

Friday, 11 January 2019

Welsh Slate helps bring dignity to a pioneering palliative care facility

Roofing and cladding features on The Prince and Princess of Wales Hospice.



Welsh Slate has been specified for its aesthetics and robustness, for the roof and innovative cladding of a ground-breaking new hospice.

The £21 million Prince and Princess of Wales Hospice in Glasgow's Bellahouston Park features Welsh Slate's Penrhyn Heather Blue Celtic grade 270mm x 180mm roof slates which are complemented by a cladding veneer of the same colour over a total of 1,400m² of the outer façade layer of 'protective' eaves and bedroom terraces.

This complements the buff-coloured Petersen brickwork and bronze-coloured metal panels used on the inner layer of the façade. Projecting eaves features in the same slate are also utilised on the northern and southern gable facades to express the prominent building ends. In addition, Welsh Slate Penrhyn Heather Blue walling features on a large internal chimney hearth.

The Welsh Slate materials were specified, for the first time, by Ryder Architecture for the 5,840m² building which comprises a 16-bed in-patients' unit including young adults' bedrooms, with associated support and family space including large kitchens, day services and out-patients' units, educational area, and administration and clinical offices over three storeys.

The Scandinavian-inspired hospice is the first in the UK to follow the Sengetun (meaning bed courtyard) model of care which promotes a home-from-home environment that also

allows patients privacy when required. The model is based on research that suggests the aesthetic design of a healthcare building has a measurable impact on patients' wellbeing.

Ryder and main contractor Balfour Beatty delivered a purpose-built, innovative and exemplary palliative care facility that delivers form as well as function in response to the brief which called for a warm, welcoming and non-clinical entrance and interior in a quality environment with interior and exterior materiality.

The hospice supports 1,200 patients and their families from a geographical area that spans Glasgow, East Renfrewshire, Cambuslang and Rutherglen, with a population of about 345,000. With something of a civic presence, it is set in 7.5 acres of parkland on a site gifted to the charity by Glasgow City Council, with a form that mediates between the city it serves and its parkland setting.

After more than 30 years of adapting and adjusting in the old hospice building in Carlton Place, the new building enables the organisation to expand its services and offer 21st Century palliative care to young people over 16 years for the first time.

To negate the potential sprawl of the complex brief and adjacencies, the accommodation was reduced to four interconnected villas that reduce the overall perception of the massing to a human scale.

Project architect Alastair Forbes said: "The building envelope has been designed with a number of key aims in mind. The primary aim is to provide a building of dignified quality commensurate with the importance of the site and the building use, and a robust building that requires, wherever possible, minimal maintenance.

"The quality of the materials proposed is critical to the success of the project and the manner in which the materials are detailed is significant in providing suitable scale and presence for the building on the site. It has to address its context successfully, both in terms of the immediate site of Bellahouston Park and also the important Hazelwood and Dumbreck Conservation Areas directly adjacent."

He added: "The protective nature of the building is realised in a 'loggia' or 'veranda' that runs around the whole building, providing a transition zone between the interior spaces and the surrounding landscape. This is an integral space for patient use and inhabitation.

"Slate is used for the external skin of the building which reinforces the protective nature of the building envelope. One senses the physical weight of the building on the outside at the same time as the ethereal quality of the light-filled interior spaces. These protective elements differ in density and permeability depending on the interior functions, sunlight and the site conditions.

"The 'purple/heather' tones of the Penrhyn slate were essential in linking the landscape and building interior whilst avoiding an overtly dark-coloured building that would not be suitable for the building's function."

The Welsh Slate roof slates were laid with 50mm x 3.35mm copper clout nails over timber sarking boards with mitred slate hips to a 38° pitch over eight months and 1,535m² by specialist sub-contractor Braisby Roofing, while the cladding system was devised and installed over 12 months by Stonescreen, specialists in natural stone rainscreen systems.

The company custom-designed the support structure and frames to hold the slate composite panels which used Stonescreen Aerolite© technology as the base. This is engineered with a combination of cellular glass reinforced with layers of glass fibre to produce a very high-strength/low-weight substrate which is typically faced with a thin veneer of natural or artificial stone.

In this case, the Welsh Slate was supplied to Stonescreen as more than 200 blocks weighing over half a tonne each and varying in length from 1,000mm to 1,600mm, in width from 500mm to 600mm and in depth from 200mm to 450mm. These were semi-processed – sawn both sides with the ends left natural.

The blocks were then cut to 20mm and foam glass material glued to each side of the slate. This was then cut through the middle using a band saw and flamed. Cuts of 3mm were achieved which made the final cladding panel 8.5mm Welsh Slate and 40mm foam glass.

Stonescreen director Gary O'Connor said: "The design and construction of the support structure was the most complex part of the cladding works. Attaching the cladding panels was relatively straightforward."

Alastair said "The building fabric, wherever possible, has been used to enhance the environmental performance of the building which had to demonstrate low energy use and value for money over a lifecycle costing. The external walls and windows had to meet the standards set down in the revised Section 6 of the Scottish Building Standards, including standards for airtightness. In the detailed specification of the materials for the building, consideration was given to green issues such as low embodied energy, responsible sourcing, and sustainability/environmental performance.

Braisby Roofing's managing director William Braisby said: "The length of the roof slope was a challenge and there was a lot of interface with other traders on site – joiners and single-ply roofers for example – but apart from that the project was straightforward. Both we and the client were extremely happy with the slate. It looks really good."

Welsh Slate commercial director Michael Hallé said: "The cladding system used on this project is the first time a composite panel with a Welsh Slate veneer has been used. The overall appearance of the Welsh Slate on the project is stunning and it sits beautifully within the environment."