

# Urbis

## 1. Project Basics

Location: Manchester, UK

Latitude/Longitude: 53°N 2°W

HDD, CDD; annual precipitation: ?

Building Type: Exhibition Gallery and Public Space

Square Footage; Stories: ?, 6 stories

Completion Date: 2002

Client: Manchester City Council

Design: Ian Simpson Architects and M&E Consulting Engineers

## 2. Background and Context

Urbis is a museum for modern living. It is dedicated to exploring urban culture and cities of today and tomorrow. Its purpose is to challenge ideas and concepts related to the development of cities while highlighting environmental and social issues that need to be considered in the future development of the urban environment.

The building was funded as a Millenium Commission project as part of the reconstruction of Central Manchester after an IRA bombing in 1996.



Photo by: Kaishu Tai



Photo by: Ade Broom

### 3. Design Intent and Validation

Urbis is positioned along the edge of the site, leaving open space for the Cathedral Gardens. The building shape follows the curves and contours of the existing streets. It is an interesting juxtaposition of a glass building next to older brick and stone structures where the glass actually reflects the surrounding buildings.

### 4. Key Design Strategies

The museum is designed with six floors. The first four floors are used for exhibition spaces. The top two floors contain a restaurant and a bar with separate access from the ground floor.

The whole building is contained within a glass skin comprised of 2,200 glazed units, each one individually fashioned to form the sculptured surface of the building. Sand-blasted glass with clear panels make much of the glazing semi-obscured while still allowing a variety of views both inside and outside the building. A double-glazing system helps the building be energy-efficient and creates a streamlined surface.

The roof is clad in pre-patinated copper to blend with the bluish-green hue of the external glazing. It slopes and cants towards the city from the first floor foyer up to the sixth floor. An angled skylight forms an emphatic spine to the building following the curve of the building and allowing light to penetrate central interior spaces. At the peak of the roof is the signature sculptural “funicular lift structure.”

The building has a glass elevator that rises 42m at a 45° angle. It lifts passengers to the fourth floor to start their exploration of the museum. The elevator is a single-lift system operated using counterweight and is the first of its kind in Europe.



<<http://www.communityfm.com>>



<<http://www.metamute.com>>



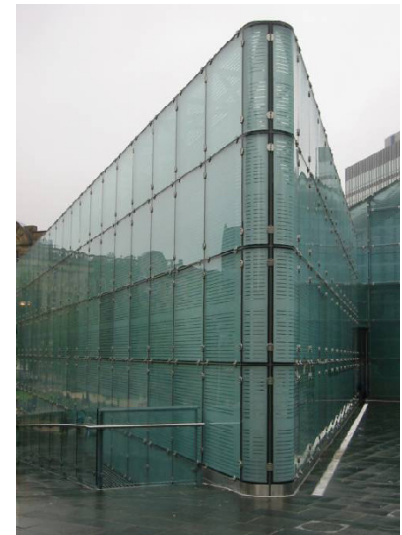
<<http://www.nik.co.uk>>



Photo by: Ade Broom



Photo by: Aidan O'Rourke



<<http://thedarkroom.org.uk>>



Photo by: Ade Broom

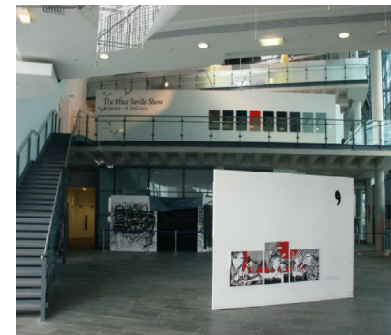
## 5. Performance Study

The ground and exhibition floors are conditioned with eight Menerga Adsolair™ air-conditioning units in conjunction with a displacement ventilation system. The total supply air volume is 33.0meter<sup>3</sup>/second.

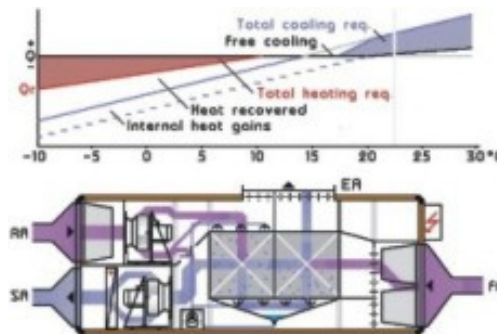
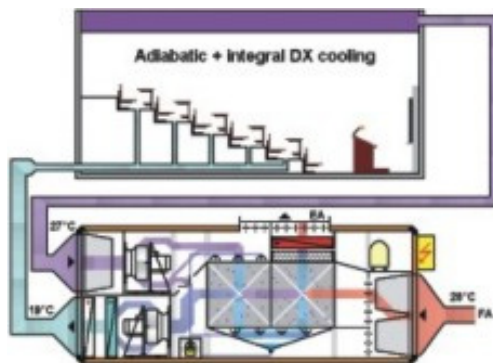
In winter, the two-stage heat recovery achieves temperature efficiencies of up to 80%, therefore minimizing the ventilation heating requirement. In summer, when free cooling is no longer available, the indirect adiabatic cooling process cools the air supply by up to 10°C. The integral DX cooling systems are only required during peak summer conditions. All heat from the cooling systems is rejected into the exhaust air, therefore no external condensing unit or chiller is necessary. The cooling power input is reduced by more than 50% when compared to an air-cooled chiller solution. Full use of nighttime cooling is used to reduce the temperature of the fabric overnight in summer, and a special buffer zone prevents excessive heat gains.



Photo by: Richard P. Chapman



<<http://www.cerysmaticfactory.info>>



<<http://www.menerga.ltd.uk>>



## 6. Further Information

For further information contact:

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## 7. References

Powell, Kenneth. *New Architecture in Britain*. London: Merrell, 2003.

<<http://www.manchesteronline.co.uk>>

<<http://www.menerga.ltd.uk/casestudies/Urbis.htm>>

<<http://www.urbis.org.uk>>

## 8. Map and Transport Options

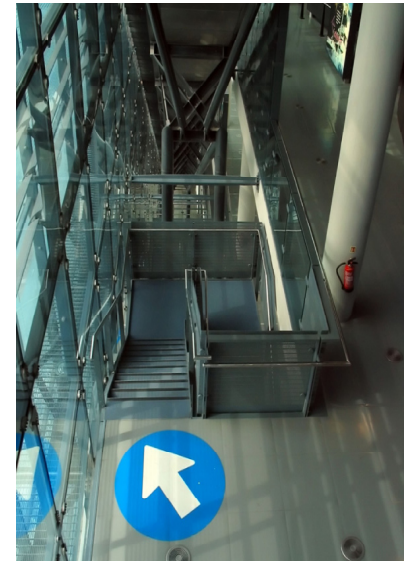
Trains and buses from London to Manchester operate daily. Cost is £12–311. Travel time 2h15m.

<<http://www.megabus.co.uk>>

<<http://www.thetrainline.com>>

Urbis is open Tuesday–Sunday and Bank Holidays, 10am–6pm.

Case Study by Amy Probert, Spring 2006



<<http://thedarkroom.org.uk>>



<<http://www.urbis.org.uk>>