

Low Impact Development

The future in our hands



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Foreword by Simon Fairlie

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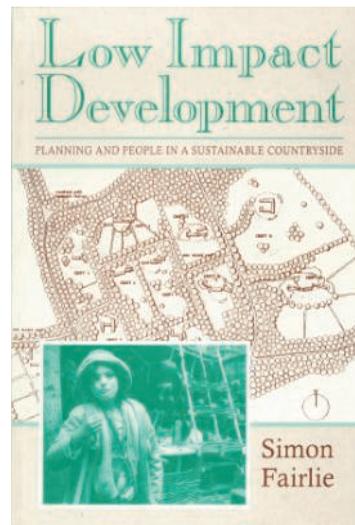
Foreword

by Simon Fairlie

In 2007 the British government began to unveil plans for up to 15 new ‘ecotowns’ of 5,000 to 20,000 homes, mostly sited in the greenbelt or open countryside. Critics argue that these new towns fly in the face of planning policy, and the Local Government Association has even threatened a judicial review of the plans. In response the Labour government claims that their ecotowns will be far greener than anything built previously, with zero carbon homes, significant reduction of car use and ownership, food provision on allotments, etc — and hence they are justified as an exception to normal planning policy which seeks to site conventional new development in or alongside existing settlements.

The funny thing is that over the last 12 years a growing number of people have been making much the same argument — that highly sustainable developments ought to be regarded as exceptions to normal planning policy — and the British government has paid not a blind bit of attention.

In 1996, I started promoting the concept of ‘Low Impact Development’ in a book of that name, a book born out of the frustration of trying to obtain permission to live in a self-built, off-grid community in Somerset. Neither the term nor the concept was new. People have been living low impact lifestyles in low impact buildings for centuries; indeed until very recently the majority of people in the world lived that way. The book borrowed ideas from several other people, notably Tony Wrench, who was facing similar planning problems in Wales.



In the book I defined a low impact development as one that ‘through its low negative environmental impact either enhances or does not significantly diminish environmental quality’. This definition gets bandied around all over the place (most recently in a Welsh Assembly consultation paper on affordable housing), but I now prefer the following: ‘LID is development which, by virtue of its low or benign environmental impact, may be allowed in locations where conventional development is not permitted.’



Roundhouse at Tinkers Bubble

I prefer this revised definition because wrapped up in it is the main argument; that low impact buildings need not be bound by the restrictions necessary to protect the countryside from ‘conventional’ high impact development — a.k.a. suburban sprawl. There are two other principle arguments in favour of

LID: (i) that some form of exception policy is necessary because conventional housing in a countryside protected from sprawl becomes too expensive for the people who work there; and (ii) soon we will all have to live more sustainable low impact lifestyles, so pioneers should be encouraged.

Since the publication of Low Impact Development, there have been a wealth of initiatives in support of LID. The Rural Planning Group of The Land Is Ours in 1999 produced a list of 15 Criteria by which LIDs could be assessed. The same year saw the founding of Chapter 7, an organization devoted to lobbying on behalf of low

impact builders, smallholders, caravan dwellers and other low income rural people facing planning problems, and offering free advice. In 2003, Chapter 7 published *Sustainable Homes and Livelihoods in the Countryside*, a 50 page document advocating changes to PPS 7, the government's planning policy statement on the countryside — backed up with an appendix reporting on over 80 individual cases.

Meanwhile, increasing numbers of people have been starting up low impact projects, more often than not moving onto land without applying for permission in advance, knowing that refusal would be inevitable. In many instances, after refusal by the local authority, the matter has gone to appeal, and in the majority of cases appeal Inspectors have decided, on the face of the evidence, that these LIDs are a justifiable exception to planning policy. In England, since 1999, almost every single low impact community that has gone to appeal — Kings Hill, Tinkers Bubble, Steward Community Woodland, Landmatters, Fivepenny Farm, Quicken Wood, Keveral Farm — has been given temporary or permanent permission.

All the more bizarre then that the government Ministry Responsible for Planning (currently the DCLG, but it changes its name so frequently that I shall call it the MRP) still refuses to acknowledge the existence of LID. The only time I have ever seen the term 'low impact development' used by the MRP was in relation to the Business Enterprise Zones introduced via the 2004 Planning and Compulsory Purchase Act. There have been a few changes in the right direction, notably the acknowledgement in the 2004 revision of PPS7 that subsistence production can be viable; but progress is painfully slow. Such is the dead weight of English planning bureaucracy that you have to move a mountain to change the position of a single comma. In *Sustainable Homes and Livelihoods* we provided pages of evidence to show that the statement 'normally it will be as convenient for farm or forestry workers to live in nearby

towns as it will be for them to live where they work' was a load of outdated, uninformed tosh. In all the cases we documented, living away from your holding was extremely inconvenient. When the new version of PPS7 came back, 'normally' had been changed to 'often'.

The MRP's refusal to acknowledge the existence of LID becomes more understandable if we take into account that it hasn't even recognized the existence of self-build. There is not a single mention of self-build housing anywhere in the reams and reams of government guidance that I have ploughed through over the last 12 years, nor is it mentioned in the Treasury's *Review of Housing*, by Kate Barker — even though self-build constitutes nearly 10 per cent of all owner-occupied housing in the UK (mainly as a luxury alternative for the wealthy) . In most other European countries self-build constitutes between 40 and 60 per cent of owner occupied housing, and caters for ordinary people and first-time buyers.

And herein lies the discrepancy between the MRP's support for ecotowns in the open countryside, and its refusal to acknowledge the existence of low impact ecovillages, ecohamlets, ecofarms and ecoshacks. British governments, and particularly the Labour Government, detest the idea that people are capable of creating their own habitat and building their own home. Planners hate dealing with individual applications and prefer to carve up the building land under their control amongst a cartel of developers whom they meet over liquid lunches. The overwhelming proportion of land allocated for housing, or scheduled to be in the near future, is monopolized by a handful of housebuilding corporations, and unavailable to the likes of you or I. These are the people the planning establishment likes to deal with and that is why the government has given the responsibility of building its pilot 'ecovillage' outside Bristol, not to the people who have been campaigning for 20 years for the right to build ecovillages, but to

Barratts, the housebuilding firm that has just had to lay off 15 per cent of its workforce.

The ray of light shining over this dismal Saxon landscape comes from the Celtic fringe. Scotland has acknowledged the existence and the potential benefits of low impact housing in its national planning guidance ever since 1999; but in many parts of Scotland the main restraint on sustainable rural development is not planning policy, but land ownership. Cornwall is peculiar and full of caravans, pixies and erratically behaved planning departments.

The really interesting developments are happening in Wales where the drawn out battle over the roundhouses at Brithdir Mawr, in Pembrokeshire National Park, has prompted two reports on LID, the first in 2002 from the University of the West of England, and another two years later from Baker Associates of Bristol — and as a result, a spirited attempt from the planning policy officers in Pembrokeshire to draw up a working development plan policy for LID. The Lamma project is a spirited response. In summer 2008 the Welsh Assembly published a consultation document on affordable housing and inviting views, not on whether LID should be introduced, but on what criteria might be appropriate.

All of this suggests that regional devolution really does improve democracy: civil servants in the devolved regions are more accessible, and are more inclined to listen than in England. But ultimately democracy depends upon the resolution of people to claim self-determination, and to riot when denied it. It will probably take years for the English planning establishment to introduce policies that provide for self-build and LID. Until that happens interested people will have to move onto land and provide for themselves. The priority should be to do this as effectively and sustainably as possible so that it sets a shining example.

How to use this book

This book can be read in order, but it is also designed to be dipped in and out of. We have divided it into clear sections which encompass the what, why and how of Low Impact Development. The second section 'in practice' is full of inspiring examples and stories. The later sections suggest ways we can move LID forward and how you can get involved.

We encourage you to pass it on once you have read it, or let others know that they can order a copy via the website: <http://lowimpactdevelopment.wordpress.com>. All proceeds from the book go to support the LID movement.

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David Blair's house in Argyll and Bute, Scotland

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LOW IMPACT DEVELOPMENT IN CONTEXT

What is Low Impact Development?

by Larch Maxey

Low Impact Development is a superb example of sustainability being led from the grass roots. Whilst planners and policy makers wring their hands over climate change, affordable housing and rural decline, for over a decade across the UK, LIDers have quietly got on with building a greener future from the ground up. LID is one

of the few approaches offering holistic solutions to climate change, peak oil and sustainability. It has the potential to help revitalise Britain's countryside and urban communities and help the nation feed and power itself. Given LID's background as a grass roots movement, it should come as no surprise that its definition has not stood still, but has continued to evolve.



Gardens at Hill Holt Wood, Lincolnshire

Development under the LID umbrella is generally:

- locally adapted, diverse and unique
- made from natural, local materials
- of an appropriate scale
- visually unobtrusive
- enhancing biodiversity
- based on renewable resources
- autonomous in terms of energy, water and waste
- increasing public access to open space

- generating little traffic
- linked to sustainable livelihoods
- co-ordinated by a management plan

These points have been more fully discussed elsewhere (see further resources). There are two crucial points to make here, however. Firstly, LID will continue to evolve in a dialogue between developers on the ground and policy makers/planners. Secondly, as independent studies consistently show, LID is a rare example of truly sustainable development capable of social, economic *and* environmental benefits to society as a whole. Thus LID draws on the skills, traditions, designs and materials best suited to each site, empowering those involved and contributing to an emerging regional uniqueness and sense of place. LID housing, for example, tends to be built to very high energy efficiency standards and *also* to use locally available natural and/or reclaimed materials so that the *embodied energy* of the building itself is also very low.



Jenny Pickerrill

Piglets at Green Hill, Scotland



Ben Law

Ben Law's house, Prickly Nut Wood

Why do we need Low Impact Development?

by Simon Dale

Introduction

Ecological crisis is not a future possibility but a current reality. Current rates of species extinction are at their highest since that of the dinosaurs. Ninety percent of the large fish in our seas have gone. Anthropogenic climate change is happening one hundred times faster than our best models have predicted. This change threatens not only the extinction of individual species but the collapse or death of entire ecosystems. We are faced with the question of whether it is too late for us to take any effective action. The fact that this crisis is already happening means that the question is not to do with whether it can be averted, but what we can do to stop exacerbating it and to cope with its effects. It is not too late; anyone can today take locally effective actions.

The Case for Urgent Preparation for Energy Descent

Human development has for the last two hundred years been powered by the use of fossil fuels. We have converted from locally self reliant agrarian focussed societies to a globalised society powered predominantly by fossil fuels. This global society is mediated by interdependent international financial markets. These markets and their various currencies have seen near continuous growth simultaneous with the growth in supplies of fossil fuels. This financial growth has also been exponential due to the growth of speculation. Our financial transactions of trade are now dwarfed by the transactions of pure finances, the speculation on that trade and the speculation on that speculation. All of this financial activity is based on assumptions and predictions of continued growth. On

this our global society is dependent.

Climate change gives a clear imperative to curtail our fossil fuel use. In addition, world supplies of fossil fuels are currently passing their peak of production. There is growing agreement that oil has passed its peak, gas will very shortly, and coal will peak in the next couple of decades. Uranium may not be a fossil fuel but that too will reach and pass its peak of production within the next few decades. Without these we either have to invent a new power source, make a transition to renewables, or reduce our power/fuel consumption.

Our society is operating under the assumption that economic liberalism and the free market will provide technological solutions for our future energy needs, the effects of climate change and any other problems that we might encounter. It is true that the free market and technological progress have extended our capabilities and even solved certain problems. However, all of this has been the product of increasing consumption of fossil fuels. The technological advance that would give us a replacement source of power to continue our growth is utterly unprecedented. Never before have we done what our society relies on us achieving now, by the essentially passive continuation of an unchanging method.

The belief that future technological fixes will enable continued growth is crucial for the functioning of our speculative economies. Without this belief our markets would collapse, and unlike the slow dwindling of fuel supplies, this can happen quickly as investor confidence fails. At the moment we are staving off this occurrence with increasingly creative accounting and economic manipulation including inflated housing prices, and increased public borrowing. Already we are seeing how precarious this approach has been with the collapse of over extended banking giants and the beginning of the 'global economic downturn'.

There is a significant chance that replacement energy sources will not be realised before we lose the economic buoyancy that makes such technological progress possible. If this happens we will have no options but to make a radical transition to a non-growth paradigm and much lower energy ways of living. This will require major adaptations. The sooner we can begin to make these adaptations, the slower the transition will be and the more chance we have of positively managing the subsequent energy descent as an equitable and comfortable process. If wisely managed we still have a wealth of resources and powerful technology in our hands. With discerning use these assets could help us address our most fundamental needs for a long time to come.

