

# BATTLE McCARTHY ©

Consulting Engineers & Landscape Architects



## PROJECT:

Hendon, Learning Resource Centre

## CLIENT:

Middlesex University

## ARCHITECTS:

BPR Architects

## BM SERVICES:

Structural, Environmental & Building Services (MEP)

## VALUE:

£12million (approx)

## DESIGN BRIEF

The Hendon Learning Resource Centre is a major new 4 storey building in the heart of the Hendon campus of Middlesex University and as such, it is the Client's requirement that the building should be considered a landmark development. It was particularly important to ensure that the structural engineering, architecture, building services engineering and the landscape are all integrated to reflect the Client's aspirations and concern for the environment.

The primary design objective has been to develop a low energy design, which is simple and economic to construct and maintain, whilst providing the Client with the flexibility necessary.

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## DESIGN INITIATIVES/ACTIONS UNDERTAKEN

The scheme is based upon the innovative use of proven technology combined with progressive design solutions with a high degree of flexibility and has the following attributes:

- Optimisation of low embodied environmental impact materials, by reducing the volume of the high environmental impact materials
- Provision of high thermal mass floor to the south allowing a reduction to the cooling load during the summer and the regulation of the internal temperature during the winter.
- Integration of structure and service routes to optimise useable space and hence minimise materials
- Optimisation of prefabrication of primary structural elements for quality and speed of erection
- Optimisation the use of recycled material
- High acoustic insulation standards
- Raised floor displacement ventilation with solar controlled facades with high thermal insulation and very low infiltration losses.

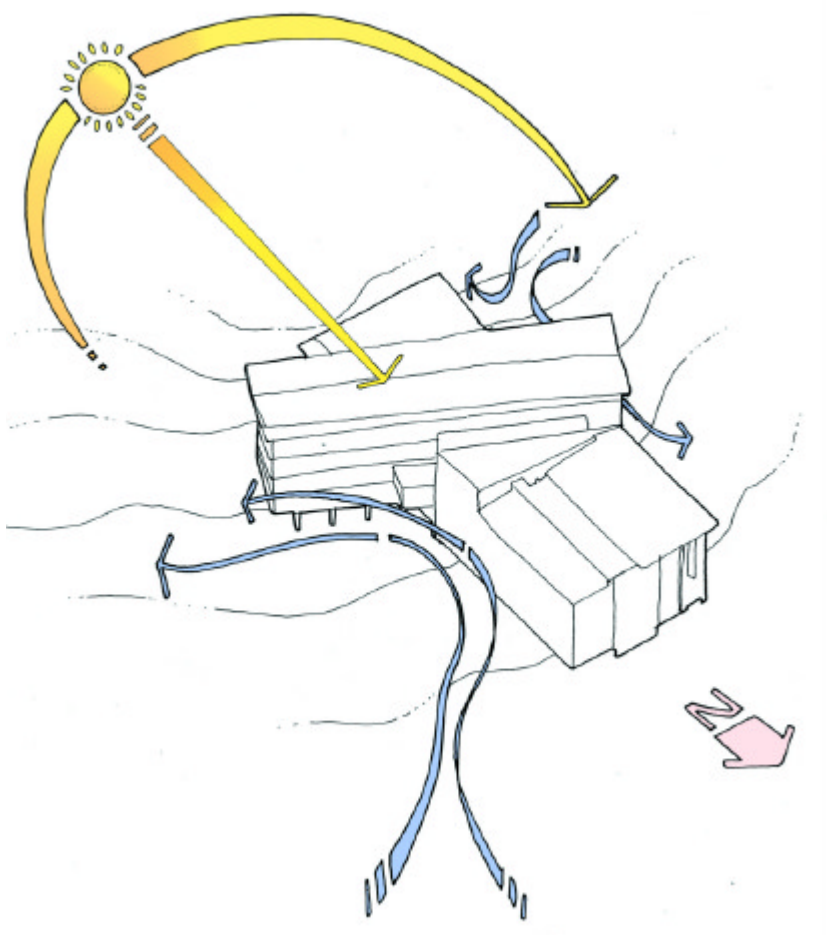
Work began on site in May 2003 and by March 2004 98% of the building frame was complete and fit out began. Relocation to the new facilities began in July 2004 while the final stages of fitout continued on site. The building was officially opened as the Sheppard Library in September 2004.



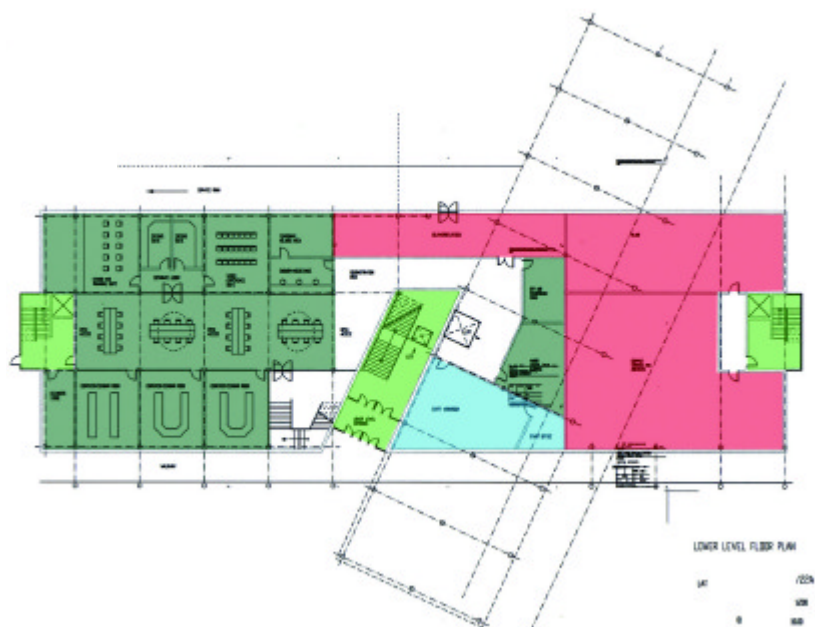
**Environmental impact of building materials:**

The following environmental issues were considered during the materials selection and specification process;

- Embodied energy [climate change, Fossil fuel depletion]
- Ozone depletion
- Freight transport
- Human toxicity
- Waste disposal
- Water extraction
- Acid deposition
- Ecotoxicity
- Eutrophication
- Summer smog
- Minerals extraction



Site Analysis



Typical floor plan and ventilation strategy



The building in the final stages of fitout - February 2005