Geographies of Sustainability: Low Impact Developments and Radical Spaces of Innovation

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Abstract
Drawing upon low impact development (LID), a radical approach to housing, livelihoods and everyday living, this article interrogates the notion of sustainability and argues for greater attention to be paid to its geographies. We wish to reconceptualise the geographies of sustainability to do five things: (i) pay close attention to ‘actually existing sustainabilities’; (ii) consider radical solutions; (iii) consider sustainability as holistic, integrating social, economic and environmental factors; (iv) be more assertively political; and (v) include a clearer consideration of scale. Drawing on a detailed case study of LID, we identify seven insights into how geographers, and others, can further shape debates about geographies of sustainability. LID emphasises flexibility, holism, engaging with questions of scale, transferability, mixed and modern approaches, and popular participation whilst acknowledging the difficulties of practising sustainability. All of this allows LID to offer valuable insights into how geographers could be considering questions of sustainability.

Introduction
Sustainability as a concept and set of practices is broad, deeply contested, and incredibly important. The notion of ‘Sustainable Development’ introduced by the Bruntland Report in 1987 is now mainstream. This should be a moment of celebration. Instead, we are in an era where ecological modernisation is the dominant approach to environmental issues, and sustainable development is little more than a sound bite (Blühdorn and Welsh 2007). There is broad recognition, even in the Minority World, that the environment matters. However, this recognition often extends only as far as a belief that we can pursue economic growth without compromising the environment through a ‘reorientation’ of free-market capitalism and by using technological solutions. This is a very weak interpretation of sustainable development.
Despite this, the notion of sustainability remains powerful. Its breadth is as much part of its strength as its weakness. Although technically ‘sustainability’ refers only to the extent to which something is supportable or maintainable and can thus for example be about economic or emotional sustainability, it has become intertwined with ecological understandings of planetary survival. As a consequence, the notion of sustainability is simultaneously able to broadly encompass all aspects of life (social, economic, political, emotional, etc.) and underscore the fundamental importance of the environment to all of the above.

Moreover, there are particular geographies of sustainability; interpretations of what sustainability involves vary across space and the implementation of these interpretations ‘are changing the geographical structures of our existence’ (Whitehead 2007, 212) from households to regions, cities and beyond. These geographies have received scant attention within the discipline (notable exceptions include Barr 2003; Whitehead 2007) and yet geographers are ideally placed to contribute to debates, policies and practices concerning the spatialities of sustainability and what these geographies of sustainability could and should be. This article examines low impact development (LID), a grassroots movement offering radical solutions to the challenges of sustainable housing, livelihoods and everyday living, as one way of approaching these particular geographies of sustainability.

We wish to re-engage geography with the concept of sustainability and argue that geographers in particular would do well to pay it greater attention. This re-engagement requires geographies of sustainability to do five things: (i) pay close attention to ‘actually existing sustainabilities’; (ii) consider radical solutions; (iii) consider sustainability as holistic, integrating social, economic, environmental, and other factors; (iv) be more assertively political; and (v) include clearer considerations of scale.

First, missing from discussions of sustainability is a close examination of ‘actually existing sustainabilities’ (Krueger and Agyeman 2005, 410) from which we can learn practical solutions and extrapolate their broader implications. We need to rectify this. Grassroots community innovations in particular hold great promise and yet are often disregarded for being ‘niche’ and small-scale (Seyfang and Smith 2007). Although some work has been done, for example, on organic and alternative food networks (Holloway et al. 2007) or alternative local currencies, this has rarely been situated within a broader analysis of the spaces of sustainability.

Second, in this focus on practical innovations, it is time to seriously consider radical solutions to our overlapping environmental and social crises. This reconsideration is necessary as humans enter an era of increasing climatic, social and financial uncertainty. We are in a period of transition where resilience to changing climates and economic failures is becoming increasingly important. In this we explicitly acknowledge the importance and influence of deep green perspectives, such as Naess’s deep ecology (1973), Bookchin’s social ecology (1989) and Douthwaite’s green economy.
(1996), in their radical approaches to ecological sustainability. Such calls for a radical restructuring of society in order to reverse environmental and social devastation underpins our conceptualisation. However, we wish to directly address the criticism that such approaches are naïve and ineffective. We accept that it is not desirable to prioritise concerns about the environment above all else, and are concerned with the materialisations of radical green visions that incorporate social issues and practical strategies for change.

Third, examinations of environmental solutions need to be holistic and integrated, consider the ‘social’ (such as social justice), and the contested complexity of what we conceive of as the environment itself (Pickerill 2008). In doing this, we are better able to understand the complexity of new geographies of sustainability as incorporating the mutual dependency of environment, economy and society, and as being shaped by cultural, emotional and psychological components.

