

Part One Planning and Development

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1

The Development Process

1.1 Introduction

The first edition of *Land, Development and Design*, published in 2002, opened with a quotation from the Urban Task Force, chaired by Lord Rogers of Riverside. The quotation observed, *inter alia*, the Task Force had calculated ‘that, on current policy assumptions, the government is unlikely to meet its own target that 60 per cent of new dwellings should be built on previously developed land’ (*Towards an Urban Renaissance*, report of the Urban Task Force, 1999). Events subsequent to publication of the first edition of *Land, Development and Design* were very soon to show that not only could this target be met, well before the target date of 2008, but it could be significantly exceeded and maintained at a high level of land reuse.

With the 60 per cent target having been reached, it could be said that the government’s land-reuse policy for England, focusing new development on previously developed land, turned out to be highly successful. This is confirmed by the statistics on the stock of Derelict and Vacant brownfield land in England, which underwent a year-on-year reduction, from around 40,710 hectares in 2002 to 33,600 hectares in 2007, a fall of 17.5 per cent: see Figure 1.1.

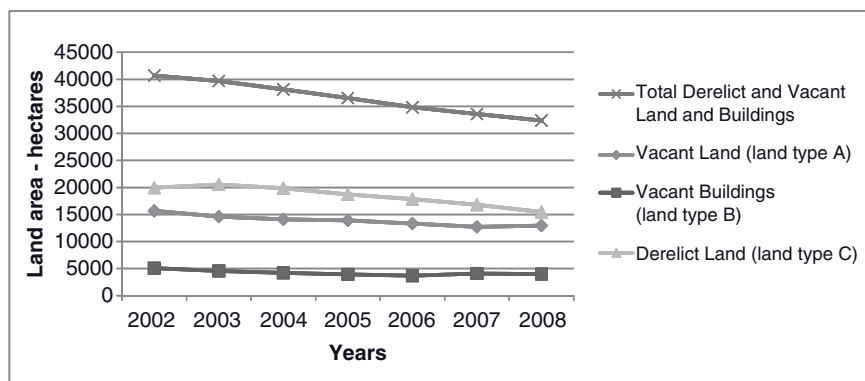


Figure 1.1 The stock of derelict and vacant land in England, 2002–2008 (source: the National Land Use Database of Previously Developed Land – NLUD-PDL, reproduced with permission)

The provision of new housing through the reuse of previously developed land and the conversion of buildings exceeded 70 per cent by 2003 and remained at annual rates well in excess of the target, which led to calls from lobbying groups, such as the Campaign to Protect Rural England (CPRE) and the Environmental Industries Commission (EIC), to increase the brownfield housing target to 70, 75 or even 80 per cent. Government resisted the lobbyists' pressures to increase the target percentage, in part due to a recognition that maintaining a higher target might not be achievable in the medium to long term and, also, due to a growing appreciation that land is needed for purposes other than housing, as well as the contributions that brownfield sites may make in terms of flood alleviation and improving biodiversity. The Land Use Change Statistics (LUCS) for 2008 showed that the land reuse figure reached 80 per cent of housing provision in 2008 (provisional estimate, CLG, 2010a), up from 77 per cent the previous year, albeit against a reduced volume of development on greenfield sites.

As with the first edition of *Land, Development and Design*, the primary focus of this new edition is on previously developed – or brownfield – land, but most of the issues raised and topics covered apply equally to both greenfield and brownfield sites. The success of the government's land-reuse policies must be viewed in context, achieved as it was against the background of a buoyant housing market, with an exceptional rate of new household formation and a renewed willingness – even an excitement – on the part of homebuyers willing to live in the inner urban areas of England's cities and major towns. Coupled with this was a linked policy, advocated in the Urban Task Force report, to increase the densities at which new housing developments were constructed: see chapter two.

Unfortunately, all too often housing developers have attempted to accommodate pressures for increased densities, while at the same time adhering to their conventional housing estate layouts of detached, semi-detached and terraced homes. This they have tried to do by significantly reducing private garden areas, allowing less space between dwellings and with limited parking provision for private cars, with seemingly little consideration for design quality.

Frequently, this reduction in external private areas and the 'cramming' of building blocks has been accompanied by reductions in the internal sizes of individual dwellings, often manifested in a loss of storage space. Even those dwellings that seek to provide room for the private car may have only a small single garage, often of insufficient size to house a modern car, let alone provide storage for the accoutrements of modern life, such as sports equipment and the tools of the 'do it yourself' enthusiast. So the end result is that the garage is used for storage, with the family car parked on the small driveway, with second or even third cars parked on the pavement or the front garden, as illustrated in Figure 1.2.

Linked to the issues surrounding increased densities and the lack of storage facilities in modern dwellings is the problem of storing household wastes and materials for recycling. New housing developments rarely seem to provide adequate storage facilities for the ubiquitous wheeled bins, of which many households have at least two, if not three, with the result that they are left to litter the street scene – not just on collection days but throughout the week; see Figure 1.3. With greater emphasis being placed on recycling, and with fortnightly collections

seeming to be on the increase, many households now have to be able to accommodate as many as eight different waste or recycling receptacles:

- household waste, for disposal;
- green garden waste, for composting;
- glass bottles, possibly sorted by colour;
- plastic bottles, but not some other plastics;
- drink and food cans, possibly sorted into aluminium and steel;
- cardboard;
- newspapers and magazines, but not old telephone directories; and
- waxed cardboard fruit juice cartons (in some areas but not others).



