

<h1>Case Study No.13</h1>				
<h2>Car-free Sustainable Housing</h2>				
Slateford Green, Edinburgh, Canmore Housing Association and Malcolm Homes Ltd				
Type:	New build tenement flats			
Number of units:	120 (69 rented, 25 Low Cost Home Ownership (LCHO), 26 for sale)			
SAP rating:	96			
U-values:	0.18 Wm ² C roof 0.2 Wm ² C walls			
Fuel costs:	£17 to £30 per annum depending on location			
Works costs:	Canmore £7.31 million; Malcolm Homes £2.24 million			
Unit cost:	Rented/LCHO £77,745 Owner occupied £86,192			
Completion date:	March 2000			
Contacts:	Client:	Canmore Housing Association and Malcolm Homes Ltd	Graham Harper	0131 623 7378
	Architect:	Hackland and Dore Architects	Alastair Hackland	0131 538 7707
	Builder:	Hart Builders (Edinburgh) Ltd		01875 610891

Key features

Slateford Green is an innovative development exhibiting many sustainability features, including:

- car-free
- brownfield site
- mixed tenure
- materials with minimal environmental impact
- super insulation
- passive stack ventilation

Car-free

Slateford Green is built on the former railway goods yard at Gorgie, close to Haymarket and with good access to many facilities and public transport. It is thus an ideal site for a car-free residential development. The space that would have been devoted to parking spaces has instead been used for gardens, children's play areas and allotments. Car ownership levels among Canmore's tenants as a whole are less than 20%, and the involvement of Malcolm Homes to produce a mixed tenure development not only provides a socially balanced community but also demonstrates the financial viability of housing for sale that is car-free and incorporates sustainable construction methods.

A Section 75 agreement under the Town and Country Planning (Scotland) Act 1997 requires Canmore to impose obligations in each tenancy agreement by which the tenant will undertake not to park any vehicle within the development. Complementary to the development is the City Car Club, a joint venture by Edinburgh City Council and Budget Car Rental. Already operational elsewhere in Edinburgh, Slateford Green will be the second site in the city. For an annual fee, members of the club have access to a fleet of vehicles which can be hired locally by the hour.

Scheme Design

A design competition was won by Hackland and Dore of Edinburgh. The design is derived from the traditional Edinburgh tenement block, with its sheltered courtyard form adapted to the site and maximizing solar gain. There are 120 flats and a community hall within a 2-4 storey perimeter block. The block encloses terraced gardens and is surrounded by natural landscape and allotments. No vehicles enter the courtyard and minimal parking is available for people with disabilities and essential visitors.



Figure 13.1 An illustration of the scheme showing car-free space within the

The construction is lightweight dry-fix with reduced costs through prefabrication and waste reduction. Materials have been sourced for minimal environmental impact, reduced maintenance and their capacity for recycling.

Energy

Energy saving is achieved mainly by super insulation. The structure is clad with a breathing wall with 175mm of Warmcel with panel-vent sheathing. Most flats have conservatories providing passive solar gain to living spaces orientated into the south-facing courtyard. The intention had been to incorporate a district heating system, the primary heat source being reject condensate from the nearby North British Distillery, available at low cost. However, legal obstacles meant that this had to be abandoned in favour of the gas-fired boilers serving each stair which were originally intended only to provide back-up.

Natural ventilation is encouraged by passive stack ventilation and there is provision for retrofitting of photovoltaic panels to power lighting if and when practical cost effective products become available.