


RIBA Enterprises

Contemporary Property Development



Dr Timothy Havard



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Dr Timothy Havard



RIBA Enterprises

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Dedication

I would like to dedicate this book to a number of people.

First must come my wife, Vicky, and my children, Matthew and Emily, who had to make sacrifices of their time whilst this book was written. I would also like to thank David, Rachel, Sam and Megan Bunce who, too, found that the production process impacted on their life. Matthew Thompson, the commissioning editor, deserves a dedication for the problems I caused him by being a slower than expected author, and Ramona Lamport deserves a medal for her perseverance with the editing process.

Finally, however, I would like to dedicate this book to the victims of the World Trade Center disaster of 11th September 2001. The destruction of both so many lives and one of the most striking examples of the output of the development process was shocking. I hope, perhaps, that some of the readers of this book will use some of the ideas, concepts and techniques contained within it in the rebirth of a new WTC that will be even more beautiful than the original and will enrich the lives of future generations, as well as forming a fitting memorial to those lives so senselessly ended.

Tim Havard
Oxford
March 2002

Introduction

What this book aims to do

Property development can be defined as the process that sees the transformation of real property from one state to another.

The property development process can be looked at in several different ways. Adams (1994)* for example, reviews a number of models that try to take a dispassionate view of the process, breaking it down into a number of streams and stages. These academic models have their uses but it must be recognised that any party involved with the process, either directly or indirectly, will have a different point of view. For example, the development of a decentralised office park can be fitted into any of the models reviewed by Adams, but the interpretation of the process in practise is multi-fold.

To a developer, process equates to the ways that an identified opportunity is realised and the profit extracted. The developer may attempt to shortcut the process where possible to achieve this end. To a local planning department the process may represent steps towards the realisation of a master plan or vision for an area that will achieve the goals of the community as they see it. To an environmentalist, the scheme represents a process of destruction, of another contribution to the degradation of the natural environment and thus, one to be opposed at every step.

Property development is a terribly emotive, divisive issue and it is easy to become bogged down in the political and social issues related to aspects of the process. This aspect is largely beyond the scope of this book, which is intended as a practical guide to development. Whether an individual development is politically correct or socially acceptable is for others to comment on. This book largely concentrates on the tactical rather than strategic level. The strategic does, however, influence the tactical at many levels and to understand the process properly it is important to have a good understanding of the widely differing characteristics of development

* Adams, D. Urban Planning and the development Process, (1994), UCL Press

Property development, like many aspects of society, has changed markedly in recent years. Many of the traditional roles in development have changed with the divisions between the participants becoming blurred. The end market for the product is volatile with user requirements ever changing. Development has always been a contentious process but it is now increasingly intertwined with political, social and environmental policy issues. At the same time, development has also become more accessible with more participants from a wide variety of backgrounds either undertaking developments themselves or taking key parts in the development process.

The book was designed with these observations in mind and thus it aims to do two main things. Firstly, for those wishing to undertake development, the aim of the book is to give the reader a sound practical guide to the process and environment of property development. Depending upon the requirements of the reader, the book will provide a basic level of knowledge but will also provide the opportunity to acquire more advanced skills. The book covers all stages of the development process. Each stage is explored at a theoretical or explanatory level but case studies that provide the link between the theory and practice of development are also included. Property development can be a relatively simple process, particularly with small-scale 'entry level' schemes like house refurbishments. It can also be extremely complex at the larger end of the scale. The book is aimed at all levels, although the complex cases will, inevitably, form the bulk of the consideration.

Secondly, the book is aimed at people who are involved in the development process or decision-making, either as members of the development team or people who are outside development itself but need to understand the process. Contemporary members of the development team need to develop wider skills and knowledge to successfully complete their tasks. In many cases, projects would benefit from the wider participation of all the members of the construction team in the development process. Individual components of the team, be they architects, planners, engineers, contractors, etc have, however, sometimes found their role limited due to their lack of knowledge of aspects of the development process as a whole. Similarly, decision makers in the corporate and public sector need to understand development in order to come to informed and sound decisions. Many of the controversial decisions in public life in the UK in recent years such as the Millennium Dome, Wembley Stadium and Pickets Lock are essentially property development decisions. A better understanding of the mechanics, process and economics should lead to better decisions. This book is aimed at filling this gap in the knowledge base.

The structure of the book

The book is made-up of seven sections that cover aspects of the theory of development, and a case study section that shows how the theory relates to practice. The theory sections are, however, strongly rooted in practice.

The seven theory sections are:

Part 1: The background to property development in the UK

- In this section the players in the development markets are reviewed, as are the various forms that development can take. In particular, however, the property markets are reviewed, as an understanding of how these markets work is vital to understanding how development can take place.

Part 2: Development inception

- In this section a number of issues connected with what enables development to take place are examined. This includes how development starts and what factors have to be in place to make it viable; how market research is carried out in order to establish whether there is a demand for the type of development proposed and as to the final form of development; and how development interacts with the land use planning system with a concentration on the process of obtaining planning consent.

Part 3: Finance and development

- Property and finance are inextricably linked. Property tends to be expensive and development is particularly capital-intensive. Raising funds for development is a vital issue. Many viable schemes have failed to proceed from the planning stage for want of financial backing. This section thus explores the vital area of development finance, covering simple development loan to corporate financing of major developments. The impact of tax on development is covered in this area.

Part 4: Project appraisal

- Development appraisal is a vital specialist area. It gives information about how much the developer can afford to bid for a site. It tells them how much profit they can make if everything goes as

expected. It can be used to explore the downside risk of development. In particular, however, it forms a vital component in the process of obtaining development finance.

Part 5: Project execution

- The majority of development ideas do not proceed beyond the planning phase. Putting all the components in place for development to take place forms the bulk of the work in many developments. However, the execution of the development itself is a vital component to the success of the scheme. This section looks at the construction of the development team, the roles and characters of the key players and the way they should work together. It also reviews how building work should be procured and how the contracts should be administered in order to successfully complete the development.

Part 6: Post-construction phase

- This section examines how the completed development is handled after the construction works have finished. It covers the choices available to the developer including selling the completed scheme and setting up the completed development as an investment vehicle. It covers aspects such as selecting an agent and also lease structures.

Part 7: Risk appraisal and risk mitigation: A common sense approach

- Finally, in the theory part of the book, a section specifically devoted to risk and its management is included. Risk and development are common partners, therefore it is important to be aware of what can go wrong and the consequences. In particular, it is important to appreciate what can be done to reduce the chance of the bad events occurring or to mitigate their effects if they cannot be avoided.

The book concludes with an examination of a series of case studies drawn from real development examples. A range of projects has been selected to illustrate how the theory relates to reality and how real developers have brought schemes to fruition.

The scope of the book

Although simple compared with other engineering type projects (such as developing a new car or aircraft), property development is highly complex in that it requires the bringing together of many strands of skills, knowledge and resources. Even a simple project requires some involvement and knowledge of basic economics, the planning system, finance, construction technology, design skills and management. Larger projects mean greater complexity.

This is reflected in a book on the subject. Each of the sections of the book could have formed the topics for substantial books on their own, and indeed often do. A book that attempts to cover the whole process is bound to be a compromise. None of the sections are as comprehensive as they could be even though some of them are very large! The book is intended to provide the reader with something more than an introduction but cannot impart expert knowledge in any area because of its natural limitations. In actual fact this reflects what many successful developers are like. They are often a 'Jack-of-all-trades'. They need to know something about most aspects of what they do but they do not need to be experts in any.

A classic developer is a catalyst, a ringmaster or an entrepreneur, depending upon the metaphor that the reader prefers. To use another one, a developer can be imagined to be someone doing a jigsaw: he or she will be able to visualise the end picture, he or she will know how the pieces need to be assembled but they do not need to know how the picture was put onto the board or how the pieces were cut out.

This book tries to impart the ability to assemble the pieces of the jigsaw and to have some understanding of what each piece represents. It may fail – that is a risk that all project developers face. That is part of the fun of trying.

1 The background to property development in the UK

1.1 Introduction

1.2 The Background: Section 1. Different forms of property development

- 1.2.1 Private sector development
- 1.2.2 Public sector development
- 1.2.3 The most common development routes

1.3 The Background: Section 2. Players in the development market

- 1.3.1 Players in the development market 1: Land owners
- 1.3.2 Players in the development market 2: Financial institutions
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- 1.3.5 Players in the development market 5: Property consultants and agents
- 1.3.6 Players in the development market 6: Pressure groups
- 1.3.7 Players in the development market 7: Developers

1.4 The Background: Section 3. The property markets: residential and commercial, occupier and investment

- 1.4.1 Residential markets
- 1.4.2 Commercial markets
- 1.4.3 Investment markets

1.5 Conclusion to Part 1

Glossary

Brownfield	Land previously used for commercial, industrial or residential use brought forward for development.
Developer investor	A developer who retains the completed development scheme and holds it long term as an investment.
Developer trader	A developer who sells on the completed scheme to realise the short-term development profit.
Greenfield	Previously undeveloped land, often located on the edge of existing towns and cities.
Land banks	Land ownerships built up mainly by house builders for future rather than immediate development.
PFI (Private Finance Initiative)	A way that public sector operators can procure new buildings and facilities without having to find the capital to pay for them outright. The facilities are financed, designed and built by the private sector and the public sector effectively rents the facility for a set period.
PPP (Public Private Partnerships)	Joint ventures between the public and private sector with the aim of using private sector expertise and finance to achieve public sector goals. An example of these include the URCs (Urban Regeneration Companies).
Standard Shop Units (SSUs)	A term referring to the simple box that most retailers are willing and able to trade out of.
Use Classes Order 1987	A tool of planning that classifies some urban land uses.

1 The background to property development in the UK

1.1 Introduction

Any book has got to start somewhere. This is true with one about property development but is especially difficult because of the nature of the subject. With development, the actual building itself represents only a tiny part of the forces and processes that brought it about. Before the process itself can be examined it is important to appreciate some of these factors and how they can interact with one another.

This introductory section looks at the background and characteristics of development in three broad parts.

Section 1 examines the many different forms property development can take. The overall process of development is fundamentally the same for all types but can differ quite markedly in detail from one situation to another. In this section we review what forms property development can take, how different the motives are of the people who undertake development and how this impacts on the final form of the development. In addition, we look at some of the different ways that the parties to a project come together to actually undertake development.

Section 2 examines who is involved in the development process at the strategic rather than operational level. The book gives pencil sketches of these parties, looking at their roles, motives and behaviour. These factors are often complex and interrelated. They also vary in different circumstances.

Section 3 examines perhaps the most important part of the background to development: the property markets themselves. Property is an amazingly diverse asset with great complexity arising across sectors and out of the legal interests that can be created out of it and over it – indeed a single individual property may serve several markets and contain several tiers of legal interests. Anyone involved in property development must have an understanding of these markets for they have a great effect on the process of property development.

1.2 The Background: Section 1. Different forms of property development

Some of the diversity covered by the catch all phrase 'property development' can be appreciated when the different types of development are reviewed. These can be classified by the type of change in the property considered:

Development can be:

New build	Greenfield – development on a previously undeveloped site
New build	Brownfield – development on a previously used site
Redevelopment	Demolition – clear and new-build of a functional and similar building
Redevelopment	Partial demolition – partial new build
Refurbishment	Retention of existing structure which is renewed or rebuilt
Conversion/Change of use	Existing structure substantially retained but for different use (e.g. from office to residential use)

It is immediately obvious that these divisions are not absolutes. It is easy to get combinations of these classifications in the same development, but they are useful sub-divisions.

In addition to this classification, it is important to consider the motives of the body initiating the development which, again, can influence the process quite markedly. The common theme is that all development releases some kind of 'latent' profit. This profit may be in the 'normal' mode of money return but might also be in the form of 'social profit' in terms of additional value to the community.

Some of the motives for development can be broken down into the following categories:

1.2.1 Private sector development

The great majority of development in the private sector is done on a 'for profit' basis. The most common exception, not listed in these tables, is where individuals 'self build' their own homes where the motive may include personal profit but is often based on other factors.

<i>Initiator</i>	<i>Purpose</i>	<i>Motives</i>
Private sector property developer	Develop property for sale or letting to third parties	Development profit
Investor	Develop property for letting to third parties and for selling on to other investors in the long term	Return on capital invested
Corporate sector	Develop property for own occupation and use	<ol style="list-style-type: none"> 1. Enhance profit-making potential of business operations 2. Acquire valuable tangible asset

1.2.2 Public sector development

Development in the public sector can also be done on a 'for profit' basis but the responsibilities of the sector for general social responsibility and enhancement leads to many developments being done on a 'not for profit' basis.

'For profit'

<i>Initiator</i>	<i>Purpose</i>	<i>Motives</i>
Government or other public sector or quasi-public sector body	Develop property for sale or letting to third parties or for own use operational	<ol style="list-style-type: none"> 1. Meet occupational/ requirements 2. Enhance local or national economic development

'Not for profit'

<i>Initiator</i>	<i>Purpose</i>	<i>Motives</i>
Government or other public sector or quasi public sector body	Develop property for sale or letting to third parties or for own use	<ol style="list-style-type: none"> 1. To meet needs of society not met by private sector development 2. To provide infrastructure or environmental enhancement to encourage economic development

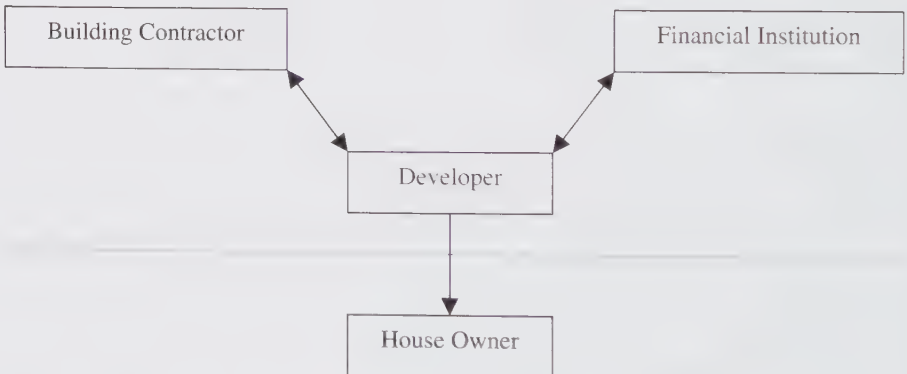
1.2.3 The most common development routes

In addition to these broad motives for development there are also hybrids. Examples are Private Finance Initiative/Public Private Partnership (PFI/PPP) projects where the Government or some other public body is the initiator whilst the private sector is the executor.

Adding to the complexity of this classification there are a number of different mechanisms of development which need to be appreciated by anyone with an interest in the development sector. Many books on this subject do not recognise that development takes place in a variety of different environments or through different routes. Some might term these environment-different routes of procurement, and indeed we will be returning to look at these when we examine development execution. However, at a strategic level, to understand the development process more completely, some appreciation of the differences must be obtained. Each environment or route produces a developed property of some kind as its outcome and each involves different players, or the same players with different responsibilities and different roles.

This is probably easier to illustrate than explain in a handful of paragraphs. Seven of the most common development routes are illustrated below.

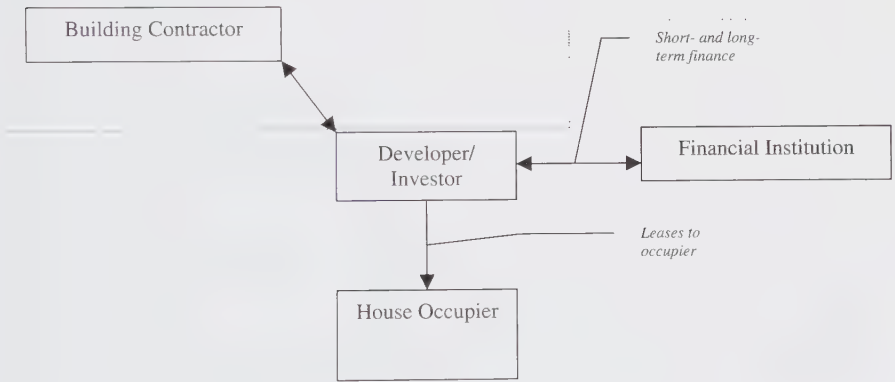
(i) Private sector house builder



In this environment developers acts as the initiator, catalyst and project manager. They may have the same identity as the building contractor but are usually separate in the UK house building market. Developers find the land, obtain planning consent and building control approval and arrange all the other necessary components for the development to go ahead. They then enter into a contract with a building contractor to construct the dwellings, usually at a fixed cost per unit (the contract is represented by the double

arrow). Developers also arrange finance to pay the majority of development costs. Commonly this will be debt finance raised from commercial lenders but the larger builders may obtain finance through other sources (e.g. the stock market, bond issues or retained profits). This type of development does not have a specific known end user at the time of the development, hence the product will tend to be unadventurous and fairly uniform in order to appeal to a wide variety of end users, though it will be targeted at certain income/socio-economic groups from the outset. Developers usually sell the freehold interest in the property to the end user and thus retain no long-term interest in the development, other than any guarantee that runs with the property. The dotted line represents the division between those who have an interest in the conduct of the development and those who retain an interest in it afterwards. The development finance is normally repaid with the proceeds of the sale.

(ii) Residential development for letting



This type of development route is a relatively recent innovation in the UK. Residential investment and development is common in other countries where owner occupation does not dominate the market. An example of this are cities in the US where high costs of ownership allied to the needs for flexibility in the labour market lead to high levels of leasing in the apartment market. Such tenure arrangements need to be supported by legislation, particularly in regard to the characteristics of the landlord and tenant legislation and the tax system.

The trend in UK legislation throughout most of the 20th century was to protect the tenant’s right over those of the landlord. Rents were controlled and tenants received statutory rights and rights of succession in title of relatives. Much of the legislation was well intended and did protect vulnerable groups from the unscrupulous landlord. The net result, however, was to prevent residential owners from receiving sufficient income to

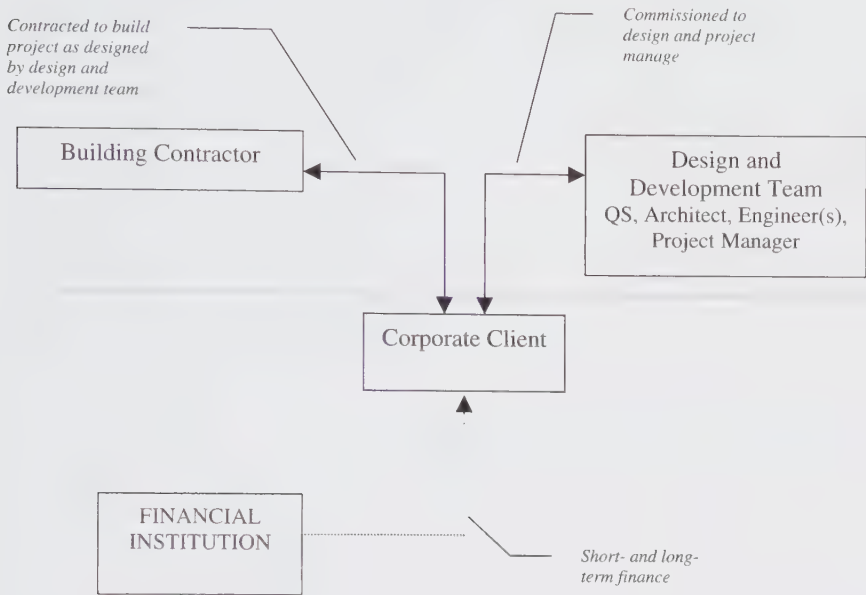
maintain the stock and to receive an acceptable return from lettings. This encouraged the trend towards owner occupation as investors were driven out of the 'middle ground' of the letting market, this type of tenure in the UK being confined to the top and bottom ends of the market. It was not until the 1980s with the introduction of assured short-hold tenancies at market rents that private landlords were attracted back into this market, and even then it has taken many years for a substantial new build market to develop.

The development of this market may have been limited by the lack of encouragement from the UK treasury. In many countries, such as the USA and Australia, the landlord can claim tax breaks such as depreciation allowances to offset tax that is liable elsewhere. Residential investment thus becomes a tax shelter for people who would otherwise not invest in property – for example, the wealthy professional. There are limited tax concessions in the UK but they are largely limited to capital allowances on plant and machinery and on industrial buildings (at the time of writing).

Returning to this route of development, there has been an increasing number of this type of scheme over recent years. Many of the schemes have involved the conversion and refurbishment of redundant office or industrial/warehouse buildings in the centre of major cities. These schemes are frequently disposed of on long leaseholds to the individual apartment occupiers¹ but they are also increasingly being developed by investors, or else the freehold interest sold on to investors, with the flats being leased at market rents on shorter leases to occupiers. This type of development has also taken place in the housing association market for many years (see the section on *property markets*, below), particularly as this sector has taken over from the council house sector in terms of new build provision.

¹ Note that under English land laws it is not possible to have freehold ownership of buildings in multiple occupation such as flats and apartments. All of them are technically leased to the occupier, and it is the leasehold interest which is purchased. These leases need to be long (99 years plus) to enable mortgages to be obtained on them as leases, unlike freeholds, are wasting assets, i.e. their value declines as the end of their term approaches. The need for leasehold tenure in these circumstances is due to the fact that positive covenants are not enforceable under English common law. A freeholder cannot be forced to repair their holdings; thus in a multi-occupied building, neighbours cannot rely on each other to ensure the building remains structurally sound or waterproof. Positive covenants to repair are, however, enforceable in leases, hence the need for this form of tenure.

(iii) Corporate client requiring building for own occupation

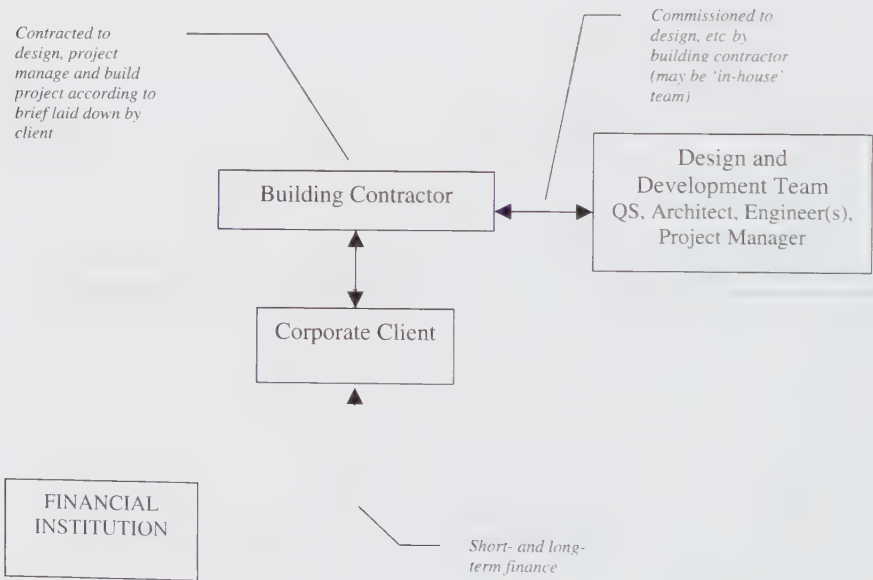


In the commercial market² there are several routes to development. The one represented diagrammatically above is the simplest. This is where a corporate occupier (although others, such as government departments or functions, use this route) requires a new building. In these cases it is the corporate occupier who is the development initiator, driver and co-ordinator. Clients, in the traditional form of this route, employ their own design and development team to detail the scheme based upon their own brief. This team prepares the designs and tender documents which the construction sector uses to prepare bids in competition to secure the work. The design and development team then manage the development process to its conclusion. Traditionally, the project management role has been fulfilled by the architect, though more commonly in larger schemes, professional project managers have taken over this role. The funding arrangements for this type of project are diverse. Often, funds will be derived from internal sources, i.e. the corporate concern uses part of its own resources to develop the building. In other cases, individual project funding is obtained from normal lending sources either through mortgage or normal corporate loan arrangements.

² Commercial is taken in this book to mean any type of property that is not residential, including shops, offices, industrial and leisure properties amongst others.

The type of building produced by this route is quite diverse. The corporate sector direct development route can produce very functional buildings designed merely to meet the requirements of the occupier and little else. It can also produce bold and innovative products as the company seeks to project an image or to make a statement. The advantages of this route are that the building only has to meet the needs of a single occupier – the commissioner – and need not appeal to a wide market (as in buildings that are produced for sale or lease without a specific end occupier in mind, i.e. speculatively). It is perhaps not a coincidence that some of the boldest, advanced and often controversial buildings produced in the UK over the last 25 years have been produced by this route. These include the Lloyds of London building, The Cable and Wireless training building,⁷ and Portcullis House, the new offices for Westminster MPs. It is interesting that these buildings are often some of the most expensive in terms of cost per square metre compared with their market-led contemporaries.

(iv) Variation: Design and build type contracts



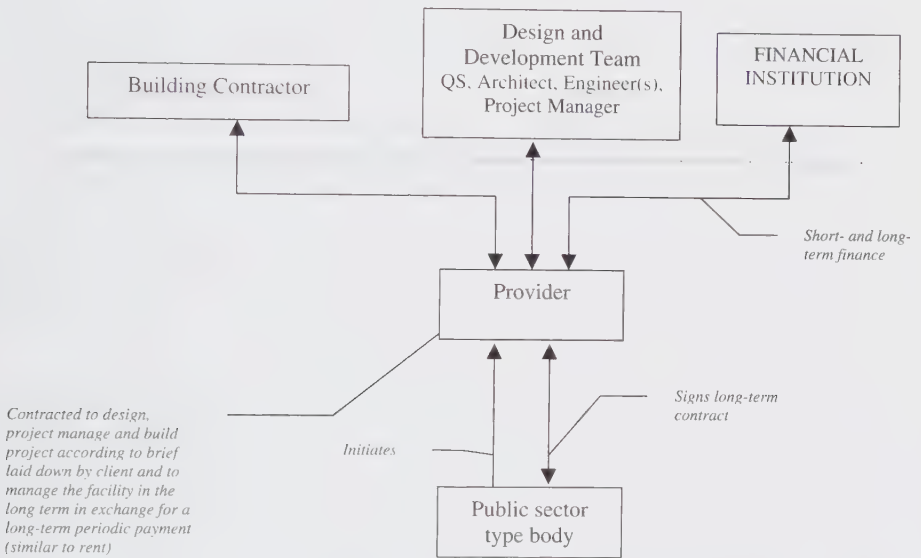
This route to development is a variation on (iii) outlined immediately above, being the contemporary route to direct building procurement. The concept behind design and build type projects is that the client seeking the building has a 'one stop shop' arrangement with the contractor who is

⁷ An innovative low-energy building that utilises natural ventilation rather than mechanical air conditioning.

commissioned to both construct the building and provide the detailed design realisation of the client's broad concept for the building. It is argued by the proponents of this method that this provides a cheaper and faster route to the finished building. The client must prepare a brief and then usually offer a handful of contractors the opportunity to bid competitively for the contract, bringing forward their concepts to meet the brief.

This route to development occurs most frequently in this type of situation where the building is for a defined end user and where there is no entrepreneurial developer involved.

(v) Variation: PFI and PPP type projects

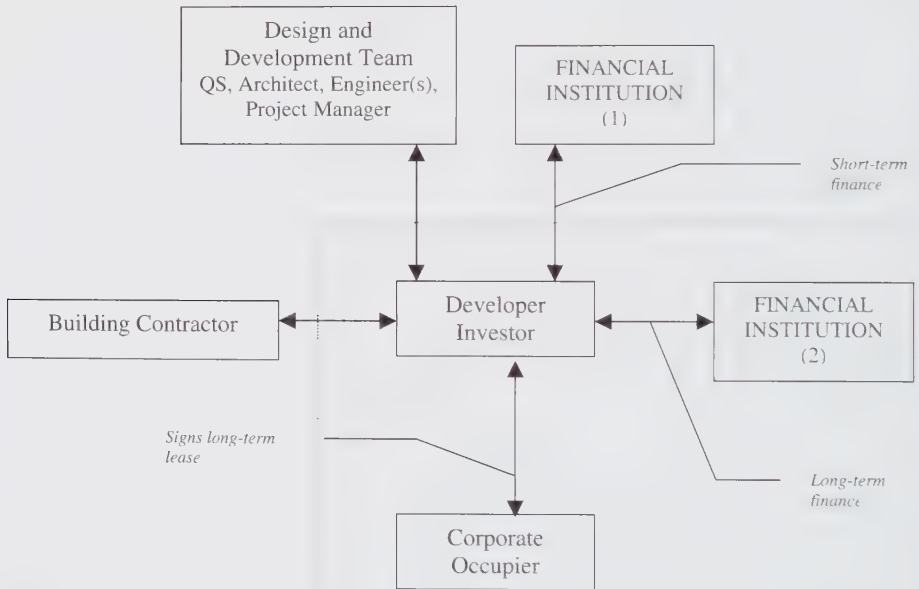


A further variation on the corporate, known end user development routes is the PFI/PPP-type arrangements. Public sector bodies (government departments, hospitals, prisons, schools, etc) used to use the traditional routes outlined in (iii) and (iv) above but for a number of reasons the PFI/PPP route has been the preferred option in recent years. The reasons for this are numerous but the principle reason is that this route takes spending off the government's public sector capital spending budget. The public body procuring the building pays a 'rent' type annual fee to the provider for the provision of the building and its services rather than having to find the funds for the whole building out of the public purse. Other reasons for the adoption of this route are that the specialist skills of facilities management are removed from the responsibility of the public sector, again reducing government costs. This method also gives the occupier the ability to more accurately budget future costs. In general, the public sector body may

receive best value following this route, though this is less clearly established.

The principle underlying PFI/PPP should be apparent from the diagram. Rather than construct and run a building to carry out the public sector function, the body seeks a provider who will provide the building and a specified list of services for a set period of time, after which the building will revert back to the provider/owner. This period of time is often quite long – 25 years being the norm – and it is also common for the provider to set the fee received for the entire period of the occupation of the public body. PFI/PPP contracts tend to be individual to each project and wide variations in form exist. The documentation is invariably complex and the process often takes a considerable period of time to negotiate.

(vi) Speculative development: Developer/investor

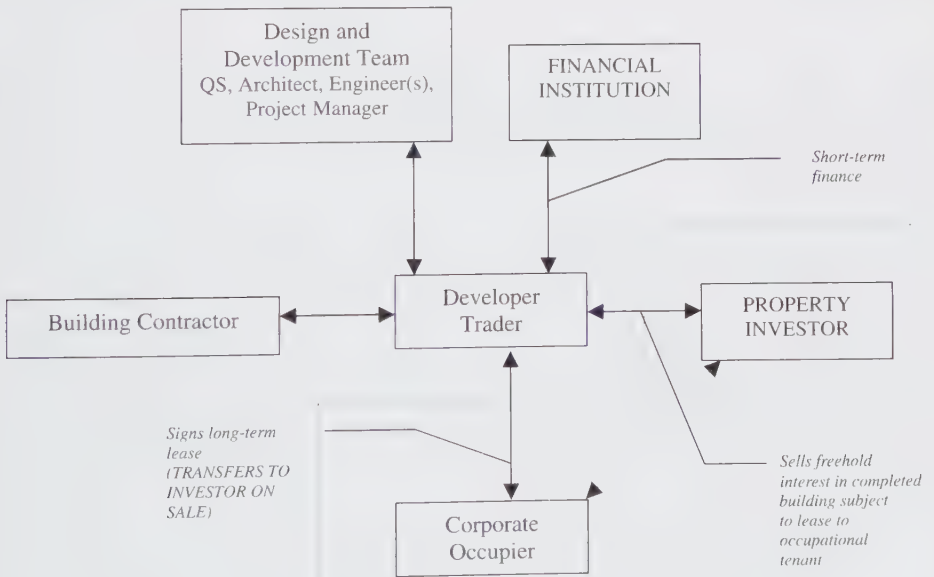


The two final main development routes that will be outlined cover the situations where the traditional ‘property developer’ operates. In many, but not all cases, the end user of the development is not known at the inception of the process. In the vast majority of cases in both routes the occupier of the building leases the property with the long-term freehold interest being vested in another party. Both of these routes are very common. There is a tendency for most corporate occupiers not to own their premises as this is viewed as tying up financial resources outside the core activities of the business; there is also a ready investment market where owners seek to

receive an income from their property holdings. Although many of the routes outlined above in the commercial sector receive a large amount of publicity, the latter two routes dominate the market.

There are two main variations on the route, largely defined by the characteristics of the developer. In the first, the developer seeks to retain the long-term beneficial ownership of the building, i.e. they are building to invest and are termed *developer investors*. This group of developers includes some of the largest UK property companies. The developer acts as the catalyst and focus of the development, commissioning the design construction and finance of the development, and finding the end user. The actual financial arrangements depend upon the characteristic of the developer, the larger companies funding developments using a variety of corporate finance sources such as long-term stock market debenture stock, whilst smaller developers rely on commercial, often project-specific loans to undertake the schemes. Sometimes this results in the developer needing to secure two sources of finance – short-term finance to construct the building and long-term, mortgage type finance, which repays the original loan and which is serviced from the rents received.

(vii) *Speculative development: Developer trader*



The second 'traditional' development route is illustrated above. This route is perhaps the most complex that has been outlined to date but is also the most common in context of the UK market. Here the developer acts as the

ultimate entrepreneur developer, in the project for the short-term return only. The roles taken by the *developer trader* are similar to the developer investor except that the former is also seeking a long-term owner for the freehold of the scheme, i.e. they look to sell on the completed development as a completed investment.

Both of these routes have common features. It is relatively uncommon for either developer traders or developer investors to procure buildings by the design and build route. This is because the developer feels the need to closely control the output of the design process given that the product is often targeted at specific market sectors or sub-sectors. A second common feature of these routes is that the product is aimed to appeal to as wide a variety of occupiers as possible, thus reducing the risk to the developer of ending up with an empty building. A by-product of this is that the buildings produced tend to be bland and mediocre.