Figure 1.2 A modern housing development in Wivenhoe, Essex, with insufficient off-road, or dedicated, car-parking provision. When asked about the inadequate car-parking provision, the site sales agent blamed Planning Policy Guidance Note 3



Figure 1.3 Wheelie bins and cars fight for space on a modern development in Ipswich

The question of good design, the provision of adequate storage and matters of good urban design are issues to which we will return throughout this book, with examples of what this author considers to be good and bad in terms of urban design for living our lives in the twenty-first century.

1.2 The phases of redevelopment

The first edition of *Land, Development and Design* mentioned the conflicts that often exist between property developers and planning professionals. To some extent the conflicts are still there, but the intervening years have seen planning courses place greater emphasis on the commercial aspects of the development process. There is also more guidance available, especially when it comes to planning and executing developments on brownfield land.

The first edition stressed the complexities of brownfield development, describing an eleven-phase development process, first outlined in *Building Homes on Used Land* (Syms and Knight, 2000), which had been commissioned by the Joseph Rowntree Foundation to provide developers with real-life case studies of how to overcome contamination and other site problems. Since 2002 the eleven-phase process has evolved further, through English Partnerships' *The Brownfield Guide: A practitioner's guide to land reuse in England*, for which this author was the lead author and editor. The phased approach to redevelopment is now contained in the PODD approach – standing for Preparation, Options, Design and Delivery.

Preparation

1.2.1 Phase 1 – Project inception

Project inception can come about in a number of ways: for example, the development project may start with a piece of land for which a new use has to be found, or with a development concept for which a site has to be found. It may involve a site that is already owned by a developer or a property company, where the previous use has come to an end, or where an occupier has gone out of business or has relocated. The developer may be actively involved in development activities, as the primary role of a business, or only occasionally engage in development, for example when a building reaches the end of its useful life.

Regardless of how the development originates, it is important to achieve an early understanding as to the aims and objectives of the potential project. Usually the aim will be to undertake some form of improvement to the site, in order to satisfy a particular market demand or need, with the objective of making a profit. Even a 'not for profit' type of organisation, such as a registered social landlord (RSL), will need to be satisfied that the development is needed and that tenants will be found. It is therefore necessary to develop a good understanding of the market, including:

- Market assessment – is there an undersupply of a particular type of property, or is there a perceived gap in the market?
- How can the market be tested – background research, analysis of recent transactions and of planning applications and existing permissions, surveys, economic analysis, advice from estate agents?
- Feasibility versus viability – the development may be feasible, in terms of market potential and acceptability to the local planning authority, but will prospective purchasers be prepared to pay the rents or prices necessary to make it financially viable?

The inception stage of the development will include some estimation as to the developable capacity of the site, whether in terms of potential numbers of residential units that can be provided, or the footprint, in square metres, of any commercial buildings. It will be necessary to consider matters such as car-parking provision, loading and unloading arrangements for commercial vehicles, access and egress arrangements, and the likely compatibility (or otherwise) with the uses existing in adjacent properties. It may well be appropriate to consider the massing of the development, the number of floors and buildings and the relationship of their built form to neighbouring buildings. All these considerations should be incorporated into simple sketches, which should not ignore the importance of the public realm as part of, and in relation to, the proposed development.

Financial calculations at this stage may be no more than rough estimates, although experienced developers, routinely building from a limited palette of designs, will undoubtedly have very accurate information for the construction costs of their superstructures, leaving sub-structures and infrastructure works as the principal variables. The developer will also have to give consideration to the ownership and legal aspects of the site, including asking the following questions:

- Is the site in a single ownership?
- Are there any parts where the ownership might be unclear and that might constitute ransom strips?
- Is there any evidence of anyone having been in illegal occupation of part of the site, as a squatter, who might claim prescriptive rights?
- Is there any evidence of fly-tipping, or other historic unauthorised use of the site?
- Are there any tenancies, sub-tenancies or licences in existence?
- Is there any evidence, physical or legal, of any wayleaves, easements, rights of way or other matters that might affect the ability to develop the site?

1.2.2 Phase 2 – Feasibility assessment

The project inception phase will have given the prospective developer a fair idea as to the potential of the site to accommodate the type of development envisaged. It should also have facilitated an initial assessment of the constraints that might hinder, delay or prevent the project from going ahead.

The second phase of the process should be undertaken with the objective of giving the developer a much clearer understanding of the site and its potential problems – bearing in mind, of course, that the developer may still not own the site and may even be in competition with others for the acquisition. There may be regulatory issues that need to be addressed, involving surveys to determine the nature of flora and fauna on the site, as well as the need to consider matters such as potential flood risks. Chapter 2 provides the reader with an overview of the policies and regulations that may have to be taken into account. The extent to which the developer will be able to deal with issues such as these will largely depend on the degree of control over the site, for example through an option agreement, or by a less formal exclusivity agreement giving the developer a specified period of time in which to undertake these preliminary investigations and discussions with regulators.

