



Basic principles of Cohousing design



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- This overview of Cohousing design is an introduction to creating the vitality that is consistently recognised in such neighbourhoods.
- Designing such settings involves a unique combination of principles for the built environment and principles for the social size of the neighbourhood community.
- These principles will apply both to new-build projects and to the ‘retrofitting’ of existing buildings into Cohousing use.
- This overview should be read in conjunction with the **‘UKCN Practical Guide to Cohousing’ – November 2020**

Core principles of Cohousing design (1)



Cohousing projects have:

- **Designs** for the physical form and layout of their neighbourhoods to maximise incidental and organised contact between neighbours
- **Self-contained accommodation** plus significant common facilities and spaces, of which a 'Common House' is crucial for communal activities
- **A size and scale** of each neighbourhood setting that is appropriate to underpin sustainable community dynamics

Core principles of Cohousing design (2)



This means Cohousing projects seek to have:

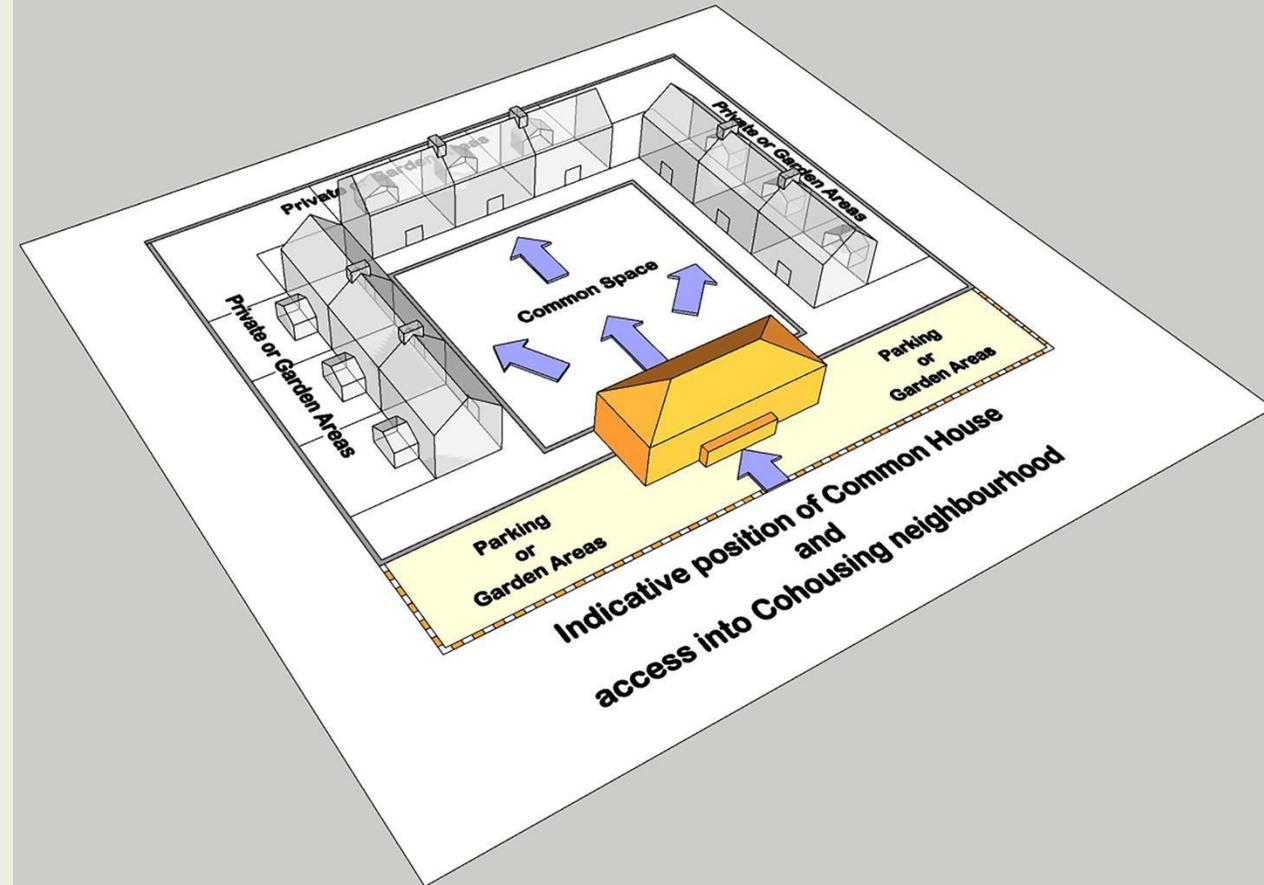
- Designs of all buildings and spaces that will make them all opportunities for social interaction
- A 'Common House' or similar facilities that will be at the heart of all neighbourhood activities
- The optimum number of dwellings and residents to sustain meaningful contacts and relationships :
between 20-50 adults (+ children, if the project is multi-generational)

Core principles of Cohousing design (3)



