

# DESIGNING FOR AUTISM

Mitford, Adult Autism  
Unit, Morpeth

Design in Mental Health  
Conference 2017



# INTRODUCTION

Mitford is the first building in the UK specifically designed for adult in-patients with severe autism, including complex Learning disability and mental health needs

It is a pioneering project requiring sector-leading, client and staff driven design standards.

The NHS Trust recognised the correlation between the environment and positive outcomes for people with autism.

The needs of the service

Building a Brief

Key Design Drivers

Testing and Design Development

The Building

Early outcomes



Early concept sketch

# NEEDS OF THE SERVICE

## A national Autism Inpatient Service

For bespoke assessment and treatment of adults on the autism spectrum with extremely complex needs and display extremely challenging behaviours.

Time limited assessment and treatment model.

18 month clinical pathway

The timescales ensure that momentum to return individuals to their home community is not lost and that lengthy hospital stays are avoided.

Planning for discharge is prior to admission

Admissions from range of sources typically Medium and high Secure. However this is not a secure service. Importance on relational security rather than environmental.



# NEEDS OF THE SERVICE

## Key Objectives:

- Improves the quality of clinical care in line with National standards
- Reflects the national agenda and the Winterbourne and Bubb report principles
- Incorporates best practice and becomes a leading edge national autism service
- Addresses current service gaps and current service provision problems for autism inpatient services
- Enhances the facilities for research and development to provide a national centre of excellence
- Incorporates the needs of service users and carers – through advocacy
- Sustainable commercial model to ensure capital costs of the building are recovered over 8 years





# BRIEF BUILDING

Developed the service model and business case over 5 years, in response to Commissioners' demands.

Size of the building changed from a 14 bed unit, to 10, to 8 and eventually establishing itself as a 15 bed unit.

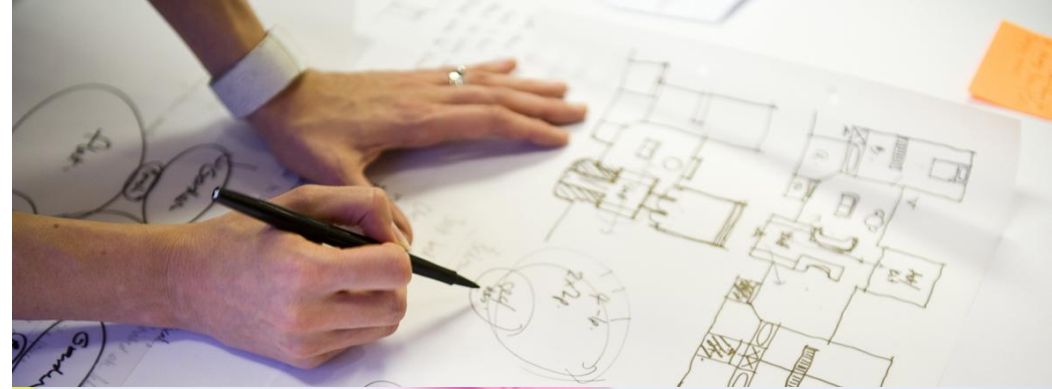
Added complexity – 1<sup>st</sup> building in UK

Knowledge gained from

- visiting other Autistic residential buildings,
- National Autistic Society
- first hand clinicians' knowledge and knowledge from previous Trust projects including Estates maintenance

Numerous stakeholder meetings took place including a 'Perfect Day' workshop.