An important issue to be considered here is whether community consultation and involvement should be commenced at this early stage. There are significant advantages to involving local communities early on in the process, but there are also drawbacks to be considered. Early involvement will provide the developer with an indication as to whether enthusiastic support is likely to be forthcoming, or whether the community is going to be steadfastly opposed – in which case the developer may decide to abandon the project without investing any more money, or seek a compromise acceptable to all concerned.

It is, however, very important to ensure that the community views are truly representative and are not just expressing the opinions of a vocal minority. One drawback of early community involvement is that it gives time for any individuals or groups who may be opposed to the development to muster support for their views. It also results in a loss of confidentiality, with the development proposals being in the public domain, and the potential that a competing developer may try to acquire the site – which is a good reason for not engaging in community consultation until such time as an option agreement, or a conditional contract, has been entered into. Project inception and feasibility are discussed further in chapter 3.

1.2.3 Phase 3 – Site assessment

Whilst the feasibility assessment phase is about enabling the developer to form a good understanding about the site and its potential problems in a pre-acquisition or pre-contract situation, the site assessment phase is about obtaining information as to the physical attributes and deficiencies of the site. In many ways it is the most important phase of all because, if not done thoroughly, it can lead to untold problems later in the project. It is also the point at which the project costs can start to ratchet up, whereas up to this point the developer may have undertaken much of the work in-house or by using retained professionals, whose fees may well have been kept to a minimum in expectation of larger fees later in the project. From this point onwards the developer will be starting to make financial commitments, including site purchase, and so the prudent developer will wish to have a binding legal agreement with the site owner or owners.

Chapter 4 considers the process of site assembly, investigation and assessment in detail, but the important point to stress here is that money spent on a good site investigation is rarely wasted. It is also important to note that any investigation that does not include a historical land-use study of the site and a pre-investigation survey, or 'walk-over', is of little value. There have been many instances when developers in competitive situations, without a binding agreement with the landowner, have instructed consultants to go on site and 'dig a few holes' for the purpose of assessing site conditions. Even highly reputable firms of consultants have been known to succumb to requests of this type, with the aim of pleasing valued clients, but it can prove to be a recipe for disaster.

It is therefore most important to undertake a scoping exercise before embarking on the site assessment phase. This would include undertaking a review of all available reports and documents relating to the site, held by the landowner(s) and by statutory authorities. It is also useful to be able to review documents relating to neighbouring properties, if these can be obtained. From this scoping exercise it should be possible to identify gaps in the information, remembering of course that the consultants who prepared reports for the existing owner(s), or a statutory body, will probably be unwilling to provide 'duty of care' to the intending developer, and that the site conditions may have changed since the reports were prepared – especially if they are more than a few months old. Identifying and recognising the shortcomings in the existing information should inform design of the requisite site investigation. It is often beneficial to involve the whole of the developer's professional team in the site investigation design, especially the architect and the engineer, as the scoping study may have identified possible constraints that will impact on later phases of the project. Flagging them up at this relatively early stage will be useful information for the environmental consultant in designing the site investigation.

Options

1.2.4 Phase 4 – Options assessment

Even if the local community has not been involved in the earlier phases of the project, by the time it 'reaches Phase 4 local residents and businesses will be aware that something is taking place and are even likely to have provided information to the data-gathering team, such as the location of unlicensed landfills on the site' (English Partnerships, 2006, p. 78). Therefore the intending developer should be at, or very close to, the position of having binding contracts with the landowners.

This phase should commence with a thorough review of all the information obtained in the first three phases, in order to determine whether the scheme as envisaged at the project inception is in fact still feasible. It is quite probable that some revisions will be required and, if changes are to be made, they should be identified and a process decided upon for resolving issues raised in the review. It is quite probable that the options assessment will highlight issues that fall into

any, or all, of three categories – legal and regulatory; market demand and value; and cost implications.

Legal and regulatory issues can include environmental regulations, in addition to town planning and highways aspects of the project. For example, part of the site may be contaminated to such an extent that it is not economically viable to remediate, or the regulatory authorities may oppose a planned on-site treatment process and have concerns about the number of vehicle movements that would be involved for off-site disposal. Resolving these issues could involve at least two regulators – the Environment Agency, with concerns over the on-site treatment and possible risks to ground and surface waters, and the local authority’s environmental health department, concerned about noise, dust and disturbance to local residents through both the on-site operations and the off-site vehicle traffic. It is, therefore, most important that both of these regulators be consulted at the earliest possible stage. For some projects it may also be appropriate to involve both the Health and Safety Executive and the Health Protection Agency.

Market demand and value are often very difficult to assess. In buoyant, rising, markets any ‘bullish’ estimates as to demand are likely to be absorbed in rising selling prices or rents. In turbulent market conditions that is far less likely to be the case. Prospective developers also run the risk of assuming that just because a similar project was successful, the present project will also achieve the same degree of success. It may well be that the first development soaked up all the latent demand in the area, leaving the present proposal without a market.

Construction cost guidance is published and available from a number of different sources, and most aspects of the development project can be estimated with considerable accuracy by in-house quantity surveyors or construction cost consultants. So far as dealing with contamination and the problems of derelict sites is concerned, English Partnerships published a useful Best Practice Note, *Contamination and Dereliction Remediation Costs* (English Partnerships – BPN27, 2008a). This provides ranges of estimated costs data for four categories of site, affected by differing levels of contamination according to historical land uses. Four different types of future, or end, use are considered – public open space; residential; employment; and mixed use – with high and low water-risk locations considered for both the historical and future uses. For derelict sites the nature of the dereliction problems are classified into non-complex and complex, for both large and small sites, to prepare them for the same four end uses as the contaminated sites. The approach is explained more fully in chapter 8, which also deals with the selection of appropriate remediation methods.

