



Personal Space:

Interior design approaches to bedrooms in mental health developments

The bedroom is perhaps the most intimate built environment. In a hospital, a bedroom is the one place that is yours for the time you are there; a place to rest in safety, to recover. This takes on a particular significance in mental health settings where bedrooms, though not the primary location for treatment and care, need to be a home from home and your place of refuge.

Designing mental health bedrooms that are at the same time safe and pleasant is a real challenge. These small spaces must deliver in a number of areas. They must be:

- a place that feels 'homely' to people with different needs and preferences, from young people to elderly people with dementia; people who may have very different ideas of what is friendly and reassuring, and what is alienating and strange.
- a safe place; allowing observation and, often, meeting anti-ligature requirements in a manner that does not detrimentally effect the 'homely' nature and perception of privacy.
- a place that is robust; being easy to keep clean and maintained so that it stays nice and healthy and for each occupant, whatever is thrown at it.
- a place that is healing; that has the characteristics which evidence based design links to improved recovery times upto 14% reduction in inpatient stays (Lawson and Phiri (2003)).

This design challenge is an issue that is repeated tens of times in any one development, and hundreds of times across the country, thereby representing a significant investment in built infrastructure and the potential to impact care settings and outcomes for a huge number of people who can be resident in these establishments for a significant period of time. Whilst there are clear economies in standardisation, and benefits in terms of flexibility in use, in mental health bedrooms the "one size fits all" approach often does not do so. Therefore the ambition of this study is not to describe the "perfect" bedroom to be adopted by all but to examine how, through small changes to the specified elements and fit-out of a standard room footprint, the issues around differing needs and personal preferences can be accommodated such that the aims and aspirations for the patient environment can be met without 'unhelpful variation' unduly impacting future flexibility.

This design study is intended to aid client teams, and their designers, both in developing new facilities and when refreshing existing rooms. The following pages are an exploration of possibilities and practicalities based on the combined expertise of 17 mental health and estates professionals from across NHSScotland who are, or recently have been, involved in the development of a new inpatient facility. It summarises the learning through much deliberation in developing bedroom designs for their own projects, highlighting issues and successes as an aid for those just starting the process. In progressing the study the group developed 'user briefs' to describe the different types of demands that may be placed on a bedroom, and tested the design response to those briefs. The resultant approaches were felt to be both workable and inspirational — one of the representatives stated they were "better than anything I've seen from our designers" – and we trust they will help client teams in developing their own thinking, briefing and design development.

The Bedroom as a Care Setting









Unlike a medical setting where the bedroom, traditionally at least, has been the main location for patients, people in mental health facilities are not encouraged to spend large amounts of time in their rooms. This might suggest that these spaces can be viewed as less important, but this should not be the case. The rooms are used for relaxation, time alone and treatment, for some patients they are where family and friends come during visits; they can have a large impact on the recovery and behaviour of patients. Evidence based design research (Lawson and Phiri (2003)) has shown that bedroom design is critical in both medical and mental health environments, with patients in new or renovated single rooms having significantly reduced behavioural incidents and better progress with their conditions. The research stressed the importance of natural light – particularly morning sunlight – and a sense of natural rhythm in the day, as well as awareness of what is happening around, in terms of views outside, but also connection to activity within other areas of the building when wanted.

The research also highlighted the importance of the patients having control over their environment and interactions with others whenever possible, reducing stress and conflict, and disturbance by others on sleep or relaxation. In this research patients consistently commented on the positive impact of a pleasant environment on their health and their wellbeing. This was echoed by this study's group who identified the following key aspects:

The room itself:

- Acoustic separation the room must allow patients to get away from other peoples noise and allow them to play music etc without disturbing others.
- Acoustic environment the hard surfaces used to allow easy cleaning and maintenance can make the room echoy and institutional (with the audio environment more like a prison than a hotel). With patients being very sensitive to noise and disruption, softening the acoustics is thought highly important.
- Personalisation walls surfaces and shelves need to provide ready space for personal belongings and pictures/posters to be installed and removed without damaging the fabric of the room.
- Colour and texture the rooms should not feel boxy and hard, but have areas of colour and visual texture (through using different materials and some subtle natural patterns such as timber effects) to soften the feeling of the room. Soft furnishings, such as curtains, cushions and comfortable chairs are also key in this.
- Mood lighting being able to have different lighting zones to change the atmosphere of the room, and also the ability to modify the light levels is fundamental. Washing walls and ceilings with pools of light to assist with the 'visual texture' was thought helpful in counteracting any harshness in hard surfaces.

Nearby:

- Views of nature, both immediately beside the window and a long view.
- Distance from external interruptions such as being viewed from the public realm (especially at night when people can see in more easily), or having car lights shining into your room.

Current Practice

Design Guidance for Mental Health bedrooms spans a range of current and older documents relating to inpatient accommodation, elderly and dementia care, medical facilities and anti-ligature requirements. The overall aims for the design of bedrooms are clear in the documents, recognising the needs of the whole person, both physical and psychological; stressing the need for environments on a human scale that are non-clinical, non-institutional, calming and familiar. SHPN 35 describes the mental health bedroom as different from a medical room, and that they should resemble a "small, comfortable, modern hotel bedroom". However, the wide ranging guidance with their competing priorities has led to some very different approaches being used by different client bodies as they react both to the guidance and their own previous experiences; with resultant significant variation in room sizes, configurations and selection of materials, even the inclusion (or not) of services such as nurse call systems. One board adopted part-height en-suite doors as an anti-ligature measure following an incident involving a bathroom door, where another felt this would not be suitable as it prevented them excluding access to the en-suite if needed for patient safety and observation. Members of the group also felt that decisions about materials, flooring for example, had sometimes been based on past experience of similar (older) specifications or FM approaches and awareness of how issues such as cleaning were overcome elsewhere to allow softer looking materials to be used would assist in broadening horizons and options.