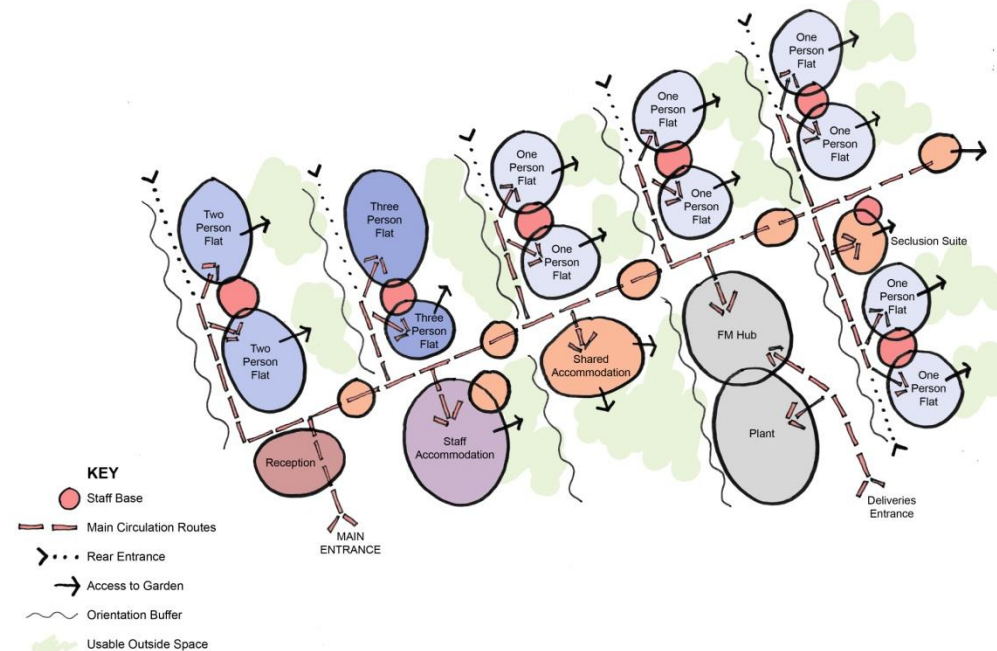
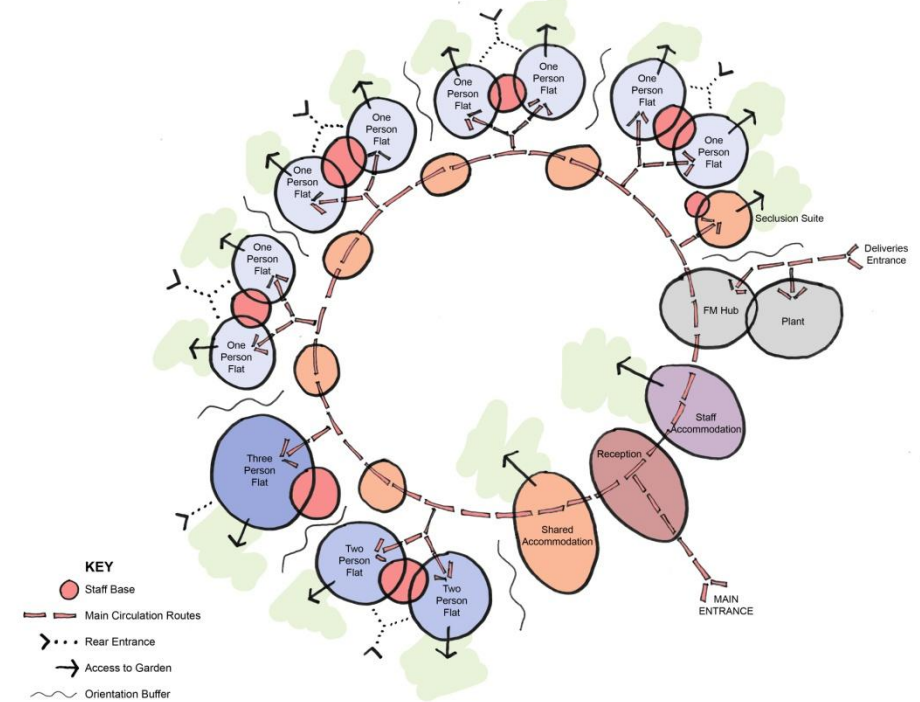
**“If you were to work the perfect day in the perfect environment, how would that feel, what activities would you provide, what would you need?”**



# BRIEF BUILDING

15 bed inpatient unit providing:

- 8 x 1 person flats (most complex and challenging service-users)
- 2 x 2 person flats
- 1 x 3 person flat (service-users are more able to socialise and are preparing to leave the unit)
- Shared activity spaces – internal and external



