IT'S ALSO ABOUT CHANGING PERCEPTIONS AROUND WHAT OUR KIDS ARE CAPABLE OF AND EMPHASISING THE FACT THAT IN AN EDUCATIONAL ENVIRONMENT, THE KIDS ARE HERE TO LEARN AND THEY MAKE PROGRESS IN THE SAME WAY THAT OTHER KIDS DO.

STARTING FROM SCRATCH

How do you design and build a special school? Irena Barker found that when a local authority in Northern Ireland decided to combine three separate special schools, educators worked with architects to create a building with well-being, self-respect and self-esteem at its heart.

If you have no experience of them, it might be easy to believe the stereotype that special schools are isolated places, hidden away from mainstream society. When you think of their interiors, maybe you think of medical equipment, wipe-clean surfaces and hoists, things more reminiscent of a hospital or care setting.

But Castle Tower School in Ballymena, Northern Ireland, which is believed to be the largest special educational needs (SEND) school in the UK, was designed to overturn all these ideas. The 10,000 m^2 school, costing £16.5m, stands proudly in the town, its rainbow-coloured front canopy a joyful beacon welcoming 370 children every morning.

Abandoning an outdated model

Castle Tower was constructed in 2017 following a local authority decision to amalgamate three local special schools – Loughan, Beechgrove and Dunfane – catering for different levels of need separately. The plan was for all ages and all abilities to be on the same site, allowing expertise to be shared more effectively, and for pupils to be educated alongside their peers, rather than purely defined by their needs, with the school itself part of the wider community.

In the past special schools have been perceived as following a medical model – a "clinical" atmosphere leaders were keen to get away from. Raymond McFeeters was principal of Castle Tower at the start of the project in 2013. "We wanted to achieve a building that would give our kids a sense of wellbeing, but also a sense of self-respect and self-esteem," he says.

"It's also about changing perceptions around what our kids are capable of and emphasising the fact that in an educational environment, the kids are here to learn and they make progress in the same way that other kids do."

But bringing everyone together presented a big challenge. With such diverse needs – from moderate to severe learning and physical disabilities, all of which needed to be catered for – and with no DfE guidance handbook, to design for special needs in Northern Ireland, it was a bit of a leap in the dark.

Working together with Arthur Sloan from local architects Isherwood + Ellis, the school formed a design team made up of interested staff and set about the process. The eventual design created a "university campus" style site featuring two large, curving buildings – a single-storey structure for Key Stage 1 and 2 and a two-storey one for post-primary and post-16. These two elements are joined in the middle by a shared entrance lobby. All classrooms benefit from direct access to outside space and there is a Remembrance Courtyard and two sensory courtyards. The wider grounds include a sensory garden, and a 4G astro pitch, also used by the community.

A highly sensory structure

One of the key challenges of the build was the two-storey secondary wing. Usually, special needs schools are built over one floor but the designers wanted to prioritise outside space.

"We realised that putting as little as 25 per cent of the building onto the first floor, it fundamentally changed the footprint of the building and it made it so much more doable," says Arthur Sloan. "But it posed a problem because we hadn't done one like it before. We were quite intimidated by the idea of vertical movement within the school."

The team toyed with the idea of installing travelators to allow disabled children to travel between floors, but the idea was too space-hungry.

Designers eventually had a counter-intuitive brainwave after seeing physically disabled children using small sets of steps in their physical therapy sessions: install a grand central "collaborative staircase" that could be used as a lecture theatre, inclusive central meeting area and therapeutic training stairs.

RATHER THAN GOING TO DIFFERENT SENSORY ROOMS WE FELT THAT THE WHOLE BUILDING WAS A SENSORY STIMULUS FOR THEM...

"We thought, hold on, why don't we just embrace the staircase," says Sloan. Hospital-style large lifts would also be installed for children unable to tackle the stairs.

"It became a fantastically successful shared space," he adds. "Something that we thought was a big challenge became one of the most celebrated parts of the school."

Another key aspect of the school is its large breakout spaces throughout. "We wanted to have flexibility in how the spaces could be used," says McFeeters, given that the needs of children change all the time.

They also needed room for plenty of movement indoors, given the Northern Ireland weather. Over time, some of the indoor breakout spaces have become "sensory integration areas" where children can use sensory swings, squeeze machines, roller slides and scooter boards.

"Rather than going to different sensory rooms we felt that the whole building was a sensory stimulus for them," says McFeeters, highlighting the extensive use of rainbow coloured glass in the design, which also maximises natural light.

Other key facilities include sports equipment such as a five-metre (16 foot) climbing wall, a hydrotherapy pool and an impressive "rebound therapy" room with a large rubber trampoline built into the floor.

Staff on the design committee were particularly helpful for choosing furniture and fittings. They opted for storage cupboards integrated into classroom walls and special curtains that cut out distractions when pupils are looking at the central classroom screens.

For McFeeters, it was important that the furniture was attractive and non-medical in feel. "The furniture that we went for was very modern and quite cool and trendy," he says.

Equipment for children with complex needs is not located in a separate part of the school, but dotted across it to emphasise inclusion.

An inclusive environment

The building and interiors are undoubtedly attractive and facilities impressive, and the aim of creating a sense of progression through school has been met; but what has been the most noticeable impact on pupils since they moved into the building?

Alick Ford is the current head, and she led the school-based design team: "In our old school buildings we would have been dealing with quite a few children who didn't want to come to school and also some children who struggled when they were in school, displaying challenging behaviour. We feel that the new school has reduced that dramatically. We have very few school refusers because it's such a nice environment to come to. It's inspiring to come here every day."

Having already identified the successes of the design of Castle Tower School, McFeeters is now in the process of implementing them at his current school, Ardnashee School and College (ASC) as it prepares for a new build. The staff at ASC are currently working through the Planning Learning Spaces in Practice Design Framework to ensure their new spaces align with their school vision and core values, and help deliver a meaningful curriculum to their students. ■