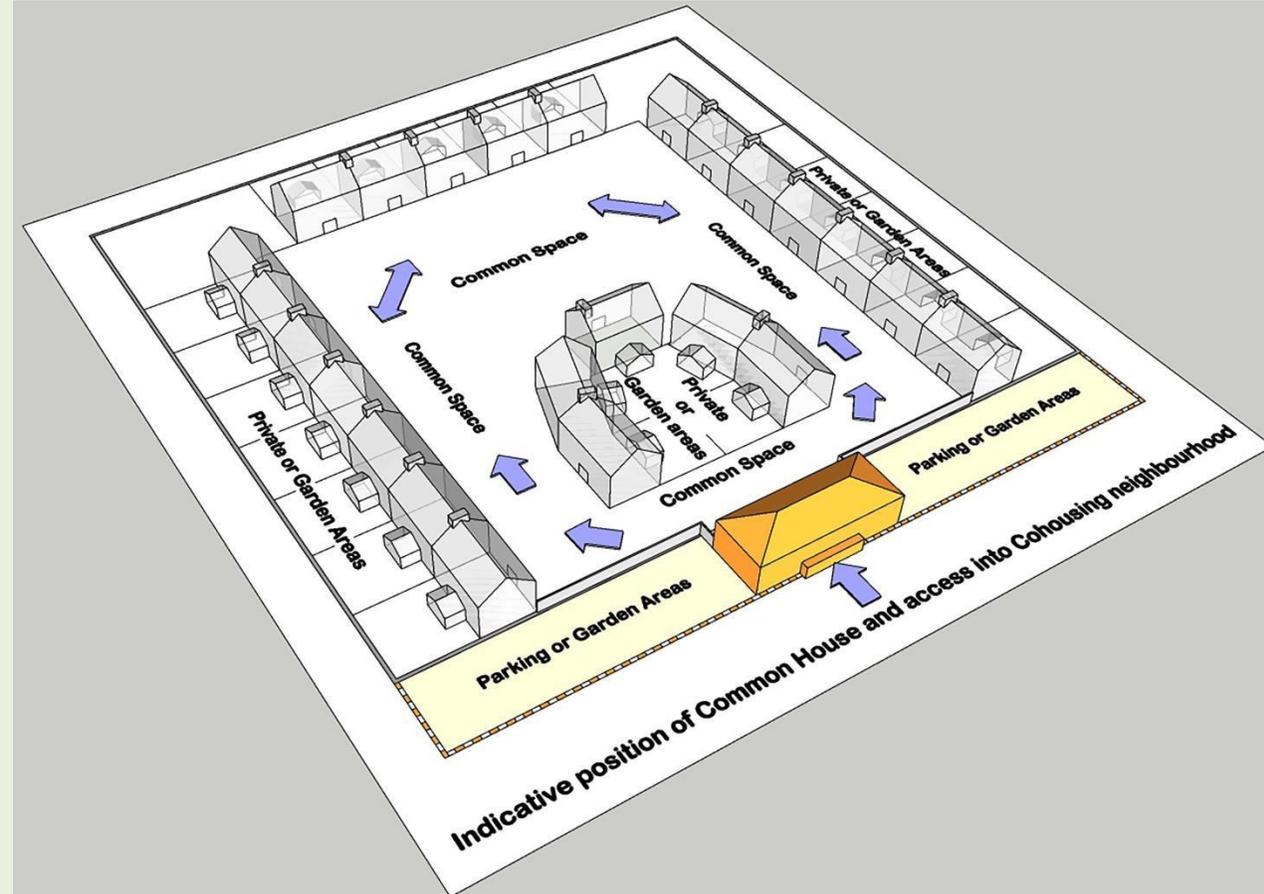
- A central principle of Cohousing is to use the positioning of the Common House as a focus of access into the Cohousing neighbourhood.
- The Common House will be positioned closest to main point through which residents enter a site (such as the examples provided of indicative square or rectangular sites) in order to access common areas and dwellings beyond.

Site types, orientation and access (1)



The diagram shows a further example of a focused access to the site via the Common House. Such a layout may prove suitable when planning higher numbers of dwellings on larger square or rectangular sites.

Site types, orientation and access (1b)



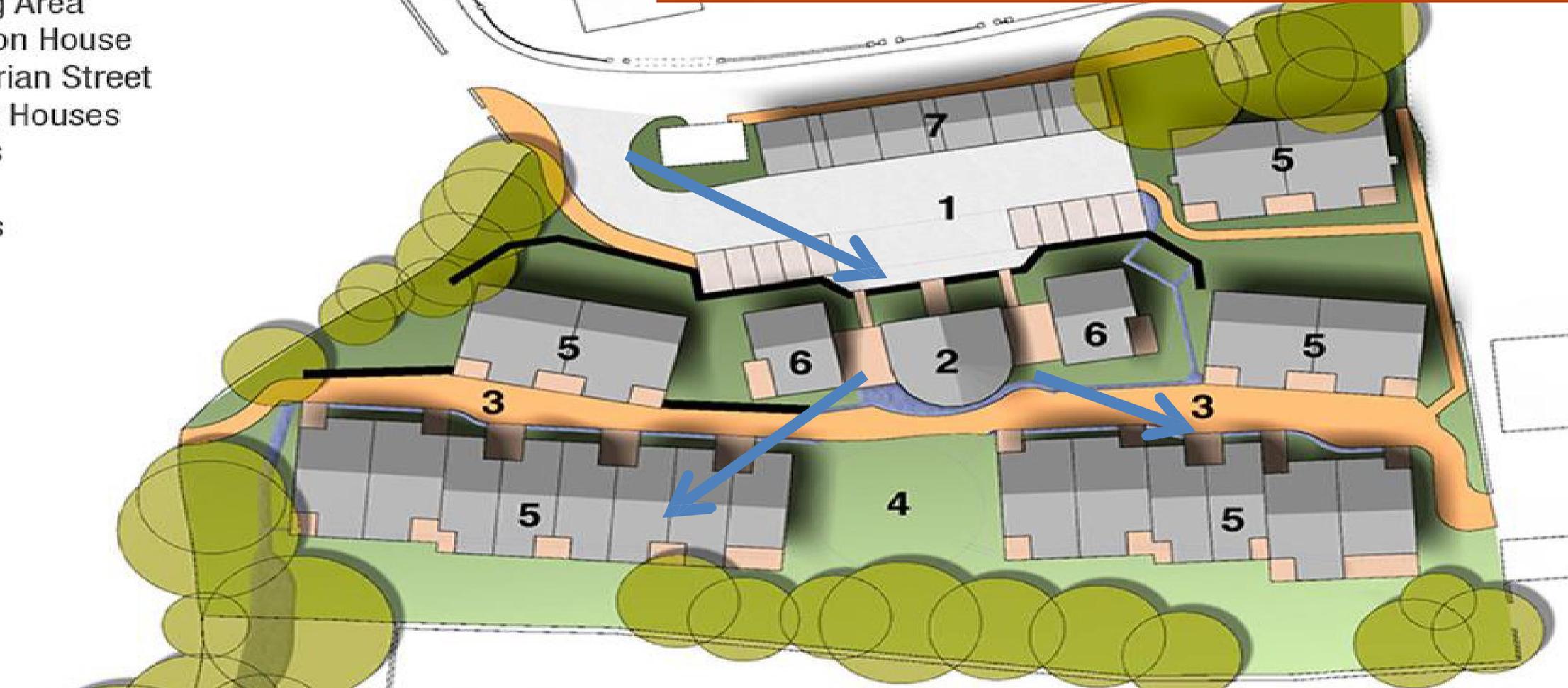
Site plan of LILAC, Leeds



Ex-school site in dense urban area, dwellings arranged around central common areas

Site plan of Springhill, Stroud

- 1. Parking Area
- 2. Common House
- 3. Pedestrian Street
- 4. Shared Houses
- 5. Houses
- 6. Flats
- 7. Studios



