

Case study

HardRock® Multi-Fix DD helps autism-specific school facility meet strict acoustic targets

NAS Anderson School, Essex





The project

External, ambient noise can be a major headache for schools, causing distraction, disruption and, at worst, impacting negatively on the academic performance of students.

ROCKWOOL® stone wool insulation has helped the National Autistic Society Anderson School and Enterprise Campus, a major new-build, autism-specific facility in Chigwell, Essex, address the issue of sound reduction to create a calm, productive, and quiet learning environment for all students.



"Our ambition is to transform the lives of autistic young people and our aim for this campus is that every child that leaves school will go into meaningful paid employment or other activity."

Mark Lever
Chief Executive
The National Autistic Society





The challenge

Part of the National Autistic Society's 13 acre Enterprise Campus, the Anderson School is a brand new facility for autistic students, aged 11-19, where the skills for life and employment are at the heart of the curriculum.

Mark Lever, Chief Executive at The National Autistic Society, said; "Our ambition is to transform the lives of autistic young people and our aim for this campus is that every child that leaves school will go into meaningful paid employment or other activity."

"As a result, the wellbeing of autistic children and young people is at the heart of the National Autistic Society's Anderson School and Enterprise Campus. From small class sizes to purpose-built calm rooms, and therapy rooms, we'll make adjustments to each student's environment to help them reach their full potential."

Project designers and specifiers, RMA Architects, recognised the role that effective sound insulation could play in helping to meet this objective for the school. The school's contemporary, low level design features extensive areas of flat roofing which could prove susceptible to noise ingress from heavy rainfall. At the same time, they required a thermal solution that would match the project's low energy credentials and a waterproofing system that would safeguard the building from defect for many years to come.

"Many children and young people on the autism spectrum really struggle in mainstream school, sometimes ending up spending long periods out of education. The National Autistic Society believes that no-one should ever be written off and we want to give them the social and work skills they need to find meaningful work or go into higher education."

Gary Simm
Principal
The National Autistic Society



The solution

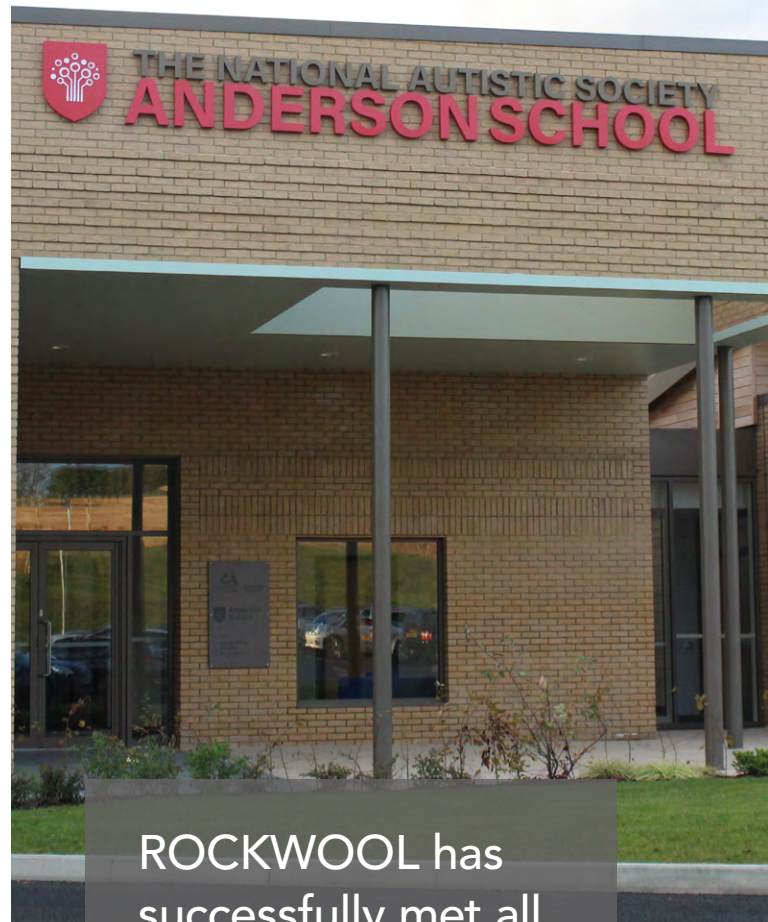
Working in close partnership with roof waterproofing membrane designer and manufacturer, AXTER Limited, and Axtershield Installer / roofing contractor, Avonside Group, ROCKWOOL has successfully met all the challenges on the project using its HardRock® Multi-Fix Dual Density (DD) board.

Avonside has fitted over 3000m² of ROCKWOOL 105mm HardRock Multi-Fix (DD) insulation board at Anderson School complete with an equivalent quantity of 150mm HardRock Multi-Fix Underlay and AXTER's EXCEL® Roof System to deliver effective acoustic, fire safety, and thermal insulation performance.

As a stone wool insulation solution, HardRock has been fully tested to meet the rigorous demands of Building Bulletin 93, The Acoustic Design for Schools, an extension to Part E of the Building Regulations which sets the standard for ambient, impact, and reverberation noise in educational buildings. At Anderson School, the total thickness of 255mm is capable of delivering a noise reducing performance of Rw 40dB whilst still satisfying the 0.15 W/m²K thermal specification for the project.

HardRock Multi-Fix DD board is also capable of providing significant time and cost savings for contractors across a vast range of flat roof applications. It can be securely installed within mechanically fixed systems with just a single fixing, compared to the multiple fixings typically used with PIR / PUR foam board installation. Meanwhile, its performance eliminates the need for additional layers to be installed to meet flat roof acoustic specifications. As a result, AXTER and their accredited roofing contractor Avonside were able to reduce the complexity of installation at Anderson School, saving time and cost.

HardRock Multi-Fix (DD) is non-combustible and is classified with a reaction to fire performance of Euroclass A2, s1-d0. It is also LPCB approved (LPS 1181: Part 1 (Ext-A)). This ensures compliance with Building Bulletin 100, the Zurich Insurance School and Academy design guide which requires the use of non-combustible materials.



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The project was completed in September 2017.

www.autism.org.uk/andersonschool

www.rmaarchitects.co.uk