADD – planning provision 5%			2.7
Sub-Total			55.7
ADD – engineering zone 3%			1.7
ADD – circulation 23%			12.8
Gross Total			70.2
Module area			71 sq.m.

MODULE 3E

Speech and Language Therapy

Individual therapy room	15.0	1	15.0
Group therapy room 8-place	24.5	1	24.5
Viewing room	5.0	1	5.0
Dedicated store	6.0	1	6.0
Net Total			50.5
ADD – planning provision 5%			2.5
Sub-Total			53.0
ADD – engineering zone 3%			1.6
ADD – circulation 23%			12.2
Gross Total			66.8
Module area			67 sq.m.



Activity space	Space Area sq.m.	Qty	Total area sq.m.
MODULE 5			
Staff Accommodation			
Staff restroom with beverages 10-place	16.0	1	16.0
Staff locker room female 20-person	8.0	1	8.0
Staff locker room male 10-person	6.0	1	6.0
Staff wheelchair WC (HBN 40 Vol. 2 type 5)	4.5	1	4.5
Staff ambulant WC 2 female 1 male (HBN 40 Vol. 2 type 1)	2.0	3	6.0
Staff shower	2.5	1	2.5
Net Total			43.0
ADD – planning provision 5%			2.2
Sub-Total			45.2
ADD – engineering zone 3%			1.4
ADD – circulation 23%			10.4
Gross Total			57.0
Module area			57 sq.m.

MODULE 6			
Patient Library/Information			
Patient information area	15.0	1	15.0
Net Total			15.0
ADD – planning provision 5%			0.8
Sub-Total			15.8
ADD – engineering zone 3%			0.5
ADD – circulation 23%			3.6
Gross Total			19.9
Module area			20 sq.m.



Activity space		Space area sq.m.	Qty	Total area sq.m.
MODULE 7				
Support Spaces				
Clean utility		9.0	1	9.0
Dirty utility		7.5	1	7.5
General storage		6.0	1	6.0
Cleaners room		5.5	1	5.5
Disposal holding bay		3.0	1	3.0
Electrical switchgear		2.0	1	2.0
Net Total				33.0
ADD – planning provision	5%			1.7
Sub-Total				34.7
ADD – engineering zone	3%			1.0
ADD – circulation	23%			8.0
Gross Total				43.7
Module area				44 sq.m.
Department area				1597 sq.m.

Example Schedule of accommodation for a theoretical rehabilitation services unit (large)

Activity space	Space area sq.m.	Qty	Total area sq.m.
MODULE 1			
Entrance and Reception Spaces			
Foyer – public telephones			
wheelchair bay	7.0	1	7.0
Reception desk 3-person	13.5	1	13.5
Waiting area 15-person	20.0	1	20.0
Draft lobby	11.0	1	11.0
Cloakroom	10.0	1	10.0
Net Total			61.5
ADD – planning provision	5%		3.1
Sub-Total			64.6
ADD – engineering zone	3%		1.9
ADD – circulation	23%		14.9
Gross Total			81.4
Module area			82 sq.m.

MODULE 1A

Sanitary Provision (excluding hydrotherapy)

Patient dual access wheelchair WC (HBN 40 Vol. 2 type 6)			
entrance foyer area	5.5	2	11.0
near physiotherapy	5.5	1	5.5
near speech/podiatry/general	5.5	1	5.5
near occup/specialist	5.5	1	5.5
Patient ambulant WC (HBN 40 Vol. 2 type 2)			
entrance foyer area	2.5	5	12.5
near physiotherapy	2.5	3	7.5
near speech/podiatry/general	2.5	2	5.0
near occup/specialist	2.5	3	7.5
Net Total			60.0
ADD – planning provision	5%		3.0
Sub-Total			63.0
ADD – engineering zone	3%		1.9
ADD – circulation	23%		14.5
Gross Total			79.4
Module area			80 sq.m.

Activity space	Space area sq.m.	Qty	Total area sq.m.
MODULE 2			
Administration Spaces			
Office general admin			
Single	9.0	1	9.0
4 workstations	24.0	1	24.0
Office physiotherapy			
Single	9.0	1	9.0
10 workstations	43.5	1	43.5
Office occupational therapy			
Single	9.0	1	9.0
10 workstations	43.5	1	43.5
Record store	6.0	1	6.0
Case conference room	20.0	1	20.0
Net Total			164.0
ADD – planning provision	5%		8.2
Sub-Total			172.2
ADD – engineering zone	3%		5.2
ADD – circulation	23%		39.6
Gross Total			217.0
Module area			217 sq.m.

