

BATTLE McCARTHY ©

Consulting Engineers & Landscape Architects



PROJECT:

Peckham Library

CLIENT:

London Borough of Southwark

ARCHITECTS:

Alsop Architects

BM SERVICES:

Building Services (MEP) Engineering
& Environmental Design

VALUE:

£5.5 million

DESIGN BRIEF

To provide building services engineering for a new library which minimises the need for mechanical systems and fossil fuels by maximising the use of natural energies such as wind, sun and daylight.



Ceiling Lights

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DESIGN INITIATIVES/ACTIONS UNDERTAKEN

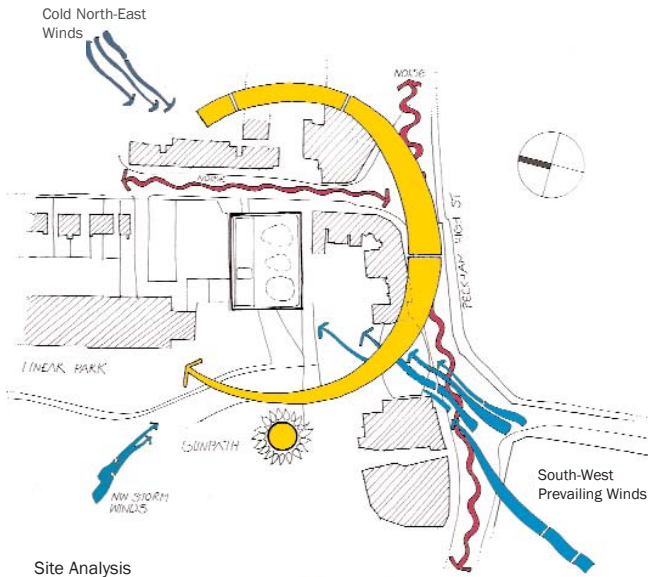
The "L" shaped design of the building creates a natural, sheltered meeting area in front of the library. Combined with the generous plaza surrounding it, the library has become the centre of a busy hub, rather than just another building on a street. The cantilevered overhang also shades the façade from the sun, an important factor as the running costs had to be kept to a minimum, ruling out the installation of an air-conditioning system.

The bright glass on the north side allows a large amount of natural daylight to illuminate the building (further reducing running costs), whilst facing in a direction which prevents the whole place becoming a giant greenhouse. The concrete frame is intended to allow the building to cool naturally, and the "red beret" on the roof acts as a shade for the high level ventilation opening and roof lights. The main public lending library element of the building (a double height space) is deliberately raised above the hubbub below, allowing readers the opportunity for quiet reflection as they browse through the books or admire the panoramic views of central London and beyond.

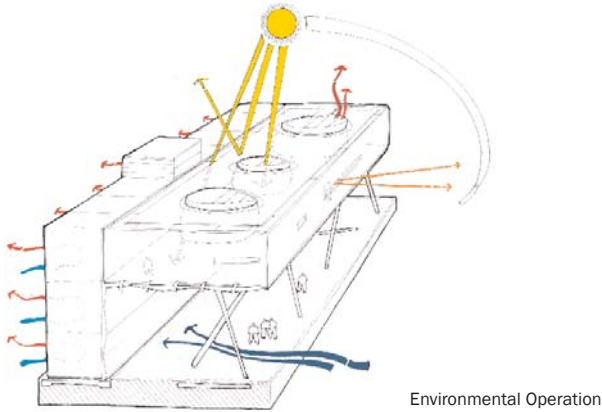
The building is naturally ventilated for most of the year, using high level roof lights and natural cross ventilation. In the summer, daily temperatures are kept low by night time cooling. Double-glazing on all façades and high levels of thermal insulation reduce the need for heating energy in the winter.

AWARDS

Civic Trust Award	2002
British Construction Industry Award, Best Building <i>Special Award for Social Contribution</i>	2001
Design Sense Awards (shortlisted)	2001
Stirling Prize	2000



Site Analysis



Environmental Operation

The water systems in the building reduce water usage when compared to typical libraries of this size. There are no water storage units on site. The domestic water services for the building are supplied directly from the incoming mains water supply. Hot and cold water services to wash hand basins have regulators. Urinal cisterns are fitted with cisternisers and W.C. cisterns with low water flush systems.

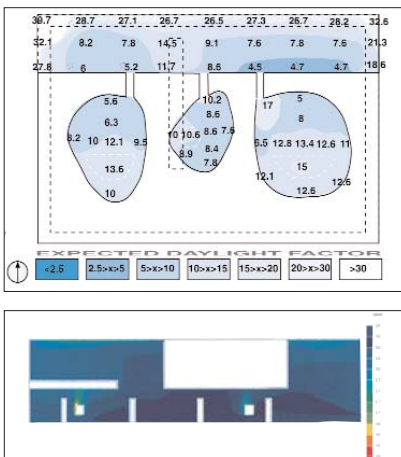
Daylight analysis provided a design solution that makes it possible to operate the building without the use of artificial light for significant periods of the year. This design saves energy and creates a stimulating environment that provides ideal reading/working conditions and visual comfort.



Internal



Lighting



CFD Analysis of the Building

