

## Solar gain, renewables, waste and Lifetime Homes

**Adaptation to climate change:** Designs should avoid excess solar gain in summer through solar shading. Developments should avoid too much hard standing and maximise landscaped areas where possible to increase the cooling effects it has.

**Passive solar gain** should be maximised through site layout utilize passive solar energy whilst avoiding overheating in summer

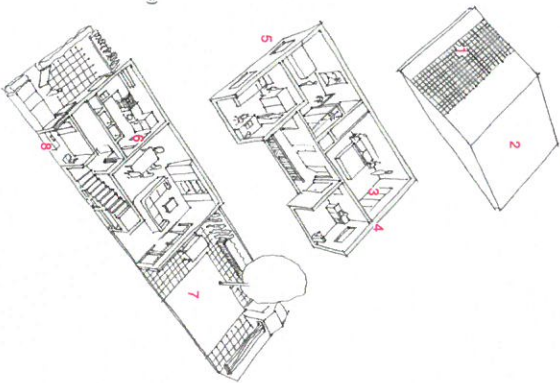
**Energy efficiency** of the building fabric should be thought about in the first instance to reduce the energy demanded from new homes.

**Renewable technologies** should be encouraged, especially for new build houses. Technologies should be chosen because they are the most appropriate for the site both in terms of efficiency as well as the aesthetics. Roof forms should be designed to allow for solar photovoltaic, preferably in the form of solar tiles and solar water heating without being too prominent or highly visible in key views. Less visible technologies such as ground source heat pumps should be considered.

**Waste:** Thought should be given to the reuse and recycling of building materials, particularly if demolition is occurring.

**Lifetime Homes:** Housing must meet the needs of the population of lifetime over time. Housing should have the ability to meet the needs of the population over time and as such people can stay in their homes longer without the need to new build residential development for specific users.

1. Photovoltaic Panels
2. Simple built form (minimise heat loss)
3. Large windows, North (max. natural light)
4. High levels of insulation
5. South Windows - avoid to much solar gain
6. Carlin doors- header heating of spaces
7. Water efficient features (dual flush, spray taps)
9. Appliances - high efficiency ratings.



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The Inmateer Design Guide



### Goldsmith Street, Norwich

A social housing development that sits well in the local urban context and meets high environmental standards. To be certified Passivhaus, the windows had to be smaller than the proportion in a Georgian or Victorian terrace, a set-back panel around the windows to give an enlarged feel were used, and panels of textured brick have been introduced into the main elevations. Parking has been pushed to the perimeter, so the streets feel safe and 'owned' by pedestrians rather than cars. Bin stores have

### New Ground Co-housing, Barnet, London

A co-housing scheme for older women, built around a large communal courtyard. It provides an alternative, community-focused housing option, where residents were involved in the design process throughout. There are 25 flats at New Ground, eight socially rented and managed by Housing for Women, and 17 owner occupied, with a few shared facilities and a very large shared garden. The buildings form and materiality blend into the terraced street.



### Brambleside, St Teath

Brambleside was completed in December 2010. The properties feature ground source heat pumps which provide heating and hot water. All the properties have private rear gardens and a parking space. The homes were part of a joint development between CRHA and Cornwall CLT providing 6 homes for rent and 10 homes for sale to qualifying local people.

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