MODULE 3 AND 3G			
Clinical/Therapy Shared Spaces			
Patient assessment/interview room	10.0	1	10.0
Consulting/exam room	16.5	2	33.0
(general & complementary therapy)			
Patient sub-waiting area	5.0	1	5.0
Splint preparation	19.0	1	19.0
Net Total			67.0
ADD – planning provision	5%		3.4
Sub-Total			70.4
ADD – engineering zone	3%		2.1
ADD – circulation	23%		16.2
Gross Total			88.7
Module area			89 sq.m.

Activity space	Space area sq.m.	Qty	Total area sq.m.
MODULE 3A			
Physiotherapy			
Therapy activity area 10-place	80.0	1	80.0
Therapy activity area 20-place (includes gym accommodation)	120.0	1	120.0
Individual treatment	12.0	1	12.0
Individual treatment UVL	12.0	1	12.0
Multi-cubicle treatment area 15-place	150.0	1	150.0
Wax treatment and ice preparation	16.0	1	16.0
Patient changing (includes shower)			
female	15.5	1	15.5
male	15.5	1	15.5
Equipment store – activity area 1	6.0	1	6.0
Equipment store – activity area 2	12.0	1	12.0
Equipment store – treatment cubicles	6.0	1	6.0
Net Total			445.0
ADD – planning provision 5%			22.3
Sub-Total			467.3
ADD – engineering zone 3%			14.0
ADD – circulation 23%			107.5
Gross Total			588.8
Module area			589 sq.m.

Activity space	Space area sq.m.	Qty	Total area sq.m.
MODULE 3B			
Hydrotherapy			
Staff base (includes resuscitation trolley)	6.0	1	6.0
Patient waiting	5.0	1	5.0
Patient transfer	6.0	1	6.0
Wheelchair/trolley parking bay	5.0	1	5.0
Patient/staff changing (male)	10.0	1	10.0
Patient/staff changing (female)	10.0	1	10.0
Patient dual access wheelchair WC dedicated to hydrotherapy (HBN 40 Vol. 2 type 6)	5.5	1	5.5
Ambulant shower – pool area entry	2.5	1	2.5
Trolley shower – pool area entry	10.0	1	10.0
Pool area	92.5	1	92.5
Patient recovery/rest 4-place	25.0	1	25.0
Equipment store	7.0	1	7.0
Utility room/linen store	10.0	1	10.0
Plantroom – pool water treatment and circulation	18.0	1	18.0
Plantroom – pool area ventilation	20.0	1	20.0
Net Total			232.5
ADD – planning provision 5%			11.6
Sub-Total			244.1
ADD – engineering zone 3%			7.3
ADD – circulation 10%			24.4
Gross Total			275.8
Module area			276 sq.m.

MODULE 3C			
Occupational Therapy			
Light activities area 15-place	110.0	1	110.0
Heavy activities area 10-place	90.0	1	90.0
IT therapy room 3-place	15.0	1	15.0
Store – on-going work	14.0	1	14.0
Store – materials/equipment	20.0	1	20.0
Store – timber/metal	20.0	1	20.0
Store – community disability equipment	20.0	1	20.0
Store – assessment wheelchairs	15.0	1	15.0
Net Total			304.0
ADD – planning provision 5%			15.2
Sub-Total			319.2
ADD – engineering zone 3%			9.6
ADD – circulation 23%			73.4
Gross Total			402.2
Module area			403 sq.m.

Activity space	Space area sq.m.	Qty	Total area sq.m.
MODULE 3D			
Activities of Daily Living (ADL)			
ADL bedroom with living assessment	18.0	1	18.0
ADL bedroom	15.0	1	15.0
ADL bathroom/shower	13.0	1	13.0
ADL kitchen	22.0	1	22.0
ADL utility/laundry	11.0	1	11.0
Net Total			79.0
ADD – planning provision 5%			4.0
Sub-Total			83.0
ADD – engineering zone 3%			2.5
ADD – circulation 23%			19.1
Gross Total			104.6
Module area			105 sq.m.
MODULE 3E			
Speech and Language Therapy			
Individual therapy room	15.0	2	30.0
Group therapy room 8-place	24.5	1	24.5
Viewing room	5.0	1	5.0
Dedicated store	6.0	1	6.0
Net Total			65.5
ADD – planning provision 5%			3.3
Sub-Total			68.8
ADD – engineering zone 3%			2.1
ADD – circulation 23%			15.8
Gross Total			86.7
Module area			87 sq.m.
MODULE 3F			
Podiatry			
Treatment room with patient changing	15.0	1	15.0
Net Total			15.0
ADD – planning provision 5%			0.8
Sub-Total			15.8
ADD – engineering zone 3%			0.5
ADD – circulation 23%			3.6
Gross Total			19.9
Module area			20 sq.m.



