

Ceiling with natural and recycled materials

THE NEW Excelsior Academy, in Newcastle-upon-Tyne caters for children aged 11-18, from the city's West End, and has places for 1800 pupils.

Excelsior's theme is enterprise, with four schools within the Academy offering pupils a choice of business and economics, health and related studies, creative & performing arts and design, and construction and the environment. There's also a sixth form.

Approximately 15,000sqm of acoustic ceiling systems from OWA UK was specified by architects Howarth Litchfield Partnership.

The tiles and panels from OWA can be used to create a clean white 'floating' look. The tiles contain more than 50% mineral wool. The white mineral wool structure is made from natural and recycled materials, and combines fire resistance with the strength and handling characteristics of glass wool, and is environmentally friendly, bio-soluble and non-hazardous.

Teaching areas

The installers fitted mainly fitted OWAcosmic Cosmos tiles. These are available in four different suspension systems, and comply with the reverberation time requirements of Building Bulletin 93, the regulations for school acoustics. For the teaching areas, 600mm x 600mm Contura edge tiles, and in the corridors, 1550mm x 400mm planks.

A different range was used for the high humidity areas. OWAcosmic AquaCosmos,



Fire resistance and strength.

used with the corrosion-resistant OWAConstruct suspension system, is designed for areas such as swimming pools and showers. Under these conditions, the tiles remain durable and stable.

www.howarthlitchfield.com

www.owa-ceilings.co.uk

Acoustics: What should schools be looking for?

THE SCIENCE of acoustics and its application within buildings can be confusing, with an endless array of different criteria and rating methods, says LIANNE PETERS from SAS International.



Lianne Peters.

BEING ABLE to hear clearly through communication with teachers and peers is vital for children to grasp grammar rules and phonetic structure through repetitive exposure to clear auditory.

The education sector responded to the need to improve acoustics in schools in 2003 with the Department for Education and Skills' Building Bulletin 93: Acoustic Design of Schools (BB93). All regulations within BB93 are mandatory and specify the acoustic design criteria requirements for all primary and secondary education facilities as well as containing performance standards for many areas within a school, including classrooms.

There are two acoustic properties relevant to suspended ceilings - sound

absorption and sound attenuation. Sound absorption refers to the measure of the ability of a surface to absorb sound, minimising the reflection of sound energy back into a space. This is important as a predominance of acoustically reflective surfaces in enclosed spaces, such as a classroom, that can lead to an overly reverberant environment; the sound of a single voice can be less intelligible due to the many reflections of sound from the room surfaces. These reflections occur with a time delay compared to the sound energy that reaches a listener's ear directly and cause the sound to become less clear.

www.sasint.co.uk