

People Exploring Low Energy Homes

K1 Cambridge, CB4 2EZ

Ian, Jan and other members

K1 Cambridge is a co-housing project in Orchard Park with very high environmental standards. Residents have more say over the development, and in the running of their community once it is completed. As well as having their own home, members will have access to a large shared garden, house, office, workshop and gym.

K1 Cambridge has been created by Cambridge residents in association with Cambridge City Council, developers TOWN, builders Trivselhus and Architects and Open Eco Homes sponsors Mole.



Here K1 member Ian Collins tells us more...

Overview

Property age: Under construction (2016-17)

Type: Terrace houses and flats

Wall type: Manufactured panel

Floor area: Varies

Cost of project: Not applicable

Occupants: 42 homes. Occupancy varies.

Key features

Insulation and glazing

- Manufactured insulated panels
- High standards of insulation throughout
- Wall, floor and roof U-values around 0.18
- Triple glazed windows and doors built into the factory manufactured panels.
- South, east and west facing glazing for winter solar thermal gain
- Large glazing areas for light interiors and to cut down on lighting

Heating/energy

- No gas on-site
- Air source heat pumps
- Mechanical ventilation with heat recovery

Water

- Fittings chosen for low water use

Other

- Shared garden, workshop and common house

What is co-housing?

'Co-housing communities are not communes: everyone has their own private home, their own front door and their own garden or balcony. But each household also benefits from extra shared facilities and spaces that allow – but don't require – members to do things together. Living in a co-housing community brings a few extra responsibilities, but many more benefits.

By pooling resources like tools and equipment and by acting collectively, co-housing communities gain more control over their environment. Residents of co-housing projects have a shared desire for the belonging, neighbourliness and mutual support which many people feel is missing from modern life and contemporary housing developments. They also tend to have a lighter environmental footprint as shared resources generally save energy and carbon.'

What will be built?

'We will start the build of 42 houses and flats in Autumn 2016, for completion in 2017. In addition to the individual homes, we will have shared facilities, and by sharing, our houses can be more compact, more energy efficient, and more resource efficient.

The common house will enable us, when we choose, to prepare and eat meals together. It will include guest rooms for friends and relatives who come to stay, a laundry, and rooms for group meetings and activities.

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As well as individual gardens and balconies, we will have a shared garden with a mixture of spaces for growing food, for children to play, and for residents to relax.

How will the homes be low-carbon?

The homes will be highly insulated, being constructed as timber panels in a factory in Sweden. Wall, floor and roof U values will be around 0.18. Factory manufacture enables high standards of air tightness to be achieved. Triple glazed windows and doors will be built into the panels in the factory.

The grouping of the 42 dwellings into four 3-storey blocks gives compact building forms with a high ratio of volume to surface area, whilst still allowing for extensive glazing, giving light interiors and minimising the need for artificial light. South, East and West facing glazing will enable the collection of solar heat during the winter months.

The homes will have a low requirement for heating which will be provided by air source heat pumps and ventilated by mechanical ventilation with heat recovery (MVHR). No gas will be used on site; this is the choice of residents, who will be able to buy their energy from 100% renewable suppliers.



Appliances and lifestyle changes

'Low energy lighting will be fitted, and water fittings will be chosen for low water usage. Car parking is provided (1.25 spaces per household, less than normal standards) and we expect to have a car share scheme to make it easier for households to manage without cars. We are well placed for public transport, being by the guided busway, and Cambridge North station is within easy reach. There will be extensive storage for bicycles.'

Future plans

'The roof of the apartment building is being designed to support PV panels, thus making it straightforward to retrofit PV at a later date.'



Professional contacts

Contact: K1 Cambridge (www.cambridge-k1.co.uk)

Developer: TOWN (www.wearetown.co.uk)

Builder and panel house manufacturer: Trivselhus (www.trivselhus.se)

Architects: Mole (www.molearchitects.co.uk)

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Mole