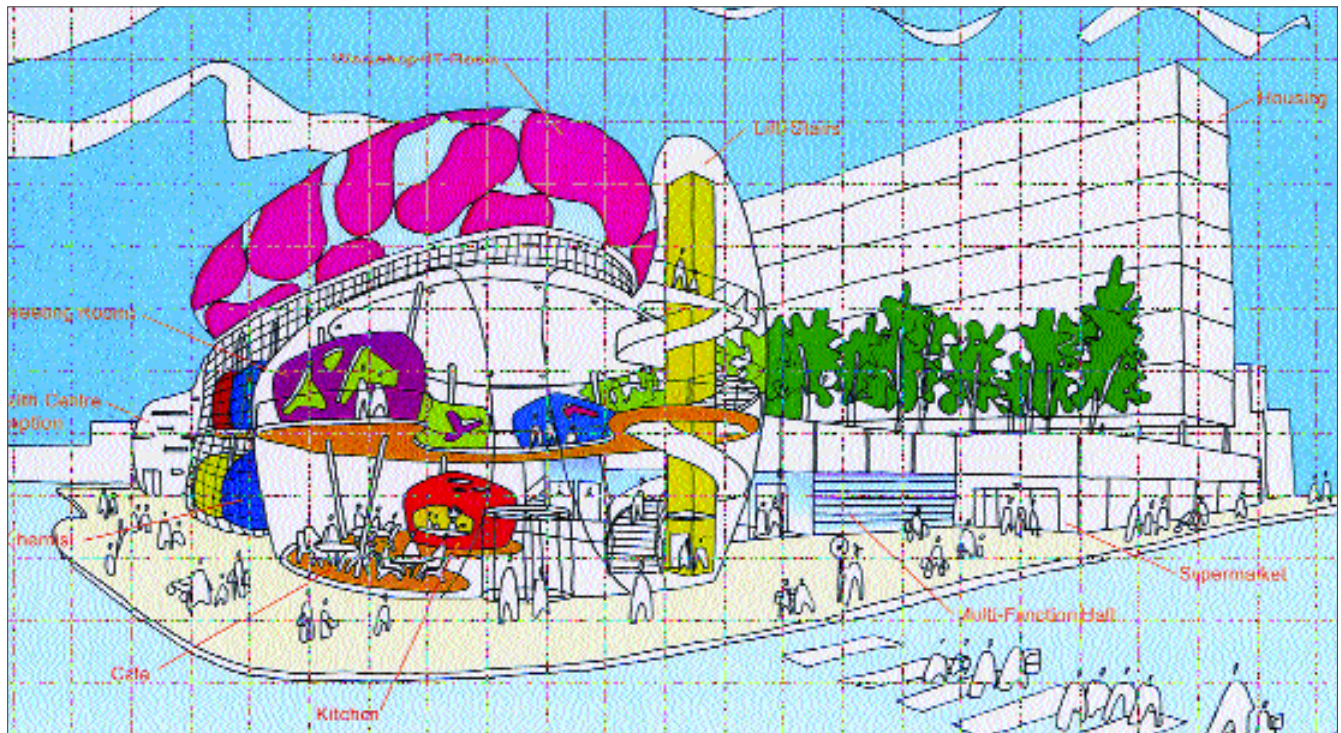


BATTLE McCARTHY ©

Consulting Engineers & Landscape Architects



PROJECT:

Stonebridge Health & Community Centre, London

CLIENT:

Stonebridge Housing Action Trust

ARCHITECTS:

Alsop Architects

BM SERVICES:

Building Services & Environmental Engineering

VALUE:

£12million (approx)

DESIGN BRIEF

The Health and Community Centre building is to be the centrepiece of the residential transformation being undertaken at Stonebridge, a former run down area of north-west London. The Client brief was to provide a landmark building which would create a positive interest in the Stonebridge area and would help generate a sense of ownership and civic pride. The Client was well aware of the merits of investing in energy conservation to reduce fuel bills, minimise adverse impact on the environment and to promote the good image of the Housing Action Trust.

DESIGN INITIATIVES/ACTIONS UNDERTAKEN

Battle McCarthy's challenge was to design an energy efficient building in conjunction with:

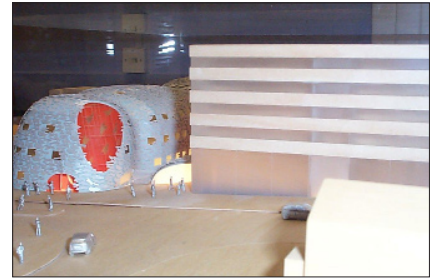
- Limitations of building orientation and location.
- A unique architectural design.
- Acoustic penetration and security requirements and compliance with regulations appertaining to the healthcare premises.

The site is a narrow strip of land on a brownfield site, that necessitated that the building be located adjacent a public highway, which created problems regarding sound penetration and privacy issues and security of the ground floor.

The architectural design included an outer envelope comprising of three dimensionally curved surfaces leaning in various angles and covered with vitreous enamel panels. Battle McCarthy assisted the architect in specifying the construction of the envelope with regard to ensuring a thermal performance better than existing standards to minimise heat loss, natural ventilation openings to minimise the requirements for air handling plant, solar shading to minimise heat gain and natural daylighting to reduce the necessity for artificial lighting and to enable workers and visitors to enjoy the benefits of a glare free naturally lit environment. All services outlets had to be carefully co-ordinated to minimise on the impact created by the unique architectural design.