Fourth, underpinning these demands is a call for geographers to be more political in their discussions of sustainability and the environment more broadly. Geography can and should be a discipline with an assertive politics of social and political engagement. We argue this because while we see much validity in recent scholarship which overlaps with issues of sustainability (e.g. the geographies of architecture (Jenkins 2002; Kraftl 2006; Lees 2001), the geographies of alternative (or as Halfacree suggests ‘radical’, 2007a) ruralities, and the geographies of utopia (Pinder 2002)) much of it skirts the political ramifications of the work. Or rather, much of it avoids making the clear political claims that are so needed in this age of ecological modernisation. This is not to undermine its usefulness. For example, Kraftl (2006) critiques much existing work on green building as failing to consider the practices of people living in them – the emotions of occupation – which of course serve to shape the buildings themselves. Much of the work in these fields purposefully explores everyday practices. However, such work could do more to help us understand and advance the possibilities and practices of radical geographies of sustainability. If questions of sustainability were considered at the intersection of these emerging fields of enquiry, then we would be better able to reconfigure sustainability as a powerful and practical way forward. Thus, we call on geographers to explore the importance of the political nature of the insights, implications, and transformations in these fields.

Finally, central to debates as to whether practical solutions are viable and the spatiality of sustainability, is the consideration of scale. For example, Whitehead’s exploration of what constitutes a ‘sustainable citizen’ notes a stretching of the ‘senses of socio-ecological responsibility’ (2007, 212) beyond the local to the transnational. Geographers have recently engaged with issues of care, responsibility and cosmopolitanism; exploring how care for others travels across time and space (Mohan 2006; Popke 2006). Such work can now be imbued with an environmental ethos and, thus,
contribute to geography’s re-engagement with sustainability. Any exploration of sustainability is implicitly an exploration of scale and this needs to be made explicit.

To begin this reconfiguration of the geographies of sustainability, we use the example of LID. LID is a radical approach to housing, livelihoods and everyday living that began in Britain in the 1990s as a grassroots response to the overlapping crises of sustainability (Halfacree 2006; Maxey 2009). LID employs approaches that dramatically reduce humans’ impact upon the environment, demonstrating that human settlements and livelihoods, when done appropriately, can enhance, rather than diminish ecological diversity. However, LID is not solely concerned with the environment. It is also a direct response to social needs for housing, an anti-capitalist strategy forging alternative economic possibilities, and a holistic approach to living that pays attention to the personal as well as the political. Thus, LIDs are a good vehicle through which to explore radical forms of sustainability and to critically assess their potential as a response to environmentally damaging ways of living. We reject LID’s consignment as a rural back-to-the-land phenomenon (Halfacree 2007b; Jacob 2006) and instead view it as a radical movement, which is ‘engaged in social transformation through everyday-lived practice’ (Woods 2008, 132) and thus consider its role within new and emerging geographies of sustainability.

Our focus in this article is on examples in Britain drawn from a 30-month (2005–2008) empirical participatory research project conducted by Pickerill. This involved repeated site visits to four LIDs (Steward Community Woodland, Hockerton Housing Project, Green Hill (a pseudonym), and Hill Holt Wood), interviews with their residents, and a visit to Brighton Earthship as an example of novel eco-construction. Maxey has been involved in the LID movement as an acadivist (mrs kinpaisby 2008) since 1994 and is currently involved in a 2-year research project into the back-to-the-land movement which involves in-depth ethnographic research within several LID projects. In addition, both authors have been extensively involved with the Lammas Low Impact Initiative Ltd (Maxey et al. 2006; Pickerill and Maxey 2007). In November 2008, the group resubmitted a planning proposal for nine LID smallholdings including dwellings on farmland near Glandwr, North Pembrokeshire, Wales.

Low Impact Developments

We have chosen LID to illustrate the value of broadening our conceptions of geographies of sustainability and use it to urge others to look beyond the obvious examples to what are often more innovative practices. The number of LIDs in Britain has grown significantly in the last 15 years, and Chapter 7 (2003) estimate that there are at least 10,000 people living in LIDs, often without planning permission (Halfacree 2006; Laughton
While numbers of settlements are growing, the majority are small in scale with few having more than 20 residents (Figure 1). In the following seven sections, we outline what LID is and what it offers us in considering new geographies of sustainability. By defining its purpose and progress as an evolving holistic experiment, its role in fighting enclosures, which also offers practical housing solutions, we are able to explore LID’s contribution to debates about localisation, as a grassroots driven policy, its role in challenging mainstream ideas and processes and, finally, its role as a radical approach to sustainability.