# KEY DESIGN DRIVERS

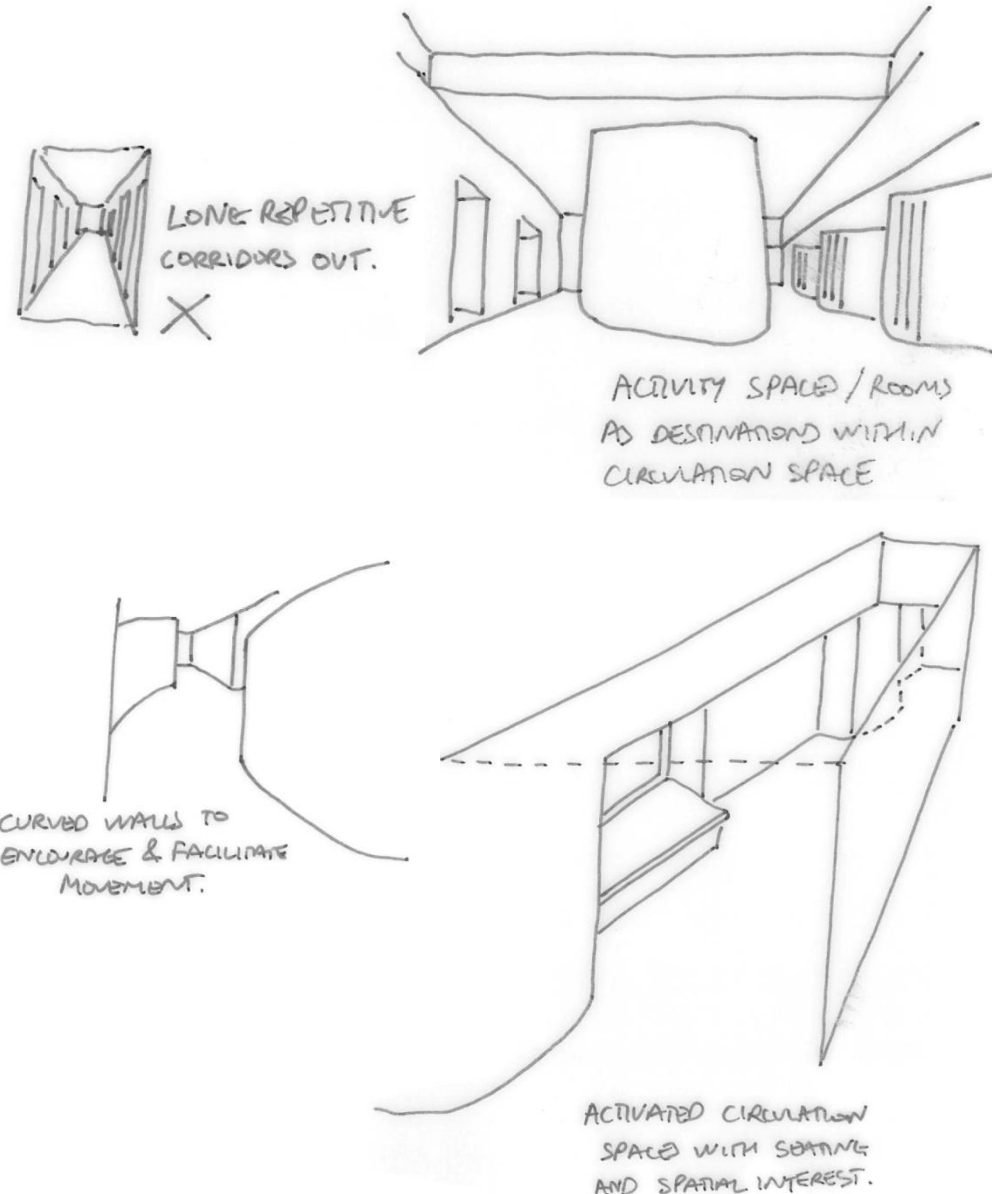
From the various stakeholder workshops and research undertaken, the following key design drivers emerged that formed the foundation for the brief and design:

## Active Circulation Space

Corridors should be multi-functional, acting as active circulation spaces with areas for rest or informal activity.

