

The Windham Croft Centre development - sustainability and environmental impact

The Windham Croft Centre is being extended and remodelled to provide quality spaces for the delivery of improved specialist children's and children's centre services, transforming a once inadequate building, into a flexible centre that meets the needs of local children and families. The newly named 'Windham Croft Centre for Children' will be a welcoming, fully accessible public building, with a fresh new reception space integrated with the adjoining Windham Nursery. The centre will provide an improved range of spaces to offer services for children and families; offer various information and support services; and provide activities specialising in meeting the needs of children with disabilities and their families.

The scheme proposes a two storey side extension, first floor rear extension, alteration to the roof and fenestration, remodelling and refurbishment of the existing building, demolition of the single storey park store building and activity space. It includes modifications to the landscaping and boundary treatment to provide an accessible external play area and sensory garden.

The Windham Croft is designed with the intention of minimising the negative environmental impacts associated with the construction, operation and eventual demolition of the building. To assess its sustainability the project is being measured using Building Research Establishment Environmental Assessment Method (BREEAM). The development, combining of new build and refurbishment, is targeting a rating of very good (over 55%) and a score of over 65%.

The key innovative and low impact design features of the building are its:

- installation of photovoltaic panels generating electricity for use within the development which is expected to achieve a minimum of 20% reduction in CO2 emissions;
- use of responsibly sourced materials;
- use of local materials, where possible;
- re-use of building materials and of the existing building's façade; and
- use of natural materials within the interior and on the exterior of the building.

Additional information of environmental impact importance:

Approx. basic building cost (not including professional fees)	£1810/m ² new build £1290/m ² refurbishment	Approx. % area of grounds to be used by community	100%
Approx. services cost	£2267/m ² new build £2043/m ² refurbishment	Approx. % area of building to be used by community	75%
Approx. external works inc. services cost	£172.2/m ²	Predicted electricity consumption*	24 kWh/m ²
Gross Internal Floor Area	1030 m ²	Predicted fossil fuel consumption*	49 kWh/m ²
Total area of site	0.1684 hectares	Predicted renewable energy generation*	5.75 kWh/m ²
Total size of function areas	625 m ²	Predicted water use*	4.4m ³ /person/year
Area of circulation	268m ²	Water use to be	0%

		provided by rain/grey water	
Area of storage	57m ²		

* All per year based on 1030m²

Steps being taken during the construction process to reduce environmental impacts are:

- The scheme was registered with the Considerate Constructors Scheme and will achieve at least 34 points;
- A site waste management plan is being executed to minimise waste and maximise recycling;
- The main contractor is adopting best practice with regard to air/dust pollution, which include:
 - dust sheets
 - damping down in dry conditions
 - covers to skips and stores.
- A Building User Guide will be created to ensure the end users know how to use their improved building correctly. This will be split into the following sections:
 - Building Services Information
 - Emergency Information
 - Energy and Environmental Strategy
 - Water Use
 - Transport Facilities
 - Materials and Waste policy
 - Re-fit/re-arrangement considerations
 - Reporting Provision
 - Training
 - Links / References