The seven development routes outlined above are the principle ones but are certainly not the only ones. There tends to be considerable variation amongst them with hybrid routes existing. Some developers act as developer traders and as developer investors depending on the individual scheme and the current market conditions. Whatever the case, appreciating what routes to development exist assist greatly in the understanding of how the development process works.

1.3 The Background: Section 2. Players in the development market

One of the features of the last century in the UK was the widening of involvement in the property market in general, and property development in particular. By the beginning of the current century a wider variety of people and bodies had been, or currently were, players in the development market. A list of players in the market would be almost infinite; if, however, we concentrate on those bodies that have a consistently significant influence on the market and the process, then a more manageable list may result:

- Land owners
- Financial institutions
- Local authorities
- Central government
- Property consultants and agents
- Pressure groups
- Developers.

We will briefly try to identify who the chief players are, what their role is within the development process and what the future trends are. It should be noted that this book is intended as a practically based book, rather than one that concentrates on the philosophies and motives of the players. Hence, there will not be an intensive concentration on this section.

1.3.1 Players in the development market 1: Land owners

Who are they?

There are a number of different categories of land owners, though ultimately it is the Crown from which the roots of land ownership arise. The section below attempts to summarise the key players. The following headings are used to analyse each party's role in the development process:

- Land owner
- Examples
- Nature of holdings
- Comments.

(i) Land owner: The Crown Estates

Examples

- Royal palaces
- Royal estates

Nature of holdings

Traditional estates in many parts of England, Wales and Scotland.

Comments

Land owners tend not to release land for major scale development. The role of these estates is largely for the preservation of status quo. Exceptions do exist such as Poundbury, Prince Charles's experiment in sustainable development.

(ii) Land owner: Traditional landed estates

Examples

- Grosvenor estates
- Howard de Walden estates

Nature of holdings

Traditional estates had significant rural and urban land holdings. With the development of urban centres many of these land holdings are now located in high value locations close to city centres. This is particularly true in the centre of London where significant parts of the West End are owned by the landed estates.

Comments

Some of the landed estates have little or no involvement in development, and the land and property markets. Others, including the two listed above, are significant players and have used their land owning as a springboard for the establishment of major property companies. In the case of Grosvenor, this has extended far beyond the original estate boundaries.

(iii) Land owner: Central government

Examples

- Direct government owned land, e.g. the Ministry of Defence estate
- Owned by agencies of central government

Nature of land holdings

These land owners own large areas of country, particularly as part of the defence estate, including army bases, ports, air bases and associated residential areas housing the staff. They also own major areas of rural land such as Salisbury Plain, for testing, training and exercises, and live firing. The secret arms of government (MI5 and MI6, defence research, etc) also fall within this category. Agencies of central government include air traffic control, the civil service commission, offices of government agencies like job centres and part of the health estate.

Comments

Governments in recent years have become less directly involved in property development. This trend has increased with the development of the Private Finance Initiative and Public Private Partnerships. The extent of their land holdings, however, still makes them highly influential in the development market. This has been notable in recent years with the release of significant parts of the defence estate made redundant by the 'peace dividend'

following the collapse of the Soviet bloc, opening up many development opportunities for the private sector.

(iv) Land owner: Quangos

Example

- Commission for the New Towns (CNT)

Nature of land holdings

The CNT has recently merged operations with another quango (quasi autonomous non-government organisation), English Partnerships. They still have significant land ownership in the 'new towns' and planned expansion centres in the UK, although much has been developed or devolved back to the local council ownership.

Comments

The CNT's traditional role was as a development initiator and co-ordinator in the New Towns. Land was acquired at the time of the town's inception by the state and released for development in line with the development master plan for the town. This programme is still active, for example in Warrington, Cheshire, where a large block of new development land called Omega was released in January 2001.

(v) Land owner: Local government

Examples

- County councils
- City councils
- Town councils, etc

Nature of land holdings

Some county councils – but particularly the urban city and town councils – have significant land ownership. In the past this was often due to post-war reconstruction programmes where large swathes of bomb-damaged land was acquired compulsorily to assist redevelopment. Another contributor to the large-scale land holdings was the comprehensive redevelopment programmes instigated, in the main, between the 1930s and 60s. This left local councils with large land holdings, though often the remnants of these are in areas of economic deprivation.

Comments

Although local authorities have been criticised in the past for restricting development and economic growth by being slow to release land, this situation has largely changed. Many local authorities now take a more active role in the development process, either by identifying land that has development potential or by positively initiating development by entering into partnerships with private sector development. Some local authorities, acting on the encouragement and initiative of central government, have set up joint venture companies with the private sector to lead development in their localities (e.g. Liverpool Vision).

(vi) Land owner: Ex public sector utilities

Examples

- Centrica
- Railtrack (and its successor)
- British Waterways
- Electricity generation companies
- Former Coal Board sites
- Etc

Nature of land holdings

Many of the old publicly owned corporations set up in the post-1945 nationalised environment had large land ownerships with compulsory purchase powers that were widely used. Land holdings include rail lines and adjacent land, canals and tow paths but with the addition of large tracts of land adjacent to water plus significant amounts of land held by the other bodies.

Comments

Most of the land held by these bodies is still used for the original purpose for which it was acquired, however a lot is surplus to requirement. This situation has existed for years and was exploited by many of these organisations whilst they were still in public ownership. British Rail had an active property arm that developed much of the valuable land adjacent to and sometimes over station sites in the major conurbations, particularly in central London. British Waterways acted similarly. The private sector successors to these bodies also have the potential to develop their land holdings. This may increase in future years

as many of the traditional heavy industries in the UK continue to decline.

(vii) Land owner: Institutional investors

Examples

- Life assurance companies (e.g. Prudential, Scottish Widows, etc)
- Pension funds (e.g. National Farmers' Union, PostTel, etc)

Nature of land holdings

Institutional investors hold land as an investment, i.e. to receive income or to obtain growth in capital values, or both. Land holdings include large tracts of agricultural and forestry land.

Comments

Institutional investors are active players in the development market, as we shall see below. The large-scale land holdings that are owned outside the major urban conurbations are not, however, often bought for development purposes.

(viii) Land owner: Corporate and industrial land owners

Examples

- Various but including steel, motor and chemical industries

Nature of land holdings

Similar to the former nationalised industries, the larger corporate concerns often build up large land ownership as part of their operations.

Comments

Some of these companies have been directly active in the development market, setting up their own development companies. This is particularly true of companies whose core business was intrinsically linked to property, such as the major retailers (e.g. Boots and Asda). Others became involved but made heavy losses in the property crash of the early 1990s and withdrew. Other companies may become involved if and when their core industries contract.

(ix) Land owner: Developers

Examples

- Larger house builders
- Commercial developers in process of site assembly
- Retailers holding strategic sites

Nature of land holdings

In particular, the larger house builders build up large 'land banks' of land that have the potential for development, though frequently they do not have planning permission. Commercial developers preparing large schemes, particularly retail schemes, also sometimes build up land ownership in the area where their scheme is located as part of the process of site assembly.

Comments

The land here is intended for development. Sometimes individual developers are criticised by those with a vested interest to see development undertaken (e.g. local authorities who have their own economic goals for the area) for holding up schemes by retaining strategic land ownership whilst working up their own development ideas.

(x) Other categories of land owners

Examples

Various, ranging from the agricultural sector through the forestry commission to wealthy private individuals

Nature of land holdings

Quite varied land ownership

Comments

Quite varied goals and intentions.

1.3.2 Players in the development market 2: Financial institutions

In property development, as with many other aspects of life, money makes the world go around. In fact, given the capital-intensive nature of property, finance and the institutions that control it are hugely influential on

development. This section examines the key players using the following structure for each:

- Example organisations
- Role in the development process
- Comments

(i) Commercial banks

Example organisations

- Royal Bank of Scotland
- Barclays

Role in the development process

- Providers of development funding for small to medium commercial and residential schemes.
- Providers of long-term mortgage finance for commercial and residential property ownership.

Comments

Banks have traditionally been the main source of finance for the property company sector both in terms of development and providing long-term finance for ownership. They tend to be at the heart of expansion of the development market, indeed they have been criticised for fuelling development booms. Figures from the DTZ publication *Money into Property* illustrates that the increase in development activity in the early 1970s, late 80s and late 90s coincided with a great increase in bank lending.

This may be a function of the behaviour of banks in lending to the property industry. The property market tends to run in cycles. Cycles are common in the general economy; indeed contemporary thinking amongst government macro economists is to dampen the swings in the general economy. Cycles in the property market tend to be bigger in amplitude, and this is partly due to how banks lend to the sector. They tend to lend when the property market is already healthy, with rises in rental and asset values well established. Compared with other risky ventures that banks become involved in, property lending is quite attractive. The rates that banks lend at are relatively high, giving it a good return with the added security of the underlying worth of the property asset to fall back on. This latter factor is not really available to lending to businesses. With businesses, the bulk of the value is usually in the ability to earn cash flow in the future; this can

evaporate very quickly. Banks operate in a very competitive environment and are therefore keen to lend in sectors that will give them a good return. The tendency to lend when values rise is understandable but the rise in values is often a function of previous low levels of lending in the immediate past when the property market is poor and when development supply is low. Shortages in supply tends to fuel price rises, thus enabling both development and development lending. This is illustrated in greatly simplified form in Figure 1.

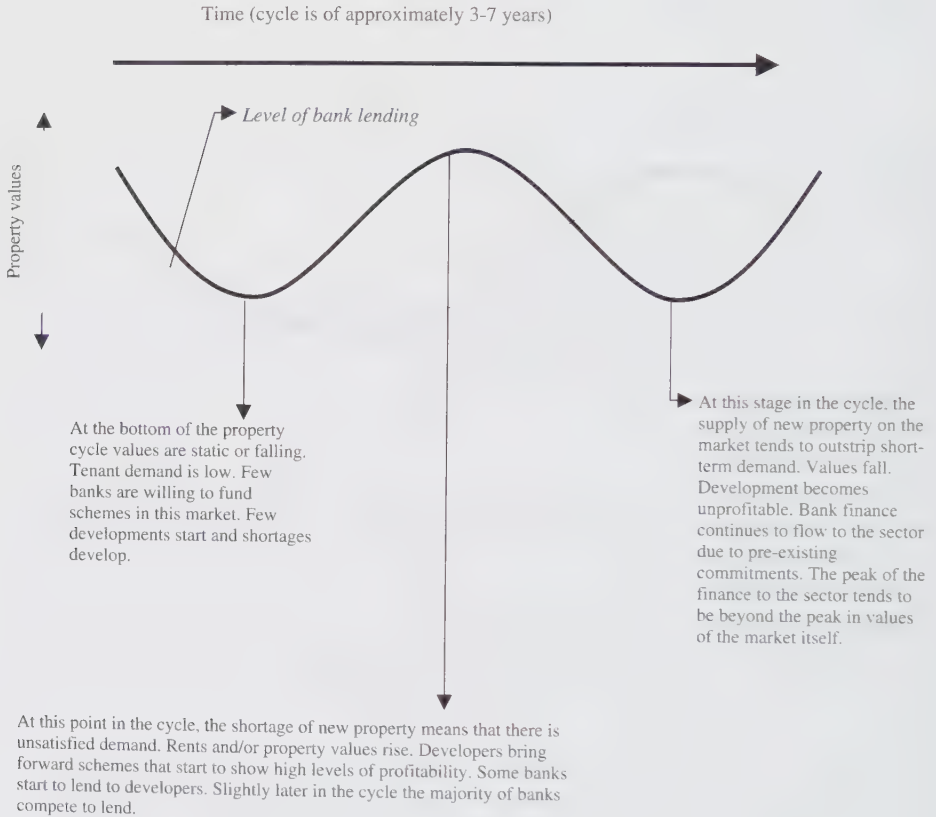


Figure 1: The property cycle and bank lending.

The result of this self-generating cycle is a series of 'feast and famine' events that is very difficult to break out of. Where the amplitude of the up cycle is large the consequent downturn is usually much larger. This occurred in the late 1980s and early 90s, resulting in banks becoming large-scale property owners following the collapse in the commercial property markets where previous years of excessive supply coincided with a downturn in the general economy.

The banking sector is therefore very influential in the development market, being the dominant source of finance for the small to medium developer. They are not as dominant overall, however, as the outsider may believe. Developers also use other sources of funds.

(ii) Building societies

Example organisations

- Nationwide
- Yorkshire
- Skipton
- Etc

Role in the development process

Traditional source of long-term mortgage finance for commercial and residential property ownership.

Comments

Building societies have always had a limited role in the development process. They were originally set up solely to allow regular savings to be made and for single purpose loans to be made against the purchase of houses. They were not allowed wider involvement until the deregulation that followed the Building Societies Act of 1986. The most common outcome of deregulation has, however, been the conversion of the (mutual) building societies into (corporate) banks. These new entities act exactly like the old banking sector though often their commercial operations are not as well developed. Examples of converted societies include the Halifax, Abbey National and the Alliance and Leicester. Very few large building societies remain and fewer still will lend to development projects other than self-build housing schemes.

One other notable feature of the banking sector that is worth mentioning is that the sector has seen considerable consolidation over the period up to the date that this book was written. Many banks and other financial institutions have recognised the benefits of the economies of scale that come about through mergers and takeovers. This process seems likely to continue, perhaps on a global scale. This means that much more power and influence on the property and development market will be concentrated on fewer and fewer organisations. With fewer organisations making decisions it seems possible that the market may be even more volatile than it has been in the past.

*(iii) Life assurance companies**Example organisations*

- Standard Life
- Scottish Widows
- Prudential

Role in the development process

- Fund development of income-producing property, usually to receive long-term beneficial ownership rights.
- Initiators of developments.

Comments

With the pension funds these financial bodies are the ones termed the 'institutions'. Their influence on the development market is huge, being the biggest single market for the product of the development process. This is not as occupiers but rather as the owners of the freehold interests in property. It was calculated in 1998 that the total value of institutional ownership of property amounted to over £120bn.

Institutional investors have strict criteria as to what an acceptable property development is. These include being in the best locations, let to top quality tenants who occupy the property on a long lease (usually of 15 years' duration) with periodic rent reviews that are adjusted only when the tenant is responsible for all the repair and maintenance of the property. This type of property investment does not require intensive management for the beneficial owner but should give the best long-term income growth and capital value appreciation. However, with the notable exception of retail property, the top performance allied to an ability to attract and keep the best quality tenant can only usually be maintained with 'young' property. Investors generally hold that the investment performance of offices, industrial and warehouse properties declines steeply when they get beyond about 10 years old. Many properties in the 10-15 year old age bracket become classed as 'secondary' (i.e. not prime) and are sold off, mainly to property companies. This stock has to be replaced, hence the institution's almost insatiable desire for newly developed property.

Although the institutions have a largely positive image, they have been criticised in other fields. They have been accused of high levels of conservatism which leads to bland and unadventurous developments. They are also associated with the trends towards out-of-town developments and

in encouraging developments that promote increased road vehicle use in just about every sector that they become involved in. All of this is probably true, but also understandable. The institutions have a duty to invest their policyholders' funds wisely, in mediums that will give a good return but will not expose them to high degrees of risk. This is reflected in their property investment policies that favour low risk developments that appeal to the widest possible market in locations where there is occupier and/or consumer demand. There is no encouragement for institutions to take the lead in environmental protection, or build innovative structures or conserve energy in the current structure of the financial environment in which they work.

The influence of the institutions on all aspects of property development in the UK, both directly and indirectly, is still very high but the sector may be on the cusp of a major change. For about the last 20 years the relative importance of property as an investment to the institutions has greatly declined, although in both nominal and real terms the level of investment has increased. In the early 1980s property made up over 15 per cent of total investment portfolios. In 2001 this had fallen to around 6 per cent. This fall is due to a number of factors, not least of which has been the explosion in global equity markets allied to deregulation. Whatever the cause, the position of property as a part of portfolios is now questionable. The low percentage that property represents in many portfolios means that it no longer offers much in the way of multi-asset diversification for investors. Property is an odd asset that requires expensive specialist skills to make it perform well. It also has other disadvantages as an investment: it is liquid, hard to dispose of, and comes in big immobile quantities that means large holdings are required to achieve intra asset diversification. There may come a point when the difficulties of property as an investment outweigh its advantages. What this will mean for the development market is uncertain but an institutional withdrawal would certainly have a considerable impact.

(iv) Pension funds

Example organisations

- National Farmers' Union
- PosTel

Role in the development process

- Fund development of income producing property, usually to receive long-term beneficial ownership rights.
- Initiators of developments.

Comments

Pension funds behave in very similar ways to the other institutions. Their behaviour can be influenced greatly by the underlying maturity of the fund. The older the contributors are to the fund, the shorter the time frame that exists for the maturity of the investments that are required. Less mature funds can invest in the long term for capital appreciation rather than high levels of income. These longer-term requirements have tended to favour investment in property, including the purchase and funding of developments.

*(v) Other financial institutions**Example organisations*

- Venture capitalists
- Specialist property funders
- Property companies
- Unit trusts

Role in the development process

- Providers of development funding for commercial and residential schemes.
- Providers of long-term mortgage finance for commercial and residential property ownership.

Comment

This is a diverse group of institutions with different motives, purposes and behaviour. At one end there are the high-risk takers, the venture capitalists and specialist funders who will put money into schemes rejected by more risk-averse organisations. Sometimes this is as a primary funder, sometimes as the provider of gap or mezzanine finance where the developer has a shortfall (see Part 3 for more coverage of this). At the other end, there are very conservative organisations providing traditional property-backed debt finance. These groups' overall influence on the property market is relatively small, but can be considerable in certain locations, sectors and markets.

1.3.3 Players in the development market 3: Local authorities

Local authorities have a key role in the development process. This role can be very complex given the range of functions, powers and goals they

possess. Local authorities can possess the following range of – sometimes conflicting – collection of powers, goals and functions:

- Strategic planning
- Detailed land use planning
- Development control
- Development initiator
- Landowner
- Economic stewardship of area of responsibility
- Representation of the aims, wishes and welfare of all members of the local area.

For convenience we will refer to this list as the concerns of local authorities. Sometimes these concerns are held in a single body; sometimes they are distributed across a range of bodies.

The range of local authorities has always been complex, but it has become more so in recent years. Local authorities, taking a very loose definition, may be taken to include the Scottish Parliament, the Welsh Assembly and The Mayor of London, as well as the various metropolitan councils, county councils, unitary authorities and district councils. The various powers of these authorities are bewildering but a summary can be attempted by looking at the list of ‘concerns’ identified above.

(i) Strategic planning

Strategic planning is concerned with the overall development of an area. The most clear cut example of this is the structure plan prepared at county council level. This is primarily a written (as opposed to a map or plan-based) document that sets out the overall objectives of the local authority concerned with economic development by way of land use. It sets targets for residential development numbers, for example, and also identifies broad areas where these units should be developed and where there could be concern about the development. It can identify objectives and policies regarding conservation. Its remit is very wide but its aim is to set strategic direction for authorities lower down the ladder of authority.

In England and Wales, the original concept was that the larger county councils would set the ‘big picture’ for the development of the larger areas they controlled with the detail being implemented by the smaller and more numerous district councils below them. This division has been blurred by the development of different tiers and types of local government. In England, unitary and metropolitan authorities fulfil both the strategic and land use planning and development control functions. In Scotland

and Wales, the Parliament and Assembly have, respectively, taken some of the strategic powers. This has also occurred in London and Northern Ireland.

(ii) Detailed land use planning

The land use planning function is a map-based system that should execute the strategic plans laid down by the higher authorities. The UK planning system does not zone land use for particular activities, instead each site is considered on its merits. The local plan system, however, does record and classify both existing and established land uses and also identifies land suitable for development of various kinds. It might, for example, identify current agricultural land that is deemed suitable for residential development. The identification of this land should be in accordance with the strategic objectives laid down in the structure plan. The classification of land into categories of use does not either guarantee that developments of that type will be automatically given the go-ahead, nor that non-compliant development proposals are completely barred from success. All development, outside of a few special categories and in special development areas, will require a planning application to be made under development control powers (see below). The plan does, however, give considerable guidance to developers as to what is or is not favoured in the locality. The document is of considerable importance and goes through a long process of preparation and consultation before it comes into use. The normal life of a local development plan is 10 years, however even draft plans have considerable weight with the planning authorities, developers and the courts.

The local or town plan was traditionally prepared by the third tier of government: the district, borough or town council. This is still the case, though the power is part of the portfolio of powers of the unitary and metropolitan authorities.

(iii) Development control

This tier of government also has the responsibility of controlling existing development as well as planning future development in its area of responsibility. Most activities that require a material change of some kind require planning consent. This includes physical development including new-build and refurbishment. It also includes many changes of use. There are exceptions; some minor development by householders including small extensions can be done under the General Development Order without additional permission being required. Activities are also classified under the Use Classes Order into different types of uses. Retailing, for example, is

classified into: A1, general retail; A2, financial services; and A3, food and drink. Whilst consent is required to change from A1 to A2 or A3, no additional consent is required to move from A2 or A3 to A1.⁴

Applications follow a formal procedure and usually an indicative timetable. They are submitted to officers of the local authority, the professional employees who negotiate with the applicant, carry out consultation and make reports to the planning committee, made up of elected members of the authority, who make the final decision. Usually this follows the recommendation of the officers, but this is not always the case.

As noted, development control powers are vested in the same authority that creates the development plan. Again, this sometimes means a single authority with the full range of powers, sometimes the last tier of separate local authorities.

(iv) Development initiator; land owner; economic stewardship of area of responsibility; representative of the aims, wishes and welfare of all members of the local area

These four concerns have been brought together because they are closely related and because they sometimes complement and contradict the other functions of the local authority.

We have seen that local authorities often have considerable land holdings. They are also highly concerned with the development of their area, its economic well being, the maintenance of social and environmental balance and urban regeneration. This, today, often leads local authorities to be the promoter and initiator of developments, particularly of large, strategic sites.

This is often a difficult balancing act. Some local authorities act on both sides of the development fence. The modern trend is towards private sector type entrepreneurial behaviour, or partnerships with the private sector to achieve these ends. This can be seen with the development of the partnership urban regeneration companies such as Liverpool Vision. They can find themselves promoting and designing developments that they themselves have to judge via their development control system. To be fair, in the main this seems to work reasonably well, the authorities balancing their

⁴ The reason for this is the impact of use on the area. A2 and A3 are both seen to bring additional impacts, with the former the tendency towards bland, non-retail frontages, the latter the additional litter and noise in unsocial hours. This requires local authorities to have additional powers to regulate these activities.

ambitions with their responsibilities to the community but there are dangers of excessive power and the squeezing out of the private sector developers.

Whatever the case, the role of the local authority in the development process is pivotal and, with devolution and changing structures of governance, this is likely to be even more true in the future.

Some of the systems of government and indicative diagrams showing areas of responsibility are outlined over the succeeding pages.

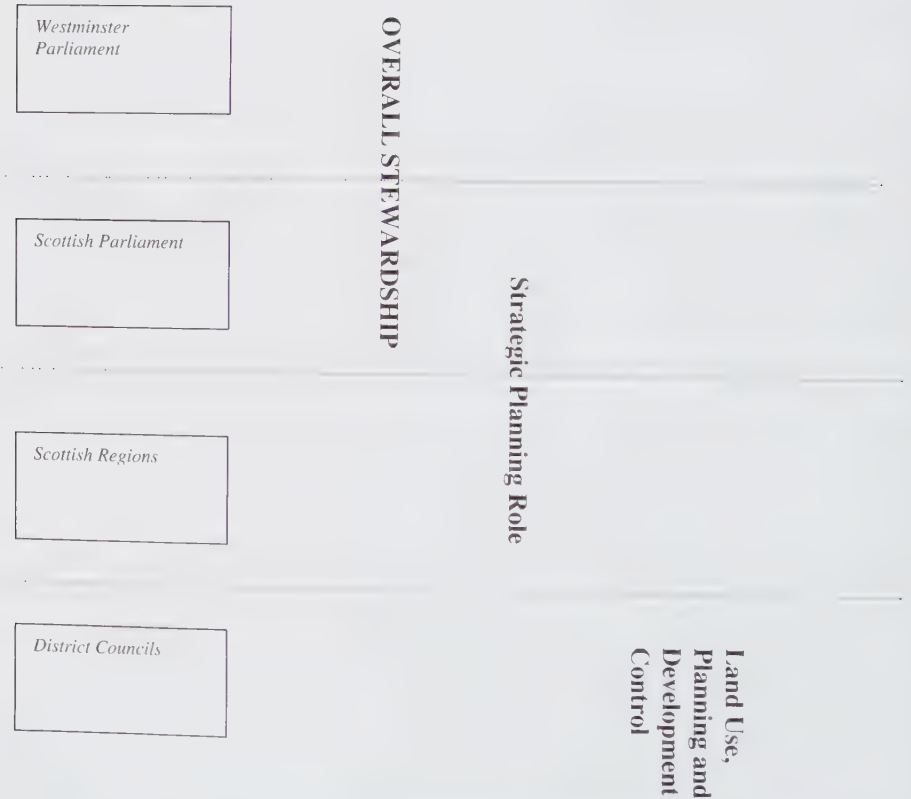


Figure 2: Responsibilities in development: an overview of the Scottish system 2001.

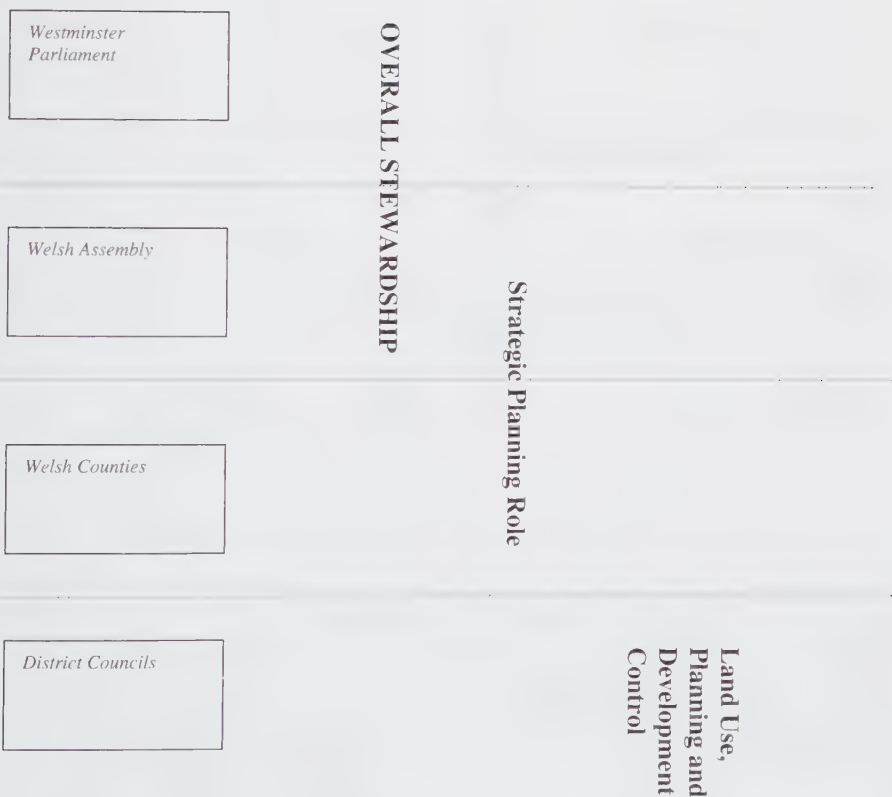


Figure 3: Responsibilities in development: an overview of the Welsh system 2001.

*Westminster
Parliament*

*London Mayoral
Office*

London Assembly

London Boroughs

OVERALL STEWARDSHIP

Strategic Planning Role

**Land Use,
Planning and
Development
Control**

Figure 4: Responsibilities in development: an overview of the London system 2001.

TWO TIER SYSTEM

*Westminster
Parliament*

Overall Stewardship

*Unitary or
Metropolitan Council*

- **Strategic Planning**
- **Land Use Planning**
- **Development Control**

THREE TIER SYSTEM

*Westminster
Parliament*

Overall Stewardship

County Council

- **Strategic Planning**

*District, Borough or
Town Council*

- **Land Use Planning**
- **Development Control**

Figure 5: Responsibilities in development: an overview of the English systems 2001.

1.3.4 Players in the development market 4: Central government

In a democratic market economy such as the UK, the role of government might be seen to be limited in the development market. In the last 20 years government has tended to retreat from direct involvement, i.e. initiating and conducting development itself. This is a reflection of the Thatcherite/monetarist/Reagonomic economic way of thinking which sought to re-establish the primacy of the market over state intervention by encouraging private enterprise. Hand-in-hand with this has been successive governments' desire to control the Public Sector Borrowing Requirement, which has further restricted the scope for centralised development. Certainly the privatisation of the majority of the old state owned industries has greatly reduced direct state involvement in the development markets.

Despite this, central government's influence over the development sector is still considerable and arises out of a number of areas:

(i) Strategic economic direction

The government's role as macro-economic manager of UK PLC is very influential. This is both indirect in terms of the effects of general fiscal and monetary policy and specific in terms of policies on areas such as urban regeneration. Fundamentally, the demand for all types of property is one derived from the activity in the economy as a whole. The government's policy on economic growth and inflation is very influential in determining the level of demand and the cost of finance. The monies, tax and grant regimes directed towards deprived areas is closely connected with development activity in these regions. Central government also almost completely controls the money flowing to local government.

(ii) Planning policy – strategic and detail

Although regional strategic planning, land use planning and development control are undertaken at local government level, all of these areas are strongly influenced and monitored by central government. The guiding legislation is obviously set centrally but the influence goes further. Structure plans must be approved by the Secretary of State for the Environment, Transport and the Regions (DETR) who also has 'call in' powers for large controversial schemes, removing the power from the local authority to the centre. Any planning appeal for a refusal at local level is to the DETR. Government also issues Planning Policy Guidance (PPG) notes to the local authorities. These set out how local planning authorities should seek to deal with key issues in planning such as transport, the location of retailing, and whether development should be on brownfield or greenfield land. These

PPGs have statutory effect and planning authorities must have regard to them in making decisions.

These powers mean that central government has a huge influence on what happens in the development market at the local level.

To these two areas can be added many other areas of influence. As we have noted, central government still has substantial land holdings and is a substantial occupier of property, even though the substantial devolution to the private sector has taken place. There is a trend for the Government to move away from direct ownership to the PFI/PPP route (see above). Whatever the case, it is still an important initiator and occupier of schemes and is thus influential on the demand side of the development equation as well as in determining the shape of the supply side.

1.3.5 Players in the development market 5: Property consultants and agents

The vast majority of people reading this book will have had some involvement with agents if only through dealings with residential estate agents. The role of agents is questioned by some, asking whether their function is really necessary. Certainly, it is possible to do without agents as houses, for example, can be sold privately. Furthermore, the advent of the Internet has greatly increased the ability of individuals to expose their properties to the wider market.

In fact, the role of the consultant and of the agent is essential in most property development as almost no development goes ahead without one or both being employed. The involvement of agents greatly improves the efficiency of the development disposal process. This is due to pre-development advice as to the form, design and marketing of the project and as a single point of contact and interaction between buyer and seller on disposal. This is usually more marked in the commercial rather than the residential market.

There is a schism between the residential and commercial property markets with relatively little cross-involvement between the agents of each in the respective markets. The exceptions are the country house market and development.

In the commercial market the fundamental nature of the property market is marked. There is no central observable market for property and there is a fundamental information gap between owners and occupiers, developers and investors. It is this void that agents and consultants fill. If there is one word that sums up the importance of the role of the commercial agent, it is 'knowledge'. Agents' specialist knowledge gives them the commercial

advantage in many aspects of the development process. This is not only in acting as the catalyst between developer and tenant, owner and occupier but also in contacts with the planning authorities, funding bodies and central government.

The nature of the leading commercial consultants is relatively consistent. There are regional and local specialists based in all the UK's major cities but the leading operators are based in the West End of London. These include firms such as DTZ Debenham Thorpe, Jones Lang Lasalle, HB Hillier Parker and Insignia Richard Ellis. All of the above are notable for being UK firms who have gone global, normally with tie-ups with US investors, banks and advisors.

Sometimes these firms are accused of 'talking up the market'. There may be some truth in this. There is no disputing the essential role that these agencies have in enabling development.

1.3.6 Players in the development market 6: Pressure groups

A larger number of special interest groups are involved in this category. They are also unique in that they have no direct involvement in initiating development. They do have a big effect on whether a development goes ahead and the form it takes if it does. The groups include:

- Country Land Owners' Association
- Conservation groups
- Campaign for the Preservation of Rural England
- Friends of the Earth
- National Farmers' Union
- Etc

This is clearly a diverse group with diverse motives but they have common qualities. They are relatively small in number but large in influence and they are well organised, which means they can have a great effect in spite of the sheer numbers involved and, possibly, in excess of the quality of the arguments they can put forward.

1.3.7 Players in the development market 7: Developers

The final of the key players in the market are the developers themselves. Developers are diverse in size, motives and areas of activity, making it difficult to provide a summary. One relatively easy division has traditionally been between the commercial and residential markets where players in one rarely operated in the other. To an extent this is still true. However, the division has

been blurred in recent years. A number of commercial developers have become involved in the residential market, especially in city centres where the new trend for city living has seen traditional commercial buildings being converted for residential use.

Broadly, however, developers fall into three categories:

- Residential developers (house builders)
- Commercial developer traders
- Commercial developer investors.

Residential developers are some of the most influential and active players in the market place. The large house builders produce a great number of housing units each year and also acquire large tracts of land as we have seen in preceding sections. Although relatively few in number, the large house builders have huge influence on both the environment and the housing markets.

