

Housing inspirations

Information from Futurebuild 2019

Notes from Sarah Couch



- **Marmalade Lane Co-housing** 42 custom build homes shared facilities with shared garden, workshop common house and laundry; developer led collective custom build development. 'Climate Shield' just below Passivhaus standard; no gas. 42 dwellings/ha; if 3-4 storey would be 60/ha. Easier to build at high density
<https://www.molearchitects.co.uk/projects/housing/k1-cambridge-co-housing/>
<http://www.wearetown.co.uk/marmalade-lane>
- **Town** developers of Marmalade Lane and other co-housing schemes
<http://www.wearetown.co.uk/>. NB Cambridge City Council sought tenders from builders for the co-housing project; Town have gone on to build several more schemes which they find enjoyable and profitable.
- **Bill Dunster Zedlife** was promoting his 'Livshare' home- affordable shared housing that students can build; clad in pv ('Powerclad' BIPV)- net zero energy; simple energy storage with solar powered exchangeable batteries.
Also Newport Essex Ecovillage 94 zero bills homes
<https://www.zedfactory.com/newport> <https://www.zedfactory.com/zero-bills-home>
Newquay Zero Bills Community
<https://www.zedfactory.com/newquay-zbh>
- **Energiesprong** <https://www.energiesprong.uk/> Net zero energy refurbishment of social housing (and new build) using Dutch system; energy saving installation cost capitalised and paid for via service charge but apparently bills still lower—ie additional 5-10% capital cost not paid upfront and developer gets income (similar to leasehold model). Strong business case. Pilot in Nottingham- need to work with housing association/LA
- **Lilac (Low Impact Living Affordable Community) co-housing** in Bramley Leeds 20 homes, shared gardens, common house, affordable; timberframe/straw bale 'Modcell' construction. Paul Chatterton Uni Leeds- Need to respond to climate emergency; urbanisation brings greater cement use. Persimmon (worst for

landbanking) and Taylor Wimpey are the worst. Need climate safe, just, socially productive spaces. 1961 12% single households; 2011 29%
<https://www.white-design.com/architecture/all-projects/lilac/>
<https://www.diggersanddreamers.org.uk/communities/existing/>

- Lynne Sullivan architect (Green Construction Board task group- report pending). Need to aim for **net positive energy**; Building Regs are being revised now- will require real net zero by 2030 (or 2050?) so need to build to future standards
- **Project Etopia Corby** (Joseph Daniels) prefab locally, modular, solar cladding, main goal is energy production, uses earth bank for interseason energy store, low or zero carbon, very quick construction, lightweight, hurricane proof, low U values (0.13) and air tight (0.07), Tribus; can work with developers and councils. Etopia India 100 units/ha <https://www.projectetopia.com/>
- **BEIS** (Nicola Lazenby) wants step change in delivery of low carbon houses; Building for 2050 case studies- need to improve build quality
- **Beechwood West** (Pollard Thomas Edwards architects) 251 private/shared ownership homes for Swan housing association in Essex. Modular offsite cross laminated timber construction (CLT) for quick delivery, brick and tile cladding, customisable plans. Saves 159 tons CO2 per dwelling. Fabric achieves Part L building regs without renewables(housing assoc did not want to maintain renewables!) With better window and doors would achieve Passivhaus. 35 dwellings/ha- *required to provide 2-3 parking spaces!* PTE did another development 250/ha.
- Nick Rogers technical design director **Taylor Wimpey** – says we are a long way off zero carbon and that it is a distraction- thinks it is unobtainable and cannot deliver Passivhaus at scale...concern re complexity of operation and maintenance; condensation and overheating issues. Cost not really an issue. Thinks emphasis should be on retrofit and decarbonising electricity. Developers will not go further without a road map to raising standards- with clear legislation. TW criticised for poor environmental statements and no long term interest and NR said he was aware of woeful environmental statements. Culture of low density- build very few family apartments; authorities are not planning in infrastructure
- Alison Crompton AECOM technical director for *Building for 2050*; lack of skills, ageing workforce; must move away from gas; 172 passivhauses in Norwich- largest in UK.
- Most people think fabric first; should zero carbon include embodied energy?
- Bow Tie Construction Passivhaus contractors – mostly refurb in London?
<https://www.bowtieconstruction.co.uk/about/passivhaus/>
- BEIS: need to look at lifetime cost to encourage demand. Trying to move away from low density. Looking at *Net zero carbon communities*
- There are 5 million underoccupied houses- need to subdivide

