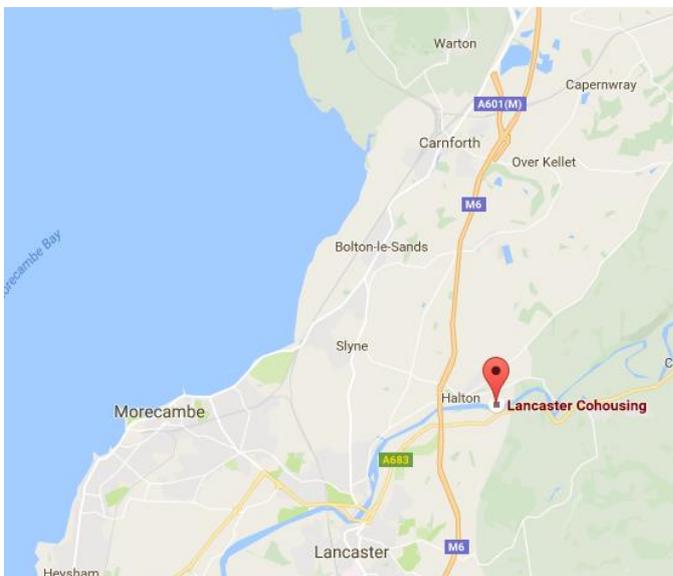


Lancaster Cohousing (United Kingdom)

Introduction:

Lancaster cohousing is located in a rural setting along the River Lune on the edge of Halton Village, 4.8 km outside of Lancaster, United Kingdom.



There are 41 properties in the housing development, mostly 1 to 3-bedroom terraced houses (35 of them are leasehold and 6 freehold). The cohousing is dedicated to strong community and ecological values, among others all the residential units are passive houses that are centred towards the common facilities, like dining place, laundry, co-working places. In addition a hydro-power plant is about to be developed and co-owned by the cohousing providing electricity not only for the households of the cohousing but households in the village nearby.

Motivation:

Lancaster Cohousing (LCH) was formed by five people who met through a combination of social, work and group contacts in the Lancaster area. Some of them had initially considered the purchase of a former school in the city which they would have converted into units for each of them to live in, with some shared communal spaces, however they were unable to purchase the school. One of the five had done research into communities and communal living and written about this through *Diggers and Dreamers*, which is a directory of communities within the UK. After further discussion the group considered that cohousing might be the model that they wanted to pursue. Finally a picturesque piece of land was bought besides a river which however suffered from serious contaminations. The land contained old mill buildings, one of which was obligatory to keep. After years of community building and preparation the complex was already built and it is in full operation since summer 2013.

At that time, 2005, cohousing was a little known concept in the UK. This group arranged the National Cohousing Conference to be run in Lancaster on 25-27th February 2005. This enabled them to

understand the concept better and to promote it locally. Following the conference the group spent some time reflecting and considering if this was the way forward for them. Once they had decided that cohousing was the model they wanted to follow they set about attracting other members. The first way that they did this was through a public meeting held in Lancaster March 2006 for anyone interested in joining as a member or as a 'friend'. This meeting was attended by about 30 people and generated 5 new members. The founder members established several key Policies new members had to agree to in order to become members (Food, Visits, Smoking, and Pets). New members were also expected to attend meetings and social events in order to understand the group and what would be expected of them, as well as getting to know the other members. As an ecological cohousing project, the two main considerations for members were either to join and participate in an intergenerational community or to live in a high standard eco-home.

Community development process:

During the development process, an external professional facilitator was invited. However, an external process facilitator was only used for early meetings and to assist with developing our consensus decision making process. This was beneficial before the group developed their own internal skills and resources. Members took on the facilitation of meetings and new members joined who either had group facilitation skills or were keen to develop them. At formation stage the most needed information was to do with land search and selection and with group processes. There was much to learn about cohousing design from other projects. Members visited developments and read and researched widely to discover experiences and good practice. The appointment of the architect was conducted in 2006 by a thorough selection process. Four architectural practices were shortlisted on the basis of their experience both in eco-build and cohousing. Group members visited the architects' previous projects to help to inform their decisions. The final decision was made on the basis of an interview panel which comprised four members of LCH. In relation to the procurement of the site, the architect assisted with sketch layouts of sites which were used to inform net value calculations. The architect was instrumental in the appointment of the remainder of design team. There was a high degree of participation between the design team and LCH at all stages in the design. It was important that the key members of the design team understood the vision of LCH and were able to contribute to the vision and enable it to be achieved. This was especially true of the architect.