A central Common House on a steeply sloping site



- affordable
- low energy
- rent or buy
- community-led
- co-operative

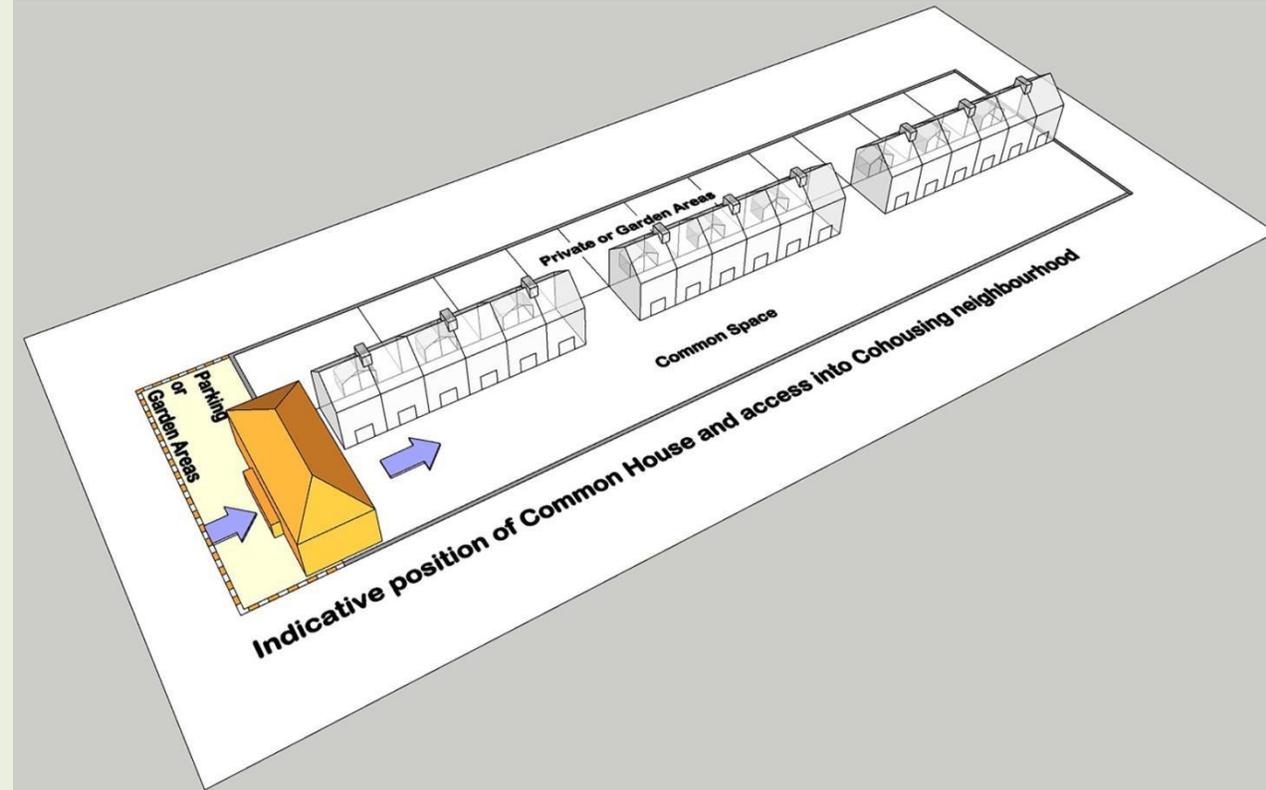
- Private homes with shared facilities:
- laundry
 - guest rooms
 - big hall and kitchen
 - garden
 - workshop etc

Site of ChaCo, Leeds



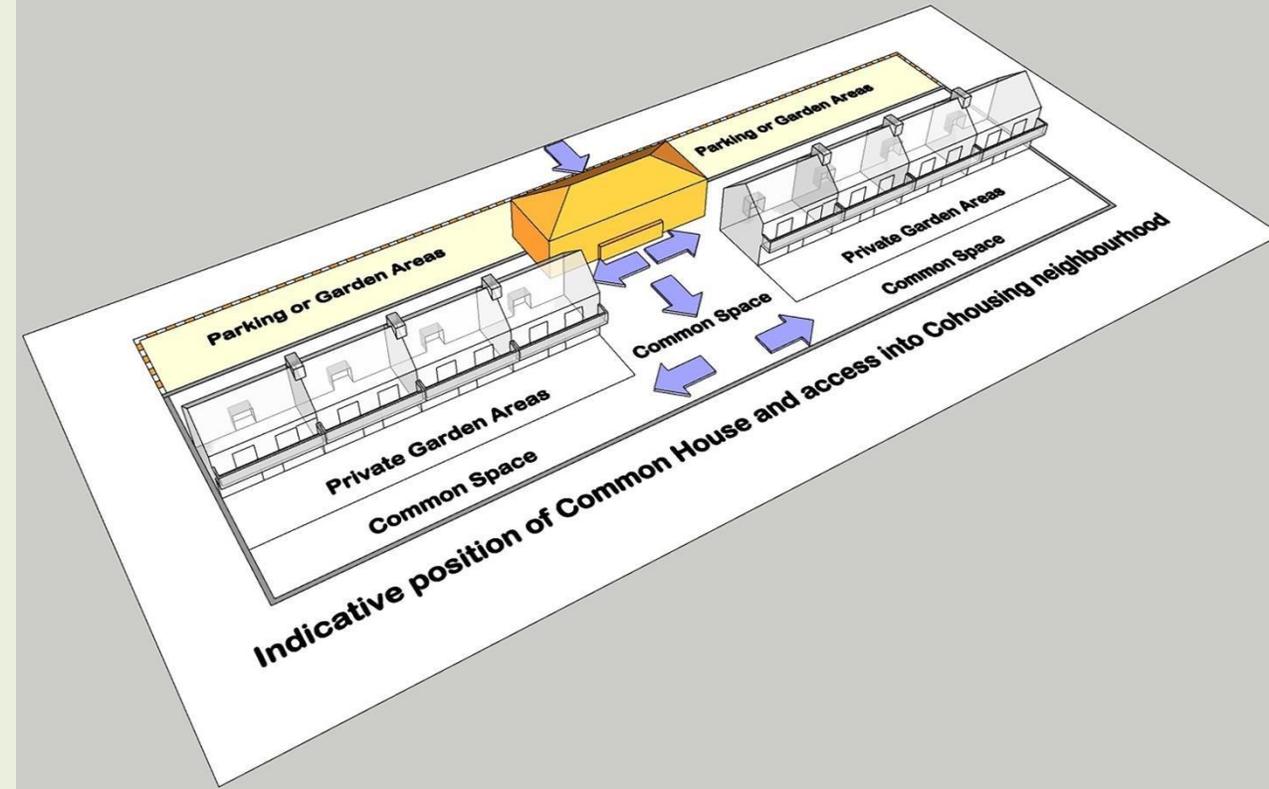
The diagram shows an example of positioning the Common House closest to the main point of entering at one end of a linear or elongated site, and then to access common areas and dwellings beyond.

Site types, orientation and access (2)



The diagram shows an example of positioning the Common House closest to main point of entering a linear or elongated site at a mid-point in order to access common areas and dwellings beyond.

