The role of cohousing in social communication and sustainable living environments

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What is ‘Cohousing’? What Cohousing community looks like? Where the concept come from?

Cohousing is a new form of human settlement which offers a possible solution to the housing crisis. In cohousing communities, people come together and share facilities and belongings, such as car and laundry. Its energy efficiency contributes to a reduced cost of living for tenants. Cohousing and its community have the potential to offer a different scale of social organisation whilst delivering an environmental concept that leads to a low carbon lifestyle.

(1) Social interaction (2) Physical design features of the cohousing community (3) Sustainable living and affordability
Why 'cohousing'?

• The sense of community is lacking.
• Environmental issues are gradually emerged.
• To explore an affordable and sustainable way to live.

Amy Jingjing Wang
Social interaction and “co-care”

- Cohousing members are involved in the community procedure at the very early stage
- Sharing and common activities (e.g. meals, workshops)
- ‘Trust building’ and Sense of security
- ‘consensus’ decision making
- Community of involvement, engagement and sense of belonging
Neighbourhood Design

- Shared spaces and facilities
- Communal spaces are in the centre of the community
- Sustainable materials and technologies
- CSH / AECB/ PassivHaus standard
## Participation in Common Activities

<table>
<thead>
<tr>
<th>Common Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee meetings</td>
<td>12.5</td>
</tr>
<tr>
<td>Attend common meals regularly</td>
<td>84.4</td>
</tr>
<tr>
<td>Preparing common meals</td>
<td>65.6</td>
</tr>
<tr>
<td>Common hobby activities</td>
<td>31.3</td>
</tr>
<tr>
<td>Common exercise activities</td>
<td>46.9</td>
</tr>
<tr>
<td>Outdoor maintenance</td>
<td>56.3</td>
</tr>
<tr>
<td>Indoor maintenance and cleaning</td>
<td>50.0</td>
</tr>
<tr>
<td>Planning special events</td>
<td>56.3</td>
</tr>
<tr>
<td>Residents’ association meetings</td>
<td>96.9</td>
</tr>
<tr>
<td>Steering committee/ board</td>
<td>28.1</td>
</tr>
<tr>
<td>Other committees</td>
<td>67.7</td>
</tr>
</tbody>
</table>

*source: adopted from Glass (2010), p35.*
Case study selection criteria

• The case location is in the UK and is accessible;
• The concept of the case has to meet the definition of cohousing or sustainable communities;
• Valuable existing data is accessible, for example, the data can be found in books, journals and reliable websites;
• Different age groups, various kinds of stakeholders (architects, designers, householders, users and neighbours) are accessible;
• Environmentally-friendly technologies (biomass, thermal mass, solar panel and timber frame, etc.) are included;
• Shared facilities (cars, bikes washing machines, kitchen electric appliances, gardens. etc.) are present;
• Rainwater harvesting/collection systems are used;
• The co-housing development was built after 2000.
Lancaster cohousing project is located in the village of Halton next to the river Lune. There are around 65 adults and 15 children who live there, making it the first certified Passivhaus cohousing project in the UK and the homes have achieved both Passivhaus and Code for Sustainable Homes (CSH) level 6 certification.

LILAC project is the UK’s first affordable ecological cohousing project; the community has 20 households and a common house. The homes have achieved the Code for Sustainable Homes (CSH) level 4 certification. It is a pioneering and award-winning project based in west Leeds.
<table>
<thead>
<tr>
<th><strong>Lancaster Cohousing</strong></th>
<th><strong>LILAC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUSTAINABLE TECHNOLOGY</strong></td>
<td><strong>SUSTAINABLE TECHNOLOGY</strong></td>
</tr>
<tr>
<td>Single radiator is running for each house, running from a biomass boiler. They have solar panels and a 160kW hydro turbine in the River Lune to supply electricity. Rainwater harvesting system is available.</td>
<td>Solar PV; Mechanical Ventilation with Heat Recovery (MVHR), high-efficiency gas boilers with solar thermal water-heating units. Rainwater harvesting system is available.</td>
</tr>
<tr>
<td>CSH level 6 certification</td>
<td>CSH level 4 certification</td>
</tr>
<tr>
<td>PassivHaus Standard and AECB (Association for Environment Conscious Building) Gold Standard Homes</td>
<td></td>
</tr>
<tr>
<td>decisions that are made.</td>
<td>social activities etc.</td>
</tr>
</tbody>
</table>
Exploratory case study – Lancaster cohousing site visit and interview

Interview questions

1. Motivation to co-found and move into a cohousing community?
2. Has the design of communal spaces affected residents’ social interaction and activities?
3. How has the site layout affected residents’ day-to-day activities (individually and socially)?
4. What design criteria you use when you design a house in cohousing community? What design features are important when designing cohousing for older people?
5. How does sustainable living contribute to different behaviour?
6. How can cohousing be an affordable option? The materials in the construction and appropriate technologies used, how do people see themselves affording these new materials and technologies?
Findings

intergenerational living
Conclusion

- Affordability is a challenge. The community scheme could be made more affordable.

- Easy to live in, because of low energy costs and sharing scheme; but market value.

- The architect team could well manage the construction cost. Spending money very liberally on super-insulation, triple glazing, comfort ventilation rather than complicated heating systems.
Limitations and Future Research

Limitations
1. Data accessibility
2. Sample size is small

Further research will target different age groups including participants such as older people and women, to better understand the value of cohousing and residents’ participation in creating sustainable living and communities.

Nvivo – Data Analysis
POE and EVOLVE Tool- Site visit and filed work
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