Reducing our Energy Dependency



Home-grown potatoes

To reduce our energy dependency we will not only have to reduce our consumption but we will have to dramatically increase the productivity of our land and ecosystems. The most crucial parts of our society are our food production and distribution systems. Particularly in the developed world, our agricultural and food supply systems are heavily fossil fuel dependent. Most of our food is either

imported, or has travelled many miles within the country. It is largely produced by industrial farming techniques which require both heavy machinery and fossil fuel derived fertilisers and pesticides. Calorifically, all of these inputs are many times greater than the outputs, meaning that we are constantly feeding energy into agriculture. Clearly, without fossil fuels, agriculture needs to be a nett donor of energy to human society. Before the use of fossil

fuels in agriculture, the vast majority of the population were involved in agriculture. If we are to move beyond fossil fuels this may well have to be the case again.

There is also a need for other important land based produce, particularly forestry and its derived products. As well as timber for building, tools and the making of other objects, wood is our primary renewable fuel source.

Sustainable and Resilient Communities

In order to be sustainable, a system or community must be self reliant in all the resources it requires. The greater the number of independent sub-systems that can provide for the functions and required resources, the greater the resilience of the system. Whilst our global society still contains many different sub-systems, they are not independent, being linked by shared fossil fuel dependency, trans-national ownership and the globalised economy. Where we can replace this with independent self sufficiency at the smallest scales, we will have sustainable and resilient local communities.



Raised-bed vegetable growing

Firstly, we need to heal the infertility that is the legacy of ecological degradation and intensive farming. Naturally the restoration of soil fertility will take time, as will the establishment of gardens, orchards and complex agroforestry systems. All of these forms of land based production require supporting infrastructure and processing facilities. These also need to be localised and provided in ways suitable for a post carbon future. Simple, low-impact homes can be

built where they are needed, with natural materials and accessible methods. These buildings can easily provide high levels of comfort and efficiency at a tiny fraction of the cost of their conventional equivalents. Effective and reliable systems for water, sewage, heating, refrigeration and even modest electricity can be simply made in low-tech ways with reused and natural materials.



Using horse power to move logs

There will always be benefits and pleasures of community co-operation and facilities. Essential supporting facilities which also need relocalisation include mills, forges, tanneries, lime-kilns and carpenters workshops. These communities should also have their own independent councils, markets, and local events. Local trading systems or currencies add to community resilience by strengthening the local economy and protecting against global financial instability. Alongside the required infrastructure comes the need for many sets of skills. A lot of these are traditional skills to be revived, some will be derivative of the contemporary world, and others will be a synthesis of the two. All take time to learn, develop and share.

Permaculture

Permaculture is a set of design principles for human scale, sustainable systems. It is based on the three ethics of ‘people care, earth care and fair shares’. It provides an approach that is most frequently applied to small scale agriculture, but can equally be applied to buildings, domestic systems and community interactions.

Permaculture has played a key role in Cuba’s ‘special period’ after the collapse of the Soviet Union in 1990. Oil imports were cut in

half, and food by 80%. The island underwent a transition from an industrial system to one of urban gardens using organic methods. We can choose this kind of transition to meaningfully curtail our contributions to climate change and what we may well soon face without choice in the face of peaked oil and economic instability. The Cubans' response, largely based on permaculture and community agriculture, was highly successful. Vegetables were planted on rooftops and abandoned car parks. Havana now produces 60% of its food from urban land within the city itself.

A Force for Change

There is significant and rapidly growing energy at the grass roots for permaculture type solutions and the intentional move towards relocalisation and energy descent. Organisations such as the Transition Towns Network and the Soil Association are part of the gathering momentum in this direction. The call to energy descent is never going to come from the corporate or political arenas, as it challenges the growth paradigm. It is coming now from the grass roots, with rapidly increasing numbers of people unwilling to remain on the sinking ship of consumption and growth, waiting blindly for the techno-fix lifeboat.

The scale and power of this enthusiasm became clear to me after our family's experience of building a simple low-impact home in a Welsh woodland where we lived whilst helping with woodland management, small scale animal husbandry and setting up a forest garden (see Jasmine Saville's piece). Part of our motivation was to show others that this kind of living was possible. I put a few photographs of our home on a simple web page to show half a dozen friends who had helped us with the construction. Within a few weeks, it had been passed on and started to appear on a few blogs. Since then the website has been receiving up to 50,000

unique visits a day and has been looked at by 2 million people. I have had thousands of emails from excited and inspired people. Some with tears, some with plans, some with their own stories and every single one with enthusiasm and encouragement.

The combination of this feedback cycle with the enthusiasm and innate appeal of this route makes this a powerful movement, and one that is capable of making effective change at every small step. The major obstacles holding it back are availability of land and people's time. These again are economic issues. The sort of work required to begin to make the transition to an energy descent is inherently uneconomic and shall remain so until the point at which there are no longer any other options. It is both crucial and appealing that before this time comes we do whatever we can to build local resilience. Whilst large numbers of people are pursuing this kind of work in their leisure time, it is impossible for most to follow it as a full time vocation at the same time as paying for housing and the land they are working.

Opportunities

The planning system does make allowances for farmers and seasonal forestry workers to live on their land; this is commonly subject to strict tests of their functional need to be there and proof that the enterprise is a viable business. This framework does not make allowance for production for self-sufficiency nor for the low cost lifestyles favoured by those living off the land in this way.

Small numbers of individuals and communities have been taking a direct action approach and simply moving on to agricultural land and getting on with their projects without advance planning permission. Most of these projects end up coming to the attention of the planners to whom they make retrospective applications, usually under the agricultural guidelines described above. Almost

without exception, those who can afford the lost sleep and considerable expenses of a planning appeal get awarded permission, although it is often short term temporary permission.

Understandably, the majority of people are currently put off this route by its insecurity. If the planning system gives concessions to those wishing to live on and work small pieces of agricultural land in this way, the situation would be a very different one. Once the route is established it will be appealing to sufficient numbers of people to make significant preparations for the transition to energy descent.

Conclusion

Climate change and ecological crisis require urgent and dramatic cuts in fossil fuel use. If we do not move first, they may well be forced on us soon by dwindling supplies and an over-extended global economy. There is currently no other viable energy source to continue our escalating growth. The transition to energy descent will be difficult. However, the sooner we can start preparing for it, the easier it will be. We need to make local communities self reliant and resilient. We also need to restore the fertility and productivity of the land. We need to develop and adapt supporting infrastructures as well as learning basic skills. Permaculture is an effective approach which we can use to make these changes.

There is a strong grass-roots enthusiasm to make changes in this direction as well as accelerating positive feedbacks. If a workable route can be made within the planning system to grant access to land, and the right to live on it, to those wishing to make these changes, we can allow a rising tide of people to make real progress towards a sustainable society. If a workable route is not found, we will be reliant upon the increasing numbers of people ready to take to the land without planning permission.

Bringing Low Impact Development into the mainstream

by Larch Maxey

We stand at a cross roads. If we act now there is still time to create a world of abundance in which everyone can fulfil their highest potential, a world in which humans take their rightful place within a thriving natural world. If we continue on our current path for another ten years this choice will be lost and we will have committed ourselves, our species and our planet to catastrophic climate change. Indeed, the latest research is increasingly clear: stopping all fossil fuel use is not enough. We need to actively draw CO₂ back out of the atmosphere and lock it up again (Hansen *et al.*, 2008). The good news is that we *can* begin this process right now! LID can contribute to this new development paradigm. In order to do this on the scale required LID will need to shift from the fringes of modern development to the mainstream. LID has much to offer mainstream development if it is to become truly sustainable.

Harnessing people power

LID has sprung *literally* from the ground up, rooted in practical projects which have drawn upon permaculture, traditional knowledge, appropriate technology and the creativity of LIDers themselves. As we transform society to address the twin challenges of climate change and peak oil it is essential that we harness the ingenuity, energy and local knowledge of people everywhere.

LID can help turn current social trends into powerful, practical forces for change. Since 2005, for example, the UK has seen an exponential rise

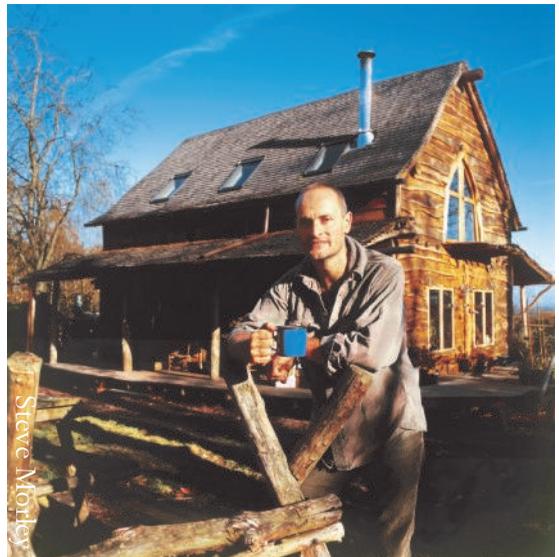


Home-grown onions

in interest in local, seasonal, organic and home grown food, green lifestyles and global ethics. For example, seed sales are going through the roof and allotment waiting lists are bulging (Vidal, 2007).

Programmes such as Channel Four's 'Grand Designs' show the growing interest in self-build eco-housing. Mainstreaming LID will allow us to unlock this potential. This is particularly important as we face the impending economic recession. House building is slowing down as mainstream builders struggle to make a profit. LID offers one way of ensuring a continuing supply of sustainable, affordable housing as it is not motivated by the need to make a profit, but people's desire to create beautiful, efficient homes for themselves. Whilst LID need not necessarily be self-built, it harnesses the skill and energy people are willing to invest into their own lives. LID simultaneously offers empowerment, employment and re-skilling.

LID can be remarkably adaptable and flexible, from a bender produced for nothing from entirely reclaimed materials through a £500 simple straw bale house such as the one at Coed Hills (see map and further resources), to 'luxury' designer homes costing up to £40,000 such as that built by Ben Law and featured on Channel Four's 'Grand Designs'.



Ben Law and his house

LID has been a seed bed for experimentation and discovery over the last fifteen years. Indeed, in a recent appeal decision, planning inspector Woolnough found ‘there to be considerable ecological, educational and cultural benefits in further exploring permaculture’ due to ‘the development of and experimentation with sustainable technologies and agricultural practices which that way of life facilitates’ (2007, pp9-10). Ideas and approaches which are starting



Solar panels at Hockerton Housing Project

to appear in the mainstream such as compost toilets, reed beds, solar water panels, turf roofs and passive solar heat gain have all been tried and tested in LIDs. As these ideas begin to inform the mainstream anyway, the time is ripe for LID *as a whole* to be embraced by the mainstream, rather than just individual components cherry picked out of context.

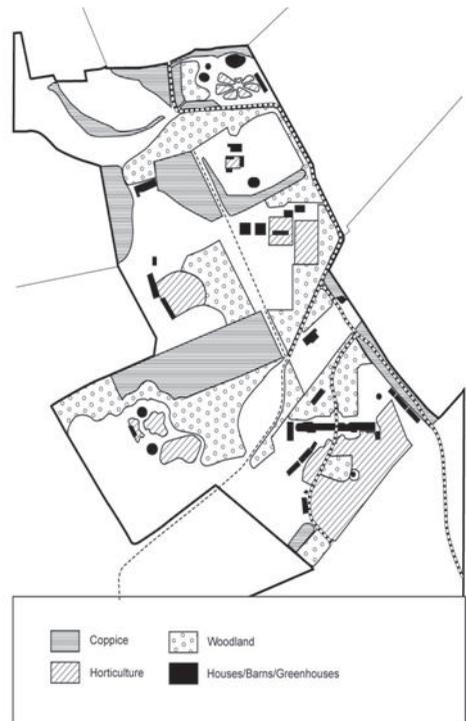
The UK Government’s target for all new housing to be carbon neutral by 2016 is ambitious given the unsustainable performance of most contemporary housing. Indeed, even its own official reports suggest Britain is already falling behind any chance of meeting this target (NHF, 2007). These targets, far from being too stringent, as large building companies claim, do not go far enough for two reasons. First, they ignore the embodied energy required to quarry, process, transport and dispose of current mainstream building materials. Second, they fail to respond to the latest science which shows that rather than aiming for carbon neutral development, future development needs to actively lock up carbon. LID has always been sensitive to the embodied energy of the

materials it uses and through using natural materials such as wood, straw and hemp, building up soil fertility, and planting trees and perennials, LID can contribute to the process of drawing carbon out of the atmosphere again. LID can meet the real challenge of carbon *positive* development immediately.

Lessons from Lammas

Lammas Low Impact Initiatives Ltd is one example of how LID is beginning to move into the mainstream, raising its profile and making it more accessible to a wider range of people. Lammas' flagship eco-hamlet in Pembrokeshire, for example, includes an eco-terrace of four units as well as five more traditional smallholdings. This eco-terrace follows the co-housing model, providing both private space and shared common space. It offers an attractive route into LID for single people, couples and families, including those who are less able to build their own home.

