

## Section 2.4: Self-build

Until recent times, building one's own home was the normal thing to do, and it still is in many parts of the world today. For most people it was the only way to get a roof over their heads. In Wales, landless peasants would work round the clock to complete the shell of a 'tai unnos', or one-night house, as a right of tenure would be gained if smoke was seen rising from the chimney before sunrise on the following day. The first building societies were in fact mutual savings clubs that were dissolved after all the members had built their own homes.

### 2.4.1 The Environmental Potential

Sustainable building means, among other things, thermal comfort, healthy living, lower heating costs, and a high degree of user satisfaction. As such, it is almost certain to appeal to those fortunate enough to have an input into the design and construction of their own homes. A desire to live in a more eco-friendly home than can usually be found on the market is often the motive behind self-building in the first place.

For the television series 'Grand Designs', presenter Kevin McCloud worked closely with eight self-build projects, following their progress over many months. He found that environmental issues were taken onboard by nearly all the participants, and "suit-wearing fathers of 2.4 children become overnight disciples of solar power, power-dressing mothers leave their chargecards on the hall table and step out into a brave new world of composting toilets, and retired couples experience Damascene conversions to ecological living" [1].

Recent examples of low-energy self-build houses are among the best national examples of environmentally sound building, with high NHER (National Home Energy Rating) scores of 9 or 10 (out of 10) [2]. In other countries too, self-builders are side-stepping the mainstream construction industry and leading the way in low-energy building. Financial incentives made available by the German government for all eco-building were mainly claimed and used by self-builders. This served to raise the standard for eco-materials and low energy houses; a standard which the building industry has now had to accept [3].

Very often in conventional construction projects, designer, contractor and client may have different interests in terms of costs, timing and build quality, and this can generate conflict, or at least a lack of combined effort. One partner in the project will often blame another for a failure to deliver the best environmental option. In situations where these different roles are united in one person or interest group, there is scope for effective decision making on the longer term benefits of eco-measures, and a commitment from the beginning to integrate them into the design and planning process.

For most people, self-build is of course a daunting prospect. The mystique surrounding buildings and how they work can deter even the most enthusiastic amateur. Construction professionals, like all experts, tend to guard the secrets of their skills. Dire warnings are often issued on the dangers of amateurs getting involved. As a result, buildings are often seen as monolithic structures that we have to fit our lives around, rather than flexible objects which can adapt to changing family or employment conditions.

## 2.4.2 The Segal Method

There are many skills involved in building a house, but several of these can be learned quite easily on the job, given proper site supervision. In addition, some methods of building are inherently more user-friendly than others. The post-and-beam, timber frame building method, developed in the 1970s and 1980s by architect Walter Segal, has proved to be particularly appropriate for self-builders with no previous experience of construction. The Centre for Alternative Technology has run self-build courses based on the Segal method for many years, and these have always been popular and usually oversubscribed.

The original Segal Method was essentially eco-friendly, relying as it did on timber as the main structural material, with minimum use of concrete and land disturbance, and the built-in option of reusing all materials. Above all, the Segal approach put the self-builder at the heart of the process. He trusted them to make sensible decisions about the design of their homes, and he trusted their practical competence, fuelled by a desire to improve their housing conditions. He has been proved right.

Designers and builders working in the Segal tradition are continually developing the method to incorporate energy efficiency and low environmental impact. They have been able to do this because of the system's inherent simplicity, flexibility and a basic low-tech, low-waste approach.

## 2.4.3 Designer Self-build

Self-build is about more than just acquiring a new building or home. It is often a process of self-discovery, development and empowerment. Kevin McCloud ranks it with the birth of a new child, or writing a novel, or crossing the Sahara, and describes it as "one of the last great adventures open to us" [1]. The return on the effort invested is immense, not just in the financial and physical sense, but also in the enormous satisfaction and self-confidence which comes from having created one's own home, and the continuing enjoyment that it brings.

**Figure 1: Taiffordd Fawr. This eco-house used professional builders, but the client managed the financial part of the project and was instrumental in the design and decisions to include eco-features, such as solar water heating, PV panels and wood pellet boiler. Architect, Pat Borer**



Self-build can also be used to skip a few rungs on the way up the housing ladder. Given a certain amount of capital to begin with, it is an entirely honourable way of ‘bucking the system’. Individuals, couples and families can self-build in order to enjoy a bigger and better house than they could otherwise afford.