Commercial developer traders perhaps come closest to the general public's idea of a property developer. Developer traders are so called because they are largely concerned only with development. Their idea of development is short term; they are interested in producing a property, selling it on and realising the profit. Although these organisations can be large they generally have relatively few assets and instead trade on the track record of producing profits. They tend to be entrepreneurial risk takers, ones who make good profits in good markets but who tend to disappear when the markets takes a downturn. In the mid to late 1980s, it was this type of developer who dominated the markets. In the early 1990s, when the market fell, many of these developers went out of business due to their inability to sell or let their schemes. Because they owned very little in the way of assets, they were unable to meet interest payments on loans from other sources and therefore the banks foreclosed. Many of these developers have since reappeared having taken a break for three to five years and have restarted new development businesses.

This type of developer can be contrasted to commercial developer investors who tend to be more risk averse. The main motive of these developers is to produce properties for retention in their investment portfolios. Example organisations include British Land and Slough Estates, two stalwart traditional UK property investment organisations who both have a stock market listing. As they are in development for the long term, they take less risk and in many ways are more 'boring' than developer traders. Although they make less profit in good times, and often get criticised by market analysts because of this, they do tend to survive.

This is an admittedly superficial review of what is a very large and diverse sector of contemporary property development. Certainly there are organisations that carry out both residential and commercial development work. There are also commercial developers who move from being traders to investors and back again according to market conditions and opportunities. The divisions are, however, largely valid and very useful for understanding the workings of the market and the behaviour of developers within it. We will return several times to developers throughout this book, often examining how the different types behave in different circumstances, for example in their dealings with financiers.

1.4 The Background: Section 3. The property markets: residential and commercial, occupier and investment

It is important to gain some understanding of the nature of the property market, or rather 'markets', as several exist, broken down into different types and sectors, locations and interests. These markets are complex and may not behave in the same way at the same point in time.

An example of how the overall market can be broken down can be illustrated in Figure 6. It represents a hypothetical decision-making process that might be followed by a fund manager deciding where to place funds which culminates in a decision to place them in the office market in Edinburgh. To start with the fundamentals, money is put into the property market, followed by a sequence of decisions as to which sub-market to invest in. This forms a cascade of choices, which are not, in fact, exhaustive. Further choices include, for example, whether to put money into developments or standing investments. Similarly, the location decision in practice would be finer than the broad country/city choice illustrated opposite.

All the markets can be considered to be separate and distinct, yet related, in that they represent aspects of the property markets, but can behave independently.

One of the causes of the complexity of the property markets is related to the fundamental nature and characteristics of property as an asset. It is possible to create many sub-interests out of a single plot of land. Let us consider a single site as an example, in this case a shopping centre in a metropolitan city that is owned by a local authority, developed by a financial institution and occupied by a series of national and local retailers. The tenure structure of a single part of the development may look something like Figure 7.

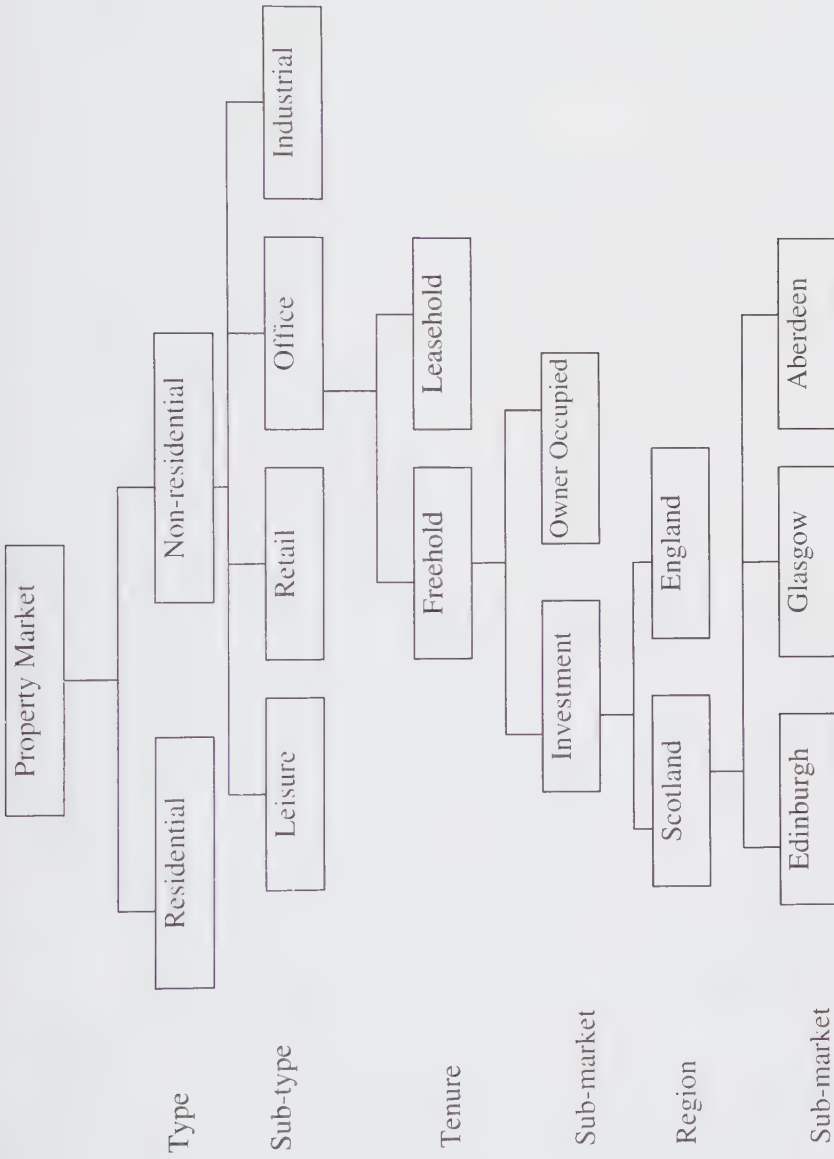


Figure 6: Illustration of tiers of decision-making in property investment in deciding which location to invest in.

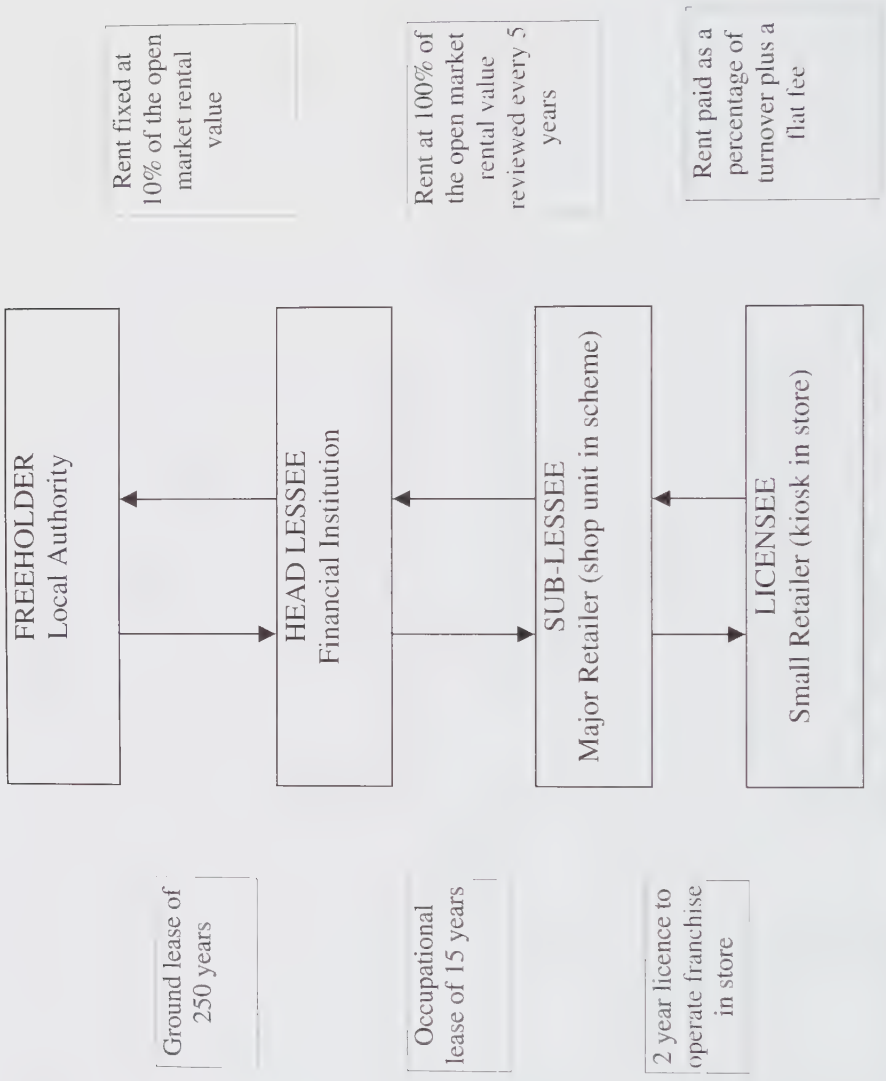


Figure 7: An illustration of how multiple interests can exist in a single property.

All of these interests have value and can be tradable in the open market, subject to the terms of the various contracts between the parties. The point is that it is possible to create investment markets of several tiers from the same piece of property as well as an occupational market, which itself can involve several parties. All of these markets are important; fundamentally the property market would not exist without the demand from occupiers, similarly the commercial investment market is very influential in shaping the property market.

A complete book could be devoted to examining the property markets, way beyond the capacity of this publication. This book will concentrate on an examination of the basic structure and sub-types in the property markets, giving an indication of the most important sub-sections.

It would not be possible to examine each geographical sub-market as varies from year to year. Up-to-date information on these markets can, in fact, be found in the specialist property press, particularly the weekly magazines *Estates Gazette* and *Property Week*, both of which include regular features on different parts of the country and different sectors of the market.

The biggest schism in the property markets is between the residential and commercial markets, and each of these will be examined separately. The other major division in the property markets lies between the investment and occupation markets, the balancing sides of the landlord and tenant equation. The occupation market is also diverse and difficult to summarise, and will thus be considered with the review of the commercial markets. The investment market is smaller and easier to split into investor groups and behaviours. As a result the three areas that will be examined in detail are the residential, commercial and investment markets. The complexity of the markets, as reviewed in this preamble should, however, always be recalled.

A further important point for developers to be aware of is that the property markets constantly evolve and change. Because the market for property for occupation and use is a derived demand, it is the requirements of the market that shape the type and characteristics of the property provided by the development sector. Users of property do not generally adapt their needs or businesses to what is available on the market; the property market meets their requirements. This is constantly reflected in the markets, particularly the commercial markets, with new types or different specifications for existing types emerging very frequently. For example, if this book had been written in 1981 instead of 2002 there would have been no mention of Retail Warehousing, of Regional Shopping Centres such as the MetroCentre or Meadowhall, of Business Parks or of High Bay Distribution buildings, to select just four innovations of the last two decades.

There are a number of implications in this constant change for developers. Firstly, developers must be very cautious about analysing past trends to determine future demand. The requirements of many users of property are likely to have changed. Secondly, there are always opportunities for the risk-taking developer to spot or to anticipate trends in the market. There is also the reassurance that the constant evolution of occupier requirements actually provides constant demand for the product of development. Whatever the case, it is essential for developers not only to have an understanding of the markets in which they operate but also to keep abreast of developments in that market.

1.4.1 Residential markets

(i) Occupational markets

Perhaps the most stable of the property markets in terms of changing demand are the residential markets but even this statement requires severe qualification. There has been a constant demand for single-family dwellings in the UK over the last 40 years. As a result, although some aspects of the technology of the product in terms of some of the materials used have changed in this period, the product itself has not evolved very much. What has changed is the number of additional housing markets that have developed. These have come about, as with all changes in the property markets, due to changes in society as a whole. Over the recent past, society has changed to produce more single person or childless households at both ends of the age spectrum, leading to markets developing aimed at the young urban professional and at the retirement sector. Smaller households, due to the trend to have less children or as the result of single parent families, have led to an expansion of the market for smaller properties. These are just a few of the many changes that have affected the sector.

The residential markets are split between the owner occupation market and the investment or rental market. We will consider the investment section separately, because the characteristics of this are somewhat different from the owner occupation markets. In the main, however, the players in the market, the locations and the characteristics of the product are very similar and so the following comments relate both to the owner-occupier and the leasing market. It should be noted, however, that the former is much larger than the latter, particularly when the private sector residential market alone is being considered.

The residential market is by far the largest of the property markets and in many ways it is the most accessible of the markets for the new developer.

The product is generally low tech and demands of the potential user in terms of the specification and location required are fairly easy to establish or predict. There are also a whole range of sizes of development that are acceptable, requiring a fairly modest financial commitment from a new developer. These include the development of new single houses on vacant plots and also the refurbishment or conversion of existing stock. Many developers have become established by taking large single houses in established urban areas and converting them into flats. Another advantage is that there is a ready market from owner-occupiers to buy the completed product and provide a lump sum to the developer to pay off the development costs. In the commercial markets, for example, there are simply far fewer of both potential occupiers and owners. All in all, it is relatively simple for a developer to become established and knowledgeable enough to compete quite successfully.

Having said this, some areas of the market are very difficult for a small developer to penetrate, mainly due to the sectors being dominated by a relatively few number of large players. One such area is large-scale private house building. This sector has long seen large house builders dominate but in the period up to 2002 a series of takeovers and mergers in the market has led to a further concentration of power.

There are a number of reasons for this domination. Land for large-scale housing development is in relatively short supply in a crowded island like the UK. Planning authorities are careful in their identification and release of such land because of the potential impact on services and other resources. The larger scale house builders are able to build up 'land banks' of prime development sites, either with or without planning consent, in order to safeguard future work. This is not a luxury within the scope of the resources of the smaller developer. In addition, profit margins have, in the past, been relatively low in this sector meaning that each unit of housing has to be built to quite tight cost margins. This is easier to achieve with the larger organisations with economies of scale including their weight of buying power. The larger organisations also have a great stock of experience and data on the markets, which greatly assists in decisions such as the timing, and make up of developments.

It will be interesting to see whether this 'low margin' position will continue. One of the effects of the consolidation in the sector is likely to be to reduce the overall level of competition. The house builders may behave more like oligopolies as in the car market. Here there is, on the surface, price competition but in fact most of the competition is based on non-price issues such as customer service and brand image. This may occur in an unregulated housing market.

Another notable feature is that, although much attention is drawn to the sector, the new stock of houses developed each year is dwarfed by the existing stock. This means that there is some scope for redevelopment and refurbishment development. This is limited, however, because residential buildings in the UK tend to have a considerable lifespan and retain their value over time. The importance of this can be seen when an alternative market is compared with the pattern of values in the UK, as in the table below which compares a UK house with its Australian equivalent.

<i>UK Detached House</i>		<i>Australian Detached House</i>	
Value when new	Value at 50 years old (inflation adjusted)	Value when new	Value at 50 years old (inflation adjusted)
£100,000	£95,000	AUS\$250,000	AUS\$150,000

What we are observing is the effect of depreciation. In Australia, and in other markets, it is common for mass-market houses to have a limited design life span. Often this is due to the environmental conditions of heat and insect attack that means that decay is inevitable. It is much more common for combined house and plot values to decline towards site value. It makes buying to refurbish, or clear and reconstruct far more common. This occurs in other markets as well, such as in parts of the USA. Interestingly, this characteristic is reflected in these countries' property valuation approaches where there is a requirement to value the land and the improvements to land separately – in the UK valuers value the land and the building as a single entity. The reason is that values of older and new houses are not markedly different. With good maintenance, houses in the UK can last almost indefinitely and maintain their value over time. This makes refurbishment, or demolition and reconstruction relatively rare.

There are, however, development opportunities related to older stock. Firstly, there are circumstances where housing stock has not been well maintained and where values have fallen to close to, or even below, site value (this can occur where the structure is a major maintenance liability or where the cost of demolition takes the value of the site to below cleared site values). This often occurs in inner city areas where the stock has been in public control or where social conditions have declined. There is the opportunity here for purchasing these properties at low values and carrying out a refurbishment programme.

There are also opportunities that arise out of changes in society and consumer demand. The case of the large single-family house in inner areas has been noted. These larger buildings are ripe for division into smaller units whose sum of values is greater than the value of the dwelling in single occupation. A similar situation occurs in suburbia. It was traditional for large family houses to have large gardens. Although these are still sought after features, such large plots are not always a requirement. A common type of development in these areas is the creation of a new plot and house out of an existing garden (a good clue as to when this has occurred is when house numbers are suffixed by letters, for example 20, 20a, 21, etc). All of this requires the co-operation of the planning authorities, of course, who can be very cautious about the growth of existing urban areas.

(ii) Investment sub-market

The residential investment sub-market in the UK has seen a resurgence in the 1990s having been in almost total decline since the 1970s. The rise in the investment market, both in terms of individuals 'buying to let' and in private companies and financial institutions becoming involved, has been a major change in the UK market.

Until the 1990s the UK was almost unique amongst the world's countries in not having a significant private housing investment and thus, letting market. Other countries have long enjoyed the benefits of leased residential property, which include generally lower costs of occupation but particularly the benefits of occupier flexibility. A leased property is easy to dispose of and does not require any major capital commitment and risk. It is ideal for those with few savings or those who move jobs or locations frequently. Continental Europe, the major cities of the USA and Australia all see a substantial number of private sector letting property often occupied by people who in equivalent positions in the UK would buy the properties. A mainstream private letting market, i.e. one that serves more than the extreme ends of the market (the low income and student market at one end and the luxury market at the other) provide occupiers with flexibility and options.

At the beginning of the 20th century the UK did have a private letting market; indeed, this was the most common means of occupying property. For a number of reasons this situation steadily changed during the first half of the century. Firstly, legislation designed to protect tenants from unscrupulous landlords restricted the owners from charging rents that would allow the properties to be maintained whilst giving an adequate return on investment. Similarly, tenants were given greater security of tenure and rights of succession to relatives. This legislation was well meaning but caused private landlords to withdraw from owning property. Complementary

developments in society encouraged the trend: the public sector became the provider of low cost social housing to a large proportion of the population; the country became more affluent and wealth spread to the urban middle classes bringing home ownership within reach. The building society movement further enabled purchases to be made (see p. 25). All of these factors in society led to the UK residential sector being dominated by owner occupation.

Although the advent of a 'property owning democracy' had a number of advantages in terms of giving people a stake in the country, it had disadvantages in terms of choice and restricted physical labour mobility. As a result, measures were put into place to rekindle the private rented sector. Fundamentally, this revolved around the introduction of assured short-hold tenancies in 1980 that allowed fixed term lettings with limited security of tenure at market rents. Even then the change in the market came very slowly. It was not until the mid to late 1990s that a reasonable number of developments of residential investment properties commenced. Part of the reason for the slow change was the attitude of institutional investors and banks, neither of whom viewed residential investments positively. Institutional investors were put off by the high levels of management required to look after this type of investment. Banks were cautious because they doubted that buyers could be found for the completed developments.

Finally, it was market changes and cycles that seem to have triggered a change in attitude from the financial and development community. The property crash of the early 1990s had two complementary effects on the market: on the one hand, home owners who needed to move around the country often found it difficult to sell their properties at reasonable prices and were forced to let out their properties and rent elsewhere. This allowed a number of people to experience this form of tenure, boosting numbers in the market. On the other hand, the commercial sector found that there was a huge surplus of mainly secondary commercial space that seemed to have very little prospect of ever being let. The only economic possibility for many office and industrial buildings was to convert them to residential use. In addition, urban regeneration and the general desire of young professionals to live in city centres boosted the move back towards city living. All of this created the environment which sees residential development for rent being a very active sector in current UK markets.

In addition to these mainstream markets there are a number of other active residential letting markets. These include:

- *The student market.* This sector has grown considerably with the expansion of university level education over the last 20 years of

the 20th century. Some of the universities have entered into partnerships with developers and investors for the provision of privately run flats and halls of residences but where there is a contract with the university to provide the service. These schemes have become an important element of urban regeneration programmes, as a number of universities are located in these types of areas. The market has become much more sophisticated and the quality of development has greatly improved.

- *Government supported housing benefit schemes.* A large part of the remaining private rental market falls within this criteria. The market seems to be largely confined to the older existing stock and is not frequently associated with the development market.

It is important to complete the review of the residential property market by examining the public sector, social housing and low cost housing sectors. Until the mid 1970s the public sector was dominated by major developers of residential property for let, i.e. council housing. The right to buy schemes and public sector spending constraints on local authorities have reduced new development by the public sector almost to zero. The stock of council housing has also been reduced by right to buy and by the transfer of some public sector estates to private sector landlords.

The provision and development of low cost and social housing has been largely devolved to charitable private bodies, the Housing Associations. Using a combination of public grants and privately sourced funds, these bodies are major players in the residential property markets, particularly in inner urban areas. These non-profit making bodies have proved very successful and efficient at providing good quality, new, affordable housing. They also offer a wide variety of choices of tenure including traditional tenure, low cost purchase schemes and shared ownership. A substantial proportion of development in inner city areas is carried out by these bodies.

One of the big issues in all spheres of development at the start of this century is the re-use of previously developed land, brownfield land, which is part of the sustainable debate. This debate is at its most sensitive when related to residential land.

1.4.2 Commercial markets

Although the schism between the commercial and residential market has been noted, with few residential investors and developers also working in the commercial field and vice versa, this division has broken down somewhat over recent years. This is mainly due to the rise of the investment market in residential property.

There are disadvantages for the inexperienced new developer in breaking into the commercial markets:

- The 'entry level' size of commercial developments and thus the degree of financial commitment tends to be much larger than with residential property.
- Successful development in the commercial markets requires specialist knowledge. Each market tends to be individual and distinct both in terms of product and local market requirements. The demands of the market change far more frequently than with the residential market. The supply and demand balance can change relatively rapidly. Markets, therefore, need to be monitored very carefully.
- Opportunities for development are more rare than with residential markets and competition is keener. The reason for this is simply that there is less land ripe for commercial development than for residential use.

Despite this there are distinct advantages in operating in the commercial markets. Not least of these is that the potential returns from the sector are higher, although this is simply a reflection of the additional risk involved in commercial development.

The main sectors of the commercial market are relatively easy to define. They are:

- Offices
- Retail
- Industrial
- Leisure.

Despite this ease of definition, in reality the divisions between the sectors can be blurred. The Government has, for planning purposes, allocated many urban land uses into use classes. The A class, for example, refers to retail use; the B class, business and so on. Illustrating the blurring that can occur, A2 uses refer to financial services including banks, building societies, estate agents, etc trading out of shop type premises. Many of the functions of the businesses in this use class resemble offices, which are normally classified under use class B1. This class, however, can also include hybrid types such as 'hi-tech' research and development buildings and light industrial uses. The development of new types of property use often blurs the basic distinctions further. Call centres for example are office type functions but often they take place in industrial type buildings. Similarly, the first generation retail warehouses occupied industrial buildings on industrial estates.

The basic market types can be divided into different sub-sections and sub-types. We will try to outline the basic characteristics of the main markets and the key sub-markets below. These outlines can only be drawn very broadly. It should be noted that regional and local requirements and market characteristics show considerable diversity.

(i) Offices

Offices tend to be amongst the most popular sectors for developers. The reasons for this tend to be the quantity of the product and its ubiquitous nature. The greatest sectoral growth in the economy of developed nations in the last century has been in the service industries – and service industries need offices. In any major town or city across the world, you will find offices, usually with the same basic characteristics, specifications and layouts. Another reason for the popularity of office development is that a wide range of qualities and sizes has market demand, making the sector very accessible.

Another attraction to developers is that the majority of businesses choose to lease rather than own their own office space. Although owner occupation in the office market has its attractions, including the ability to raise finance against the value of the asset and to obtain premises that can be exactly tailored to the requirements of the occupier, the costs of management and the degree of capital tied up in the ‘bricks and mortar’ rather than in the core business, tends to favour leasing. This means that there is an established market in most locations for leased office space as well as the ability to create investment vehicles with the security of good quality tenants securing the income flow.

There are, of course, disadvantages for the developer as well. The office sector is prone to rapid changes in demand from occupiers as expansion or upgrading plans are made and then shelved by occupiers as the business climate waxes and wanes. Offices have considerable flexibility in terms of their intensity of occupation. A firm can delay the decision to move by simply packing more desks and workstations into an existing space. This demand elasticity is in contrast to the supply chain. Office schemes tend to take many years to reach fruition, largely because the components required to complete a scheme (the site, legal and planning issues, ownership, tenant identification and negotiation, design and specification, etc) are numerous and complex. A moderate city centre office is likely to see a three- to five-year development period from idea through inception to completion by way of occupation, letting or sale. In this time market requirements, conditions and demand can have changed markedly several times.

A second major risk to developers is related to changing occupier requirements in terms of specification and location. Occupiers do tend to follow the herd, despite any protests that might be made to the contrary. There are a number of examples in the UK where sudden changes in fashion can make locations and types of buildings almost obsolete overnight. This usually occurs when the traditional core office location where the best occupiers reside is characterised by older, period buildings, perhaps Victorian or older. These buildings have drawbacks to modern occupiers in terms of layout and ability to incorporate modern communication technology. Usually restrictions are imposed on redevelopment and refurbishment by the planning and heritage authorities. Occupiers tend to put up with these inconveniences because of the prestige and image that goes with the address. Developers and investors can pour money into these areas to maintain the stock and to go as far as they can to provide modern facilities to occupiers. This situation goes on for many years until a developer builds a modern, highly-specified prestige building, usually in a hitherto fringe location. In these conditions it will only take one or two major tenants to move to the new location to make it acceptable and for a mass rush of movement to occur out of the traditional areas. These areas can be transformed overnight to wastelands of high vacancies and collapsing values. The author has observed this situation occurring to a lesser or greater extent in London (with the influence of Docklands), Edinburgh, Manchester and Birmingham.

There are a wide variety of types and sizes of offices as has already been noted. These include:

- Single rooms
- Offices above shops
- Suites
- Serviced offices
- City centre
 - Grade A
 - Grade B
 - Grade C
- Business Parks
- Call centres
- Stand-alone headquarters buildings.

The key types will be reviewed below.

(a) Single rooms and offices above shops

Although not a major development sector in their own right, these two sub-types of office provide the developer with useful ancillary income from a

scheme. They are also sometimes popular with planning authorities as they provide mixed use elements to schemes. These key types tend to be occupied by smaller businesses and professionals such as solicitors, accountants and surveyors.

Developers have to be aware that the extra income may be countered by movements in investment yield by incorporating the additional use into the property. Some investors equate additional uses and tenants in investments as creating added restrictions and management cost, and may require an extra initial return to compensate them. This impacts on capital values.

For example, consider a retail development that produces £50,000 pa in rent and for whom investors are willing to accept an initial yield of seven per cent. This equates to the following completed value:

Initial Income	£50,000
Capitalised at a year's purchase in perpetuity @ 7%	<u>14.285⁵</u>
Value of Investment	£714,250
Say	£710,000

Let us assume now that a developer incorporates a small office suite on the hitherto unused upper floors of the scheme. This mixed use scheme is less attractive to investors in the market at the time of development due to the additional management costs that are anticipated as the office will be let on a separate, shorter lease than the main shop. Investors require an additional one per cent return on additional income in compensation.

Initial Income	£55,000
Capitalised at a year's purchase in perpetuity @ 8%	<u>12.500</u>
Value of Investment	£687,500
Say	£685,000

⁵ With income producing properties, the value of the asset is usually found by multiplying the annual net income by an income multiplier based upon the inverse of the investor's required initial return or yield. If investors seek a seven per cent return this means that they should pay $\frac{1}{7}$ per cent or 14.285 times the annual income when buying the property. As the investors required return rises, so the multiple of annual income falls, so an eight per cent required initial return equates to $\frac{1}{8}$ per cent or 12.50 times the annual income. This short initial explanation of how investors determine bid prices will be expanded on in a later section.

The additional income of £5,000 has reduced the completed value of the development by £25,000. The attitude of investors can seem illogical but it is a real and very important factor for both developers and planners to consider.

(b) Suites

One major attraction of office markets is that multiple occupation of buildings is an accepted part of the market. Many buildings lend themselves to sub-division into suites, although issues such as security, tenant mix and fire escapes must be considered. Division of a building into self-contained suites can be a low-cost development option for a building that has previously been in single occupation. The income flow from the divided building can often be significantly higher than for the single occupancy building, largely because the market for smaller suites is so much larger than the market for large single buildings. The initial yield effect for multi-let buildings as noted above, however, occurs here too and the value situation must be carefully monitored.

(c) Serviced offices

Serviced offices is a sector that at the time of writing (early 2002) is very much in vogue. Serviced offices offer occupiers flexibility of occupation and the ability to set up in business quickly without the need to set up the infrastructure (support staff, office equipment, etc). The office buildings are divided into a range of different sizes of suites and are staffed and equipped by the service office provider. Potential occupiers enter into short-term agreements with the provider to take office space in the facility as well as being provided with a range of back up facilities at an additional charge. Although the occupation charges are high compared with traditional renting, as a short-term solution to many firms they are cost effective. They also do not require the occupier to take on the liability of taking out a traditional lease.

There are a number of major players in the service office market who own or lease space in a variety of locations ranging from traditional city centres to business parks. A number of smaller private investors and local authorities also offer schemes, the latter often as a service to assist small business development.

(d) City centre offices

City centres were the traditional home of the office as they were convenient for transport routes, particularly public transport, and there was also the

attraction of being close to complementary and competing offices for such things as the transfer of messages and documents. The rise in personal transport and the development of information and communication technology has largely freed office users of the physical reasons for their location choice but city centre locations are still very important. This is partly due to the continuation of the aforementioned factors but also for reasons such as prestige and the social elements of city centre environments.

The changes in information and communication technology and the rise of personal transportation have seen some diversion of office demand to the edge of built up areas and onto business parks. These locations allow more space, far better car access and are generally much more cost effective with total occupation costs (including rent and property taxes) of generally between 50 per cent to 70 per cent of the cost of city centre space. As a result of this, businesses have moved many of the more labour intensive lower grade office functions out to the fringe of town locations. Similarly, businesses that do not need to locate in prestige locations – perhaps those who do most of their business at a distance from their customers – have also moved to these locations. The city centre, however, continues to be very important and, generally, generates the highest rental values.

City centre offices are usually graded into A, B and C quality specifications. There is, however, no absolute definition of what these grades are from year to year. They approximate to the following:

- A** Top quality new, usually air-conditioned open plan space, let on institutionally acceptable leases, in the most sought after locations, for which the highest rents are paid.
- B** Lesser stock, usually second-hand, often – but not always – in inferior locations and possessing characteristics which limit their attractiveness to top quality occupiers.
- C** Older, poor quality, poorly located offices, usually let at low rents on shorter leases.

The reasons for the doubts about the definitions are numerous. Firstly, it is often a relative grading based upon the characteristics of the local property market, i.e. Grade A space in one location may not be considered Grade A in another. Secondly, occupiers' requirements for top quality space vary over time. During the explosion of personal computer use in the early 1980s, space that could not provide under-floor raised access for data and communication runs were downgraded. Similarly, whilst new, well located, well specified office space may be provided within a city centre such as Manchester, it may not be graded as Grade A by occupiers if it fails to meet the modern requirement for large single floor plates.

Although some demand has been diverted away from city centres to business parks and the communication revolution has allowed such activities as home working and hot desking, the prospects for the city centre office are still good. Firstly, the concept of the office is remarkably durable. People do not need to work in offices but they choose to do so because of the human need for social interaction. Secondly, governments and pressure groups throughout the world are pressing for a sustainable use of resources. This implies on long-term reduction of car use, the regeneration and re-population of city centres and the development of improved and more modern public transport systems. All of this suggests yet more use for and demand for city centre offices.

(e) Business parks

Some of the attractions of business parks have already been discussed. The business park concept started, as with most things in the property markets, in the USA, in this case in the 1960s. The basic concept of the business park is low-density development of relatively low-rise buildings in landscaped, pleasant environments. These locations are on the edge of major urban areas and need to have both good car access to the motorway network and extensive car parking.

There are a range of developments that are referred to as business parks but which, in fact, do not possess all of these characteristics. Indeed, the term has come to refer to virtually all edge-of-town or out-of-town office development. True business parks tend to have very low densities (below 30 per cent of site area) and high degrees of landscaping. The realities of development in a congested and competitive market such as the UK are that site densities tend to be rather higher and landscaping limited to planting around the car parks in order to make the schemes cost effective for developers.

Similarly, cost constraints limit the specification of decentralised offices. Lower rents in decentralised locations means that construction costs of investment buildings tend to be about 30-50 per cent of the costs of top quality city centre space. Part of the lower costs are due to the easier construction conditions found on decentralised sites as opposed to city centre locations but mainly they are due to limited specifications. These types of offices are invariably two- to three-storey steel-framed, brick-clad buildings with shallow-pitched concrete tiled roofs. They are double-glazed but are often not air conditioned in the UK. Where air conditioning is fitted the systems tend to be unsophisticated. There are usually raised access floors and suspended ceilings but this is generally the limit of specification. This is simply due to the limits imposed by the relatively low rental values generated.

(f) Call centres

Call centres are a form of office use, though they do not specifically appear in the Use Classes Order of 1987, as they were not even thought of at that time. They are populated by a rolling staff of workers who man PC-linked telephone lines. Call centres occupy a range of building types from traditional offices (both in city centre locations and on business parks), converted warehouses and distribution buildings to purpose built facilities.

(g) Stand-alone headquarters type buildings

The final type of office included in this brief review is the headquarters building of major organisations. These tend to be in decentralised or even rural locations, either in converted country houses or bespoke, modern buildings. These properties tend to be owner occupied and have very little interest to the private developer other than as potential future development sites.

