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Case Study: Woodland View Ayrshire Central Hospital



Introduction

Located within a mature woodland setting close to the coast at Irvine, Woodland View is a new build 206-bed healthcare facility for NHS North Ayrshire and Arran. This Acute Mental Health Community Hospital focuses on delivering adult mental health services, rehabilitation and long term condition provision for adults with physical health care needs stepping down from an acute hospital setting.

Inspired by its natural surroundings, Woodland View adopts a non-institutional and holistic design approach to provide a supportive environment of recovery, rehabilitation and re-enablement for adults and older people with an emphasis on encouraging social interaction and recreational opportunities.

Opened in May 2016, the broad spectrum of specialist services provided by the new building include: forensic and addiction rehabilitation services, elderly mental health, continuing care, and intensive psychiatric care.

Background

The creation of Woodland View followed a mental health strategy carried out in 2009 by NHS Ayrshire and Arran in response to the existing outdated, inadequate and institutionalised clinical provision spread across a number of hospital sites.

The new facility is an important part of the local authority's strategy to achieve its mission of delivering the healthiest life possible for the people of Ayrshire and Arran through its vision of services reconfiguration.

Stakeholder and Community Involvement

Stakeholder and community involvement in the area was initiated as far back as 2006 with the launch of 'Mind Your Health', a strategic review of mental health services in Ayrshire and Arran.

William Lauder, General Manager of Ayrshire Central Hospital describes the historical engagement that helped shape the eventual Mental Health Strategy for the area:

"'Mind Your Health' was a significant milestone for us in terms of really looking at mental health services across the community and patients. As the development got more advanced we made sure some of the senior charge nurses were part of the community presentations to talk in very real terms with patients and people that would be using services here. And this allowed us to build up really good connections."

Extensive consultation during this period lead to an agreement that a new facility at Ayrshire Central Hospital in Irvine would provide the best possible location for adult acute mental health inpatient services.

A pre-planning process was commenced by North Ayrshire Council and in order to raise awareness and invite feedback, a series of stakeholder meetings were held with the participation of the public, carers, and staff, with key findings incorporated into the subsequent procurement brief.

During the design development process a BIM (Building Information Modelling) 3D model produced by the design team was used to seek feedback from communities and stakeholders to shape the clinical brief.

"We approached Woodland View as a new start, a new model, new environment. We saw it as an agent for change. The emphasis all the way through was that the money should be spent on direct patient care and the service user experience. It wasn't about building nice offices or lots of meeting rooms. It was all about focusing on the inpatient care delivery."

Iain Fairley, Senior Project Manager - Capital Planning, NHS Ayrshire and Arran

Vision and Brief

Integral to the vision for Woodland View was the delivery of a contemporary building that would be welcoming, efficient and therapeutic; with an enduring quality that would outlive transient trends.

Iain Fairley describes how the clinical brief evolved: "We adopted a pragmatic approach. We had a tight and informed team led by healthcare planners who really helped pull together the clinical brief. We helped define the brief by building up an understanding of what 'a day in the life' entailed from all points of view - from a patient point of view but also from the staff, estates, soft services and facilities management points of view. So we looked at a detailed 'day in the life', how this centred around the service users' needs, and built up the whole picture."

Senior charge nurse and clinical teams described what their ideal service user provision would entail over the course of a day. This was translated into the clinical brief; considering all aspects of care and detailing a best practice 'wish list' of activities, space requirements and facilities.

The overall aim of the brief was to approach the model of care not simply as 'business as usual' but instead embrace the opportunity to come to a new site and do things differently rather than doing more of the same but in a nicer environment.



Top to bottom: Woodland View therapeutic garden space | Pre-construction site model | Workshops with key stakeholders.

Design

Site

Bordered by woodland, a largely flat site provided an opportunity to design the new hospital within the existing mature landscape, adding to the therapeutic value of the building. The new facility is located across from the existing main Horseshoe building and remaining pavilions on the Ayrshire Central Hospital site.

Building

The buildings form is largely a single storey narrow plan arranged around large courtyards with a double height entrance 'plaza' clearly visible as you enter the site. Intuitive wayfinding provides a view into the lobby and waiting areas with the reception clearly visible to visitors. All accommodation, other than the central entrance 'plaza' is arranged over one level.

IBI Group Architect Wendy de Silva describes the overall design strategy:

"Our immediate task was 'how do we make something potentially huge and institutional - that would historically be a two-storey building - into something that felt homely? Our first decision was to connect everything to the ground, and give everybody access to external space, and make the building as small in scale as possible. But we also needed people to be able to find it, and find their way to it. So we put everything on one storey, apart from a central entrance area that everyone could see from a distance."