Break up length of the circulation area visually to prevent anxiety in the service-user.

Curving walls where possible – to make them appear 'softer' and to encourage flow.



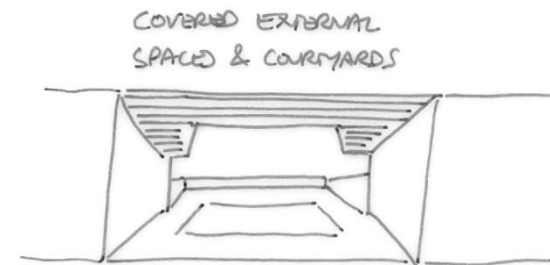
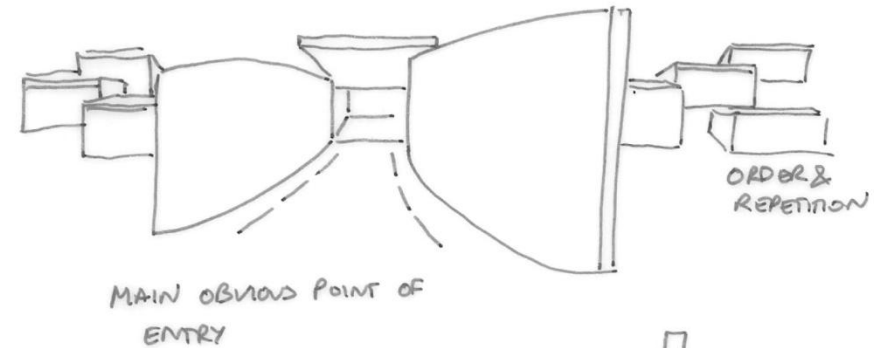
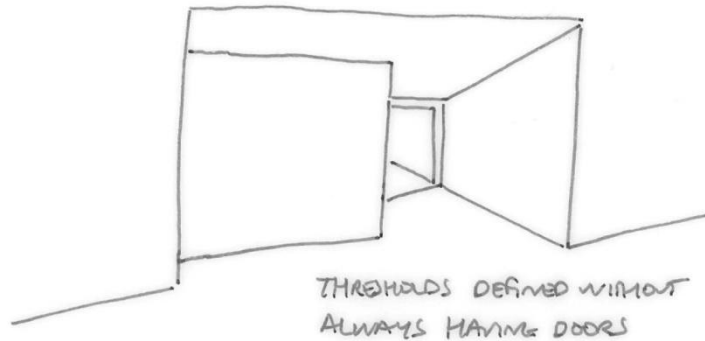
## Demarcation of Space

Thresholds are needed to demarcate space without the need for a great number of doors.

Differentiation and identification markers will assist users with orientation, whether this is through use of colour or material.

Different ceiling levels will also subtly change the feel of the space.

The transition space from inside to outside needs to be well designed and gradual. For a service-user that has difficulty engaging with outside space; a well positioned window or window seat may be enough.





## Orientation and Natural Light

Orientating each flat and key rooms in the same direction (north east) minimises overheating and glare, both of which will cause problems for the patient group.