(ii) Retail

The retail sector has been very resilient in the UK. In some respects the core activities of retailing – city centre and high street shops – have changed very little over the last 30-40 years. Having said this, there have been substantial changes over the period that can be summarised as the following trends:

- (a) The rise of the national multiple. In many ways, all high streets and shopping centres in the UK and, increasingly, over major cities in Europe, have started to look very similar. The main reasons for this have been the consolidation of retail groups and also the result of the preferences of institutional investors who favour the larger retailers in their developments. These retailers themselves are very influential and many locations and shopping centre schemes need to be occupied by certain groups in order to achieve credibility with funders and, indeed, other retailers.
- (b) The rise of the supermarket. There has been a steady trend towards single-visit bulk shopping over the last 40 years. Supermarkets have grown in all ways: in size, in the number of ranges offered by each store, and in influence on the retail sector. Again, the number of supermarket operators has fallen as groups consolidate. The current trend at the time of writing in the UK is for global players to develop. An important example is the growth of the Walmart Group who has entered the UK by the acquisition of ASDA. In the US Walmart has a reputation as the 'Killer Big Box Store' and whilst the UK market is more

- diverse with stronger competition from local operators such as Tesco and Sainsbury's, the trend for ever larger stores and more pressure on the competition seems set to continue.
- (c) Both of the above mentioned trends and the influence of national multipliers have had a detrimental effect on smaller retailers and smaller retail centres which have seen steady declines over this 40-year period.
 - (d) Shopping has become decentralised. The traditional town centre is still important to retailers, however there has been considerable gravitation to the edge of town. This has been caused by the development of out-of-town shopping centres and retail warehousing, both of which will be covered below.
 - (e) The rise of the covered shopping centre. People may not admit it but by simple weight of numbers it is clear that shoppers prefer to carry out their purchases in a controlled, weather-tight environment.
 - (f) The rise of leisure associated with retailing. Shopping has become a leisure activity and has sometimes become seamlessly associated with mainstream leisure activities such as cinemas, public houses, bars and restaurants.
 - (g) The general increase in wealth of society has given people more disposable income and has fuelled a great increase in the volume of the sector.

The future of traditional retailing has been questioned in some quarters. E-commerce and e-tailing have been cited as being alternatives to physical shopping. The question is whether this is truly valid. There is no doubt that modern technology has already had an impact on certain sectors of conventional retailing and some forecast that the traditional high street may be badly hit by the diversion of spending. It seems more likely that e-tailing will tend to complement and expand the retail sector with only a few sectors seeing a diversion of trade. Technological changes tend to increase activity rather than provide alternatives – witness the 'paperless office' predicted in the computer age. Anyone working in an office knows that computers have vastly increased the ability and opportunity to create paper! Shopping is a leisure activity as well as a necessity. It is unlikely to be supplanted.

Retail investments come in many different types and sizes. This makes them popular with both investors and developers. Retail property is, however, extremely sensitive to location, making the acquisition of suitable sites difficult. The difference of a few metres can have a huge impact on the rental capital value of a property. Figure 8 illustrates how the weight of pedestrian flows determines this.

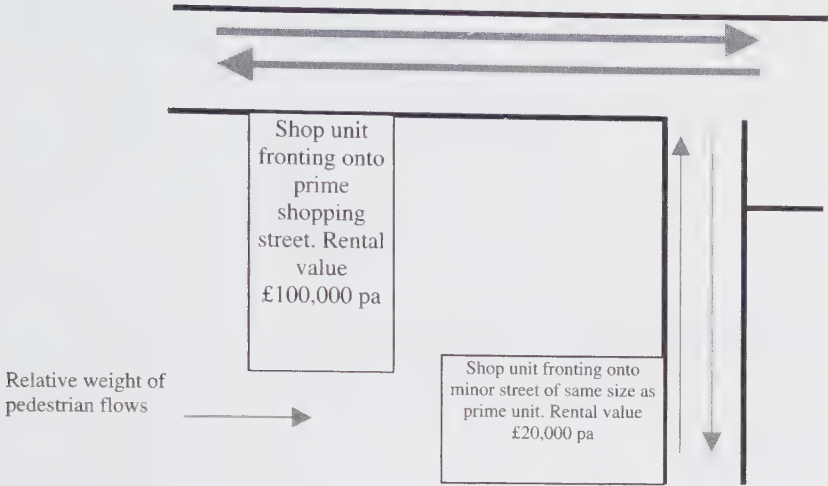


Figure 8: Minor locational differences cause major variations in retail property value.

Strong retail locations tend to be very ‘tight’ markets. Retailers tend to try to hold onto properties in these locations. This means that vacancies are rare and development opportunities difficult to find in town and city centres. One exception to this in recent years has been the redevelopment of older department stores. Many traditional department stores occupy old, inefficient buildings that have often been acquired piecemeal over the trading life of the store. These operators now find either overall trading difficult or else find it more cost effective to move to newer, smaller but more efficient premises, often as part of a shopping centre development. This opens the building up for conversion into smaller, standard shop units (SSUs – see below).

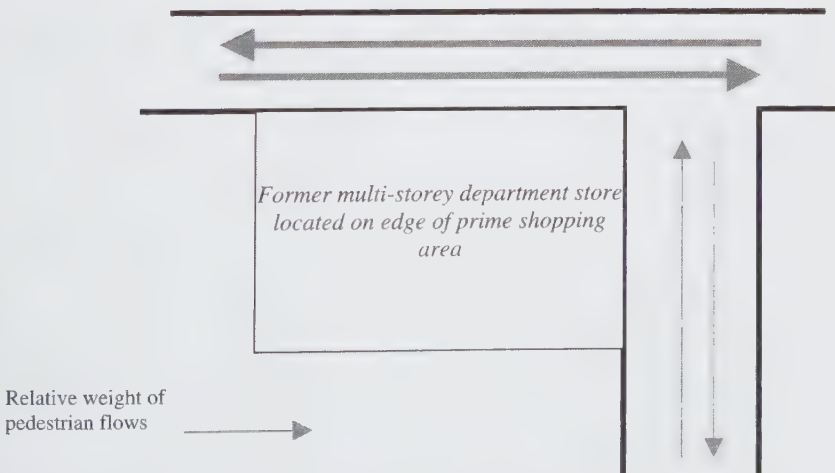


Figure 9: Starting point of development: existing department store.

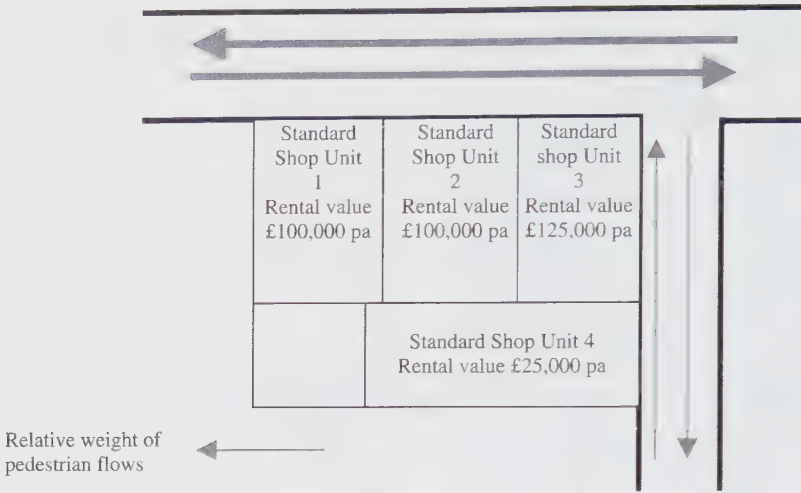


Figure 10: Completed development: provision of four standard shop units trading off ground and first floor. Ancillary storage area above with nominal value. Note that Unit 3 has a higher value to its corner location increasing its visibility to shoppers and thus attractiveness to retailers.

This type of development can realise considerable extra value. It should be noted that the majority of high street, supermarket and bulk retailing (as in retail warehouses) takes place on the ground floor only. Again, this is to do with the effect of the flow of people which tends to drop off considerably above ground level. The exception to this is in the busiest retail locations such as the absolute prime retail areas of major towns and cities where the expense of the locations forces retailers to maximise floor area utilisation.

Some of the key retail types are listed below. Each will be considered in turn in brief thumbnail sketches.

- Kiosks
- Standard Shop Units
 - Comparison goods
 - Financial services
 - Hot food and drink
- Local parades
- Convenience stores
- Supermarkets
- Hypermarkets
- Motor showrooms
- Petrol stations

- Shopping centres
 - In-town shopping centres
 - Out-of-town or suburban centres
 - Regional centres
- Retail warehouses.

(a) Kiosks

Kiosks are the smallest type of fixed retail premises and are occupied mainly by operations such as newsagents and confectionary vendors. They are sometimes useful vehicles for earning additional income from schemes.

(b) Standard Shop Units (SSUs)

Standard Shop Units (SSUs) are so named because they are essentially a standard size unit that the majority of conventional retailers can trade out of. They are essentially a simple box, 6 x 7 metres wide by 20-30 metres deep. In many cases, in particular in shopping centres, they are arranged over a single floor though a sensible developer will leave the facility for a stair opening to be formed in any structural first floor slab to give the operator maximum flexibility. Modern units are usually let as a shell to retailers to enable them to fit out the unit to meet their own corporate style. It is only at the bottom end of the market that the landlord might provide shop fitting. Developers should try to ensure that the floor area produced is unencumbered by intrusive structural columns and that it does not include any steps or 'pinch points'. All of these features inhibit retailing and will greatly reduce rental value. The aim of development is to produce a unit that will appeal to the widest range of occupants as possible.

A number of different types of business can trade out of SSUs (or two or more neighbouring units merged together for those businesses requiring more space). The planning authorities have recognised this and also that some of these uses, for example financial services and food and drink (non-alcoholic) businesses, have potentially more impact on neighbouring uses and the vitality of the town centre, and thus need additional control. The former type of use, which includes banks, building societies and estate agencies, produce bland frontages. Too many of these units can also lead to loss of vitality and diversion of trade from the town. Similarly, food and drink uses lead to greater out of hours trading, litter and noise. Both of these users do, however, have the potential ability to outbid other users. To control this the Use Classes Order has split retailing into: Class A1, general retail; Class A2, financial services; and Class 3, food and drink. Planning authorities are allowed to place restrictions on the latter two uses, including setting 'quotas' for the proportion of A2 and A3 to A1 uses. Under another arm of

the planning system, the General Development Order, operators are allowed to move from A3 to A2 use and A2 to A1 without the need for additional planning consent, but will require consent to move from A1 to any other use.

This planning restriction on classes A2 and A3 tends to put an artificial constraint on supply. It is quite common, therefore, for units with this type of consent to attract premium values.

The majority of users of A1 units sell comparison goods such as fashion, jewellery and electrical goods, though there has been a reduction in the range of operators using this type of unit as many retailers have moved to out-of-town, retail warehouse type locations. The ability to pay the highest rents between users varies according to market and economic conditions, hence it would be dangerous to generalise about this issue.

(c) Local parades

In some respects this is a false definition, because parades are usually made up of a group of SSUs. They are, however, a distinct type of retail property in their own right. Typically they have been developed by local authorities to service local needs. They date back to the period between about 1930 and the 70s. Following this period, local planning authorities usually required developers to provide only a convenience store or some other facility to support local housing. Some are retained by local authorities but some have been transferred into private ownership.

Rents in this sector are low and leases are short. Development opportunities are limited, other than the theoretical conversion to a higher value retail use such a restaurant. Usually, however, there is insufficient income flow or value available to cover development costs.

(d) Convenience stores

In some ways convenience stores represent an unlikely development and investment opportunity. They are the successors to the 'open all hours' corner shop which are open very long hours and sell a limited number of lines (compared with supermarkets) at relatively high prices and thus, profit margins. This was a sector that was ignored and even marginalised for many years. This has now changed and the sector has seen the entry of a number of big players and a rapid expansion in the total floor space operating in this way. The new entries to the market include Tesco with its Tesco Metro operation, and the Co-op who have adjusted their business plan around a convenience store profile.

The reason for this change around is due to three main reasons. Firstly, changes in society, including the trend towards city living, more flexible working time and the 24-hour society have encouraged the use of shops with longer opening times for occasional top-up purchases that do not warrant a full supermarket visit. Secondly, changes in the planning regulations in the UK have restricted the big supermarkets of continuing expansion in their traditional sector. They are forced to focus more on smaller urban sites rather than their traditional large edge-of-town locations. This means that to open new stores a new, smaller format is needed where profits and sales are maintained by higher costs and longer opening times. The third main reason for the growth in the sector is the intense nature of competition in the main supermarket sector. Some fringe operators have moved sectors to avoid direct head-to-head competition with the big players.

The trends in the market suggest that supermarkets may have merely delayed this competition and that the big players in the main market will also do the same in the convenience sector. The financial clout of the large players is such that there is little doubt about who will be the winners of this battle. Convenience stores tend to put even more pressure on local stores and traders and it seems inevitable that these traders will struggle to compete against the sector.

(e) Supermarkets and hypermarkets

This sector perhaps marks the biggest change in world retailing behaviour, let alone that of the UK, over the last 50 years. From small beginnings they now dominate retailing in most countries. Their influence spreads even further as their presence and behaviour shapes the pattern of farming in the UK; their business practices have led to the development of distribution networks including the motorway system and distribution warehouses; they have been a significant cause of the change to a car dominant culture; they have both led, caused and reflected changes in society and the way we lead and organise our lives. This is a considerable burden to lay at the door of what is, after all, an overblown corner shop but the more that thought is given to the nature of society today the more it is clear that the supermarket is central to it. This is not to lay any blame for the negative effects of these changes on the supermarket operators; they are only giving us what we clearly want.

The ideal modern supermarket or hypermarket is a large (3,000m² plus and usually much larger than this) single-storey steel framed box located on a large site where the building itself makes up only 20 to 30 per cent of the site area, the rest being devoted to car parking and, usually, a petrol filling

station. It will be located within a few minutes' drive time of a substantial population centre and will have excellent road access. Preferably there will be no competing large supermarket within at least two miles. The best sites have high visibility so they will be easy to find for potential customers. The supermarket itself will carry thousands of product lines both in terms of fresh food and non-food goods such as clothes, and will usually include a newsagents, bakery, chemist and butchers. Supermarkets are essentially town centres under a single roof.

The major operators, of which there are relatively few, have reached this point through evolution. There are still a high proportion of smaller, older stores who do not meet these specifications. In recent years the big players have been trying to move towards closing their older stores and moving to the larger, more efficient locations. The planning system has been tightened up to try to limit expansion of the sector which may cause the operators to rethink their activities. For example, they may have to consider redeveloping older, smaller urban stores.

There are still considerable development opportunities in the sector, though most of the large operators tend to have their own development departments who carry through their own schemes. The best a private developer may be able to do is to locate possible sites for introduction to the major operators. Another possible development opportunity arises out of the trend for supermarket operators to take space on retail warehouse parks. These outlets tend to be smaller than the stand-alone schemes.

There are a number of segments in the market. The leading operators have tended to operate at the premium end of the market. These operators include ASDA/Walmart, Tesco, Sainsbury's, Safeway and the Continental Europe operations Aldi and Netto. At the budget value end of the market are operatives such as Kwiksave/Gateway and the Continental Europe operations Aldi and Netto. The problem for the budget end of the market is that the giants of the sector seem set for a period of price competition as they vie for supremacy. This in itself will reduce the price advantage of the budget operators but this is not the least of their worries. The stores of the supermarkets are so large that the operatives can afford to compete in a number of sectors from the same store. The leading operators, for example, offer branded products, their slightly cheaper but good quality own brand version and a budget 'no frills' version of the same product in the same aisles. It seems that the sector will see more consolidation in time, which will make the giants more dominant. This will, in some cases, make development in this sector more difficult for the independent developer, though securing a major operator in a mixed retail scheme will be an even greater guarantee of success.

(f) *Motor showrooms*

This is a slightly odd sector in that it is not considered as being retail in many sectors (it is defined as being *sui generis*, i.e. a class on its own in the Use Classes Order), yet it clearly is, albeit one that sells a specialist product from locations removed from mainstream retail. There have been development opportunities in the past but usually for owner occupation. This situation may change however, hence the inclusion of this section in this review of property markets. There are changes afoot in the market that may push the operatives out of traditional patterns into different ways of operating. This may include a number of brands being offered from supermarket type locations.

(g) *Petrol stations*

This is another market that is dominated by major players, in this case the oil companies. There are relatively few, successful independent operators in the market, largely because of the ability of the large operators to secure the best sites and the low profit margins that petrol retailing enjoys. The market has seen a contraction in the number of outlets to concentrate on the best, most visible sites close to population centres. One effect of the low margins and the move to larger sites is that the operators have increasingly placed more emphasis on the ancillary retail parts of the business. Most filling stations now effectively operate as convenience stores or small supermarkets. Whilst it is unlikely that a private development company would be able to break into this market, the effect of the competition of filling centre sites on convenience store development should not be overlooked.

(h) *Shopping centres*

Along with the supermarket sector reviewed above, shopping centres – or shopping malls to use the increasingly used American term – have represented the greatest change in the landscape of retailing throughout the world. Shopping centres tend to dominate the world markets, though the form they take in each country tends to reflect local requirements.

There are a number of different forms that shopping centres take. The principal types are reviewed below.

- *In-town shopping centres*

The development of covered centres in the middle of urban areas is the main way in which the retail capacity of these towns is increased. There are

two main reasons for this. Firstly, shoppers do seem to show a preference for shopping in controlled environments where a range of shops are joined together. The second is to do with the constraints that exist within established urban areas. The demand for retail products has increased with the rise in real Gross Domestic Product (GDP) of the country. GDP growth leads to rises in spending and this normally gravitates to existing centres. This tends to lead to a rise in rents in these locations as expansion is difficult in most town centres. The development of a shopping centre is the normal way that this expansion takes place.

How this is often achieved is illustrated in Figure 11.

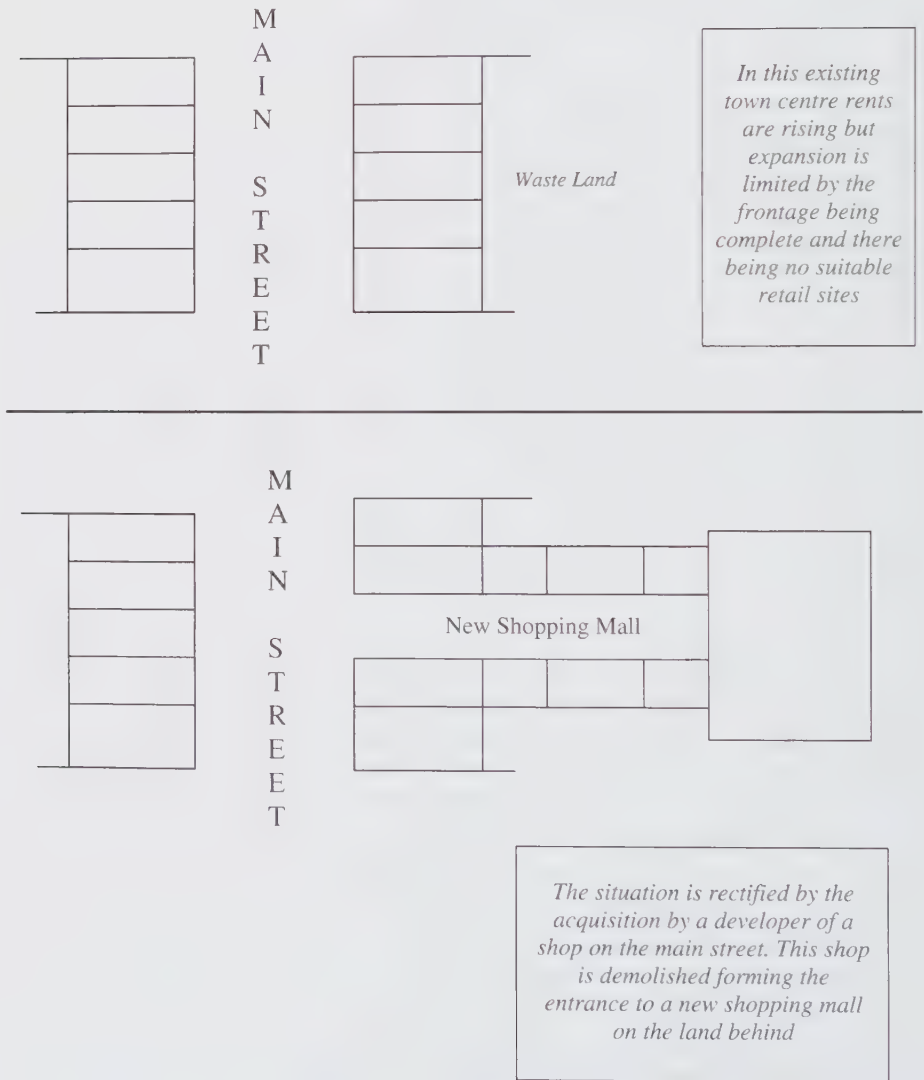


Figure 11: Typical town centre development in back land area.

Within most town centres, situations like this are fairly common. There is usually some low intensity large-scale land use that can be exploited. Quite commonly this is surface car parking or service yards or sometimes an industrial-type use.

These types of town centre expansion schemes have to be carefully planned as they can have a considerable impact on the dynamics and economics of the existing town centres. The schemes themselves are also not guaranteed success, even when they are constructed in a town or city where there is clear retailer demand. There are a number of examples where centres have been constructed in such locations where, for various reasons, the schemes have been failures because they have not attracted sufficient pedestrian flows into the malls. Town centres and shopping centres have an organic quality that is sometimes hard to predict. Shopping centres have a difficult balancing act to achieve: they need to attract the right quality of tenant to attract shoppers but if those tenants find they have not generated sufficient business and withdraw, even less shoppers are attracted and a centre can enter a vicious cycle of closure and down-grading of tenants.

Trends in in-town shopping centres over the last few decades have included the move from simple, basic covered centres towards much more expensive environments with high grade finishes and climate control. Most centres need an 'anchor', usually some large-scale space user that acts as a magnet to shoppers who then make complementary visits to the other shops in the scheme. Anchor tenants are crucially important to the success of a scheme and developers and funders spend considerable time in negotiation and selection of this key tenant. Schemes are frequently abandoned if a suitable anchor cannot be found, largely because the other retailers will not sign up to a scheme until this identity is known.

- *Out-of-town or suburban centres*

Suburban centres tend to have a slightly different make up to a city centre as they are designed to serve the local residential community, usually anchored by a supermarket or other food store, the rest of the centre being populated by a mixture of national multiples and local or regional traders. Rental values tend to be rather lower than in-town centres, though this does depend on the amount of turnover that the centres can support, which in turn depends upon the catchment area of the centre.

Suburban centres tend to be unexciting but very lucrative and profitable investments. This is mainly due to the fact that they usually are in a local monopoly situation. There is insufficient demand for more than one suburban centre in a local area and the planning authorities will, in any case,

have planned for the development rather than allow it to be developed speculatively. The scope for future development is thus limited to circumstances where an area is expanding, i.e. substantial amounts of new houses are being built, or else an area that is underserved by existing retail centres can be identified.

- *Regional centres*

These are the largest of the current breed of shopping centre and are likely to remain so with the current attitude of governments and planning authorities regarding sustainable development and being against car use. They are so named because they serve whole regions, their catchment serving a vast area. In the UK, the first example of such a centre was the Metrocentre on Tyneside. This pioneer has been followed by centres such as Meadowhall in Sheffield, Bluewater Park on the M25 and the Trafford Centre near Manchester. These centres need excellent road access with millions of potential shoppers within an hour's drive time. In time they will probably all need Mass Rapid Transit systems to link to them as well. Inside, they contain two to three department stores to act as anchor tenants, with the remainder of the units occupied by national multiples. There are usually a range of local tenants or a market-type arrangement to give variety and character to the development. All the regional centres have a high leisure content as well as extensive food and drink outlets. Leisure and entertainment is essential to keep families coming and spending in the centres.

Regional centres are developed by some of the largest companies. It seems that the market in the UK may have reached its peak but it is probable that the existing schemes will be extended in time. The biggest impact on most smaller developers that schemes such as this have is on developments in the smaller centres close by the regional scheme. These centres tend to see considerable diversion of trade. Development in these centres should be considered very carefully, particularly if it contains a retail element.

- (j) *Retail warehouses*

This sector represents another major trend of the last 20 years, though it is part of the same trend to move out of town. It is also a sector that has evolved very rapidly over its relatively short life.

The principle behind retail warehousing is that it involves shop operators trading out of industrial-type buildings in industrial-type locations. The first generation retail warehouses were indeed developed with the idea that if the concept failed, the buildings could be converted back to light industrial or warehouse use.

The original users were traders of big bulk items such as furniture and DIY companies who found it difficult to trade cost effectively in traditional, small, in-town shops. The move out of town offered them large, cheap premises with good vehicular access. The success that these sectors enjoyed encouraged a large number of other retailers to adopt the format, including electrical goods, fashion and white goods.

The units themselves changed as the sector became more mature. The initial developments were of stand-alone units; later terraces were built allowing the agglomeration of complementary uses. The later generations of retail warehouses tend to be in warehouse parks in prominent locations. The buildings have become further removed from their industrial roots with relatively high quality clad frontages that involve extensive glazing and facing brickwork.

Rental values of the initial retail warehouse units were around 25 to 50 per cent above the equivalent industrial rents with investment yields in double figures. Rents have risen considerably, though they still are well below town centre rents. Rents are now about two to three times above industrial figures. Retail warehouse development is heavily controlled by planning authorities, which artificially control supply and tend to fuel rental growth. There is still considerable scope for development although at high rent levels some operators struggle to make the locations viable. In particular, the control of expansion of retail warehousing into new sites tends to support the redevelopment of older, first generation sites that have existing consent for retail use.

(iii) Industrial

The industrial sector is viewed by some as the least exciting of the mainstream property types. It attracts the lowest values in terms of rents and capital values. The buildings are the simplest in the whole property sector, the cheapest to construct and have the shortest economic life on average (largely through their occupants driving lorries into them). Despite this view, industrials may be a little bit of a Cinderella underneath their mundane appearance.

The positive side of industrial properties include the fact that demand tends to be steady. A large range of businesses can operate out of industrial premises; they are, after all, merely simple boxes in the main. A major attraction of the sector also lies in its lack of popularity with speculative developers. The balance between supply and demand rarely gets out of equilibrium because the sector rarely gets overbuilt.

Like all the other property sectors considered to date, the industrial sector is divided into various sub-markets and sub-types. Some of these are listed below:

- Lock-up workshops
- Starter units
- Standard industrial units
- Hi-tech industrial units
- General industrial buildings
- Warehouses
- Distribution units
- Specialist industrial building
- Self-storage.

Again some of the major types will be reviewed below.

(a) Lock-up workshops

Lock-ups are the traditional heart of the small industrial market. They are generally older stock located within existing urban areas, occupied by small businesses. They generate relatively low rents and attract high yields, which equates to high value. They are, however, attractive to a number of businesses and to those who promote mixed-use schemes. A selection of sizes of lock-up workshops and warehouses can add vitality and important job opportunities in an inner city area. They can be useful, therefore, as a magnet to attract other activities but also to ease the passage through the planning system of a scheme with more valuable mainstream commercial or residential elements.

(b) Starter units

Starter units are the modern successors to the lock-up. These are small units (not often larger than 100m²) that offer simple but modern facilities for smaller businesses. They are quite often provided by local authorities and regeneration companies to provide assistance and start-up premises for these small operations. Again, the rents are relatively low and the covenant of the businesses that take the leases is rarely very strong. As a result, values are low. It would be difficult for a developer to make sufficient development profit to justify the development of starter units alone.

(c) Standard industrial units

In some respects this is a misnomer. There is no such thing as a standard industrial unit as they vary so much in size if not in specification. There are, however, some standard features that modern units possess.

They are usually, in the UK market at least, of steel portal frame construction with six metre eaves height with a relatively large, clear floor span unencumbered by columns. This gives the maximum flexibility in operation. The buildings are usually clad with profile insulated light metal sheeting with translucent panels on the roof. The lower parts of the walls are usually built of non-load carrying concrete blocks. There is an increasing tendency in new units to face the front of the buildings in facing brickwork with high quality fenestration, to give them an office like appearance. The main entry to the building is by way of a large roller shutter door at the front with, generally, a separate pedestrian access to the unit. Typically part of the unit, usually the front, is given over to office space, either at mezzanine level or over both stories. The office space forms between five to 15 per cent of the total floor area in a typical unit. Sizes of light industrial units range from around 100m² to 2,500m² plus in the main. The floors are of reinforced concrete, usually around 200mm thick which gives a good load bearing capacity.

The units can be stand alone or else arranged in terraces. The former gives the tenant the highest visibility and identity and also the ability to expand the property easily. The latter usually offers the developer the most efficient utilisation of the site and also reduces overall construction costs by reducing the amount of steel and cladding required. An essential part of these units is the yard area around or in front of the units. There must be sufficient area to allow for staff and visitor parking as well as large vehicular servicing. The larger units require access room for large articulated vehicles and often incorporate dock levellers. These are ramps set into the yard areas that bring the tailgate of the vehicle level with the floor of the building, allowing for ease of unloading and loading. These features are also incorporated into distribution buildings (see below).

(d) Hi-tech industrial units

Hi-tech industrial units at one point looked set to be a major component of the property market, being a brief feature of the technology revolution of the mid 1980s. The sector has, however, had a limited impact. Hi-tech units are essentially flexible structures that incorporate office, research and development and a manufacturing function within the same shell. They were essentially industrial buildings with a very high office content (up to about 50 per cent usually).

That the sector has failed to become distinct in its own right is due to a number of factors. Probably the most important was the change in the planning system and specifically the Use Classes Order (UCO) of 1987. The planning system had not kept pace with developments in the economy and

prior to the new UCO, industrial and office uses were considered separately. This caused real problems with the new electronic industries that required office-type facilities as part of their production and development activities. Some of the industrial units that were occupied at this time were fitted out accordingly but were probably illegal. There was, however, no option to move to office-type buildings because firstly the buildings were unsuitable in layout and facilities, and secondly the office use class did not allow manufacturing to take place on the premises. The 1987 UCO accepted the facts of the situation and recognised that offices and light industrial activity could be incorporated together and would have a similar impact on the environment. The new business class B brought offices and light industrial uses together in class B1, general industrial into class B2 and warehousing into class B8.

These changes meant that occupiers have the flexibility to adapt most light industrial buildings to meet their needs as required. Hi-tech buildings have not so much disappeared but have been absorbed into a continuum of uses that has traditional light manufacturing at one end and pure offices at the other. The requirements of the major hi-tech units have also apparently changed over time. As their businesses have grown and matured it seems they have adopted the traditional separation of manufacturing and office functions as per other industries.

There is still a premium attached to hi-tech type units. Rents are higher than conventional industrial buildings but this is largely due to the higher office content of the units.

(e) General industrial buildings

General industrial buildings fall into class B2 of the 1987 UCO. (The 'missing' classes B3-B7 not mentioned in the review to date refer to specialist industrial activities.) The B2 uses include activities that potentially conflict with public access and with neighbours due to the use of heavy plant and machinery or the production of noise or noxious fumes. The buildings tend to be similar to those described above for the standard light industrial uses, though they are on the larger end of the size spectrum. The sector tends to be dominated by owner occupation though there are some investment properties and speculative development.

(f) Warehouses and distribution units

These two categories of industrial building are considered together because they fall into the same category of use class, B8. They are essentially the same use. However, whilst smaller warehouses are very similar to light

industrial units (indeed, many industrial buildings at the smaller end of the scale can be used for both B1 and B8 use and, frequently, for B2 (general industrial) use as well) the larger distribution units have started to become distinctly different from 'normal' industrial buildings.

Strictly, warehouse buildings are distinct from B1 industrials. They tend to have a lower percentage of office space, they normally have an eaves height in excess of six metres and require additional circulation space externally to allow for articulated lorry movements. In fact, as noted, often flexibility is built into the design of smaller industrial units to allow for a range of uses including warehousing.

Distribution units on the other hand are distinct. They are another example of how the property market both reflects and enables change in society. Modern retailing in general, and supermarkets in particular, require excellent distribution systems. Most companies follow the 'just-in-time' principle of stock holding, storing very little material on the premises but ordering new stock as and when needed. This requires a system that is flexible and which is quick to react to service orders. The only way to achieve this is to set up a massive logistic system revolving around huge warehouses located within a few minutes' drive time of the major motorway intersections.

This means that the system revolves around road transport. The system is remarkably efficient but is also vulnerable, as the fuel protests of late 2000 illustrated. It also underlines how difficult it would be to change the system to alternative systems. At present, clusters of warehouses owned or occupied by either the main distribution companies or directly by retailers are found at key motorway intersections.

The buildings tend to be vast. The typical distribution warehouse today has a floor area in excess of 10,000m² with eaves height of eight to ten metres. The units will have a large number of dock levellers allowing many vehicles to be serviced at once.

Rents of these units are relatively high but the operators tend to try to negotiate shorter leases than is the norm in the rest of the prime industrial market. This is because the contracts that logistic companies have with the main retailers and other customers also tend to be renewed regularly and the occupiers like to match their commitments to their income flow.

(g) Self-storage

Self-storage is a relatively new industrial/warehousing type use for the UK, though it has been long established in the USA. They are usually located in

traditional industrial/warehousing type locations, offering individuals and small companies the ability to store equipment and personal effects for the period when they are not required. This market is very big in the USA and is getting bigger in the UK. The first phase of expansion in the UK saw existing second hand units being converted. There has now been a small amount of development of new units.

(iv) Leisure

Leisure property used to be a fairly marginal sector but in recent years has blossomed into one of the most active and popular for investors and developers alike. It may, indeed, be too popular at the time of writing with a tendency to overbuild.