Landscaping

The outdoor spaces, including a series of courtyards around which the main wards are set, are designed to promote health giving exercise opportunities as well as rehabilitation and recovery. Large sheltering canopies encourage people to step out into the open air. Surrounding the building are a number of spaces designed for supervised patients, visitors and staff to share, including the outdoor café, plaza area and a woodland trail.



Top to bottom: Woodland View corridors arranged around courtyards | Art strategy integrated into the hospital environment | Woodland View visitor areas.

"Mental health accommodation across the former hospital sites all had serious shortcomings, particularly in their lack of access to safe outdoor spaces. This necessitated staff having to escort patients, often leading to frequent frustration points. The final design was very close to what we described in our design brief, for all single bedroom accommodation on the ground floor."

William Lauder, General Manager Ayrshire Central Hospital, Senior Manager Inpatient (Mental Health) and Forensic Services, Ayrshire Central Hospital

Maximising Daylight

The ward design maximises natural daylight by utilising predominantly single sided corridors grouped around an external courtyard that allows for a high level of passive natural observation. Each bedroom has access to natural light and views. Carefully placed rooflights and glazing make the large social spaces attractive and inviting.

Creating a therapeutic environment

A safe therapeutic environment has been created throughout the whole building by means of clear sightlines achieved by significant areas of glazing and the convenient location of staff bases and duty rooms with views across social spaces and courtyards.

The location of the staff bases at the entrance to each ward also allows staff to easily monitor arrivals and deal with visitors and patients discreetly, in contrast to the traditional hospital arrangement where staff bases were located at the middle of the wards thereby exposing patients to visitor traffic.

Privacy

Delineated flooring at the entrance to bedrooms for mental health patients helps set boundaries by clearly marking an area within the room that staff will not go beyond, unless in urgent situations. This approach protects the patient's personal space and is used effectively in other countries but not yet widely adopted in the UK.



The plaza's height maximises daylight and the lighting of social spaces creates inviting spaces for patients and staff.

‘It’s not just a question of buying things off the shelf, it was very much co-designed with the people that were using it.’

Wendy de Silva, Architect, IBI Group

Flexibility

Built-in flexibility addresses the possibility of future changes in models of care delivery and demand.

- Gender flexibility is designed into the wards to allow the separation and to maintain privacy and dignity. Additionally the majority of wards have been designed to ‘swing’ bedrooms from one ward to another.
- Flexibility of accommodation has been built into the larger bedrooms, with the option to accommodate a hospital bed next to the anti-ligature fixed bed without the need to remove it.
- Woodland View has also allowed for the provision of Low Secure and open rehabilitation forensic provision.

Latest Dementia Design in Practice

One of Woodland View’s key roles is its provision of functional services and a therapeutic environment for elderly mental health, specifically dementia care. Its design draws upon and incorporates recent best practice guidance from Stirling University’s *Dementia Services Development Centre* on meeting dementia patient needs and includes:

- Corridors which lead to seating areas and not dead ends so that a journey has a purpose.
- Walls at seating areas have been designed to hold familiar objects or artwork in memory boxes.
- ‘Wander loops’ are provided within the building which also extend in gardens, to allow safe yet stimulating walks.
- Garden planters which offer opportunities for horticultural therapy.
- Bedrooms designed with space to lay out clothes within the wardrobe. (A vision panel to the wardrobe door allows patients to see their clothes for the next day).
- En-suites planned so that the WC can be seen from the bed, creating a clear destination for the patient.
- Dining areas next to pantry areas for cooking smells to permeate the space to help with appetite.
- Toilet doors in a bright primary colour to make them clear and recognisable.
- Bedroom doors personalised with innovative signage and colour.

Interior Design

The local area and landscape provided inspiration for an intuitive wayfinding system developed using colour and symbols to create a cohesive strategy.