Sourcing appropriate fixtures was seen as a major issue, with product designs either being less than attractive or not suitable for their specified purpose; one client reported that the 'anti-ligature' recessed lighting specified contained readily accessible bulbs allowing easy electrocution and required replacement.

One board, when considering the design of bedrooms over a number new developments, built a "mock-up" standard room, which was then heavily reviewed and investigated by clinicians and nursing staff to test the location of fixtures, suitability of materials and detailing (though colours, lighting quality and total effect on the atmosphere of the room did not appear to be assessed). However not all projects would warrant the investment needed to develop a mock rooms and therefore it is important that client groups take the time to investigate what others have done (see Pulse for selcted completed projects) and to visit a number of recent facilities outwith their immediate area to learn from a broad base of experience.







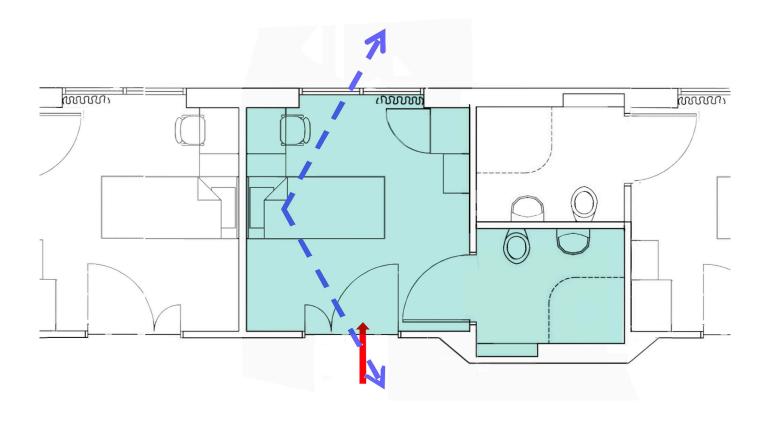


2. The En-suite Location

Whilst this study looks to investigate how 'standard' bedrooms can be personalised, the characteristics of the base room will affect the feel and utility of the space. The introduction of single bedrooms as standard for inpatient accommodation across healthcare in the UK has resulted in substantial research into the way that these, and their en-suite bathrooms, are best shaped and configured. There are three primary approaches to the layout of rooms, identified by the location of their associated en-suites:

- **back to back**; where a pair of en-suite shower rooms are placed between two rectangular bedrooms.
- **inboard;** where ensuite is placed in a corner of the bedroom by the ward circulation.
- **outboard;** where the ensuite is placed in a corner of the room, on outside wall.

Comparative research on the three models in a medical setting is ongoing at Hillingdon (http://www.thh.nhs.uk/About/bevan/bevanward.html) which will yield important insights, many of which will be relevant to the mental health setting. However mental health bedrooms have additional considerations and different priorities. Each client group that informed this study has spent considerable time and effort developing the best layout for their project, with the inboard and back-to-back en-suites being popular choices. The issues identified around each approach are therefore noted below:

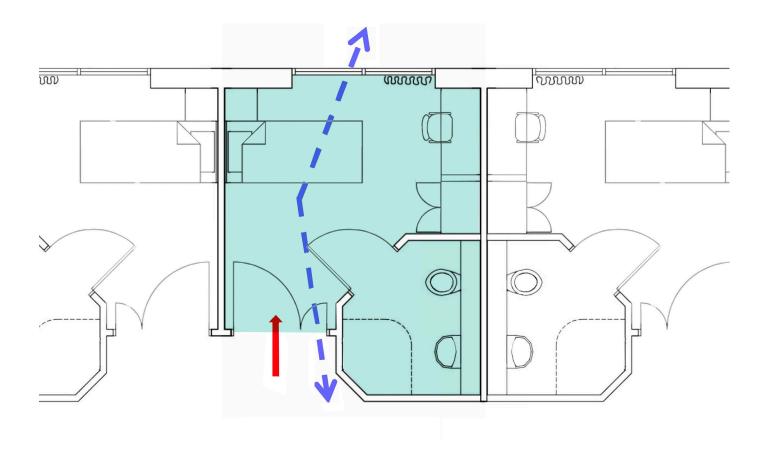


Back-to back en-suite

- Easy to get good visibility into the room from the corridor, and good view of the space and life adjacent to the bedroom (internal) if this there is something interesting to look at and the mutual view is wanted.
- Full width external wall allows for good daylighting and visibility of landscape, and the room shape gives improved scope for daylighting to reach corridor through the room.
- Rectilinear room gives maximum usable space, and feels more domestic.

 Potentially more expensive to build and staff due to increased unit length and therefore circulation length; though Hillingdon research shows it's not
 - and therefore circulation length; though Hillingdon research shows it's not more expensive if the space outside the room is expanded to be used as a communal area (rather than a corridor) with staff bases distributed well.
- Isolation of services to the 'external' en-suite, with control from the corridor, is not as easily managed as the 'inboard' model.
- Can arrange bathroom doors so they're visible from both the bed and the corridor, allowing maximum observable area (though privacy in bathroom becomes an issue).

