

Norton Park, Edinburgh, Scotland, U.K.

Building Name: NORTON PARK
 Building Type: Traditional stone built School dating from 1903
 Location: 57 Albion Road, Edinburgh, UK
 Status: Completed May 1998
 Owner: Albion Trust, Norton Park, Edinburgh Scotland
 Design Team: Architect: Burnett Pollock Associates
 Quantity Surveyor: Pottie Wilson Partnership
 Structural Engineer: Wren & Bell
 Services Engineer: Ove Arup

Building Function Type: Headquarters Offices for 25 Voluntary Organisations
 Site Area: 3,750m²
 Gross Floor Area: 3,250m² (Nett lettable 2,670m² after conversion, 1,940m² before conversion)
 Occupancy: 250-300 persons
 Legislation: Historically significant building, Grade B Listed

Projected annual operating energy consumption: 0.438 GJ/m ²	
Projected annual emissions of:	
CO ₂	23.65 Kg/m ²
SO ₂	None
NO _x	x 8.55 kg/m ²
Methane	None
Particulates	None
Projected annual consumption of potable water: 980,000 Litres	

Detailed information not able to be included in the poster is given in the Project's conference hand-out document.

Building Conservation Measures

- Regeneration of a deprived area of the city
- Stonework restored using traditional materials eg lime mortar
- Existing structure retained with minor alterations
- Minimal loss of original fabric
- Unnecessary materials and components such as suspended ceilings avoided
- Construction materials saved and substantially reused such as dressed stone, cast iron rainwater goods, roof slates, cast iron radiators, ceramic tiles, timber linings, floor boarding and ironmongery
- Second hand materials used in repairs eg roof slates
- Timber and timber products sourced from sustainable supplies
- Traditional materials used in restoration for both conservation and ecological reasons

Energy Conservation Measures

- Thermal insulation in walls and roofs maximised (U-values of 0.203 and 0.12 respectively)
- High efficiency double glazed argon gas filled timber windows behind existing restored traditional sash and case type (U-value of 0.9)
- Use of efficient natural gas condensing boilers
- Novel heat recovery from underside of roof slating (Napier University prototype)
- Avoidance of air conditioning - user controlled direct fresh air ventilation
- Heat recovered from extracted air
- Zoned central heating and high efficiency lighting controlled by BEMS
- Adjustable solar shading light shelves
- Efficient use of space due to shared facilities and services and mezzanine galleries

Water Reduction Measures

- Construction waste reused eg broken brick and concrete used in ground fill
- Construction waste salvaged as reusable scrap or recycled eg timber for particle board
- Final construction waste segregated for efficient disposal
- Rainwater collected for 'grey' water use in toilet flushing
- Recycling of future user wastes planned for by offering separated collection facilities

Car Use Restriction Measures

- Minimal car parking provision, high proportion reserved for disabled spaces
- Extensive secure bicycle parking
- Central location on popular bus routes and potential for rail link
- Preference for locally sourced products and services

Enhancement of the Indoor Environment

- Cafe incorporated in design
- Provision of a Nursery and Creche
- Known allergenic and toxic materials avoided in construction
- Chemicals involved in treatment of both new and existing timbers avoided
- Mezzanines fitted with natural fibre carpeting
- Natural rubber alternatives to PVC
- Use of 'Greener' paints & coatings
- Linoleum preferred to vinyl

Enhancement of the Outdoor Environment

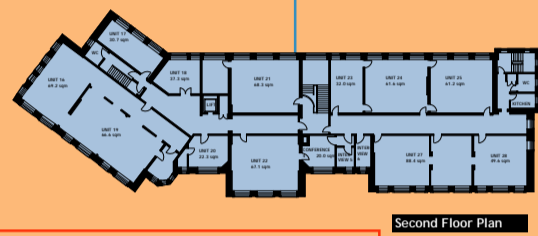
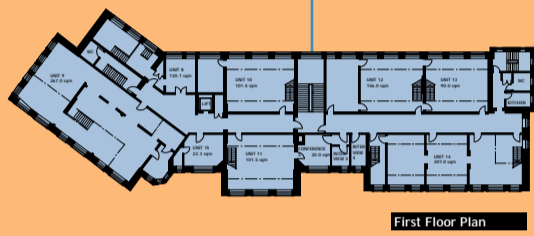
- Reed bed purification of surplus waste water
- Wildlife friendly gardens planned to replace the hard asphalt surface and to purify air locally
- Roof mounted bat boxes installed
- Insect friendly external lighting

Measures taken to Ensure Building Longevity

- 'Barrier free' disabled access provided throughout the premises
- Enhanced traditional detailing such as lead cappings to protect exposed stonework
- Sinking fund established to deal with cyclical repairs and maintenance
- Extensive use of high quality renewable materials

Features of Interest Concerning the Design Process

- The basic Project objectives were:
 - To achieve maximum sustainability in the wider sense of long term social, economic & environmental factors
 - To restore a valuable listed building and secure its beneficial use for posterity
 - To provide flexible, healthy, quality offices with shared resources and facilities
- Specified materials and components subjected to an environmental audit
- Materials & systems associated with sick building syndrome avoided
- Innovative new wood product based trunking system alternative to PVC
- Commitment to community involvement in project
- Consultants & contractors selected on the basis of both employment policies and practices and community and environmental probity
- Design, construction and management decisions weighed for their upstream & downstream costs in terms of both finance & environmental impact



Attic

Tank

Ground Floor Plan

First Floor Plan

Second Floor Plan

Facade

Corridor

Mezzanine

