

CL:AIRE's SUBR:IM bulletins present practical outcomes of research by the SUBR:IM consortium which have direct application to the brownfield and contaminated land communities. This bulletin is a guide to the role of the development industry in brownfield regeneration.

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The Role of the UK Development Industry in Brownfield Regeneration

About the research

This end user guide is one of the products of the Sustainable Urban Brownfield: Integrated Management (SUBR:IM) research consortium. The research was completed at Oxford Brookes University, and examined the role of the UK development industry in brownfield regeneration. The project, which was carried out between 2004 and 2006, was based around a major survey of property developers (residential and commercial), and also included structured interviews with developers at a national level; a detailed analysis of the ODPM National Land Use Database, and case studies and further interviews with key brownfield stakeholders in Thames Gateway and Greater Manchester. A key message emerging from the research is that although the property development industry is coming to terms with brownfield risks, including contamination, major policy barriers are hampering effective regeneration. Furthermore, resolving other issues, relating to density and infrastructure, are key to successful brownfield regeneration.

1. INTRODUCTION

The UK Labour government has placed a strong emphasis on brownfield¹ 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'.

Given the importance of property's dual role in the economy, not only as a means of production and physical regeneration, but also as a means of wealth ownership, the UK property development sector, comprising financial institutions such as pension funds, insurance companies and property companies (including investor/developers and housebuilding companies) has the power and capacity to influence patterns of economic activity, as well as affect wealth and income distribution through engagement in urban regeneration. Examining the role of the development industry and its interaction with other key stakeholders in the brownfield regeneration process is therefore vital to understanding how the dynamics of brownfield recycling and regeneration works in practice.

This end user guide focuses on the key findings from the research to examine:

- The nature and challenge of brownfield development;
- The role of the development industry, and its attitudes towards brownfield regeneration; and
- How we can best learn from current practice in two key areas of brownfield regeneration (Thames Gateway and Greater Manchester).

2. THE NATURE AND CHALLENGE OF BROWNFIELD DEVELOPMENT

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 and Kate Barker's review of the housebuilding industry. 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.'

Table 1. The benefits of brownfield regeneration (adapted from National Round Table on Environment and Economy, 2003)

Economic	Social	Environmental
● Creation and retention of employment opportunities	● Improved quality of life in neighbourhoods	● Reduced urban sprawl pressures on greenfield sites
● Increased competitiveness for cities	● Removal of threats to human health and safety	● Restoration of environmental quality
● Increased export potential for clean-up technologies	● Access to affordable housing	● Improved air quality and reduced greenhouse gas emissions
● Increased tax base		

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.'

This has also found resonance at an international level. As Table 1 points out, experience from Canada, the USA and Europe suggests that, while specific circumstances vary, the key benefits of brownfield regeneration within a 'triple bottom line' model share common features.

However, 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.

It is also 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 Report (2001), 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.

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3. THE ROLE OF THE DEVELOPMENT INDUSTRY IN BROWNFIELD REGENERATION

In headline terms the property development industry seems to have come to terms with brownfield regeneration. Current statistics show that the brownfield land total is about 64,000 ha in England, with some 16,500 ha comprising 'hardcore'² sites (English Partnerships (EP), 2003), some of which may have contamination issues associated with them from an industrial legacy³. The Government's national target is that by 2008, 60% of new dwellings should be provided on previously-developed land, and through conversion of existing buildings. In 2004, some 72%⁴ of new dwellings were built on previously-developed land (including conversions), compared with 56% in 1993 (ODPM, 2005). As Figure 1 shows, the total number of new dwellings completed on brownfield sites was relatively stable between 1997 and 2001, although the absolute total appears to have increased more recently, with a bottoming out of 'greenfield' completions.

Although figures such as these seem to suggest targets are being met, how are developers reacting on the ground to the challenges of brownfield development? This was the subject of a major SUBR:IM survey of commercial and residential developers carried out in mid-2004, with follow-up interviews with 11 national developers (Shephard and Dixon, 2004; Dixon et al., 2005a).

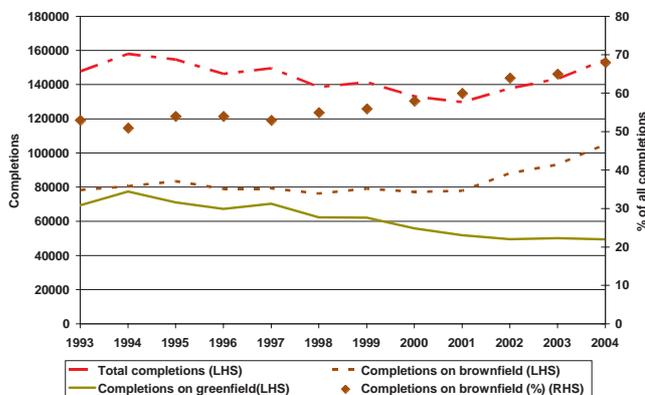


Figure 1. New dwelling completions in England (1993-2004) (Source: ODPM, 2005)

Brownfield development is widespread... The survey results confirm that brownfield development is now widespread throughout the housebuilding industry. For example, more than 80% of the sample developed entirely on brownfield sites (Figure 2). It was already apparent that brownfield development was no longer the preserve of specialists and had been adopted by volume housebuilders (i.e. larger housebuilders were building some 50-74% of their units on brownfields). Findings from the survey also show that smaller and medium-sized operators have also clearly shifted their output towards brownfield.