One of Lammas' innovative features is its commitment to working *with* the planning system. It is the first time a LID hamlet has sought planning permission *before* commencement on site. This is invaluable in moving LID towards the



Land-use plan for Lammas

mainstream as more people will consider LID if they can do so with the certainty and security that planning permission provides. However, this approach entails its own set of tensions which offer insight into some of the challenges posed by mainstreaming LID. Bureaucratic hurdles are perhaps the biggest obstacles Lammas has faced. Not only must it negotiate the delays and quirks of an overburdened and archaic local planning system, it is also breaking new ground within both the LID movement and the planning system.



Model of the proposed Lammas community hub

The Ecological Land Co-op

This initiative works on a slightly different model to Lammas, but again acts as a broker through the planning and land purchasing quagmires to make it easier for people to set up LIDs. By attracting investors the co-op has the funds to buy land and gain planning permission before then leasing LID smallholdings on reasonable and long-term agreements.

Educational LID projects

Another way in which the LID movement has already begun to reach out to the mainstream is through a range of educational initiatives. Most established LID projects include an educational component, from tours, open days and courses on site to stalls, talks and web sites off site. Additionally, a new generation of LID educational projects are beginning to emerge. These have education

as their central focus and whilst they do not necessarily involve people living on site and developing more traditional low impact livelihoods, their contribution to mainstreaming LID is considerable.

Several such projects are mentioned in this book, including Down to Earth (see ‘examples from around Britain’), Menter Felin Uchaf, Cae Mabon (see map) and LILLI. Other educational initiatives in which LID ideas and techniques feature extend well into the mainstream from the Centre for Alternative Technology to the Eden Centre, with the largest rammed earth installation in the UK. Each time LID in any form appears in the mainstream it is an opportunity for the movement to reach out further. It is crucial, however, that these opportunities are used to convey LIDs’ true message and power – that sustainable solutions are holistic and achievable by everyone, rather than discrete bits being cherry picked out of context or allowed to become the preserve of ‘experts’.

Conclusion

LID has huge potential to deliver truly sustainable development immediately, helping Britain feed, fuel and house itself. In addition to carbon positive, rather than carbon neutral development, LID can help both rural and urban regeneration. However, if LID is to be brought into the mainstream it is vital that LIDers themselves continue to set the agenda in terms of defining and expanding what LID is. This sets a significant challenge to the planning system tasked with working in participatory ways with people, with a minimum of bureaucracy. It also presents challenges to LIDers themselves to form new and innovative partnerships, working with more mainstream organisations such as Housing Associations, Local Authorities, charities, NGOs, researchers, schools, educators and enlightened building companies.

LOW IMPACT DEVELOPMENT IN PRACTICE

Examples from around Britain

by Jenny Pickerill

There are examples of LIDs worldwide, and the structures include Earthships, strawbale buildings, yurts, Walter Segal constructions, geodomes, and benders (Hewitt and Telfer, 2007). They range from temporary constructions buildable in a few days (such as a small strawbale roundhouse) to substantial solid dwellings built permanently into the ground (Hockertons' subterranean concrete walls are a good example of this).

The number of LIDs in Britain has grown significantly in the last 15 years and the low impact advocacy organisation Chapter 7 (2003) estimate that there are at least 10,000 people living in LIDs, often without planning permission. While the numbers of settlements are growing, the majority are small in scale with few having more than 20 residents. Since the mid-1990s a series of precedents have been set where LIDs have been granted temporary (between three and five years) planning permission (such as Steward Community Woodland, Landmatters and Tinkers Bubble) in recognition of their extensive sustainability. There are numerous examples of LIDs in Britain; here we look at five quite different projects:



*Hockerton Housing Project,
Nottinghamshire*

Hockerton is a five house earth-sheltered terrace first conceived in 1993. It is self-sufficient; wind power is used to generate electricity, they harvest their own water, and a reed bed system (the pond in

Hockerton Housing Project, Nottinghamshire

the front) is designed to dispose of sewage. It has won a number of prizes for energy efficiency and zero-carbon emissions. The structure is passively solar heated thanks to its particularly high thermal mass derived from being built into a hill with large insulating walls.

Roundhouses at Brithdir Mawr, Wales

There are a number of low impact homes and structures at Brithdir Mawr, most notably Tony Wrench's Roundhouse. His house is made from cordwood walls (round timber with bark still on, sawn to length and packed with mud). In certain places glass bottles and straw bales have also been used. Built in 1997 the structure cost just £3,000 to build (Wrench, 2001). It is designed to have minimal visual and environmental impact by blending in with its surroundings. It is heated through south facing windows and a wood stove.

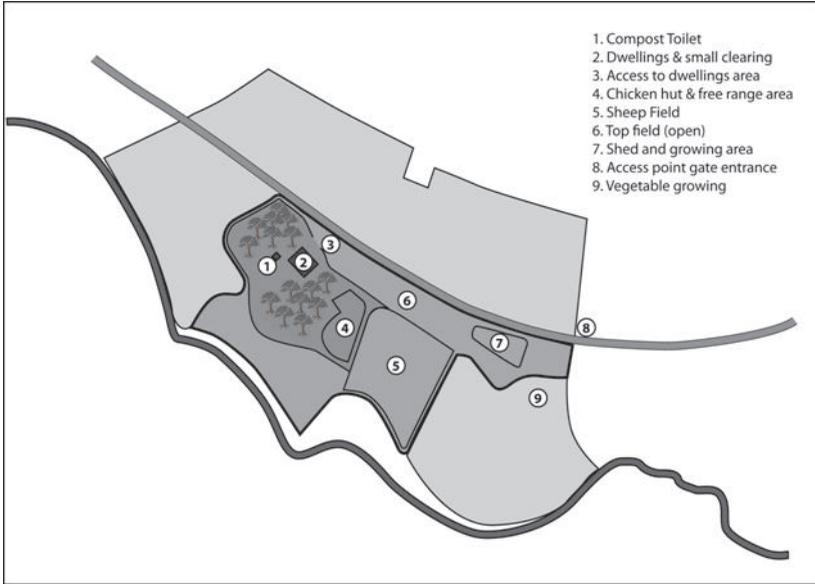
In September 2008 the roundhouses at Brithdir Mawr were granted 3 years temporary planning permission. It is the first application to

succeed under Policy 52 and is a breakthrough in planning for LID. Significantly they not only secured retrospective planning permission for existing buildings, but also prospective permission for some new residential roundhouses, visitor huts, and compost toilets. The permission is contingent on residents meeting several environmental criteria.



Tony Wrench's Roundhouse at Brithdir Mawr

Green Hill, Scotland



Green Hill layout

Since 2001 this community has been living without planning permission in a woodland in Scotland. They live in a yurt and a geodesic dome, both covered by canvas and insulated with blankets and felt. Rainwater is used for everything except drinking, power is generated by wind and solar, houses are heated by wood stoves and homemade charcoal, and they have a compost toilet. Income is generated through



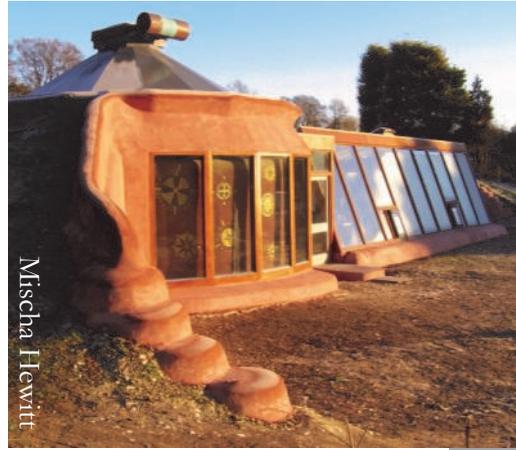
The 'tunnel' at Green Hill

a vegetable box scheme run from their extensive gardens, selling eggs and meat, and hosting training courses. They are currently constructing a timber-framed straw-bale house.

Brighton Earthship, East Sussex

Based on the US Earthship design, this is one of the few examples in the UK of a structure built using car tyres filled with waste as highly insulating walls. It is built into the ground with thick walls and floor.

It has an average temperature (without additional heating) of 21.4 Celsius. It is an entirely autonomous house; photo-voltaic panels provide electricity, drinking and washing water come from filtered rainwater, and all wastewater is treated on site.



Brighton Earthship



The oak-tiled timber-framed building at Down to Earth Project, cob wall and 28KW solar array

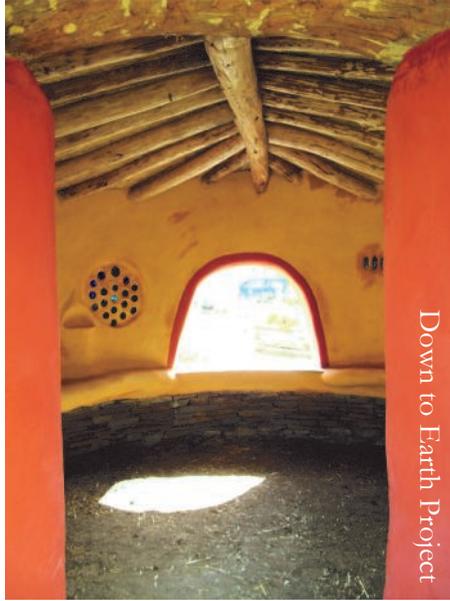
Down To Earth Project

Down to Earth Project was founded in January 2005 as a social enterprise on a four acres of the Gower Peninsula, South Wales. The project employs eight people from the local area to offer highly participatory programmes for 'disaffected' young people and training programmes for adults in Low Impact

building. They also work with schools and community organisations to design and build Low Impact outdoor classrooms, such as those in Edwardsville, Merthyr Tidfil and Bishopston, Gower Peninsula.

The site is designed using permaculture principles and includes an orchard, rare breed pigs, various Low Impact structures, a compost toilet and 28KW solar array which provides all the project's energy needs and a small income from the sale of surplus power.

The project was 'Overall Winner' of the *Sustainable Swansea Awards* in 2008 and has received official recognition and support from Jane Davidson, the Welsh Assembly Minister for Environment, Sustainability and Housing.



Outdoor classroom at Edwardsville, Merthyr Tidfil (completed 2008), built using local Blue Pennant stone, cob walls, local ash timbers in the round and a sedam roof

Existing Low Impact Developments

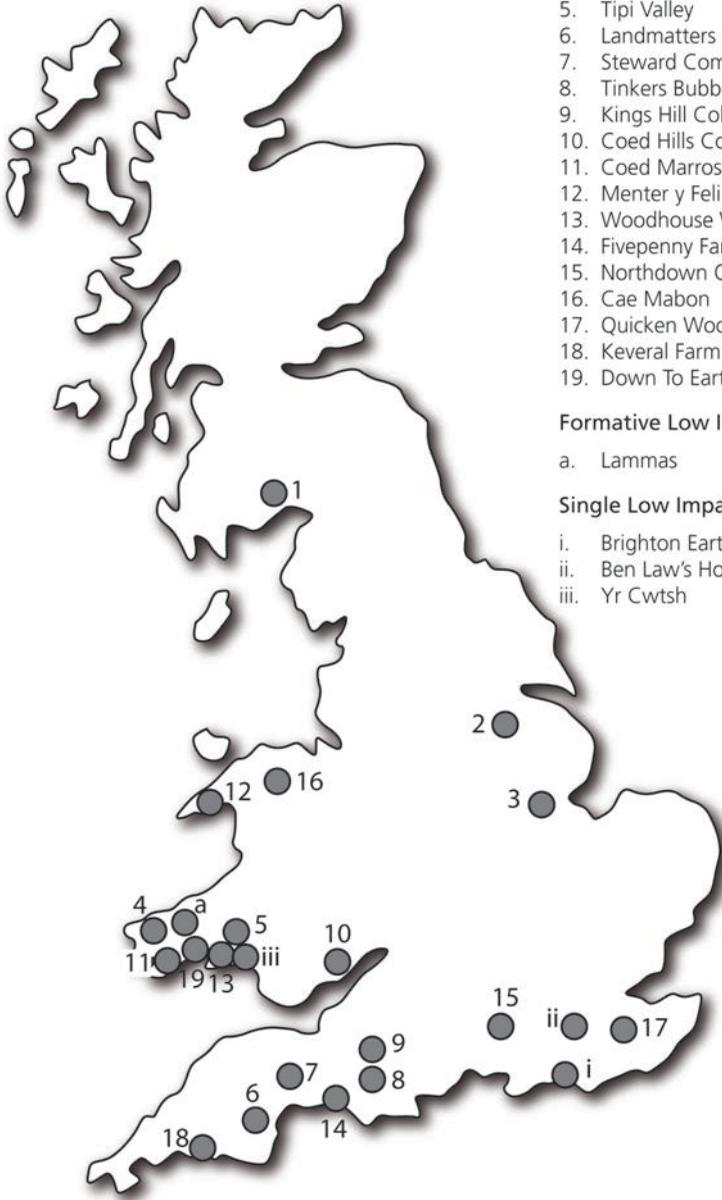
1. Green Hill
2. Hill Holt Wood
3. Hockerton Housing Project
4. Brithdir Mawr & Tir Ysbrydol
5. Tipi Valley
6. Landmatters
7. Steward Community Woodland
8. Tinkers Bubble
9. Kings Hill Collective
10. Coed Hills Community Art Space
11. Coed Marros
12. Menter y Felin Uchaf
13. Woodhouse Wood
14. Fivepenny Farm
15. Northdown Orchard
16. Cae Mabon
17. Quicken Wood
18. Keveral Farm
19. Down To Earth

Formative Low Impact Developments

- a. Lammas

Single Low Impact Constructions

- i. Brighton Earthship
- ii. Ben Law's House, Prickly Nut Wood
- iii. Yr Cwtsh



Map of some existing and formative LIDs in Britain, November 2008

Lammas: Aims and intentions

by Paul Wimbury

Introduction

Lammas exists to support Low Impact Development (LID) throughout the UK as part of the transition to a sustainable society. Toward this end its primary focus has been to pilot a low-impact development model which works within existing planning policy. Thus we have proposed an exemplary ecohamlet project in Pembrokeshire that fits within the Councils innovative low impact Policy (see *Further Resources*).

