

● british airways



It beggars belief, but the glittering Waterside development near Heathrow Airport, opened in July as the new £200 million business centre of British Airways plc, used to be one of London's most contaminated and notorious dumps. "Landfill site" is the more polite terminology, but "dump" is infinitely the more appropriate.

Prince Charles, who wasn't too enamoured by the appearance of the building, was clearly impressed by BA's total commitment to green design when he officially opened the site. Not least because the 280 acres of

parkland, in which the building is situated, will be a nature reserve and public retreat, opened to all-comers in 1999.

Energy efficiency and the environment took centre stage when the plans were made, back in 1988, to centralise BA's headquarters. The Norwegian architect, Niels Torp, who won the competition to design the new business centre, focused heavily on efficiency, as well as aesthetics.

The company wanted an environment where the use of new technology matched the needs of staff, while being as efficient as possible.

British Airways has created an energy-efficient business centre close to Heathrow Airport. Richard Lafferty reports

The world's favourite offices?

◀ **Mechanical and passive systems have combined to help Waterside achieve a 'very good' BREEAM rating. Air conditioning had to be installed due to the proximity of Heathrow Airport**

The materials used for the building came from just about every corner of the earth, although a strong Scandinavian influence is unmistakable.

The building comprises six, four-storey U-shaped 'houses' which back onto a 175m glazed atrium, appropriately called the Street. This is the main focal point of the building where people meet or even work in a pavement cafe or an espresso bar. It has a bank, supermarket and florist, while on the lower level there is a financial centre, hair and beauty salon and aircraft fuselage section for cabin crew training.

The man in charge of building facilities at Waterside, is Alan Glenister. He explained: "Control of the Street environment is achieved by a combination of mechanical and passive systems, but, in keeping with the concept, is not conditioned, but tempered in specific areas."

Therefore, because of its vast size, the Street could not be conditioned as a traditional atrium, rather as a series of micro-climates. "The street will therefore reflect outside conditions and be cooler in winter and warmer in summer. Temperatures within the Street may vary between 10°C in winter and 35°C in summer in the region immediately beneath the roof glazing," said Glenister.

This is possible due to the use of solar control glazing - a system using high performance solar control glass which regulates temperature.

He continues: "Underfloor heating is provided in various areas of the Street, especially in those areas where people will be sitting - for example, the coffee bar, café and reception.

"In addition to heating the Street, it ensures occupants won't suffer cold feet from masonry floors!"

Perimeter heating is provided to each of the side street glazed walls and half plate glazed walls, which, together with electric trace heating in the glazing mullions, will obviate cold draughts from the glazing. And a tempered air supply is provided to the

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▲ Waterside comprises six, four-storey 'houses' backing on to a 175m atrium. This 'Street', with shops and bars, provides a focus for the site

sloping planar glazed walls at the north and south ends of the Street.

Each of the high level Street bridges are provided with a conditioned air supply to temper conditions for people walking across the bridges. Air is distributed within ductwork running inside the bridge structure and is supplied at low level, via floor outlets.

Even more interesting is the exhaust air transfer system. Rather than dumping air from offices it is transferred to the Street to supplement its heating or cooling systems. There are three points of supply; two in lift pits, the other coming from the stair lobby which leads to the parade of shops.

Meanwhile, each of the office landings are provided with two recess floor-mounted fan convector units, which supply warm re-circulated air to the lobby, via linear floor grilles.

Glenister admits that a fully air-conditioned building is not necessarily the most efficient or environmentally friendly. But, in the Waterside development, bang next door to a massive airport with all the attending noise and pollution, there was no option. He is confident that if weren't for the air conditioning, the BREEAM rat-

British Airways has attempted to create an efficient environment where new technology matches the needs of its staff ▶

ing of "very good" would have been elevated to one of "excellent".

"We needed a system which would effectively filter kerosene out the atmosphere and eradicate the sounds of planes taking off and landing, not to mention the noise that comes from being sandwiched between the M4 and the M25," added Glenister.

The bustle of the Street is a contrast to the calm and informal open plan work areas. These are designed for team work, for information sharing and to allow space to be used efficiently. Hot-desking, where people can effectively work from where they like in the office, is a buzz-word at Waterside.



As in the Street, the level of natural light in the 50,000m² of office space has been "maximised". Large windows with low level sills and different ceiling heights, materials and colours help give each house a distinctive look and feel.

Each of the six houses has its own boilers which were assembled off-site, and, according to Glenister, "minimise energy consumption by means of high efficiency modulation, low NOx burners".

Boilers, air conditioning and lighting are all connected to a T&A BMS system, which Glenister says allows the building to "run like a five-star hotel". BA wouldn't reveal running costs in this intelligent building, which needs to be up and running before any benchmarking can take place, Glenister insists.

The exterior of the building is a combination of limestone cladding and the grey coated aluminium and glass of the window frames and the roof of the Street. This design gives the building a simultaneous degree of uniformity and individuality.

But the most physically striking thing is the presence of water everywhere - pools, fountains and an enormous lake just outside the Street. Inside the building, water management is also handled by Glenister. The decorative water is all re-cycled and washroom water is "carefully controlled". Wherever possible rainwater is used for urinal and toilet flushing.

Among the 2,800 people installed at Waterside is Bob Ayling, BA's chief executive. He said: "We want to see the principals BA believes in extend to the construction of the building and parkland."

The latter is truly astonishing, considering its former identity as a tip. Even the three rivers running through the Waterside development, once soiled and dying with industrial effluent are now spotless, home to abundant wildlife, including trout, heron and kingfishers (a fine specimen of which presented itself on the day EiBI visited the site).

So far, 70,000 trees have been planted and 80,000m³ of waste removed. Without a classical archway in sight, it was enough to put a watery smile on Prince Charles' face. **EiBI**

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