All three groups of issues briefly described above will, either singly or in combination, impact upon the timescale for the project. Many months may well have elapsed to bring the project to this stage but, if the options assessment is not undertaken in a competent and professional manner, the end result may be one of considerable delays at later stages in the programme, with significant financial implications.

1.2.5 Phase 5 – Working design of the preferred option

Having successfully completed the options assessment, the next phase in the development programme is to produce a working design. This will incorporate

all the information obtained in the earlier phases and will, essentially, provide the brief from which the detailed design can be prepared. The working design should address the funding requirements for the project as, although the developer will have had some idea of costs from the inception stage onwards, only now will it be possible to take realistic account of the on-site constraints and external influences that will potentially affect the viability of the project.

The working design will reflect any changes in development layout, building numbers, heights and floor areas, brought about through the options assessment. It will take account of guidance issued by statutory bodies, research and other organisations involved with construction and the land, as well as having regard for legal, regulatory and property issues. This is also the stage at which decisions will need to be taken with regard to matters such as the inclusion of public art and the future maintenance of public spaces or any undeveloped parts of the site. For example, should part of the site have been found to be undevelopable, it may be too burdensome to expect purchasers or tenants of the completed development to accept responsibility for maintenance. Equally, the local authority may be unable, or unwilling, to accept responsibility for the undeveloped area. One solution may be for the land in question to be conveyed to the Land Trust – see Box 1.1 – or another similar body.

The developer's ability to deliver the preferred option will necessitate overcoming any physical constraints and environmental issues, together with ensuring that

Box 1.1 The Land Trust¹

The Land Trust provides a cost-effective management solution for public spaces and green infrastructure. It manages open spaces, on a long-term basis, for the benefit of the community, with the specific aims of improving the economic, social and health prospects of an area.

By taking on the ownership of sites, the Trust can deal with any type of public space, from large country parks to small play areas, from ecologically sensitive nature reserves to streetscape. Its aim is to guarantee that land is managed properly, thus protecting the investment made in creating the open space and ensuring that it continues to have a positive rather than negative effect on the surrounding area.

When taking on a site the Trust calculates the amount of funding needed to maintain the site at a base level in perpetuity. This calculation takes into account factors such as routine site maintenance and cyclical site upkeep (fences, access points, tree maintenance). The preferred method of funding ongoing site maintenance is through an endowment or dowry which is invested on site handover, with the annual yield from the investment paying the maintenance cost. The Trust will also consider alternative options such as annual service charging from adjacent housing or commercial outlets, section 106 contributions, asset offsets from property or saleable land or energy generation, etc.

The Land Trust seeks to make the most of the spaces it owns and manages, particularly those in, or on the fringes of, urban areas. These spaces can play a vital role in mitigating climate change as well as in the regeneration of the community. Further information is obtainable from www.thelandtrust.org.uk.

¹ The Land Restoration Trust changed its name to the Land Trust on 2 June 2010.

the necessary service infrastructures are in place. Failure to achieve these will hinder, or even prevent, the project being completed for occupation. 'Discussions with regulators and service providers will help to finalise the option/working design, and identify any further issues that may have emerged in the meantime' (English Partnerships, 2006, p. 83). It is unwise to assume that just because the previous activity on a site was a major consumer of electricity, gas and telecoms, all these services will be readily available for the new development. On the contrary, the available capacity may have been committed elsewhere and obtaining new supplies could require extensive off-site works, at considerable cost, with attendant lengthy delays.

It is essential, in order for the developer, or other decision maker, to finalise the design brief, that by the end of this phase all these issues have been resolved and the principles of what is to be designed and constructed are fixed.

Design

1.2.6 Phase 6 – Detailed design

For the most part the work described in the first five phases, the Preliminary and Options parts of the PODD process, will need to be carried out consecutively, as each logical action follows another. In contrast, much of the work in phases 6 to 8 can be parallel-tracked, although phase 6 will need to be completed before the other two phases can be finalised.

In order to achieve a successful outcome, it is most important that the entire project team is involved in taking the project from the working design stage to the detailed design. This includes the people that will be responsible for marketing, letting and selling the development – the press and public relations consultants, the estate agents, the investment sales agent – as well as the architects, engineers, quantity surveyors, environmental consultants, town planning consultants and other professionals. Some of these team members may have had only a fairly minor involvement in the project up to this point, but from here on it is essential that they are all fully involved and understand the roles and remits of the other team members.

The detailed design phase will finalise the site layout and the general arrangement of any structures. It will include roadways and footpaths, access points onto the site, junctions with neighbouring roads, public-realm works and landscaping. Construction materials will need to be selected and colour schemes decided upon, which may well result in some differences of opinion among the developer (client), the designers and the marketing team – but all viewpoints need to be considered, even if they are later rejected. For sites affected by contamination or extensive dereliction, decisions will need to be taken as to the most appropriate remediation methods, including the protection of habitats and features such as existing trees and archaeology. The timing of remediation operations may also be an important consideration: for example, bio-remediation may work better in warmer summer weather than in winter, whereas cooler weather may be better for reducing the likelihood of flies and odours if a former landfill site is to be opened up.