AN EVOLVING HOLISTIC EXPERIMENT

We have long experimented with environmentally innovative design of our homes, communities, and cities. These designs have evolved in sophistication, effectiveness and in acceptability. We could conceive of an evolution of sustainability and a (rather non-linear) progression from the establishment of eco-villages to sustainable communities to co-housing projects and to LIDs. With every progression, the perceived limitations of previous experiences are modified and improved upon (with the acknowledgement that different solutions have worked in different contexts and responded to different needs). LID is a recent innovation pioneered in Britain. It has little public profile and of the eco-build designs is probably one of the least understood and least socially acceptable (a point we return to below). It draws inspiration from the successes and failures of communes, intentional communities and cooperatives. It integrates nature into its design, transgressing the nature/culture divide and blending with its surroundings, ensuring a low visual impact. LID often also increases ecological diversity, challenging dominant understandings of an inevitably antagonistic relationship between ‘humans’ and ‘nature’. In construction LIDs employ natural, reclaimed and/or local materials, renewable technologies and are generally engaged in their own ethical and organic food production. LIDs are designed to support sustainable livelihoods and lifestyles by minimising vehicle use, reducing costs (and, hence, the need to travel to earn money) and reducing consumption. In essence, residents are ‘trying to live consciously’ (Jo, Green Hill, interview).

Simon Fairlie, a key figure in the LID movement, currently defines it as ‘development which, by virtue of its low or benign environmental impact, may be allowed in locations where conventional development is not permitted’ (2009, 2). Fairlie prefers this broad definition because it directly addresses what he considers to be LID’s key 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’ (2009, 2). This highlights LID’s emergence in part as a response to post-war British planning law which has been highly restrictive of rural development in order to protect particular conceptions...
Fig. 1. Map of some existing and formative low impact developments in Britain, November 2008.

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. Keversal Farm
19. Down To Earth

Formative Low Impact Developments
a. Llannas

Single Low Impact Constructions
i. Brighton Earthship
ii. Ben Law’s House, Prickly Nut Wood
iii. Yr Cwtsh
of the rural idyll (Halfacree 1995). We discuss LID’s relationship to planning and policy more fully below.

Using the permaculture approach (Earth Care, People Care, Fair Share), the personal politics of change are as important for many LIDers as the business of providing for their own food needs and enhancing the biodiversity of an area (Holmgren 2002; Saville 2009). Such approaches value lived experience as much as environmental efficiency and stimulate many LIDs’ commitment to education. LID could be conceptualised as a form of co-housing (where residents can live collaboratively – sharing facilities – but maintaining individual space). Differentiating LID from other co-housing projects, however, is LIDs’ predominant emphasis upon building new livelihoods in rural areas, often on so-called greenfield sites. Even the deeply rural, land based aspect of LID is changing and there is growing evidence that LIDs can and should be allowed in a wider range of contexts.

As a grassroots-led movement LID continues to evolve through a dialogic process between practitioners, planners and other commentators. Indeed, this fluid, evolving nature is one of LID’s key strengths, allowing it to innovate and adapt to changing environmental, social and economic conditions. Definitions and interpretations of LID, therefore, need the flexibility to respond to this dynamic nature. Many LIDs, for example, are now seeking more permanence compared with an initial presumption in favour of temporary structures (Fairlie 1996, 55). This is illustrated by Steward Community Woodland. Following the precedent set by the Kings Hill LID decision, Steward Community Woodland was granted temporary permission for canvas structures in 2002 (Figure 2). Residents were subsequently refused permission to make their structures permanent. Lammas is seeking permission to build permanent structures in the first instance having successfully persuaded the Local Planning Authorities in Pembrokeshire that

Fig. 2. Temporary canvas structure at Steward Community Woodland (source: Jenny Pickerill).
LID need not necessarily be restricted to temporary constructions. Finally, Green Hill have recently built a permanent structure to replace the canvas dwellings which saw the project through its first 5 years (Figure 3).

POWER AND FIGHTING ENCLOSURES

There is a long history in Britain of opposition to the capitalist enclosure of common land. Ward (2002) has detailed housing’s hidden radical
history that points to the extended tradition upon which LID draws. The Tŷ Unnos tradition, for example, asserts that a squatter able to build a dwelling in one night on common land could claim freehold. This tradition arose in direct response to the 17th- to 19th-century British enclosures and inspires the contemporary LID movement. Plotland developments, such as Holtsfields, near Swansea (see Figure 4), proliferated before the Second World War as holiday shacks and rural refuges (Hardy and Ward 1984). Most were destroyed following the post-war planning regime, which sought to prevent urban sprawl by controlling rural development and limiting it to villages and towns. However, many survived and have evolved into a particular strand of LID, complete with their own sets of struggles with planners and profiteering ‘developers’ (Fairlie 1996; Maxey 2003).

