

BEST PRACTICE PROGRAMME

General Information Leaflet

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High Rise Housing for the Nineties and Beyond

There are over five thousand blocks of flats in the UK, comprising over half a million individual dwellings and accounting for about 10 per cent of local authority housing units. The proportion varies widely from authority to authority across the country, however, and more than half of local authorities do not own a single block.

Most high rise blocks were built between the late 1950s and the early 1970s using a variety of building techniques and designs. Twenty to thirty years on, many owners are reviewing the condition of their high rise stock, and developing a strategy for its future. Demolition, transfer of ownership, refurbishment or a 'do nothing for the time being' option may all be valid approaches in particular circumstances. There are cost

implications – and benefits – for both landlord and tenants associated with each of these options, including capital and future revenue expenditure.

The decision on the future of a high rise block has to take account of a wide range of technical, managerial and social issues which have become associated with high rise blocks and housing estates in general (see Table 1). Guidance on option appraisal is available,¹ promoting a systematic approach to decision-making which takes account of all relevant costs and benefits.

Energy Efficiency for Affordable Warmth

Increasingly, the decision is to retain and refurbish high rise accommodation, as landlords calculate the 'do nothing' or demolition and rebuild costs and find them to be too high in the medium term. After all, carefully managed high rise accommodation is often well-suited for certain types of households, such as the elderly or young people without families.

The poor energy performance of high rise flats is well documented. The physical problems of poor insulation and inadequate, inappropriate or inefficient heating systems may be compounded by the nature of the households occupying the flats, as they are often on low incomes. It is becoming recognised that the approach advocated by BRECSU, that of an integrated package of measures designed to provide affordable warmth, is an essential component of any high rise refurbishment scheme.

A typical, comprehensive package of measures may include:

- insulation to walls, roof and, maybe, floor
- double glazing
- efficient whole-dwelling heating
- proper provision for ventilation
- energy advice to tenants

Often, fewer measures are necessary to achieve a target heating cost of, say, less than £3.50 per week for a two-bedroomed flat. There is no single panacea. BREDEM,² in its many commercially-available forms, is ideal for this application, allowing the designer to estimate the effect of different measures and develop a cost-effective package.

HIGH RISE

HOUSING FOR

THE NINETIES

AND BEYOND



Energy Efficiency Office
DEPARTMENT OF ENERGY

The Tenant's Viewpoint

Tenants have the experience of living in the properties and efforts to consult their opinion on energy issues may help to establish sensible target heating costs, for example, or help to avoid misunderstandings later. After completion of a refurbishment, a programme of advice to tenants on energy issues is essential in order to ensure that they understand how to use their heating system, extract fans, and so on. BRECSU has also demonstrated that such an advice programme can itself save 10 per cent on energy bills, by expediting a more rational use of heating systems.³

Landlords' Benefits

An energy efficient refurbishment achieves many of the aims of a good landlord, such as low fuel costs, warm dry homes, and happy tenants. It can also be achieved at a cost comparable with that of demolition alone, which may run to several hundred thousand pounds even without the capital and management cost of rehousing. But landlords can benefit financially as well as socially, due to the fact that energy efficient refurbishment impacts on some of the other issues in Table 1. Early evidence from a BRECSU project under the EEO's Best Practice programme suggests that energy efficient dwellings can save the landlord £100–£500 per year compared with unrefurbished versions. This figure takes into account maintenance costs and management costs such as transfers, complaints and voids. An increase in tenants' rent may be feasible to reflect the higher quality of accommodation – an increase of say £2 per week may be less than the tenant is saving on fuel bills.

Case Studies

Two projects monitored by BRECSU for the EEO under the Energy Efficiency Demonstration Scheme demonstrated the application of an integrated approach to the refurbishment of high rise blocks. Knowsley Heights, near Liverpool,⁴ and the Brades Rise estate in Sandwell⁵ were both electrically-heated blocks suffering from acute problems of condensation and mould growth. Following the installation of a package of energy efficiency measures, the average weekly space heating cost over a year is less than £2.50 in both projects, and savings are worth about £80 per year on average to each tenant. Average temperatures are much higher (3°C or more) than before improvement, helping to secure one of the major aims of each project – to eliminate condensation problems. Tenants are well satisfied in both instances.

Further Good Practice Case Studies under preparation for BRECSU include high rise refurbishments in Lancaster, Sheffield, Bradford, Runcorn, Croydon and Greenwich.

Funding Energy Efficient Refurbishment

There are a number of programmes managed by the Department of the Environment under which local authorities may bid for resources to fund refurbishment.

- Estate Action provides resources to tackle run-down estates, and has long recognised that energy efficiency measures are an essential part of a refurbishment package.
- In 1990, DOE established the 'Green House Programme' to reduce carbon dioxide emissions by improving energy efficiency. The successful bids in the first year included ten tower blocks.
- Liverpool City Council is in consultation with DOE over the possibility of establishing a Housing Action Trust to take over and renovate their high rise blocks.
- In May 1991 the Environment Secretary, Michael Heseltine, announced a new initiative, City Challenge, to tackle the regeneration of the most deprived urban areas on a comprehensive scale. A number of the eleven successful bids in the first year included plans to refurbish existing housing.

Private sector finance can also play a role:

- Operational leasing of electric heating systems has been pursued by some local authorities, in which tenants pay the cost of the operational lease. The authority can then meet the cost of insulation improvements from its capital programme.
- At least one company has purchased blocks from an authority, refurbished them and sold them to first-time buyers.

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Knowsley Heights – refurbished block on the left of picture

Table 1: Some Refurbishment Issues

structural integrity	maintenance management
weather-tightness	letting policy
fire safety	rent arrears
security	
surrounding areas	
condensation	high fuel bills
mould growth	tenants' wishes
'Affordable Warmth'	

The Future?

A strategic approach to the refurbishment of high rise flats, designed to provide affordable warmth for tenants, offers cost-effective energy savings, warm and dry homes for occupants, and lower management and maintenance costs, thereby offering an alternative to demolition and re-housing. High rise housing, properly refurbished, can thus offer a useful contribution to the nation's housing needs into the next century.

References

- 1 Handbook of Estate Improvements, Part 1, Appraising Options, Department of Environment, HMSO, 1990.
- 2 BREDEM – BRE Domestic Energy Model: background, philosophy and description. BR Anderson, AJ Clark, R Baldwin and NO Milbank. BRE Report, 1985.
- 3 Energy Advice to Tenants. Energy Efficiency Demonstration Scheme, Expanded Project Profile R&D56, EEO, September 1988.
- 4 Overcladding and improved heating of High Rise Flats. Energy Efficiency Demonstration Scheme, Project Profile 349. EEO, January 1990.
- 5 Refurbishment of High Rise Flats, Best Practice programme, Good Practice Case Study 2, EEO, January 1990.