Activity space	Space area sq.m.	Qty	Total area sq.m.
MODULE 5			
Staff Accommodation			
Staff restroom with beverages 15-place	22.5	1	22.5
Training/seminar room	40.0	1	40.0
Staff changing female 30-person	24.0	1	24.0
Staff changing male 20-person	18.0	1	18.0
Staff wheelchair WC (HBN 40 Vol. 2 type 5)	4.5	1	4.5
Staff ambulant WC 3 female 2 male (HBN 40 Vol. 2 type 1)	2.0	5	10.0
Staff shower	2.5	2	5.0
Net Total			124.0
ADD – planning provision 5%			6.2
Sub-Total			130.2
ADD – engineering zone 3%			3.9
ADD – circulation 23%			30.0
Gross Total			164.1
Module area			165 sq.m.

MODULE 6			
Patient Library/Information			
Patient information area	15.0	1	15.0
Net Total			15.0
ADD – planning provision 5%			0.8
Sub-Total			15.8
ADD – engineering zone 3%			0.5
ADD – circulation 23%			3.6
Gross Total			19.9
Module area			20 sq.m.



Activity space

		Space area sq.m.	Qty	Total area sq.m.
MODULE 7				
Support Spaces				
Clean utility		9.0	1	9.0
Dirty utility		7.5	1	7.5
General storage		12.0	1	12.0
Cleaners room		5.5	1	5.5
Disposal holding bay		6.0	1	6.0
Electrical switchgear		2.0	1	2.0
Store - linen		3.5	1	3.5
Net Total				45.5
ADD – planning provision	5%			2.3
Sub-Total				47.8
ADD – engineering zone	3%			1.4
ADD – circulation	23%			11.0
Gross Total				60.2
Module area				61 sq.m.

MODULE 8

Rehabilitation Engineering

Specialised wheelchair assessment area		40.0	1	40.0
Wheelchair workshop		40.0	1	40.0
Store – assessment wheelchairs		60.0	1	60.0
Store – workshop		20.0	1	20.0
Office – engineers 3-workstation		18.0	1	18.0
Net Total				178.0
ADD – planning provision	5%			8.9
Sub-Total				186.9
ADD – engineering zone	3%			5.6
ADD – circulation	23%			43.0
Gross Total				235.5
Module area				236 sq.m.



Activity space

**Space
area
sq.m.**

Qty

**Total
area
sq.m.**

MODULE 9

Orthotics – Manufacture/Adjustment

Workshop		24.0	1	24.0
Store		7.0	1	7.0
Net Total				31.0
ADD – planning provision	5%			1.6
Sub-Total				32.6
ADD – engineering zone	3%			1.0
ADD – circulation	23%			7.5
Gross Total				41.1
Module area				42 sq.m.

MODULE 9A

Orthotics – Supply and Fitting

Consult/exam/fitting room		14.0	2	28.0
Store		25.0	1	25.0
Administration section 2-workstation		14.0	1	14.0
Net Total				67.0
ADD – planning provision	5%			3.4
Sub-Total				70.4
ADD – engineering zone	3%			2.1
ADD – circulation	23%			16.2
Gross Total				88.7
Module area				89 sq.m.

Department area

2557 sq.m.

Appendix 1 – Engineering services for hydrotherapy pools

Mechanical services

The mechanical services in the hydrotherapy suite functional unit includes the following:

- supply and extract ventilation systems and air handling plant, including integral heat pump for energy recovery;
- pool water circulation system, including pumps, pipework, strainer, filter with back-wash control valve and heating calorifier;
- pool accessories, including pool cover, skimmer units, inlets, outlets and drain connections, water “make-up” system;
- pool water treatment equipment and associated control systems.

