

Migdale Hospital

A Case Study



Migdale Hospital



^ Front elevation of Migdale hospital, overlooking the Kyle of Sutherland
Image credit: John Paul Photography

Overview

The replacement of the Migdale Hospital in Bonar Bridge is a good example of a rural community hospital and sets a helpful precedent for community facilities in remote locations.

The product of 15 years work, the project involved considerable consultation with community groups, local councillors, staff, patients, and patient representatives before being constructed and completed in June 2011. The new facility replaces an older hospital building, originally designed as a Victorian 'Poorhouse' to support and provide housing for the dependent or needy. A decision was made to sell the original hospital which had become unfit for purpose. This was in part due to restrictions caused by the narrow corridors, 4 and 5 bed wards, inadequate sanitary facilities and split-level accommodation, all of which affected the use by long-stay elderly patients. Retention would require a total refurbishment which was deemed unviable. It was considered that a new hospital could more easily provide better integrated care and single-bed rooms, in line with Scottish Government Health and Social Care Directorate (SGHSCD) policy.

The new Migdale hospital is a 22-bed community health unit serving the north and west areas of NHS Highland. The hospital has two wards: an Older Adult Mental Health Assessment Unit (Strathy) and a GP Acute Unit (Kyelsku). A number of outpatient services are also provided including Physiotherapy, Occupational Therapy, Audiology, Rehabilitation Classes, and Memory Clinics.

Built on a steeply sloping site in Bonar Bridge, the hospital lies close to the main travel routes between Inverness and the North and West of Scotland. A number of sites were considered by the project team. Two in Bonar Bridge and one in Lairg were shortlisted but the preferred site was chosen based on its proximity to the local health centre, good travel links to routes through Sutherland and the fantastic views over the Kyle of Sutherland and the Dornoch Firth. The chosen site itself was made up from two separate parcels of land: one owned by the local council and the other by a neighbouring resident. Funding was not in place when the latter parcel of land was being offered for sale but happily the local authority stepped in and purchased the land until the funding was in place, allowing transfer from the council for the same price.

The facility serves a low density, widely spread out population and its geographic placement has meant that more patients can be transferred up from the Raigmore, in Inverness, to Sutherland.

"That was something we'd always hoped would happen, that patients would be discharged earlier from Raigmore, and get closer to home."

John Bogle, Head of Capital Planning, NHS Highlands

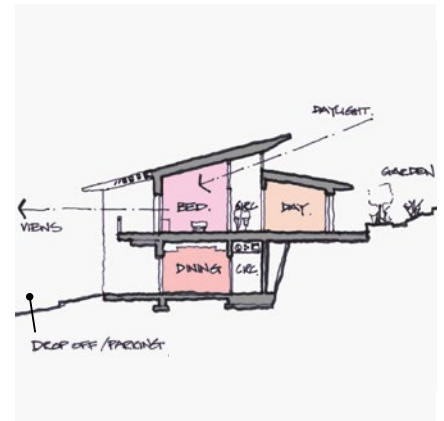
The building form is very strong and linear, running the length of the site. The design team (Austin-Smith:Lord) have made the most out of the tricky site, by organising staff and outpatient accommodation on the lower level. The inpatient wards are located on the upper floor, which is at ground level to the north, to make best use of the topography, natural ventilation and daylight. Lounge spaces face north with access to a rear secluded garden space that

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benefits from a good amount of sun due to the carefully pitched roof profile. Bedrooms all face south taking advantage of the spectacular views.

As was the case with a number of capital projects being built around the same time, the procurement route changed during the course of the project and became part of the newly formed Frameworks Scotland. Prior to this the project was expected to be procured traditionally and the Design Team were preparing the project for tender stage. As the project had not yet achieved financial close, NHS Highland felt that it was more appropriate to adopt this new procurement vehicle. The resultant change brought with it a significant delay to the start on site when the Principle Supply Chain Partner (PSCP) was brought on board, partly through the time required to transfer the contract but also through learning the new procurement method. Given the general fast pace nature of most building projects, this pause allowed the project team a period of reflection on the proposals and an opportunity to review the information gathered to date ensuring that the best outcome could be achieved.

When considering the sustainability criteria the Design Team placed an emphasis on low-tec approaches such as: sourcing of local materials, maximising natural ventilation and daylight, and ensuring a well insulated building fabric. At the beginning of the design process there were considerations of renewable technologies with micro wind generation and photovoltaic panels suggested for the generation of electricity and a wood pellet fired biomass boiler would provide the heat source; although cost restrictions on the project meant that only the biomass boiler was installed. After completion however, the roof space was leased using the feed in tariff, providing additional revenue for the facility. Although this is valuable revenue for the board it brings with it a number of difficulties particularly as it occupies large areas of valuable space within the ward stores.