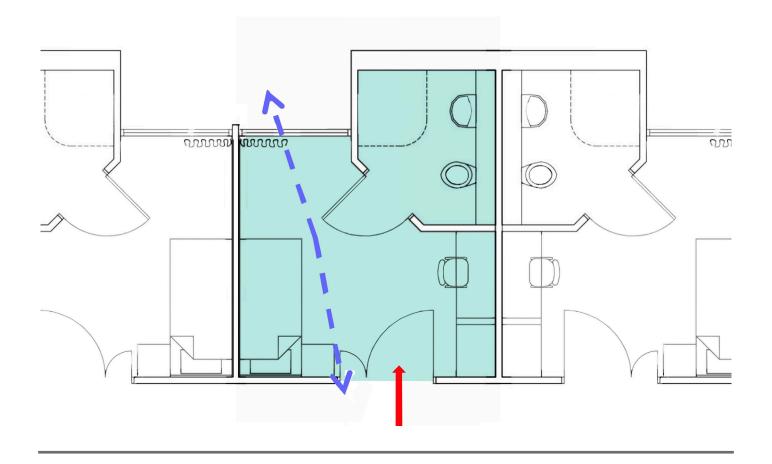
Suggesting this option is most likely to be appropriate if a feeling of connectivity to life immediately outside the room is more important than a feeling of privacy and good audio separation, and particularly if the wards are to be arranged such that bedrooms open directly onto a shared space.



Inboard en-suite

- Familiar model, most hotels have the bathroom closer to the corridor.
- Bathroom and access space form buffer zone, aiding gradation of spaces from private to shared: ideal if feeling of privacy is more important than feeling of connectivity.
- Good size external wall allows for good daylighting and visibility of landscape.
- Layout to be carefully considered to avoid blind spots when viewed from corridor; resulting angled walls can lessen 'hotel' feel.
- Space by the door is not useable space, and can restrict handling space on entry into the room.
- Shorter unit length than back-to-back model, therefore shorter corridors possible, therefore potentially more economical in terms of build and staffing costs.
- Easy isolation of services to bathroom (controlled from corridor).

Suggesting this option is most likely to be appropriate if a feeling of privacy and good audio separation is most important, or to allow a gradation of spaces from most private to communal, making the progression less stressful.



Outboard en-suite

- Easy to get good visibility into the room from the corridor, and good view of the space and life adjacent to the bedroom (internal).
- Short external wall limiting opportunities for daylight and views, but can increase feeling of privacy on exposed locations (noted in early feedback from Hillingdon research)).
- Limited space at window, this would require very careful design to become a cosy nook rather than a wasted space.
- Shorter corridors possible, but service runs longer therefore highest build cost.
- Isolation of services to bathroom (controlled from corridor) difficult to achieve, therefore difficult for room layout to meet design guidance.

Suggesting this option is most likely to be appropriate if the site is overlooked or close to public spaces and the facility is therefore arranged to look inward to light and spaces within the plan. Issues around isolation of services would require very careful consideration.

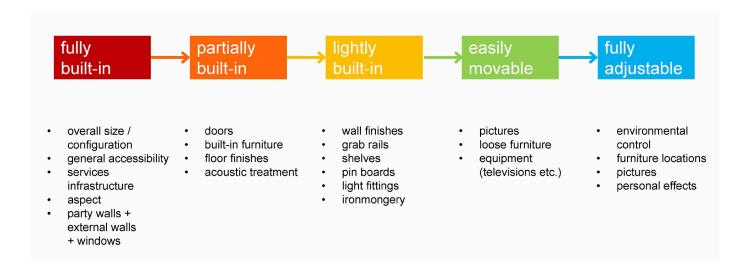
Whilst the above might suggest different room types for different wards, the benefits of one model over another are subtle and depend largely on the sensitivity of how each is planned; the back-to-back model need not have large windows for visibility into the corridor for example, and the inboard bedroom can be planned such that the general circulation areas are visible from the bed.



3. From Standard to Personal

As the one thing that is certain in healthcare is that things will change – designing for future flexibility is a key consideration. To allow wards to more readily change uses over time, as demographics and services modes change influencing the number of people needing each service, it is preferable for one model of room to be chosen for the whole, or majority, of the facility. This one base model may need to be provided in a couple of sizes in any one ward; where greater spatial needs are being handled by special provision rather than across the board provision, for example. However, unhelpful variation in the elements of the building that are permanently built in (the walls that describe the size and shape of the room) can unduly limit flexibility by tailoring each area too closely to a narrow need. That said, there are a number of elements that will require replacement at different points in the buildings lifecycle and could reasonably be amended at the point a ward is refreshed and re-assigned. Over a 10-20 year timeframe for example, it could be quite normal in a high wear and tear environment for built-in furniture, doors or even windows to become tired, broken and to be replaced; surface finishes and light fittings are likely changed much more frequently. On a day to day basis, items might be moved in and out of rooms to suit the needs or risks of the occupants.

This table describes building and furnishing elements that, over time, are generally more "fixed" or more "moveable". Considering permanence and adaptability within the design allows the environment to be tailored to different degrees corresponding to the frequency and magnitude of change (greater magnitude of change being less frequent in both built elements and service needs).





The User Groups for the study

To explore the possibilities generated by this approach, different interior design and furniture approaches have been 'applied' to the same base room (the same physical box dimensions) to tailor it to the atmospheric & emotional needs of very different users. The three groups selected to test the potential of this approach were:

- **forensic, IPCU and adult acute admissions**, where observation, access for staff and anti-ligature design are key drivers;
- adult rehab and elderly acute/functional, where patient safety was less of a worry, instead with emphasis on relaxation, sense of home and a feeling of calm, and;
- young persons, where the size of unit generally means that one bedroom type must be accommodate all potential mental health problems, and be suitable for children and young people without seeming alienating, overly controlled or inappropriate to their age and stage of development.

Common elements and ideas

The basic room

The approaches illustrated (left) are describing an 'inboard' bathroom model, however the main illustrated examples overpage use a rectilinear footprint for the bedroom and bathroom, of consistent dimensions, to test the approach on the 'boxiest' example. The doors, window and service locations are the same in each drawing. Pinboard acoustic surfaces are shown (linoleum based) both to allow personalisation of the space and to help soften sound.