The detailed design will need to consider the security of the people who will live in, work in or otherwise use the property. Designing out crime, or reducing its likelihood, is an important factor in the design process and is considered in chapter 13. Similarly, careful consideration has to be given to the sustainability of the development, which is reflected in the design standards discussed in chapter 14.

1.2.7 Phase 7 – Regulatory and planning

Developers, when asked about the major reasons why development projects on previously developed land are delayed or abandoned, often cite the seemingly conflicting requirements of regulatory and planning authorities. Differences in the type and scope of information required by town planning and environmental regulators has been said to lead to frustrations, resulting in some developers being reluctant to tackle anything other than the simplest brownfield sites.

The Home Builders' Federation, the trade body for housing developers, has lobbied government and the Environment Agency in an effort to streamline the process, or even consolidate the planning and environmental permitting arrangements into a single permit. There are significant problems in combining approvals to undertake development under town planning legislation and permits to undertake remediation, or other environmental works on land, not least in terms of ensuring compliance with European Union directives. Nevertheless, the Department for Environment, Food and Rural Affairs (Defra) and the Department for Communities and Local Government (CLG) have acknowledged that having two completely separate systems is not ideal. CLG and Defra were also concerned that Planning Policy Statement 23 – *Planning and Pollution Control* (PPS 23) – was not being fully implemented by some local planning authorities, and in September 2006 they launched a joint consultation involving 500 interested organisations, key stakeholders and individuals; a summary of the responses was published in April 2007 (CLG, 2007e). This was followed in May 2008 by a letter to Chief Planning Officers, setting out new Model Planning Conditions, intended to support effective implementation of PPS23 policy (CLG, 2008e). These conditions covered the following aspects:

- **Site Characterisation** – requiring an investigation and risk assessment, in addition to any assessment provided with the planning application, to be completed in accordance with a scheme to assess the nature and extent of any contamination on the site, whether or not it originates on the site.
- **Submission of Remediation Scheme** – a detailed remediation scheme to bring the site to a condition suitable for the intended use by removing unacceptable risks to human health, buildings and other property, and the natural and historical environment, must be prepared, such scheme to be subject to the approval in writing of the Local Planning Authority.
- **Implementation of Approved Remediation Scheme** – requiring the approved remediation scheme to be carried out in accordance with its terms prior to the commencement of development, other than that required to carry out remediation, unless otherwise agreed in writing by the Local Planning Authority.

- **Reporting of Unexpected Contamination** – in the event that contamination that was not previously identified is found at any time when carrying out the approved development, it must be reported in writing immediately to the Local Planning Authority.
- **Long-term Monitoring and Maintenance** – requiring a monitoring and maintenance scheme to include monitoring the long-term effectiveness of the proposed remediation over a stipulated period of years, and the provision of reports, all being subject to the approval in writing of the Local Planning Authority.
- **Reason (common to all)** – to ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors.

(based on CLG, 2008e, Appendix 1)

Some of the problems associated with town planning and environmental approvals are considered further in chapter 8.

1.2.8 Phase 8 – Legal, property and funding

The first edition of *Land, Development and Design* mentioned that, ‘Few developers fund projects entirely from their own resources’ (Syms, 2002, p. 10), a fact that became increasingly obvious in the latter part of 2008 and the first few months of 2009 as many publicly quoted developers, both residential and commercial, came close to breaching their banking covenants. This situation is considered further in the following section and in chapter 3, but it is important to note here that the availability of finance, from banks and other funding institutions, is an essential raw material to enable the development industry to function.

An adequate supply of land, suitable for development and with all the necessary approvals and permits, is the other essential raw material in the development process. Building materials and skilled labour are also important but, without land and finance, developments simply cannot be undertaken. One of the principal problems associated with land assembly in the United Kingdom, especially previously developed sites in densely developed urban areas, is the multiplicity of ownerships and other interests in the land, often associated as well with small plot sizes. It is therefore often necessary to acquire several small parcels of land in order to assemble a development site and there may be several different legal interests in each of the individual parcels, all with separate owners or beneficiaries. The legal estates in the land could include the freehold interest; a long leasehold of up to the remaining balance of 999 years; occupational leases of, say, five to 25 years’ duration; various underleases and/or licences for a term of a year or less; plus any number of wayleaves, easements and rights of way that may need to be diverted or extinguished.

To add to this complexity, while it may be possible to identify the owner of a long leasehold interest in a property that was developed 100 or so years ago, it might not be possible to find the freeholder. The developer may then have to

decide whether or not to proceed with the development, with less than ideal title to the site, in the hope that someone with a superior interest does not appear and seek to exercise clauses in the headlease giving the freeholder rights to approve any new development on the site and to share in the proceeds of the project. Although it may be possible to insure against such risks, it is probable that such a challenge could result in delay and a protracted legal battle.

The legal implications of these and other issues will have to be taken into consideration as part of the site-assembly process. A prudent developer is therefore unlikely to commit to purchasing part of a proposed development site without being reasonably certain that the rest of the site can be acquired. That is, unless the part of the site to be acquired is already producing income or, as a contingency, can be made to produce income or is capable of development on its own. These points are considered further in chapter 4.