Groups such as The Land is Ours (Shoard 2000) and Chapter 7 also argue for the creation of ‘new commons’ with greater accessibility to land for all. Related to this have been the contentions surrounding the planning regime, where the right to live on and from the land (often for poorer families) has been a consistent struggle for a variety of communities. Indeed, Chapter 7 takes its name from chapter 7 of Agenda 21, a core outcome of the Rio Earth Summit in 1992, itself a ‘watershed’ in placing sustainability at the centre of the world’s stage (Chapter 7 2003). Agenda 21 makes explicit the link between enclosure, social justice and sustainability and acknowledges the role of grassroots LID in reversing this: ‘Access to land resources is an essential component of sustainable low impact lifestyles. Land resources are the basis for (human) living systems and provide soil, energy, water and the opportunity for all human activity’ (United Nations 2004, para. 7.27). Furthermore, it requires, amongst other clauses, that ‘[a]ll countries should, as appropriate, support the shelter efforts of the
urban and rural poor by adopting and/or adapting existing codes and regulations to facilitate their access to land, finance and low cost building materials’ (United Nations 2004, para. 7.9 (c)). The provisions contained within chapter 7 have clearly not been met by many of the signatories to Agenda 21 and the LID movement in Britain represents attempts to hold governments to their commitments.

LIDs can also be conceptualised as forming an important tenet of autonomous activism, with ties to broader movements for land justice. Autonomous activism critiques and challenges the capitalist quest to own and control access to property and use it as a profit-generating resource (Pickerill and Chatterton 2006). Just as other anti-capitalist projects have sought to open up spaces for communal use (such as social centres, see Lacey 2005), LIDs have pioneered practical examples of alternatives to capitalism and offer new and creative forms of resistance. This is evident in many LID residents’ personal histories of anti-capitalist activism that often imbues their rhetoric and intentions. Moreover, LID is often evoked directly by those within the anti-capitalist movement. For example, a flyer for the UK Camp for Climate Action (held near Kingsnorth Power Station, Kent, in August 2008) runs with the slogan ‘Low-Impact Living, Real Solutions, High-Impact Direct Action’.

Ownership of the land of LIDs (and the individual properties) varies considerably between sites, but draws inspiration from these like-minded housing histories. Some are run as Community Land Trusts, where land is collectively owned by the community and can never be re-sold (Chatterton et al. 2007). Others hold land in private ownership, but create new rights of way and pathways across the sites, politely requesting privacy around settlement areas. Across the movement as a whole, however, there is a presumption in favour of collective land ownership, particularly in projects involving more than one household. Lammas, for example, have created an Industrial and Provident Society, which issues loan-stock to fund shareholder ownership of land, a particular form of community ownership.

GRASSROOTS HOUSING SOLUTIONS

There are examples of LIDs worldwide, and structures include Earthships, cob, adobe, timber and strawbale buildings, yurts, Walter Segal constructions, roundhouses, geodomes, and benders (Hewitt and Telfer 2007; Pickerill and Maxey 2009; Steen et al. 1994; Wrench 2001). They range from temporary dwellings built in a few days, such as a bender or small strawbale roundhouse, to substantial homes built permanently into the ground; indeed, Hockerton’s subterranean concrete walls are a good example of this (Figure 10). What they have in common is an emphasis upon affordability, and in Britain with years of high house prices and a stagnation of real incomes, there is a need for affordable housing options.
Rooted in the paradigm established by Agenda 21, LID illustrates a radical grassroots route to creating truly affordable housing and sustainable livelihoods. Many LIDs are exceedingly cheap to build. Using local (often natural) resources or even waste (such as the use of old car tyres, waste cans and bottles to build Brighton Earthship; Figure 5) dwellings can cost from a few hundred to a few thousand pounds to construct. Ben Law’s timber framed home cost approximately £40,000, for example, whilst a straw bale dwelling at Coed Hills, Vale of Glamorgan cost £500 (Maxey 2009). Tony Wrench’s roundhouse at Brithdir Mawr (south west Wales) cost £3000 to build (Wrench 2001). It is built from local timber, straw and mud to produce cob walls and a turf roof (Figure 6). Being highly
insulated, and designed to benefit from passive solar heating, it is also low cost to heat. Moreover, LIDs often cap dwelling re-sale prices to ensure affordability endures. Such structures are a challenge to existing definitions of ‘affordable housing’.

There is growing recognition of the need for the LID movement to cater for the diverse needs and interests of those involved. Concerned to be as inclusive as possible, Lammas is developing an eco-terrace design with smaller individual plots and larger common areas. They will also have shared energy systems, waste disposal, and laundry facilities, further reducing individual costs.

