

Kingswood Academy

Complete	Area	Client	Architect
2013	UK England	Morgan Sindall	Allford Hall Monaghan Morris

Kingswood Academy in Hull is a flagship school that was built as part of the Council's Building Schools for the Future programme. The four storey academy includes media facilities, a recording studio and areas for science, art and technology. The building is arranged around a top-lit central street that is bordered by open plan studios for group and independent learning. The main staircase rises through this inner street to simplify circulation and provide a central architectural feature.

Additional facilities include a sports hall - fully equipped with a floodlit synthetic turf football pitch - a performing arts theatre with its own plaza and box office and a range of community facilities including a crèche, café and training rooms.

The academy's striking design has been recognised with a RIBA Yorkshire National Award and a RIBA Yorkshire Client of the Year Award. It has also been recognised in terms of its sustainability, receiving a BREEAM Very Good accreditation.



Services provided

The new academy was built to replace previous facilities on the site that had been demolished. Sandy Brown was appointed to provide design advice relating to the new development. This included consideration of:

- environmental noise
- recommendations on construction of partitions, room fronts and doors
- control of noise from building services
- ventilation strategy
- acoustic finishes and treatments
- design compliance with Building Bulletin 93 (BB93) – Acoustic Design of Schools.

Special acoustic features

The main acoustic complexity in creating a constructive teaching environment lies in producing conditions for flexible learning. Both didactic, teacher led sessions and noisier group work need to be accommodated, yet each has significantly different auditory needs.

In the case of Kingswood, this was further complicated by the desire for open plan teaching spaces and non-partitioned areas to the central atrium. While this type of design is appealing, the increased level of background noise and longer reverberation times can impact speech intelligibility and means that teachers are constantly straining their voices. It was, therefore, important for us to communicate with the school to gain a clear understanding of the activities that would take place in each space and engage with designers at an early stage to incorporate noise mitigating elements where necessary. These included carpeted flooring, sound absorbent ceilings and sound absorbent screens between spaces.

The proposed layout of the school meant that a number of measures were needed to control noise transfer between key adjacencies. Again, the open plan design was a factor as this included the dining area, which is open to the forum and atrium space. The high levels of noise expected from the dining area and the staggered lunch schedule used at the school meant that classrooms facing onto the atrium would be affected by this arrangement. Identifying this allowed for better planning and management of the space.

Other key adjacencies in the layout included the auditorium to the dance and drama suites and the multi-gym / activity studio to teaching spaces.

Sound insulating lids were used in all dance, drama, music rooms and the auditorium, with absorbent ceiling tiles included to ensure that noise transfer was kept to a minimum. In the multi-gym, a platform build-up for the free weight areas and isolating cardio-vascular machines on proprietary anti-vibration mounts avoided the need to provide a floated slab to the entire room, meaning that savings could be achieved while impact sound was moderated.