Heating

Because of the chemically aggressive high humidity levels that are a persistent and inherent feature of the hydrotherapy pool hall, it is recommended that radiators or low-pressure hot water radiant panel heaters should be avoided. The fabric losses for this space should be dealt with by the ventilation system.

Ventilation of hydrotherapy suite

The hydrotherapy pool hall should have a supply and extract ventilation system dedicated to this accommodation. The relatively high ventilation rates and air temperatures necessary within the pool hall justify the provision of equipment to recover some of the heat energy that would otherwise be discharged by this system.

The diffusion of high air temperature from the pool hall into the ancillary changing and recovery accommodation should be avoided by creating a positive air movement from the ancillary accommodation into the pool hall.

In order to reduce condensation on the building fabric (especially windows), the supply air to the hydrotherapy pool hall should be introduced at high level and directed to circulate down the windows and wall structure of the hall. With this arrangement, the extracts would be positioned directly over the pool with provision of access for cleaning and maintenance.

The supply air rate for a hydrotherapy pool should be based upon the total wetted surface area of the pool plus 10%. Project teams should take account of water vapour evaporation from the surface of a hydrotherapy pool, which will be greater than that from a conventional swimming pool due to the comparatively higher pool water temperature. It is recommended that approximately 20% of air supplied to the pool should be fresh air with ratio of fresh air to recirculated air delivered via a set of fresh air/recirculation dampers, controlled via humidistat within the return air duct.

The materials selected for the supply and extract ductwork and accessories for the hydrotherapy pool ventilation system must be suitable to endure the humid and chemically aggressive environmental conditions.

Controls for hydrotherapy suite ventilation system

The supply and extract ventilation fans to the hydrotherapy pool hall should be interlocked so that the supply fan will not operate unless an air flow is established within the extract system.

The supply and extract ventilation for the hydrotherapy suite should be time-clock controlled to relate to the normal hours of operation of the suite. A local override switch may be provided to permit staff to reactivate the plant on an extended day basis as required.

Outside the normal hours of operation of the hydrotherapy suite, when the pool cover will be in place, the rate of evaporation from the pool surface will be greatly diminished but not completely eliminated. In order to prevent excessive condensation on the building fabric, especially glazing, the pool hall ventilation system should be provided with both a night set-back temperature control and a high humidity control. Therefore the ventilation plant should continue to run during pool closure, but on full recirculation with the introduction of fresh air dependent on humidity in the return air duct. Either of these should override the time clock control and automatically operate the system for such periods as are necessary to restore the desired set-back conditions. The actual set-back levels will need to be ascertained by experiment to suit local site conditions, but settings within a temperature range of 21–25°C and a relative humidity range of 60–75% are likely to be suitable.

In order to assist the users with the day-to-day monitoring of the pool temperature and environmental conditions, consideration should be given to providing a remote indication panel, located in the pool hall, giving visual display of the pool water temperature and the pool hall air temperature and relative humidity.

Plantrooms

It is recommended that the pool water treatment and circulation plant be segregated in a separate enclosure from the pool hall ventilation equipment.

These plantrooms can be located adjacent to each other or be a sub-division of a larger space, but it is not necessary for them to be located at the same level. External access to these plantrooms is required for servicing and maintenance.

It is normally preferable for the pool water plantroom to be at ground or semi-basement level. The shape and relative height of the pool hall may permit the ventilation plant to be installed within a roof level plant or enclosure adjacent to the pool hall, and such an arrangement could minimise the length of the ductwork routes to and from the pool hall and associated changing areas.

Special provision must be made within the pool water plantroom for the chemicals used for pool water treatment. Only chemicals for immediate use should be kept here. Separate bunded areas sited as far apart as possible should be provided for each of the chemicals so that they may be effectively segregated, retained and used in a safe manner. This is particularly important when sodium hypochlorite and acid reagents are used, as they react together to produce chlorine gas. To comply with Health and Safety recommendations an emergency “walk under” drench shower with eye-wash provision should be provided within this plantroom.

Ventilation to the pool water treatment plantroom will be required to relieve both the atmospheric contamination associated with the dispensing and/or possible accidental spillage of water treatment chemicals and excess temperature/high humidity which will arise from the plant operating conditions. Any local mechanical extract discharge arrangement should be located to avoid re-introduction of exhausted air into the building through air intakes and windows.

A wash down and hose point should be provided for the dispersal of any chemical spillage and for general cleaning. This should be installed to comply with local water regulations, including the provision of suitable anti-contamination fittings.