The concept is that of a new-build permaculture development of nine eco-smallholdings, a community hub building and a seasonal



Simon Date



Jenny Pickerrill

Site of proposed Lammas development, Glandwr, Pembrokeshire

campsite on 76 acres of pasture and woodland currently forming part of Pont-y-Gafel farm, Glandwr, Pembrokeshire. Each of the dwellings will be unique, having been designed by the people who will build and live in them.



Some of the Lammas team

They will be innovative and earthy, combining the latest technologies with local natural materials. The project will also feature a diverse range of land-based enterprises. The project's structure will be based upon the conventional village model, whilst a governing body ensures the project remains low impact in the long term. The site will become a successful demonstration of low impact building and living.

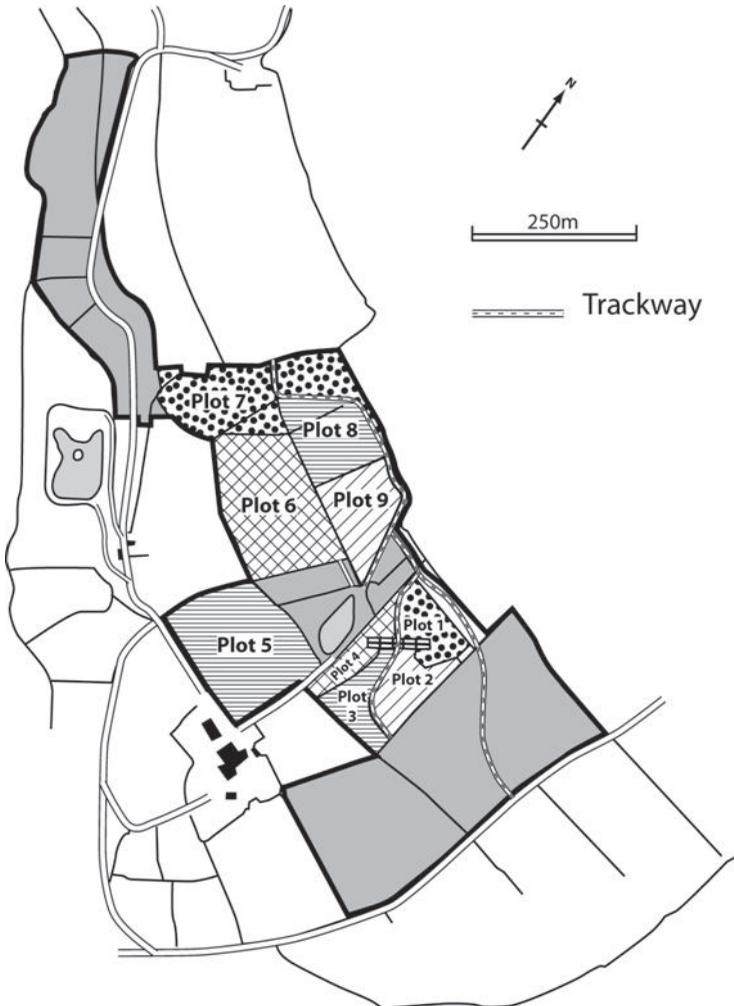
Sustainability: The Lammas project will aspire toward a one-planet ecological footprint. In addition to carbon neutral housing, residents will create land-based livelihoods and low-carbon lifestyles.

Affordable Housing: The average projected smallholding set-up cost (including lease, house build, additional buildings, business set-up costs, etc.) is £83,722. The average UK house price is £178,364 (July 2008), whilst the average 8 acre smallholding is over £300,000.

Rural Regeneration: Between December 2006 and June 2007 the village of Glandwr saw both its post office/shop and primary school close down. Lammas will provide a whole range of facilities, services and educational opportunities for people living in the locality.

The Ecohamlet

Lammas has developed a detailed planning application for the ecohamlet which includes over 1200 pages of text, over 150 illustrations and two large models. The whole application is available for people to browse through at the Lammas website and is a resource for others developing LID projects.



Designs for the smallholdings include a 4-unit terrace, an earth sheltered house, straw bale houses, a cob house, and more. All the designs use materials sourced from the site. All the buildings will blend into the landscape, indeed most of them are covered with elements of the landscape (for example, turf roofs, cob walls, timber cladding). Each household will have access to approximately 6 acres of farm land and additional common woodland, enabling residents to substantially meet their household needs from the land and to produce surplus goods for the wider economy.

Along with the smallholdings we are proposing a community-hub building and a camping area for education and working visitors. The hub building will become a study and visitor centre for the wider low impact movement.

The Benefits

The main emphasis of Pembrokeshire's new policy is that any prospective low-impact project must be able to demonstrate environmental, social and economic benefits.

Environmental Benefits: Lammas has conducted a geology survey, a soil analysis report and a full habitat survey complemented by many species surveys, providing baseline data for further research. We have put together a comprehensive management plan which sets out guidelines and rules for the sensitive ecological management of the land. The land will be managed in such a way as to create a diverse patchwork of different habitats and eco-systems, ensuring an impressive increase in biodiversity, soil health and wildlife.

Social Benefits: For the wider community, Lammas will play an important educational role in promoting sustainable development. In addition, Lammas will conduct, coordinate, disseminate and

produce research about low impact development.

On a local level, the project fully intends to integrate with the neighbouring communities. Lammas has already reached out and consulted with the local people on the project and will continue to do so. The Welsh language and culture are very strong in the area, so we have adopted a strong Welsh language policy that supports bilingual communication.



Woodworking

Lammas will provide a range of local benefits including:-

- * A part-time shop selling local land-based produce
- * The running of a Community Composting Scheme
- * Lammas will run a minibus service to and from local towns for local people, visitors and residents alike
- * The creation of two new permissive footpaths across the site

Economic Benefits: The nine smallholdings will make a significant contribution to the local economy. Informed by a baseline economic survey business plans have been carefully developed to complement, rather than compete with, existing businesses in the area. Initiatives include basketry, smoked hams, hazelnut production, horticulture, woodland products, wool crafts and medicinal herbal preparations. Residents' livelihoods will adapt and evolve as various markets are explored and opportunities discovered. A market stall will tour the local towns with produce and craftwork.

Within 5 years we will be producing £107,996 per annum of land-based produce from the site compared with approximately £2,500

under its current regime of sheep monoculture. Much of this produce will be sold locally and the money raised through this, circulated in the local economy, will help the much-needed shift towards a resilient land-based local society. The project plans to employ at least five people part time.



Lammas public meeting in Narbeth

The Organisation

Lammas Low Impact Living Initiatives Ltd is a cooperative registered under the Industrial and Provident Society Act for the benefit of the community. Membership to the Society is open to anybody who buys a share (£50). Shares are non-transferable and withdrawable.

This means that whilst it is possible for members to sell their shares back to Lammas, they will not be able to sell them on to other people. Funds raised through the sale of shares assist Lammas to further the wider aims of the project.

The Society is directed and run by a voluntary, democratically-elected management committee. It will retain freehold ownership of the settlement's land and grant residents 999 year agricultural leases. Thus Lammas will oversee the management of the site and will be legally accountable for meeting the planning requirements agreed with Pembrokeshire County Council planning authority. As part of meeting the new policy criteria, Lammas will produce an Annual Monitoring Report which will chart the project's progress under a range of performance indicators.

Permaculture

Permaculture has played an important role in the design of the settlement. It has been integrated into the management plan for the project and will continue to influence how the project is run. Within the design, great care has been taken to create wildlife



A plot design in the Lammas proposal illustrating the integration of biodiversity and food production

corridors, encourage biodiversity and soil health, conserve water and move toward a system in which human beings are a complementary part of the natural landscape. It is largely through permaculture techniques that the residents plan to realise the full potential of the land to support people and enterprises. The key difference between agriculture and permaculture is that agriculture tends towards monocrops for financial return and permaculture tends towards maximising diversity of produce by working with natural systems.

The Terrace

The terrace evolved during the permaculture design process when a group of residents decided they would prefer a co-housing set-up rather than autonomous smallholdings. In particular they were keen to share heating, laundry, and power provision as well as being located closer together to increase sociability.

Louisa / Thy-Gafel Terrace Building
Plans and Elevations at 1:100



Terrace design by Simon Dale for the Lammas proposal

The resulting design is a ground-breaking four-unit self-build eco terrace that will enable its occupants to live in a smallholding setting in close proximity to their neighbours. Each household will have the exclusive use of approximately 2 acres of agricultural land, and share additional resources. These include a miscanthus crop (for heating and hot water), a willow coppice (for cooking fuel), a

woodland coppice (as a long-term resource) and a 12 acre grazing area. It will also benefit (along with the other Lammas plots) from a communal woodland area. The building has been designed on a modular system to allow individual design freedom within a common construction. It has been designed by Simon Dale and is based on a timber frame system in-filled with straw bales.

Services

Lammas will meet 100% of its service needs from the site. A mini electric grid will be powered by a hydro turbine and water will come from spring and rainwater harvesting. All waste will be treated on site using composting toilets and reed beds, and all fuel will be grown on site (using short-rotation coppice and miscanthus).

The Future

Lammas has had its application refused twice by Pembrokeshire County Council (10/07 and 09/08) despite a glowing report from the Design Commission For Wales. Lammas then appealed to the Planning Inspectorate and remains committed to creating an ecohamlet on the site. And others throughout the UK



Submitting the planning application

Lammas will also support the creation of a local network of projects working together towards a sustainable future. Lammas plans to actively support new low-impact projects, freely sharing the knowledge learnt from this first project. In addition, Lammas aims, by raising capital through the sale of its shares, to create a rolling fund dedicated to purchasing land for new projects, which can then be bought back once planning permission is obtained.

Personal stories and experiences

The Lammas journey

We begin our personal stories with those of Cassandra, Ayres, Andy, Dave and Paul who are all part of the proposed Lammas project in Wales.

'Best to live lightly, unthinkingly' Sophocles, 496-406 BC

by Cassandra Lishman

Since the late 1980s I have been interested in environmental issues, and in 1997 I received my degree in Environmental Science. I went on to do lots of voluntary work in environmental organisations, but never really felt 'at home' anywhere.

In 2001 Nigel & I came to Wales, with Ted. Ted has special needs, and we came as part of the Williams Syndrome Foundation's sponsored holidays. When I first saw Wales, I felt this was home. We also felt very strongly that a community of people was the right way for Ted to grow up, and that a low impact life was the right path - the path of the future.

In 2001 Nigel and I set up a small not for profit co-op (www.livelightly.co.uk). Our co-op now has 15 local members and is still growing. It provides occasional part time work at present for 8 people and regular work for 2 more. We had varying successes with the co-op, but finally found our niche when I started offering willow sculptures for sale. We now deliver



Willow structure by Cassandra

workshops to schools in willow sculpture, grounds development, and even roundhouses. This business is a large part of our low impact livelihood plan for Lammas. I will be planting several varieties of willow coppice to supply the co-op. Even in the Preseli mountains this is a viable crop. Using permaculture as our guide, we aim to develop all aspects of our life as in tune with the land as we are able.



Willow structure by Cassandra

We will also be offering yurt holidays for children with specific needs and their families, and work experience for adults with learning disabilities. We hope to share the joy we feel with others perhaps not as fortunate as ourselves. Our joy comes simply from being alive in such a glorious place, and we hope to teach others about the beauty of a simple life, living in harmony with others and the land. We now have 2 more children—Davi and Bea. They attend Welsh schools locally, and are both very keen on helping build our house and look after our garden and animals.

The planet does not need me to save it

by Ayres Gipson

My friends and family are always very curious when I speak about Lammas. They marvel at the ideas of ‘sustainable living’, and congratulate me for ‘saving the planet’. Being a part of the Lammas project has, aside from the gruelling work of educating myself in permaculture, agroforestry, sustainable building, woodland management, and small-scale farming, given me much food for thought, and the more I think about it, the more I realise that *the planet does not need me to save it*. Until our Sun explodes or the

Universe folds, her surface will creep and crawl and swarm with the inexorable and ineffable incarnations of Being.

