



## ACOUSTIC LIGHTING CEILING RAFTS WITHIN SCHOOLS

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**With the design of schools changing rapidly to meet various construction and education demands; acoustic, lighting and service standards are being met by a new modern cost saving ceiling solution.**

SAS International acoustic rafts incorporating luminaries were used extensively in classrooms at the Business Academy, Bexley. As an alternative to suspended ceiling systems, acoustic lighting rafts are becoming increasingly popular within schools, particularly the new 'Academies'. Leaving an open soffit for sustainable natural mass cooling, they also offer increased design flexibility and significant capital and installation cost savings.

As an intelligent acoustic and lighting solution, rafts can be flat, faceted or curved in section to express relief in the ceiling. Luminaries and up-lighting effects are incorporated to deliver illumination of the soffit and re-create natural environmental lighting. Passive/active cooling elements can be included if required within highly glazed facades to overcome solar gains. Radiant heating and any number of other services such as computer cabling, sprinkler and PA systems can also be included.

Manufactured from metal with a polyester powder coating these rafts have the same performance properties of more traditional suspended metal ceiling systems. They are a highly durable and easy to clean solution with an exceptional lifespan and minimal

maintenance costs. In addition, they integrate easily with other metal education solutions, such as acoustic baffles and wall panels, all of which are offered by SAS International.

As floating rafts don't cover the entire ceiling plane, capital costs can be reduced, while offsite prefabrication and the pre-integration of lighting and other services into the raft ensures that manufacture and onsite installation costs are greatly reduced. Therefore, these metal acoustic rafts not only offer a modern, but also a cost effective solution.

### **CASE STUDY:**

the Business Academy, Bexley Replacing the original Thames Mead community college, the Business Academy Bexley was designed by Foster & Partners and completed in just twelve months. The Academy was the

first purpose built, part-privately funded independent state school in Europe. An 'innovative success' the Academy was short-listed for the Stirling prize and has been used as the national template for other academies.

The design objective of David Garrard the Academy's private sponsor was to create a 'transparent, open plan space, creating an atmosphere of brightness, to encourage learning.' In keeping with this ethos, there are no corridors in the academy and the teaching spaces are separated only by partitions.

This open plan design placed significant demands on the building and the architect wanted to use acoustic baffles. As a solution SAS International designed a series of twelve metre acoustic baffles that also

acted as solar shades directing sunlight into the three main atrium areas.

In individual classrooms acoustic floating rafts were used leaving an open soffit for natural mass cooling. In more demanding working areas such as the science laboratories, metal systems were used to meet acoustic and rigorous cleaning and maintenance requirements.

Since moving to the new building students results have dramatically improved, two students obtaining five A\*-C GCSE passes has now developed to 95% of students obtaining A\*-G Grades placing the school in the top 25% of all schools in the UK.

This project is an example of how dynamic thinking and design of a workplace environment has delivered benefits to its users, in the case the staff and students of Bexley.

SAS International designs and manufactures a wide range of metal solutions including suspended ceilings and prefabricated modules which are available in a variety of different colours and finishes and have an expected lifespan of over 25 years. [www.sasint.co.uk](http://www.sasint.co.uk), Tel: 0118 929 0900

