

Increase BREEAM credits through the specification of advanced architectural glass

A Case Study

In order to continue the growth of the economy in the city of Liverpool, English City Fund (ECF) made dramatic investment in the new commercial district, St Paul's Square.

This commercial project has been the most significant for Liverpool in over a decade, and shows Liverpool's resilience through extremely tough economic conditions. Building 4 St Paul's Square is the recently completed final phase of the scheme, and we are happy to say that it has been finished to the highest standard in Guardian SunGuard High Selective Super Neutral glass.

Building 4 St Paul's Square Liverpool, has become the focal point for Liverpool's new commercial district. Standing eight storeys tall and covered with over 3,000m² of SunGuard High Selective Super Neutral 70/41 glass, Building 4 St Paul's Square takes pride of place, leaving an impression that's hard to forget with its stylish, elegant use of angles and inspirational design. However, Building 4 is more than just stylish and elegant; it joins the distinguished list of buildings in Liverpool which have achieved a 4 star level of 'Excellent' under the BREEAM assessment scheme 2006. Building 4 also achieves a high Energy Performance Certificate (EPC) B rating. This is setting a new level of sustainability to aspire to for commercial buildings in Liverpool.

The SunGuard HS Super Neutral glass used on Building 4 St Paul's Square, helps the project achieve its BREEAM level of 'Excellent'. By specifying SunGuard High Selective 70/41, credits were achieved towards the BREEAM assessment, under many different categories.

Energy Category

In the 'Energy' category, the low centre pane U value of 1.1 ensures optimal thermal insulation, whilst a low solar heat gain level of 41% ensures excellent solar control and helps limit the chance of the building over heating. This tailored performance combination means the demands on heating in winter and air conditioning in summer are greatly reduced, as the high selective glass helps to control the temperate environment inside the building. Additionally, the SunGuard high selective light transmission of 70% also helps to reduce the need for artificial lighting during daylight hours, which in turn helps to reduce the energy consumption inside the building. All of these factors can help score highly in the BREEAM 'Energy' category.

Health & Well Being Category

Building 4 has also specified complete curtain walling. Large areas of glazing help to achieve credits in the 'Health and Well Being' category, as the floor to ceiling glazing design provides a connection between the building's users and the outside, which promotes a healthy environment inside the building. Additionally, by using the SunGuard High Selective 70/41, its super neutral appearance and high selective light transmission of 70% provides a more natural level of daylight inside the building. This helps the office workers to refocus their eyes when working and adds towards achieving BREEAM credits in the 'Health and Well Being' category.

Management Category

Under the 'Management' category, Guardian 10.8 Laminated glass, in combination with toughened High Selective 70/41, helps achieve credits for security and safety throughout the large areas of glazing on the building. The use of 10.8 Laminated glass in the unit makeup also provides the necessary sound control in combination with the buildings fabric, which ensures the required acoustic performance is achieved.

Waste Category

In addition to this, using glass on any project can help achieve BREEAM credits under the waste category. Due to the bespoke transport system used to deliver glass, there is little-to-no waste packaging. In addition to this, any cut sizes of glass used on a project are either returned to the glass manufacturer or to a cullet supplier. The waste glass is then recycled into the float glass manufacturing process and used to produce new float glass. Where large areas of glass are used, the potential reduction in construction waste can help a project meet its target under the waste management category of BREEAM.

Building 4 St Paul's Square, is therefore not only an attractive addition to the commercial district, it is also a fantastic feat of sustainable, environmental and healthy building design which has been recognised by its BREEAM rating. The façade fabricator, Linder Facades, has also finished the glazing to the highest standard with very little optical distortion despite the whole façade being supplied in toughened safety glass.

Architect: RHWL Architects
Developer: MUSE
Scheme Developer: ECF
Structural Engineer: Buro Happold
Fabricator: Linder Facades

SunGuard High Selective SN70/41

Guardian LamiGlass 10.8