The contractor was selected through a tendering process. That process was set up relatively speedily and involved selection on the basis of a combination of a limited pricing submission, quality submission and interview. The tendering process that selected the contractor was a three stage process. There were a limited number of contractors of a suitable size within the local area, and two contractors withdrew from the process after shortlisting. Amongst the reasons cited were the uncertainties surrounding delivering an unprecedented number of dwellings to Passivhaus standard and the human resources required from the contractor side to engage with the detailed design

process. Twelve contractors were contacted and asked to return pre-qualification and this was then increased to 14 when the return rate was poor. Six contractors were then invited to submit formal tenders. Finally four contractors were interviewed by a panel comprising QS/Contract Manager, Architect and Client Representatives. The project requirements were set out in a Project Briefing document to introduce the design information. This specified Passivhaus as well as Code for Sustainable Homes level 6.

Some issues during the development process:

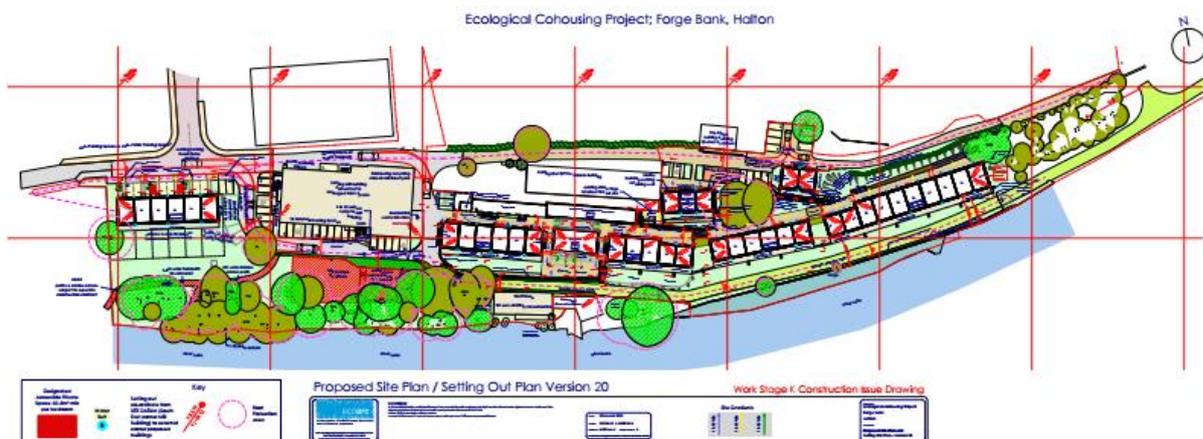
In general most new buildings or major changes to existing buildings or to the local environment need consent - known as planning permission. The planning system controls the construction of buildings and use of land. The local planning authority (local municipality) is responsible for deciding whether a development - anything from an extension on a house to a new housing development - should go ahead. The output of this process is called planning permission. Most types of development need planning permission however, certain minor building works – known as permitted development– don't need planning permission.

Building permit process is an independent one from the planning permission process. Unlike building regulations, planning regulations are not hard and fast and they differ from one area of the country to the next. This is because planning involves local politics. Thus planning solutions are under negotiations with the applicants and the local authority while construction solutions are rather tied to strict legal regulations – which however can be interpreted differently. The responsibility for checking the Building Regulations have been met falls to Building Control Bodies - either from the Local Authority or the private sector as an Approved Inspector. The person carrying out the work has the choice of where to get approval for the building work.