Site types, orientation and access (2b)



Site plan of Forge Bank, Lancaster



A linear site, accessed from one end, with the Common House on the main thoroughfare

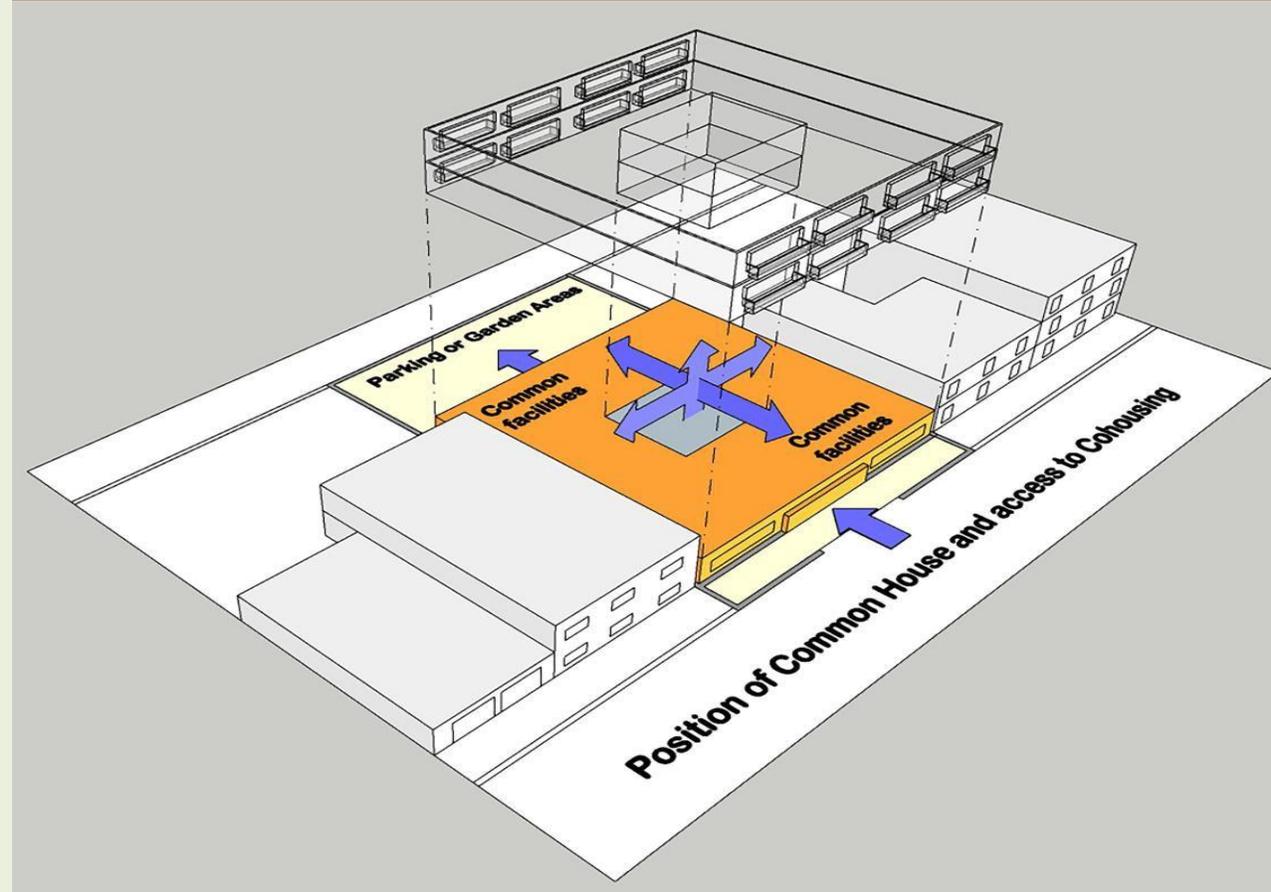
Cannock Mill is a on steep sloping site, with the Common House and other shared facilities located some way in from the entrance road at the bottom, and with dwellings located along the drive up the slopes.

Site plan of Cannock Mill, Colchester



The diagram shows how the Common House and other shared facilities can be positioned closest to main point of entering a multi-storey setting (usually on the ground floor).

Site types, orientation and access (3)