The lighting shown is intended to be split operation, and dimable, to allow the lighting to be varied by activity and mood, with one light also operable from outside the room to aid observation when necessary. Good natural ventilation and reliable heating is assumed as a basic; cooling may be necessary particularly where the room is a venue for a number of people involved in physical restraint or where physical processes such as detox can increase body temperature.

Enhanced rooms with additional facilities for accessibility are not illustrated, but it is anticipated that the same palette of materials and fixtures would be applied to any size space.

Breaking the box

In the base room we have explored the option for angling the ceiling within the service zone to make the room feel less "box-like". This allows light to be played across the ceiling for a less institutional effect, and can change the acoustic performance of the room so echoes are reduced. The ceiling is shown with the high point on the corridor side (to create a more intimate environment at the window and reduce the need for areas above cupboards to be boxed in for safety reasons, but could be angled up to the outside and combined with higher windows to create a more outward looking, optimistic feel or increase light and views.

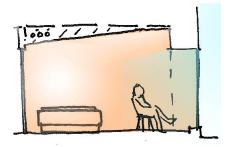
Windows and visibility

In all the rooms in this study, the staff observation from the corridor is achieved through a half door with adjustable integral blind to give controlled visibility into room. In the groups it was discussed that these could be placed next to most doors in a facility, including staff areas, to normalise this element and reduce stigma. The external windows are the same horizontal dimension and utilise mesh screens built into one sliding pane to allow natural air inflow without presenting any risks of escape, falling or passing of forbidden items. However the window element is described in different forms in each scheme to give different opportunities, spaces and feels to the rooms.

Linen

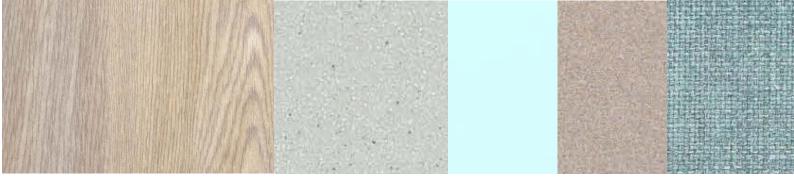
White bed linen is described on each bed as the group felt it would be highly impracticable to launder separate sets for different wards in a larger facility. However co-ordinating throws and cushions are shown as elements that can be used in the room when appropriate (and easily removed if needed). However one group said they would expect the young people in their facility to bring their own bed covers in for familiarity and to help bring their identity to the room.







Window with secure sliding panel.

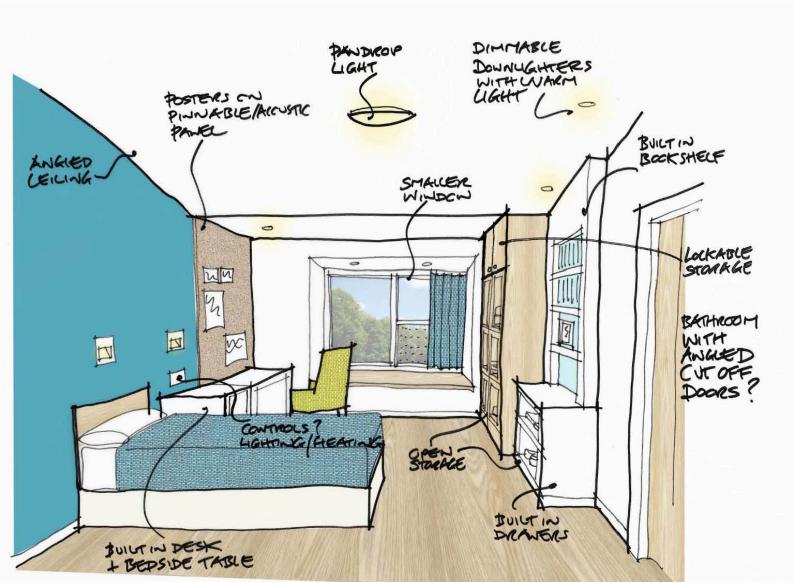


Forensic, IPCU and Adult Acute

(above) Indicative surface, floor, fabric and paint finsihes. For more detail see Appendix 4.

Design challenge

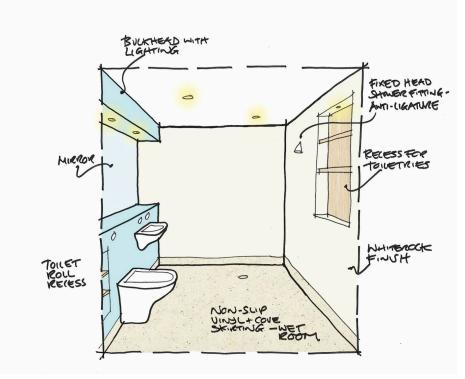
This user group has people of all adult ages, who may be new to a unit, undergoing assessment and who may not be there voluntarily. The room is likely to be the first environment for the patient, where they'll be brought to settle in and get through their first night. Thereafter patients will use the room when they feel they need to be away from others, when they are being assessed, undergoing treatment or being restrained. At times they will be distressed or angry, and the room should fundamentally provide a place that helps restore calm, a place of safety. There needs to be space for a number of staff to be in the room.