So let us abandon the arrogance that creates the fantasy that humans could possibly destroy, beyond resurgence, the life-bearing, life-affirming ability of the Earth... or save it. Yes, we should mourn the tragic, wanton, and unnecessary destruction of the wonders of Creation. Through our mourning, perhaps, we will realise that no creature is a permanent resident, nor has dominion, and every manifestation of life, including humans, is threatened with 'pre-mature' extinction until humanity understands this. It's humanity that needs saving.

Yet I am constantly bombarded by evidence that *humanity does not want me to save it*. Pity, because despite all its faults I quite like humanity. However, I've been a therapist long enough to know that what people don't know, we tend to persist in not wanting to know. For when we know, we have choice, and choice leads to power; power inevitably leads to the question of responsibility, and who wants that?

So... *I need saving*. I need to be saved from my cynicism and despair, resentment, anger, feelings of impotence, powerlessness, and hopelessness, and that's where the Lammas project comes into my life. Henry David Thoreau said that most men lead lives of 'quiet desperation'. I'd hate to think he was right, and yet I realise that it is my worst fear. To be separated from Gaia by concrete and noise and pulled from her so that I may execute my tasks more efficiently as a function of the marketplace, is for me the ultimate life of quiet desperation.

I am an expression, a child, and a steward of the Earth. My task is to bring forth life, food, and sustenance, see humans as an integral, beneficial and benevolent function of the 'ecosystem' and affirm the



Jenny Pickerill



Tony Wrench's
Roundhouse, Brithdir
Mawr

Tony Wrench



Mischa Henrit

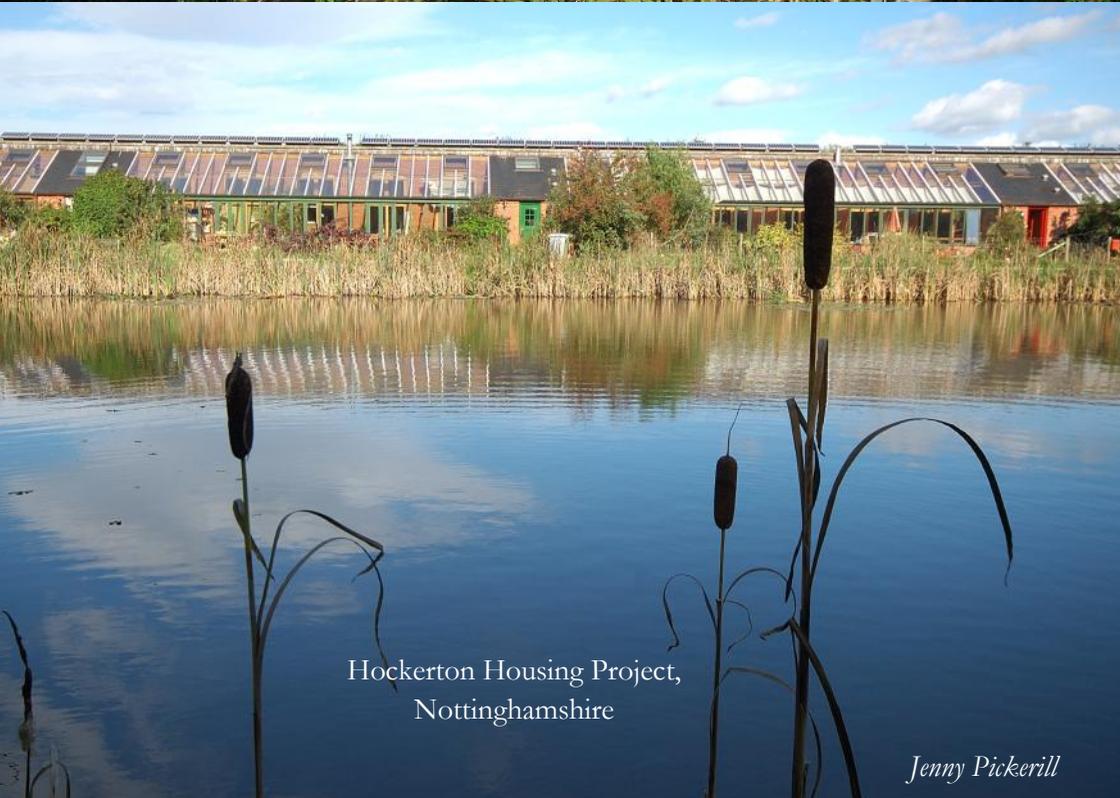


Brighton Earthship

Jenny Pickerill



Jenny Pickerill



Hockerton Housing Project,
Nottinghamshire

Jenny Pickerill



Jenny Pickerill

Green Hill, Scotland



Jenny Pickerill

abundance that comes from a direct relationship to the planet that is both home and provider for us all. *I am saved.*

If not us, then who?

by Andy Wells

I've always had strong feelings and views about humans' relationship with the environment and, to this end pursued a career as an environmental engineer in the hope that I could make a difference. I have had some successes over the years, but have felt it increasingly difficult to reconcile my core beliefs with what is possible in the mainstream working environment.

Environmental terms and phrases have become part of our everyday language and the law makers and corporations use them liberally when developing policy and, of course, making headlines. However, despite the use of such terms I cannot escape the fact that, at best, the status quo is maintained, only now it has a self-satisfied green tinge. If anything, the situation is worse. The onset of globalisation appears to allow the 'developed' nations to export their environmental liabilities to the majority world whilst at the same time boosting profits and improving their green image at home. It's a pity about the social impacts of large-scale job losses as production moves abroad but that's the price of progress. Now the

oil's running out and it's suddenly costing more to import what we used to make and grow ourselves.

It has become increasingly clear that the pattern of development chosen



Lammas

Model of terrace plot at Lammas

in the West is not, to borrow a phrase, sustainable. Somebody should be doing something about it. They should be looking for alternatives. But who is somebody? Who are they?

And so to Lammas. I guess that somebody has to be us. If not us, then who? It might work, it might not, but let's at least see what is possible.

The importance of community

by Dave Owen

I am a native of West Wales with local connections on both sides of my family going back for several generations. I have seen numerous changes in South Ceredigion and North Pembrokeshire over the last 50 years and feel that many of them have not been for the better. The lack of affordable housing for local people and the breakup of communities in the area have been important issues for me. For at least three generations members of my own family have had to work away from the area in order to support themselves. My passion for Lammas stems from the possibilities that I can see in reversing these trends. The chance, in particular, for youngsters to build themselves a home at a realistic price and create a living to raise a family with a strong sense of community is vital in maintaining what is left of the culture of the area which has been slipping away for so long.



*A Lammas gathering at
Pont-y-Gafel*

The good life

by Paul Wimbush

Some years back I had the good fortune to live at Brithdir Mawr. Whilst there I built my dream low impact home. It was a timber-framed straw-bale roundhouse with large double glazed windows and an open fire. Inside it was totally warm, dry and cosy and from the outside it was virtually invisible, blending into its woodland environment. I worked horses for the farm community as well as participating in cutting firewood and growing food. We kept a wide range of livestock on the farm and grew virtually all our own food.

At the time I earned a living from making cleft oak gates and laying hedges. In the evenings we would share food as a community, and there was often music and dance.

It was in every respect ‘the good life’. The air was clear and fresh. The water was alive. The food was radiant. It enabled me to really connect with an inner peace. It is an experience that I believe should be available to anyone.

The Lammas project is about taking the best from the alternative culture and merging it with mainstream culture, creating the opportunity for people to create a lifestyle that is on the one hand, balanced with our natural world and on the other hand, integrated with modern society. I believe that eco-smallholdings are a way forward for our society, creating a



Simon Dale

Sunrise over Pont-y-Gafel

more natural population density in which human beings live as a part of the landscape.

It is worth remembering that most people in the world live in clusters of smallholdings. In fact there was a time when most people in the UK did so as well. There is no good reason why modern lifestyles need to take place in cities, and many good reasons why some of us would be better off spreading ourselves across our greatest resource – the land. That way we can make the most of it. It has long been an established fact that smallholdings are far more productive per acre than large farms. I would go on to say that smallholdings potentially create a far healthier environment for people, livestock and wildlife.

I see a future in which areas of our countryside move away from industrial agriculture to embrace an approach which is alive with abundance and biodiversity. Where natural homes blend into a landscape alive with the sound of children playing and birds singing. Where a short walk in the country becomes an exploration of different habitats, crops and animals. Where traditional crafts and

cuisines are thriving amidst a culture of international citizenship.

Being involved with the Lammas project has been an honour and a pleasure. I am wholly grateful for the opportunity to play a part in the low-impact movement.



The first share of Lammas being issued

Other LID journeys

At home in the forest

by Jasmine Saville

Take one baby, a toddler and a building site. Mix well with a generous helping of mud, combine with 6 weeks of solid Welsh rain whilst living under canvas. Do this in candle light without a bathroom or electricity for three months. Chuck in living with your father for good measure. Top with an assortment of large slugs. The result - a hand crafted home of beauty, warmth and health for about £3,000.

Having children is a major motivation for buying a house. Combine the rigours of looking after young children and meeting demanding mortgage payments in today's climate and you have a recipe for stress. Then add to this concern about toxic materials that are inherent in most buildings, and exposing your precious babies to them and you have a cocktail of dismay. This would sum up the options for our family until we decided to take the plunge and go off the beaten track.

Some past experience, lots of reading and self-belief gave us the courage of our convictions that we wanted to build our



Inside the low impact woodland home

own home in natural surroundings. With this in mind my husband and I decided to build ourselves what you might call an eco-home wherever we could get the opportunity. For us one choice led to another and each time we took the plunge events conspired to assist us in our mission. Looking back there were times of stress and exhaustion, but definitely no regrets and plenty of satisfaction.



Inside the low impact woodland home

Initially we had no capital and we had resolutely decided to be full time parents whilst our children were young. As you'll appreciate, to be a full time mum and part time dad meant our income was low, about £5,000 p.a, so a mortgage was not an option and the prospects for renting seemed grim. Providence came our way and a landowner offered us the chance to move to his woodland in west Wales to build an eco-house. There would be no formal security or long term ownership, but £2000 was available for materials, so we jumped at the idea without a backward glance.

So here we are today. You can see from the photos our home is unusual but the aesthetic appeals to lots of people and perhaps touches something innate in us that evolved in forests. We hope this article will provide confidence and information for anyone inspired to undertake a similar project or even just to illustrate that where there's a will there's a way, even if such a building does not tantalise your taste buds.

Many people ask how we managed to build a house whilst camping without mainstream facilities, and as the mum rather than the full

time building blokes (my husband and father), I can assure you of a few things. Children like mud, diggers, tools, wood and candlelit extended camping. Mums fret about washing. Dads build all day long and then look after mum. Children are entertained by the outdoors ad infinitum even when it rains. Mums hanker after cosy cafes and make frequent excursions to venues with warm, clean toilets. Children find sticks, look under stones for insects, collect acorns, simulate diggers and do a lot of puddle splashing. Dads carry on building and look after family in the evenings when they are not completely exhausted. Children see materials taking form, observe the construction process and make a lot of connections; they see their parents being effective. Mums wash up whilst



East window of the low impact woodland home

yearning for tiled utility rooms, learn to ignore the mud and fend off slugs. Dads build, console mum, read children bedtime stories and make muddy imprints on the sheets. Everyone wonders at the nature of slug slime. Then one day you get a house.

If that hasn't put you off, more serious issues do provide an impetus to eco-building. Modern construction materials, mainly cement and insulation, contribute significantly to carbon emissions and pollution of water, soil and air, albeit often in other countries. More alarmingly, home furnishings and interior finishes account for the primary pollutants we are exposed to, much more so than from traffic fumes or factories. Fluoro-carbon compounds in fire



Inside the low impact woodland home

retardants permeate nearly everything we live amongst; toxic chemicals such as bisphenol-A are rife in paints and varnishes; PVC windows, doors, kitchens and so on contaminate our air and devastate the environments they are produced in. All these substances are well documented as harmful to human and plant life, and are

cancer forming agents. Some are belatedly being phased out but what about their saturation of our world already? I have no answer to this except to choose natural materials when I can and am confident that cost does not have to be the prohibiting factor.

So what did the house that rose from mud, slugs, physical effort, three months and a few grand entail? A hole was dug into a bank with a knackered old digger (not my father; a machine the landowner already had on site) to the required depth for us to have a mezzanine floor. This took a few weeks interrupted by me constantly dragging men to the glorious West Wales beaches as it was mid August after all. A rough stone wall was built around the perimeter for the wall foundation. The stone was sourced from the hole and free.

The structure was oak posts used in the round, i.e. not sawn into planks and hence very strong. In our case thin, spindly oak posts were all around us in the woods and not conventionally useful for any purpose except, shamefully, firewood, fencing or wood-chip. This required a chainsaw, men, lots of heavy lifting, a few days and

no money. To construct the frame some advice and calculation was necessary but this information is readily available from other people who have built 'roundhouses', please see *Further Resources*.

