

Athlete's Village

Complete	Area	Client	Architect
2012	UK England	Lend Lease	Fletcher Priest (Masterplan) Denton Corker Marshall Lifschutz Davidson Sandilands Patel Taylor

As well as providing accommodation for 24,000 athletes during the 2012 Olympic and Paralympic Games, the development was based on reusing the buildings after the games to provide low cost housing.

On a site that covers 67 acres, apartments are provided in blocks of between eight and 12 storeys. The mixed-use scheme also provides shops, restaurants, medical, media and leisure facilities. In the centre of the complex there are raised gardens which conceal underground car parks.



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Services provided

Sandy Brown was engaged at an early stage to provide acoustic design advice for both Games accommodation and legacy housing, culminating in an extensive pre-completion acoustic testing regime. Key design considerations for the project were:

- achieving enhanced sound insulation to residences over and above that required by Building Regulations
- assessing and controlling environmental noise ingress to residences based on extensive acoustic modelling of future sources
- evaluation of the effects of vibration from passing trains.

Special acoustic features

The design brief for the Athlete's Village was to provide thousands of beds for athletes and officials during the 2012 Olympic and Paralympic Games that would also deliver affordable legacy housing once the event had finished. Acoustic design was a two-stage process, with the legacy accommodation being the primary concern.

Notwithstanding the requirement to achieve enhanced sound insulation (higher than required under Part E of the Building Regulations), a slim party wall construction was proposed to maximise apartment floor areas which required development and testing along with careful control of flanking sound transmission via all other routes.

Many of the external noise sources did not exist at the time of the design and could not therefore be quantified via measurement. It was therefore necessary to carry out extensive acoustic modelling of these in order to predict the resulting façade noise levels thereby informing the design requirements for the facades and ventilation strategy.

Several of the plots were also close to a rail / freight line, which had the potential result in an exceedance of the planning limit for re-radiated noise. By undertaking additional vibration surveys on test piles at an early stage and appropriate modelling, we were able to advise the Client and Design Team of the risks associated with compliance with the planning requirements and relative benefits of mitigation measures.