



4 Pancras Square King's Cross, London

Location

King's Cross, London

Client

Argent Group Plc

Main Contractor

BAM Construction

Engineer

BAM Construction

Architect

Eric Parry Architects

Tonnage

1,850

The King's Cross development has radically changed a former run-down industrial site in central London into a vibrant business neighbourhood with exceptional sustainability credentials. One of the largest regeneration schemes in Europe, one of the main elements is Pancras Square, seven buildings arranged around a steel-framed wedge-shaped podium.

4 Pancras Square is believed to be the first weathering steel exoskeleton frame building in the UK. The building consists of ten storeys of office above ground, office reception and retail at ground and lower ground floor, with two levels of basement.

Weathering steel provides a striking visual design statement linking to the sites historic background as well as minimising building maintenance. Under the influence of the weather the steel rusts to form a protective layer on its surface negating the need for corrosion protection. It is beneficial when access is restricted for maintenance and used predominantly for infrastructure projects. One of the key considerations when using weathering steel is minimising rust staining; rainwater deflectors were incorporated into the design to direct the flow of water to avoid the public realm and general public.

This building is further unusual in its use of stainless-steel brackets connecting the post tensioned concrete slab flooring to the weathering steel columns. Stainless steel was selected for providing a similar life span and maintenance to weathering steel.

The use of large trusses between levels 1 and 2 reduce the perimeter columns at ground level and open up the public realm space to flow out to the square. To achieve this for the North elevation the sections were site welded in situ working 24 hours a day over a 2-week period on rotation. The columns are all fabricated box sections with internal splices and site welded cover plates to make them invisible. The building has a feature ring beam at Level 10, a highly architectural detail to provide a focal point in the roof garden which also required invisible connections. This is a complex undertaking, very tightly controlled to minimise risk but was critical to realising the Architects intent.