Delivery

1.2.9 Phase 9 – Financial appraisal

The financial appraisal should be continually updated throughout all phases of the development, from the initial ‘back of envelope’ figures at the project inception stage, right up to completion of the detailed design, obtaining all the necessary approvals, finalising the site acquisition and signing the funding documentation. It should be thoroughly reviewed at each phase of the project, with more detail being added and with uncertainties being either removed or minimised. Only by undertaking and maintaining a robust financial appraisal can the developer be reasonably certain of achieving a successful outcome.

The earliest appraisals may take the form of simple residuals, whereby current construction costs, selling prices and rents are used to calculate the likely cost of the project, including all professional fees and other expenditures, which then have to be deducted from the total selling price of the completed project, net of disposal costs. In an ideal world this should leave a substantial residue, from which the developer can pay for the land and be left with a profit: see Box 1.2. Unfortunately that may not always happen the first time, and several iterations of the appraisal may be required before a workable solution is found.

In these early residual appraisals the financing cost of the project may be simply calculated by dividing the total construction cost in two and multiplying by the expected duration of the project, then applying the appropriate finance rate. This approach is used on the premise that the mid-point in the time cycle is also the mid-point in the expenditure profile. However, that is not always the case, as some costs – such as land purchase and professional fees – tend to be loaded more to the front end of the project, while other costs may lag towards the later stages, as contractors are usually paid on valuation certificates prepared at the end of each month during the construction period. In general, the residual appraisal is likely to understate the finance costs and thus produce a smaller residue for land and profit, which would support a conservative approach in the early stages of the project.

Box 1.2 A simple Residual Appraisal: site of two hectares for a mixed-use (offices and residential) development

Income – proceeds of sales

Sales of 50 residential units @ average price of £200,000	£10,000,000
5,000 m ² offices let @ £250 per m ²	£1,250,000
	per annum
Investment yield on sale 7.5% – Years purchase	13.333
Gross sales proceeds from offices	<u>£16,666,250</u>
Total gross value of the development	£26,666,250
Deduct costs of sale – letting fees for offices	
Sales fees for residential units, investment sale of	
Office, legal fees etc. – total say 3.5% of total gross value	<u>£933,000</u>
Net value of development upon completion	£25,733,250

Expenditure – development costs

Site preparation and infrastructure estimated at	£3,500,000
Residential construction costs – 50 units, average size 80 m ² @ £800 per m ²	£3,200,000
Offices – 6,000 m ² , including 20% non-lettable circulation area, @ £1,200 per m ²	£7,200,000
Professional fees – architect, engineer, project manager town planner, quantity surveyor	
@ say 12.5% total	£1,737,500
Planning, Building Regulations, CDM and sundries	
@ say 2.5% total	<u>£347,500</u>
Total development cost of	£15,985,000
Development finance, calculated as half project cost for a period of two years @ 7.5%	<u>£1,198,875</u>
Total cost of project including finance	<u>£17,183,875</u>

Residue – the balance available for profit and to purchase the land

Net income (development value) minus Expenditure	£8,549,375
Profit required by developer – say 20% of net development value	<u>£5,146,650</u>
Balance remaining for land acquisition	£3,402,725
<u>Deduct</u> acquisition costs – surveyors' fees, legal fees, Stamp Duty say total of 8%	<u>£272,225</u>
Maximum price to be offered	<u>£3,130,500</u>

Or: £1,565,250 per hectare

As the design evolves and more information is obtained about the site and its ground conditions, and about the infrastructure requirements, building specification and construction costs, the residual appraisal can be replaced by a Discounted Cash Flow Appraisal, which will plot more accurately the expenditure profile on a month-by-month basis and reduce the costs back to Present Value. Several software programs are available to assist the developer in preparing appraisals, such as that produced by Qube Global Software (www.qubeglobal.com); or alternatively the development company can develop its own DCF using Microsoft Excel or a similar spreadsheet package.

In addition to a comprehensive review of the financial aspects of the project, whatever method is used, 'the appraisal process should entail a comprehensive review of the project against agreed guidelines, objectives and policies' (English Partnerships, 2006, p. 98). These should include:

- **Affordability** – are the borrowing requirements and rates in line with those finalised in Phase 8 of the PODD approach? If not, the review will need to consider whether changes have been fully accounted for.
- **Long-term affordability** – has adequate provision been made in respect of future maintenance? This is of particular importance for public-realm projects, but also for other projects where the selection of inappropriate materials could lead to increased costs in the future.
- **Outputs and outcomes** – will the project deliver the expected direct outputs, for example in terms of new affordable housing or new jobs, and will it meet longer-term, more indirect outcomes such as contributing to area regeneration? In order that these can be properly assessed, it will be necessary for the appropriate baseline data to be identified in the appraisal process.
- **Risk management and risk transfer** – does the project provide adequate means of managing risks, including the ability to make changes if unforeseen problems arise and, if so, can any residual risks be transferred to the end users or investors at the end of the development? If not, the financial appraisal should consider whether any explicit transfer mechanisms are required, for example insurances, and the costs should then be factored in.
- **Project delivery** – has the potential for 'slippage' in the project been adequately considered, and how sensitive is the market to any delays in delivering the completed development? Brownfield projects carry an inherent risk that unforeseen problems may occur and result in delayed completions. It is therefore important to consider whether, in the event of that happening, market share will be lost to competing developments.
- **Procurement and delivery options** – how is the project to be implemented through the construction stages? Many developers have their own preferred ways of procuring the site preparation, infrastructure and construction works, but some sites, owing to their complex nature, require departures from usual practices. The financial appraisal should therefore include consideration as to the most appropriate methods for procurement and delivery, together with any financial implications.