The Housing challenge

Chair Jane Briginshaw Director of Design England

Susan Smith Mistress Girton College – ideas:

- **Developers should be incentivised for long term liveability and sustainability**
- Tax should not benefit better off
- **Land value tax** needed

- Equity finance (instead of debt funding) – **tenure neutral funding**- Jo Rowntree study
- Review moral limits to profit- New Homes Ombudsman- HIF

Other ideas

- **Ownership and management: Commonhold** ; Commonhold is a new type of property ownership, an alternative to the long leasehold system. It allows freehold ownership of individual flats, houses and non-residential units within a building or an estate. Ownership is not limited by time as it is with a lease. The rest of the building or estate forming the commonhold is owned and managed jointly by the flat or unit-holders, through a commonhold association. <https://www.lease-advice.org/advice-guide/commonhold/>
- **Ownership: Community Land Trust** eg Liverpool and Granby Land Trust (refurb)
- New town design: Danish International new town institute. <http://www.newtowninstitute.org/>
- **Terraced housing** is some of the densest and most adaptable housing
- Hero: **Jan Gehl** Danish architect - Design for Life (met Grosvenor re improving their estate). Focused on improving the quality of urban life by re-orienting city design towards the pedestrian and cyclist
- Hero: Alex Gordon- 'Long life loose fit low energy' housing . Architect with a prophetic vision of sustainability and *low energy*
- Hero: Walter Segal: pioneer of self build.



260
bedspaces / ha

a new, flexible, housing concept

The LivShare Home

What is LivShare?

LivShare is a new, flexible, housing concept based on purpose-built shared houses, designed to offer the best of communal living whilst at the same time creating high quality, safe private bedrooms. With a higher density townhouse model utilising efficient build systems, LivShare proposes a model offering rents that young people on low incomes can afford whilst at the same time minimising the running costs of the properties.

A LivShare model can be classed as an affordable housing product and can be delivered as part of a developer's Section 106 contribution—it can also attract capital grants and institutional investment.

Crucially, LivShare addresses the significant housing need of single young people who struggle to access decent private rented accommodation, and for whom home ownership is unaffordable. The housing need of this huge section of people is too often not being met by registered housing providers, the build to rent sector or government capital grant funding streams. LivShare also provides a credible and scalable move on solution for single people living in supported housing.

The LivShare concept envisages developments that are designed specifically for sharers, providing good quality shared houses that offer excellent facilities and communal living space.

Total floor area: 130m²

Living Space Module

22 m²



Bedrooms Module

25.5 m²



Kitchen + Dining Module

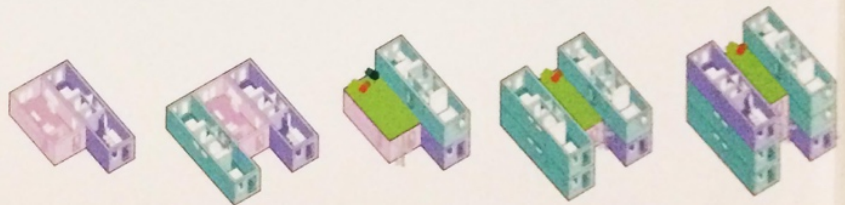
25.5 m²



Ground floor plan



First floor plan





Zed factory Newquay Zero Bills Community

LILAC Co housing



Bioregional case studies

<https://www.bioregional.com/projects-and-services/creating-sustainable-homes-communities>

Europa Innova Sustainable Housing across Europe (older 'Stand-Inn' Case studies by Jane Thompson, Eynsham)

- Solaris Rennes 2004 110 flats
<http://www.manuelle-gautrand.com/projects/solaris-housing-block/>
- Bedzed Beddington South London 2002; 82 homes and 18 live/work unit; carbon neutral
<https://www.bioregional.com/projects-and-services/case-studies/bedzed-the-uks-first-large-scale-eco-village>
- Villa 2000 Tuusula Finland demonstration house <http://www.cres.gr/perch/villa-fi.htm>
- Austrian straw bale house 2005 Böhheimkirchen Centre for Appropriate Technology
www.s-house.at/SB05.pdf
- 9-10 Stock Orchard Street London 2004; Sarah Wigglesworth straw bale home office <https://strawbalehouseislington.wordpress.com/design/>
- Nordic Passive House, Espoo Finland 2005; block of 20 flats
- Rural house at Oncins, Huesca, Spain, 1999, architect Petra Jebens-Zirkel 'bioconstruction' house/office
- La Viscose, Echirrolles France, Grenoble; refurbishment of social housing, 1982-1990s