

Welcome to our final update of 2022 on progress towards the replacement for Belford Hospital. This column will look at how we'll design for net-zero carbon.

As we develop plans for the new Belford, our work will be informed throughout by the Sustainable Design and Construction (SDaC) Guide. SDaC was created by NHS Scotland as a guide and tool for delivery of Scottish Government sustainability targets, and it is a requirement for NHS Highland and all other NHS Scotland Boards to adopt and follow the guidance set out in the SDaC guide for all new-build development and major refurbishment projects. To positively influence future development of NHS facilities, the Guide is structured around three priority themes: Wellbeing; Circularity and Climate Change. There is also an overarching theme across the whole Guide of “optimising operational performance.”

NHS Highland must consider key issues under each of these themes and work with stakeholders to agree, record and evidence actions taken to address these issues. Actions will be reviewed and evaluated against the requirements of the main aspects of every stage of the business case.

The Wellbeing theme promotes the design and operation of an NHS estate that is considerate to and prioritises the wellbeing of users – including staff, patients, visitors and the wider community – through the creation of comfortable, inclusive internal and external places to ensure that the new facility contributes positively to the community's needs. Considerations include social, mental, physical and economic wellbeing.

This theme also covers quality of space and things like thermal comfort, air and water quality, acoustics and visual comfort, recognising that a building with fresh air, natural light and a calm environment can contribute to both mental and physical wellbeing. This will involve detailed digital modelling of the new building and adjusting different parameters such as orientation or the size of the windows to achieve an optimal balance of energy use and environmental comfort.

The Circularity theme focuses on establishing practices that support a more circular economy, by aiming to eliminate waste and extract maximum value from resources. It is intended to ensure new buildings design out waste and pollution, keep products and materials in use and regenerate natural systems, for example by designing building elements that can be dismantled and used again in their current form, rather than demolished and recycled, or worse, sent to landfill.

The Climate Change theme seeks to enable the delivery of a sustainable and resilient buildings that effectively manage climate and ecological risk. The issues it covers are: operational energy and emissions; embodied carbon, water consumption; environmental security and active travel and sustainable transport. It is intended to ensure that, for example, low carbon embodied materials are used in construction and that a renewable heat source as well as smart energy management systems are incorporated throughout the new building. It also covers the need to include features such as a water leak detection system and water flow control devices. Among the key goals under the environmental security heading are ensuring that existing natural features of the site are retained and

protected and that quality green spaces are planned. The guide also requires planners to “prioritise and promote” an active, accessible, and more sustainable transport strategy for the new building.

If you would like to find out more about the SDaC guide, full details are available online at: [Sustainable Design and Construction \(SDaC\) Guide \(SHTN 02-01\) | National Services Scotland \(nhs.scot\)](#)

We will also continue to keep you informed about this vital element of the work in these columns.

In 2021, Scotland’s first low-carbon new-build hospital was officially opened. The Balfour Hospital, at Kirkwall in Orkney, is fully electric, with air-to-water heat pumps generating all heating and solar panels to reduce reliance on the grid. It also has a host of innovative environmentally friendly initiatives and facilities in operation on-site.

The example of the Balfour, a Rural General Hospital of a similar scale to the Belford, shows what can be achieved in Scotland for the benefit of the public and staff and the environment, however it predates the current net zero targets and the new Belford will need to go further to meet these more stringent targets.

Our next column will appear at the start of a new year and in it we will take a look ahead at developments we are expecting in the Belford project in 2023.

If you’d like to contact us, you can do so via the NHS Highland Feedback team Nhshighland.feedback@nhs.scot or 01463 705997, or our project email address on nhsh.nhshighlandestatesprojects@nhs.scot.

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