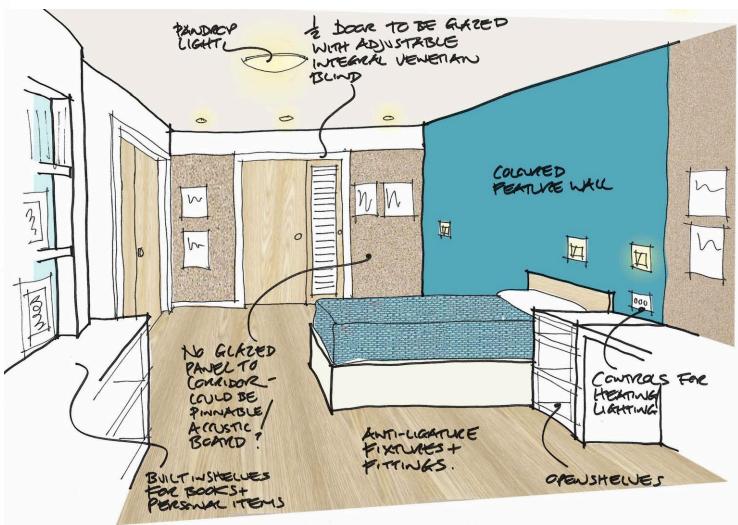


Design Response

The room uses colour and visual texture to soften the environment that might otherwise seem bare and harsh, particularly if the removable furniture and items have been taken away for safety. Light is cast onto walls and ceiling to give the space warmth and character. The space has pinnable surfaces and open storage to provide space for personal items and objects if doing so is thought safe.

All fixtures and fittings are anti-liguature, and easily cleanable, but spaces such as the bathroom have been designed with storage and welcoming lighting so that they do not feel specifically like a secure area.





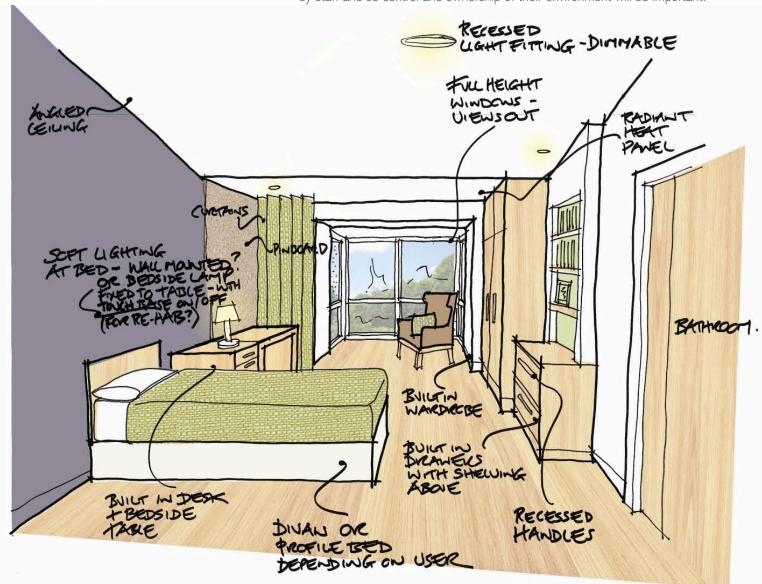


Adult rehabilitation & elderly acute/functional

(above) Indicative surface, floor, fabric and paint finsihes. For more detail see Appendix 4.

Design challenge

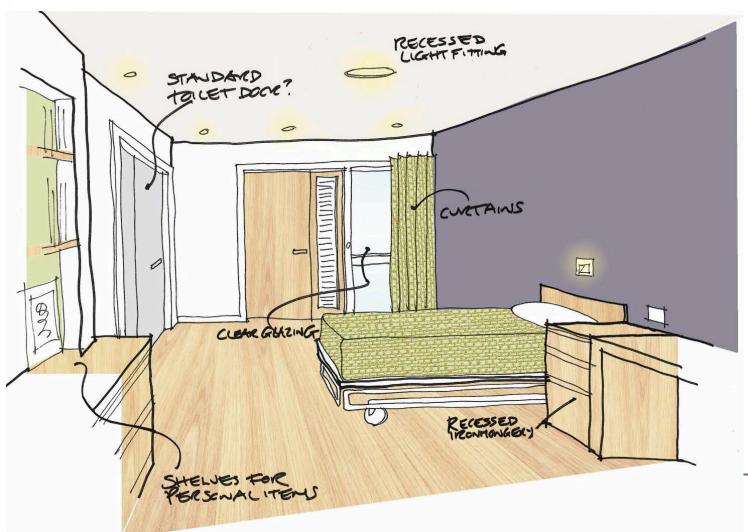
This is really two user groups, but for whom the basic approach is very similar. These users, either through frailty, improvement, or the nature of their condition, are not considered to be highly likely to place themselves or others at risk, and hence, whilst safe design considerations are still important, they are not the primary issue in the bedroom design. The room may therefore be rather domestic in feel, to relax the patients, and make older patients feel more at home and less likely to become disoriented. Access to natural light, visual interest and views are particularly important for older users, who may be less active, and for those who may be recovering from the physical effects of their rehabilitation. Rehabilitation users may be more self-reliant, and less managed by staff and so control and ownership of their environment will be important.



Design Response

For both these user groups the room has been designed to feel residential. The room is decorated with soft colours and timber effect flooring. Curtains have been used to make the space more homely and familiar, and allow control over the space by the users, if required these can be removed for safety. There is a glazed panel to the corridor/wider environment so that less mobile users can be stimulated and drawn out into rest of the unit. To accomodate patients with dementia the floor and walls are different colours, and the doors are also in a contrasting material, in this case wood (see picture left). For rehab users this is not necessary, and standard doors can be used (see picture right). For elderly acute patients the divan bed base may be replaced with a medical bed if needed.