(after English Partnerships, 2006, p. 98)

Altogether, the financial appraisal should confirm that all of the objectives and aspirations of the project can be achieved, whether for a private-sector developer, a public body, or for both working in partnership. It should meet the needs of the market or the community, and satisfy the long-term requirements of the investors, regardless of whether those be financial institutions, homeowners, office and factory workers, or the general public as the users of community facilities. The appraisal should then be continually reviewed and updated through the construction period and right up until the last building is sold, occupied or

handed over to the end users. Only in this way will it be possible to judge the success, or otherwise, of the project.

1.2.10 Phase 10 – Works procurement and execution

Several different procurement options may be available to the developer and their selection will be determined largely by the nature of the development organisation, as well as past experience and practice. Private-sector developers may have their own in-house construction companies; others will often have their own preferred contractors and obtain prices from a select pool of three or four builders. Alternatively, they may negotiate prices on the basis of rates carried forward and adjusted from other jobs.

Public-sector developers will be bound by European Commission competition rules and will probably have to advertise contracts for open competition in the Official Journal of the European Union (OJEU). Both private- and public-sector developers will need to decide whether to let the project in a single tender or in two or more packages. Where significant site preparation and remediation works are required, it is probably preferable to let the groundworks as one main contract to a specialist civil engineering contractor or a specialist site-remediation contractor, with the above-ground construction works forming a separate main building contract.

Both private- and public-sector developers may decide to opt for ‘design and build’ contracts, under which the contractor takes responsibility for the detailed design of the development and its delivery, in accordance with a specification setting out the Employer’s Requirements. There are arguments for and against this approach. In some instances it can speed up delivery of the development, but that may be countered by the fact that the contract might entitle the contractor to substitute materials of ‘equivalent design, performance and quality’. Where time is of the essence in completing a new building that might be desirable, as it gives the contractor the ability to use substitute materials without having to go back to the architect and client for approval; the downside, though, is that it could result in changes to the appearance of the building.

The design-and-build approach, or ‘early contractor involvement’, could also be of benefit in projects requiring soil remediation, especially if the contractor has devised its own techniques, or even patented technologies, for dealing with contamination. There may be significant advantages in this approach, as the complex nature of many brownfield projects means that it is often difficult to quantify the amount of affected soil that will need to be treated or removed. The risk here, however, is that if the contractor becomes bankrupt while the work is ongoing, it may be difficult to persuade another contractor to take over the project without having been involved with the design or having a full understanding of the methods being employed.

The process of selecting tenderers, the tender documents and forms of contract were comprehensively covered in chapter 11 of the first edition of *Land, Development and Design*, written by Tim Abbott. Most of the points made then are still valid, and it is worth remembering the advice given that the contract

documentation must clearly set out what the employer requires and that it is unambiguous.

Regardless of the form of contract to be employed, the developer needs to be satisfied, through a pre-qualification process, that the contractor has the relevant experience and competence to undertake the type of project involved. This will entail the developer seeing evidence as to the contractor's health-and-safety record, quality assurance and training provisions, as well as waste handling and recycling policies, among others. Requirements as to insurances, warranties and matters such as parent-company guarantees or other forms of security will need to be specified in the contract documents.

Decisions will need to be taken as to whether the developer requires a 'fixed' price from the contractor, or whether there will be provision for fluctuations, as 'Practitioners must appreciate that the greater the risk transferred from the employer to the contractor, the larger the impact on price' (English Partnerships, 2006, p. 100). If the entire risk burden is placed on the contractor, then it is almost certain that a higher price will be demanded, whereas if some fluctuation is allowed with, for example, the contractor being incentivised with regard to cost savings, there is potential for both parties to benefit. Risk-transfer mechanisms may impose liquidated damages on the contractor, especially if there is an overrun in the project duration, but these should not be excessively onerous, otherwise relations between the employer (developer) and the contractor could break down.

1.2.11 Phase 11 – Sales and marketing

The final phase of the development project is its handover to the occupiers that will live, or work, in the buildings. Their acceptance and satisfaction with the end result is essential in ensuring the success of the development. For private-sector projects this will usually require a sales and marketing campaign. Although shown here as the final phase of the PODD approach, as it marks the ultimate outcome of the project, the input of sales and marketing professionals at all stages is essential, from project inception onwards.

The sales and marketing team might include the estate agent, or in-house marketing team; an investment agent if a development is to be leased and the property subsequently sold as an investment; an advertising agent; a public relations consultant; and designers for the marketing materials. The function of this team is to communicate information regarding the development in the most favourable light possible and at the appropriate times. This includes having a contribution to the design stages, which may include commenting on the colours and types of material, from bricks and roof coverings, to wall and floor finishes in office buildings, to the external finishes and landscaping of both commercial and residential schemes.