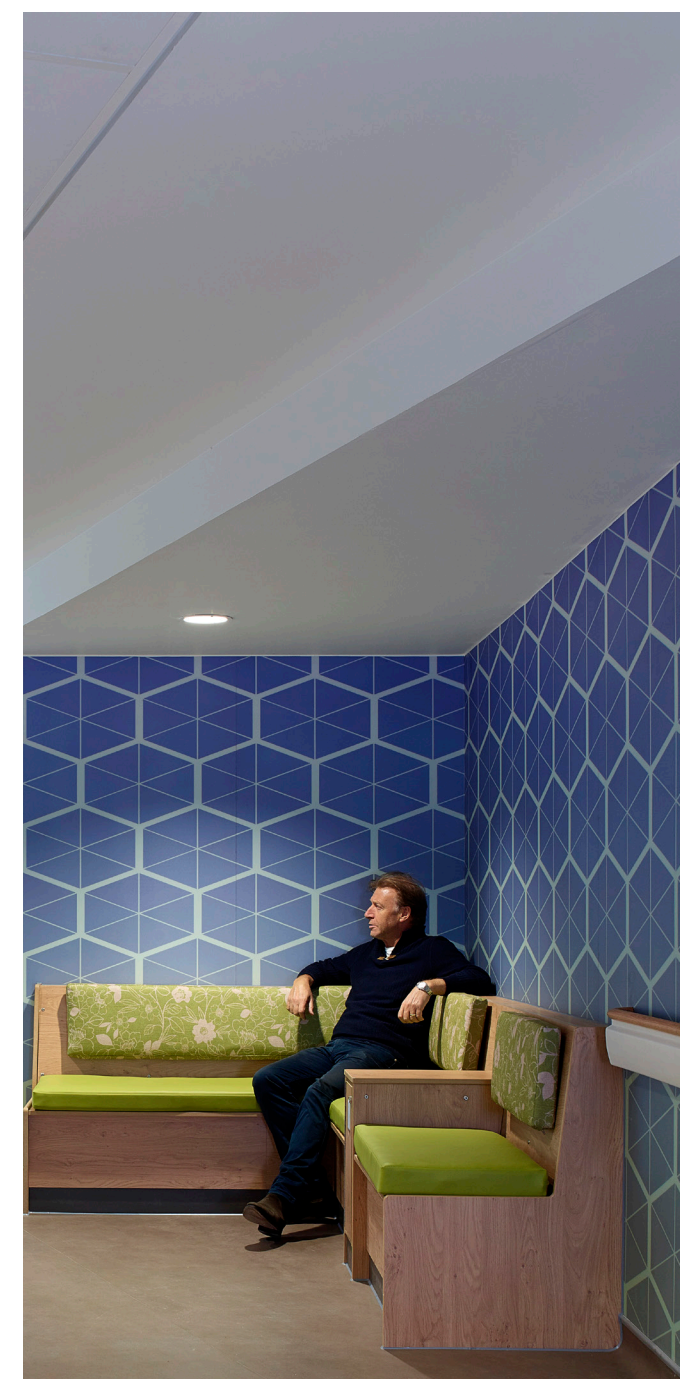
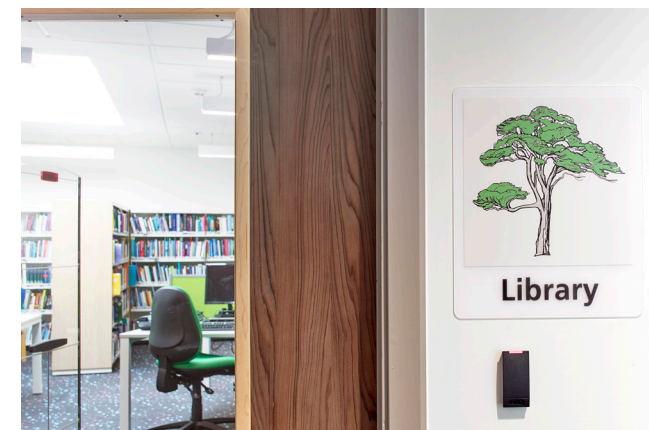
Architect Wendy de Silva of IBI Group describes this approach:

“We have a research branch and they collect a lot of evidence about how people feel in different places, and develop ‘emotional mapping’ based on criteria such as which colours are good for certain situations. For this particular project, we’ve used local plants, and various leaves and flower patterns. The chosen colours and symbols feature throughout the building and in the bespoke furniture, developed by our interior designers. A huge amount of effort went into getting it to look the way it did. It’s not just a question of buying things off the shelf, it was very much co-designed with the people that were using it.”

Art Strategy

An essential requirement of the brief was the integration of art and design within the architecture and landscape to enhance the hospital environment. A strategy was developed by artists Donald Urquhart and Will Levi Marshall which would support the patient pathway and benefit residents, visitors, families, carers and staff alike.

Consultation sessions were held with service users with local artists engaged to create pieces of work which feature throughout the building and surrounding landscape. Photography including historic images of local landmarks and the local landscape has been used extensively in the dementia wards to help stimulate memories.



Top left to bottom right: Careful lighting strategy | Woodland View library | Historic images of local settings have been used in adult dementia wards to help stimulate memories | Corridor seating areas create an inviting environment.

Construction

The domestic scale of the building is reflected in the main timber frame structure, which also facilitated a relatively short construction programme.

The single storey narrow plan with pitched roofs breaks up the mass of the building, allowing it to sit harmoniously within the woodland setting.

Materials

Materials selected were graded in terms of environmental cost and impact on the embodied energy and lifespan of the building. The external finishes were chosen to compliment the surrounding architecture; such as the brick tones of the Horseshoe building and white rendered walls, creating cohesion with the original Art Deco buildings.