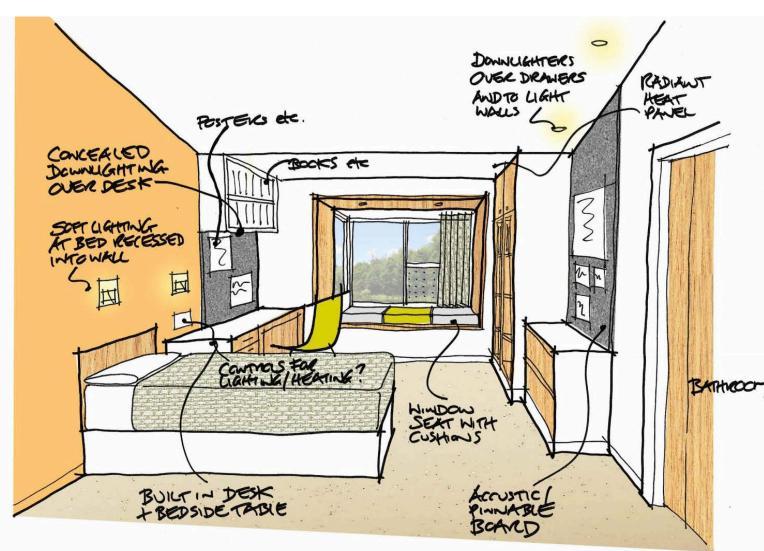


Young person

(above) Indicative surface, floor, fabric and paint finsihes. For more detail see Appendix 4.

Design challenge

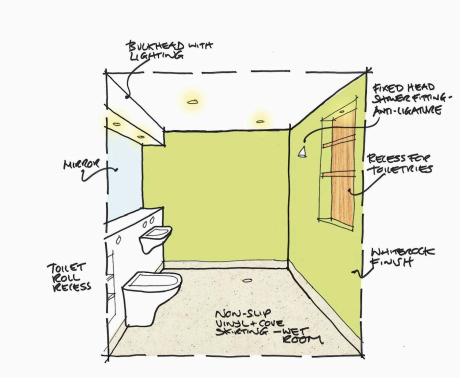
This user group is people around the ages of 12-18. They may be in the centre for several months, and it is essential that the space feels friendly and that they have ownership of it. The patients would be encouraged to use the day rooms during the daytime, and therefore the bedroom is an area for relaxation, private space and family visits. The space should not feel institutional; the space should feel more like a student study bedroom, rather than a hospital ward. Use of colour and design can make the space seem youthful, but patterns or imagery should be carefully considered so that they do not become easily out of date, or appear childish. The patients should be able to personalise their space, without damaging it. There should also be space in the room for study and school work. Due to the small amount of young persons' mental health rooms in any one location, the patients may have a wide range of types and severity of problems, therefore anti-ligature fittings and good observation are essential.