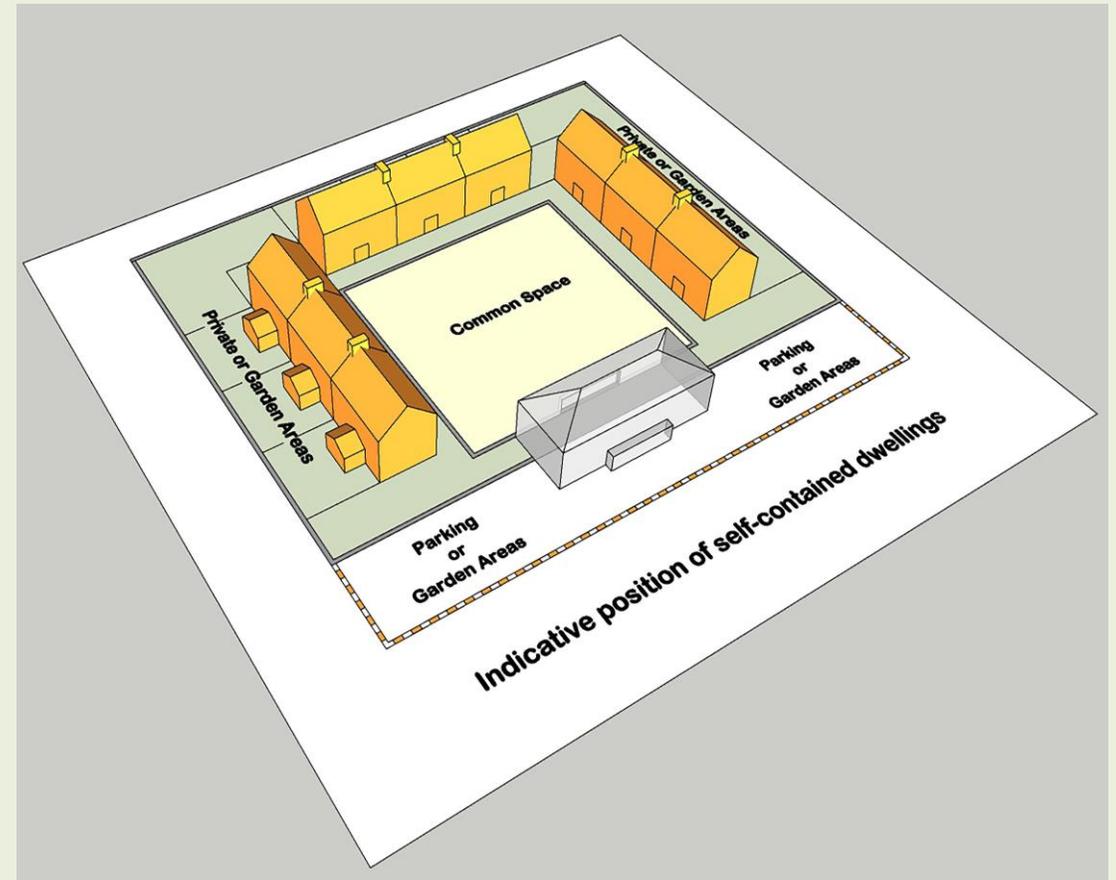
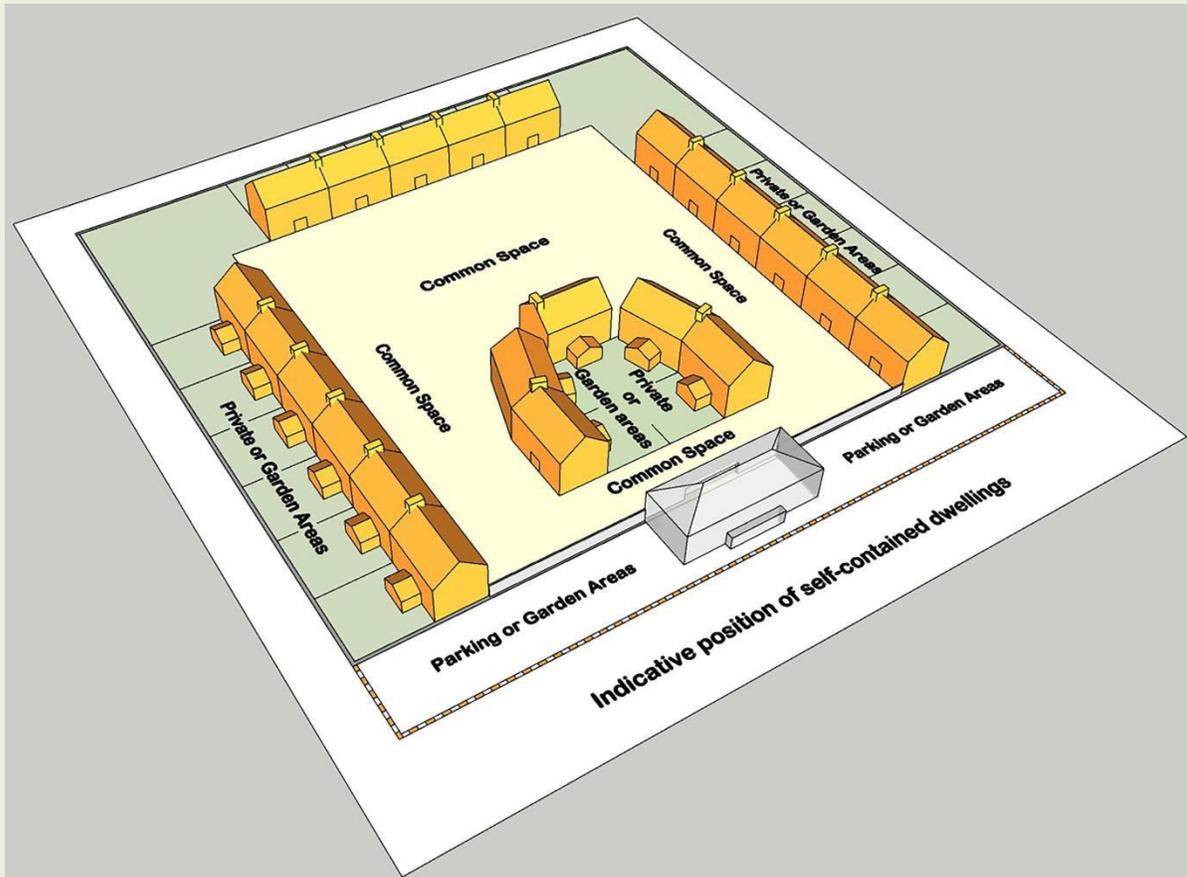
Site plan of New Ground / OWCH

Access into the New Ground site is via the Common House area, off the external street, with dwellings above and on either side of the shared facilities.



Indicative placement of dwellings (1)

Square or rectangular sites, with dwellings distributed around common areas, to encourage residents to connect with each other, rather than coming and going in private.....



Threshold Centre, Dorset



The Threshold Centre is a compact rural setting, with dwellings and the Common House arranged in a 'horseshoe' layout



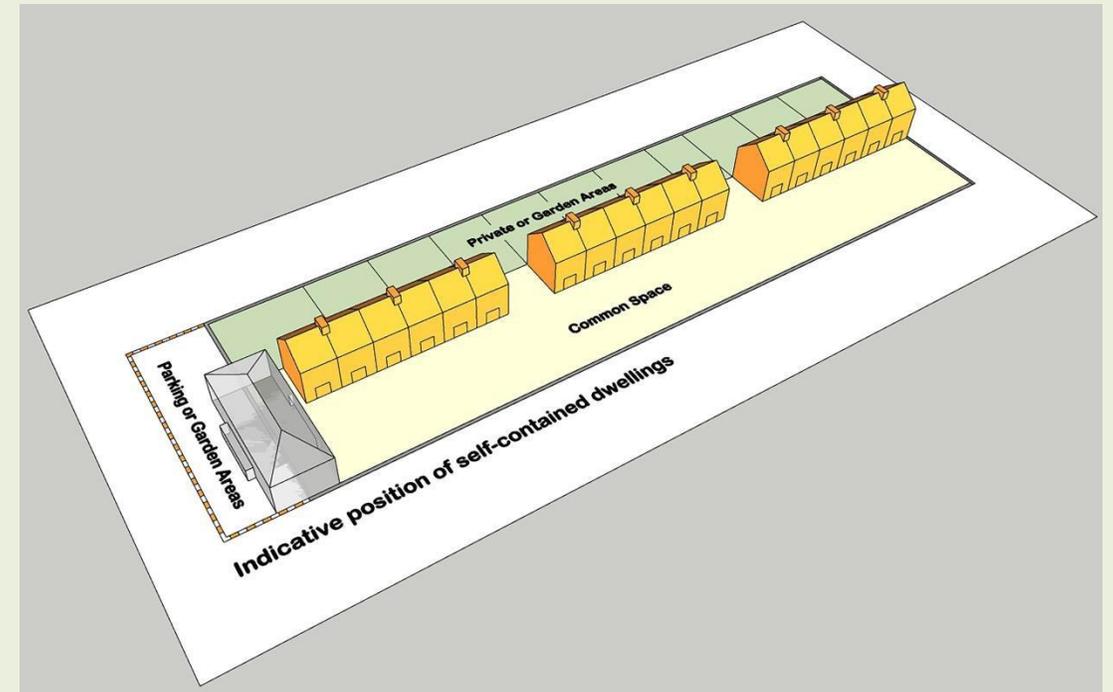
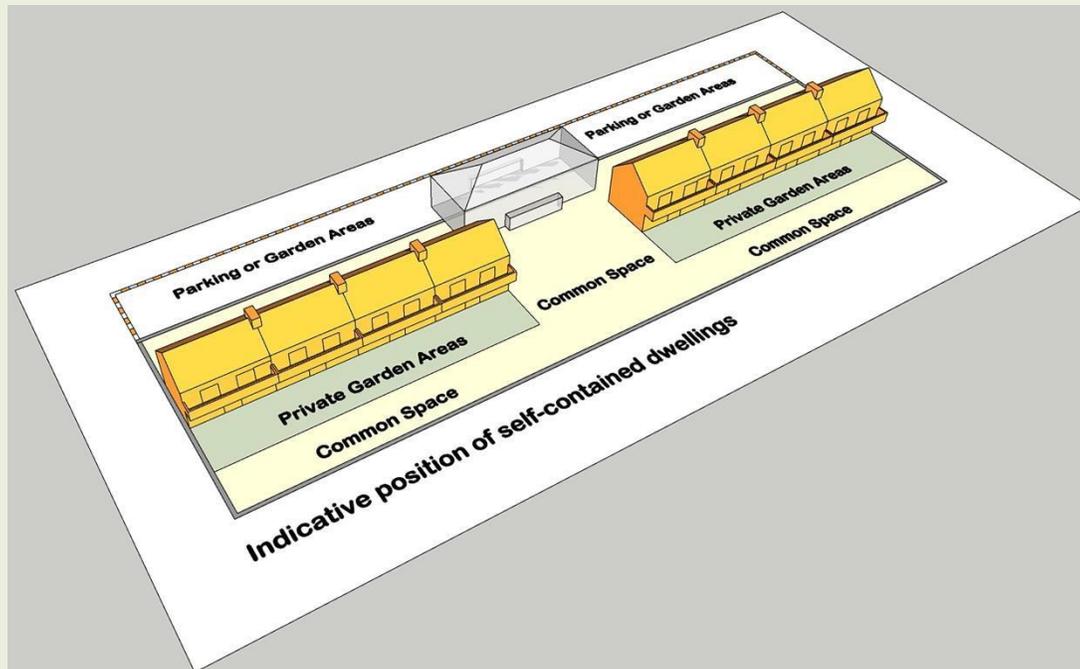
LILAC is a compact urban setting, with access into the area by the side of the Common House, positioned central to dwellings on all sides