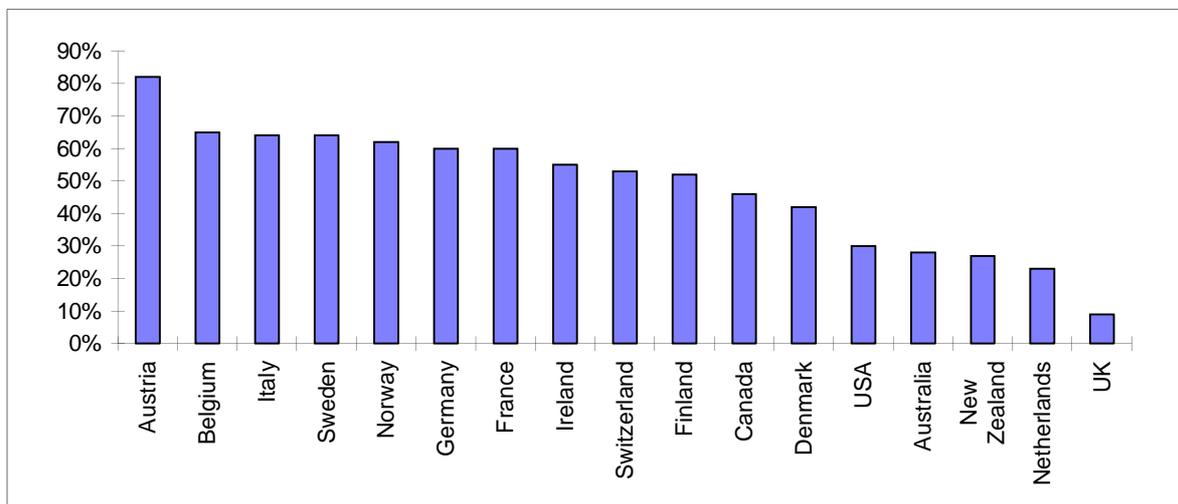
For those on middle to high incomes, there is a burgeoning market in ‘designer self-build’, based on the appeal of a totally unique and individual home. The ultimate in DIY, self-build in this situation can include an input by the resident into design or managing the process, as well as doing some or all of the construction work. Sometimes it is no more than a very token input, but the sense of having overall control makes it feel very different from buying an ‘off-the-peg’ house. Glossy magazines aimed at this market offer many examples of couples or families building their ‘dream home’, and are full of adverts for financial packages, insurance and building plots.

According to Kevin McCloud, “there is a contained explosion happening in the building industry, of ordinary people who feel it is about time that houses were designed and built for the individuals who occupy them and built with a sense of how we live today” [1]. He sees this as a rational response to unimaginative modern estates, with rows of identical boxes “drawn up by draughtsmen from copybook patterns and constructed for profit” [Ibid].

#### 2.4.4 Self-build for Housing Need

Sadly, those on lower incomes who succeed in self-building have usually done so in spite of our current system of housing provision, rather than because of it. As Jon Broome points out, “Britain has a disabling framework for self-help housing ... compared with other countries.” [4] The number of self-build completions, as a percentage of all new housing, is lower for the UK than for any other European country (see Figure 3).

Figure 2: Self-help as a percentage of new owner occupied housing [5]



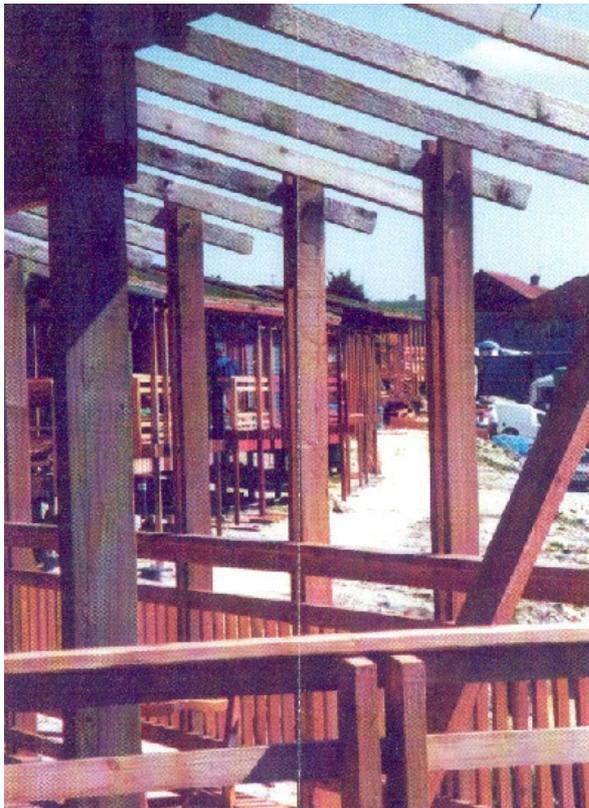
This is due to several factors, including the relatively high cost of land, the lack of suitable financial packages that allow for the release of capital before the house is completed, and restrictive planning regulations. Even so, groups of people in housing need may attract funding through the Housing Corporation or, with appropriate support from a Local Authority or RSL, private finance through banks or building societies. It is possible to include a training element such as NVQs into these self-build schemes, so that young unemployed people end up with their own homes, and the prospect of employment.