Investors have long known that this sector would boom due to society's increasing focus on leisure, the increase in leisure time, rise in disposable incomes and other changes in society. They had, however, traditionally avoided the sector for a number of reasons:

- (a) The sector is risky because it is the one that is most subject to fashions and fads. A development may be profitable for a short period of time but then may go out of fashion. Most property investment requires sustained income over a long period of time to repay the high levels of capital involved in its creation.
- (b) Leisure properties tend to suffer from high levels of depreciation. They need frequent refurbishment and alteration to keep them competitive and up to date.
- (c) Leisure spending tends to be the first affected by a slow down in the economy. Downturns are therefore perceived as having a more marked effect on this sector of the property market than any other.

Despite these factors the trend and attitude in the market has turned around almost completely. Investors and financiers have fallen over themselves to pour money into the sector. The reasons are numerous:

- (a) The sheer weight of consumer spending and the durability of this spending have convinced investors and developers that the sector will continue to thrive.
- (b) Certain sectors, particularly cinemas and restaurants, have proved particularly durable and consistent, producing excellent returns over a long period of time.
- (c) The economy has enjoyed a long period of growth over the period since 1992/3, meaning that leisure spending has continued to grow.

- (d) Investors have gained experience of the sector making it less of an unknown quantity. In particular, investors found that large retail schemes worked best when an element of leisure was included. This encourages them to form a working relationship with the leisure operators where none had previously existed.
- (e) Investors recognised that the large leisure operators offered high quality covenants as tenants.
- (f) The effect of the herd instinct. This factor is never to be overlooked in the property markets. Although the players in the market are increasingly sophisticated they do not like to be exposed as individuals going a different way from the crowd or to miss out on any potential gains that others are making in a sector. When a number of larger players put money into a sector the others will invariably follow. This actually has the effect of driving up values and thus returns in these sectors, as the demand for investments causes competition just as in any other market. The drive for higher returns tends to be self-generating, at least in the short term.

There are a number of leisure vehicles that have been developed. Some of these are listed below:

- Cafés
- Restaurants
- Theatres
- Cinemas
- Bowling alleys
- Health clubs and sporting facilities
- Nightclubs.

Of these it is only really the cinema market that has been established long enough to show clear development and trends. Modern cinema development started with the multiplex concept, a number of smaller screens usually located on or close to retail parks, usually consisting of retail warehouse type buildings fitted out as cinemas. These entities have now moved back into the city centres from the edge of towns. The current trend at the time of writing seems to be towards multi-faceted leisure schemes with cinemas, restaurants, bars, gaming and isolated specialist retail outlets being located under the same roof. An example of such a scheme is the Printworks in Manchester, built on the site of the former *Daily Mirror* printing presses and building. The success of such schemes is yet to be established.

1.4.3 Investment markets

(i) Introduction

It is very important to consider the investment market as well as the general property markets. As we have noted, the nature of property is for several layers of interests to be created out of it, each which can have their own, largely independent sub-markets. Of these, the investment market is the most important because of its influence on shaping what gets built and where. It is these aspects that we will examine in this section.

(ii) The relationship between the investment markets and the development sector

It should be noted that the investment market only makes up a small proportion of the property market. As we have seen, by value and numbers, the majority of the property market is made up of owner occupied residential property. In the commercial market, the investment sector is more significant but there is still a high proportion of owner occupation. Of the investment market itself, again only a relatively small proportion is owned by the big financial institutions but this is invariably the best quality, 'prime' property. It is, however, these institutions which have an enormous influence on the property market as a whole, far in advance of the extent of their direct ownership. One of the reasons for this is that a high proportion of development is funded by the financial institutions at the top of the market. These institutions, as we will see, have a constant demand for new property investments. Their specifications and requirements set a benchmark for the rest of the property market. They are the ones with the resources and financial influence to determine what will be built and where, and to what design.

The development market has sometimes been accused of producing bland, unadventurous designs that do little to promote ideas such as sustainability, or reflect the character and heritage of the urban fabric for the UK. The critics perhaps fail to realise that developers build for investors as much as they build for occupiers. They also perhaps fail to understand why the financial institutions are so conservative. This is mainly due to their role as managers of other people's investments. Part of their role in the property markets has already been discussed earlier in this chapter; we will concentrate here on the detail of their activities and how it relates to their status and activities.

(iii) Investors and their requirements

Investors' behaviour and their requirements are determined by a combination of their motives, financing and tax status. The big financial institutions are the custodians of their policyholders' funds. They are thus risk averse. They need to invest for the medium to long term to secure the total returns to meet the requirements of their investors. They thus invest for capital growth rather than pure income. They are also able to accept a very low-income return because they have beneficial tax status at worst, thus most of even a four to five per cent initial return go to their policyholders. This means that this class of investor will bid for safe, high quality, expensive, low-yielding investments. Similarly, developers will be required to provide such investments. Contrast this behaviour with a smaller property company who funds property purchases through debt. They pay income and corporation tax as well as having to service their debt. They cannot bid for low yielding property because it will be impossible for them to meet debt repayments whilst making a profit.

Figure 12 illustrates the overall picture across the investment in the UK with most of the major players being listed.

(iv) The benchmark: Institutional quality investments

Institutional quality property is the benchmark that all other property is assessed against. Institutional quality refers to the type of property that the life assurance and pension funds would accept into their investment portfolios. They are the best quality and thus the highest value properties. Movement in prices for this class of property determine the prices in the rest of the commercial market.

Institutional quality investments have certain characteristics. These can be summarised in terms of their location, specification, occupiers and lease terms.

(a) Institutional grade locations

Obviously this will depend upon the property type but to generalise this will tend to be the location that is in the highest demand for the type of property that is being considered. High demand will equal high rental and thus capital value growth potential due to occupiers competing for space. Having said that not all locations will have institutional grade property of all types. London has a number of such locations in each category, for example institutional grade office locations exist in the West End, the City, Mid-Town (a term imported from the States which in London covers the area between

INVESTOR TYPE	Pension Funds	Life Assurance Companies	Overseas Investors	Real Estate Investment Trusts
	To provide long term pension products for pension holders of the organisation.	To provide life assurance, investment and pension products to investors competitively in the open market.	Varied, but unusually part of investment portfolio for pension and life products as per the UK financial institutions. The UK offers an investor friendly market and diversification options.	United States Tax Efficient Investment vehicle.
Source of Funding	Equity funded. Contributions from workers and employers into pension funds.	Equity funded. Contributions from investors and policy holders.	Mainly equity funded. Contributions from investors and policy holders.	Mainly equity funded. Contributions from investors and policy holders.
Tax Status	Largely exempt from taxation on investments.	Beneficial tax status. Pay tax but at low rates.	Depends upon how investment vehicle is set up but usually taxed as offshore investor.	Offshore tax status. Limited tax payable in USA if majority of income and gains are distributed.
Behaviour in the Property Market	Generally invest in low yielding prime property that enjoys high levels of capital appreciation. Tax status means most funds can be retained. May forward fund development schemes but rarely directly carry out developments.	As per pension funds but are slightly more risk taking due to outperform competition in order to attract investors. May forward fund development schemes and sometimes directly carry out developments.	Similar to the previous two but with some differences. Firstly, they will rarely invest outside London or the Southeast. Secondly, some have an appetite for 'trophy buildings', high status landmarks obtained at high cost. Finally, they concentrate on covenant above growth consideration.	Invest aggressively in overseas markets to meet unsatisfied demand for property investment from the US home market. Tend to go for higher-risk, higher-yielding products.

Figure 12: Players in the UK investment market.

Banks and other Similar Institutions	Large Property Companies – Stock Market Listed	Large Private Property Companies	Small to Medium Property Companies	Individuals and Others
Usually two motives (1) for general profit on banking activities (2) for pension and investment products.	To increase the value of investment portfolio and thus shareholders' funds.	To increase the value of investment portfolio and thus shareholders' funds but shares not offered on open market.	As per large private companies.	Various motives.
Mainly equity funded. Contributions from investors and policy holders.	Part equity (shareholders' funds) and part debt (usually debenture stock).	Part equity (shareholders' funds) and part debt (usually debenture stock).	Party equity (shareholders' funds) and part debt. Debt is usually conventionally sourced through bank lending.	Usually investment of personal wealth but some debt financing.
Mixed, some beneficial status but pay corporation tax in UK.	Pay corporation and income tax.	Pay corporation and income tax.	Pay corporation and income tax.	Pay corporation and income tax.
Some direct investment but usually is connected with own occupational requirements. Also involved with joint venture developments for profit share.	Tax status means that they cannot outbid the institutions for the lowest yielding properties. Tend to operate mainly in the office and industrial market, plus some secondary retail. Risk taking, therefore will undertake development.	Tax status means that they cannot outbid the institutions for the lowest yielding properties. Tend to operate mainly in the office and industrial market, plus some secondary retail. Risk taking, therefore will undertake development.	Tax status and cost of funds restricts activity largely to secondary (i.e. poorer quality) investments that are high yielding and thus self-funding. Many developers in this sector.	Tax status and cost of funds restricts activity largely to secondary (i.e. poorer quality) investments that are high yielding and thus self-funding.

INVESTOR TYPE	Pension Funds	Life Assurance Companies	Overseas Investors	Real Estate Investment Trusts	Banks and Other Similar Institutions	Large Property Companies - Stock Market Listed	Large Private Property Companies	Small to Medium Property Companies	Individuals and Others
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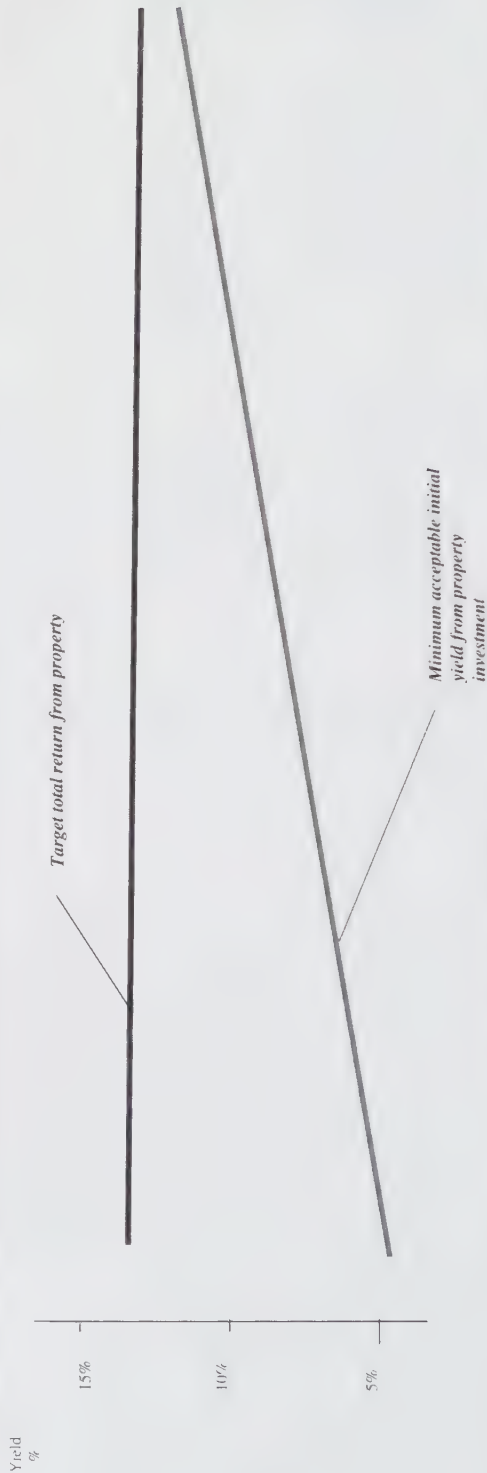


Figure 13: A rough indicative diagram that shows how the identity, motives, funding and tax status of the individual investor equates to their behaviour in the property market. The equity funded, risk averse, beneficial tax status of the institutions allows them to bid to the lowest yields.

the City and the West End, including areas such as Holborn and Fleet Street) and Docklands. A small provincial town may have no institutional quality locations at all, the one possible exception being in the retail sector where top quality tenants may take space on longer lease terms.

It can be seen that it is not simply the location that defines institutional investment but a combination of all the factors.

(b) Institutional grade specifications

Again, to generalise, institutional grade specifications are those that have the greatest demand from occupiers. These are usually the most modern, newest type of buildings. The importance of the specification is more important in some property types than others. The most notable example of this is the office sector which is strongly specification led. We have already seen that the office sector is more footloose than, say, the retail sector. The highest value offices are in good locations but are usually specification led and brand new. Older property suffers from physical depreciation and functional obsolescence so will be, by definition, not prime. Retail property is often an exception to this being simple concrete boxes that retailers fit out themselves. Even in this sector the environment and layout of retail units tend to deteriorate over time.

(c) Institutional grade leases

The terms under which the top quality property is occupied is one of the most vital components of the institutional property. These terms have varied over time, for example the average lease term has come down since the property crash of 1990. The terms can be summarised as follows in Figure 14.

These lease clauses are amongst the most investor-friendly in the whole world, which explains why the UK is popular with overseas investors. They make property investment as clean and as 'hands off' as it possibly can be. The terms may seem onerous but one of the key points to remember is that tenants agree to them in the open market. They only agree because of the quality of the properties they wish to occupy.

(d) Impact on the development market

The importance of covering this section on investors and investment grade property is two-fold. Firstly, it is important for people who intend to operate in the development market to have an understanding of the investment market and investment vehicles. Secondly, the relationship with the

Length of term	15 years	This has come down from the traditional 25 years. The new length of term guarantees a secure income flow to the investor, particularly valuable when tied to a good quality corporate tenant.
Repairs and maintenance	Full repairing and insuring	Tenants are responsible for all aspects of maintaining the property including the structure. Tenants are expected to give the building back in the same order as they acquired it. The landlord will be able to recover all outgoings from the tenant.
Rent reviews	Normally the rent is reviewed every five years to the rental value that similar properties let on new but similar lease terms are achieving on the open market, such reviews are 'upward only'	This clause enables the value of the property to be maintained by periodically adjusting the lease rent. Perhaps the most controversial part of this clause is the 'upward only' component, although strictly this means that the rent cannot fall even if market values have gone down. It does act to maintain the quality of the income flow to the investor.
Other terms	Open user clause, open alienation clause, open alteration clause	These clauses are open in that they require the landlord's consent but that consent is 'not to be unreasonably withheld'. This helps to maintain rental values. A recent change is the introduction of authorised guarantee agreements that help maintain the value of the property if the original, good quality tenant leaves.

Figure 14: Typical UK commercial lease terms.

development market must be appreciated. Prime property of investment grade is the best quality property that appeals to the best quality occupiers thus producing the highest quality income stream. These, almost invariably, are qualities that are associated with the newest properties. As property ages it loses these institutional qualities, indeed it becomes secondary. Institutional investors thus have an insatiable demand for the products of the development process. Lesser quality, older investors are sold on to investors seeking higher yields and lower capital growth. In time these properties require refurbishment and, sometimes, redevelopment when they often transfer back to the institutions. Whatever the case, the institutions are the financial engines that drive the market.

1.5 Conclusion to Part 1

The preceding sections have provided the context to property development. They have hopefully illustrated the breadth of the subject, though no single work can hope to cover all the potential development scenarios. The property markets are rich and diverse in character and scope. The players within the development market are very varied in type and character and interact with each other in many complex ways. Development can be carried out for many reasons and parties directly involved with development can come together in many different ways. Essentially what we are looking at is a highly complex set of interactions which result in development. Anyone involved in the industry must understand and get a feel for this complex environment in which development is undertaken.

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2.6 Conclusion to Part 2

Glossary

Competition survey	An analysis of the existing and potential competition to a property development scheme.
General Development Order (GDO)	A planning instrument that allows certain activity, that would normally be deemed to be development, to take place without the requirement for making a planning application.
Highest and Best Use (HBU)	Refers to the highest value, legal use to which a site may be reasonably used for.
Land value equation	Essentially the residual value left after the cost of development is taken away from the end value of the scheme.
Ransom strips	Usually small pieces of land which are vital components of a development scheme but which are owned by another party. Effectively, the owner of these pieces of land can hold the developer to ransom and ask almost any sum for the sale of the land. This situation can sometimes be resolved by the use of compulsory purchase powers held by public bodies.
Special Development Orders (SDOs)	Special powers given to certain bodies to carry out development that would normally require consent without the requirement for making a planning application. Urban Development Corporations were given such powers.
Spoiling bids	A bid for a site or component of a site put in by another developer who has no intention of bringing forward a development project on the site themselves. The bid either forces the hand of the developer who was working up a scheme on the site or else prevents the development completely.
Time value of money	Where there is a positive rate of interest, money received in the future has a lower value than the equivalent sum received today. For example, one would prefer to receive £5 today than £5 in one year's time, because the £5 today could be invested to accrue to a larger sum.

2 Development inception

2.1 Introduction

The previous section looked at the wider background to development. This section gets closer to development itself by looking at some of the elements required to develop an individual site. This requires a number of components to come together, including an opportunity, an unfulfilled demand, a site, the consent of the state, finance, an appraisal showing sufficient return, a team with the sufficient skills to complete the scheme and a well designed product. We will look at all of these during the course of this book as each of them needs to be in place for a development to succeed. Some are so complex and diverse that they need sections on their own (finance and appraisal) whilst other are more related to the production or post-production phase of the projects and will thus be dealt with later. This leaves us with some basic components that are essential parts of the jigsaw that often need to be put into place before the rest. To take the analogy further, these components can perhaps be viewed as parts of the edges of the jigsaw that need to be put together first for the rest to make any sense later.

In the first part of this section a basic question is examined: what makes a site ripe for development or redevelopment? This is a fundamental question and one that needs a first principles approach. It is one of the few areas in this book where we need to take a primarily theoretical approach.

One of the fundamental factors for a site to be developed is that there is demand for the product of development. We next examine how a developer establishes whether this demand exists and what the demand is for. This requires market analysis. The peculiar problems related to this are examined, using the best-researched area of the market, retail, as the base example.

If there is demand from the market then what else is required to execute a development? The basic requirement is a site. This is a bit of a chicken and egg situation – which comes first? Is a site identified first and then a use for it established, or is it the case for a use in demand seeking a site? In fact, either can occur in the development market though the latter is slightly more common and it is this model that we will follow. How is a suitable site

found? What are the major areas that need to be examined? What are the pitfalls?

The final area that we will cover in this section is the question of planning and other consents required to enable a development to go ahead. These legal issues are often critical and some understanding is required of the system that underlies them. The last section of Part 2 attempts to do this.

2.2 Development inception: an introduction

As noted already, this book is intended to be a practical guide to development rather than one that concentrates on theory. Property development is, after all, a hard, practical world where there is little room for pure academic thought. There is one area, however, where it is difficult to avoid taking a theoretical approach because the reality is that the subject is so diverse. This area is development inception. In practice, there are a huge number of reasons as to why a development commences. Almost every development case is individual, making summary very difficult. It is useful, therefore, to take a step back into the theory, albeit briefly, as there are fundamentals that explain why sites get developed.

The fundamental questions that this section will attempt to answer are:

- What makes a site ripe for development?
- How is one use of the site chosen over other competing uses?
- How and why are decisions taken to start the development process?

It is not possible to answer these questions separately as they are all part of the development inception process.

Let us start by going right back to first principle fundamentals. Land is one of the factors of production identified in economic theory by economists, along with labour and capital. To produce any goods or service, land labour and capital need to be combined. Whereas people's wants are unlimited, factors of production are scarce. Productive activities compete for use of the factors of production but not all demand can be accommodated. This competition leads to all factors of production having value, the extent of which depends upon the degree of demand and the relative scarcity of the factor.

Land, the basic raw material of development, therefore does not have intrinsic value. In fact, land itself usually has no cost of production in its own

right (the exception being reclaimed or manmade land). The value of land is derived from the demand for the goods and services that can be produced on it and from it. In principle, the more valuable the goods and services that can be produced from the land, the more valuable the land itself, particularly if that land is scarce. Each piece of land is unique, even if only in terms of location. Each piece of land can be used for different purposes and for different intensities due to factors such as topography, soil quality and, in particular, location. Some of these factors appear to be intrinsic, such as soil quality and topography with agricultural land, but essentially the same principles apply whether it is rural or urban land; it is the value of the product that can be produced from the land that gives it its value. Grade A agricultural land is more valuable than rough grazing because more income can be earned from it. It is also not ubiquitous; in fact, top quality land is scarce, adding to its value. Land in the central business district (CBD) of cities is more valuable, in general, than industrial land on the edge of town because it is (a) scarcer and (b) more able to generate income from business activity.

Having established the economic principles of land value, let us now turn to individual sites. Essentially, the same principles apply.

As an example we will examine the case of a site in an established urban area. As noted above, each piece of land will have a value based upon the most valuable use for the site. This is related to the earnings that can be generated from the site less the cost of improving the site, i.e. constructing a structure and providing all services to the site (power, water, drainage and road access, for example). Let us assume that the current use of the site is as an industrial site, perhaps for light manufacturing. The value of the site is dependent upon the bid a potential user would make for it. In the market place only the prices bid are observable, but the economics that underlie these prices are approximately as follows (note: issues such as taxation are ignored for this calculation. Negative figures are given in brackets).

Company turnover	£500,000 pa
Operating costs	<u>(£400,000) pa</u>
Gross profit	£100,000 pa
Less: Reasonable net profit to operator (15 per cent of turnover)	<u>£75,000 pa</u>
Surplus (rent)	£25,000 pa

Taking a reasonable return of ten per cent on initial income to the freeholder of the land would give a value of £250,000 of the right to receive the

income stream of £25,000 (£25,000 / 10 per cent = £250,000⁶). This is not the full value of the site because we have not taken into account the cost of improving the site, i.e. constructing the buildings and providing the services. Let us say that these will cost £200,000 to provide. This will give us the following equation:

Present value of income stream	£250,000 pa
Less: Cost of providing improvements	<u>(£200,000) pa</u>
Value of land for its current use	£50,000 pa

It should be stressed that valuers and agents assessing the value of land do not start with a calculation of the surplus that firms can make and thus pay in rent when looking at individual sites. The problem with doing this is that each potential user of the site will have different cost and profit structures.

⁶ What is illustrated here is basic investment appraisal. The fundamentals of this underlie the appraisal section and are discussed more fully there but explanation would probably be helpful here. An investment usually has two features that make it attractive: it will either appreciate in value over time or it will provide an income flow to the owner (or sometimes in the case of shares and property, it can do a bit of both). It is quite difficult to assess the value of the former type, which includes items like works of art, as these investments tend to be valued subjectively in comparison with similar items sold, for example, at auction. It is easier to assess the worth of the latter type of investment because what you are trying to do is set the value of the right level to receive the income flow in the future. You can do this by comparing the investment with the return from other investments of similar characteristics. In this case it is assumed that similar investments return about a ten per cent return. All future cash flows expected to be received from the investment can be expressed according to their present worth using this interest rate. This is because of something called the 'time value of money'. Basically if we had the £25,000 today we could invest it and receive a ten per cent return on it, i.e. £2,500. The same sum received in, say a year's time, is worth less to us today because we do not have the opportunity to invest it. We can calculate how much less it is worth today by using a financial formula, the Present Value of £1 formula which is $(1 + i)^{-n}$ where i is the interest rate and n is the number of years in the future the sum is received. In this case it is $£25,000 \times (1.10)^{-1}$ or £22,727.27. We could do this for every year that the sums are receivable and total them up to find out the net worth of this investment (which equates to what someone should pay for them). This can get difficult with long cash flows, and with freehold property this is virtually impossible as freeholds are a perpetual right and therefore the right to earn an income is also perpetual. Fortunately, we can use another formula for working out the present value of a series of future income flows. This is $1 - (1 + i)^{-n} / i$ (the letters mean the same as the above). There is also a version of the formula that deals with perpetual income flows, this is $1 - 0 / i$ (it is actually the same formula as the first, it is just modified as when n trends towards infinity the $(1 + i)^{-n}$ trends towards giving a value of zero). This all looks complicated but the result is simple: if you multiply an annual sum receivable in perpetuity by the formula $1 / i$ you get the present value of that cash flow, or its current worth. Here, then, $£25,000 \times 1 / 10\% = £250,000$.

Some will be efficient, well run, profit-maximising enterprises; others may have quite different motives for being in business, or may run the business in an inept, inefficient way. The amalgam of bid prices for rent and land acquisition is taken as a better signal of land prices as a whole across all potential users, efficient and inefficient. It is, however, a useful tool for our purposes.

The value of the land in its current use, at the point of time when we are looking at it is thus £50,000. This will not remain static. It will change according to the general business cycle in the economy with inflation and with the specific attractions of the site for its current use.

The pattern of values over a ten-year period is illustrated in Figure 15, below.

Now let us consider alternative uses for the land. The land could, for example, be redeveloped for residential use. Let us assume that five houses could be built on the land. There are constraints, however, which may prevent the site being developed. One is the existing occupier who may have a long lease on the site. They would have to be willing to sell that lease or to extinguish it in some way. If the site is leased, there will also be the freeholder to consider. The freeholder is the ultimate beneficial owner of the site who would either have to sell their interest or grant a developer a long lease (in excess of 100 years if development is to be considered). There are also the legal aspects of development; land can have rights over it (access, rights of way and service easements), restrictions on its use (covenants) and will also, of course, require planning consent. The final constraint is the

Value of Land for Current Use

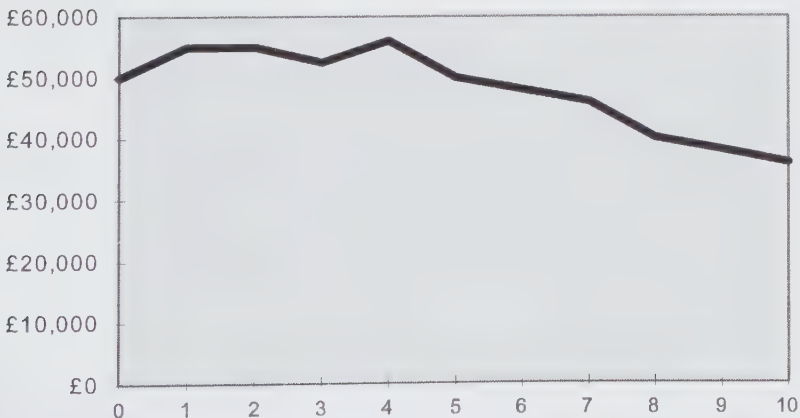


Figure 15: Progressive values of land for existing use over a 15-year period.

market and the cost and value equation. It is this aspect that we will concentrate on for the moment. The other constraints mentioned illustrate the complexity of the problem of site development that have to be addressed before development can commence, and will be considered again, later. For the moment we will assume that vacant possession of the site can be obtained, that the freeholder is willing to sell, that no legal obstructions exist and that planning consent can be obtained.

Let us now deal with the land value equation. What we are considering is the value of the site for its alternative use. The equation to calculate this value is very similar to the calculation that we made above, and we will assume that it is being done at the same time as the previous calculation. The land is in industrial use. We will assume that the area surrounding the site is of similar character to the site in question, i.e. it is in light industrial/manufacturing use. This will reduce the attractiveness to house buyers and thus will reduce demand for the product, and consequently the price.

The calculation of land value for the alternative use is therefore as follows:

Value of completed houses (£50,000 each x 5 units)	£250,000 pa
Less: Construction costs (inc. fees and finance)(£35,000 per unit)	(£175,000)
Less: Demolition and site clearance	(£10,000)
Less: Reasonable profit to developer) (20 per cent of development costs)	<u>(£37,000)</u>
Surplus (Land Value)	£28,000

It can be seen that it is possible to develop the land – the houses can be constructed profitably and can be sold to end users – but only if the land can be bought for £28,000. At the time of the calculation this is below the existing use value. The Highest and Best Use (HBU) is as an industrial site.

The HBU is an important concept. The HBU of land is defined as being the highest value use the land can be put to subject to the constraints that:

- this use must be legal;
- there is a reasonable chance that it could be used for that purpose; and
- that demand exists for that use.

Strictly, this is inaccurate. An allowance for holding the land over the period of development needs to be included. See the section on financial appraisal in Part 4.

Given this, land use should naturally move to the highest and best use over time, though there are several qualifications to this which will be considered below.

In this case the use of the site will not change until the most valuable alternative use produces a land value that exceeds the value of the existing use. Again, this picture will not be static. Areas change in character and the value of alternative uses changes in the wider economy making development of the alternative viable in situations where it would not otherwise be.

In the case of our site we will assume that the demand for its current industrial use declines over time as manufacturers either find that they cannot continue their businesses profitably or else find that they need to move, perhaps to more modern premises elsewhere. This is a process that continuously happens in urban areas, albeit at a slow, sometimes almost unnoticeable pace; a transition from one dominant use to another. Hence, as the value of industrial use declines, so the value of the best alternative use increases. In this case, when one residential development takes place, the area will tend to improve in terms of attractiveness to other residential users. A process of appreciation in value for the alternative residential use takes place. This is illustrated in Figure 16.

Let us revisit our calculations of land value for the alternative use, considering the situation ten years after the original appraisal (and ignoring the influence of inflation). The effect of the change in land use and the environment has boosted the potential sale prices of the houses that can be built from £50,000 to £70,000. The developer can afford to spend slightly

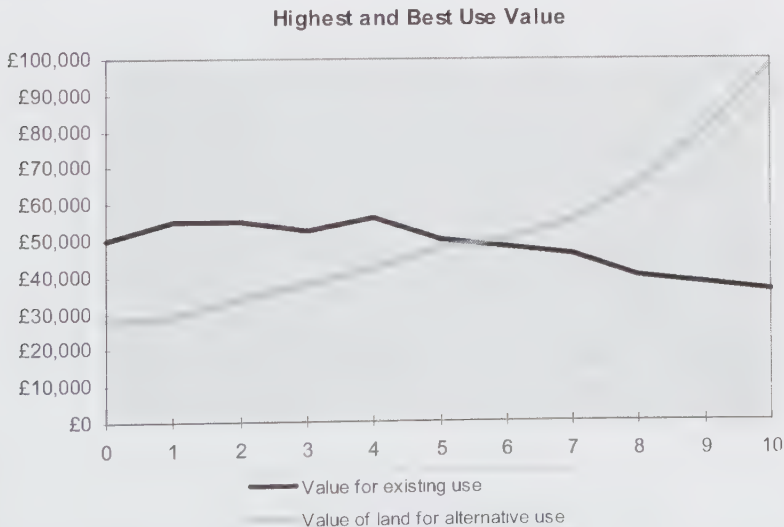


Figure 16: Illustration of the relationship between site value for alternative use and the existing use value over time.

more in terms of construction cost to produce a higher quality product to capture these higher values.

Value of completed houses (£70,000 each x 5 units)	£350,000 pa
Less: Construction costs (inc. fees and finance) (£40,000 per unit)	(£200,000)
Less: Demolition and site clearance	(£10,000)
Less: Reasonable profit to developer (20 per cent of development costs)	<u>(£42,000)</u>
Surplus (Land Value)	£98,000

This is clearly a much higher value than that of the existing use and thus this is the new HBU, and indeed, scrutiny of Figure 16 illustrates that this had been the case for some years.

In our individual case it was somewhere between years five and six that the transition took place. It was at this point that development could have taken place. However, it may not have done so for a number of reasons.

Firstly, someone has to identify that this situation has occurred and that the site is ripe for development. This may not have occurred, as the property market is one of the least perfect of markets:

- There is no central market place for the participants to observe changes in prices.
- People in the market place do not have perfect knowledge, indeed information is very tightly held by a small number of parties.
- The market is very slow moving, property and sites are quite infrequently sold and tend to remain in the same ownership, occupation and use for long periods of time.

Secondly, there may have been restrictions on the transfer of ownership and use. As we have noted, an occupier may have a long lease on a site. Without the application of compulsory purchase powers by a national or local authority, or a body with statutory powers, a leaseholder cannot be compelled to give up a properly constructed lease until the term of the lease has expired. Even then, if they are a qualifying business, they have the automatic right to a new lease under the 1954 Landlord and Tenant Act, at least in England and Wales. Although one of the grounds under which the grant of a new lease is that the owner wants to redevelop, this can be restrictive and can cause delays. Similarly, merely identifying higher values does not mean that an existing freeholder will sell.

Thirdly, there may be planning or other regulatory problems. Although strictly the HBU of the site assumes that the alternative use is legal and reasonable, in some circumstances authorities may resist the grant of planning consent even if on pure planning grounds it would be reasonable for permission to be granted. What are essentially non-planning grounds for refusal include politics and social policies.

Fourthly, there has to be an individual or company to act as the catalyst for the development to take place. This party, i.e. a developer, must do a number of things:

- They must identify that the opportunity exists.
- They must have the ability, knowledge and resources to take advantage of the opportunity.
- They must be willing to take the risk at that point in time.

All these factors must be in place for a development to take place. Even then other factors may conspire to prevent development starting. For this reason, although in time sites will naturally tend towards their highest and best use, the imperfections of the property market tend to mean that, at any one point in time, only a fraction of the sites that are ripe for development are actually developed. Logically this means that many sites and properties have latent value that could potentially be exploited. It also means that many sites that are out of current economic use – such as in run down, inner-city areas – often take many years for circumstances to come together that lead to regeneration and redevelopment, at least without state intervention.

A point to note at the end of this section is that these theoretical underpinnings only apply to property development that is driven by market forces. These are not the only motives for development. Development is carried out for social purposes, such as the provision of low cost housing. It is also carried out to provide services such as education and healthcare or to provide social facilities and amenities such as sports centres and swimming pools. It is sometimes carried out for prestige purposes, to provide, for example, sports stadia for Olympic or Commonwealth games or to attract a sporting event such as a World Cup. With developments like these, pure economics and profit are rightly pushed to one side. It is these types of development where it is hard to provide generalisations or supporting theory to explain their existence. Because of this, this book concentrates on market-driven developments. The reader must be aware that this type of development is driven by non-profit motives, however. It should also be noted that it is the development that is not constrained by the discipline of market forces where serious problems, particularly as regards cost control, most frequently occur.

2.3 Establishing demand: researching the markets

Part of the factor that leads to a development opportunity is clearly that a demand exists. As we have seen, it is not the sole element required but it is a critical component. This next section looks at how demand is identified and quantified.