The entrance features large metal cladding panels in bronze and silver grey, highlighting the key architectural features of the stairs, entrance and cafe. Horizontal feature metal cladding bands in warm red and orange were designed to provide shelter from the south-westerly prevailing winds at the main entrance drop-off as well as signaling the entrance.

Large metal cladding panels in a variety of colours highlight the individual departments from the outside. The rendered parapet walls help maintain a level of security within the courtyards and these also feature aluminium anti-climb rainwater pipes.

The majority of the roofs were designed as single pitched metal standing seam (Kalzip) with varying pitches to create distinctive blocks.

Sustainability

Certified as a BREEAM Very Good rating, Woodland View was designed to provide a high quality environment for patients and staff whilst minimising utility costs and carbon emissions. High levels of day lighting and natural ventilation help make the space feel light, airy and healthy; with natural daylighting assisting the treatment of patients with dementia through vitamin D absorption.

Large areas of glazing are provided to bedrooms, day spaces and many of the corridors, allowing almost all internal spaces to receive controlled direct sunlight. Solar control glass features on facades exposed to direct sun light to reduce undesirable solar gain and minimise solar glare whilst maintaining good daylight levels.

The low-rise design makes extensive use of natural ventilation reducing the requirement for supplementary mechanical ventilation where function permits. Ward bedrooms are also naturally ventilated taking advantage of large openable windows whilst remaining safe and secure.



Materials selected were graded in terms of environmental cost and impact on the embodied energy and lifespan of the building.

Post Occupancy Evaluation

As part of the Business Case for capital investment to build Woodland View, the project was reviewed at key stages by the Scottish Government in the form of 'Gateway Reviews', including a Post Occupancy Evaluation in 2017 after one year of opening.

The key assessment findings took the overall view that the new facility has continued to meet and in most cases, exceed, all anticipated benefits as evidenced in a number of outcomes including a reduction of: complaints, absconsion, significant clinical incidents, rates of physical violence, and the occurrence and duration of enhanced observations. Critically no patients have had to be accommodated in another NHS Health Board due to lack of bed availability.

Other key findings include:

- 40% rise in attendance to AA meetings held in the tribunal accommodation (this is attributed to the improved therapeutic environment).
- Brambles Café within the main entrance plaza is attracting members of the public as well as patients and visitors from Douglas Grant and Redburn rehabilitation wards situated on the ACH site to use the facilities (and free WIFI) creating a vibrant hub, and breaking down the stigma associated with mental health issues.
- Increased levels of health and wellbeing activities are being offered in the Support Clusters, such as gym classes and physiotherapies.
- Proven flexibility in allowing for beds to be swung between wards to adjust bed numbers, an invaluable operational tool.

In terms of clinical care, the design of Woodland View with its smaller, more manageable ward environments has allowed a reduction in levels and duration of therapeutic enhanced observations, leading to a reduction in additional staffing.

William Lauder explains: "Overall we have had very good feedback from services users and families. There has also been a very, very substantial change to the cost of our service delivery, as a clinical delivery facility. Previously we typically used an additional 38 Whole Time Equivalent (WTE) staff over funded establishment, with associated costs totaling hundreds of thousands of pounds. After moving to Woodland View this additional requirement reduced to 16 WTE staff for which we successfully secured recurring funding for."



Top to bottom: The therapeutic environment has included improved access to health and wellbeing activities | Woodland View staff room.



Brambles Café is attracting members of the public as well as patients and visitors, creating a vibrant hub and breaking down the stigma associated with mental health issues.

Conclusion

Woodland View is being seen as an exemplar building in terms of its design, planned as it is around patient and staff wellbeing, creating a safe, spacious and sustainable environment that supports the patient’s journey to recovery and paving the way for their transition home and into the community.

By putting into practice the central tenets of the clinical brief, namely maximising natural light, promoting a high level of observation inside and out, and offering flexible wards that maintain privacy and dignity, the new building creates a therapeutic and healing environment that not only patients but visitors, staff and the local community can enjoy.

Images courtesy of:
IBI Group
NHS East Ayrshire Health & Social Care Partnership

“The difference between Woodland View and the previous facilities is night and day. The outside space and the gardens are fabulous for patients and staff. The previous wards I worked on had grounds that weren’t really very good for people with mental health problems, and there were often heightened anxieties. Whereas here, the indoor as well as the outdoor spaces are much more relaxing for patients and staff. It really is a lot nicer for everyone.”

Alison Gordon, Senior Charge Nurse, Ayrshire Central Hospital



Woodland View greenspaces support the patients journey and create a healing environment.

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