

Developer and Investor Responses to Sustainable Urban Brownfield Regeneration: Does Practice Make Perfect?

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1. INTRODUCTION

The UK Labour government has placed a strong emphasis on brownfield recycling as a foundation of urban regeneration, linked strongly with the concept of 'sustainable development'. This approach highlights the importance of reusing and recycling brownfield land not only to improve urban environments, but also to relieve development pressures in the countryside. The twin policy mantras of '*sustainable development*' and '*brownfield regeneration*' have therefore dominated the debate on urban redevelopment in recent years.

Traditionally, regeneration in the UK has been characterised by area-based initiatives driven largely by the property development industry, but often in close partnership with the public sector. The redevelopment of brownfield sites has been seen as a 'good' thing, by preventing urban sprawl, keeping cities compact and reducing out-migration. This has led to a marrying of the brownfield and sustainability concepts to underpin a vision of '*sustainable brownfield regeneration*'.

However, how sustainable is such redevelopment, and how is the development industry responding to the challenges of sustainability in brownfield regeneration? Despite the emergence of the strong policy emphasis on sustainability, previous research, for example, has shown that the property and construction industries have been slow to react to the challenges of sustainable development. Some argue that this is partly due to the fact that sustainability remains a 'contested' concept, and currently lacks the mechanisms or metrics to be fully operationalised. However, there has been little research so far which has sought to analyse how the UK property development and investment industry is responding to the challenge of integrating sustainability within brownfield regeneration projects.

This paper examines the concept of 'sustainable urban brownfield regeneration', exploring its meaning, and briefly setting it in the context of emerging policy themes in the UK. Data and information sources are analysed to characterise two major sub-regions, where EPSRC SUBR:IM research is being conducted: Thames Gateway, and Greater Manchester. In particular, the National Land Use Database is used to highlight and contrast major differences between the nature of brownfield land, and its development in these two areas. The nature and role of the development and investment industry is examined to highlight the extent to which the industry is engaging with the sustainability agenda on specific sites in these two sub-regions. The implications for the structure of the industry and its network relationships, together with impacts on policy and practice, are also explored, through the development of a best practice developers' checklist.

2. THE NATURE AND CHALLENGE OF SUSTAINABLE BROWNFIELD REGENERATION

Within the UK, the role of brownfield regeneration continues to be important and has been given a new resonance because of the focus of government policy on sustainable communities. Williams and Dair (2005) highlight the evolution of brownfield policy in England. This first found a focus through Planning for the Communities of the Future (DETR, 1998), and was further developed through the Government's Urban White Paper (DETR, 2000: 29), which stated that it aimed to:

'... accommodate the new homes we need ... through a strategy that uses the available land, including, in particular, brownfield land and existing buildings in urban areas.'

Brownfields have also been underpinned through the Planning Directorate of the Office of the Deputy Prime Minister, which seeks '*to promote a sustainable pattern of physical development and land and property use in cities, towns and the countryside*' (ODPM, 2001), and furthermore through planning policy guidance (PPG3 and more recently PPS3), which has also reinforced the message on brownfield recycling, together with the key quality of life indicator, relating to land re-use (H25).

As a result of the emergence of the sustainable development and brownfield regeneration agendas in the UK, there has been increased debate over the concept of 'sustainable brownfield regeneration'. Inevitably this concept is founded on the three pillars model of sustainable development. RESCUE (2003) provide a helpful EU-wide definition of 'sustainable brownfield regeneration' in this respect, which sets brownfields within a 'triple bottom line' framework:

'The management, rehabilitation and return to beneficial use of brownfields in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations in environmentally sensitive, economically viable, institutionally robust and socially acceptable ways within the particular regional context.'

Similarly, Williams and Dair (2005) suggest a sustainable brownfield development is:

'A development that has been produced in a sustainable way (e.g. in terms of design, construction and participation processes) and enables people and organisations involved in the end use of the site to act in a sustainable way.'

But Pahlen and Franz (2005) also highlight the fact that sustainability is neither static in time nor implies a fixed spatial perspective, in that it has to balance short and long term effects over generations, and also has political, administrative and functional impacts at a local, regional, national and global level.

However, it is a widely held view that the property and construction industry has been slow to react to the challenges of sustainability. A workshop for the DTI (Davis Langdon Consultancy, 2003) highlighted key findings from the Sustainable Construction Taskforce (2001) Report, and found that although the social and environmental benefits of sustainability had been highlighted, not enough had been done to demonstrate the economic benefits, especially from the property investment point of view. Moreover, many initiatives had focused on 'pushing through' sustainable development, although the 'pull through' by property investors is currently limited. This was highlighted as a 'circle of blame', whereby investors claim they would fund more sustainable developments if the market asked for them, but constructors say they are not asked to build sustainable developments. This also poses issues for the way in which networks of investors and developers operate in the brownfield arena, and how they approach brownfield regeneration.

