



after refurbishment



GENERAL INFORMATION	
Building owner	Dublin City Council
Address	Mary Aikenhead House
Number of dwellings	150 before and after refurbishment
Number of floors	4
Average size of the dwellings	47.22 m ² before and after refurbishment
Total heated floor area	7083 m ² before and after refurbishment
Year of construction	1940
Year of refurbishment	2000
Has the refurbishment been carried out while the dwelling was occupied?	yes
Has an independent quality assurance been carried out?	no
Total building costs	43.472 €
Building costs concerning energy recovery	17.132 €

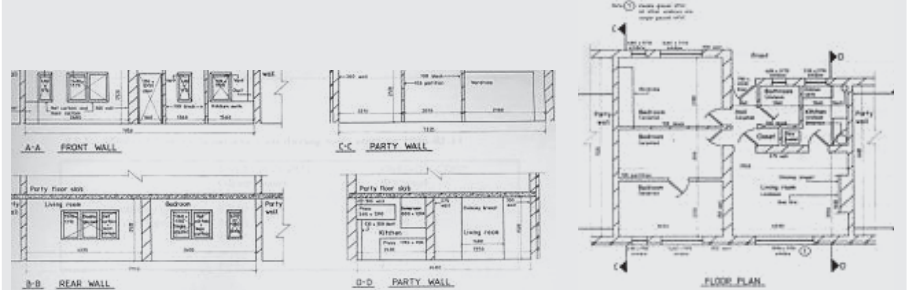
INITIAL SITUATION/LOCAL CONDITION	The development was built in the 1940's, the construction consists of 320-100mm internal walls and solid concrete floors. The windows were single glazed. The units were heated by a single gas fire in the central living room.
TYPE OF REFURBISHMENT (MEASURES WHICH HAVE BEEN CARRIED OUT)	<ul style="list-style-type: none"> • Double glazed UPVC windows • Gas fired central heating system • Draft proofing and roof insulation • Dry lining
WHY HAVE THE MENTIONED MEASURES BEEN CARRIED OUT?	To reduce heat loss through building fabrics, to help alleviate fuel poverty, preservation of housing stock

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PLANS



ENERGY RELATED ACTIVITIES

- | | |
|---------------------|---|
| Exterior components | <ul style="list-style-type: none"> • Double glazed UVPC air filled windows U-value 3 • Internal dry lining • Roof insulation • Draft proofing |
| Systems engineering | 79% efficient central gas fired system |

ENERGY RELATED INDICATORS

	Initial situation	After refurbishment	Reduction
Energy performance	984 kWh/m ² /yr	234 kWh/m ² /yr	76 %
Energy consumption	6969672 kWh/a	1657422 kWh/a	76 %
CO ₂ -emission	345.3 kg/m ² /yr	47.5 kg/m ² /yr	297 kg/m ² a
Heating system	Single gas fire	79 % efficient gas fired central heating	
DHW-system	None	None	
Monitoring system	None		
Regional energy costs	114.089 €		

PROMOTION

SUBSIDIES

None

STATEMENT

Kieran Gallagher, Deputy City Architect, Dublin City Council

The overall objective of Dublin City Councils refurbishment programme was to demonstrate a high standard of energy-efficiency in refurbished social housing apartments within an overall integrated area plan for social, economic & environmental regeneration of the inner city. Energy Refurbishment was considered in terms of reduction of greenhouse gases, combating full poverty and preservation of housing stock. Codema later secured a grant of € 500,000 for the energy efficient refurbishment of 100 Dublin City social housing flats in 2003, which facilitated higher specifications for fabric insulation, high performing windows and the installation of an efficient heating system

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