

Showcasing innovation in new-build Towards Class A - Shining examples ...are everywhere and in a town near you...

Introduction

In Maidenhead, what was previously a car park was rejuvenated in 2001 into a 27 unit sustainable housing project. The site was ideally suited to housing being within only ten minutes of both the local train station and town centre. The development was especially designed to incorporate as many INTEGER innovations as possible in order to fully capitalize on the benefits of such an extraordinary development. This decision has consequently also allowed the scheme to act as a test bed for new ideas, solutions and process.

Innovations

The aim of the design was to incorporate as many innovative environmental features as possible with a concentration on the theme of low energy use. In this way design solutions such as organizing the orientation of the house in order to maximise the benefit from passive solar gain could keep tenant energy bills low, while also promoting energy conservation.



	U-values (W/m ² K)	Building Regulation requirements at time
Roof	0.2	0.25
Exposed external walls	0.2	0.45
Windows	2.16	3.0
Ground floor	0.35	0.45

Environmental Technologies

Throughout the construction, a theme of environmental conservation was focused upon, this included measures such as:

- Heating water via solar panels. Excess and used water is then recycled and internally treated for flushing toilets and irrigating the gardens.
- Use of efficient recycled cellulose insulation that allows energy loss within the building to be less than half of that permitted under building regulations.
- Intelligent heating controls with sensors that prevent the house from being overheated.
- Photovoltaic (PV) panels which generate renewable electricity. This also allows for surplus energy to be sold back to the energy supplier to gain credit on their bills,

Conclusion

The dwellings achieved excellent SAP or Standard Assessment Procedure ratings, which has led to high levels of energy conservation as well as exceptional fuel bill savings for tenants. The initiative also led to new ideas such as the use of prefabricated timber panels which facilitated a quicker and cleaner construction process, while also minimising disturbance to local residents. Overall it led to very positive comments from residents and the prospect of similar developments in the future.



Partners



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