Section illustrating design intentions
Image credit: Austin-Smith:Lord



Rear elevation of Migdale Hospital
Image credit: John Paul Photography



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^ Caithness stone and Scottlarch cladding at the entrance of the hospital
Image credit: John Paul Photography

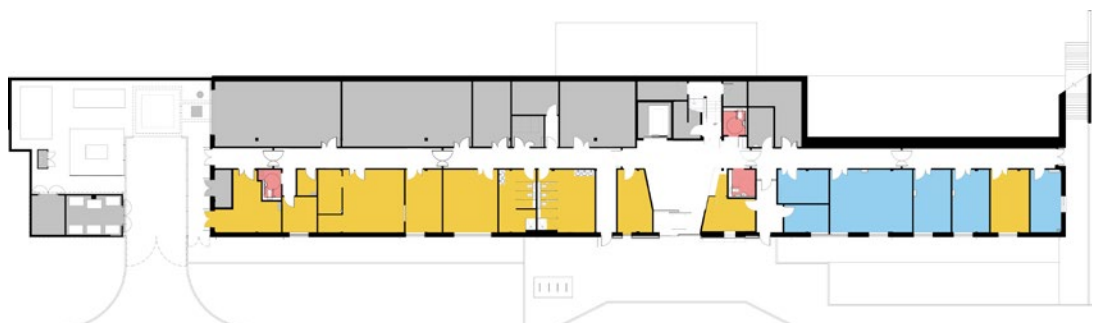
Experience

From the southern approach into Bonar Bridge, the new community hospital is visible, perched on the hill ahead. The building sits close to the heart of the village, set within a series of smaller blocks more residential in scale and nature. The most prominent feature of the new facility, visible when approaching, is the strong linear roof profile and array of solar panels, the latter of which was installed post-completion. An early design proposal had proposed the installation of a planted roof, which would have softened the building's visual impact in its setting. The final design instead has a concrete tile roof which could visually blend into the village; however, the subsequent installation of the photovoltaic array now detracts from the building's otherwise well-considered design in the landscape.

The main entrance is centrally located on the ground floor and is clearly legible; a simple full height glazed opening surrounded by Caithness stone and timber gives both a feeling of quality and reassurance as well as being appropriate to the rural setting. The reception area is a generous space with an adjoining waiting area that feels welcoming; however, with the draught lobby doors being 'in-line' rather than a 'chicane' the entrance quite often suffers from draughts. The entrance space may also have benefitted from a glazed screen into the stair well. This would borrow light from the well-lit upper level, creating a more welcoming entrance in the reception space and aid wayfinding by directing access to the wards above.

> First floor plan
✓ Ground floor plan
Image credit: Austin-Smith:Lord

- Bedroom
- Swing bed
- Social space
- Staff
- Outpatient
- Toilets
- Public circulation
- Storage



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The building form is simple and straightforward and works well with the operational aspects of the facility. The stepped section has single aspect to the ground floor and dual aspect on the upper floor. The lower floor of the building is cut into the slope and houses the outpatient functions, staff and community accommodation and the mortuary. Ancillary accommodation such as plant, changing rooms etc. are cut into the hillside where natural light is not as essential

Early in the consultation and briefing process it was indicated that there was a need for a kitchen facility that could offer residents a range of meals choices and avoid the need to outsource this service. An additional benefit of this is that, with limited extra cost, a canteen has been provided for staff, giving a place away from the ward to relax and take time out. This has proved to be particularly beneficial for staff given the 24/7 nature and location of the facility.

On the upper floor, a major success of the project is the light and airy spine corridor that forms the heart of inpatient areas; providing residents with additional space for wandering, chance social interaction and quiet moments of reflection. The double height volume, punctured with clerestory windows within a stepped roof profile, creates a dynamic space and provides a buffer between lounge and bedroom spaces. The changing nature of the daylight in this space throughout the day provides both variety and a meaningful connection with time and nature.

Bedrooms are accessed off this space. 2 face north with access to the external courtyards and 20 face south, benefitting from spectacular, uninterrupted views over the Kyle of Sutherland through full height windows. However, as some patient groups in the Strathy ward are at a risk of exposing themselves (visible from the approach and nearby houses) the decision was made to frost the lower section of glazing within these bedrooms. The resultant effect is that residents within these rooms do not have a clear view out when sitting down or lying.

Day facilities are located to the north side of the corridor offering contemplative spaces for residents each with access out to a private garden space, complete with shelter and vegetable growing areas.