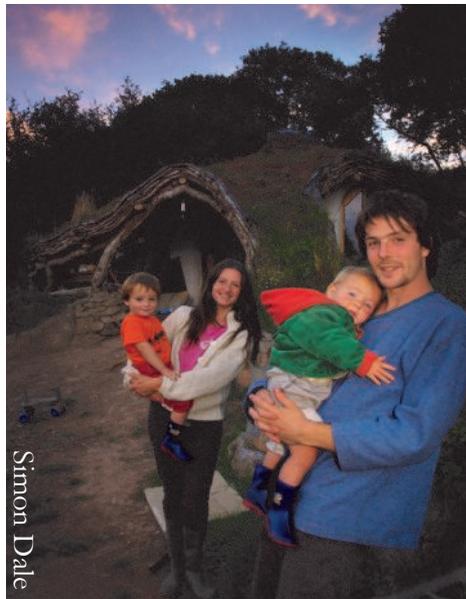
DPC plastic was laid in the hole and salvaged hardwood crates laid on top to provide a breathing space for straw bale insulation. Eight tons of straw bales (costing £650) arrived on a huge lorry which were stacked in glorious sunshine and secured from the deluge of rain that began the next day and lasted for weeks. Very quickly the bales were assembled as walls, secured with hazel rods, leaving appropriate gaps for windows. Straw bale construction is extremely quick, easy, fun and hence rewarding. As our house is oval the bales require jumping on to achieve a curve.

The roof is a series of layers, to achieve insulation, waterproofing and low visual impact at little cost. Cotton dust sheets were laid on to the rafters, followed by whole straw bales, sealed with three layers of silage plastic and topped with earth from the original digging. A space was left in the centre for a skylight.

Serendipity called again to provide the floor and windows. Large pine palettes from a nearby works, which were due to be burnt, were laid on the straw, sanded and polished up with a non-toxic oil and wax that we have found to be durable and great to work with. When you are oiling boards in the same room as your kids at 4am you are glad it's only citrus turpenes your hair and clothes are covered with rather than petrochemicals. Due to a north facing aspect we have no windows in the front of the house, but designed the length of the rear wall to have windows. A nearby double glazing supplier gladly furnished us for free with misfit units due to be landfilled that miraculously fitted with an inch to spare and came framed with fittings.

By this time we were exhausted; I had evacuated the children to a luxury holiday cottage for a fortnight to escape the mud and now snow. The Dads were working round the clock to make the house habitable, only stopping to eat sardines. They occasionally slept but generally carried on building the mezzanine, fitting back doors, digging grey water pits and plastering with semi frozen lime and fingers. All the tools were buried in straw. Dads were in danger of being mistaken as yetis. So in December 2005, sixteen weeks on, we moved in without doors but with a huge sense of satisfaction.

Now is the time to make changes in our lifestyles and consumption. There are a number of projects making this a reality in Britain and Ireland and plenty of resources to support green building ideas; links to these can be found on our website (www.simondale.net/house). If this has inspired you to get covered in straw and lime, come and help us build another grander home next year! Feeling impotent in the face of environmental and social problems is overcome more easily than we imagine by forming clear intentions of our ideals. Realising them is not always simple, but in our experience more fulfilling than business as usual. For peace of mind and the future we bequeath to our children, let's do the job as best we can.



Jasmine and family

Fivepenny Farm

by Jyoti Fernandes

My husband and I and our four girls have been living a ‘low impact’ lifestyle for the past 15 years. After living at Tinker’s Bubble - a low impact community in Somerset which manages a woodland, orchard and gardens—without the use of fossil fuels for 5 years, we decided that we wanted to build upon our experience of living in a low impact community and running small land based businesses and embark upon setting up our own farm. With another family from Tinker’s Bubble we bought 43 acres of land by the sea in Dorset. We didn’t have very much money to buy the land with, so we drew up a business plan and got a loan from an ethical bank called Triodos Bank. In the nerve racking hour before the auction we all held hands praying for good luck, then when we broke the circle my husband bit into a piece of bread which had a fivepence piece baked into it. It became our lucky charm during the bidding - when we won the bid we danced around the room shouting ‘we are peasants and we bought our land with fivepennies in our pocket’ and thus was born Fivepenny Farm.

We run our farm as a two-family shared farm, with each of us agreeing on certain principles and helping each other out on some projects, but with autonomy in the daily management of our separate plots. The farm was a bare field filled with tall grass and a huge sky when we first moved into our yurt hidden behind a haystack. It was hard to know where to start. We wanted to show that we were serious about what we were doing so we started selling vegetables at the local market straightaway. We built our timber cabin after five months of planting, fencing, setting up an alternative electricity and water supply, and getting livestock. It was a simple and quick stud-work cabin, costing around £1,500. By the time the planners came around we had plenty of local supporters

who helped us through our planning battle and spoke up for us against objectors (the most notable being a woman who spied on us from a hot air balloon!). We won the right to live here temporarily for four years at appeal, our main argument being that all the elements of our farm are part of the whole farming system which is diverse and needs our constant attention. We are an integral part of this whole system. We have now built up our farm into a financially viable mixed smallholding. We grow 7 acres of organic vegetables, 6 acres of woodland and orchards, have 32 piglets, 10 beef cows, 20 sheep, 80 chickens, and - my favourite - 4 jersey cows who provide us with an abundance of creamy milk and cheese. It is hard work but every day there are moments when you can't help but give thanks to the universe for giving us this opportunity.

Our newest project is building a timber frame, thatched barn on our farm with other local smallholders, which will be home to a processing centre where we can all press apples, make preserves, butcher our own animals, and make cheese and herbal products. We just had our first cider pressing the other day using the 300 year old cider press a local farmer gave us. People were sharing last year's brew, home cured ham, homemade cheese and chutney while the kids dumped the apples down the hatch upstairs like marbles and folks built up the pulp into a gigantic cider cheese. Coming together through the blustery days keeps our



Simon Fairlie

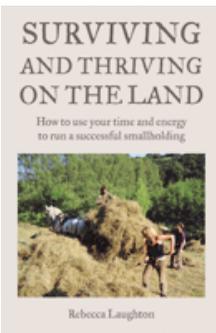
Horse logging at Tinkers Bubble

spirits alive. This has been a hard year in many ways for people working and living on the land. Underneath all of the abundance of the season, I keep feeling this underlying uncertainty about the future for everyone, with the weather patterns looking like they may never settle and reporters talking about recession every time you switch the radio on. Yet, when I look at our position in all of this I know that we will make it through because what we are doing is holding onto and reviving skills that are timeless and real. It is important now, more than ever, to build up ways to support each other in working with the earth to produce honest healthy food.

I used to be a bit sceptical ...

by Rebecca Laughton

Ten years ago I was a bit sceptical about the significance of LID as a solution to the pressing environmental problems we face. I believed that change could be achieved more effectively by working within mainstream organisations. Since then I have been privileged to witness the development of a number of outstanding projects, and watched as fields and woodlands have been converted into diverse systems, capable of providing sustainable land-based livelihoods. My crowning experience of the low impact movement is the four years I have spent living at Tinker's Bubble community in Somerset.

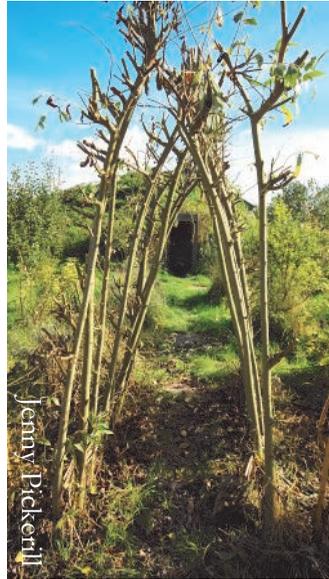


As well as being inspired by the hard work, dedication and creativity which characterises low impact initiatives, I have been impressed by their capacity to draw in local support and involvement, despite initial apprehension from neighbours. They appear able to capture the public imagination because they are tangible, and taking direct action to address a number

of environmental and social issues. Most people are aware that lifestyle changes are needed to protect the planet. However, to shop for fresh, organic food from a friendly market stall, visit a hand built eco-house for a cup of tea, or buy timber from the people who manage the forest where it was grown, demonstrates that 'being green' isn't all about self-denial.

In today's economic climate, a low cost, subsistence lifestyle can make the difference between economic viability and failure. When people are able to build their own home, generate renewable electricity, harvest rainwater, grow food and manage their own supply of firewood, they can dramatically cut their overheads. They can thus afford to undertake activities that might otherwise be considered uneconomic, such as hedge laying, small-scale organic horticulture and greenwood chair making, thereby providing useful products to local people. Furthermore, they can develop a diversity of enterprises, rather than focussing exclusively on achieving economies of scale.

For Britain to become self-reliant in food, fuel and fibre, we need to increase productivity per acre. Low impact smallholders have the capacity for simultaneously intensifying food production and paying the attention to detail necessary for conserving biodiversity. I am now convinced that increasing the number of low impact smallholdings is a vital part of our transition to a low carbon society.



Willow path, Hockerton

Living at Steward Community Woodland

by Dan Thompson-Mills

Steward Community Woodland is a low impact, sustainable project based in a 32 acre woodland near Moretonhampstead, Devon. The community currently comprises 11 adults and 7 children (with a baby on its way) living in dwellings we have built ourselves with materials from the wood and recycled/reused materials. Most are timber-frame structures, canvas covered with insulation and wood-burning stoves, and built on stilts to provide a flat floor on the sloping valleyside. Amongst our structures are raised beds with vegetables and flowers, fruit bushes and trees, as well as our renewable energy systems and large Growing Area.

We spend our time managing the woodland (tree felling and planting, coppicing, etc), growing food organically, building and



Map of Steward Community Woodland

maintaining our low impact structures and infrastructure, home educating our children, running Forest School sessions, running courses (such as permaculture design courses), and organising and catering for visiting volunteers.



*Temporary canvas structure at Steward
Community Woodland*

Unfortunately, despite the urgency of finding solutions to climate change and overwhelming local support for the project, the Dartmoor National Park Authority refused us planning permission to continue our sustainable way of life in September 2007. Consequently, we have launched an appeal to the Planning Inspectorate. A public inquiry has been set for 11/12th November 2008. Meeting the £20,000 costs for this has been a major challenge!

Our achievements so far

We have achieved much over the eight years the project has been running. We have, for example;

- * inspired thousands of visitors to the woods, to our website and to our stall at events, passing on skills, knowledge and information on sustainable living and permaculture (and we, in

turn, have learnt from and been inspired by many of our visitors)

- * demonstrated renewable energy systems, such as micro hydro, solar and cycle power
- * demonstrated organic food growing, incorporating permaculture ideas such as growing perennials and forest gardens
- * demonstrated low impact building and living over several years
- * sold timber and woodland products (such as larch trees to build a barn at Proper Job in Chagford, and split larch fence posts)
- * run several successful residential permaculture design courses with students from around the UK and the world
- * contributed to the local community, through our involvement in various voluntary groups, running computer courses at the library, offering computer support, organising events for Transition Town Moreton, breastfeeding peer counselling, etc.

We have carried out a Carbon Audit which concludes that our carbon footprint is 23% of the national average. Fourth World Ecological Design (2008) have conducted an independent report this year which shows that ‘the average Ecological Footprint of the residents of Steward Community Woodland over the period studied was 2.06 gha, 39% of the Ecological Footprint of a typical UK individual. The equivalent Carbon Footprint was 3.75 tonnes, 34% of the UK average at 10.92 tonnes.’

Consequently, we are a working model of sustainability and positive action for the benefit of people, animals and the Earth. We are an asset to the National Park and the local area.

Our planning application is available for viewing on our website and in hard copy (please ring and we can lend it to you). Also, if you wish to visit us in the woods, you’d be most welcome (please call to arrange).

Coed Hills Rural Artspace

by Charlotte Le Marchant and Coed Hills Community

Coed Hills Rural Artspace is one of Wales' leading venues for art in the landscape. Since the first exhibition in 1997 the 180 acre farm of Coed Hills has grown into a Low Impact Centre for creativity and a community resource. It was inaugurated as a space for artists and crafts people who shared a vision for a life more in tune with the seasons and nature. Gradually a lifestyle formed through shared resources and regular visitors became longer term volunteers.



*Writers retreat at Coed Hills,
constructed by Marcus Knight*

The communal farm buildings house event spaces, a post modern multi-yurt inside an agricultural barn, workshops and studios, kindergarten, office and shop. The woods are shaped like a map of Britain; up in Scotland you'll find the residents with their yurts, benders and tipis, sitting around the communal fire playing music as the owl calls out her path.

Artists: At the very core of its intention Coed Hills aims to encourage art and appreciation by offering residences for international artists. Here people can re-connect with themselves and the nature around them, creating art from deep within. Pieces are located in the barn and gardens and the evolving sculpture trail which has become an endless source of inspiration. The centre also provides a new context for artists' work that has been through the gallery system. There are extensive workshop areas with a metal forge, carving, green woodworking, painting and printing studios and textile space. Outreach consists of touring shows, and delivering the Low Impact

Yurt Village to community groups as well as involvement with festival rigs Triban Solar Stage and Lost Horizon Sauna Cafe.