LILAC, Leeds



Indicative placement of dwellings (2)

On elongated sites, dwellings can be sited in a linear direction, after access to the site via the Common house area



Forgebank, Lancaster



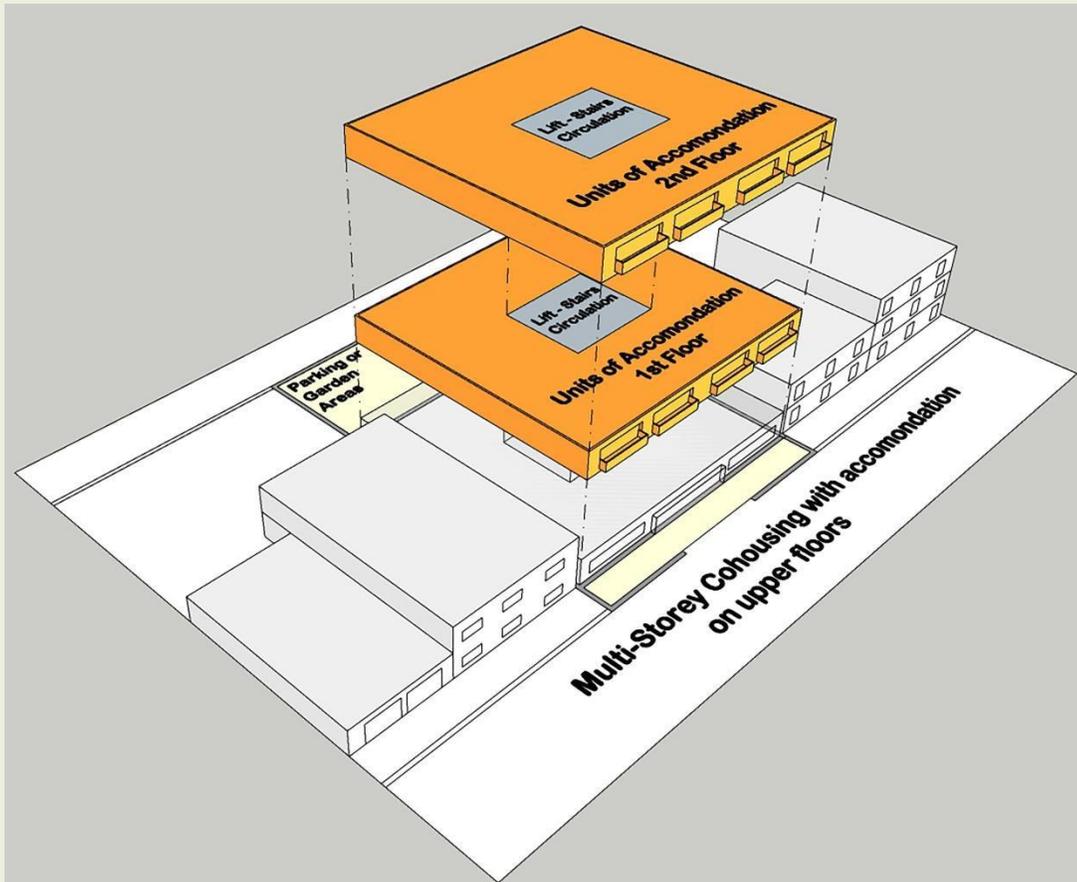
Forgebank is a long site, following the bank of the River Lune. A hosts a line of family-sized accommodation, with the Common House located within this line, by the main thoroughfare.

Cannock Mill, Colchester



Cannock Mill features an elongated access through the site up the slopes

Indicative placement of dwellings (3)



- New dwellings can be designed above and around ground floor common areas (in multi-story floors)
- One or more floors of dwellings can be sited above other facilities on the ground floor level.
- Such projects could be a conversion of empty office or factory buildings, or of a larger mansion.



New Ground / OWCH, Barnet

New Ground is the original UK Cohousing project for 'senior' members. It was co-designed and created by and for women over 50 and has dwellings over three floors and above the Common House, with communal gardens.



Canon Frome, Herefordshire



Canon Frome is the retrofit of a large mansion and extensive grounds to create an 'intentional community' .

Thundercliffe Grange, nr Rotherham

Thundercliffe Grange is an early example of retrofitting a large mansion. Common facilities on the ground floor, with apartments on upper floors and in outbuildings.



