



LONDON FIRE BRIGADE

HAROLD HILL: SETTING NEW STATION STANDARDS

Background

The new Harold Hill fire station, recently opened in the London Borough of Havering, is one of the greenest in the London Fire Brigade (LFB). It has already won a prestigious award for environmental sustainability at the Havering Business Awards.

The station is fitted with grey water technology which recycles rain water, and photo-voltaic panels, which will convert solar energy into electricity, as well as Combined Heat and Power (CHP) and solar heating with a phase change thermal store. It also has energy saving boilers, motion sensor and daylight controlled lighting and thermostatic radiator valves which control the temperature of each radiator.

The design, construction and long-term use of the new station have been based on sustainability principles featuring maximum reuse of the existing structure with minimum possible alterations, lower energy and water consumption and the production of renewable energy.

The approach taken to procuring the goods and services needed for the station's construction has also been key to delivering sustainability.

Key themes

Incorporating environmental efficiency into fire station design is an important goal for LFB, particularly in view of the plan to develop 11 new fire stations in the next five years.

LFB's station design briefing, finalised in 2009, sets out the specification for any new fire station build or major refurbishment project. While retaining sufficient flexibility to reflect the differing nature and scale of projects, it sets out core requirements for station configuration. The framework includes many environmental aspects >>





covering issues such as energy efficiency and raw material selection, including an aspiration for all new stations to achieve the BREEAM 'Excellent' ranking – an assessment against the Building Research Establishment's Environmental Assessment Method ('BREEAM'). The BREEAM standard, which is the leading and most widely-used environmental assessment method for buildings, provides a benchmark for best practice in sustainable design.

In developing Harold Hill, LFB have successfully integrated many of these environmentally-beneficial characteristics. Working closely with BRE and the Department of Communities and Local Government and applying experience from the Harold Hill site, LFB have helped develop new tailored criteria which reflect the particular use and sustainability requirements for fire stations. These criteria are now available for use in any fire station development nationwide.

Attention to procurement in the Harold Hill development began as early as site selection. The 2006 London Safety Plan had identified the need for a new station in the borough of Havering, located in an area of housing and population growth, seeking to ensure that the station's precise location minimised 'attendance time' – the time required for fire-fighters to respond to emergencies – in the north east part of the borough.

Identifying suitable sites for a fire station in existing built up areas can be challenging. Following a review of sites available in the area, the option to purchase three industrial units on the Falcon Business Park in Ashton Road, Romford was seen to provide good value for money, a suitable operational location, and the scope to convert existing industrial units rather than use new build. As few alterations as possible were made to the existing structure in order to minimize the use of new materials and to ensure the new building fit in with its surroundings. Approximately 80% of the basic structure of the original buildings was used in the final construction.

The industrial units also provided a unique indoor all-weather training space, increasing the amount of productive time for staff and reducing the impact on neighbours of noise and light from training.

Following a contract pre-qualification process, which involved a number of local firms, LFB selected an ISO14001 accredited Romford-based company as the main contractor. In addition to supporting local >>

“We are already seeing benefits from the way the station has been designed. These are not only in terms of efficiency – though we are clearly making valuable savings on things like energy and water already. It is also about how the station's design has enabled us very quickly to become part of the community. It's a welcoming building that provides a positive environment for the public while also meeting all our operational needs.”

Steve Dudeney
Station manager



employment, this helped minimize travel and transport impacts resulting from construction, such as those arising from site deliveries.

In the contract specification and evaluation processes, LFB incorporated a number of environmental elements. Product requirements specified the use of white goods with at least an 'A rated' energy efficiency ranking, with product criteria drawn from the UK government 'quick wins' list of energy-efficient appliances. Suppliers also had to demonstrate that any new timber used was FSC certified and to provide reclaimed timber where possible. They were also required to detail a site waste management plan within their proposals, which was assessed as part of the bid evaluation. It was also requested that building work adhere to the 'Considerate Constructors Scheme', which sets out a code of practice for registered participants covering topics such as safety, accountability, cleanliness, neighbourliness, and environmental responsibility.

Outcomes

The station, London's first additional fire station for 11 years, officially opened in January 2010. It is now fully operational.

The environmental benefits of the station are already apparent. Achieving these benefits now is the result of careful planning from the outset. According to the project manager Andres Monsalve, the collaborative and active approach taken to managing the contract was a key factor in delivering what was wanted on time and within the budget available.

The objectives set and achieved in this project represent a valuable model. The adaptability needed to accommodate LFEPA's changing operational requirements and our aspirations for sustainable development and procurement can be met at a lower cost and with the use of fewer resources.

Achieving the BREEAM certification requires a post-occupancy assessment, generally over the first year of occupation. If successful, it will be the first classification in this category for a fire station under the new assessment method. In using the station, LFB are learning about it. Experience so far suggests that Harold Hill is on track to achieve the excellent ranking, which will demonstrate the good practices LFB are applying every day.

“Good communications with the contractor ensured that any problems were nipped in the bud so that delays could be avoided, budgets met, and we could secure the outcome we all wanted. The result is a project that has been welcomed by LFEPA, LFB users, and the local community.”

Andres Monsalve
Project manager

For any additional information on this case study or other LFB related work in this area, please contact the Central Responsible Procurement Team at responsibleprocurement@tfl.gov.uk

