

Navigating the technical and logistical challenges of **NHS Orkney**

Set in a remote island location and faced with external wind speeds twice the mainland UK average, building the new **Balfour hospital and healthcare facility** was a unique project with exceptional logistical and technical challenges to the build.

NHS Orkney

The **Balfour hospital and healthcare facility** in Kirkwall was designed to transform health services in one of the most remote parts of the UK. Working with Robertson Group and their architects Keppie Design, the 49-bed, 16,500m², £65 million hospital and healthcare facility was designed to reflect the rural community that the building would serve, and provide wider primary and community care facilities to.

Focusing on placemaking, the building is laid out in interrelated streets and spaces around a central hub with a large number of small departments, each with a distinct identity. This layout closely reflects the local, rural community, while making movement around the space easy for patients, visitors and staff.

Project: The Balfour hospital and healthcare facility

Building Type: New build, hospital and healthcare facilities

Client: NHS Orkney

Architect: Keppie Design

Contractor: Robertson Group

Specialist Contractors: PFP Ltd

Key benefits:

- Highly impact resistant
- Achieves Severe Duty Rating to BS 5234
- Improved indoor air quality
- Superior energy efficiency
- Increased levels of acoustic performance
- **SpecSure**[®] lifetime system warranty

An extraordinary environment

The mix of distinct departments, large public spaces and small, private consulting rooms meant acoustic design needed careful consideration. This challenge was further exacerbated by the location where wind speeds average 25-31 miles per hour each day in winter months, which creates unusual internal air pressure requirements and additional acoustic design challenges.

As Orkney is situated 10 miles off the coast of mainland Scotland, the team also needed to consider supply chain logistics and programming requirements. This included procuring and shipping materials to the island and protecting them from extreme weather. The contract stipulated no waste be left on Orkney post completion.



Overcoming pressure through partnership

Using its expertise in healthcare building project delivery and industry leading experience in technical specifications to deliver positive building outcomes, British Gypsum provided technical support and consultation to ensure that the right solutions and systems were specified to provide the best outcome for our customer.

A variety of our Gypframe 'C' studs were selected for the building's drylining systems, to accommodate internal air pressure fluctuations, while maintaining critical fire and acoustic performance. These included the use of GypWall Single Frame Enhanced to give the ultimate in impact resistance to the building.

For consulting rooms, GypWall Single Frame Enhanced was selected alongside Gypframe 92 AS 50 AcouStud to create highly durable, yet quiet spaces ensuring patient privacy.

In public areas, NHS Orkney and Keppie wished to combine strong visual impact, acoustic performance and enhanced air quality, as such, British Gypsum recommended the use of its Gyptone ceiling tiles with GypCeiling MF ceiling system. As well as creating a beautiful aesthetic to complement the sweeping curves of the building, this combination delivers excellent reverberation control. As the entire Gyptone ceiling range incorporates ACTIVair® technology that reduces VOCs, the ceilings absorb and reduce these harmful compounds found naturally occurring inside our buildings.

Support for a lifetime

Through our Plasterboard Recycling Service, all plasterboard waste generated was collected and recycled, limiting its environmental impact on Orkney now and in the future.

We also contribute to the ongoing performance of The Balfour through our **SpecSure**® warranty that guarantees our proprietary systems will perform as specified for the lifetime of the building.

An award-winning facility

As a testament to the design and construction of this unique, best in class facility, The Balfour has been honoured on an international scale, winning silver in the Best Healthcare Project category at the Partnership Awards in 2018. These awards recognise excellence in public private partnerships (PPP).



The construction was a steel construction with durable and hard wearing materials and external façade, designed to reflect the Orkney weather and high speed winds. We had to get things right the first time, and that was a challenge. Working with the British Gypsum team and their materials helped us to achieve this high quality outcome.

**George Young,
Robertson Group**



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