



Moon Court, Fetcham, Surrey

Sustainable housing at its best

Project Description

The construction of 23 Eco Friendly apartment units for Mole Valley District Council in Fetcham, Surrey.

Client:	Mole Valley District Council
Value:	£2 million
Period:	40 weeks

Introduction

- Construction of 23 ECO Friendly flats complete with parking areas designed with Sustainable Underground Drainage systems
- Enabling works, including the demolition of existing homes on the site to be undertaken as part of the contract

The following issues were incorporated into the project:

- Solar collecting panels incorporated into the design to heat units' water
- Extra thick cavities in the walls with south facing windows to utilise the minimum energy required to keep homes warm in the winter and cool in the summer
- Grey water (rain water) harvesting to flush toilets
- Reduced waste through effective re-use and recycling of materials. Ensuring that demolition waste was crushed and utilised as a ground stabiliser during the project
- Low energy up-facing street lights to reduce local light pollution
- Double glazed window frames from sustainable timber source, with aluminium facing on the outside in order to make them low maintenance.



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The Problems

Early involvement –Moon Court's key environmental objective proved challenging, to prevent >87% of waste from disposal to landfill.

Due to limited site access the transportation and delivery of materials and heavy plant, such as a mobile crusher, proved challenging. However, it was deemed necessary to ensure that the demolition waste was diverted from landfill and incorporated into the project.

Previously the local area had experienced problems with flooding, which was the result of heavy rainfall and mitigation was necessary to ensure that the risk of future floods was reduced significantly.

Solutions

Moon Court ensured that the waste hierarchy was followed: to reduce, reuse and recycle the project's waste arisings and all Mansell as well as sub-contracted staff received toolbox talks to raise awareness of this objective. The project utilised a Site Specific Waste Reduction Plan, which allowed the site teams to effectively plan for their waste, comply with the waste hierarchy and to incorporate materials with a high recycled content into the project. Elimination and reduction of waste was incorporated in the early planning phases of the project and as a result just 7% of the project's total waste was sent to landfill – a commendable reuse and recycling figure of 93%.

Demolition waste was crushed and re-used on-site as infill and as a stabiliser for the access roads. Old railway sleepers were constructed together and used as planters, which demonstrates how discarded materials may be re-used effectively.

A sustainable underground drainage system (SUDS) was constructed under the road and car parking areas. They are made up of permeable paving stones (paviors) that allow rain falling onto the road surface to permeate and return to the natural water table below. This is intended to eliminate water entering the surface water drainage system and to reduce the risk of flooding in the area.



Project Benefits

The project team was keen to demonstrate their dedication to reducing the quantity of waste produced throughout the project and identified different methods in which waste could be re-used or recycled in accordance with the waste hierarchy (Reduce - Reuse - Recycle - Dispose).

Efficient planning, measuring and monitoring of the project's waste arisings resulted in a commendable figure of just 7% total waste sent to landfill. This confirms that Mansell are committed to reducing their impact on the environment and view waste management with high regard.

Effective procurement – involved the selection of suitably accredited sustainable timber for the windows and doors as well incorporating low energy lighting throughout the units.

All internal paints were water-based to eliminate Volatile Organic Compounds (VOCs) and their associated harmful odours.

The scheme was short-listed as 'Sustainable Development of the Year' in Building Magazine's Sustainability Awards 2005.



For Further Information:

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