LIDs are often self-built, further reducing labour costs and facilitating the evolution of innovative designs which fit the resources available and site location. The virtuous feedback loop advocated within both ecological architecture and permaculture, whereby design leads to use and this in turn informs re-design, is firmly embedded within LID. Moreover, LID has consistently made sustainable technologies, from reclaimed radiator solar water panels to compost toilets, practical and available for all whatever their level of income or prior experience. For example, Simon Dale and his family self-built their house for £3000, with a unique curved design (Figure 7; Saville 2009). This creativity is stimulated by a critique of dominant hierarchies of expertise within construction and design professions. The majority of LID structures are not designed by architects; rather, people are self-taught and share skills.

WITHIN AND BEYOND THE LOCAL

Scale and locale are important for LID projects. There is a strong emphasis upon living within one’s means, grounded in a particular place, using local
resources wherever possible, growing food, and reducing one’s carbon footprint (a form of ‘localisation’). This is not, however, about retreating to a disconnected idyll. LID is a process in negotiation with the local and this includes the social and the economic (such as existing communities and planners). This negotiation can be complex and challenging for all parties.

In common with many developments, including the British government’s ‘eco-towns’, LIDs often receive an initially mixed response amongst the area’s existing residents. Over the last 15 years a pattern has emerged, with some existing residents highly supportive of the LID, a quiet majority who bide their time to see how things pan out and a vociferous minority in opposition. There are exceptions to this, though, with Penitddy Wood, Cornwall and Hill Holt Wood, Lincolnshire standing out as particularly strong examples of a family and community scale LID, respectively, which gained planning permission in part thanks to unanimous local support (Waters 2006). Even when there has been initial opposition, however, many LIDs have, over time, built strong positive links with their neighbours. Several Steward Community Woodland residents, for example, now work and volunteer in community spaces (running a computer club in the local library and a local singing group) and welcome locals onto their site.4 Green Hill established a growing Community Supported Agriculture vegetable box scheme, through which to sell their produce locally (Figure 8). They also established a local Steiner Kindergarten group, which attracted several other families and provided mutual childcare opportunities in the local community. Others, such as Lammas, have specifically included building a ‘community hub’ (Figure 9), which will act as an educational centre, café, shop, and as a space available for local people to use.

There is also a growing network between these LIDs with many residents in regular contact with established and fledgling projects in their area.
Groups such as Chapter 7, Low Impact Living Initiative (LILI), the Ecological Land Co-op and Lammas are explicitly reaching beyond the local to create a national presence and encourage planning authorities to recognise and support LID. This network is embryonic, however. Individuals within LIDs often lack the time and other resources to network fully with other LIDs, even those in their area. Nationally the LID movement has a relatively low profile, although the emergence of *The Land* magazine and use of email and web fora as well as established media are beginning to address this.

The negotiation of local contexts also extends to a concern for ensuring that LIDs are accessible to a broad variety of potential residents. An intentional community explicitly shares a common vision and is often ‘a
relatively small group of people who have created a way of life for the attainment of a certain set of goals’ (Shenker 1986, 10). In contrast, several community scale LIDs have deliberately sought to eschew the emphasis upon shared goals and followed the more traditional hamlet model. The difference, although small, is crucial in determining who can be involved. Lammas and the Ecological Land Co-op, for example, facilitate individuals in taking responsibility for their homes, land and livelihoods, rather than setting out to create intentional communities. They intend, therefore, that LID residents may benefit from the company and support of others who share similar values and livelihoods, whilst maintaining the freedom to be involved in communal activities as much or as little as they choose. Explicit communal activities and goals are replaced in favour of implicit community values. This approach loosens the criteria for potential residents’ involvement. This flexibility, it is hoped, broadens and diversifies participation.

To date there has been an emphasis within the LID movement upon generating livelihoods from land-based activities. This involves considerable manual labour and reduces the scope for social diversity; ‘To me that means that you’ve got a skewed community . . . we can’t all be gardeners, farmers and labourers’ (Gordon, Lammas, interview). However, there are growing signs that this emphasis may be shifting as the LID movement broadens.

There have been concerns about the move away from communal living that some feel such LIDs represent. As an eco-village advocate, Dawson (2006b) has argued that this shift undermines the possibility of the ecological and social benefits of shared neighbourhood design and features (such as shared power generation and car pooling). However, while community scale LIDs encourage such shared facilities and often include them within their management plans, many remain careful to avoid becoming too prescriptive of how people may wish to live.