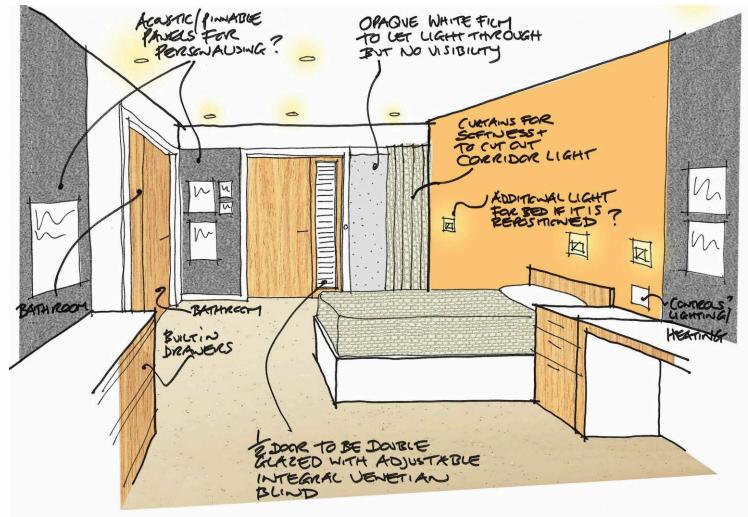


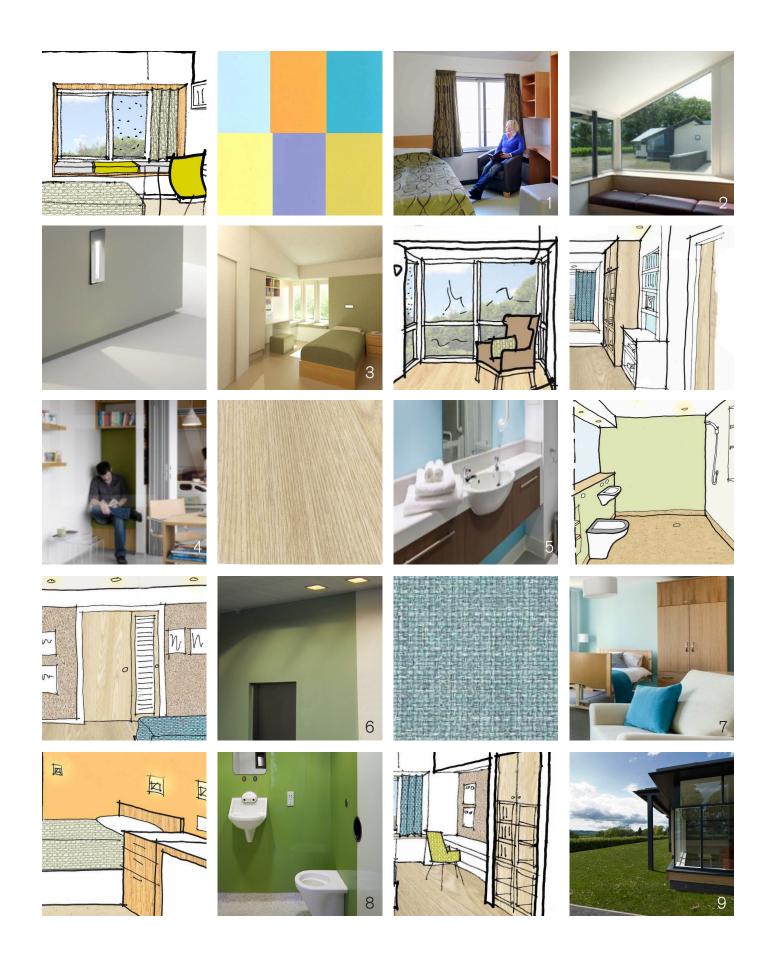
Design Response

The space has been designed to feel as uninstitutional as possible whilst meeting antiligature requirements. The walls have been painted in a strong colour, and the floor has a glittery finish. The room uses furniture and built in elements to shape specific areas, such as a window seat for relaxation and extra seating for visitors. Shelving, desk space and pinnable wall areas form a dedicated study space, with extra storage elsewhere in the room so this space does not become cluttered with other items.

The bathroom uses colourful high gloss finishes to make the room less sterile in appearance, whilst still being easy to keep clean.







4. Response

The overall response to the designs and samples presented was very positive – with one participant saying the atmosphere and environment they described were better than anything they had been presented by their designers.

The Group liked:

- Windows designed as a place, allowing a cosy seat with a view, rather than simply a hole in the wall.
- The 'timber' look sheet flooring for adult areas, feeling the textures and colours softened the appearance of the room one participant had direct experience of the flooring being used and felt it cleaned well with the appropriate cleaning method.
- The 'funky' flooring sheet for younger people's areas, the colours and slight glitter effect felt youthful. The one issue may be around anyone with dementia trying to pick-up the metallic bits.
- Incorporating a range of light fittings to provide areas of light for different moods. However there were some concerns about the number of fittings needed to get desired effect and the impact on costs and BREEAM points. It was discussed that LED or other low energy fittings might help in this and that the objective of providing 'mood lighting' should be recognised as a fundamental service need.
- Using a sloping ceiling (though either articulating the roof pitch in a single story building or using the service zone in a taller development) to break up the 'boxy' feel and change the atmosphere of a room.
- The use of strong but subtle colours and coordinated fabrics with a visual texture.
- The idea of wipeable acoustic pinboard was well received, although from the sample available the group were not sure if it'd be fully robust.

However there were elements that the group felt were still disappointing, that being around the availability of fabrics and products that are robust enough to be incorporated into mental health rooms and attractive enough that you might want them in a bedroom. Particularly:

- anti-ligature toilet seats sitting directly on the porcelain is a sure way of getting a jail-like experience.
- better range of light fittings in particular the pan-drop lights drawn were not felt to be ideal as they spread a rather unflattering light, but were included due to concerns over the design of recessed spots.

The main response though was the benefit of bringing people together – even in the short time the group met connections were formed that would help one group test, through another's experience, a different way of tackling a similar problem and examples of solutions to help challenge obstacles in their own project.

Acknowledgements

This document was created as the result of workshops held by A+DS with support from haa design ltd, attended by representatives of NHSScotland who have recently been, or are currently, involved in the design of mental health inpatient facilities, and Health Facilities Scotland. Many thanks to the representatives of the NHSScotland boards who provided expertise, from NHS Ayrshire and Arran, NHS Dumfries and Galloway, NHS Lothian, NHS Highland and NHS Tayside.

The report was also informed by the designs developed for the Muirview and Elmview wards at Stratheden Hospital (NHS Fife), Stracathro Hospital (NHS Tayside) and Midpark Hospital (NHS Dumfries).

For further information on built mental health developments, please see our database Pulse http://ads.org.uk/healthierplaces/pulse

The interior design schemes and visualisations were designed by haa design ltd, and actively developed and tested through the workshops



Further reading and guidance

The Architectural Healthcare Environment and its effect on patient outcomes An NHS Estates Funded Research Project by Professor Bryan Lawson and Dr Michael Phiri of the University of Sheffield

Dementia Design Tool Kit. The Dementia Services Development Centre, University of Stirling.

"In-Patient Care" Scottish Health Planning Note 04-01 Published by Health Facilities Scotland (2010)

"HAI-Scribe" (healthcare associated infection system for controlling risk in the built environment) Produced by Health Facilities Scotland (2007)

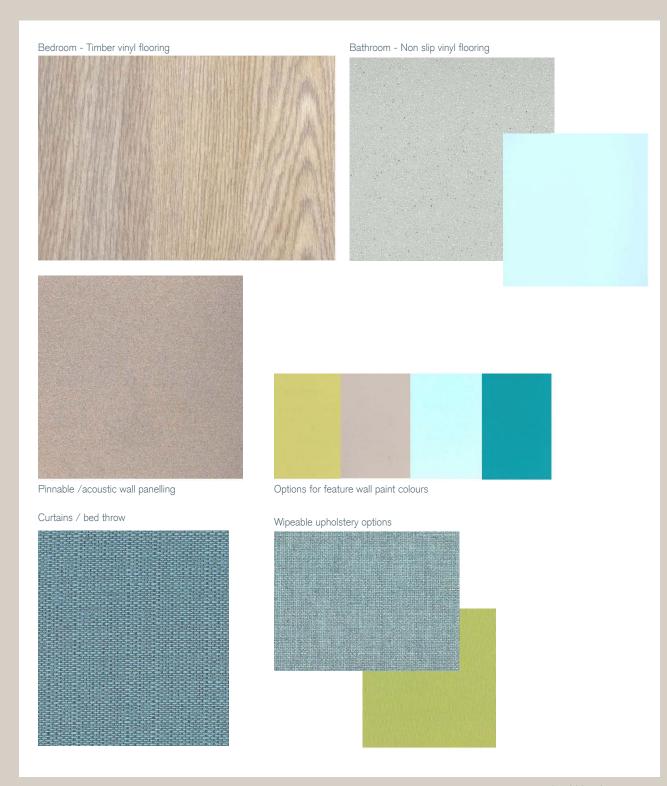
"HAI-Scribe" – Implementation Strategy Produced by Health Facilities Scotland in September (2007)

