



BIM helped plan our works, co-ordinating the different refurbishment and new build aspects



Solar PV panels provide renewable electricity



A green wall creates new habitats



Reuse of existing building structure and features saved resources

## CASE STUDY: SEVEN PANCRAS SQUARE

Part refurbishment and part new build, Seven Pancras Square provides 30,297 sq ft of BREEAM Excellent office space. An existing heritage, Grade II listed building, was refurbished and then a new office building constructed, wrapping around it and joined to the heritage structure by an open, glass atrium.

### SUSTAINABLE DESIGN

Built in the 1860s, the Stanley Building is one of the only remaining examples of early social housing in London. Due to the historic interest of the building, the design of Seven Pancras Square was sympathetic to its heritage, so unnecessary structural changes were avoided. We refurbished the Stanley Building's small rooms into meeting rooms, and designed the new build section to provide open plan, modern office space.

In order to successfully integrate old and new components, we used Building Information Modelling (BIM) extensively. We took cloud point surveys of the entire existing Stanley building to create detailed structural models, highlighting any walls which were undulating or out of plumb, and allowing us to better plan our works.

Seven Pancras Square takes full advantage of the environmental benefits of its location. The building's orientation and solar shading, use of thermal mass through its concrete frame and exposed ceiling soffits, and passive ventilation systems all help to regulate temperature changes naturally.

### CARBON

Sustainable technologies minimise energy use, sensors and low energy lighting reduce

unnecessary electricity use while solar PV panels provide a source of renewable electricity.

Seven Pancras Square, like all buildings in the King's Cross Central development, is connected to the on-site Energy Centre and its Combined Heat and Power (CHP) Plant. Using electricity and heat from the District Heating System, Seven Pancras Square has no need for a traditional boiler itself.

### COMMUNITY

During the refurbishment old copies of newspapers from 1903 and 1904 were salvaged and are on display in the building, as a reminder of the building's past. See our Community Engagement: King's Cross Zone B case study to learn more about our community engagement.

### BIODIVERSITY

Working with the King's Cross conservation area advisory committee, we installed a green wall on the western elevation. These climbing plants, along with bat boxes incorporated into the walls, improve biodiversity on the site. The old Victorian roof terrace has also been brought back into use, by adding benches and planted containers to not only create an inviting outdoor space, but also contribute to biodiversity in the long term.

### RESOURCE EFFICIENCY

Rainwater harvesting systems provide water to the rooftop garden and green wall, while smaller cisterns and flow restrictors reduce the water used in the building.

Retention of the existing Stanley Building structure allowed resources to be saved. We retained the building's frame and where possible restored and reused internal features such as lime plaster, detailed columns, iron work. The external wrought iron railings on balconies were restored and the brickwork of the façade was repointed and repaired. When a neighbouring North Stanley building was demolished, we salvaged windows, fireplaces and floorboards for reuse.



Completed: July 2014

Developer: Argent

Concept Architect: Studio Downie Architects

Detail Architect: BAM Design

Interior Architect: Weils Mackereth

Structural Engineer: Arup and BAM Design

Quantity Surveyor: Gardiner and Theobald

M & E Consultants: AECOM