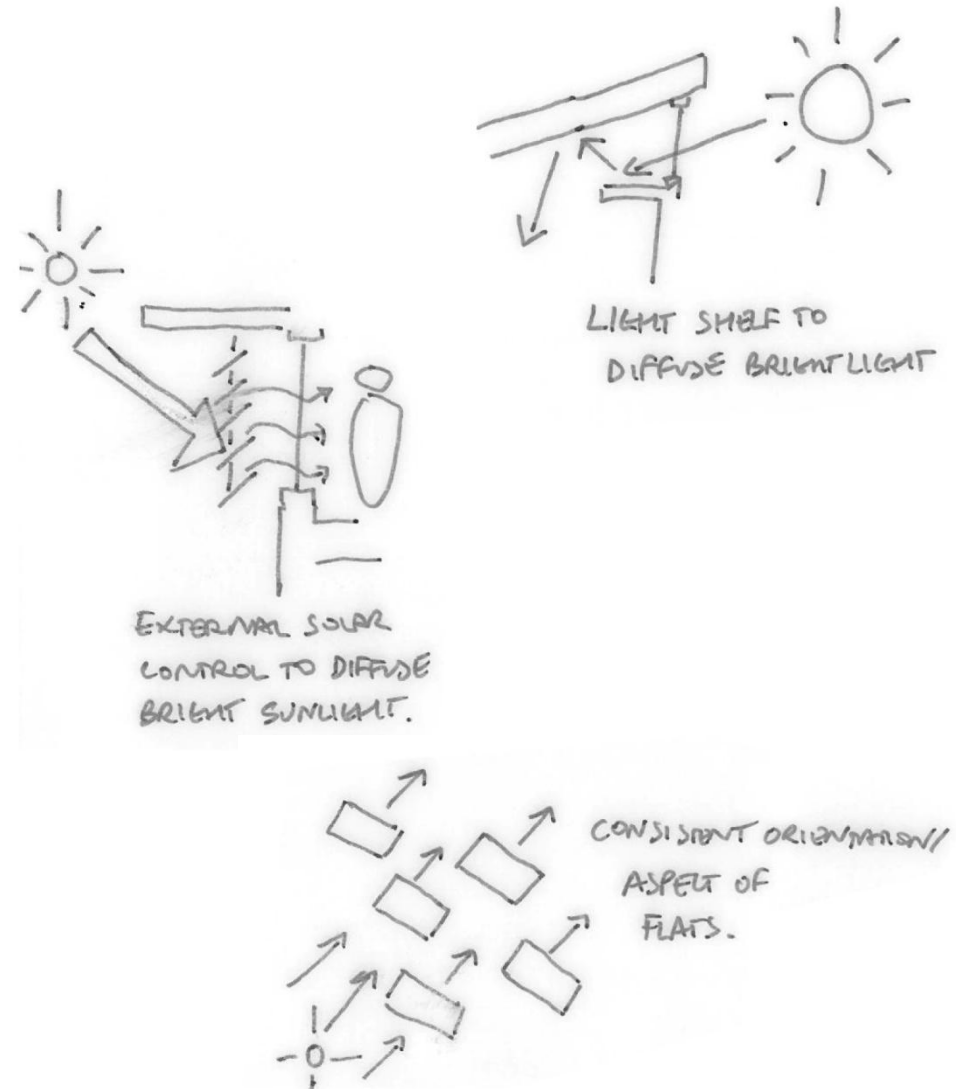
Fluctuation in light and temperature is to be avoided.

Key spaces face East away from the main routes through the hospital estate, increasing privacy.

High level windows maximise daylight, whilst minimising glare, adding a sense of lightness and space within the building.

Small picture windows will provide direct, framed views into the immediate or distant landscape.

Large paned windows can cause too much stimulus and feedback and are to be avoided.