Given the policy emphasis on brownfield development it is not surprising that housebuilders of all sizes are undertaking schemes on previously developed land, to a greater or lesser degree. Maintaining output on greenfield sites has become increasingly difficult in the recent planning climate. Indeed, 'the availability of land' or 'government policy' (which underpins the former) were the key reasons given by the majority of developers for increasing their output on brownfield over recent years. However, the move towards brownfield development has not been solely policy-driven; a significant proportion of developers – both commercial and residential – viewed it as an opportunity for profitable development in what has been a relatively buoyant property market.

At present, there appears to be a clear intention amongst developers to continue to increase the amount of brownfield development they are undertaking and for housebuilders this was supported by the composition of their land banks in which brownfield accounted for, on average, 70% of total plots.

Contaminated sites still hold problems... Developing on sites with contamination is likely to become increasingly important if the brownfield target is to be sustained. The survey findings show that developers in both the commercial and residential sectors are clearly not averse to developing on contaminated sites. Practically all the survey respondents were prepared to undertake development on sites requiring remedial treatment and around three-quarters had actually developed on contaminated sites over the past year. Smaller developers are less likely to undertake schemes on contaminated sites; this is not unexpected given that they may not have the resources, the specialist knowledge or the financial reserves to carry the additional risks involved.

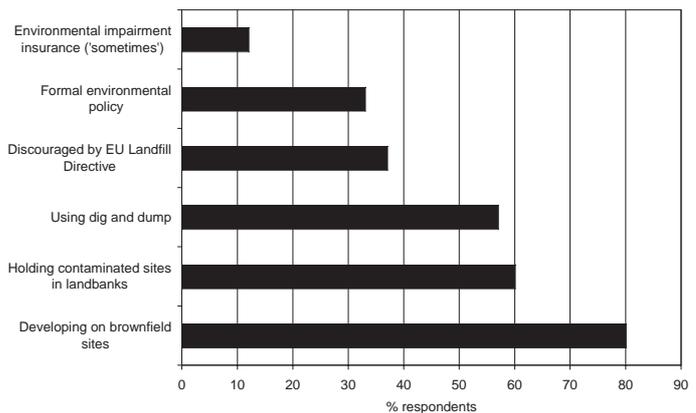


Figure 2. Key findings from survey of developers (based on Shephard and Dixon, 2004)

A majority of housebuilders (60%) were prepared to hold contaminated sites in their land banks (Figure 2). Attitudes towards contaminated land clearly appear to have changed as housebuilders have gained more experience of developing on brownfield sites. Appropriate insurance can reduce risk. However, although contractor warranties and insurance were commonplace, only 12% of developers used ('sometimes') environmental impairment liability insurance.

The readiness of the development industry to tackle contaminated sites could, however, be threatened by the impact of the EU Landfill Directive⁵. Some 32% of developers and over two-fifths of housebuilders (37% of respondents overall) were likely to be discouraged from undertaking development on sites with contamination, following the implementation of the Directive (Figure 2). This was particularly true of smaller housebuilders and those without experience of commercial development. Commercial developers were less likely to be dissuaded from building on contaminated sites, but the Directive is clearly causing some uncertainty in the industry. The Directive is causing concern because 'dig and dump' is still the most frequently used method of dealing with contamination, with some 57% using the technique, 'often' or 'always' (Figure 2). There is, however, evidence that in-situ treatments are being used, most commonly barrier methods and containment. Commercial developers typically had a greater awareness of alternative remediation techniques than housebuilders and were more likely to have experimented with them, particularly solidification / stabilisation and soil vapour extraction. Other techniques were generally used much less frequently.

The EU Directive does appear to have stimulated some interest in exploring alternatives to landfill; just over half of all developers said they were doing this. Of the remainder, around half stated that they were also likely to continue developing on contaminated land, suggesting that they already have sufficient knowledge of alternatives to landfill. In terms of access to independent sources of information on remediation treatments, the majority of developers did not consider this to be a problem. Smaller housebuilders were less likely to share this view and this could suggest that there is a greater role for government bodies such as the Environment Agency to publicise and disseminate information more widely.