Hydrotherapy pool water circulation system

The pool water circulation system should ensure an even distribution of water through the pool and minimise any “dead” zones.

A single in-line strainer unit should be provided immediately prior to duplicate circulating pumps. The pump performance characteristic should be compatible with the requirement for backwashing the filter as well as the circulation duty when the filter is offering maximum resistance immediately prior to backwashing.

A filtration system should be provided with vent, pressure gauges for measuring inlet and outlet pressures, inlet and outlet water sampling points, and a flow-rate indicator. It should also include an appropriately sized pipework assembly so that backwashing utilises pool water to ensure disinfection of the filter media.

The heat exchanger should be capable of maintaining the pool temperature at a selected operating point within the range 34°C–40°C, and to a control tolerance of $\pm 1^\circ\text{C}$. When bringing the pool up to operating conditions after a cold fill, the rate of

temperature rise should be restricted to a maximum of 1.5°C per hour to avoid condensation. A manually operated regulating by-pass valve will be required to set the correct flow rate through the heat exchanger, and a flow rate indicator should be provided for this purpose.

A break tank should be provided for a pool water makeup and should include an automatic self-levelling and make-up system.

A separate outlet should be provided below normal water level, at a suitable position in the pool wall, connected via a manually operated shut-off valve to the strainer unit. This will permit portable fittings to be plugged in for suction cleaning of the underwater surfaces of the pool.

Hydrotherapy pool water treatment plant

Continuous disinfection of the hydrotherapy pool water is essential to control water quality within acceptable limits. Detailed guidance on the microbiological aspects of the health risks and the advantages and disadvantages of the various options for chemical dosing treatments are given in 'Hygiene for Hydrotherapy Pools', published by the Public Health Laboratory Service.

The injection pumps should be automatically controlled, preferably using an electronic control system which responds to the free chlorine level in the pool. The controls should continuously monitor and display the pH and total chlorine level and should also incorporate features to vary the required set-point and compensate for variation in pool water temperature. In addition, the injection pumps should be interlocked with the pool water circulation to prevent the continuation of dosing should there be a cessation or substantial reduction of flow. This interlocking system should be designed to "fail safe".

The sampling chambers should be of a construction suitable for operating at the elevated pool water temperature and have removable sampling bowls. The outlets from the sampling chambers should be valved and may be returned to the remote balancing tank if this is provided or, alternatively, run to a drain.

In addition to the above fixed equipment, a pool water test kit should be provided which is suitable for manually sampling and testing the pool water for residual free chlorine, pH level, alkalinity and hardness.

Patient hoist for hydrotherapy pool

A power-operated patient hoist, traversing over the pool, will be required. The hoist should give smooth lifting, lowering and automatic braking action and have upper and lower limit safety stops. The upper limit stop must ensure the safety of sitting patients. The lifting speed should not exceed 0.05 m per second. The power unit and control ear must be totally enclosed and suitable for long periods of trouble-free operation in the humid, corrosive pool atmosphere. All moving parts of the hoisting unit must be protected from the reach of the patient.

The hoist may be electrically or hydraulically operated and may either be suspended and operate along an overhead beam or be floor-mounted.

The track, trolley, slings, spreader bars, harness and other parts of the hoisting assembly must be designed for a long, trouble-free life, and particular care must be taken in the design and construction of the stitchings and fastening of those parts of the assembly which will be subject to immersion in the pool. All nuts should be fitted with either lock nuts or lock washers, or corrosion resistant self-locking nuts may be used.

If the hoist is electrically operated, special precautions are required to protect the patient and operating staff against the danger of electric shock.

Any transformer or earth-proving units should preferably be located outside the pool hall.

The patient hoist controls should comply with the relevant IEE Regulations for Electrical Installations.

An independent emergency stop control should be provided. It should be located in a position convenient to the operator and should be cord-operated and distinctly coloured and marked. Hand re-setting will be necessary.

Piped oxygen and medical vacuum (optional services)

An oxygen supply and medical vacuum may be required in the individual physiotherapy treatment room. Rather than use portable apparatus it may be preferable to have permanent services from the hospital medical gases installations, if these are available. Guidance regarding medical gases installations and terminal outlets is given in SHTM 2022 – 'Medical gas pipeline systems' and any subsequent published amendments.