**Threshold:** A place to retreat - Nursery School, Berlin, Volker Staab



**Natural Light:** Maggie's Centre, Glasgow, OMA



**Natural Light:** Shelter - Highcroft Hospital, Canopy to courtyard, Medical Architecture



**Landscape:** RHS Hampton Court Flower Show, Autism Garden Nick Buss and Clare Olof



**Natural Light:** Sunfield School, bedroom, GA Architects



**Active Circulation Space:** Robin House Children's Hospice, Balloch, Scotland, Gareth Hoskins Architects



**Landscape:** Hammersmith Maggie's Centre, Dan Pearson

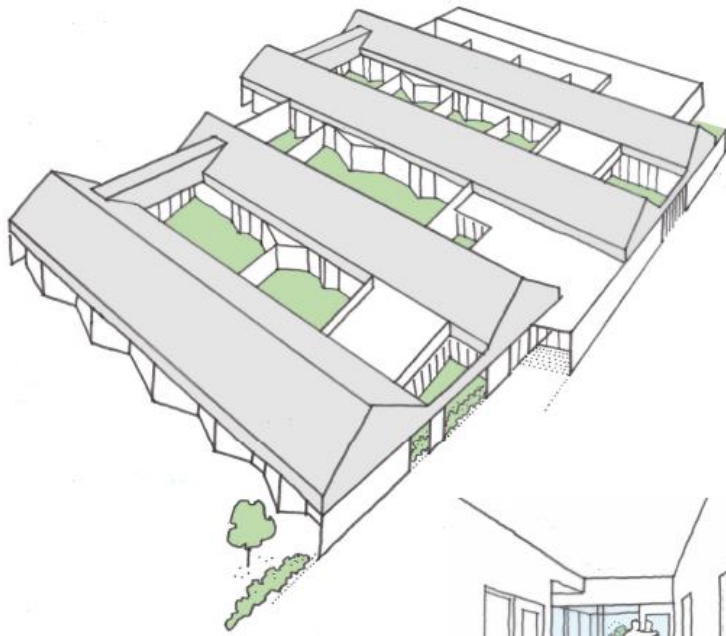


**Aspect:** Accordia, Cambridge, Feilden Clegg Bradley Studios



**Natural Light:** Hazlewood School, Murray Dunlop Architects

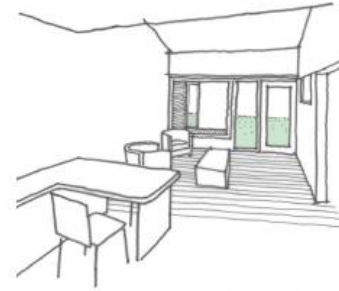
# DESIGN DEVELOPMENT



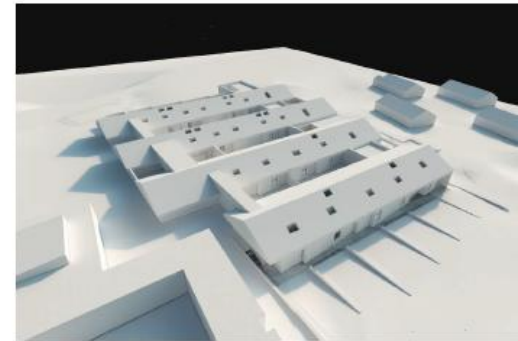
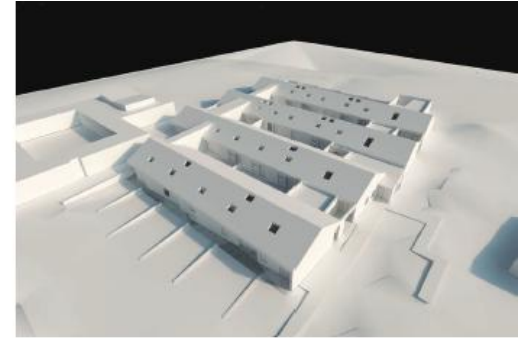
1. Aerial perspective of concept design



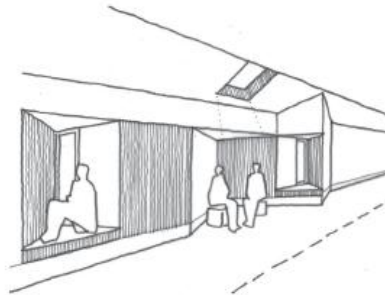
3. View down corridor at the bottom of 'Finger 3' looking towards activity space



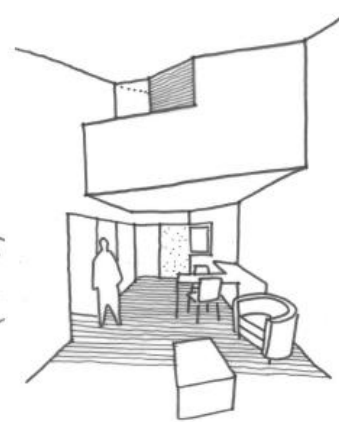
5. View through flat living space to garden beyond