Parking provisions

- Cohousing neighbourhoods work best when car use is restricted to just the edge of a site. This allows for incidental interactions between residents when moving between homes and cars.
- As people live in Cohousing, they tend to find they need fewer cars than they first expected – more car sharing takes place and parking needs are reduced.



Laughton Lodge, Sussex

Places to park vehicles just inside a site's main entrance or at its edges - not attached to individual properties.



Springhill, Stroud

Parking areas



K1 / Marmalade Lane, Cambridge

Common Houses and shared facilities

- May be built from new, or reconditioned from existing properties
- Are designed to be the centre of community contacts - the 'heart' of neighbourhood activities,
- Should be large enough for all members to congregate together
- Are the natural place for common meals and sitting areas
- Can include guest room(s), laundry facilities, mail boxes and work rooms



Threshold Centre, Dorset

Avoiding design pitfalls...

In a 2022 presentation to UKCN, Grace Kim listed common pitfalls to avoid when designing a common house:

- Poor attention to acoustics and surfaces in dining areas
- Insufficient storage of dining tables and chairs
- Glare of lighting in dining areas
- Dining areas being too small
- Kitchen areas not able to provide for community meals
- Insufficient storage for personal and community needs

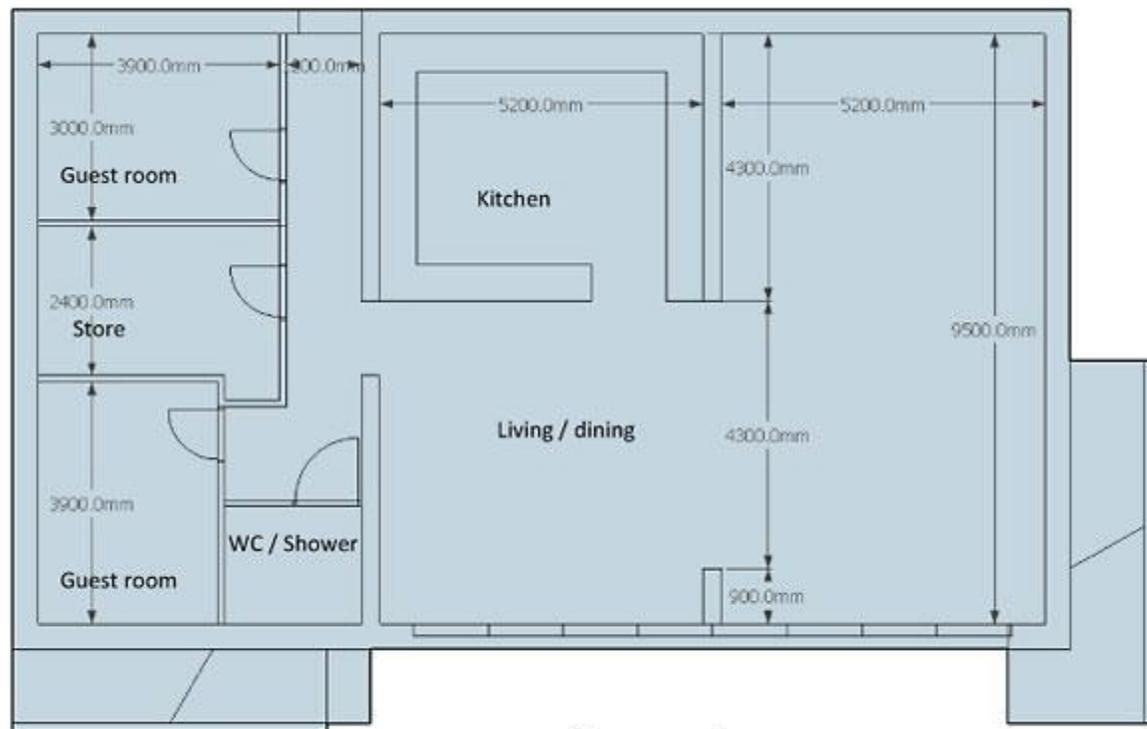
An indicative idea...



Here is an indicative plan for a modest common house of about 130 square metres which will seat 30 to 40 people at meals.

- The kitchen window is aligned with the walkway outside to maximise sight-lines inside and out
- Patio doors at the far end to wider outdoor spaces
- Other facilities, floors or elements can be added or considered, as desired

Common House - Chapletown Cohousing



Balcony access & stairs to garden

Common house
Preliminary plans
Justin Lunn mar 2017

ChaCo: “The essence of cohousing is sharing..... at the heart of the site there’s a ‘Common House [which is the location for]:

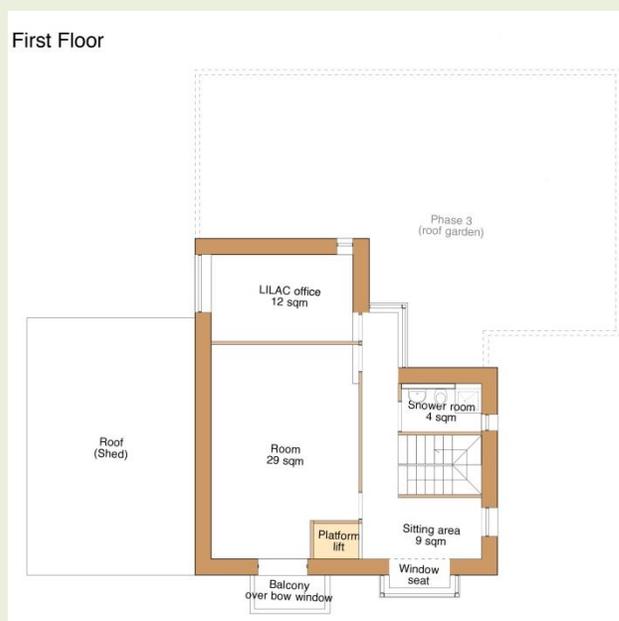
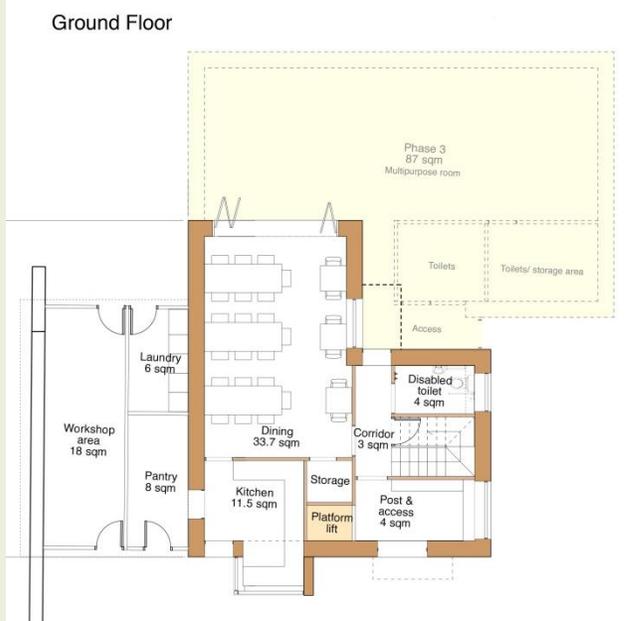
- shared meals and cooking
- meetings (maybe including ‘community centre’ type events)
- play space
- guest rooms
- a laundry
- a workshop”