A typical single-bed room
Image credit: John Paul Photography



Views from the bedroom, with lower panel frosted for patient privacy



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^ Stairwell with entrance into the wards
Image credit: John Paul Photography

Reaction

The general reaction to the new facility, both locally and in the wider Highland area, is that it has been well received. The decision to locate the facility in Bonar Bridge has been beneficial as the links to the local GP practice, day care facilities and local trades & services means that the facility is well served by the community. The new hospital receives patients sent from the Raigmore Hospital in Inverness for treatment and to be closer to home. The flexibility of having individual bedrooms, as well as the provision of two centrally located swing bedrooms, helps the building to accommodate fluctuations in numbers and a variety of patient groups.

Patients have settled into the new facility and use and enjoy the range of environments. There was a real drive from the project team to generate a homely feel within the wards by creating a patient environment that moved away from the standard ward arrangement of social space and bedroom wings off this. The plan's arrangement was intended to allow bedrooms to open onto social spaces, with low level shelving providing minimal visual separation to the corridor without obstructing the view. Unfortunately this has only been partially realised. Detailed consultation with building control, and development of a fire-engineered solution proved insufficient to achieve the outcome the project team wanted and therefore there is clear separation between these two elements. However, the buffer space created has become a well used space with the additional seating at the end of the corridors offering significant benefits to patients in each ward. These areas create opportunities for informal gathering or as an alternative quiet space away from patient bedrooms. They also provide destinations at the end of each corridor which are particularly useful within the Strathy ward where dementia patients tend to wander.



^ Naturally-lit corridor with seating space at the end
Image credit: John Paul Photography

There were initial concerns by staff that the garden space would not be well used particularly by patients of restricted mobility. With the garden being north facing there was the potential that this space may not get adequate light. However, the concerns have proved unfounded and the gardens are well used. During the summer months the garden and patio area receive a significant amount of use and, due to the stepped profile of the roof, there is enough sunlight to make this space an attractive place to be.

"They loved it in the summer. One chap was growing his own veg!"

Sandie Ross, Deputy Charge Nurse

Early on and throughout the project a wide stakeholder engagement was undertaken. Members of the access panel and the staff group (comprising nurses, occupational therapists and physiotherapist) were included in the project team while a communications group and a garden/landscape group were consulted as advisory groups throughout the process. In addition to this they had a number of community consultation events. The general feeling was that the engagement provided a great benefit to the project and that staff felt encouraged to participate and influence change.

>> Private garden and patio space accessed off the day facilities space
Image credit: John Paul Photography



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^ Entrance reception waiting area
Image credit: John Paul Photography

"I think the experience we had with the client was fantastic... they were very knowledgeable but they also made a point of involving the wider stakeholders and the community. The early design team meetings had 15 to 20 people at them, however, everyone contributed and had an input into the design process"

Iain Wylie, architect, Austin-Smith:Lord

Through the design process the collaboration of community groups and organisations was significantly beneficial to the final outcome, and this community engagement continues. A local primary school were involved in providing a series of art pieces, which were framed by the NHS board and used in decorating the circulation spaces. Cost savings towards the end of the project meant that funds allocated for landscaping were cut. Fortunately, a local community group took the initiative and stepped in to develop the garden design, with the view of developing the garden over a number of years.

Additionally, due to the type of the facility, the Dementia Services Design Centre (DSDC) at Stirling University were appointed to advise on how the design of the facility would meet dementia friendly design criteria. A series of recommendations were made and many were incorporated; however, there was a conflict between the requirements for infection control and the recommendations by DSDC meaning that a number of the items could not be satisfied. Simpler elements such as a change in colour of floor finish at fire escapes, to discourage use, and the inclusion of memory board to each bedroom door were incorporated and are considered successful.



^ Nurse station set back from the corridor
Image credit: John Paul Photography

There was an initial apprehension from staff around how the new facility would affect their daily working practices, particularly around supervision of patients in single bedrooms. However, this proved to be less of an issue than initially thought. During the consultation period nursing staff had requested the introduction of a nurse workstation for each ward, accessible within the corridor space, but able to monitor each bedroom. With the change in working practice these spaces tend not to be used as much for that function as staff spend more time in the wards with patients. The workstations, however, are generally well used during night shift working when staff can monitor the entire length of the facility from one point.

Overall the facility is deemed to be a success. There are some minor niggles such as the lack of windows to both the treatment room and sluice room, however, these are seen as very minor in comparison to the benefits the new facility offers. In general staff felt engaged in the procurement process and are very positive of the final environment created.

"I love our corridor upstairs, I think it's lovely and light and airy"

Sandie Ross, Deputy Charge Nurse

>> Naturally lit seating area at the end of the corridor
Image credit: John Paul Photography



Project Information

Client body: NHS Highlands
Location: Cherry Grove, Bonar Bridge, Sutherland
Architect: Austin-Smith : Lord
Principal Contractor: Robertson Construction Group
Value: £8 million
Area: 2255m²
Opening Date: June 2011
Procurement Type: Frameworks Scotland

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