Early interest from potential purchasers and tenants is generally beneficial to developers, although in a rising market some may be unwilling to sell 'off plan'. For other developers 'off-plan' sales or lettings made before work starts on site may be essential in terms of securing the development finance. Larger, publicly quoted developers often secure funding for their activities from a syndicate of banks and covenant to maintain a specific asset-to-loan ratio – see the next

section, as well as chapters 3 and 11 – while smaller developers have to negotiate their funding arrangements on a project-by-project basis. When considering development funding applications from smaller developers, the banks will be interested in knowing how much of the development is pre-let or pre-sold, often requiring 50 per cent or more of the development to be under contract before the loan agreement is approved.

Good opportunities for public relations-type marketing can be linked to events such as completion of the site acquisition, the approval of planning permission and, especially, start on site. All of these are effectively ‘free’ advertising, usually in the local and trade press, placed by the public relations consultant. Editorial coverage may be possible for newsworthy projects, or the developer might decide to use the ‘advertorial’ approach, which looks similar to editorial content but is actually paid for by the developer. Site fences and hoardings, provided the site is in a prominent location, can provide some of the best means of communicating information about the development, as well as giving a virtually cost-free means of giving updates on progress.

For public-sector projects, where normal ‘sales and marketing’ operations are not required, it may still be worthwhile to involve the end users in the design stages of the project. That could be, for example, a member of a community group in respect of a new community building, or office workers helping with the design of a new office building for a public body. Having such organisational representatives involved from early on in the project can help to overcome problems at later stages or following completion.

1.3 The 2008–9 ‘credit crunch’ and its impact on property markets

Residential and commercial property markets in the United Kingdom peaked from around the end of 2007 to early 2008. Markets tend to be cyclical, with peaks and troughs around every five years, and so the downturn in values was at first unremarkable. Before long, however, it became apparent that it was part of a wider, global financial problem that was largely driven by the ‘sub-prime’ mortgage market in the United States of America.

‘Sub-prime’ mortgages were loans arranged to high-risk borrowers with imperfect credit ratings, often granted without any form of credit checking, and even to people who were unemployed. Many lenders entered the market when interest rates were low and at first borrowers could afford the repayments, but as interest rates rose they defaulted on the loans and lenders foreclosed, resulting in many properties being vacated. At first the severity of the situation was not fully appreciated: defaults and foreclosures are always expected by lending institutions and, for higher-risk loans such as sub-prime mortgages, a higher-than-average failure rate might be anticipated. Lenders therefore sought to protect themselves by packaging together hundreds, or even thousands, of mortgages and selling them to investors. Banks then repackaged the mortgages and sold them on as ‘prime’ investments.

These ‘prime’ investments bore no real resemblance to the mortgages from which they were made up and, as a form of derivative, were more or less impen-

etrable to anyone wishing to conduct a due-diligence exercise by investigating the quality of the underlying assets. That is, until the numbers of borrowers defaulting on their sub-prime mortgages increased to proportions way beyond the default levels originally expected. Banks then began to realise that the ‘paper’ they held as collateral for loans to other banks and investors was becoming valueless. In order to protect themselves banks stopped lending to each other, mortgage lenders found themselves unable to lend, even to people with good credit scores, and lending to other business sectors became problematic, with banks often calling in loans or refusing to extend existing facilities.

The holders of the derivative instruments that were largely made up of packaged and repackaged sub-prime loans found that their investments were losing so much value that they became known as ‘toxic assets’. Although the problem might have originated in the United States it became one of worldwide proportions, as the derivative investments had been sold internationally, and in the United Kingdom the government had to step in to avert the total collapse of the banking system, initially by nationalising Northern Rock – a building society that had converted to a bank – followed by injecting billions of pounds sterling into other banks, most notably Royal Bank of Scotland and Lloyds TSB. See Peston (2008, pp. 158–180) for a more detailed explanation.

Central banks around the world reduced their base rates to the lowest possible levels; in the UK the Bank of England reduced its base rate to 0.5 per cent, the lowest since the bank was founded in 1694, with the objective of encouraging banks to start lending again and consumers to start spending. The Bank of England also increased the amount of money available in the market, through Quantitative Easing, or the buying in by the Bank of government stocks, or gilts.

The impact of the international financial crisis was keenly felt in the UK’s property markets, with serious reductions in value for both residential properties and commercial property investments. The effect this had on property development and investment companies is discussed in chapter 3.

1.4 Summary

This chapter has provided the reader with an introduction to the current and historical situation regarding previously developed, or ‘brownfield’ land in England. It has also provided an introduction to the process of redeveloping such land. The author makes no apology for the fact that the central theme of *Land, Development and Design* is the redevelopment and/or reuse of land that has been used before, such land quite often having undergone several different uses over periods of two hundred years or even longer. Returning brownfield land to beneficial use is a primary focus of government policies and it is generally more complex, more demanding and more time-consuming than the development of greenfield sites. Therefore, if practitioners engaged in the process of redevelopment or land reuse can cope with the problems and issues they will encounter, they surely must also be able to tackle greenfield developments.

The chapter has also outlined the situation regarding the adverse economic climate against the background of which this second edition has been written.

The global economic problems meant that, during 2008, speculative development slowed almost to a standstill. Commercial property values fell by 40–50 per cent between 2007 and 2009, while many residential developers were more than ever reliant on building publicly funded social housing. We will return to these issues again in later chapters.