Common House - Springhill

The Common House at Springhill has three floors. It includes a kitchen, dining area, and spaces for meetings and other leisure uses



The Common House at LILAC has two floors and includes a kitchen, dining and meeting rooms and guest space



Common House - LILAC



Common House - Forge Bank

The Common House at Forgebank includes kitchen, dining and leisure areas



Common House - Forge Bank



The Common House at Springhill



The Common House at Forgebank



Common House – Boston, USA

At Cambridge Cohousing in Boston USA, the Common House provides parking in the basement with common facilities on the ground floor, besides entrances to townhouses and apartments.

Interior of the Common house



Vehicle-free external spaces



Spaces as venues for communal and external interests.





Springhill

Garden areas

Private and shared garden spaces all operate as places of contact.



Laughton Lodge



Threshold Centre



New Ground



Marmalade Lane

'Internal streets'



Some settings incorporate other internal spaces where residents can mix and relax.





Energy banks – Canon Frome

Other facilities

Other community provisions
(where space has allowed).



Performance space –
Laughton Lodge



Composting –
Threshold Centre



Workshops – Marmalade Lane

Designing 'for life'

- Cohousing sites, spaces and dwellings should be accessible to all mobility and access needs.
- Dwellings should be adaptable and flexible to meet changes in personal circumstances.
- Dwellings should be designed so that they can be accessed and visited by all residents.
- Colours, contrasts, materials and surfaces should be chosen to support inclusivity – especially within the Common House and areas of other shared facilities.



Sustainable Design - Site and Buildings

Designing to meet sustainability standards means consideration of factors like:

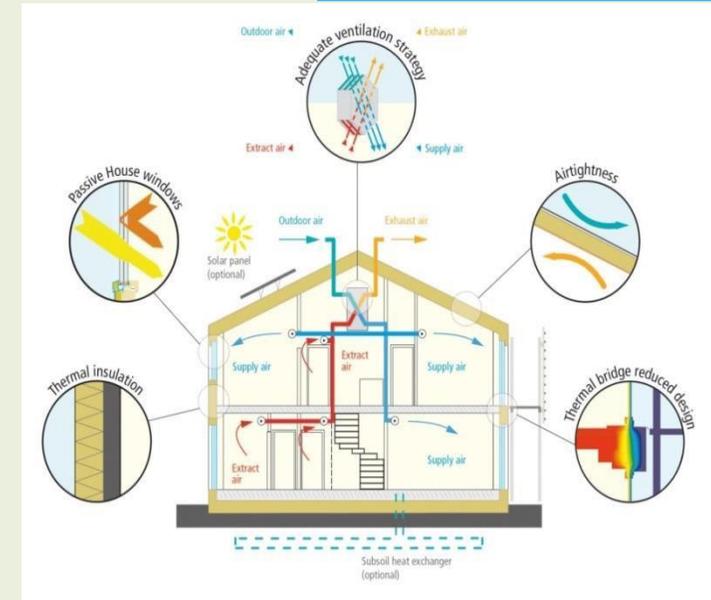
- Low energy design that takes prime account the “building fabric” such as **Passivhaus standard** for new properties and the **Enerphit** version for retrofits.
- Enhancement to existing biodiversity as beneficial to the local climate and to residents.
- Buildings orientated and positioned to provide useful solar gain and daylight, but to avoid overheating.
- Buildings orientated to maximise incidental contact between neighbours.
- Using low or zero carbon technologies: see <https://www.leti.London/cedg> for evaluation
- Green roofs, rainwater harvesting and water recycling as part of the Sustainable Urban Drainage and flood protection strategy and reduction of water consumption onsite



Sustainable Design - Passivhaus Standard

Building to Passivhaus standards involves:

- High levels of continuous insulation
- High performance triple-glazed windows
- Airtight building fabric
- 'Thermal bridge'-free designs
- Mechanical ventilation and heat recovery



Source: [Passive House Institute](#)

Performance targets:

- Space Heating Demand: $\leq 15\text{kWh}$ annually or 10W (peak demand) as per square metre of usable floor space.
- Primary Energy Demand: $\leq 120\text{kWh}$ annually as per square metre of usable floor space
- Airtightness: ≤ 0.6 air changes per hour at 50 Pascals overpressure (about the same as a 20 mile per hour wind).
- Thermal Comfort: year-round but with less than 10% of hours over 25°C

• Video about Passivhaus click [here](#)

• UK Passivhaus Trust click [here](#)

Neighbourhood life and Climate Change



- Energy and utility efficiencies within Cohousing neighbourhoods can reduce household costs from sharing meals and other resources.
- Allotments can contribute to local food production and enhance community wellbeing
- Comprehensive use of land through Permaculture and similar practices can utilise rainwater harvesting and other sustainable techniques.



Cohousing in relation to very large and small sites

- Use size Guidelines to design more than one 'cluster' on a large site
- Consider separate Cohousing projects in a larger site for different ambitions – intergenerational families; seniors; etc.
- Intermingle Cohousing clusters alongside groups of conventional residences
- Orient small sites to use spaces between dwellings to maximise neighbour contact



Publications with details of Cohousing design



‘Cohousing’, K McCamant and C Durrett (1994), 2011 ISBN 0898155398

‘Creating Cohousing’, K McCamant and C Durrett (2011) ISBN 9780865716728

‘Thinking About Cohousing’, Martin Field (2004), ISBN 0951494570

‘The Cohousing Approach to Lifetime Neighbourhoods’, M Brenton (2008),
www.housingcare.org/downloads/kbase/3140.pdf

‘Senior Cohousing’, M Brenton (2013), ISBN 9781859359266

‘The Senior Cohousing Handbook’, Charles Durrett (2009), ISBN 0865716110

‘Cohousing in Britain – a Diggers & Dreamers Review’, (2011) ISBN 9780954575731

Websites with information on Cohousing design

UK Cohousing Network

www.cohousing.org.uk

New Ground

www.owch.org.uk/resources

US Cohousing

www.cohousing.org

German approaches to 'CoHousing' and other collaborative housing projects

www.cohousing-inclusive.net/the-book

Housing our Ageing Population Panel for Innovation (HAPPI) –

www.housinglin.org.uk/Topics/browse/Design-building/Neighbourhoods/

'Designing the Cohousing Common House', G Kim (2006)

www.schemataworkshop.com



*All slides and information prepared by
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