Electrical services

Introduction

In practice the electrical switchroom for the hydrotherapy suite will usually be adjacent to the hydrotherapy pool plantrooms.

Electrical installations

The electrical installation shall comply with the appropriate requirements of the current edition of BS 7671 - Regulations for Electrical Installations for locations containing swimming pools. Within the hydrotherapy pool area and associated water treatment plantroom, any exposed services should be of PVC or similar

finish to avoid corrosion by humid and chemically aggressive atmospheric conditions. Mineral-insulated PVC sheathed cables may be used.

Lighting

In the hydrotherapy pool area, the general lighting luminaires should be splash-proof (IP54 degree of protection as classified in BS 5490) and made from a non-corrosive material. Consideration should be given to maintenance with, ideally, no luminaires positioned immediately over the pool itself. With a high ceiling level in the pool hall, wall-mounted luminaires are one option, but care should be taken to avoid problems with glare. This could be alleviated by uplighting but, to achieve the required illumination levels, this may involve having to use floodlights as uplighters.

Any luminaires (other than those operated at safety extra low voltage (SELV)) that are installed above the pool or the area within 2 m of the pool, should be installed at a height greater than 2.5 m above the floor/access level.

Any luminaires installed over the area between 2 m and 3.5 m from the pool, should either be class II or should be installed at a height greater than 2.5 m above the floor/ access level.

Within the physiotherapy activity area with high ceilings, consideration again should be given to using wall-mounted luminaires to provide convenient access for maintenance. These luminaires should be manufactured from materials having good resistance to impact damage.

Within the occupational therapy activity areas fluorescent lighting should generally be provided, and be circuited to avoid stroboscopic effects where rotating machinery is used. Ceiling-mounted luminaires positioned above workbenches and equipment are preferable to portable lamps for task lighting. When maximum flexibility of use is required, such as in the light activities area, it may be advantageous to install ceiling-mounted power track. This will allow task lighting and power supplies for portable therapy equipment to be directly accessible without the hazard of trailing cables, and has the potential for changing lighting patterns to suit other group activities.

Socket-outlets and floor cleaning equipment in the hydrotherapy pool hall

Socket-outlets will usually be required within the hydrotherapy pool hall for floor cleaning machines. These should be sited at least 2.0 m, and preferably 3.5 m, away from the edges of the pool water surface and should be industrial-type sockets, as classified in BS EN 60309-2. They should be connected via an integral or adjacent residual current protective device complying with BS 4293, having a residual operating current not exceeding 30 mA.

As a further safety precaution, all 230 V floor cleaning equipment should be fitted with a restraining lanyard, sliding along a secure wire fixed to the pool structure, of

a length permitting operation of the equipment but short enough to prevent it falling into the pool.

Power connection for pool counter-current unit (optional facility)

If a counter-current unit is to be provided (see paragraph 3.59) it should be connected via an appropriately rated residual current protective device having a residual operating current not exceeding 30 mA. The electrical controls, which may be incorporated within the unit assembly, should be of a type which provides at least IP44 degree of protection, as classified in BS 5490, and also protects the operating staff against the danger of electric shock. They may be pneumatically operated or electrically operated at a safety extra low voltage (SELV) not exceeding 12 V (RMS) using an earth-free source and circuits which comply with the relevant IEE regulations for Electrical Installations.

Internal drainage

Design parameters

Depending on local circumstances, special consideration may have to be given to the size of the drainage connection from the hydrotherapy pool to deal with the flow rates associated with filter backwashing and pool emptying.

References

References are identified by paragraph number.

- 1.1 **Rehabilitation – a guide.** Department of Health 1997.
- 1.9 **Towards a Healthier Scotland.** Scottish Executive White Paper, TSO 1997.
- 1.10 **Joint National Priorities Guidance 1999/2000–2001/2002.** September 1998
- 1.11 **Our National Health: A plan for action, a plan for change.** Scottish Executive Health Department, TSO 2001.
- 1.12 **NHS Responsibilities for Meeting Continuing Health Care Needs.** HSG 95/8, Department of Health 1995.
- 1.16 **Rehabilitation – a development challenge.** Robinson, J. King's Fund Publishing, 1996.
Trends in rehabilitation policy – a review of the literature. Nocon, Andrew. King's Fund and Audit Commission, Grantham Book Services Limited, 1998.
- 1.17 **Community hospitals.** Property and Environment Forum Executive (in preparation).
HBN 36 Vol 1: Local healthcare facilities. NHS Estates, TSO 1995 (under review)
- 1.18 **SHPN 35 – Accommodation for people with mental illness.** NHSScotland Property and Environment Forum Executive 2000.
Design guide – Day facilities for people with severe learning disabilities. NHS Estates 1993.
- 1.20 **SHPN 03 – General design guidance.** NHSScotland Property and Environment Forum Executive 2001.
- 2.7 **Carers (Recognition & Services) Act 1995.** TSO 1995.
Social Work (Scotland) Act 1968. TSO 1968.
- 2.23 **Disability Discrimination Act 1995.** TSO 1995
SHPN 03 – General design guidance. NHSScotland Property and Environment Forum Executive 2001.
SHPN 14 – Disability access. NHSScotland Property and Environment Forum Executive 1999.

