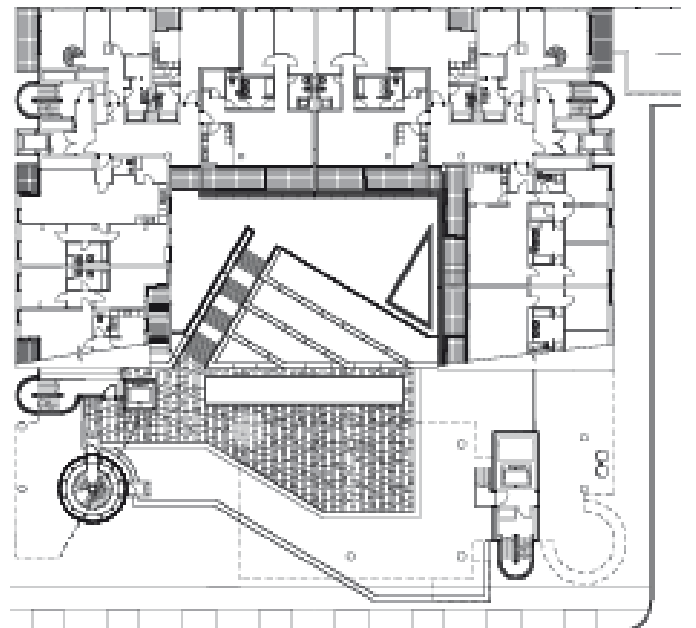




Daimler Chrysler Residentail

Berlin





Place
Berlin, Germany

Date
1993—1999

Client
Daimler Chrysler debis Immobilienmanagement

Area
16,300m² (Building B8)

Cost
DM 55 million

Cost/m²
DM 2,600 per m²

Architect
Richard Rogers Partnership

Structural Engineer
Ove Arup + Partners / Knebel & Schumacher

Services Engineer
rp+sozietät

Construction
Schmidt-Reuter und Partner

Thermal & Acoustic Installation
Müller BBM GmbH

Façade Engineer
Institute für Fassadentechnik IFFT

Integrating low-energy design within a dense urban environment, the buildings optimise passive solar energy, natural ventilation and daylight



Awards

RIBA Award for Buildings in Europe 2000

The brief called for a mixed use scheme comprising office space, housing and retail. The housing complex occupies the upper levels of B8, one of the three blocks which make up the project.

Richard Rogers Partnership chose to open up the South-East side of the blocks, generating a building form that allows light to penetrate into courtyards and internal spaces. The housing is arranged around a terraced, landscaped courtyard, with all the apartments enjoying views out over the park beyond.

One of the main objectives of the design has been to create innovative, low-energy buildings with a high-quality user comfort. Solar radiation and daylighting were analysed for all façades and individual shading solutions have been developed in order to minimise energy use.

By orientating the housing block to the South-East, sunlight penetration into the courtyard and living spaces beyond is maximised. The glazing areas to the north-east and north-

west façades are comparatively small which reduces heat loss during the winter months. The high proportion of glazing to the south-west and south-east elevations results in a hierarchy of spaces with the living areas opening onto the courtyard and the majority of bedrooms situated to the north-east / north-west sides.

The passive use of solar energy is maximised through winter gardens on the south-west and south-east elevations. The winter gardens act as direct solar gain spaces and buffer zones, with pre-heated air used to ventilate or warm the internal accommodation space in winter. Sun shading provided by aluminium louvres on sliding tracks prevents overheating in summer.

The double-height penthouses are fully glazed to the courtyard side. The glazing system is supported by a water-filled steel structure which acts as a radiator during the winter. Electronically operated sun-shading devices and opening windows minimise solar gain and maximise natural ventilation during the summer.