3. NETWORK RELATIONS¹

Work on investor strategies and approaches to brownfield regeneration have raised the important role of (financial) risk in structuring the flow of funds into property development (Adair et al. 1998 and 2002). Brownfield sites (at least in certain areas) are seen as risky because of low economic demand, uncertain ground conditions, ongoing environmental or safety issues and uncertain and time-consuming planning processes. However, for investors willing to take and manage those risks, the evidence suggests that returns in regeneration areas can out-perform the sector benchmarks. Indeed this has been responded to by the creation of a select band of urban regeneration investment funds such as Igloo Regeneration and the English Cities Fund. However, this still leaves the overwhelming majority of investment funds steering clear of brownfield redevelopment areas because of these perceived (and indeed real) risks.

Research at the University of Ulster (Adair et al. 2006) has led them to propose that there is a need to develop new investment vehicles to draw institutional investors into the brownfield redevelopment process. Although this addresses an obvious 'strategic gap' in the process, it is interesting that the research by ourselves (and also confirmed by Adair and his colleagues) reveals that investment fund managers do not particularly differentiate between brownfield and non-brownfield assets but treat each according to its merits (in relation to portfolio strategies). Indeed, investors have placed funds into brownfield redevelopment sites and we have been interested to explore the networking processes through which that has occurred. Initial findings from the University of Reading's SUBR:IM research suggest that:

- investors are drawn into brownfield projects through developers (or others) who operate as 'network builders';
- these network-builders will have a clear (if evolving) vision of how the site/area could be redeveloped;

¹ The material in this section is based on the SUBR:IM project at The University of Reading on 'Property Investment and Brownfield Development'.

- investors often have limited or weak ties with other actors in the process, but have usually been involved with the developers in previous projects or through other contacts and have confidence in the judgment and abilities of the network builder;
- without this form of personal trust and networking, the normal investment criteria (operationalised in investment strategies, allocation rules, appraisal software, reporting requirements, etc.) will tend to emphasise the inherent risks involved and exclude these schemes from serious consideration (if they're considered at all);
- certain developers and investors have worked together on a number of projects together and have begun to form themselves into a 'brownfield development network', which is developing experience and expertise in this area of practice and is reaping significant financial returns; and
- this network is consolidated through ongoing joint-working, personal friendships and social gatherings as well as joint-memberships of organizations and attendance at regeneration conferences and workshops.

These kinds of findings place some emphasis on the 'soft infrastructure' of investment processes in which personal inter-relationships and actor-networking are important determinants of the direction and scale of financial investment into brownfield regeneration areas. They sit alongside (and within) the more technical and strategic requirements for appropriate investment vehicles and the economic and legal drivers for increasing the flow of money into such redevelopments.

4. THE ROLE OF THE DEVELOPMENT INDUSTRY: CASE STUDY SUB-REGIONS²

The Thames Gateway and Greater Manchester have provided the SUBR:IM research consortium with a rich laboratory for scientists and social scientists to study examples of best practice brownfield regeneration on a number of sites, and to highlight those elements which work and those which are not so successful.

Thames Gateway is perhaps the most ambitious regeneration programme undertaken in the UK. Set to deliver 120,000 new homes by 2016, with associated jobs and infrastructure, the development is a key part of the government's Sustainable Communities Plan. As one of three of our case study examples in Thames Gateway, Barking Reach, with its site conditions and related problems (for example overhead pylons and layered peat) but with huge potential for growth, is the largest brownfield regeneration project in Europe (350ha).

Within Greater Manchester, both Manchester and Salford have also received increased government and media attention as a result of the Northern Way and the Sustainable Communities agenda. Furthermore, the existence of a Housing Market Renewal Pathfinder in Salford makes the locality a pertinent one to study. With three case studies located in close proximity to the city centre, these areas face many challenges. For example, the site for New Islington, part of English Partnership's Millennium Community portfolio, has suffered greatly from a lack of connectivity with the city centre and other growth areas, as well as issues of contamination related to Manchester's industrial past.