Mixed attitudes towards the sustainability agenda... Although the development industry is playing an influential role in the 'sustainability' agenda, there is a degree of scepticism over an agreed, industry-wide definition, and this may hinder its implementation. Indeed, only a third of respondents in the survey had a formal environmental policy (Figure 2). Developers seem to be adopting a proactive approach to defining sustainability on their own terms. Developers' own interpretations subsequently vary. Motivated by their efforts to comply with sustainability requirements for gaining planning applications, developers frequently concentrate on environmental and social objectives, although there is also a keen focus on the economic sustainability of the scheme, often limited to the end product itself rather than the economic vitality of the surrounding area.

4. LEARNING FROM PRACTICE: THAMES GATEWAY AND GREATER MANCHESTER

4.1 The Case Study Sub-Regions

Building on the survey of developers in the UK, Thames Gateway and Greater Manchester have also 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 (New Islington, Higher Broughton and Hulme in Greater Manchester, and Barking Reach, Gascoigne Estate and South Dagenham (West) in the Thames Gateway), and to highlight those elements which work, and those which are not so successful.

Thames Gateway is perhaps the most ambitious regeneration programme

¹Any land, which has been previously developed, including derelict and vacant land, which may or may not be contaminated (see ODPM, 2000). ²In February 2005 EP and the ODPM launched the setting up of 14 pilot brownfield projects (which situated to be in such a condition, by reason of substances in, on or under the land, that - (a) significant harm is being caused or there is a significant possibility of such harm being caused; or (b) pollution of controlled waters is being, or is likely, that between 5 and 20% of these may require action to ensure that unacceptable risks are minimised. Research is underway to improve such estimates (www.defra.gov.uk). ⁴The equivalent figure (excluding conversions) was 68%. For consistency permitted to accept hazardous waste. The aim of the Directive is to encourage waste reduction and wider adoption of more sustainable methods of dealing with contamination. A new Mobile Treatment Licence regime in 2006 may also help pro

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.

The characteristics of each sub-region also vary in terms of the nature and extent of brownfields (Figure 3). In 2004, there were some 3,541 hectares of 'previously developed land' (brownfield) in Thames Gateway (TG), and 3,354 hectares in Greater Manchester (GM). This represents more than 10% of all brownfield land in England. Analysis of the National Land Use Database (NLUD) for SUBR:IM revealed (see also Dixon et al., 2005a; 2005b):

- A significantly higher amount of brownfield land in GM is derelict/vacant (73%, in 2004), compared with TG (44%, in the same year), which largely reflects the industrial legacy of the GM sub-region.
- In 2004, in relative land area terms, on average some 2% of the total land area in GM is derelict or vacant (2480ha); in TG about 1% of the total land area is derelict or vacant (1580ha in total). For England as a whole, the proportion is 0.3% (38,170ha).
- In 2003, brownfield land was 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).

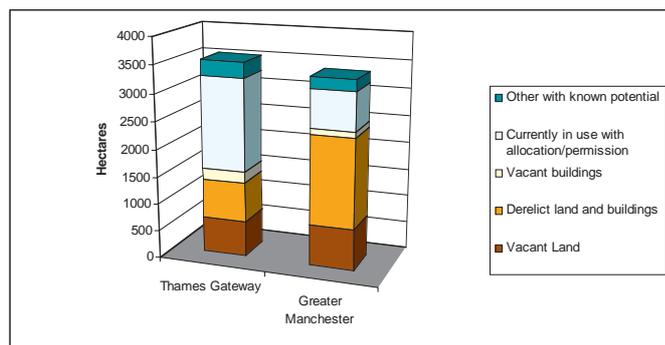


Figure 3. Brownfield land characteristics: Thames Gateway and Greater Manchester, 2004 (Source, NLUD data)

4.2 Towards Best Practice?

Based on more than 50 interviews with key stakeholders, research at Oxford Brookes examined six sites in these two sub-regions, and reveals some important implications for sustainable brownfield regeneration within the three pillars of sustainability (Dixon et al., 2006).

4.2.1 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.

4.2.2 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.

4.2.3 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 Urban Regeneration Companies. At a national level, transport, environment and regeneration are currently undertaken by three separate departments (DfT, DEFRA, and ODPM) 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) (Box 1), 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.