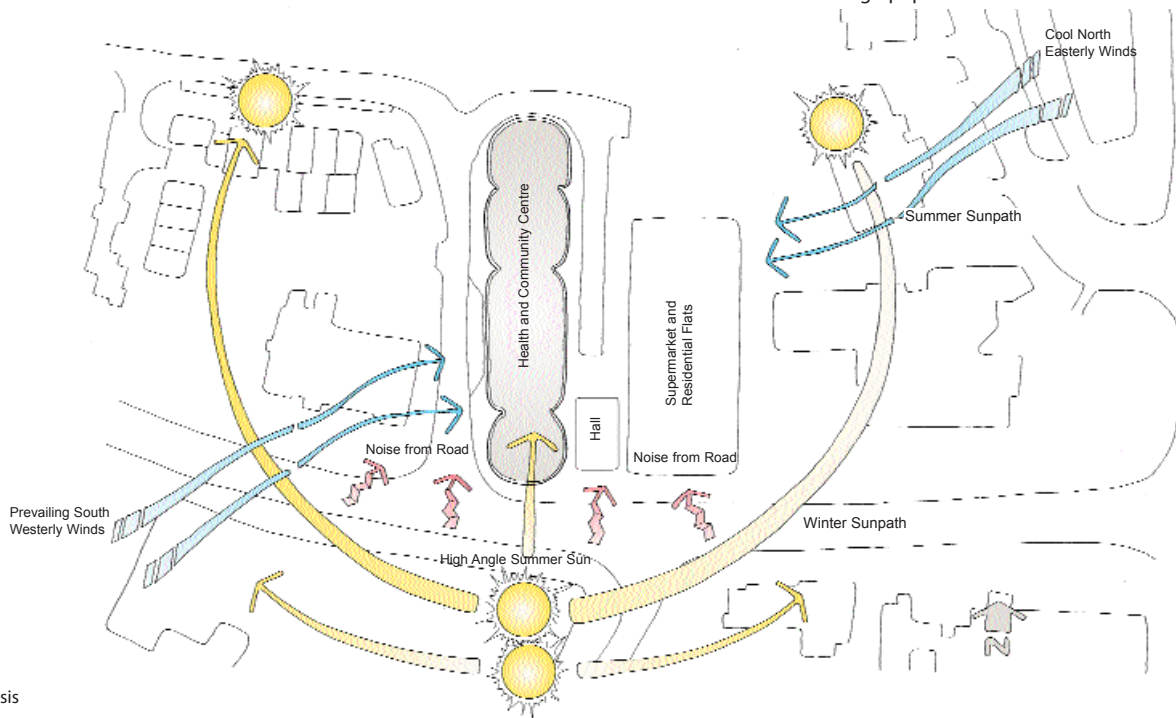
Additionally healthcare regulations required that temperatures be maintained within stipulated parameters in certain areas. There were also stringent requirements to ensure that sound privacy was maintained in healthcare areas and that maintaining cleanliness was high on the list of priorities.

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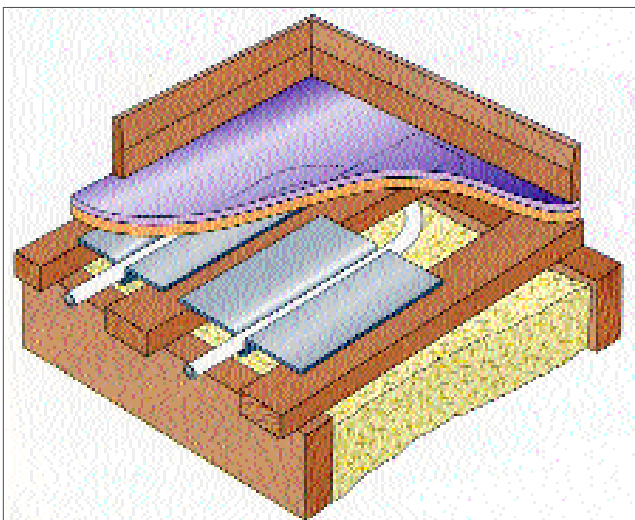


Battle McCarthy's solution was to design a building which was essentially naturally ventilated, heated by an underfloor heating system utilising highly efficient condensing boilers. The underfloor heating solution ensured maximum utilisation of space and that no additional surfaces requiring cleaning. VRV cooling/heating units were specified to areas only where natural ventilation could cause problems with sound intrusion/privacy and security and in the few areas where natural ventilation would not be sufficient to satisfy comfort conditions in high population areas.

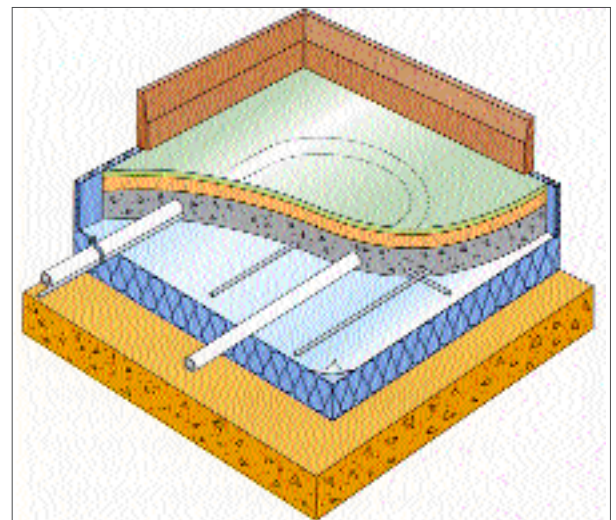
Model



Site Analysis



Suspended Floor



Solid Floor