Tied to this concern with accessibility is a consideration of transferability – an awareness that the practices of LIDs can and should be replicated. Thus far LIDs have been in rural areas using agricultural land to generate income and affordable rural livelihoods. However, the ideas of LIDs can be extended to urban locations and indeed many residents of LIDs had explored the suitability of urban sites in their search for land. Many LID principles and practices are already appearing in urban areas, from the rise of urban allotments, urban permaculture, city farms and food production to eco-buildings, car pooling, collective electricity generation (community wind-turbines), and waste reduction (collective composting and recycling) (Girardet 2007; Low et al. 2005). However, the tendency has been to cherry pick such elements of LID out of context rather than fully explore the role LID can play in the city. LID is about the confluence of concern for housing needs (low cost, self-built), with low incomes (reducing fuel bills, livelihood creation), self-provision (through energy generation and food production) and minimising environmental impact.
There are a few experiments that suggest this is possible. In the 1990s, there was a protest land squat Pure Genius in Wandsworth, London, coordinated by The Land Is Ours (Halfacree 1999). In occupying the site, activists built a temporary eco-community, using permaculture techniques, and dwellings (often very cheaply 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 its limitations, it illustrated what is possible. Some members of current LIDs were heavily involved in Pure Genius, whilst it inspired others to join and set up 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 Earthships will be urban high-density homes with shared infrastructure.

Examples such as these illustrate the potential of transferring LIDs beyond their current manifestations and into new contexts, including the urban. The major challenge remaining is that of creating income-generating activities from scarce urban land. This would currently only be possible if there was a way to make land available at reasonable cost, or designate land for LID. Such options should at least be explored in the debate about how to ensure that future cities are sustainable (Pearce 2006). Indeed, the eco-town proposals are interesting in this context. Announced shortly after Gordon Brown became Prime Minister in 2007, up to ten eco-towns are proposed of 5,000–20,000 homes each. The proposals shortlisted to date have been roundly criticised for being unsustainable by every sector from local opponents, NGOs and even the Eco-towns Challenge Panel, a review body set up by the Department of Communities and Local Government to assess the proposals (Fairlie 2008; McCarthy 2008). Although the eco-town proposals have so far ignored the wealth of experience gained through the LID movement, eco-towns actually make similar arguments to those put forward by LIDs, that development in the countryside is justified when it demonstrates such high levels of sustainability (Fairlie 2009). The evidence to date suggests that LIDs have a better chance of achieving this than the eco-towns in terms of location, materials used, scale and traffic generation.

GRASSROOTS DRIVEN POLICY

Low impact development is a rare example of grassroots-driven policy, where sustainability debates are shaped by public participation. Restrictive planning laws have meant that LIDs have tended to involve people moving onto land without planning permission and seeking to gain retrospective permission once they have become established or discovered.
This has often involved long, costly and exhausting battles with planning authorities and has triggered a much-needed debate about the need for LID planning policies (Fairlie 1996).5 Since the mid-1990s a series of precedents has been set whereby, generally on appeal, LIDs have been granted temporary planning permission of between 3 and 5 years in which to prove themselves. Projects being granted such permission in recognition of their high levels of sustainability include Steward Community Woodland, Landmatters, Tony Wrench’s Roundhouse at Brithdir Mawr, Kings Hill, and Tinkers Bubble. Similarly, Hockerton Housing Project secured permission for a large wind turbine, despite strong local opposition and consequently helped alter planning regulations on wind power (Figure 10). However, the LID movement has become increasingly active in lobbying for and contributing to policy changes at the consultation stages, widening the impact of LID beyond individual successes. As a consequence LIDs have been involved in shaping planning policies which now enable LIDs in rural areas of Pembrokeshire, Milton Keynes, Oxford and South Somerset.

While this is a great success for LID and illustrates the potential of grassroots-driven policy, challenges remain. Implementation of these policies is in the hands of planning control officers who have so far been extremely reluctant to allow any application under the policy (Fairlie 2007). This is, in part, a result of applying the policy too rigidly and restrictively. Despite these limitations LID practitioners and advocates continue to push for further LID policies. A proposed LID policy has been included in a Wales Assembly Government consultation on sustainable housing in the countryside. This is the first time LID has received official recognition within a national planning context. Connelly and Smith (2003) argue that a current failing in our approach to environmental issues is a lack of participation and debate. LID is an example of the kind of grassroots participation that influences policy, which will greatly enhance sustainability agendas.

INFORMING AND CHALLENGING THE MAINSTREAM

Low impact development specifically needs to demonstrate itself to conventional society as a viable model if it’s going to make any progress. (Paul, Lammas, interview)

Low impact development has been controversial, challenging existing planning orthodoxy, local residents’ expectations and notions of sustainability. It is a seed bed for experimentation, which has developed and contributed to the evolution of sustainable technologies and agricultural practices. Many of these are beginning to be replicated, including compost toilets, reed bed systems, solar water panels, turf roofs, passive solar heating and polycultural land management. Whilst the adoption of these approaches
is welcome, there is a danger that taken out of context they can be applied unsustainably, as the case of the eco-towns illustrates (CPRE Leicestershire 2008). LID is a deeply holistic approach and cannot be reduced to its constituent parts. Rather than cherry picking individual components out of context, it is therefore essential that LID as a whole is adopted into the mainstream if its comprehensive framework for sustainability is not to be watered down. However, directly rejecting the idea that ‘one-model-fits-all’, LID embraces vernacular styles and local adaptation. LIDs will therefore vary significantly across regions, creating a patchwork of different architectural, agricultural and social patterns and styles (Fairlie 1996).