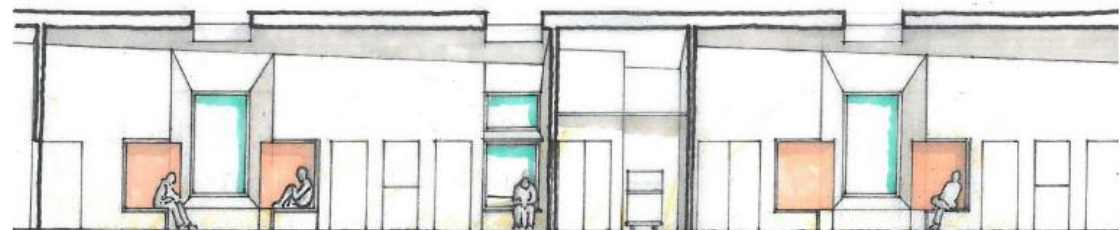
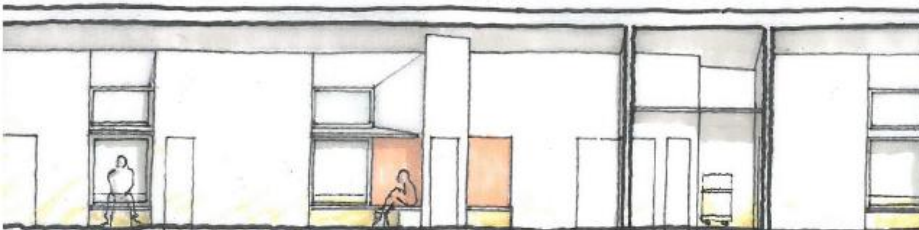
2. View from controlled lobby through to view of garden beyond



4. Concept design of corridor space outside of flats



6. View from flat living space to door entry point





Ingram (Villa 11)

- |   |           |   |            |
|---|-----------|---|------------|
|  | Flats     |  | Support    |
|  | Garden    |  | Activity   |
|  | Seduction |  | FM / Plant |
|  | Staff     |   |            |





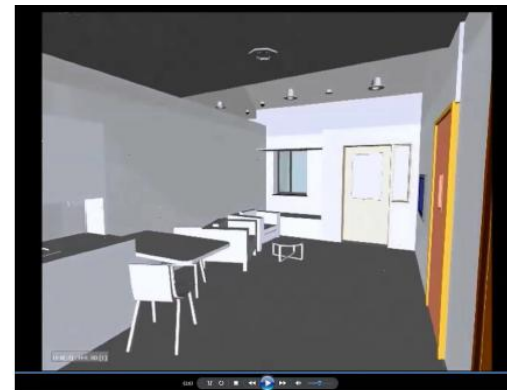




# TESTING THE DESIGN



A significant element of the project was the patient flat and it was incredibly important to get the design right. NTW invested in building a 1:1 mock-up. The mock-up started with simple spaces and became more and more refined, testing joinery and other detailed elements.



A bed design was developed that allowed it to be fixed to the floor in 2 different positions. Different wall build-ups were tested for their acoustic and robustness properties - reverberation and impact noise were key elements. A walkthrough model was uploaded to the NTW intranet site so staff could see how the building would look. When the building was handed over there was 3 days of Live-Ins, allowing the Trust's Clinical and Capital Projects teams, architects and governors to comprehensively test the building before patients were transferred. A valuable experience which picked up a few small teething problems.





# THE BUILDING



The architecture has developed from the inside out due to the very specific needs of the patients. Due to the variety of different spaces in the floor plan and different alignment of walls the simple roof geometry has been used to provide a 'lid' to all of that complexity. Nothing is too fussy which might provide too much patient stimulation.



Active circulation space: These spaces are very important - providing spaces for rest and informal activity. The spaces are broken up with areas for seating, artwork and a variety of differently shaped volumes. Corners of walls are curved to make transitions softer, encourage 'flow' and reduce anxiety. Colour palettes are restrained.



The 'fingers' of accommodation are linked at their southern end by a band of shared spaces, interspersed with staff facilities. This front-of-house accommodation is organised to carefully protect the privacy of the patients, and allow the staff to work efficiently with minimal journeys around the facility. The main circulation space allows fluid transitions between rooms and spaces; areas bleed into each other to increase flexibility of use.