For many self-build groups, it can take years of battling with various bureaucracies before they can start to build. Individual self-builders, especially those who are not professional builders, are often regarded as high-risk by mortgage lenders. Yet in a scheme run by Stockholm City Council, where self-builders were given the help and facilities they needed, only 1 in 1000, once started, failed to complete their houses, and only 1 percent were more than 2 months late. [6]

What is more, with most of the labour donated free by the self-builders, these houses can be built within Housing Corporation cost guidelines. The Hedgehog self-build scheme in Brighton (see Figure 2) was made possible by treating the self-builders' labour as match funding to complement a Social Housing Grant. Their rents are set at a discounted rate and heating bills are expected to be around £80/yr. In an earlier Brighton scheme (Diggers), also funded by South London Family Housing Association, the self-builders paid rents that were only two thirds of the NFHA (National Federation of Housing Associations) rent indicator levels for 1993 [7]. More information on both of these projects, and others, is available from The Walter Segal Self-Build Trust website. [8]

**Figure 3: Hedgehog Self-Build project in Brighton, consisting of ten detached bungalows**



#### **Bournemouth Churches H.A.**

Bournemouth Churches Housing Association has developed a 'Build and Train' model, which is designed to deliver a fast-track training package with a minimum NVQ level 2 qualification, to young long-term unemployed and homeless people.

In collaboration with Purbeck District Council, who provided the land free of charge on a long-term lease, Bournemouth & Poole college, which provided the training, and Oregon Partnerships, who provided the timber frame structure and specialist training, six low-energy flats were constructed.

In the first year, the flats showed a 35 percent saving on heating bills. It is estimated that the actual construction costs are 5-8 percent lower than for a conventional masonry build.

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### 2.4.5 The Future for Self-build

People who build for themselves will tend to take more care, and spend more time getting details just right, than those building for profit. Because self-builders have an intimate knowledge of the way their homes are built, any necessary maintenance tasks are usually obvious, and they are carried out conscientiously, as a means of protecting the initial investment of time and effort. These houses therefore tend to have a longer life. They are also much more likely to be altered and renovated, as family circumstances change, both because self-builders see such work as within their sphere of competence, and because they are understandably reluctant to move.

Self-build also provides the option of 'building in stages', i.e. adding rooms as a family grows or more money becomes available, or converting former living space to work or hobby space. Indeed, there is a lot to be said for not attempting to complete a house in one go. Vernacular houses were often deliberately built unfinished, and evolved over time as circumstances changed and finances permitted. After all, "if a building is perceived to have been completed and not capable of change, [it] ceases to provide us with the enriching experience of imagining alternatives" [9].

Groups of people working together for a common aim will often build up a sense of community and mutual help, thereby laying the basis for a well-integrated, sustainable neighbourhood in the future. In the Diggers scheme in Brighton, and more recently at Hockerton, this is reflected in the decision to create communal leisure and play spaces, community enterprises and growing areas on surrounding land.

Durable, flexible houses that suit the particular needs of their inhabitants, whose construction has enhanced self esteem and community relationships, and which have low embodied energy and energy efficiency built in, seem as close to a definition of sustainable housing as one can reasonably get.

Not everyone would choose to build for him or herself, but it should be a viable option for those who do. Access to land and finance could be further improved, and planning conditions could be made more sympathetic to individual designs. Deprived of its mystique, the process of building could become much more open; enlarging and enriching the pattern of housing provision in this country.

## References

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