Many involved in LID intend to encourage its broader scale adoption through an emphasis on education and outreach. Hockerton Housing Project, for example, has constructed a dedicated educational centre (Figure 11) from which to run tours, workshops and training sessions. Even those LIDs that have moved onto land without planning permission, such as Green Hill, have encouraged volunteers to come onto the land and experience LID for themselves. Furthermore, dedicated LID educational projects such as LILI, Down to Earth, Menter Felin Uchaf and Cae Mabon represent an emergent branch of the movement.

Furthermore, programmes such as Channel Four’s ‘Grand Designs’ show the growing interest in self-build eco-housing generally. Viewers voted Ben Law’s Low Impact house the best ever design and build (Figure 12). These advances, however, do not suggest that the process of integrating LID into existing social and economic contexts is unproblematic. For many LIDs it has been a slow process of building links and acceptance within existing communities. As noted above, LIDs often experience initial opposition from some local populations and more could be done...
within the LID movement to learn from projects where local integration has been particularly smooth.

There is, though, still a broad chasm to bridge for many LIDs. Not only are they seeking to build unconventional dwellings in the ‘open countryside’, they are often also living off low incomes derived from livelihoods some locals perceive as unviable – such as selling vegetables or weaving baskets. Moreover, the often loose ownership structures and mixture of communal infrastructure and land and autonomy that relies upon notions of shared responsibility is counter to much in broader society. Shared responsibility is no longer a conscious part of many people’s daily lives. Yet it is precisely these personal politics of LID that have so much to offer the new geographies of sustainability.

A RADICAL APPROACH TO SUSTAINABILITY

Research into LID has consistently found that it meets the criteria of economic, social and environmental sustainability (University of West England and Land Use Consultants 2002). Although it is not a panacea, and has encountered many challenges during its development, LID does provide seven insights into the geographies of sustainability. First, flexibility is crucial. LID teaches us not only that we can survive changes in the environment, but that it is a process of constantly evolving and adapting to our changing needs and climatic uncertainty. We cannot be rigid in our designs and solutions but instead need to embrace change. In this way LID is an unfinished experiment and most participants will admit that there are always improvements to be made – in construction, resource efficiency, land management and establishing livelihoods. Second, LID teaches us that sustainability requires a holistic approach; that the personal and emotional matter as much as the practical and technological. Often it was
the community aspects of LIDs that residents most struggled with; ‘just living with each other can be hard – understanding each other, accepting everybody’s differences ... and not being judgemental ... loving everybody all the time is hard’ (May, Green Hill, interview). Third, LID raises interesting questions about scale. While it is relatively simple to be sustainable within a local scale, and reduce the spread of one’s carbon footprint, this approach limits the possibility of attaining broader impacts. In order to encourage their adaptation and proliferation, these small-scale experiments need to be networked and actively promoted at regional and national scales.

Fourth, LID should not be seen as a one-off rural project. Many of its ideas are transferable to urban environments. Only through regular contact with land can we truly care for it. A more widespread requirement to derive some of our own needs from the land would begin to engender greater responsibility for our environment. Fifth, LID takes a dual role of on the one hand simplifying what sustainability needs to be and on the other illustrating that this is realistic here and now without being a prim-ativist or Luddite. LID is mixed and modern. For example, one resident is a freelance IT consultant from a canvas-covered home in the woods, and another acknowledges ‘I don’t ever imagine us to be entirely self-reliant ... we’d never produce our own wheat or produce our own bread’ (Will, Green Hill, interview). LID is about being conscious of our needs and consciously choosing the most appropriate tools.

Sixth, LID illustrates that sustainability is not easy. LID can be very hard work, living off little money, in an increasingly challenging climate. Without care, people burn-out and struggle, but the tasks are eased through communal infrastructure and shared responsibility (Laughton 2008). Finally, LID is tackling the difficult issue of the diversity of participants. People are involved in LID for a broad variety of reasons; because they have a low income, appropriate skills, to enable them to home educate their children, as a way to push for social change or simply as a form of survival in a fragile global climate. LID is concerned with issues of accessibility and provides space for those who are unable to take on a plot on their own. It is attuned to the need to share the workload and to maintain shared systems.