To be successful, developments need to respond to and meet the needs of the marketplace. It is therefore necessary to conduct a thorough and detailed examination of the needs of the market before development commences.

Market research has become an essential part of the development process though it must be said that it is not often done particularly well by much of the development sector. In the recent past, particularly when the economy was rapidly expanding, it was possible for a developer to take a superficial look at the existing competition and commence the proposed project, being reasonably confident that the project would succeed as long as the market was underserved. Painful experience gained in times of economic downturns showed how this could no longer be relied on. Memories in the industry tend to be short, however, and over confidence allied to poor research are often rescued by a healthy economy.

It should be noted that this section is aimed mainly at the primary development sector, where property is developed for the open market. Government and corporate sector bodies commissioning developments for their own occupation and use are usually doing so because they have determined that a market exists for the goods and services that they intend providing from their new premises. They may well have to do some of the market research identified in this section, for example to determine whether a skilled workforce will be available for employment in their new premises.

Market research is the process of establishing whether there is a market for the product being developed, at what price it will let or sell for, how long it will take to lease or sell, on what terms and to whom. Anyone familiar with the production of a good or the provision of a service will find this process familiar. However, there are a number of differences between the process of market research for property and that for other goods. This is all related to the characteristics of property as a good. Consider the difference between a manufactured good such as a confectionery product and an office property, in Figure 17.

This in many ways is an unfair comparison. Economists would argue against comparing such dissimilar goods but this is done for a purpose, namely to illustrate the problems faced by market researchers in property. Market

	<i>Confectionery product</i>	<i>Office property</i>
<i>Units produced</i>	Millions	Handful at most
<i>Unit cost of product</i>	Low	Very high
<i>Product production lifespan</i>	Usually long	Relatively short ⁸
<i>Investment in production infrastructure</i>	High	Low
<i>Numbers in target market</i>	Very high	Very low
<i>Geographical spread of target market</i>	Universal	Usually limited
<i>Entry qualification for purchase</i>	Very low	Very high

Figure 17: Comparison of a property with a conventionally marketed product.

research for most manufacturing concerns is recognised as that business's lifeblood. It is also relatively easy to carry out by way of consumer surveys, blind trials and tastings and focus groups amongst many other techniques. This process is sophisticated and works with everything from Mars Bars to Mercedes Benz.

The property market is different and much more difficult to research. The products tend to be individual, often one-offs. The client or consumer of the product in some sectors is not obvious. The product takes a long time to produce, during which time the market for the product may have changed entirely. Manufacturers of other products can change the production focus relatively quickly, for example confectioners can switch volumes of production from chocolate bars to ice cream products over a few weeks to react to warmer than average seasons. Production of property takes many years, and like a super tanker, it takes a lot of warning to change direction by which time conditions may have changed yet again!

⁸ The product of development obviously has a long lifespan, however the actual production process, the time on site, is relatively short. In comparison, confectionery products are manufactured in relatively unchanged forms for many years. Kit-Kats, for example, have had a production life of over 60 years.

This situation makes good market analysis even more essential despite the difficulties of carrying it out. Certainly one of the most notable trends in property consulting over the last 20 years has been the rise in research departments. All the major UK firms have such departments. Often these are major fee earners for the firms involved. Quite a high proportion of these fees are earned from the development sector. From being data collection centres and chart producers of dubious quality, these research departments have employed extremely bright people – many from the academic community – and the quality of the techniques employed have greatly improved.

This last statement is made largely in preparation of a defence against the likely reaction to the next! If the quality of the research done in property development at the dawn of the third millennium can be summed up in one word it would probably be 'patchy' or 'mediocre'. Ten years ago, the word would have been either 'poor' or 'awful', so things have improved. Some research is very sophisticated and thorough, particularly when carried out by the research departments of the major firms, in other cases it is so superficial to be almost non-existent.

To generalise, good research tends to be carried out in the larger development projects where the product is relatively ubiquitous and where the market (both in terms of the occupier and the occupier's business market) can be well defined. The two markets that this description fits best are the retail and large-scale private residential market. It is no surprise to learn that it is in these two markets that the most sophisticated research is carried out.

Even in these cases, however, the nature of the property market is such that a lot of the research requires subjective assumptions to be made. These assumptions can be manipulated either deliberately or unconsciously to produce the result that the commissioner desires. For example, retail impact studies used in planning disputes are often prepared by consultants employed by both sides. Using the same facts and looking at the same development, the respective reports usually support the stance taken by their commissioners. This process applies to market research in property, therefore the results can be misleading.

2.3.1 Who carries out research for development projects?

Before looking in detail at market research for development, it may be useful to establish who plays what role in the process. Research for development is not confined to being carried out by a single external party. Many parties involved in the development also carry out research related to development.

<i>Party</i>	<i>Research role</i>
Developer	<ul style="list-style-type: none"> • Initiating force but often do their own market research
Agency Surveyor	<ul style="list-style-type: none"> • Occupier research (requirements, trends) • Research into investor requirements • Market monitoring generally • Economic base and market analysis
Specialist Research Consultant	<ul style="list-style-type: none"> • Economic base and market analysis • Occupier research (requirements, trends) • Research into investor requirements • Market monitoring generally
Architect	<ul style="list-style-type: none"> • Planning concept • Site analysis • Physical form
Planning Consultant	<ul style="list-style-type: none"> • Planning history • Planning viability • Economic base and market analysis

Figure 18: Parties involved in the research process for property development.

2.3.2 An example of good practice in market research for property development: retail impact analysis

To examine examples of how research is actually undertaken, we will look at research for a retail project. As we have noted, retailing is often the most sophisticated of the markets for which research is undertaken. However, before this is examined in detail, we will look at some general principles of market research for property development.

(i) Preliminary investigations

Fundamentally, before major expenditure is made on market research, some basic investigation will be carried out to establish whether there is evidence of demand for the property type envisaged. This is generally undertaken by

talking to people in the market, usually the agents who are vitally important in making the market in the first place. Whatever the market, residential or commercial, they will have a 'feel' for what occupiers and potential owners require. Developers look for markets where there either are unfulfilled enquiries or known requirements that remain unfulfilled.

Other signs are more apparent in the actual environment where the development is proposed. In an established commercial environment, a prospective developer should drive around looking for marketing boards and vacant premises. If these are few on the ground and if most premises are occupied, this is a very good indication that there is unfulfilled demand in the market.

Sadly, many developers do not research beyond this level. To be fair, often talking to the market makers and looking at the visible signs of the state of the market is sufficient but these signs can mask the true state of the market or current occupation trends that could lead developers into making expensive mistakes (and careful scrutiny of every UK city will throw up examples of developers' 'expensive mistakes'!). More in-depth investigations can reveal these trends.

(ii) In-depth investigations

In general, there are two types of market research that are relevant to property development:

- (a) area research
- (b) consumer demand analysis

(a) Area research

Area research usually consists of some form of market analysis. This is carried out to determine the best size and nature of the development and can be used to provide the information for the financial appraisal.

The research can be carried out at several levels. At the top level, equivalent to the strategic level of decision-making, the research assists the developer in deciding where to carry out a development. The largest investor/developers may be working through a gradual process of narrowing down where to carry out the development. Once the fundamental decisions about location have been made, the research can be viewed as occurring at the tactical level, aiding decisions about the detail of the scheme and leading up to the decisions made about which site to develop and the final design of the scheme. This process can be portrayed in diagrammatic form:

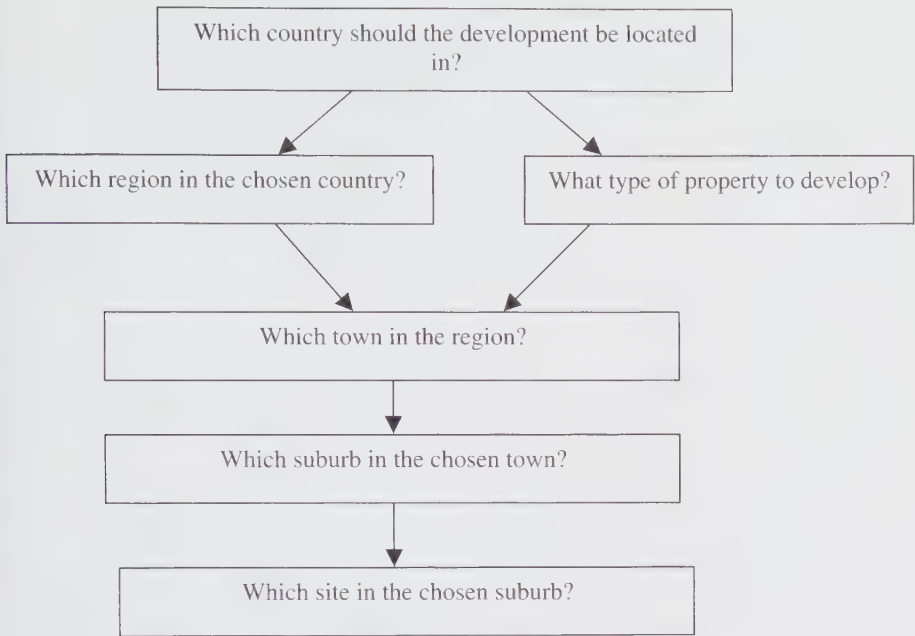


Figure 19: The locational investment decision in property.

Whichever level the developer is working at, the process and data collected is essentially the same. Fundamentally, the developer is looking for the location that will give them the best return for the type of development envisaged. The data will also aid the planning of the project, including decisions about timing and phasing of the scheme, as well as providing information for planning applications and development impact studies.

In general the market analysis process consists of four stages:

- Data collection
- Data analysis
- Analysis of the effect of introducing the scheme into the market
- Conclusions and recommendations.

Each stage is examined in turn below.

Data collection

At the strategic decision level the following data should be collected:

- Past, present and future population trends within the chosen area or areas.

- Social characteristics of the area – per capita income, social structure, employment structure and trends, etc.

These two sources of data can be obtained from a number of official and commercial sources, including census data and the Office of National Statistics, and may include family expenditure surveys, the Inland Revenue's survey of personal incomes, and the DETR's new earnings survey, amongst others. Some of this data is sold commercially via market research firms and delivered through GIS technology.

- The size, quality and characteristics of the existing property market and proposed developments that will compete with the project under consideration.

Data on this area is becoming easier to obtain though often it will require detailed field studies. Sources of information include Estates Gazette Interactive (EGi), the subscription website of *Estates Gazette* the industry's weekly property magazine. Other sources include the planning department of the local authority.

The above will be done for all levels of decision-making. As the fundamental or strategic decisions are taken, more detailed information can be gathered. This may include an economic base study which is carried out to establish or understand many factors that relate to the detailed execution of the scheme. The data collected may include:

- the geographical extent of metropolitan area;
- road patterns;
- population levels;
- employment levels and bases;
- catchments or trade analysis;
- per capita incomes by geographical sector.

Where specific sites have been identified, other, more detailed data related to these factors may be collected:

- *Site analysis*

Size

Configuration

Environment

Relationship to existing residential/commercial areas

- *Access analysis*

Road
 Rail transport routes
 Identifying traffic problems

- *Trade/catchment areas*

Defining a trade or catchment area depends on:

- size and nature of scheme;
- natural, manmade or psychological factors;
- existing or proposed access conditions;
- size and location of existing and proposed competition.

There might seem to be a large degree of repetition in these lists, however this has been done to underline the fact that market research in property development does not take place at a single point in the process but instead at many stages as different decisions are taken. As the scheme becomes more certain and closer to fruition, the type of data collected changes. Market research is a continuous process that should be on going throughout the life of a scheme.

Data analysis

The next step following the collection of the data is the difficult step of analysis. This is undertaken to provide an understanding of current and possible future conditions in the market where the development is proposed. This analysis can take many forms and can be done at many levels. At the lowest level this may be no more than a detailed description of the market. At the higher levels some kind of regression based modelling may be attempted. Modelling attempts to identify key associations with the variables that can be used to forecast future trends.

In many types of developments – hotels, residential, retail and offices – one of the key areas of analysis will be related to the catchment area or trade analysis. It is from this that the market for guests, occupiers and customers can be estimated. The extent of the area will be determined by many of the factors on which data has already been collected. These include the presence of physical or psychological barriers to potential users, access conditions and the availability of transport links, and the size and location of existing and proposed developments.

Part of the ability to capture a share of whatever market the property is intending to serve is related to the site itself. The micro location of the proposed development can be critical. This is particularly true of retail

schemes. A location may, on paper, appear to be a very attractive one in terms of all other criteria but may not be able to capture sufficient market share to make it attractive. In retail, being a few metres off the 'prime pitch' can greatly reduce the ability to attract shoppers and thus, rents. This point will be discussed further below, however it should be stressed that the analysis of a development's market potential should be done at the detailed level as well as the broad aggregate level.

Analysis of the effect of introducing the scheme into the market

This is perhaps the most difficult of the four steps. Collecting the data is usually straightforward, although access to some data can be difficult. Analysing how the existing situation works is a process of careful deliberation but one that is based on current facts and relationships in the main, though the effects of planned developments such as new roads or significant new developments can create problems. (An example of the latter was faced by those responsible for redeveloping the retail heart of Manchester following the IRA bomb in 1996. An imponderable at the time was the effect that the regional shopping centre being built on the outskirts of the city would have, which was due to open as the Trafford Centre within the next 18 months.) The problems tend to be even greater when trying to predict the effect that the scheme itself will have on the market.

Markets are dynamic, almost organic structures that can be quite sensitive to change. Some are more sensitive than others, but most large schemes can have a major effect. Office markets are usually not that footloose but single schemes or sometimes single lettings can cause the entire office core to move. An example of this occurred in Manchester where the development of two large offices close to the GMEX exhibition centre and their subsequent letting to some of the larger solicitors' practices in the city caused a substantial shift away from the traditional centres close to the retail heart of the city.

The effects in retailing, where location is more sensitive, can be even more striking. In Aberdeen, the development of a large in-town shopping mall, the Bon Accord Centre, saw a substantial re-alignment of the prime shopping area from the traditional area along Union Street.

What the impact will be depends on many of the factors already discussed above, including the nature and micro location of the site itself.

Conclusions and recommendations

The final stage in the process is the decision and recommendation about the scheme itself. The market analysis can tell the developer whether there is a

fundamentally unfulfilled demand for the type of property proposed. It should also give the developer valuable information about the form, size and timing of the scheme amongst many other things.

(b) Consumer demand analysis

Consumer demand analysis is quite different in character to area research. Area research tends to concentrate directly on the potential customers of the companies or organisation who operate out of the property to be developed. This type of research involves talking to the potential occupiers themselves, either by way of general surveys of the type of occupier who might take the premises, in order to clarify the sector's general requirements and future expansion intentions, or else by contact with specific potential occupiers who might subsequently buy or lease the scheme.

Due to its direct nature, this is actually the most common form of property development research. It is an efficient way of establishing market demand for the proposed product and it is often carried out on an informal basis, usually by the developer's property consultant or agent, though more formal research programmes are sometimes carried out on behalf of developers for larger development proposals.

Below is outlined the sort of analysis that might be carried out for a major retail scheme at the broad aggregate level, i.e. that would be done above the site specific level of decision making. Here the developer is examining the opportunity to build a new department store in a large market town in the UK.

2.3.3 Property market research case study: retail scheme

The first step is to establish the population levels from census data for the area served by the existing retail centre. This involves establishing the catchment and trade areas for the town. Usually up to three zones are determined. The most important is the primary trade area, where the population almost invariably shops in the retail area considered. Secondary and tertiary catchments are also defined, where progressively less of the population make shopping trips to the retail centre where the development is proposed. The definition of these trade areas varies. Sometimes they are defined from actual surveys of shopping destinations carried out by market research on shoppers. The cut-off points tend to be made on the proportion of trips made. Sometimes the division is made purely on travel times or distances, e.g. 15-, 30- or 45-minute isotimes.

In our example, the trading area zones have been established by survey, and the defined areas of population history has been researched.

Historic Population of Trade Areas

<i>Trade Area Zone</i>	<i>1981</i>	<i>1991</i>	<i>2001</i>	<i>Annual Change 1981-91</i>	<i>Annual Change 1991-01</i>
Primary	100,000	110,000	115,000	1.00 per cent	0.45 per cent
Secondary	130,000	132,000	135,000	0.15 per cent	0.23 per cent
Tertiary	50,000	55,000	60,000	1.00 per cent	0.9 per cent

The next step is to forecast the change in population in the zones over the development period. For this exercise the development is due to start in 2001 and take one year. The development is expected to be fully established in the year 2004. ('Fully established' means trading to full potential. It takes a number of years for a new shop to build up to its maximum turnover, as the clientele increases.)

Projected Population of Trade Areas

<i>Trade Area Zone</i>	<i>2002</i>	<i>2004</i>	<i>2006</i>	<i>Change 2002-06</i>
Primary	117,638	119,249	120,882	0.46 per cent
Secondary	136,541	137,474	138,414	0.23 per cent
Tertiary	62,777	64,505	66,280	0.93 per cent

These projections may be based on past trends, such as the previous census records or local planning projections, or they may be modelled using regression models.

The next step is to calculate the retail area's retention levels over the development period. The retention level is the area's ability to capture spending from the trade areas. From this the total effective catchment for the centre can be calculated.

Retention Levels

<i>Trade Area Zone</i>		<i>2002</i>	<i>2004</i>	<i>2006</i>
Primary	90 per cent	105,874	107,324	108,794
Secondary	50 per cent	68,271	68,737	69,207
Tertiary	25 per cent	15,694	16,126	16,570
Total Catchment		189,839	192,187	194,571

The income and buying power of this population now needs to be established. This is where the socio-economic data collected, including the CSO National Income and Expenditure tables can be used. Two important targets of this analysis are to calculate annual disposable incomes and the amount the target population spends on different types of good. In this case the most relevant statistic is the amount spent in large area stores, i.e. department stores.

It should be noted that, similar to the population analysis, this is normally carried out in two steps: firstly, an establishment of historical patterns of expenditure, then a project of future trends. In the example below, just the current year and appropriate future projections are illustrated.

Disposable Incomes

	2001	2004	2006	Annual Change 2001-06
Primary	4,300	4,563	4,842	2.00 per cent
Secondary	4,500	4,846	5,219	2.50 per cent
Tertiary	5,000	5,464	5,970	3.00 per cent
Mean	4,600	4,958	5,344	
Per capita expenditure	2001	2004	2006	
<i>75 per cent expended</i>	3450	3718	4008	
<i>25 per cent saved</i>				
Food	1553	1673	1804	
Hardware	69	74	80	
Chemist	86	93	100	
White Goods	259	279	301	
Large Area Stores	259	279	301	
Clothing	518	558	601	
Furniture	276	297	321	
Other Comparison Goods	431	465	501	
	3450	3718	4008	

The next step carried out is called a competition survey. This entails establishing the current spend and capture of market share by the existing competition. Following this it is necessary to estimate the capture of market share by the competition after scheme completion. After this the sales potential of the proposed department store can be estimated. This is a process of residual analysis and is illustrated below.

	2001	2004	2006
Population attracted to town centre	189,839	192,187	194,571
Expenditure in large stores	£259	£279	£301
Total town centre large store spend	£49,168,301	£53,620,173	£58,565,871
<i>Less</i>			
Effective competition (50 per cent)	£24,584,151	£26,810,087	£29,282,936
Unsatisfied potential	£24,584,151	£26,810,087	£29,282,936
Project share (50 per cent)	£12,292,075	£13,405,043	£14,641,468

From this data a recommended scheme size can be determined. This is calculated by dividing the expected income of the store by market derived trading figures per metre square based on industry experience:

	2001	2004	2006
Recommended size of unit (m ²) (based on £3000/m ² sales per floor area)	4097	4468	4880

Our analysis therefore suggests that a store of approximately 4000 m² could be supported on a suitable site in the town centre.

It should be noted that many aspects of this process require assumptions to be made which can greatly affect the outcome of the process. Some caution should be used when acting on the results.

2.3.4 Research for other types of property

Market research for other property types is done in a similar way, though it is in retail that most of the effort is focussed, given the direct relationship between retail rents and retail expenditure patterns. The links between economic factors and other types of properties are less straightforward and the results of the analysis are therefore less conclusive. This is only really a problem where property is built speculatively, i.e. not for a specific end user. Where an occupier or purchaser is identified prior to construction few problems arise. Unfortunately, a high proportion of development is carried out on a speculative basis.

(i) Residential property

Perhaps the next most sophisticated and extensive market research carried out in other property markets is concerned with the residential sector, particularly the volume house-building market.

Residential developers can closely identify their target markets, enabling them to quite accurately balance the supply and demand equation. The goal of a residential developer is to supply the product at a rate just below the equilibrium level demanded in the market. This will ensure that prices rise steadily – but not at such a high level as to attract too much competition – and that all their units sell within the target period. This means that market research is worthwhile for the sector. Data is usually gathered on the following areas:

Site and access data as per retail schemes

Market area	<p>Catchment (who is the scheme going to serve?)</p> <p>Employment generators (who are the main employers? What are the prospects for the future, etc?)</p> <p>How good are the transport routes/links to the site/suburb?</p>
Population	<p>Trends/structure (is the population rising or falling? Is it aging? Are there lots of young families?)</p> <p>Family size</p> <p>Employment levels</p> <p>Income levels</p> <p>Rate of family formation</p>
Competition	<p>What other schemes have been built or planned for the area?</p>
Take up/sale levels of similar dwellings	<p>Have the units sold quickly or have some remained unsold for long periods?</p>
Price trends in the region	<p>Have prices risen? Is this a sudden rise indicating a shortfall of supply? Is this a long-term trend?</p> <p>How do prices compare with similar areas in other parts of the region or country?</p>

There has been a period of consolidation in the residential development sector with many mergers and takeovers. This reduction in competition will increase the ability for house builders to both analyse the market and to predict the level of demand regarding the level supplied. It is likely that the methods employed to do this will get even more sophisticated in the future.

With smaller scale residential developments it is hard to carry out such detailed analysis, nor will it be likely to be cost-effective to do so. In these cases, the developer must rely heavily on the market knowledge and experience of a residential agent. The discussions with, and subsequent appointment of, an agent who possesses this information is a vital part of the market research process for smaller schemes.

(ii) Market research for offices and industrial property

With the other sectors, market research is more difficult and rarely carried out effectively because of more indirect links between aspects of the economy.

The office sector is perhaps the most problematic due to inadequate data about the supply and demand factors in the market. It is very hard to get adequate and reliable data about future take up rates from occupiers. Offices can be used more or less intensely, according to the occupiers' requirements. Acquisition of additional space can be postponed by an occupier who is uncertain about future trading conditions. Businesses in the UK can also shed and take on staff more quickly than in many places in the world. On the supply side, developers can postpone decisions to take up planning consent for many years, often by re-letting a secondary office building bought for redevelopment on short-term leases. This means that although the analysis outlined for retail schemes above can be carried out, it is often a waste of time and money.

Office developers rely on a handful of key indicators to make their decision. These are:

- Number of years' supply in market. This is calculated by dividing the annual area of space let by the vacant space of the appropriate quality in the market.
- Outstanding unfulfilled requirements for office space. Many businesses register future or current requirements with property agents. High levels of unfulfilled demand are a key sign for developers to proceed.
- Rental trends. When rents start to increase this usually illustrates unfulfilled demand.
- Vacancy rates in each class of office. A key factor for developers is the quantity of Grade A, i.e. top quality, space on the market (see the section on the property markets in Part 1).

Although this low level of research in the office market is understandable, one word can be used to sum it up: 'inadequate'. Essentially, as with small-scale residential development, the appointment of an agent who knows the market really acts as a proxy for conducting formal research. These agents will provide a depth of knowledge about market trends and occupier requirements, both general and specific.

Essentially the same situation exists with the industrial markets. Knowing occupier intentions and requirements tends to be the key to successful developments. This information can be gathered by contacting key occupier firms but it is easier and more cost effective to use the services of a good industrial agent.

2.4 Site assembly and land acquisition

2.4.1 Introduction

It is a straightforward fact that a site is a basic requirement of property development. The developer must acquire an interest over, or the rights to develop on a piece of land. The actual purchase of this land must, however, follow a complex path of investigations that are carried out in order to ensure that the development is viable on the site chosen. Many problems and heartaches can be avoided if this preliminary work is carried out properly.

Before we examine the process of acquisition we must consider the question about site identification. How this is done depends upon how the idea of the development came about. In some cases the idea comes first. The developer is either working to fulfil a known requirement, or has been commissioned to supply a building to a known client, or a gap has been identified in the market that the developer is seeking to fill. In this case, the developer seeks a site that can fulfil these requirements. The alternative scenario is where a site that is ripe for development is brought to the attention of a developer. This happens in the course of normal business activity in the property market but also where local authorities identify key sites for development and issue a brief to the market. In this case, the developer knows the nature and characteristics of the site and attempts to find a suitable development that can be successfully built on it. This is a subtle distinction but it does affect both the behaviour of the developer and the process of investigation that has to be carried out.

Some development sites are made known to the development sector by being marketed. This is the normal case where existing users of the land have completed their activities and wish to dispose of their interests or, again, where a local authority wishes to promote a development site. Here some of the preliminary work on bringing the site to development will have been carried out though the developer will still have substantial work to do. There are a number of advantages with dealing with a site that is on the market; not least of which is that the owner of the site is known and that some appraisal of the site and some idea of value will have been determined.

There are some potential disadvantages to developers buying a site 'on the market'. Firstly, the price that will be paid for the site is likely to be 'full'. Exposing the site to the market means that all interested parties will have had time to weigh up its qualities and submit bids before it is (generally)

sold to the highest bidder. This is very good for the vendor but can make life difficult for a developer trying to make a profit out of the site. The second disadvantage is related to timing and competition. A development is often time sensitive and the developer needs to have all the components in place before proceeding. Being forced to bid for a site forces their hand and the developer may have to proceed before being really ready. The bidding process also allows the market to have information about the developer's scheme; rival developers can either bring forward their own schemes or else put in 'spoiling' bids to drive up the price of the land. It is not uncommon for the owner of a key piece of land to hold out for a high price once development plans have been released. These 'ransom strips' can be acquired compulsorily if one of the promoters of the scheme has compulsory acquisition powers (such as local authorities or public utilities) or if the development is viewed as being in the public interest. However, such problems can seriously delay a development.

Developers are thus often very sensitive about revealing information about their plans. As a result, many developers prefer to deal 'off the market'. This refers to the acquisition of sites that are either not for sale or else are being marketed discreetly, an approach that allows for confidentiality. It also offers the potential for the site to be acquired at a price below the value that could be obtained in the open market. It should be remembered that where development potential exists, the value of the site for alternative use exceeds the existing use value but that it requires someone to identify this as values are not easily observed.

There are, of course, distinct disadvantages in following this approach, for example in England and Wales it has traditionally been difficult to identify the owner of land (though the Land Registry has now been reorganised, allowing easier access to information like this). The other obvious disadvantage is that the landowner may not be willing to sell.

This position applies to the acquisition of all sites but the 'off market' approach is particularly pertinent where a large development is planned that requires the acquisition of a number of sites that are joined together to make the main site. This can be done in one step where the developer has access to compulsory acquisition powers. Where these do not exist, however, it is common for developers to acquire individual sites slowly and quietly over time as they come on the market, without revealing the purpose of the acquisition to the vendors. These properties can be held on short-term leases as investments until the time comes to commence the development. Developers assembling sites in this way have to show extreme patience and maintain good security for this approach to be successful.

2.4.2 Basics of site acquisition: useful members of the development team

The roles and duties of the development team will be considered elsewhere, however it seems appropriate here to identify the key members who should be employed by a developer at the site acquisition stage.

The pivotal member of the team at this stage is the solicitor. A good solicitor, experienced in development is indispensable, as he or she can carry out the checking of titles, covenants, easements and rights of way. Other advisors who can be used include planning consultants who can save valuable time and effort in identifying possible development avenues and in consultation and negotiations with the planning authorities. Similarly, an experienced chartered surveyor specialising in the field of land acquisition and/or development can assist in site identification, pricing and in negotiations with land owners, occupiers and vendors. Finally, environmental consultants and engineers may be required in some circumstances to work on some aspects of the site appraisal process.

2.4.3 Preliminary investigations prior to purchase

In this section the main areas of preliminary investigation required to be carried out before acquisition will be reviewed. In following this procedure it is assumed that the developer has identified a site and is carrying out investigations as to the feasibility of developing it.

(i) Planning

This is one of the fundamental areas of investigation as the planning status of the site is critical to the success of a development. The developer needs to establish whether the site can be used for the most valuable appraised development and also needs to establish what restrictions the planning authority will place on this use. Planning clauses such as height restrictions, the building line, the degree of car parking allowed and the total area permitted to be built on the site are the principal determinants of completed value and thus, the economic viability of the site.

Information on these areas can be determined from a number of sources and at a number of levels of investigation. Again, the developer's attitude to how much information can be released about the development determines the type of approach followed.

(ii) Local plan

A considerable amount of information can be gleaned from the local plan. The local plan is a planning document prepared by the local authority to assist in the physical and economic development of the area under their jurisdiction. It includes a descriptive statement and a map indicating current and acceptable land uses, as well as the goals of the local planning authority set against the context of the structural planning for the area. It is unusual but not unknown for individual sites to be mentioned in the plan. This will only occur where the site is large or of strategic importance. It should, however, be possible to identify uses that the local planning authority will accept for the site as well as some indication of the conditions that would run with those consents. It should also be remembered that uses envisaged by the developer that conflict with the local plan do not rule out that use being eventually approved, if the developer can make a strong enough case either to the local authority or on appeal if consent is not immediately forthcoming.

(iii) Planning history

Following the consultation of the local plan, the next level of investigation to be carried out by the developer or their agents regarding planning issues is the investigation of the planning history of the site. All planning authorities keep records of each site under their jurisdiction. These records are in the public domain and available for public scrutiny. Normally this requires a visit to the local authority to inspect the records but some authorities will supply written information.

The site's planning history will provide a range of information. This includes:

- *The history of planning applications made on the site.* This is very useful in determining whether other developers have, or are currently showing an interest in, the site.
- *A record of approved applications and the conditions attached to the consent.* This can be used to establish the existing planning status, i.e. the current established use, the size of building approved for the site and the form of building allowed, as well as whether there are any outstanding consents that can be utilised to develop the site. Historical, as well as current, consents can be useful in that old uses may be used as evidence in planning negotiations to argue for a reversion to a more valuable use.
- *A record of rejected applications and the reasons for rejection.* This gives a good picture of the planning authority's attitude to

development on the site. A history of rejections for the use proposed illustrates that a developer is unlikely to succeed unless the reasons for the rejections can be addressed in the new scheme.

- *Whether any building or element of a building on the site is listed.* Listing illustrates that the building is of historical or architectural importance. It means that another tier of consent will be required before planning permission can be granted and that some aspects of the development may be restricted. There are three tiers of listing; Grade I, the highest tier applied to exceptional and outstanding buildings and structures; Grade II* applied to very significant buildings and structures; and Grade II, the remainder. Listing can apply to whole buildings or just elements. Listing a building does not mean that development is completely barred but that the developer will be restricted and may need to conserve elements.
- *Whether the building is in a conservation area.* Planning authorities often wish to preserve the character of key areas of their areas of responsibility, such as areas characterised by particular architectural styles or dominated by buildings of a particular period. The buildings within the area may or may not be listed. Development is normally allowed but must be sympathetic to the character of the area in terms of material or design.

(iv) Discussions with the planning officer

The above investigations can be done quietly, without attracting much attention. Sometimes, however, more in-depth discussions are required to test the attitude of the planning authorities. These will certainly be required at a later stage of the acquisition process. One issue that may be material to the development is whether the planning authorities will be seeking any 'planning gain' through section 106 of the Town and Country Planning (1990) Act. Meeting with a planning officer may clarify this issue.

Meeting a planning officer is very useful as general planning policy can be articulated as well as the authority's position regarding particular sites that may not appear in the written documentation. The outline of the development can also be discussed with the planning authority directly, prior to an application being made. This allows a developer to gauge whether a development would be allowed or resisted. Other details that can be discussed include the scale of the development and what features and characteristics would have to be incorporated to give the application the best chance of success.

Success in a planning application cannot be guaranteed. Planning officers can only make recommendations that go in front of the elected members of the planning committee. However, building up a relationship and discussing proposals in detail with officers can allow the developer to gain a good understanding of the situation pertaining to particular sites. This is useful both in terms of deciding whether the acquisition should be made and also later, when the detailed design of the scheme is being made.

2.4.4 Title

To succeed, a developer needs, as far as is practicable, to acquire an unencumbered clear title to a site, be it freehold or leasehold. Clear ownership of the site needs to be obtained and all legal restrictions to the title that may restrict or even prevent development must be identified and extinguished. One of the key aspects that must be examined in regard to title is clear ownership of the interest to be acquired. It is not always possible to identify who owns land. Despite the Land Registry, some landowners have never been registered or cannot be traced. Particularly with freehold interests, the rights of ownership of the land are passed to the rightful heirs of the previous owners who may have to be traced. Another problem that should be recognised is in relation to the establishment of ownership rights. Land ownership can be acquired by occupation for a prescribed period without protest by the rightful owner (similarly, rights of way over land can be established by use without protest or objection). Even when ownership of the land is clear there can be problems with the establishment of boundaries. It is not always easy to establish the extent of a site.

As well as these questions over title and extent, there are a number of rights that can be established over, or in connection with land that can strongly affect the development viability. These include:

- Rights of way to third parties and neighbours over land.
- Existing leases whether or not the tenant is in occupation.
- Easements for the passage of cables or pipes over, under or through the site.
- Restrictive covenants that prevent certain activities or uses of land.
- Mortgages on the land. Land and property is often used as security for loans, thus a charge may exist that needs to be discharged.
- Offers to sell. There may be a requirement in the title or the lease on the property to sell to a named party.
- Other rights to the land, such as grazing rights, rights to mineral extraction or rights to hold a market on the land, are all historic rights that can exist even on urban land.