In 2003, there were some 3,600 hectares of previously developed land (PDL) stock in Thames Gateway (TG), and 2,625 hectares in Greater Manchester (GM) (see Appendix A). A significantly higher amount of PDL in GM is derelict/vacant (73%), compared with TG (41%). This is mainly in private ownership in both areas, although a substantial amount of ownership is unknown in GM, and dereliction is characterised by larger sites in TG (4.8ha) than GM (3.0ha). Dereliction is also more widespread in GM, where 'medium term' dereliction is also an issue. In relative land area terms, in GM on average some 1.5% of the total land area is derelict or vacant PDL (1915ha in total); in TG 0.85% of the total land cover is derelict or vacant (1479ha in total). For England as a whole, the proportion is 0.3% (39,710ha). At a local authority level in Dartford, Newham and Barking within TG, and Manchester, Salford and Bolton within GM, dereliction and vacancy are particularly important issues.

² *The material in sections 4 to 6 is based on the SUBR:IM project at Oxford Brookes on the 'Role of the Development industry in Brownfield Regeneration'.*

5. IMPLICATIONS FOR SUSTAINABLE BROWNFIELD REGENERATION

Based on more than 50 interviews with key stakeholders, research now based at Oxford Brookes examined six sites³ in these two sub-regions, and reveals some important implications for sustainable brownfield regeneration within the three pillars of sustainability.

5.1 Environmental issues

Although contamination was still seen as an important challenge in both sub-regions, it was not the single most important issue. More important were infrastructure, density, and governance issues. However, there was a view from the interviewees that contamination and waste legislation and guidance should be streamlined and rationalised, and that a single remediation permit system should be developed. Soil Guideline Values also need to be reviewed, to ensure a sensible balance is created between safety and risk to public health. Not surprisingly, we also found that developers tend to be cost driven, when it comes to remediation, although the case studies revealed several instances of innovative *in situ* techniques and a belief that 'soil hospitals' would become more common. Generally, larger developers tend to have more expertise than smaller developers in cleaning-up contaminated sites.

Although there is a trend towards *in situ* methods driven by the EU Landfill Directive, stabilisation and solidification methods can still present regulatory problems because of their complex nature. The Environment Agency and UK government therefore have a key role to play in helping develop realistic risk guidelines for cleanup.

Our case studies also suggested that with limited gap funding now available, further public sector funding, and improved grant regimes will be needed for 'hardcore' sites, if regeneration in these localities is to continue.

5.2 Economic issues

The research showed that there is a clear need for government and related agencies to ensure infrastructure is in place prior to development. In the absence of full government funding/support, this may mean the introduction of a planning gain supplement (or equivalent) is inevitable. Already a number of local developer tax schemes exist, such as the Milton Keynes' 'roof tax'. Further local schemes are likely, and English Partnerships can play a key role here in providing local infrastructure and serviced sites. Local authorities may also have to 'sacrifice' land value on some sites to create the necessary education and health infrastructures required for communities.

Creating a new image and brand was seen as a way of creating 'confidence' in an area to overcome perceived 'stigma'. However, this can create problems for local communities, as projects become victims of their own success and local people are priced out of the market, unless a sufficient amount of affordable housing is provided. In London there is currently a target set of 50% for affordability, although this may, conversely, create issues for developer confidence in the Thames Gateway, given the level of current residential values. It was also clear that there was an over-emphasis on flats at the expense of housing in both sub-regions (in 2004/05 some 46% of new dwellings in the UK were flats), and in some cases there was evidence of buy-to-let tipping the balance away from a suitable housing/tenure mix.

The research showed that area-based initiatives, based solely around property development, were more likely to fail in their aims, and so strong underpinning and support for people-based initiatives are needed to enable local people and businesses to thrive and flourish. This means regeneration must also be based around jobs and re-skilling, as well as housing provision.

5.3 Social issues

There is a need for a rationalisation of governance in the Thames Gateway. Clearer designation of responsibilities is required at national, regional and local levels, and although this is less of a problem in Greater Manchester, even here clearer designation of responsibilities is required, given the existence, for example, of two URCs. At a national level, transport, environment and regeneration are currently undertaken by three separate departments (DfT, DEFRA, and ODPM)

³ The sites are New Islington, Higher Broughton and Hulme in Greater Manchester, and Barking Reach, Gascoigne Estate and South Dagenham (West) in the Thames Gateway.

with fiscal arrangements being handled by two others (DTI and Treasury), which can lead to a lack of 'joining up' at national, regional and sub-regional level. Continuing planning delays and bureaucracy were also seen as key challenges by a number of stakeholders.

Our research also indicated that joint venture schemes are perceived as being generally successful. In both sub-regions, good examples of such schemes exist (for example, Barking Riverside and South Dagenham West), but there needs to be a balance between strong leadership and collaborative working to ensure success, and a fair risk/reward trade-off for those involved.