Conclusions

I see myself as being a catalyst for letting permaculture happen in the countryside and letting people with no money or very little money, live a balanced lifestyle that will survive economic crises, and will survive peak oil and will survive the collapse of the American empire. (Tony Wrench, Brithdr Mawr, interview)

We began this article by seeking to re-engage geography with the notion of sustainability, and to expand our understanding of the geographies of
sustainability, perhaps even to begin to produce a critical geography of sustainability. This task has been started by others, such as Whitehead (2007) but geographers still need to pay it greater attention. We have outlined how a geography of sustainability needs to do five things: (i) pay close examination to ‘actually existing sustainabilities’; (ii) consider radical solutions; (iii) consider sustainability as holistic, integrating social, economic and environmental factors; (iv) be more assertively political; and (v) include a clearer consideration of scale. In these ways we wish to take geography in a new direction and at the same time continue the search for practical solutions to the impending environmental, social and economic crises. In this search we wish to bring to the fore some of the more radical and innovative practices to interrogate what they can offer us.

LID offers us seven insights into how we can further shape debates and practices within geographies of sustainability. Its emphasis upon flexibility, holism, engaging with questions of scale, transferability, mixed and modern approaches, acknowledgement of the difficulties of sustainability and that diversity of participation is important, are all useful insights on how we should be considering questions of sustainability. Much of what LID has to offer is challenging and it is in these spaces of innovation that more geographers could be engaged. Using LID we are arguing that this form of development should be seen as valid (by academics, planners, policymakers and architects (Adam and Booth 2008)), should be supported and extended nationally, and that its formation in itself enables us to reconceptualise what geographies of sustainability can and should be.

Short Biographies

Jenny Pickerill is interested in how collective action, participation, spaces for dialogue, autonomy and anarchism can create pathways towards environmental and social justice. She has written a book (Cyberprotest), co-written a second (Anti-War Activism), a number of articles (in Environment and Planning A, Australian Journal of Political Science, Parliamentary Affairs), and book chapters, about the use of Internet technologies for environmental and social justice campaigning. Current research includes exploring Indigenous politics in Australia (published in Environmental Politics and GeoForum) and autonomous geographies through the case example of eco-building projects across Britain (Progress in Human Geography).

Before becoming a Senior Lecturer in Human Geography at the University of Leicester, where she currently works, Jenny was a postdoctoral fellow in Internet Studies at Curtin University (Western Australia), and has been a Research Assistant at Lancaster University. She has held visiting fellowships at Melbourne and James Cook Universities in Australia and at Oxford University. She holds an MSc in Geographical Information Systems from Edinburgh University, and a BA (Hons) and PhD in Geography from the University of Newcastle upon Tyne.
Larch Maxey’s overriding interest is in sustainability and developing pathways to a socially and environmentally harmonious world. With a background in several non-violent direct action campaigns, he has been at the forefront of research and practice into the links between activism and academia. Papers and book chapters in this field include a recent special edition of the online journal ACME (co-edited with Paul Chatterton). He leads research on sustainable food systems (Geographical Journal and book chapters), participatory research (Area) and intentional communities. An interest in children’s geographies led to his becoming the founding chair of the RGS’ Children, Youth and Family Working Group as well as academic publications (e.g. Children’s Geographies) and to his development of Geographies of Age as an emerging sub-discipline (International Encyclopaedia of Human Geography). From 2004 to 2007 he led a successful Education for Sustainability research project and was founding chair of Swansea University’s Sustainability Forum. He currently works at Swansea University, where he is a Leverhulme Trust postdoctoral fellow on the Back to the Land Movement and director of the Ecological Land Coop (http://ecologicalland.coop/) and Lammas Low Impact Initiatives (www.lammas.org.uk) (Director of Research). He is currently developing research projects into Geographies of Transition – drawing on the work of the Transition Movement to build resilient communities in the face of the Peak Oil and Climate Change (http://transitiontowns.org/).

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Notes

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1 We use the term low impact development after Fairlie (1996) to refer to a radical approach to living, as opposed to use of the term in the USA for a storm water management system which seeks to disperse storm water using biologically inspired design. Such an approach in Britain is referred to as sustainable urban design systems and is very different to what is explored in this article.
For example, in 2006, Steward Community Woodland consisted of 10 adults and 6 children, and Green Hill had 4 adults and 2 children.

Although Dawson (2006a), for example, conceives of LIDs as an example, and thus subset, of eco-villages.

Local schools have visited and the health visitor routinely sends trainee nurses onto the site for them to gain experience of different contexts.

Many environmentally friendly residences have been given planning permission in Britain in recent years, including BedZed and the Autonomous House, but these are technically not LIDs – they have a high visual impact and do not generate their livelihood from the land.

These volunteers tend to be WWOFFers, which refers to World Wide Opportunities on Organic Farms, an international scheme through which volunteers work on organic farms in return for board and lodgings (see www.wwoof.org). Steward Community Woodland also welcomes WWOFF volunteers.

References