- 2.24 **Wayfinding.** NHSScotland Property and Environment Forum Executive 1999.
- 2.29 **Health and Safety at Work etc Act 1974.** TSO 1974.
- Violence and aggression to staff in health services: guidance on assessment and management.** Health Services Advisory Committee, Health and Safety Commission, HSE Books, 1997.
- 2.32 **SHPN 03 – General design guidance.** NHSScotland Property and Environment Forum Executive 2001.
- 2.35 **HTM 2065 – Healthcare waste management – segregation of waste streams in clinical areas.** NHS Estates 1997.
- 3.2 **HBN 36 – Local healthcare facilities.** NHS Estates, TSO 1995 (under review).
- Community hospitals.** Property and Environment Forum Executive (in preparation).
- 3.5 **HFN 21 – Car parking.** NHS Estates, TSO 1996.
- 3.9 **SHPN 03 – General design guidance.** NHSScotland Property and Environment Forum Executive 2001.
- 3.52 **Hygiene for hydrotherapy pools.** Dadswell, J.V., Public Health Laboratory Service 1999.
- 3.56 **SHPN 03 – General design guidance.** NHSScotland Property and Environment Forum Executive 2001.
- 3.86 **Community Care: A Joint Future – report by the Joint Future Group.** Scottish Executive 2000.
- 3.99 **SHTM 2045 - Acoustics.** NHSScotland Property and Environment Forum Executive 1999.
- 3.105 **SHPN 03 – General design guidance.** NHSScotland Property and Environment Forum Executive 2001.
- 3.108 **SHPN 45 - External works for health buildings.** The Scottish Office NHSScotland Management Executive, TSO 1994.
- 3.110 **SHPN 04 - In-patient accommodation: Options for choice.** NHSScotland Property and Environment Forum Executive 2000.
- 3.134 **Factories Act 1961.** TSO 1961.
- Health and Safety at Work etc Act 1974.** TSO 1974.
- 3.136 **Factories Act 1961.** TSO 1961.

Health and Safety at Work etc Act 1974. TSO 1974.

- 4.1 **SHPN 03 – General design guidance.** NHSScotland Property and Environment Forum Executive 2001.
- 4.3 **HTM 61 - Flooring.** NHS Estates, TSO 1995.
- 4.7 **HFN 26 – Refurbishment for natural ventilation.** NHS Estates, TSO 1998.
SHPN 03 - General design guidance. NHSScotland Property and Environment Forum Executive 2001.
- 4.9 **HTM 56 - Partitions.** NHS Estates, TSO 1998.
HTM 60 - Ceilings. NHS Estates, TSO 1989.
HTM 61 - Flooring. NHS Estates, TSO 1995.
- 4.10 **CIBSE Lighting Guide LG 10 1999 – Daylighting and Window Design.** Chartered Institute of Building Services Engineers (CIBSE) 1999.
- 4.14 **Carers (Recognition & Services) Act 1995.** TSO 1995.
Social Work (Scotland) Act 1968. TSO 1968.
- 5.1 **SHPN 03 – General design guidance.** NHSScotland Property and Environment Forum Executive 2001.
- 6.2 **SHPN 03 – General design guidance.** NHSScotland Property and Environment Forum Executive 2001.
- 6.3 **SHPN 03 – General design guidance.** NHSScotland Property and Environment Forum Executive 2001.

Appendix 1

Hygiene for hydrotherapy pools. Dadswell, J.V., Public Health Laboratory Service 1999.

SHTM 2022 - Medical gas pipeline systems. NHSScotland Property and Environment Forum Executive 1999.