As far as community engagement and development are concerned, active dialogue with key elements in the community are needed. Several developers had used 'eco days' or 'green days' to highlight the benefits of sustainable communities. But education is key to highlighting the benefits of Combined Heat and Power (CHP), energy saving and the benefits of green construction. Community Trusts may also become more common for community-based projects, founded on successful experiences in Thames Gateway.

There is also a major challenge for those involved in the sustainable development agenda to more closely define what 'sustainable communities' really comprise. Although ODPM have produced a definition, it was noticeable that stakeholders had developed an array of terminology (for example, 'liveability' and 'neighbourhoods of choice') to contextualise what they were trying to achieve. It is likely that those developers with a strong Corporate Social Responsibility agenda are more likely to be fully committed to the sustainable communities agenda.

6. A CHECKLIST FOR DEVELOPERS – 'PUSHING THE BOUNDARIES'?

Clearly, valuable lessons can be learned from the experience on these sites. Appendix B provides a summary of key points developers need to bear in mind when approaching brownfield development, and although this is not intended to be prescriptive, we believe it can provide a useful tool for those seeking to develop in ways which really do provide for sustainable end products. In this sense the research is intended to help refine and complement existing 'sustainability checklists' such as the one produced by SEEDA. Indeed SUBR:IM work based at the University of Surrey is developing a framework for assessing sustainability across the brownfield lifecycle.

Developers and investors are coming to terms with brownfields, and there is evidence of the emergence of networks and supporting financial vehicles to reduce risk. However, it is also clear that the projects that developers are engaging with today are complex, have long lifecycles, and involve peoples' homes, jobs and future lives. A key challenge will be to incorporate innovative and sustainable products and designs throughout the brownfield lifecycle from cleanup through to development and construction in order to provide truly sustainable communities. As one of our community representative interviewees put it:

'I worry really what we are creating – it's almost like scientists really: testing out design, testing out living materials and new products. But we're testing out on peoples' lives really, I think, and I just worry that we are creating ... a new area, that in 20 to 30 years we are going to knock... down again because it wasn't sustainable now. But I also think, on the other side, that it's important to test out new ideas and push the boundaries.'

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Appendices

Appendix A: Comparison of Previously Developed Land in Thames Gateway and Greater Manchester (based on NLUD data, 2003)

Characteristic	Thames Gateway	Greater Manchester
Amount of brownfield (PDL)	3600ha	2625ha
Average size of PDL site	3.75ha	1.82ha
PDL in private ownership	76%	53%
Derelict/vacant PDL	1479ha	1915ha
Derelict/vacant PDL as % of all PDL	41%	73%
Derelict/vacant ownership (private as % total)	79% / 76%	50% / 50%
Derelict/vacant ownership (Unknown ownership as % total in each category)	4% / 3%	26% / 10%
Derelict PDL as % of all PDL	12%	46%
Average size of derelict PDL	4.8ha	3.0ha
Derelict/vacant since 1998 (% of all derelict/vacant)	33%	40%
% of new dwellings built on PDL	81%	84%

Note that this analysis is based on raw NLUD data and excludes sites 'with redevelopment potential that have not yet been allocated for planning'.

Appendix B: Developer's checklist (adapted from Dixon et al, 2006)

Stakeholder	Key roles/ responsibilities	Comments
Environmental	<ul style="list-style-type: none"> • Use sustainable remediation techniques • Incorporate sustainable construction methods and high standards of design 	<ul style="list-style-type: none"> • Engage with community and other stakeholders during and after cleanup • Driven by policy and guidance, design codes may be appropriate.
Social	<ul style="list-style-type: none"> • Engage with community at an early stage of development 	<ul style="list-style-type: none"> • A need to be proactive in design options • 'Eco Days' and 'Green Days' can help educate general public • Overseas visits with community representatives • Promote risk transparency in clean-up (warranties on sale)
Economic	<ul style="list-style-type: none"> • Focus on partnering and engaging with other stakeholders • Promote a strong 'brand/image' for the project • Incorporate a balance/mix of tenures and house types • Focus on sustainable communities which provide 'liveability' 	<ul style="list-style-type: none"> • Joint Ventures and PPP-based schemes can offer advantages but require leadership and vision • Sensitivity required because of the richness and diversity in the community • Affordable housing is key, and gated communities can create social exclusion • Mix of density, house and tenure type is vital • Engagement with stakeholders to provide homes, where people want them, close to jobs and other services
All	<ul style="list-style-type: none"> • Measure sustainability proactively across the project lifecycle 	<ul style="list-style-type: none"> • Need to be consistent and to attempt to measure relevant sustainability components