

Building a local neonatal unit fit for the future

FOCUS

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The finished Dyson Centre for Neonatal Care and, inset, building work on the £6.3 million project.

In 2007, it was proposed that the neonatal intensive care unit (NICU) in Bath was long overdue for a face-lift and so plans for the Dyson Centre for Neonatal Care began. The existing facilities were extremely cramped and generally not fit for purpose, making life very difficult for families and staff alike.

The prospect of redevelopment gave us the opportunity to evaluate and take stock of what life would be like in the new world of managed neonatal networks. We would shift from a unit delivering all levels of care to a level two unit, and ultimately a local neonatal unit (LNU). We needed to establish our core values and develop a clear philosophy of care for the future that we could articulate into a coherent and functional design. This was all the more important as it was decided that the build would be funded through charitable donations.

We knew that we would always be busy as we serve an annual birth population of 5,200. We also believed very strongly that whether you are a baby cared for in a level three unit or in a level two unit, you deserve the best quality of care available. The families, in particular, would make no distinction between the different levels of care and they would quite rightly expect state-of-the-art facilities, a knowledgeable

and dedicated team of professionals and an environment that was above all caring. As a LNU, it may be that we have unique opportunities to 'add value' in the quality of the care environment, taking advantage of the more balanced mix of intensity.

Our business is to help parents meet their vulnerable offspring in those first precious weeks and build the foundations of a solid family. The care environment would be key in empowering families on the road to taking their babies home. It was very quickly established that we needed to put the family at the centre of the design and to weave in the essential ingredients for establishing a culture where developmental care values are at the core.

Much of this is not too different to the aspirations of many neonatal services, but what we feel makes our unit stand out is our unique approach to establishing the design. The first bold move on the part of the project team was to appoint an architect with no track record of healthcare buildings. Fielden Clegg Bradley Studios is a Bath-based firm with an international reputation for innovation and an impressive portfolio of environmentally friendly buildings. If we were committed to giving our babies the best possible start in life, wasn't it just as important that we gave them a sustainable world with a future to

grow up in? Besides, the NHS has encouraged low carbon technology in future capital projects. NICUs are very complex spaces and, if excellent environmental credentials could be achieved within the space, this could be translated into other less complex projects.

The vision was to have a low carbon building with a strong identity with the natural world through the use of imaginative materials – a care environment that had high levels of controllable light and sound. The space is designed so that families can enjoy privacy and also be staffed efficiently, although individual rooms were deliberately shunned to avoid the risk of confusing privacy with isolation at this vulnerable time.

The design is simply stunning. The building is of solid timber construction with the natural timber visible, indeed tangible, in all of the care rooms. The wood is finished with a clear, protective coating that is easy to clean for infection control. There are high ceilings giving an almost cathedral quality to the space, particularly the circulation and mixed function spaces. Glass ceilings give a clear connection with the outside world. Great care has been taken to ensure that every cot



A playroom for siblings.

space is out of direct sunlight. Instead, each nursery room has large bay windows and high-level skylights. Each has integral individually controlled electrical blinds. This is complemented by a sophisticated and programmable lighting system. Bay windows double up as comfortable window seats, allowing parents to step away from the cot space for contemplation without being too far from their babies.

Each cot space is orientated into a corner. This gives a sense of intimacy and comfort not found in the traditional linear layout of a nursery. This is further enhanced by each cot space having airline business class style seating for parents to use while delivering skin-to-skin care or enjoying quiet time.

Having set out such an ambitious vision, it wasn't surprising that it would carry a very hefty price tag of £6.3 million! All we had to do was raise the money and sell the project. Thankfully the Royal United Hospital (RUH) Bath has a fantastic in-house team of fundraisers called Forever Friends. This would be their biggest challenge and would certainly be a learning curve for all concerned.

A major breakthrough came when the Strategic Health Authority agreed to fund approximately 50% of the project. With this vote of confidence, other donors came on board and interest grew. The most significant contribution has come from the Dyson Foundation, with personal interest from Sir James and Lady Dyson. The support from the entire community has been overwhelming and has led us to develop many relationships that we hope will continue long into the future. To see



High ceilings lend a cathedral-like quality to circulation areas.

Below: Large bay windows and skylights flood the NICU with natural light.

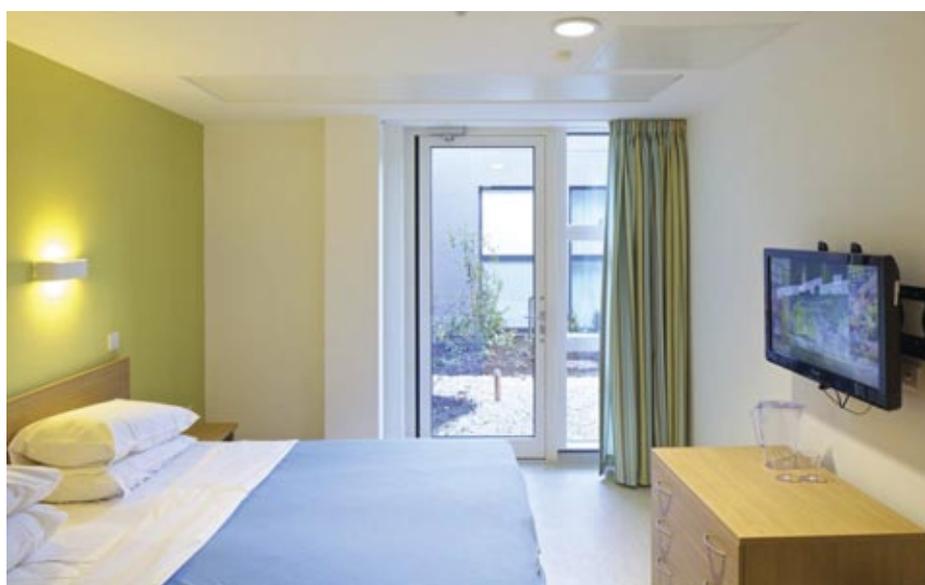
old patients and their families pitching in to help others, and school children give their pocket money is a very humbling experience. Of real interest is just how much understanding there is of the needs of vulnerable babies and their families; everyone seems to know someone who has needed a service like ours.

After several years of meetings, charity events, talking to community groups and schools, we finally took possession of the building in July 2011. The old unit is adjacent and has now been converted into en-suite parent facilities and a high quality shared office space with seminar room and breakout spaces for privacy.

The benefit of our new space seems to speak for itself. We have adapted well and the families tell us they really like it. Rather



than take this for granted, we are assessing the impact of the building through a research project. We have created a data set that includes babies, family, environmental and staff data. We have interviewed families about their experiences and we have used specialised equipment to monitor staff journeys. We began collecting the data in the old unit and are now completing collection in the new building. This work has been supported by the Dyson Foundation and has allowed us to put together a unique team of professionals including a neonatologist, NICU nurse, medical physicist and engineers, a clinical psychologist and a dedicated research nurse. We look forward to having data to analyse very soon and then we can really begin to share our experience of building a care environment – starting from the baby and family and building up.



The old NICU has been converted into accommodation for parents.