Box 1. New Islington, Manchester



New Islington is one of seven English Partnership Millennium Villages. The £250m development is on a 12.5 ha site at Ancoats, East Manchester. The site includes the 1960s Card Room Estate and the scheme is a Partnership between New East Manchester (URC) and Urban Splash with English Partnerships, Manchester City Council, and Manchester Methodist Housing Group. Innovative design, combined heat and power supplies, and a sustainable approach to remediation (using bioremediation) are features of the project. (www.newislington.com) (Source: Authors' photographs)

¹ include hardcore sites) as part of the next stage of creating the National Brownfield Strategy. ²Under the Environmental Protection Act 1990 Part IIA contaminated land is defined as: 'land which appears to the local authority in whose area it is to be caused.' In its report, *The State of Contaminated Land*, the Environment Agency (2002) quotes an earlier estimate that there may be as many as 100,000 sites affected by contamination to some degree in England and Wales. It advised that, Figure 1 shows new dwellings, excluding conversions, and so figures are correspondingly lower. ³From 16th July 2004 the Directive banned the co-disposal of hazardous and non-hazardous waste resulting in a radically reduced number of sites remote on-site treatment, and exemptions for contaminated waste still exist for Landfill Tax (under Sections 43A and 43B of the Finance Act 1996 (as amended by the Landfill Tax (Contaminated Land) Order 1996 (SI 1996 No 1529)).

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.

5. A CHECKLIST FOR DEVELOPERS

Clearly, valuable lessons can be learned from the experience on these sites. Table 2 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, 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.

Table 2. Developer's checklist (adapted from Dixon, 2006)

	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 best practice 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

6. CONCLUSIONS

There is no doubt that the development industry has a vital role to play in the brownfield regeneration process. As a key risk-taker the industry expects to receive a fair and equitable reward/return on development and investment, and the industry seems to have responded to opportunity 'pulls' and policy 'pushes' over the last few years.

However, although government policy seems to have been successful in shifting the pattern of development towards brownfield sites, conflicting policy aims may start to create difficulties and threaten the continued success of the regeneration agenda. For example, the attempt to reduce the amount of contaminated material going to landfill sites may slow down the development of brownfield sites, as alternative methods of remediation have to be sourced and implemented and costs of disposal rise. Higher costs for dealing with contamination may therefore threaten the viability of some brownfield redevelopments thus increasing reliance on public sector intervention.

There also appears to be a greater need for the public sector to take the lead in disseminating and publicising the information that is available on alternative remediation treatments. It is clear from the first stage of our research therefore that the EU Landfill Directive, and the recent, European Court of Justice *van der Walle* case (C-1/03 (Van der Walle and others), can exacerbate tensions which already exist between existing brownfield and contaminated land policy 'layers'. Nonetheless, more sustainable methods of remediation may be promoted as a result, and it may be the case that the sustainable development agenda really does now become a main focus for debate within the property industry, as other environmental directives and legislation start to bite.

In policy terms, other issues highlighted by the research include:

- The contamination and waste legislation and guidance should be streamlined, and the remediation permit system needs to be simplified. Soil Guideline Values need closer review to ensure efficient operation.
- Sufficient amounts of affordable housing need to be provided. In London there is currently a target set of 50%, although this may create issues for developer 'confidence' on some sites. There is an over-emphasis on flats at the expense of houses in both Thames Gateway and Greater Manchester, and 'buy-to-let' may create additional pressures.

It is also clear that the brownfield projects developers are engaging with today are

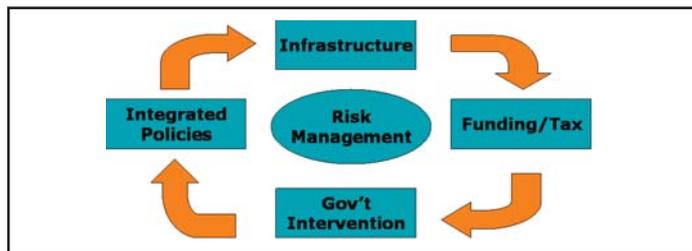


Figure 4. A virtuous circle for brownfields (adapted from Dixon et al., 2006)

often complex, have long lifecycles, and involve peoples' homes, jobs and future lives. The starting point for improved success has to be a greater role for the public sector, especially on 'hardcore' sites. If policies are truly integrated at a national level this should help, and getting the right infrastructure will require a true partnership between public and private sectors. If funding and tax issues can be reviewed, perhaps in terms of a 'stick and carrot' approach, then increasing the rate of brownfield redevelopment becomes a reality. Finally, risk management, of course, should not be ignored. Costs and value are important considerations, but developers require better guidance, and better site characterisation on difficult sites. In short, there is a need to create a 'virtuous circle' for brownfield development (Figure 4).

The 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 (rather than transient) communities. But this will present major challenges over the next 20 years. 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 are we creating a new Hulme, or a new area, that in 20 to 30 years we are going to knock it 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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ACKNOWLEDGEMENTS

SUBR:IM is funded by EPSRC (Grant Number GR/S148809/01), with additional support from the Environment Agency. My thanks go to all those who were interviewed but who for reasons of confidentiality, must remain anonymous. The project was completed at Oxford Brookes University, but a major role was played by Yasmin Pocock and Mike Waters of the College of Estate Management, Reading, in completing this research. The kind support of the RICS Foundation is also acknowledged.

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