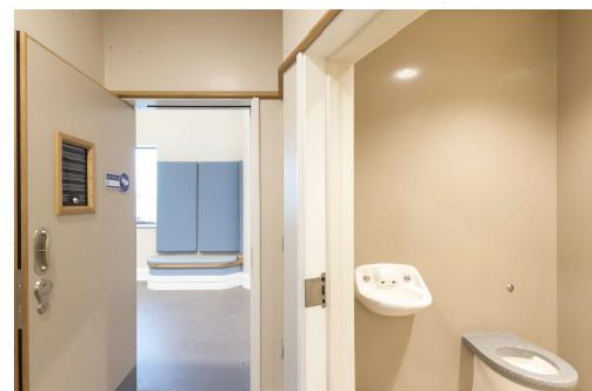


Circulation space beside bedroom areas: There is a window seat opposite each bedroom entrance. This provides a safe threshold for the patient on movement from one area of the building to another. It also provides an area of activity and engagement without the patient getting anxious about going to the shared activity spaces.





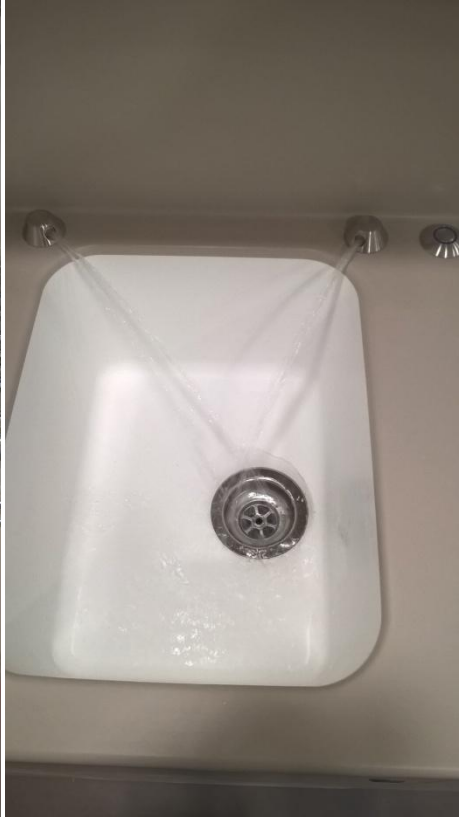
All the flats are oriented to the east for a comfortable internal environment, with direct access to the private gardens to support the therapeutic needs of individuals. High-level windows are widely used to ensure sufficient daylighting while maintaining privacy. There is a clear visual route from the window seats - threshold to threshold.



Attention to detail is incredibly important. The apparent volume of the spaces is visually reduced with a door height 'picture rail'. This provides domestic proportions to the rooms while also allowing cupboards and doors to lock away so they become less of a target for the patients' attentions. TVs and wardrobes can be taken out of view by locking doors back in place to remove the stimulation.



# OTHER AREAS OF DETAIL



# EARLY OUTCOMES

***“There's one patient who used to live permanently in voluntary isolation and crawled everywhere. Within a week of moving in to Mitford he was walking around and having a coffee with staff in one of the offices.”***

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***4 patients have had the locks changed on their flat entrance doors to allow them to control their own access – this is a very positive step forward in their treatment.***  
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***“The entire design of Mitford has been centred around people with autism, with low-stimulus environments and very specific features to help reduce anxiety for the people we support. This new building will provide one of the most tailored environments in the country for adults with an autism spectrum disorder.***

***Happiness is.....getting everything you asked for. I never thought it would be so good. The building has been tested and it stood up to it all.”*** – Pamela McIntyre, Ward Manager, Mitford

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***“The individual needs of the patient have clearly been at the centre of the design thinking.”*** – visitor

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***“A real example of the powerful and positive impact of the environment!”*** - visitor

# THANK YOU - ANY QUESTIONS?

Total project cost £10.6m, GIFA:1,998m<sup>2</sup>