All of these rights are defensible against third parties, i.e. they are real rights recognised in courts of law that cannot simply be arbitrarily extinguished by the owner of a superior interest. They can only be extinguished or modified by negotiation and agreement with the beneficiary. If that party cannot be identified – and with historic titles this is quite common – these rights can be extinguished or modified by application to the Lands Tribunal. This can be a time consuming process and a site with a number of title problems may not be a viable prospect for development.

2.4.5 Relationship with neighbouring sites

Connected with the questions of the title and rights over the site itself is the relationship with the site and neighbouring owners. A building does not exist in isolation; the relationship with its neighbours is regulated by law. Some issues that need to be considered are:

(i) Easements and rights-of-way benefiting the site

To make a development economically viable it is sometimes necessary to establish rights over neighbouring land. This may include simple access to the site over neighbouring property but there is no automatic right of way over land in law. If the site being considered is an island remote from, say, road access, a right of way needs to be established. Other similar factors include easements to allow services onto a site and also rights of egress and escape to meet fire regulations.

(ii) Rights of light

There are complex rules dealing with neighbours' rights to daylight and views. This must be taken into account in designing schemes as well as in negotiating compensation to neighbours adversely affected by new buildings.

(iii) Party walls and support of neighbouring structures

Similarly, there is statutory protection for the rights and responsibilities of neighbours and site owners about questions of shared walls and rights of support. These need to be negotiated and agreed before development can proceed, though neighbours cannot prevent development on these grounds.

(iv) Craneage and oversailing rights

Finally, on tight urban sites, the possibility of crane jibs used in the construction of the new building passing over neighbours' sites must be

considered. Properties have rights to the airspace over land, so there is no automatic right for a crane to pass over the site.

Other issues that might be considered are road closures and the effect of neighbouring businesses of the construction work. All these issues have to be investigated and this is best done as early as is feasible.

2.4.6 Site servicing

The utilities have a statutory duty to service developed land but there are practical issues that must be considered that can have significant effects on the development planned, in particular an assessment of the capacity of the services to meet the requirements of the development. If there is a shortfall in some areas of supply it may take considerable time for adequate facilities to be supplied – if at all. If it were not practical to raise the capacity of supply then the service supplier would use this as an argument to the planning authority against the scheme being given consent. The services to the site that should be investigated are:

- Gas
- Electricity
- Telecommunications
- Water
- Sewage and rainwater run-off.

A further factor to consider is whether pipes and service runs interfere with the physical development of the site. High pressure gas pipelines, for example, have exclusion zones around them where no development is allowed.

2.4.7 Highways and access

Virtually all developments will involve some generation of traffic and need servicing by roads. As a result, one of the most important issues to resolve will be the highways situation. Like the services connection, consultation with the highways authorities is one of the key components of consideration by the planning authorities, therefore consultation at the pre-acquisition stage is important both in assessing whether the scheme is acceptable on the site and in shaping the form of an acceptable scheme.

The highways authorities will first consider whether the scheme is acceptable in terms of the potential increase in car use generated by the development. They, and the planning authorities, will take into account

whether the scheme is in line with central government guidelines on transport and car journey generation. They will also assess whether the scheme is in conflict with any proposed road schemes in the area.

If the scheme is acceptable, consideration will then be given to the degree of road alterations required, if any, to accommodate the scheme. New junctions or roundabouts may be required. If they are directly connected with the scheme, the developer may have to contribute to their development or pay for the alterations in their entirety. Ascertaining, at least in principle, what is required, gives the developer the opportunity to cost the commitment and set it against the completed value of the scheme. The developer may also be able to gain information about future schemes that may affect the development, either positively or adversely.

2.4.8 Ground conditions and bearing capacities

Key physical characteristics that affect the building that goes onto the site are the ground conditions. These include the frequency of flooding that the site suffers (for example, is it located on a floodplain?) and the groundwater height. The type of soil, geology and the bearing capacity of the site are also key issues, having a strong influence on the design of the building and, in particular, the foundations. All these factors can have an influence on both the cost of construction and the end value of the development. Spending a relatively small amount of money on site investigations can help save the commitment of considerable sums.

2.4.9 Contamination

The final main issue to consider about the site has been one of the most important ones of the recent past. This is likely to become increasingly important in the future as the Government acts to encourage more development on previously used brownfield sites. It is also likely to be an issue affecting developers as occupiers of property have shown a trend to become increasingly litigious.

It is therefore very important to carry out investigations on the previous users of the site. If processes had been employed which used harmful chemicals then there is a strong risk that the site is contaminated with chemicals potentially harmful to human or animal life, one of the main definitions of contamination under the legislation of the Environment Act 1995. Some of the potentially harmful uses are obvious, such as chemical works and gas works, but some are less obvious: dry cleaners, petrol stations, and animal rendering and abattoirs are associated with contamination.

The principle followed in dealing with contamination is that the 'polluter pays' for making the land safe. Although this is reassuring to the developer, it is not an absolute panacea. Firstly, with historical contamination the polluter may not be identifiable or may no longer be in business. There will almost certainly be timing issues. It may take time for the site to be treated by the polluter, which may cause the project to miss the window of economic viability. It may be advisable, under most circumstances, for the developer to control and thus carry out the work on the site. Developers should therefore employ environmental consultants to carry out a survey for contamination and to assess the potential cost of cleaning up the site before making the commitment to purchase.

Remediation is a complex area outside the scope of this book, however it should be noted that most sites can be remediated. It is the cost and time issues that are important to consider, as well as any potential stigma that is associated with the contamination that may have an impact on the end value of the scheme.

2.4.10 Conclusions

Acquiring the site is perhaps the most important point of the whole development process. It usually marks the point of the start of the development proper and certainly the point where the major financial commitments begin. It is thus imperative to carry out investigations into the site diligently and thoroughly. This will pay dividends later on.

2.5 Obtaining planning consent and other legal issues

2.5.1 Introduction: planning and development

In the preceding section we have covered some ground dealing with planning and other statutory authorities. Because planning requirements are so important to development, however, we will look in more detail at the systems and processes involved.

Planning and development go hand in hand. Most countries have planning systems in place; some are restrictive and prescriptive, some are liberal and largely market led. Whatever the case, the planning system represents state intervention in the land markets.

There are a number of reasons why the state chooses to intervene but they all revolve around the importance of the built environment to the economy,

to society, and to the individual. In a market economy there is the need to balance the requirements of the state and the business community in the economic development and growth of the economy, with the requirements of the population for a safe and healthy environment. There is the need to ensure that resources are used as efficiently as possible. In an unregulated economy there would be a tendency for developers to follow trends that would give short-term profits only, providing time for properties for which there was the highest demand and ignoring the rest, leading to a boom and bust cycle in individual markets. The planning system works best when a balance is achieved between the needs of the state, business and society, ensuring balanced development and an efficient use of resources, smoothing out short-term trends in the market.

Some parties view planners as the enemy of development and developers. This is, in fact, not the case. In fact, the planning system, although restrictive in many cases, assists developers and investors by creating certainty and, sometimes, artificial construction of supply of the type of property most frequently on demand. Where demand exceeds supply of any commodity the price of that commodity invariably rises as is certainly the case with property.

An effective planning system on land values can be observed in many ways. One classic way is by taking a profile of land values across any major city. The highest values tend to be in the centre where demand is greatest, falling out towards the suburbs. There is usually a point at which values drop close to agricultural values and then pick up again. This is usually an indication of the position of the 'green belt', an artificial constraint on development introduced to prevent urban sprawl.

This can also be seen in individual cases. In the mid 1990s there was a clampdown on out-of-town retailing in the UK by a tightening up of the planning system. It was felt by many commentators that the dynamism of traditional town centres was being undermined by the growth of hypermarkets and retail warehousing on the edge of towns. The growth in these markets also led to an increase of road traffic, another factor that is an increasingly key issue in politics and planning. A sequential test was developed that required developers to consider sites closer to the centre of urban areas first, and there was a presumption against giving consent to new out-of-town schemes. The result of this was a significant rise in value of both developed and undeveloped retail sites with planning consent on edge-of-town locations, as investors and operators realised that an artificial constraint on supply had been imposed. This rise in value actually increased the impetus for both the development of new sites and for the redevelopment of existing locations. Planning can be a crude instrument but it is one that is also essential.

Indicative Scale Values of Vacant Sites (CBD = 100)

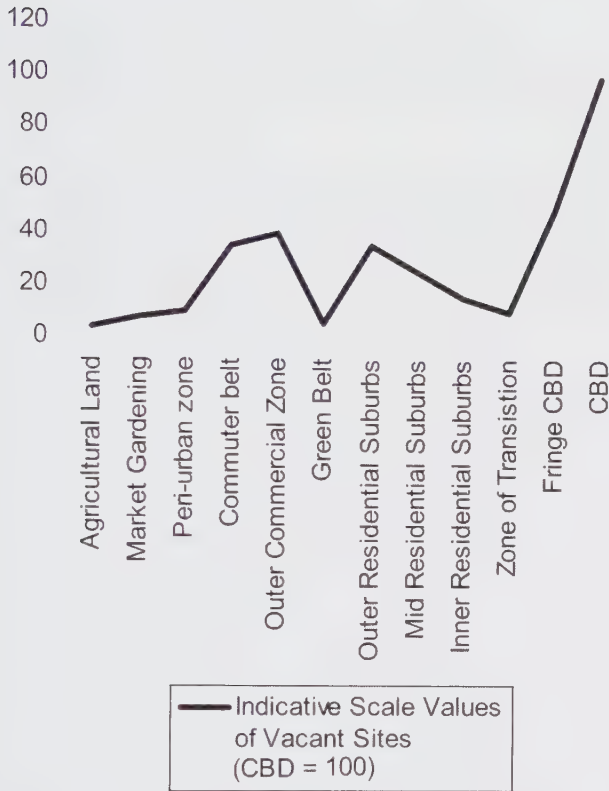


Figure 20: The effect of the planning system on land values across an urban area.

The land use planning system is an integral part of the national planning system. Other elements of planning include transport and highways. It is the land use planning system which lies at the interface between the state and the development market, and hence this is the area on which we will concentrate.

2.5.2 The UK land use planning system

It is not the purpose of this book to give a history of the development of the planning system; nor is this book intended to provide a comprehensive analysis of all aspects of the planning system as it affects the developer. The UK has a mature, extensive and complex land use planning system with over 90 years of legislation from the first true planning act in 1909 (The Housing, Town Planning, etc Act 1909). Much of the system is embodied in

a huge range of 'statutes, the rules, regulations, directions, policy statements, circulars and such like'.⁹ The whole system cannot be discussed here, only key features can be examined. It should be noted that there is a lot of difference between the 'framework' and the way in which the system actually operates. There are a number of political, social and economic factors that can significantly alter the way the system actually works from time to time.

There was a major change in the operative legislation in the 1990-91 period with the passing of the Town and Country Planning Act 1990 and the Planning and Compensation Act 1991, and it is these acts which are in operation at the time of writing.

The basics of the planning system are outlined in Figure 21. The system is a tiered one with the ultimate planning authority lying with central government. The strategic planning of local areas and the actual implementation of the planning system is devolved to lower levels of government, namely local authorities. Authorities such as county councils, the metropolitan councils and the unitary authorities prepare strategic planning documents in line with government policy. Lower level local authorities such as district, town and local councils prepare detailed development plans in line with this strategic planning and are responsible for development control.

The UK planning system is not a zoned one. Each site is treated on its merits and any sort of application for development can be considered for any site. A decision, however, must accord with the local development plan which in turn must be aligned with the strategic structure plan, which itself should be in line with national and planning guidelines and policies.

A précis of the England and Wales land use planning system is included below. The system in Scotland is similar in overall philosophy but is slightly different in structure, particularly since devolution.

All of the authorities listed employ professionals to prepare the various plans and instruments, and to implement their plans. Approval of the plans and of subsequent development applications is, however, taken by elected members of the appropriate body, be it at a local or national level. This acts to greatly improve the transparency of the system and the processes operated within it.

⁹ Cullingworth, J. B. and Nadin, V. (1994, 11th edn) *Town and Country Planning in Britain*, London, Routledge, p. 46.

Developers in this system have a clear framework of plans to work with, to give them guidance in the development of schemes.

The structure plan gives the strategic overview of the type of development required and indicates the locations where the authority feels development is needed. The plan also gives guidance to the overall philosophy and thinking behind the plan.

The local plan gives detail to the overall strategy. It enables local authorities to flag up sites for development and to give relatively detailed guidance as to what sort of development would be allowed in each area, and also what conditions might be applied.

When these plans are clearly constructed and where the system is working well, the UK planning system gives a good balance between guidance and control while still allowing a degree of flexibility. As we noted above, the system does not prescribe uses for each and every site, nor does it impose rigid zones. It allows arguments to be made for a contrary use for a site but also clearly lays down guidance for developers regarding the local authority's position.

The structure and local plan follow transparent processes in their production. Both require the public to be consulted during their preparation. Plans are also published in draft form before they are finally adopted, to allow representation to be made regarding alterations and amendments. Many developers keep a close eye on the preparation of development plans, and can and do make representation to the local authorities concerned during the period when the plans are being drafted.

2.5.3 Control of development

Most forms of development require prior approval from the local planning authority that have considerable powers of discretion in considering applications. Decisions must have regard to the development and structure plans but, as we have seen, they can take into account any other material considerations and arguments.

Applications must be made in a proper form to the local planning authority who employs 'officers', professional planners who consider the applications, advise applicants and make recommendations to the authority's planning committee which is made up of elected members. A fee is charged for the submission of an application.

Actor	Main activities/roles	Notes
Central government	<ul style="list-style-type: none"> <li>(I) Strategic planning guidance and development of policies such as transport policy, etc. <li>(II) Issue of national policy guidance to assist/direct the strategic (structure) implementation (local) and planning by way of instruments such as Planning Policy Guidance note (PPG) and Regional Planning Guidance (RPG). Examples of PPG include PPG 6 which deals with retailing and transport. <li>(III) 'Call in' powers are reserved by the appropriate secretary of state for key/contentious developments where the decision would normally be taken locally of where there is national concern. <li>(IV) Operate the appeal system against a decision or disagreement at a lower level. 	<p>The basic role of central government is as an overseer and coordinator of the planning system, providing the national strategic direction. Can be involved at all stages of the process with the issue of planning guidance, which should be used in the preparation of plans and also as a guide to developers making planning applications. Can call in powers of the government and allow local decisions to be overridden. This is reinforced by the government controlling the appeals system which allows national concerns and the philosophy of national government to be operated at a local level.</p>
County councils (and some national parks)	<ul style="list-style-type: none"> <li>(I) Preparation of structure plan which has a broad framework of development proposals that exist over all of the area for which the authority has control. The structure plan generally has a 15-year life and gives strategic guidance about the development of the area. 	<p>The county councils have a strategic role in planning, laying out a broad outline of how the region should be developed. The structure plan can take into account the wider issues regarding the economic, cultural, social and historic development of</p>

	<p>(II) The preparation of mineral plans. As the name implies, these plans deal with the exploitation of mineral resources in the area.</p> <p>(III) The preparation of waste plans.</p> <p>(I) Preparation of a local plan, an authority-wide, map-based document with a narrative of backing. It provides detailed policies and proposals for the guidance of development control. Policies normally have a 10-year horizon but can be longer.</p> <p>(II) Development control. Local authorities receive planning applications and make decisions to reject, approve or modify proposals.</p>	<p>the region. County councils usually cover a wide geographical area compared with the district, town and local council below them.</p> <p>The district, local and town council have the task of implementing the strategic direction as laid down in the structure plan and also in controlling development. In a two-tier system it is at this level that planning applications and decisions are made.</p> <p>Some authorities fulfil both the strategic and the detailed planning role. This usually occurs where there is a logical administrative area that is best governed as a whole. The large metropolitan cities in the UK are obvious examples, being self-contained urban areas that have little in common with the counties that surround them. They are also usually large enough to allow effective strategic planning.</p>
<p>District councils (jointly with some of the national park authorities)</p>		<p>Metropolitan councils, London boroughs and other unitary authorities</p> <p>(I) Preparation of the unitary development plan, a two-part document effectively combining the structure and local plan. The first part contains the framework of general policies and proposals. The second part provides the detailed policies and proposals to guide control. These normally have a 10-year horizon.</p> <p>(II) Preparation of mineral and waste plans.</p> <p>(III) Development control.</p>

Figure 21: England and Wales land use planning system.

The local planning authority has three choices when an application is made to them. They can:

- *Give unconditional planning consent.* This is actually quite rare. Normally conditions are attached to consents
- *Give planning consent subject to conditions.* These can be just about anything as long as they are material and reasonable. A typical example includes the timing of the development (usually consent is not open-ended, a time limit is imposed requiring the development to start within it, for example that the consent should only run for five years). Another common requirement is related to the materials and design of the building. In England and Wales the consent may be given subject to an agreement under section 106 of the Town and Country Planning Act 1990. This allows the authority to obtain what is commonly termed 'planning gain', usually some community facility to be provided by the developer at their cost or by way of a major contribution to the overall cost in exchange for consent being given. Although this may sound like bribery the effect of this section is moderated by the government and the courts, requiring the article gained under the agreement to be related in some way to the development.
- *Refusal of consent.*

Applicants for planning consent have the option of applying for detailed or outline consent. The latter is often done to establish, in the eyes of the market and the planning authority, what size and type of buildings would be allowed on a site that is ripe for development. Obtaining outline consent can be useful if, for example, the site is to be marketed prior to development, as it shows the potential for the site. It also may be useful for a developer in obtaining finance or development partners for a site. The outline consent granted will not be sufficient to allow immediate development and usually the conditions applied are that the detailed application will follow.

The most obvious reason for applying for outline consent in the early stages of the development, however, is related to design. At the inception phase of a development the design of the scheme is not usually finalised. A full planning application requires the inclusion of detailed plans. It is normal, therefore, in a development project to obtain outline consent at the land acquisition stage to prove that the broad development planned will be allowed. A full, detailed application then follows as the scheme design is finalised.

If an application is rejected, the applicants have the right to appeal to the appropriate secretary of state. This right also exists against conditional

approval where the applicant feels the conditions applied are inappropriate or unusually onerous. In addition, the applicant can resort to the courts if the local planning authority is considered to have acted *ultra vires*, i.e. outside its powers. Where an appeal is made to the secretary of state an experienced planning inspector is appointed to consider the case and hear representations.

The appropriate secretary of state has wide powers on appeal. An inspector may reverse decisions, impose new conditions, or refuse consent altogether where it has previously been given. About one-third of appeals tend to be allowed. Most decisions are made by the inspectors employed by the ministry with a very few, larger schemes going to a public inquiry.

It is important to define what development actually is. It is defined in the 1990 Town and Country Planning Act as 'the carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of a new material change in the use of buildings or other land'. This is clearly an extensive definition that also includes demolition in some cases. It should be noted that it includes not only physical operations or alteration to a building but also the changes of use of a building. For example, if a developer wanted to change a building currently used as an office to, say, an estate agents, planning consent would be required, as an estate agents is considered a retail use and, therefore, a change of use.

The definition is so broad it could include just about any aspect of development. This would imply that all activity would require consent from the planning authority. In fact, some leeway is given to reduce the burden of bureaucracy:

- Some activities are specifically stated not to be a development, for example internal alterations to many buildings are not classified as such.
- Other items may constitute development but are specifically declared not to require consent by government instruments.
- There are a number of instruments which would allow development to take place without specific application to local planning authorities:
 - General Development Order (GDO)
 - Use Classes Order (UCO)
 - Special Development Order (SDO)
 These are discussed in more detail below.

2.5.4 The General Development Order (GDO)

The GDO is a statutory instrument which is intended to save time and effort for both the community and the planning authorities. The GDO lists activities which are defined as permitted development. These are essentially activities either of a very minor level or else have a minor impact on the local community or area. Examples include minor alterations to residential buildings and small extensions within certain size limits. Similarly, the erection of certain agricultural buildings is deemed not to require additional permission under the GDO. This also applies to certain changes of use. For example, in the retail class A it is possible to move from class A3 (food and drink) to a class A2 or A1 without the need for a planning application to be made. This is because the change represents a reduction in intensity and impact of use. A move of the other way from class A1 to class A2 or A3 does have an additional impact on the location where the shop is located and consent is required (see Part 1).

Although most of the GDO deals with minor matters which are not of concern to most developers, it is worth checking in some cases whether consent is actually required, especially where change of use is concerned.

2.5.5 The Use Classes Order (UCO)

The Use Classes Order is an important element of the planning system. It defines 16 classes of activity in the built environment. Class A is the retail class, class B is a broader business class and includes office, light industrial and warehousing activities, and so on. Classes are subdivided, for example class A is broken down into class A1, general retail; class A2, financial services; and class A3 food and drink (or rather 'sale of food or drink for consumption on the premises or hot food for consumption off the premises'). The Use Classes Order is used by planning authorities to define activities suitable for individual sites and/or areas. It also allows, as we have seen above, some changes in use to take place without the need to go through the planning application process. In this, the Use Classes Order and the General Development Order work in tandem.

It is to be noted that not all uses in the built environment are included within the Use Classes Order. Some users are *sui generis*, i.e. they are in a class on their own. Car showrooms fall into this category.

2.5.6 Special Development Orders (SDOs)

The GDO is applicable everywhere. Special Development Orders are more limited and apply only in specific cases. They relate to particular areas or

types of development. For example, the Urban Development Corporations, a feature of urban regeneration in the UK in the 1980s and 90s, had SDOs granted in their favour to speed up the development process in the areas of their authority. SDOs have to be debated in Parliament and can be revoked. They can be used for specific developments, for example if a local authority is opposed to a plan the government wants to carry out or see developed. The government can override the local planning authority by issuing a Special Development Order, thus bypassing the normal planning system.

2.5.7 Certificate of lawfulness

In certain circumstances it is difficult to determine whether planning consent for a development is required. In these circumstances an application can be made to the local planning authority for a certificate of lawfulness which confirms whether planning consent is or is not required. A certificate of lawfulness is not in itself consent but it can remove uncertainty.

Other issues concerned with planning are discussed below.

2.5.8 What are the chances of success on applications?

This varies from area to area but on average some 80 to 90 per cent of applications are successful. This increases with the level of consultation undertaken by the developer.

2.5.9 The powers of the local authority

Local planning authorities also have powers of enforcement related to development. They can:

- require the developer to consult with the local planning authority if development has been carried out without permission;
- have the power to demolish or remove structures constructed without consent or in breach of content;
- issue stop notices to prevent development proceeding.

2.5.10 What is the situation if development has taken place without permission?

This is a difficult position. As we have seen, local authorities have powers of enforcement up to and including the removal or demolition of the development concerned. Where development has taken place in good faith

or in ignorance, it is possible, however, for the local planning authority to issue retrospective planning consent. This can legalise the situation that it should not be relied on as a matter of course.

2.5.11 What other official permission may be required in development?

A number of other applications may be required to execute the development. These include:

- *An environmental assessment.* This is a European Community/ European Union requirement, arising out of concerns about protecting the environment. It requires a qualitative and quantitative review of the proposed project and its potential impact on the local environment, and the preparation of an environmental statement and also information on the environmental effects of the development by the local planning authority and the developer. The project must be of more than local significance or importance. It will usually be required where the project is in, or near, a vulnerable location. These types of locations include Sites of Special Scientific Interest (SSSI) or Nature Protection Sites (NPS). Finally, environmental assessment will be required where the project is unusually complex or where the potentially adverse effects of the project are unusual or high.
- *Listed building consent.* As we have seen from the above, a number of historical or architecturally interesting buildings are what is termed 'listed'. This means that they are contained within a document highlighting their importance. There are three grades of listing (see 2.4.3) which means that additional application must be made in addition to the planning application to the heritage authorities, for example in England this would be to English Heritage. Any alterations require listed building consent in addition to the planning consent. Having a listing does not entirely protect the building. It is relatively easy to gain consent for working with a Grade II building but almost impossible for a Grade I listed building.

2.5.12 Other related considerations

- *Conservation areas.* As we have seen from the site acquisition section, local planning authorities can declare whole areas as conservation areas to protect some special characteristic. Although no specific additional consent is usually required for work in these areas (other than if a listed building is involved), consultation with the planning authorities, the local civic society

or the national heritage bodies will be usually required prior to the making of an application.

- *Archaeology*. Many historic towns and cities in the UK have many centuries of continuous occupation. Consultation with the county archaeologists, university departments and the heritage bodies may be required at the planning application stage.
- *Sustainability*. In addition to the environmental issues, it is likely that future developments may see energy audits and sustainability statements being a requirement of many applications.

2.5.13 Conclusion to the planning section

Obtaining the necessary legal consents is a vital requirement of the development process. Without consent development cannot take place. This section can only give an introduction to the issue. Anyone involved in a significantly sized development is advised to research the area in detail and to obtain advice from a planning and development specialist in order to avoid expensive delays or even failure of the scheme.

2.6 Conclusion to Part 2

A developer reaching this stage will have four of the important pieces of the jigsaw in place. Initially, an opportunity will have been identified. This apparently simple step is surprisingly complex; the identification of latent development potential requires a number of components to come together at the same time. Perhaps part of this process is establishing whether the demand for the proposed product really exists. After this has been done at a superficial level, more in-depth analysis of the market adds detail to the nature of the demand leading to the form of the scheme becoming more crystallised in the mind of the developer. Next, a site will have been identified and, after a process of due diligence, will have been acquired. Planning and other consents will finally have been applied for and obtained. The scheme can now proceed.

All of these key pieces need to be obtained. Without any one of them the development puzzle cannot be completed. The developer now needs to assemble the remaining pieces in order to see the development to its conclusion. We will examine these components in the following sections.

3 Finance and development

3.1 Introduction

3.2 Fundamentals of development finance

- 3.2.1 Phases in development funding
- 3.2.2 Relationship between project characteristics and funding
- 3.2.3 From where does the finance come for development?
- 3.2.4 A note about debt
- 3.2.5 Development finance in detail
- 3.2.6 Forward sale agreements

3.3 Retention financing

- 3.3.1 Mortgage finance
- 3.3.2 Variations on lending
- 3.3.3 Corporate finance
- 3.3.4 Corporate debt
- 3.3.5 Equity funding
- 3.3.6 Other options
- 3.3.7 Part disposal options
- 3.3.8 Equity sharing
- 3.3.9 Joint ventures and partnerships
- 3.3.10 Other financing options

3.4 Risk reduction and finance

- 3.4.1 Fixed rate loans
- 3.4.2 Derivative-backed hedging

3.5 Taxation

- 3.5.1 Introduction: tax and development
- 3.5.2 Taxes that may be encountered by developers
- 3.5.3 Conclusion to the tax section

3.6 Conclusion to Part 3

Glossary

Caps	A vehicle used to limit the level of interest rates on a loan.
Collar	Similar to Caps but cheaper as a lower limit is also agreed, below which the rate of interest cannot fall, which gives security to the lender.
Commercial paper	Short-term (loans of less than three months' duration) available in the money markets.
Debenture stock	Stock market issued debt.
Derivative-backed hedging	Using the futures and options markets to reduce the level of risk in interest rate movements.
Equity returns	The return on an investor's own (as opposed to borrowed) funds used in a project.
Forward fund	A way of securing cheaper funding for a development involving selling the scheme prior to construction to a financial institution who then provides the short-term project funding during the life of the development. On completion and letting of the scheme, the institution pays the balance owing to the developer and ownership is transferred.
Forward purchase and Forward sale	Similar to the above, but the agreement is only to purchase the completed scheme at an agreed price and with an acceptable occupier and lease in place. The developer must secure their own project funding.
Gearing/leverage	The percentage of borrowed money to the developer's own money invested in a project.
Interest-only mortgage	A property-backed loan where none of the principal sum is paid back until the end of the loan period, the borrower only paying interest on the loan.
Investment yield	The return on an investment expressed as a percentage.
Joint venturing	The practice of entering into a partnership with one or other development partners, such as a public sector body or bank, to carry out a development project.

Limited Liability Partnerships (LLPs) and Limited Partnerships (LPs)	Two versions of special investment vehicles used to save tax on a development or investment project in the UK.
Limited recourse loans	A loan where the lender has limited ability to seek repayment from a parent company when a subsidiary defaults. See Debentures.
Loan stock	
Loan to Value ratio (LTV)	The percentage of value or cost of a development scheme that forms the basis of how much a lender will advance to a developer. For example, if a scheme has an end value of £1m and a bank has an LTV limit of seventy per cent, then the maximum that will be lent is £700,000. This ratio protects the banks' money from drops in value in the property market.
London Interbank Offered Rate (LIBOR)	The rate of interest that banks charge each other for loans between themselves. This forms an important benchmark for other, less secure, lending.
Mezzanine finance	Debt financing of a project above the LTV limit, usually at a premium rate of interest.
Negative cash flows	Cash outflows, i.e. expenditure.
Non-recourse loans	A loan that is specific and secured on a project only, with no recourse from the lender to any other party should default occur.
Opportunity cost	An economic term referring to the highest value option given up to do something such as invest in a project. It gives a measure of that project's worth.
Overage	Extra receipts over and above those originally expected.
Public Sector Borrowing Requirement (PSRB)	The amount of money the government and public sector need to borrow to fund activities.
Real Estate Investment Trusts (REITs)	US tax efficient property investment vehicles.
Repayment/amortised mortgage	The traditional property-backed loan where the borrower pays off both interest and capital over a fixed time period.
Retail debt	Effectively a corporate debt agreed for general business operations rather than project specific debt.

Retention financing	Financing that allows a developer to retain, rather than have to sell, a development scheme.
'Rolled-up' interest	A debt where the interest is not paid each period but is instead added to the total amount owed which is then paid back as one lump sum.
Sale and leasebacks	Where a property owner receives capital by selling their property to an investor and immediately takes out an occupational lease on the property.
Securitisation	Property investments divided up into shares like a company.
Senior debt	The main loan on a project, usually the debt that is not the mezzanine layer.
Swaps	A form of derivative hedging for interest rates.
Taper relief	A tax allowance given on inheritance tax.
Texas agreement	A document drawn up for a partnership/joint venture that deals with what should happen if the partnership is terminated early.
Utilised Securities Market (USM)	A cheaper, less formal version of the main London Stock Market that allows smaller, less well established companies to trade their shares and raise finance.

3 Finance and development

3.1 Introduction

All types of property development have some similar characteristics. They tend to be capital intensive, requiring large amounts of funds. The funding characteristics tend to fall into broadly similar patterns in that there are requirements for regular outflows of funds for long periods whilst the positive receipts from development tend to be delayed. These features mean that securing sufficient funds on the correct terms to suit the requirements of the development is one of the critical elements required to move a development from the conception stage to reality.

This is the main reason why finance gains a section of its own in this book. Finance is a complex element that needs to be looked at in detail. There are many different ways of financing developments though, to be realistic, the options for smaller developers are limited.

The basic options for funding developments are as follows:

- (a) Use the developers own resources – either from retained profits or from corporate funding routes – to undertake the development. This is referred to as equity funding.
- (b) Borrow the money, either on a long-term or short-term basis, using the site as the security for the loan (though other security may be required by lenders).
- (c) Find an investor who will buy the completed scheme and who may provide funding for the project during its construction phase.

These are the basic options, though combinations are possible and, indeed, are common. The choice of which to use, as we will examine in more detail, will depend upon the aims and objectives of the developer, the type of development being undertaken and the financial standing of the developer themselves.

This section will work through all the options, starting with an examination of the fundamental nature of development and the influence these have on finance.

3.2 Fundamentals of development finance

In order to understand the way in which developments are financed it is important to first review the characteristics of development as it is these that shape the behaviour of both developers and financiers.

To explain this we will take the example of the development of an investment property by a private sector developer. This is, in any case, one of the most common circumstances where funders need to be involved.

3.2.1 Phases in development funding

As can be seen in Figure 22, below, development breaks down into distinct phases.

Developments of this sort usually commence with the purchase of the land, a major capital outlay. There is then, typically, a period of negative cash flows, i.e. payments, as the development is planned, constructed and whilst an occupier is sought. Once a letting is achieved the property settles down into a hopefully long and stable life as an investment. Once it is fully let it

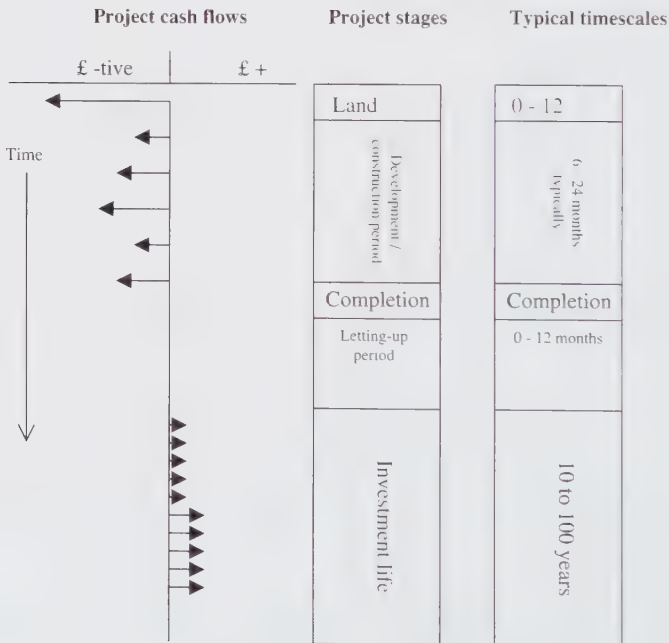


Figure 22: Analysis of the stages of a development.

becomes a valuable, saleable asset but until then a development property can only be sold at a substantial discount to full value.