Low Impact Living: The site is powered by grid connected wind turbine and photo-voltaic panels. In the summer, hot water comes from solar thermal panels, and in the winter the ultra-efficient gasifying log boiler heats the barn and water from our sustainably managed woodland. There are compost toilets and solar showers.

Permaculture: We are developing our knowledge and practise of permanent agriculture. We are not yet self sufficient with regards to food, but in summer months weeks pass where all you have eaten was grown on your doorstep!

Community: By living, eating and working together we can learn more about each other and ourselves at the same time as saving on resources. We can share our skills, ideas and experiences, and provide a supportive environment for each other as we grow and develop through problems and issues. We hope that all who visit for short or longer periods can feel part of the community, and take that openness back into their lives.

Spirit: Coed Hills is open to people exploring the deeper aspects of themselves and the nature of the universe through their own means and experience; people of all beliefs and faiths coming together and celebrating that which unites us all.

Coed Hills engages with the vision of a new sacred landscape. The stone circle built through a Millennium Award is the first phase that connects the site with ley lines and the energy grid network of Britain.



*Stone circle constructed by
Tim Halewood and
Robyn Heath in 2005*

Worms and Bees

by Tony Cutajar, Jenny Carr, Dylan and Irisa

Our family lives in a caravan in a forest. Electricity is mainly generated through photo-voltaic panels with a bit of wind power, water is collected rainwater from the roof and we are in the process of tapping drinking water from a spring. We use a wood burner for space heating and hot water and mainly cook using gas. It's not ideal but we have prioritised working the land which takes up a huge amount of effort. We've got pigs doing ground clearance, prior to tree planting, and have recently created access tracks into

the mature forest. The initial objectives are restocking, native woodland restoration (which was over-planted with conifer), preservation of an iron age hill fort and converting even-aged stands of Douglas Fir and Larch to continuous-cover forestry for timber production.



Our residence here is 'not authorised' (we applied under Policy 52 but were refused planning permission) and we applied for temporary permission over a year ago. As a result we can't get any post, or have telephone or internet, and since there is no mobile reception this makes communication very difficult.

On the plus side we have met a lot of lovely people in the area who have been fantastic in terms of support and inspiration - which is the best part of the experience so far. This was completely unexpected in such a remote area and without their support things would have turned out very differently.

Planning for a Low Impact Society

by Tony Wrench

At present planning takes place in a context where the average British person has an ecological footprint of over three times the sustainable level. Our society is contributing to ecological meltdown which will have various critical symptoms such as economic failure due to peak oil, environmental failure due to pollution and the takeover of natural habitats for human exploitation, and social breakdown as global warming kicks in. There is not a sustainable town or city in the whole of Britain. The ecological footprint of London equals the size of the whole of the UK land area!

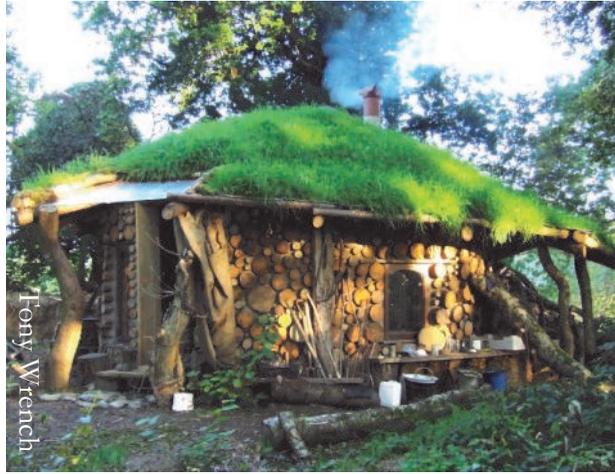


Tony's roundhouse at Brithdir Mawr

When the meltdown comes, over maybe a 5-10 year period starting any day now and possibly last week, the cities will, within about 6 weeks of the start, be like volcanoes of hungry people. The planning system must therefore take on a long term emergency planning function similar to those experts in Italy, Indonesia and Japan who make purpose built channels for lava so it goes productively and less destructively down the hillsides and doesn't destroy whole towns as it goes. All these planning rules are channels down which desperate people may one day travel. If they are not broad and deep enough to take the mainstream they will be useless when the

meltdown comes.

So it is important to recognise that the planning system is part of the problem. Planners plan for new roads, new car parks, new estates, new supermarkets and new airports that all involve excessive use of natural resources and excessive pollution by CO₂ and other greenhouse



A roundhouse at Britbdir Mawr

gases. If, however, I want to build a house with no cement, with no mains connections, built from natural materials and in harmony with nature, I have to jump through a ludicrous series of hoops and hurdles to prove that this house and its occupants will make a positive economic, social, and environmental contribution. This might seem perfectly natural to you, dear reader, used as you are to our topsy turvy system on the road to collapse. To me, though, sitting in this wooden nest in bushes near woods and a field, struggling to write this quickly before the electricity in the battery from today's sun runs out, this is yet another symptom of a planning system that has yet to wake up.

When, or if, it wakes up, *all* developments will be required to be low impact. All the earth is sacred. Want a new factory? Site it underground and make its outlet pipe vent into its inlet pipe. Reuse all wastes. Want a parking space for a petrol-powered car in town? Forget it. Want a house made of bricks and mortar, with oil fired central heating and 5kw demand of lighting - total ecofootprint of 3 hectares or more? Well, for such a High Impact Development you

will need to prove that the house makes a positive economic, social and environmental contribution. Fact is, though, you won't be able to prove that, will you?

What will it take to get a change like that? Probably some kind of war or national emergency. Ah, wait a minute, I think I hear something coming.....

Living the dream ... the low impact way

by Oli Rodker

Five years ago I was living on my own in a little rented stone house in northern England. Today I'm living the dream! 42 acres of beautiful Devon countryside – fields, trees, woods, a stream, a circle of benders and yurts around our emerging village green ... is it possible? Yes it is! But you need commitment, serious hard work and patience – and probably a good dose of luck as well.

We were a group of 18 that bought our land and now 10 of us live here, and 5 young children have appeared too! Lots of us had been thinking about buying land for ages and we had the co-op legal structure and plenty of experience of living outdoors already.

It was the chance of buying this piece of land that brought us all together. We had all done a permaculture course, so had that philosophy as a common commitment. We agreed to pay an equal share of the price and got a private loan to cover those who could only pay in instalments. That debt is nearly paid off now. We thought we were familiar with the 'simple' life but there's nothing simple about building a long term sustainable community in a field.

We spent the first year just visiting the land and getting to know it, having weekend meetings up here. Gradually after that we moved on, building benders from local hazel poles, old army tarps and

windows out of skips. Slowly we moved in beds, carpets, tools, filing cabinets, solar panels...more slowly we talked about plans, designs, our relationship to the land, animals, each other...we realized those discussions will never stop.

After a year or so the people in the little hamlet which we are on the edge of, realised we were living up here; we'd been on good terms with them but never mentioned the living part. They were upset, and so began the long planning



Welcome sign at Landmatters, Devon

process. Writing an application, being refused, meetings with councillors, letters to and fro, bureaucracy, media interest, our own long meetings...this led to a 4 day planning appeal with an inspector from Kent. We talked about sustainability, housing, our vehicle share policy, permaculture, personal responsibility...while the solicitors for the council and the local hamlet tried to disprove, undermine and refute our positions. One of our group gave evidence on our behalf and we made grateful use of Simon Fairlie (Chapter 7) and Andy Goldring (Permaculture Association). We also used an ecological footprint analysis which showed us to be at less than 50% of the national and regional average. This was well worth the money and time it cost us. In August 2007 the inspector gave judgement: permission for 8 dwellings for 3 years. Another crack in the planning monolith.

Now the real work begins. To make a living from the land in a

sustainable way, to build a decent environment for our children, to care for the land and show that people and nature can live harmoniously, without exploitation. Not a minor task and plenty of challenges – but rewarding, important, uplifting work!

What are the lessons? We'd all have a different list, but here are some of mine:

- * You can do it. But you'll need to take risks, so be brave.
- * Don't wait till you're 'on the land'... get those practical skills now.
- * Ensure your group has a coherent, unifying vision to hold it together when the going gets tough.
- * Raise money beyond the purchase price, so you can spend it on the site.
- * If you know the area you want to be in, get involved locally now, don't wait for the project to happen: local connections are crucial.
- * Let the land shape your plans before your plans shape it.
- * But plant plenty of trees.
- * Have a mixture of skills in a group, and value everyone's contribution.
- * Don't wait for the global social and ecological crisis to intensify...get on with it!

*Skills workshop poster,
Landmatters, Devon*



LOW IMPACT DEVELOPMENT INTO THE FUTURE

Planning and Policy for Low Impact Development

by Larch Maxey

Changing the planning paradigm

The Low Impact Development (LID) movement is a direct response to the UK's double-lined straight jacket of restrictive planning laws and monopolistic land ownership. UK planning law is still based largely on the controls put in place after WWII when the motor car seemed set to destroy Britain's 'green and pleasant land' through suburban sprawl. A central plank of the planning system since 1945, therefore, has been a presumption against development in 'the open countryside'. New housing and other developments should, according to the post-war planning paradigm, be concentrated in existing centres, be they cities, towns or villages. Whilst this has helped Britain avoid the excesses of suburbia visited on North America, it has not stopped unsustainable roads, houses, supermarkets and other 'developments' from concreting over thousands of acres of our most fertile and bio-diverse land every year since! LID presents a new planning paradigm which places humans as *part* of the natural world not as an anathema to it. LID demonstrates that humans can create sustainable homes and livelihoods *and* increase bio-diversity.

Given the above, it is not surprising that LID projects have dragged the planning system kicking and screaming into this new paradigm! Since the mid 1990s a succession of projects have set the LID agenda by getting on and doing it, buying land, moving on and setting up LIDs. The residential component of LIDs has most

challenged the planning system, which has often tried to force LIDers to commute to their land from nearby towns and villages in order to tend their lettuces and livestock. Clearly this involves more travel and is often impractical as many of the land based activities require a continuous presence.

Over time a series of precedents have been set in which appeal inspectors have granted temporary planning permission for a growing number of LIDs due to their outstanding levels of sustainability. Landmatters, for example, an LID in Devon was recently awarded 3 years planning permission for eight dwellings. In making his judgement, Planning Inspector Alan Woolnough cited both the project's use of permaculture and the planning system's 'direction of travel' in addressing climate change (2007). This decision sets a valuable precedent in officially recognising the role of permaculture within the UK Planning System.

Whilst this process of building first and then seeking retrospective planning permission has been invaluable in establishing the principles and practices of LID, it has its limitations. Firstly, it entails considerable personal and financial cost to those involved. LIDers, such as Tony Wrench, Tinker's Bubble and Land Matters, have often been faced with complex and costly legal appeals with an on-going threat of enforcement actions hanging over their heads. Landmatters' appeal cost them more than the construction of their eight dwellings combined, for example!! Secondly, each planning appeal is considered on its own merits, so whilst decisions such as Woolnough's are encouraging, there is no guarantee that future decisions will follow suit.

Lammas, Policy 52 and beyond...

Clear policies are required which allow LID. Whilst several local authorities such as Milton Keynes have dabbled with LID policies,

the greatest step forward to date is Policy 52 of the Pembrokeshire Joint Unitary Development Policy (JUDP) 'Low Impact Development: Making a Positive Contribution' (see <http://www.lammas.org.uk/lowimpact/documents/AdoptedLowImpactSPG.pdf>). This policy and its accompanying Supplementary Planning Guidance (SPG) has come directly from the Agenda 21 process in which the two Local Authorities asked people their priorities and people responded by clearly asking for a LID policy. The forward planners in Pembs County Council and Pembs National Park (the Joint authorities in the JUDP) duly obliged. However, when it comes to implementing the policy it is planning *control* officers, not forward planning officers who are involved, and to date the policy has been applied so rigidly that not a single application has been granted (Fairlie, 2008).

Lammas Low Impact Initiatives Ltd represents a new departure in the LID movement as it is the first time a LID has been proposed ahead of time, working with the planning system from the very start. Indeed, acting as a consultee, Lammas helped shape the content of Policy 52's SPG! It is clear, however, that the current wording and application of Policy 52 is too restrictive and there remains a need for more forward thinking, appropriate LID policy. Consequently LID projects' best chance of getting planning permission remains the tried and tested route of building first and seeking retrospective planning permission! Meanwhile, independent research into LID has consistently found that LID offers exemplary sustainable development which meets *all three* criteria of sustainability, economic, social and environmental contributions. This research, funded by the Welsh Assembly Government (WAG), amongst others, concludes that there is a proven need for LID policy (Baker Associates, 2004; UWE and Land Use Consultants, 2002).