HBN 37 – In-patient facilities for older people (Archive) Published by the Department of Health and NHS Estates (2005)

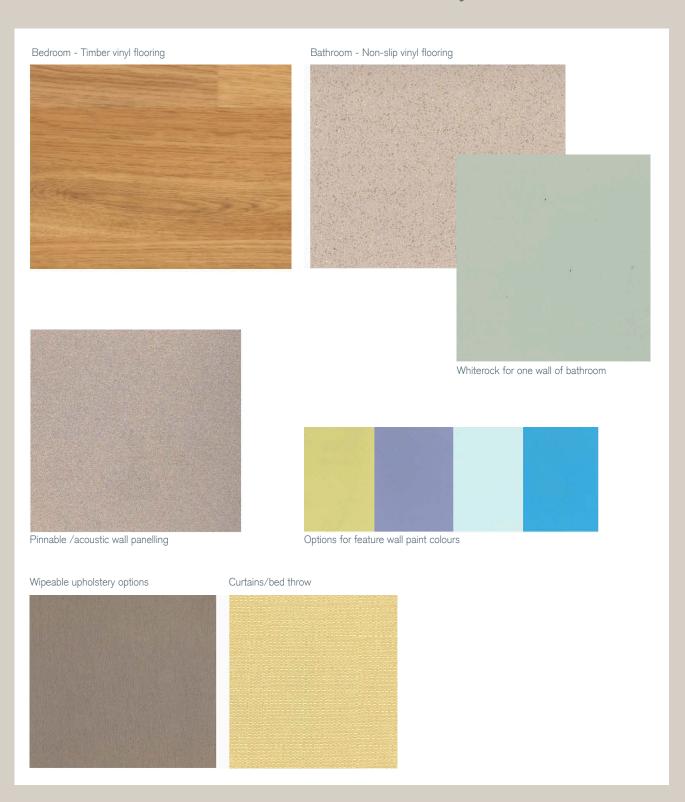
Scottish Health Planning note 35 - Accommodation and assessment of the short term care of those with mental illness Published on behalf of NHS Scotland Property & Environment Forum (2001)

Adult acute mental health units – Planning and design manual available on the Department of Health's Space for Health website at www.spaceforhealth. nhs.uk

Full colour and texture palettes for the example rooms
Forensic IPCU and Adult Acute admissions



Full colour and texture palettes for the example rooms Adult Rehabilitation and Elderly Acute



Full colour and texture palettes for the example rooms Young Person

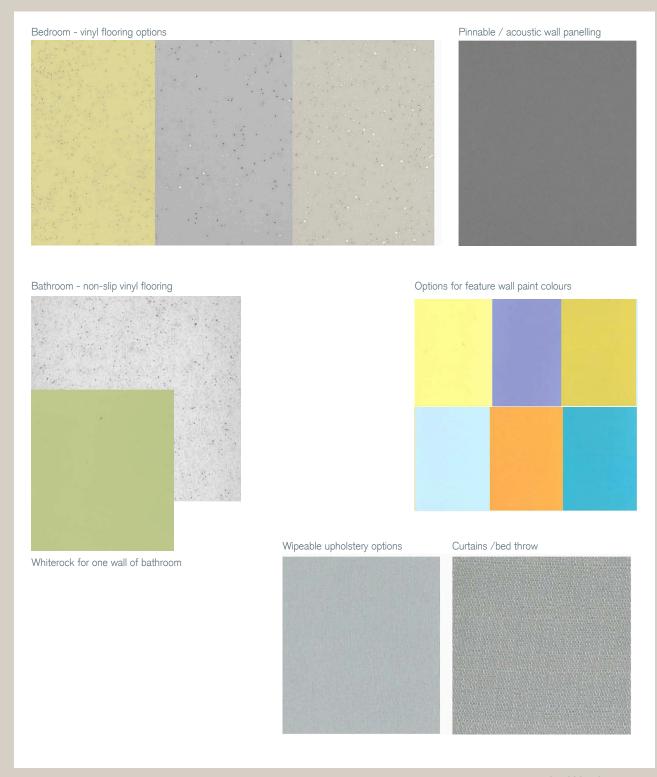


Image Credits

р1	1	Springfield Universiity Hospital (Tuke Manton Architects LLP and Medical Architecture, photographer Oliver Edwards photography)
p4-5	1	Stratheden Hospital, Elmveiw Ward, (Richard Murphy Architects)
	2	Wandsworth Recovery Centre (Medical Architecture, photography David Butler)
	3	Midpark Hospital (Archial)
	4	Glenside campus redevelopment, Adelaide (visualisation by Medical Architecture)
	5	Balhousise Care Group care home (haa design)
	6	Stracathro Hospital (Richard Murphy Architects)
	7	Wandsworth Recovery Centre (Medical Architecture)
	8	David Walker Gardens care home (haa design)
p 13	1	Midpark Hospital (Archial)
p 20	1	Roseberrry Park (Medical Architecture, photography Jill Tate)
	2	Stratheden Hospital, (Richard Murphy Architects)
	3	Glenside campus redevelopment, Adelaide (visualisation by Medical Architecture)
	4	Teenage Cancer Trust Unit at the Univeristy Hospital of Wales, Cardiff (ORMS)
	5	David Walker Gardens Care Home (haa design)
	6	The West Centre, Drumchapel Child and Family Centre (Anderson Bell Christie)
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