BS 7671 - Requirements for Electrical Installations – IEE Wiring Regulations. Sixteenth Edition. BSI 2001.

BS 5490:1997 Specification for classification of degrees of protection provided by enclosures. BSI 1997



BS EN 60309-2:1999 Plugs, socket outlets and couplers for industrial purposes. Dimensional interchangeability requirements for pin and contact-tube accessories. BSI 1999.

BS 4293:1993 Specification for residual current-operated circuit-breakers. BSI 1993.

Publications in Scottish Health Planning Note series

Given below is a list of all Scottish Health Planning Notes. This list is correct at time of publication of this Note, but refer also to the Health Building Notes and Scottish Health Planning Note Reference Guide published by the NHSScotland Property and Environment Forum Executive.

- 03 **General design guidance.** NHSScotland Property and Environment Forum Executive 2001.
- 04 **In-patient accommodation: Options for choice.** NHSScotland Property and Environment Forum Executive 2000.
- 08 **Facilities for rehabilitation services.** NHSScotland Property and Environment Forum Executive 2001.
- 27 **Intensive Care Unit.** NHSScotland Property and Environment Forum Executive 2000.
- 35 **Accommodation for people with mental illness Part 1 – The acute unit** NHSScotland Property and Environment Forum Executive 2000.
- 35 **Accommodation for people with mental illness Part 2 – Treatment and care in the community.** NHSScotland Property and Environment Forum Executive 2000.
- 52 **Accommodation for day care Part 1 – Day surgery unit.** NHS Scotland Property and Environment Forum Executive 2001.
- 52 **Accommodation for day care Part 2 – Endoscopy unit.** NHSScotland Property and Environment Forum Executive 2001.
- 52 **Accommodation for day care Part 3 – Medical investigation and treatment unit.** NHSScotland Property and Environment Forum Executive 2001.

Publications in Scottish Hospital Planning Note series

Given below is a list of all Scottish Hospital Planning Notes. Those Notes which have to be read along with their counterpart Health Building Note (HBN) are marked with an *. This list is correct at time of publication of this Note, but refer also to the Health Building Notes and Scottish Health Planning Note Reference Guide published by the NHSScotland Property and Environment Forum Executive.

- 1 **Health Service building in Scotland.** TSO 1991.
- 2 **Hospital briefing and operational policy.** TSO 1993.
- 6 **Radiology department.** TSO 1995.
- 12 **Out-patients department (with DBS).** TSO 1993.
- 12 **Out-patients department Supplement A - Activity space data sheets.** TSO 1993.
- 12 **Out-patients department Supplement 1 - Genito-urinary medicine clinics.** TSO 1993.
- 12 **Out-patients department Supplement 2 – Oral surgery, orthodontics, restorative dentistry.** TSO 1996.
- 13 **Sterile services department.** TSO 1994.
- 15 **Accommodation for pathology services.** TSO 1994.
- 20 **Mortuary and post-mortem rooms.** TSO 1993.
- 20 **Mortuary and post-mortem rooms Supplement 1 - Activity space data sheets.** TSO 1994.
- 21 **Maternity department.** TSO 1996.
- 22 **Accident and emergency department in an acute general hospital** TSO 1995.
- 22 **Accident and emergency department in an acute general hospital Supplement 1 – Trauma care and minor injury.** TSO 1996.
- 26 **Operating department*** TSO 1992.
- 26 **Operating department Supplement 1 - Activity space data sheets.** TSO 1993.
- 34 **Estate maintenance and works operations*.** TSO 1992.

- 34 **Estate maintenance and works operations Supplement I - Activity space data sheets.** TSO 1993.
- 40 **Common activity spaces Volume 5 – Scottish appendix*.** TSO 1996.
- 45 **External works for health buildings*.** TSO 1994.
- 47 **Health records department.** TSO 1995.
- 51 **Accommodation at the main entrance of a District General Hospital.** TSO 1992.
- 51 **Accommodation at the main entrance of a District General Hospital Supplement A - Activity space data sheets.** TSO 1993.
- 51 **Accommodation at the main entrance of a District General Hospital Supplement 1 - Miscellaneous spaces in a District General Hospital.** TSO 1992.
- 51 **Accommodation at the main entrance of a District General Hospital Supplement 1A - Miscellaneous spaces in a District General Hospital - Activity space data sheets.** TSO 1993.