Lammas has picked up this agenda of establishing LID policy more widely. For example Lammas has worked with Chapter 7 (<http://www.tlio.org.uk/chapter7/>) and others to lobby WAG to include LID policy in the forthcoming public consultation on TAN 6 (Maxey, 2007). Whilst this consultation has been delayed for over two years and is still not out, the lobbying appears to have paid off because for the first time in UK planning history a proposed LID policy has been included in an official Government consultation (WAG, 2008). The proposed policy is ‘To introduce the LID concept and an enabling policy into national planning policy.’

Taking it forward: what we can all do

Lobby your Local Authority for LID policy: The current LID policy proposals in Wales do not oblige Local Authorities to create LID policies, rather they can choose whether to create LID policies or not! It is essential therefore, that individuals and groups urge Welsh and English Local Authorities to adopt such policies! If enough people contact their forward planning officers and development control officers to persuade them of the value of LID, then things will really change! Local Development Frameworks set the planning agenda for each area. These are re-written continuously and ‘must ensure the active meaningful and continued involvement of the community throughout the process’ (Planning Portal, 2008). For further information on this see the UK Government’s Planning Portal (<http://www.planningportal.gov.uk/>).

Set up LID groups: The whole LID movement has been led from the grass roots, so perhaps the best way to develop LID policy is to form a local group and begin creating LIDs near you! Lammas and Chapter 7 exist to support such groups, so feel free to contact them.

Low Impact Development in the City

by Larch Maxey and Jenny Pickerill

LIDs to date have almost exclusively been located in the open countryside as this provides access to land at affordable (agricultural) prices, which has been central to LIDs' affordability and 'doability'. LID in both practice and planning policy has so far been a response to the urgent need for access to affordable rural livelihoods. LID should be encouraged in a wider range of contexts, however, including urban and brownfield sites. Indeed, a mid- to long-term goal of the LID movement should be the extension of LID in this way as all development becomes more sustainable and the need for locally produced food, energy and materials increases to address climate change and peak oil.

The political imperative to do this can be seen in the UK's commitment to Agenda 21, which includes a commitment to: *'support the shelter efforts of the urban and rural poor, the unemployed and the no-income group, by adopting and/or adapting existing codes and regulations, to facilitate their access to land, finance and low-cost building materials'* (The Land Is Ours, 1996).

As Chatterton et al (2007) note, the housing crisis in Britain requires urgent action and the support of grass roots, citizen based initiatives as well as those designed from above. The ideas of LIDs can be extended to urban locations and indeed many LID residents have previously explored the suitability of urban sites in their search for land. Individual components of LID have already been applied in many urban areas, evident in the rise of urban allotment use (and urban permaculture), city farms, eco-buildings, car pooling, collective electricity generation (such as community wind-turbines), and waste reduction (eg. collective composting and recycling)

(Girardet, 2007). However, LID is about the confluence of meeting housing needs (low cost, self-built), with low incomes (reducing fuel bills), self-provision (through energy generation and food production) and minimising environmental impact.

There are a few experiments which suggest this is possible. In the 1990s there was a protest land squat called *Pure Genius* in Wandsworth, London, co-ordinated by The Land is Ours. In occupying the site activists built a temporary eco-community, using permaculture techniques, and dwellings (often very cheaply and from reclaimed material and scrap, including a roundhouse). They were critiquing the planning process, the lack of common land in cities, and the lack of access and power local people had in determining the shape of the city (Featherstone, 1997). They were also responding to local needs – a lack of affordable housing and rising homelessness. Although the experiment had limitations it illustrated what was possible. Some members of current LIDs were heavily involved in *Pure Genius* and it inspired others to join and create LIDs.

More recently, planning permission has been granted for a 16 unit Earthship development at the Lizard site in Brighton. Usually built in rural spacious locations, these homes will be high-density in an urban area and include shared infrastructure. These examples illustrate the potential of transferring many of the ideals of LID beyond their current manifestations and into new contexts.

The major challenge remaining for urban LID is creating sustainable livelihoods and in particular generating income from scarce urban land. This can be done by drawing on permaculture's ability to grow intensively and think creatively - from growing strawberries vertically up buildings, to design courses. Urban LID can be supported by creating workshops, kitchens and artisan produce spaces in which to add value to and sell local produce. It

would also be supported by making land available for LID at reasonable cost. All this should be explored in the debate about how to ensure future cities are sustainable.

This raises a problem inherent in the UK planning system, which escalates house prices and thus land values once permission has been granted. More creative measures could be explored to keep land and house prices affordable, including the use of Community Land Trusts and the designation of urban areas as LID. Local Authorities and housing associations, with their commitments to affordable housing, climate change and sustainability, could be key players in helping to bring LID into the urban environment.

LID in an urban context would require a different approach to that in the countryside. Pemb's LID Policy, for example, requires that 75% of household needs be met from the development within 3 years. As the first policy of its kind, this target has been set exceptionally high and future policies elsewhere may be lower (see Planning and Policy for LID). However, in an urban context LID could keep the requirement for development to actively foster the creation of sustainable livelihoods. Drawing on permaculture and other sustainable design approaches, the ability of high density housing to significantly contribute towards food, fuel, water and waste needs can be further pioneered through Urban LIDs.

The sustainable city is:

A Just City, where justice, food, shelter, education, health and hope are fairly distributed;

A Beautiful City, where art, architecture, and landscape spark the imagination and move the spirit;

An Ecological City, which minimises its ecological impact, where landscape and built form are balanced and where buildings and infrastructures are safe and resource efficient;

A Diverse City, where a broad range of overlapping activities create animation, inspiration and foster a vital public life

(adapted from Rogers (1998) *Cities for a Small Planet*)

10 things to note about doing Low Impact Development

by Jenny Pickerill and Larch Maxey

1. At the moment it is easier to get planning permission retrospectively, having already set up an LID, rather than applying before you have moved onto the land. This *is* changing, but only through people working on all fronts, particularly those getting on and building LIDs.
2. There is likely to be some local opposition to all LIDs. Over time, however, most have integrated successfully into local communities. It is worth taking time to build local connections and relationships before commencement.
3. While it is challenging to both set up livelihoods and build infrastructure simultaneously it is worth the effort. Getting land based businesses up and running is invaluable in gaining respect for the project.
4. Money is important and it is worth spending the time in constructing detailed economic plans. Not only is purchase of the land costly, but you need robust income generation ideas that suit the specific site.
5. Pay attention to the emotional aspects of the project. Understanding the risks of exhaustion, burnout and frustration will stand you in good stead to survive the pressures. Develop robust communication procedures between all those involved, so that frustrations are aired and dealt with open and clearly.

6. Think carefully about your site—does it have to be green field? Would a suburban spot do? Is there any temporary housing available while you build? Do other residents overlook the site? Permaculture recommends observing all four seasons before starting on site. This time can be used for fundraising, planning, group building, local integration, etc.
7. Use the support networks. Visit other LIDs, make contacts, ask for help, learn from their mistakes!
8. Create accountable, transparent decision-making processes.
9. Do not advertise your project until you are ready and have a media plan.
10. Just do it! Strike a balance between planning and action!

Finally some advice from someone who has gone out and done it:

'I would say go for it and don't involve too many people in the early stages. Start saving up money from day one, and probably don't spend too much time on visioning exercises and how you can image it being ... don't spend too much time on detail because it's so irrelevant to the reality of it. Just largely get on with it ... push that planning boundary' (May, Green Hill)

GETTING INVOLVED

Get involved

There are lots of different ways in which you can get involved:

- * **Set up your own Low Impact Development group.** Existing LIDs started by people like you getting together and doing it.
- * **Lobby your Local Authority for a Low Impact Development policy.** Only through public pressure will more Local Authorities see the need to develop their own LID policy. Start the ball rolling and get a local debate going.
- * **Write to your MP** and urge them to support local Low Impact Development projects.
- * **Buy a share in Lammas Low Impact Initiatives.** For just £50 you can become a member and part-owner of Lammas. These shares are non-profit-making: you are investing in the future of LID - www.lammas.org.uk.
- * **Subscribe to the *The Land* magazine.** To subscribe to this excellent magazine send £10 by cheque (payable to *The Land*) or in stamps, or to the Editors of The Land, The Potato Store, Flaxdrayton Farm, S. Petherton, Somerset, TA13 5LR.
- * **Go on a Low Impact Living Initiative (LILI) course.** If you are unsure where to start, why not develop some of your skills? LILI run a huge variety of courses about Low Impact Living; see their website: www.lowimpact.org.
- * **Help publicise this book!** Feel free to pass this book on, share its contents, copy and redistribute and link to the book website: [Http://lowimpactdevelopment.wordpress.com](http://lowimpactdevelopment.wordpress.com)
- * **Get informed.** Read some of the recommended readings on the next page.
- * **Get started!** Begin low impact living right now. Don't wait for some mythical day when you're on your dream plot. Wherever you are you can begin making the changes now. Living simply is free and easy, it just takes a mental leap!

Further resources

RECOMMENDED READING:

- Bunker, S, Coates, C and How, J (2008) *Diggers and Dreamers Directory*. Diggers and Dreamers Publications
- Chapter 7 (2007) *Low Impact Policies for Sustainable Development in Dorset*. Chapter 7, South Petherton, Somerset
- Dawson, J (2006) *Ecovillages: New Frontiers for Sustainability*. Schumacher Briefings. Green Books, Totnes, Devon
- Fairlie, S (1996) *Low Impact Development: Planning and people in a sustainable countryside*. Jon Carpenter, Oxfordshire. [This is currently out of print, but will be re-issued at the end of 2008 with a new introduction and available from *Chapter 7*]
- Hewitt, M and Telfer, K (2007) *Earthships: Building a zero carbon future for homes*. HIS BRE Press, Watford
- Jacob, J (2006) *New Pioneers: The Back-to-the-Land Movement and the Search for a Sustainable Future*. Penn State University Press
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- Schwarz, W and Schwarz, D (1998) *Living Lightly: Travels in post-consumer society*. Jon Carpenter Publishing, Oxfordshire
- Wrench, T (2001) *Building a Low-Impact Roundhouse*. Permanent Publications, East Meon, Hampshire

USEFUL GROUPS AND WEBSITES:

Brighton Earthship: www.lowcarbon.co.uk/eb.html

Ben Law: www.ben-law.co.uk (Ben supplies material and skills for construction, especially using round-pole timber; contact him by email, ben@ben-law.co.uk, but please include your phone number so he can call you back)

Chapter 7: www.tlio.org.uk/chapter7/index.html

Climate Outreach and Information Network (COIN): <http://coinet.org.uk/>

Coed Hills: www.coedhills.co.uk, 01446 774084

Diggers and Dreamers: www.diggersanddreamers.org.uk

Down to Earth: www.downtoearthproject.org.uk

Ecological Land Co-operative: www.ecologicaland.coop

Eco-Village Network: <http://gen.ecovillage.org/>

Hockerton Housing Project: www.hockertonhousingproject.org.uk

Lammas Low Impact Initiatives Ltd: www.lammas.org.uk

Land Match (for people wanting to live on the land in a low impact way and find others with compatible ideas):
www.epfsolutions.org.uk/landmatch

Landmatters: www.landmatters.org.uk

Low Impact Living Initiative: www.lowimpact.org

Permaculture Magazine: www.permaculture-magazine.co.uk

Permanent Publication: www.permaculture.co.uk

Steward Woodland Community: www.stewardwood.org

Simon Dales' house: www.simondale.net/house

Tinker's Bubble: www.economads.com/log20020524-20020531.php

Tony Wrench's roundhouse: www.thatroundhouse.info

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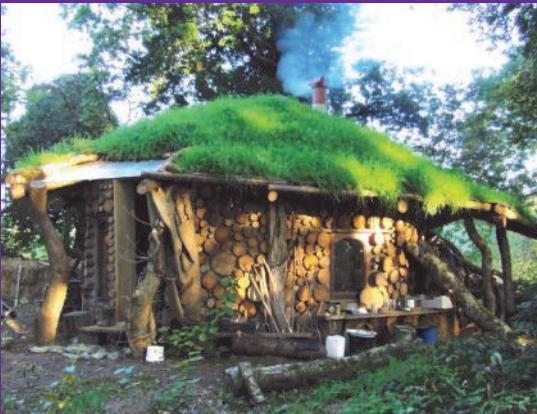
Simon Fairlie is founder of Chapter 7 and an editor of *The Land* magazine.

Tony Wrench built a roundhouse (www.thatroundhouse.info) at Brithdir Mawr in Pembrokeshire which has recently been awarded temporary planning permission. He is a wood turner and runs workshops helping others learn how to self-build.



Low Impact Development is a radical form of sustainable housing and livelihood which is in tune with the natural environment, it offers us innovative solutions for the environmental, social and economic challenges of the 21st century.

This book outlines the what, why and how of Low Impact Development. In addition to exploring its potential, the book contains inspiring stories from those who have put Low Impact Development into practice, and plenty of ideas of how you can get involved.



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