As the members of Lancaster cohousing were or had been Councillors with the Local Authority, and also had experience in the construction industry, they were quite well aware of the steps that needed to be taken and what other actions would ease the acceptance of the applications. Lancaster Cohousing and the design team therefore worked very closely with key stakeholders from before the site was purchased and throughout the design and construction stages. Lancaster Cohousing contacted the Planning Department of the Local Authority initially concerning land that might be suitable and available to buy for the development. This contact continued on a formal and informal basis following the purchase of the site. As soon as the site was bought, Lancaster Cohousing made links with the Parish Council and local community association to develop positive relationships with these key parties. Parish Councils have a wide remit but specifically they must be notified of, and display for residents, any planning applications for the area. Any comments submitted to the planning authority by the Parish Council must be taken into account. The Parish Council also covers footpaths and there were two public footpaths that go across Lancaster Cohousing's land and which had to be diverted during construction. Parish councils are also concerned with lighting, parking

places, and have the right to enter into discussions about new roads and road widening. The consent of the Parish council is required for diversion or discontinuation of highway, traffic signs and other notices, tree planting and verge maintenance. All of these issues could have been raised by the Parish Council or local residents about the new development, so it was imperative that the founders of the CSO started relationship building early in the process.

Lancaster Cohousing formed a partnership, Halton Carbon Positive, with the Halton Community Association, which successfully applied to the Department for Environment and Climate Change (DECC) for Low Carbon Communities Challenge funding. The scheme brought together Lancaster Cohousing and Halton Lune Hydro which planned to install a hydro electric generator on a nearby weir. The grant paid for adaptations to ensure the hydro's turbine does not harm the salmon, sea trout and eels, and contributed to the installation of the cohousing district heating system. The grant is enabled both schemes to install pioneering technologies. This partnership was another way of developing good relationships with the local community.



Some of the issues concerning meeting Building Regulations were to do with the residents' decision to seek to achieve Passive House standard and the Code for Sustainable Homes Level 6. This led to some challenges and potential incompatibilities. The Passive House standard differs from the United Kingdom's Building Regulations and the Code for Sustainable Homes in the requirement for an absolute level of energy consumption instead of improvement over a more basic specification. This – as an example - related to the pair of 2 bed houses (semi-detached houses) that would not meet the Passive House standard with the same construction as the terrace houses, owing to their higher surface area per house. Therefore the specification on these houses was upgraded with more expensive lower conductivity wall insulation to ensure they meet the standard too. All external and party cavity walls, excepting the south, were constructed with 100mm leaves of 7N Eco Block containing a minimum of 80% recycled aggregates. The rigorous use of the Buildings Regulations 'deemed to comply' details (Approved Document A, Section 2C) were adopted where possible, which draws from the experience of what works 'in the real world', rather than what can be demonstrated via strict calculation. With much of the blockwork close to its structural capacity, site quality

management was essential. Where external walls did not comply with Building Regulations, the effect of buttressing from the internal walls was included to minimise the use of wind-posts, only utilised in the gable end walls.

Critical information/tools for the project:

- Land search and selection
- Group/community development process

Lesson learned:

LCH took on the client project management aspect themselves and would recommend that other groups do not follow this step. Although there may be some perceived financial benefit, it can create difficulties within the group. This role is best assigned to a professional who is not involved in the project. In addition, project should resist the pressure from the lender to apply conditions on the design team as this increased the costs. In more detail, lesson learned during the early development of the project are:

- Dealing with the bureaucracy relating to 40+ different planning conditions
- Lack of a predictable timescale from the planning authority for dealing with applications and the discharge of conditions
- Uncertainty regarding affordable housing requirements
- Take time to explain the benefits of cohousing to senior planners at an early stage
- Inconsistencies of approach between different members of staff within Assent Building Control
- arrangements which were approved at plans stage can be challenged at site inspection stage (explanations were needed)
- Having to pay for SAP (Standard Assessment Procedure) assessments to be carried out for building control purposes when the buildings had already been through the much more stringent Passive House assessment. A building that meets the Passive House standard will be much more energy efficient so this duplication is just an unnecessary cost penalty on ultra energy-efficient construction
- Private sector building control takes a more flexible approach than Local Authority building control (however naturally all have to be in line with the building permit process that is in the hand of the local authority)