

BATTLE McCARTHY ©

Consulting Engineers & Landscape Architects



PROJECT:

National Glass Centre, Sunderland

CLIENT:

Tyne & Wear Development Corp.

ARCHITECTS:

Andrew Gollifer Associates

BM SERVICES:

Building Services & Environmental Design

VALUE:

£9.6million (approx)

DESIGN BRIEF

The National Glass Centre aims to promote glass in design, art and technology through exhibitions and education. The centre contains a variety of activities, including a glass making factory, workshops, exhibition space and visitor facilities. The centre also houses the University of Sunderland's Glass and Ceramics Department and the International Institute for Research in Glass. Glass has been used extensively in construction in a number of innovative ways.

DESIGN INITIATIVES/ACTIONS UNDERTAKEN

The National Glass Centre sits in a picturesque location on the north bank of the River Wear. It has been designed to meet the needs for the demand of flexible exhibition space and working factory units, while taking a responsible view of wider issues of the total environment. An important design area investigated was the consideration of low energy systems and energy building design, the investigation of the most suitable construction of the glazed facade was combined with the feasibility study of reclaiming heat from the glass making factory to produce a naturally ventilated foyer area. The space was analysed using a thermal computer simulation. To meet these needs the outline scheme has been designed taking into account a number of important engineering objectives as shown below.

ENGINEERING OBJECTIVES

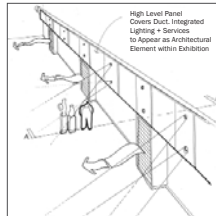
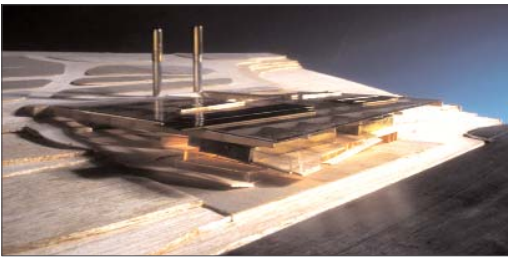
- Maximise human comfort in terms of:
 - Daylight
 - Air Quality
 - Acoustics
- Minimise running costs
- Minimise capital costs
- Minimise maintenance costs



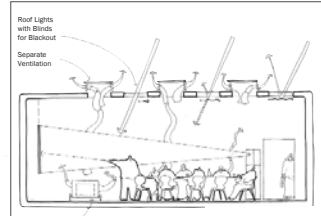
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The National Glass Centre



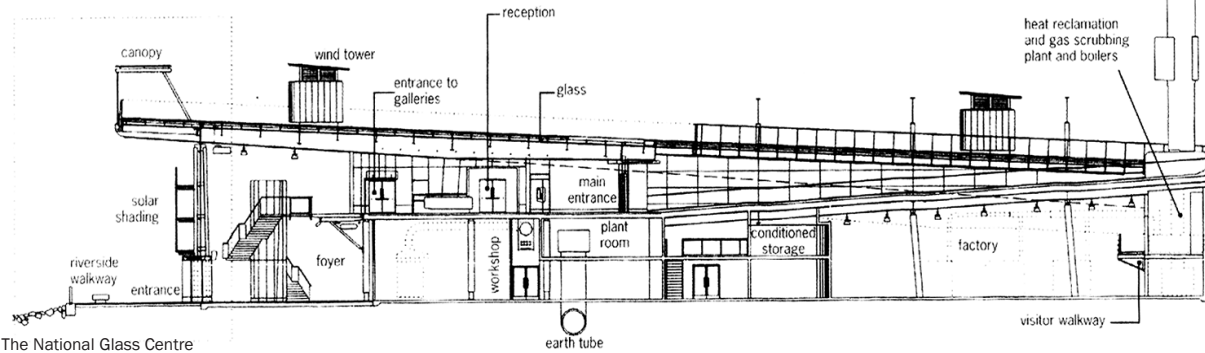
Elements of environmental Control to be integrated into exhibition space



Conference Room

chimney

Architects Initial Design Model



The National Glass Centre



Surface of Glass roof under construction



The National Glass Centre



Fume Extraction Chimney