This illustrates that two distinct phases with different cash flow and risk characteristics exist. In the development phase, the project is high risk. There are large negative cash flows, there is little or no income and the asset is largely unsaleable. After completion and letting, the asset is a relatively low risk investment, with a high underlying value, a steady but relatively low income stream and low, sometimes negligible, outgoings.

3.2.2 Relationship between project characteristics and funding

These differing characteristics usually force developers to consider finance in two phases and, in most cases, to obtain the finance from more than one source. The first phase is the project or development finance phase. This tends to be short-term finance bearing a high risk and is thus usually expensive. The second phase is concerned with long-term ownership, investment finance, which bears a low risk.

This need to consider the two phases separately is illustrated in Figure 23.

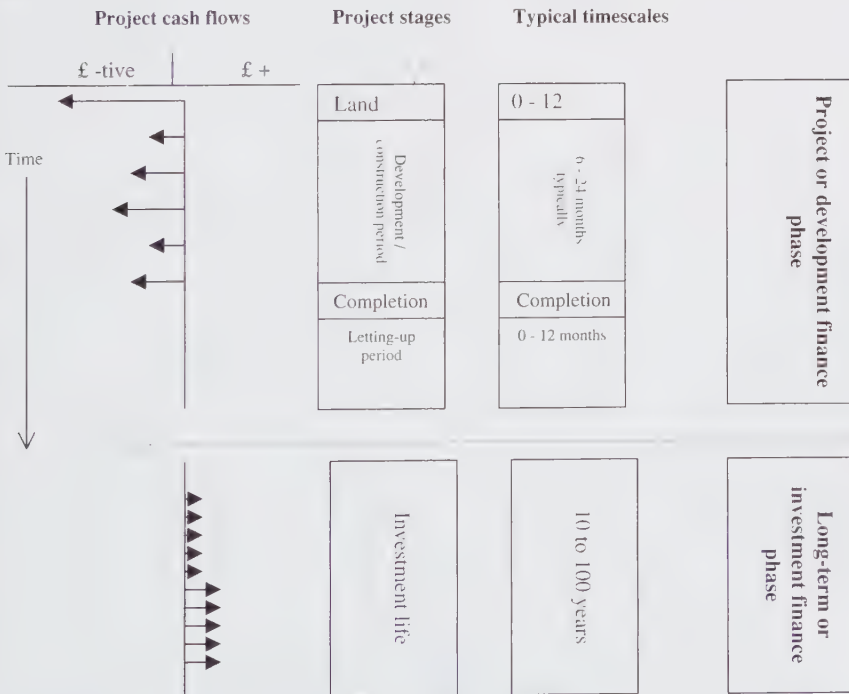


Figure 23: Distinction between project finance phase and long-term investment finance phase of a property development.

The choices that the developer makes regarding finance are greatly influenced by this situation. They are also shaped by three key variables:

- (a) The identity of the developer.
- (b) The intentions of the developer.
- (c) The attitudes of the financial community towards development risk at the time the financing decision is made.

The identity of the developer is critical in determining the options available; the size and experience are the key factors. Larger, well established developers will have many more options available to them, and will have much less difficulty raising finance than smaller, less experienced developers who may well be confined to obtaining debt finance from the high street banks or specialist property lenders. The former, particularly if they have a stock market listing, will be able to consider a number of financing options including debenture loan stock, new equity and commercial paper, as well as conventional project-secured lending. This gives great advantages in terms of being able to obtain finance at the most competitive rates and terms.

The intentions of the developer also greatly influence the choices made. Developers have two fundamental choices: to sell on or to retain the development. The former is the option chosen (or sometimes forced on) developer traders, the latter the choice of developer investors.

The attitude of the financial community is a critical factor in determining what forms of funding will be available or, indeed, if funding is available at all. The investment market will at times readily fund certain types of schemes and will buy the end product of development. This will normally occur when funds perceive that that a sector will perform well in the future and where the funds portfolios are underweight in these sectors. This occurred with the retail warehouse sector in the early 1990s in the UK and then again with the leisure sector between 1998 and 2001. At other times, usually when the equity or bond markets are demanding large flows of funds, pre-selling developments is virtually impossible. Similarly the banks, which provide the majority of debt finance to the development sector, have periods when property lending is more or less attractive.

Given that two of these three factors are out of the direct control of the developer, we will continue our examination of funding options by way of the one in which the developer has the choice: funding choices according to the future intentions of the developer.

(i) Selling on the development and funding

The first option is relatively simple. The developer only needs to arrange short-term finance as the sale made on completion and letting should raise sufficient funds to pay off all the costs of development, including the project finance, leaving a surplus which makes up the developer's profit. This is illustrated below in Figure 24.

There are a number of ways of achieving the funding for this, including traditional project linked debt. Ideally, a developer will seek to achieve a 'forward sale'. The details of forward sale will be considered below but in outline this is a situation where a developer negotiates the sale of a scheme prior to completion and, indeed, preferably before the scheme has even commenced. The developer contracts with an investor to achieve a number of goals, on completion of which a sale will occur at an agreed investment yield. These goals are laid down in the contract but usually it requires the developer to build the property, and to find a suitable tenant on a suitable lease at an acceptable rent. The attraction of this to the investor is that they get a new property investment but are insulated from much of the risk of the development and are often obtaining the property at below its market value on completion. The attraction to the developer is that they have a defined exit for the project. This usually enables loans to be obtained at a more advantageous rate from sources of project finance or, indeed, when market conditions are poor to obtain a loan at all.

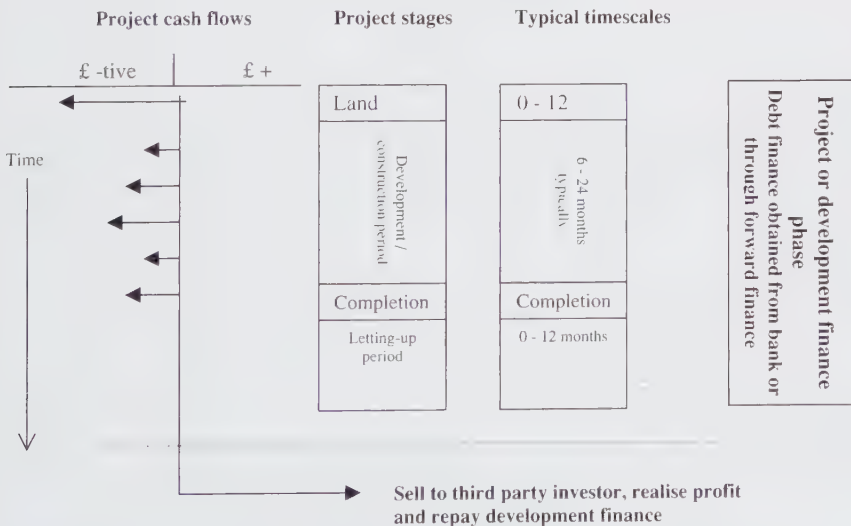
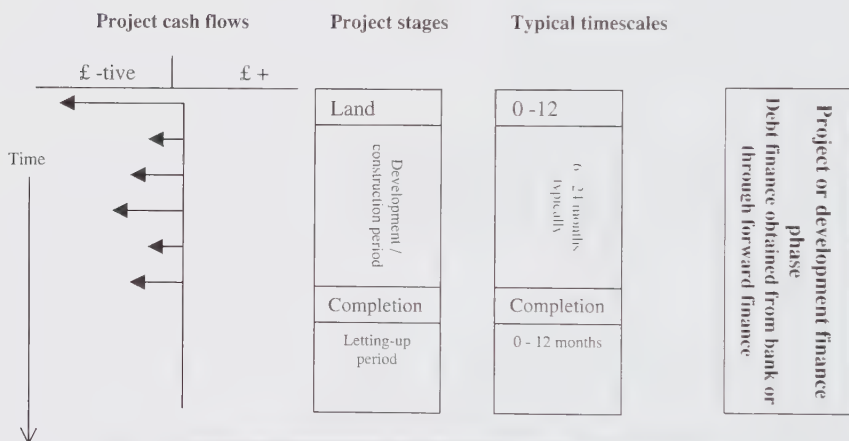


Figure 24: Forward selling of a development.

There is a variation on this, which will be covered in more detail below, where the investor agrees to forward fund the scheme as well as forward purchase it – hence a greater degree of risk is involved in the development phase of the scheme. However, this risk is limited as money is drawn down from the investor as the project proceeds with the final payment (including the developer’s profit) not being made until all the conditions are met by the developer.

(ii) Retaining the building: funding options

The second option, the retention of the scheme by the investor, is rather more complex but with more options available. The two phases of finance are usually split up, as with the first option, but project finance is arranged for the development phase and longer-term finance found for the investment part.



Refinance project as long-term investment based on value on completion either by way of mortgage or corporate debt and retention of ownership. Long-term finance repays development debt

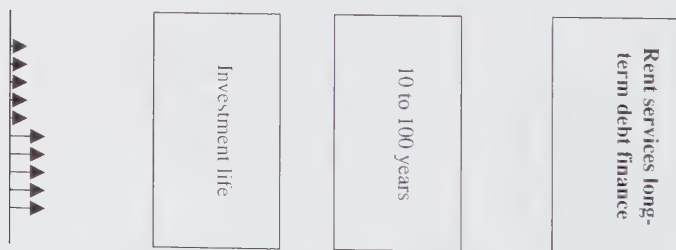


Figure 25: The refinancing route to the retention of the development scheme by the developer.

One traditional method for financing the investment phase is by mortgage, i.e. a property secured loan. The income from the property services, the debt and the principal is paid off by way of entering into a repayment mortgage as per house purchase or by way of an interest-only loan, where the principal is paid off by the sale of the asset. Alternative ways of financing long-term ownership include corporate debt, equity raising ventures and joint ventures with financial bodies, especially banks. This is illustrated in Figure 25.

An alternative way of retaining ownership is to finance both phases of the project in a single step – a common procedure with the larger developer investors who raise debt finance via the stock and money markets, but a more rare procedure for the smaller developer as the cost of lending, overall, would tend to be higher with conventional debt. Large companies raise medium to long-term money by offering corporate debt on the market against their track record or, more rarely, to carry out a specific project or projects. This debt, usually a debenture, pays the investor a guaranteed coupon or rate of interest and will be repaid at a fixed date. This gives the developer a pool of money with a known cost to use in general development projects. This is illustrated in Figure 26.

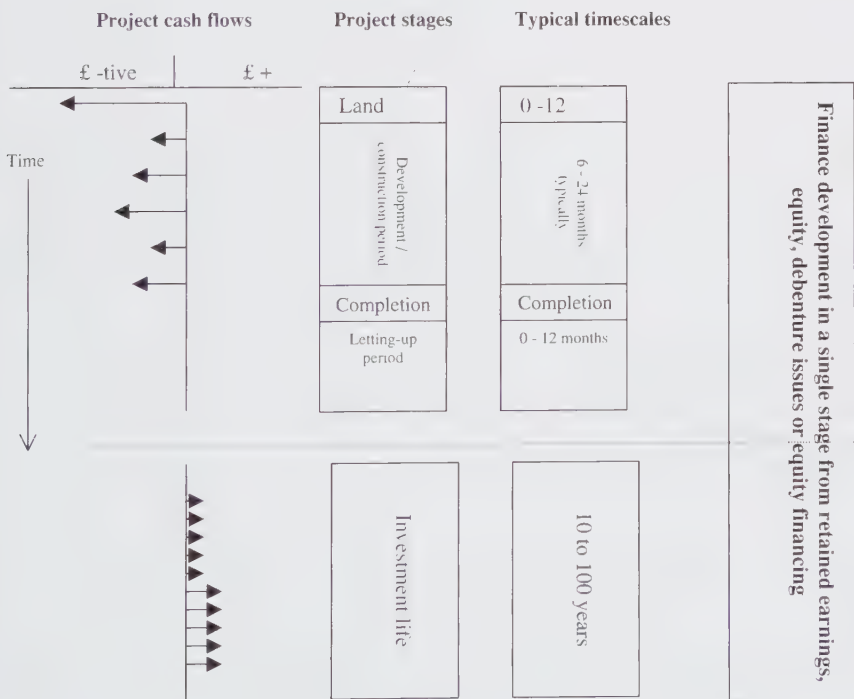


Figure 26: The 'whole project' route to retention financing.

More rarely these funds are raised via equity issues, i.e. the sale of new shares in the company. This is usually a more expensive option than raising debt but is advantageous under certain market conditions.

3.2.3 From where does the finance come for development?

Before some of these aspects of development finance are examined in more detail, we need to explore where the finance comes from for development. This requires an understanding of the workings of the financial system.

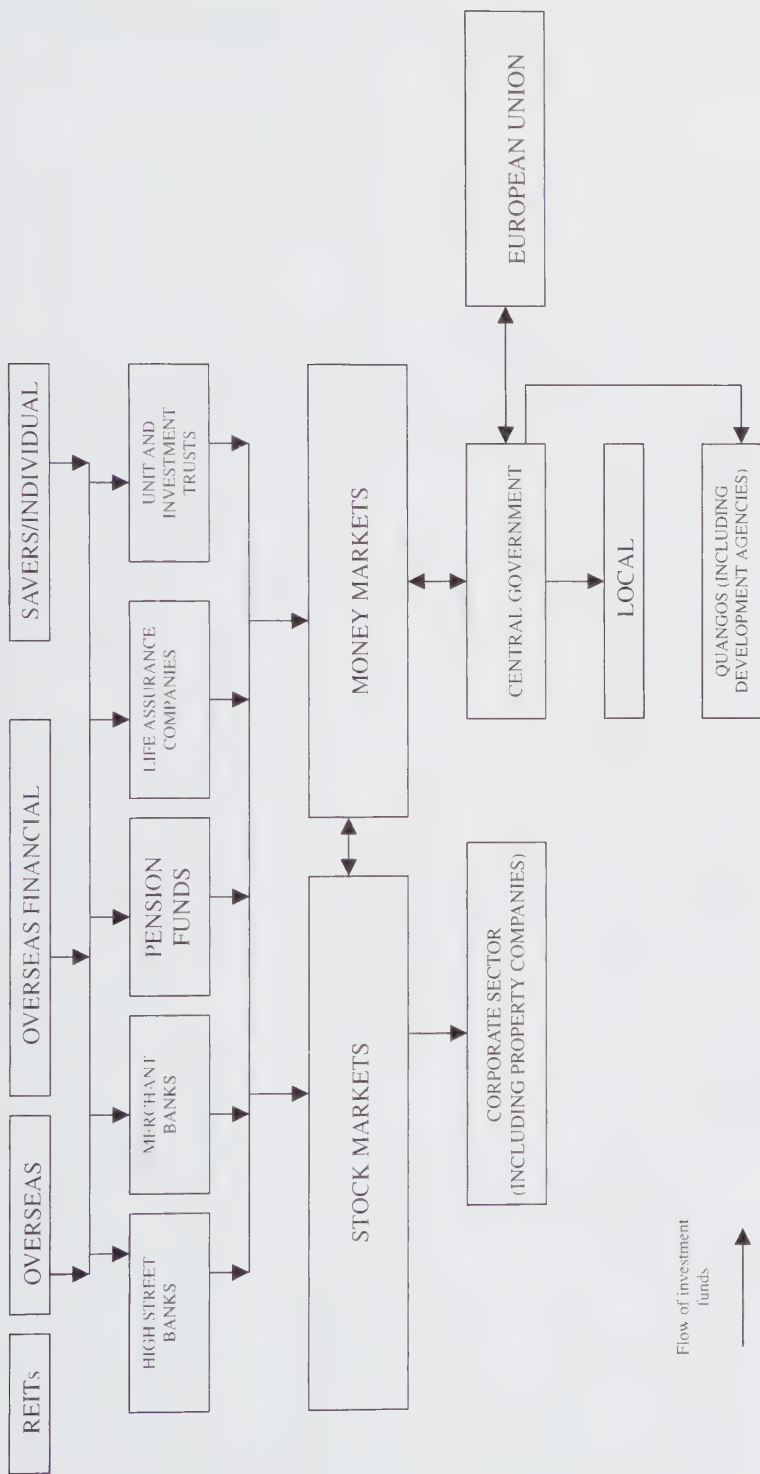
This is illustrated in Figure 27. Basically, money flows from the top of diagram to the bottom, though there are, of course, flows back as investors hopefully get a return on money invested. These have been omitted for clarity. Savers and individuals, and parties from abroad outside the system, place funds (usually through the second tier – financial intermediaries) into the system. These financial intermediaries¹⁰ invest funds on behalf of the investors, usually in the stock market and money markets but also directly in property, which is not shown on this diagram. These funds are then available for the corporate sector and government.

This is very much the traditional economist view of the financial system. In Figure 28 the development sector is represented as being an additional part of the system for the purposes of our understanding as to where the funds flow from.

Three types of funding have been distinguished. Firstly, there is debt funding, which is defined as money that must be specifically repaid to the lending body. The second type is equity funding. This includes corporate funding of the development sector (e.g. money raised by share issues) as well as monies flowing for the purchase of completed developments (which can be loosely viewed as long-term finance). The final source of funds which we have not mentioned to date is grant funding. This generally flows from the public sector (central and local government, quangos and the European Union). These funds usually flow to support development in deprived areas to encourage private sector participation.

The source and weight of the arrows indicating the flow of funds of the various types illustrated in Figure 28 gives an idea of the proportion of

¹⁰ Note that in this diagram building societies, which are a financial intermediary, have been excluded. This was to simplify the diagram but also reflects that most of the larger building societies in the UK have, in any case, converted to banks under the powers given to them under the Building Societies Act 1986.



Key: REITs = Real Estate Investment Trusts

Figure 27: The structure of the financial sector in the UK.

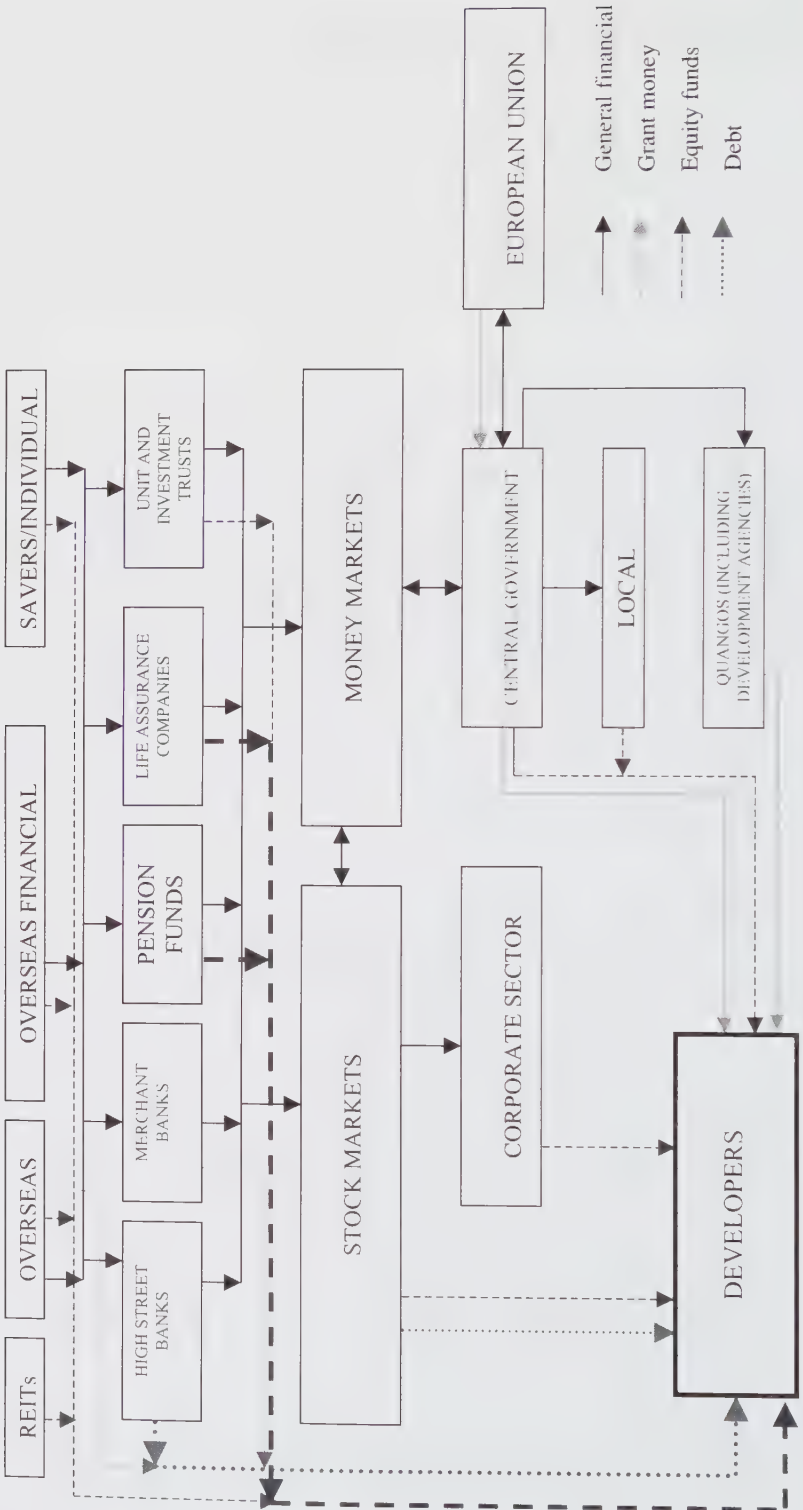


Figure 28: Financial flows to developers.

where the funds come from that flow to the development sector. Further reference will be made to it later in this chapter.

3.2.4 A note about debt

There is an old saying about property development finance: the most important factor to take into account when financing a development is the OPM principle – Use Other People’s Money!

Though this rather jocular line might underline some people’s opinions of property developers as fly-by-night shysters, in fact there are some very sound principles behind this statement. Better returns from the development to the developer can be obtained by using OPM. The reason is ‘gearing’, or to use the American term, ‘leverage’.

Let us use a simple illustrative example of a development that gives a 20 per cent return on cost:

100% equity finance	
Total development costs	£1,000,000
Completed development value	£1,200,000
Return on equity	20.00%

Let us now look at the return on equity, i.e. the developer’s own money, if 50 per cent of the money is now borrowed:

50% equity finance / 50% debt finance	
Total development costs	£1,000,000
<i>Made up of</i>	
Debt	£500,000
Equity	£500,000
Completed development value	£1,200,000
Repayment of debt	<u>£500,000</u>
Surplus to repay equity and give profit	£700,000
Return on equity	40.00%

The developer has invested £500,000 to get £700,000 back, a £200,000 profit which is a 40 per cent return.

Borrowing or gearing up further increases the return further:

25% equity finance / 75% debt finance	
Total development costs	£1,000,000
<i>Made up of</i>	
Debt	£750,000
Equity	£250,000
Completed development value	£1,200,000
Repayment of debt	<u>£750,000</u>
Surplus to repay equity and give profit	£450,000
Return on equity	80.00%

The question might be raised as to the validity of this calculation. Is it not true that borrowed money has a cost, an interest charge, whilst equity is free, i.e. you would not charge yourself interest. Does this not, therefore, increase the cost of debt over equity? The answer is no, not if the developer is accounting for costs correctly. All money used in projects has an opportunity cost, a cost equal to the highest opportunity with similar characteristics forsaken in order to put the money into this project. Simplistically, the opportunity cost of all funds used in a project should be similar to the cost of money borrowed to carry out the project.

So debt in projects tends in theory to be good. There are down sides, however, to gearing up. Firstly, debt does have to be serviced. Equity returns do not have an immediate charge, the owner of the equity has to wait. Lenders will not, they expect the debt to be serviced. Excessive debt over a large development portfolio can drag down a company, particularly when interest rates rise. Also gearing works in reverse. If the project does not do as well as expected then equity destruction takes place much more rapidly with gearing. This can be illustrated below:

100% equity finance	
Total development costs	£1,000,000
Completed development value	£800,000
Return on equity	-20.00%
50% equity finance / 50% debt finance	
Total development costs	£1,000,000
<i>Made up of</i>	
Debt	£500,000
Equity	£500,000
Completed development value	£800,000
Repayment of debt	<u>£500,000</u>
Surplus to repay equity and give profit	£300,000
Return on equity	-40.00%

25% equity finance / 75% debt finance	
Total development costs	£1,000,000
<i>Made up of</i>	
Debt	£750,000
Equity	£250,000
Completed development value	£800,000
Repayment of debt	<u>£750,000</u>
Surplus to repay equity and give profit	£50,000
Return on equity	-80.00%

Hence, gearing has its dangers. Lenders usually limit the extent to which developers can swap equity for debt, as they prefer developers to have some equity stake in a scheme for obvious reasons. If a scheme goes wrong, a developer with no equity can walk away with no loss except the chance of an opportunity to make a profit. Developers with equity are much more likely to work hard to protect it.

A further attraction with long-term debt is tax relief on interest.

3.2.5 Development finance in detail

(i) Project finance

This is the most common type of finance used by property companies of all sizes though it is used particularly for individual projects and occasional or new developers. It is provided from a number of different sources including banks and specialist property financiers.

(a) Features

Project specific lending has many variants but there are some common characteristics:

- Finance is short term, only for the period of the project or sometimes until the first rent review. This means that most loans of this type are of a two- to three-year period, extending to seven to eight years if funding continues to the first rent review. These latter, longer arrangements usually occur when there is an option with the lender to convert the loan from a development to an investment loan. As noted, there is usually the need to renegotiate the loans, due to the very different risk characteristics of development projects and standing investments.

- There are a number of options regarding the security required by lenders. Many loans are on non-recourse or a limited recourse basis. With the former, the only security for the loans is the value of the development itself. This is particularly attractive to smaller developers who rarely have other sufficient assets to provide security for lenders. It is also attractive to larger developers who have stock market listings. Excessive borrowing that appears on the balance sheet of these firms reduces the net asset value and thus the share price. Such developers try to achieve lending 'off balance sheet' by carrying out developments in subsidiary companies, sometimes in partnership with their financiers.
- Lending is limited to a proportion of the value of either the completed development or of the predicted development costs. With project finance this is usually the latter. Loans are available up to around 70-80 per cent of the development cost.
- Interest can be charged on any interest calculation period, for example, daily, weekly or monthly, though the latter is the most common.
- The sum borrowed is usually not taken as a lump sum but is drawn down from the lender as required. Most frequently this is on a monthly basis to coincide with the stage payments made to the construction team.
- Interest can be payable on a regular basis but it is much more common for interest to be 'rolled-up', i.e. added to the principal of the loan as the project proceeds. This is a common pattern because most developments do not produce any income to service debt as the project proceeds. If the project is phased with disposals during the course of the development then the loan

Total Finance Required £316,649.57

Interest rate per month 1%

Month	1	2	3	4
Expenditure	£100,000	£20,000	£30,000	£40,000
Interest		£1,000	£1,210	£1,522
Total Balance Owed	£100,000	£121,000	£152,210	£193,732

may be structured to see partial repayment of interest and/or principal as cash is received.

The rolling-up of interest is illustrated below.

- The interest rate charged on the loan depends on a number of factors. Fundamentally it is the Bank of England base rate that determines all domestic interest rates. The banks, in practice, obtain their own money based on LIBOR, the London Interbank Offered Rate. The individual lenders will then add a premium to LIBOR when lending, dependent on their assessment of the loan risk. This will itself depend on factors such as the status of the borrowers, their experience, track record and financial stability as well as the characteristics of the property and the state of the property market. Other factors include the availability of a buyer or tenant for the completed project, and the competitiveness of the lending market – banks are often keen to lend to property because the level of returns available tend to be higher than from other commercial loans.
- The lenders will need to satisfy themselves about the viability of the project before lending at all and will require the developer to provide much of the evidence to convince them of this by proof of market research, as well as recent lettings, market trends and movements. The financial appraisal will be scrutinised very carefully. This will include an examination of the rents and yields used, an analysis of the void allowances and whether the profit margin allowed is sufficient. The lenders may investigate the title, planning consent and contamination issues. References from

	6	7	8	9	Totals
£40,000	£30,000	£20,000	£10,000	£10,000	£300,000
£1,937	£2,357	£2,680	£2,907	£3,036	£16,650
£235,669	£268,026	£290,706	£303,613	£316,650	£316,650

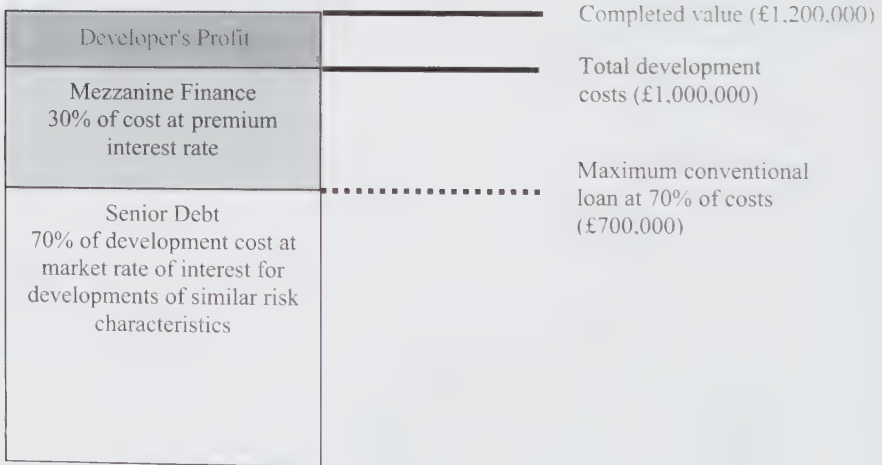
firms and persons of standing who have had experience of working with the developers may be required.

- Although it is most common for the site itself to act as security, lenders may require more comfort from the developer by way of personal guarantees and bonds. As additional security, banks quite frequently require developers to pay for the bank's own team of project experts to sit on the progress meetings of the development. This team monitors progress and acts to safeguard the lenders' investment. This enables early steps to be taken to rescue projects that are running into difficulty.
- Where the project is very large, the loan may be syndicated, i.e. spread over a number of lenders by a lead bank or lender.

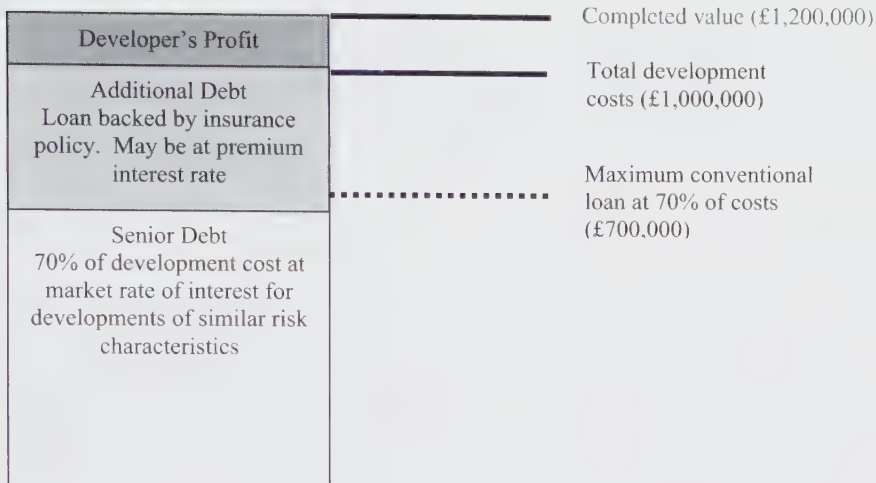
(b) Variations

In some cases developers will seek and be able to cover all the costs of the development from borrowing. This will normally require market conditions to be buoyant. There are three main ways of achieving in excess of the normal funding levels:

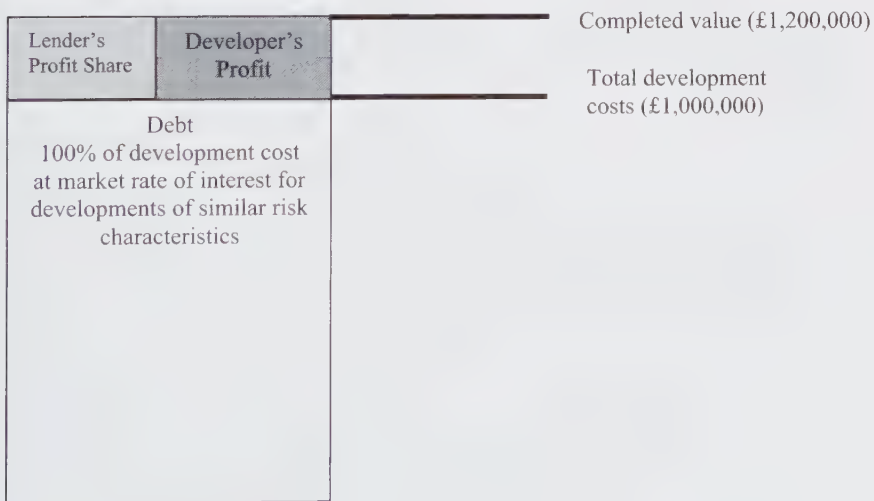
1. Mezzanine Finance. This is where lenders agree to close the gap in funding by taking a higher level of risk. In return, they get a higher rate of interest on the loan. Mezzanine finance is usually subservient to the senior debt, i.e. the senior debt will have first call on any funds if, say, the developer defaults.



2. Insurance. The additional money loaned is covered by an insurance policy, the premium of which is paid by the developer.



3. Equity sharing arrangements. Here the lender becomes the partner of the developer to share in the profits made by the scheme. The lender frequently charges the market rate for the senior debt but lends 100 per cent of the predicted cost of the scheme in exchange for a percentage of the developer's profit. The actual detail of the arrangement depends upon the status and bargaining strength of each party in each individual case but normally one would expect the lender's profit share to have a degree of guarantee with the developer still taking the risk of failure.



(ii) Project finance: sell on

A further option for short-term finance is connected with forward selling. A variation of forward selling is forward funding where the long-term investment owner, usually an institution, also provides development finance.

In these cases the development finance is provided at a lower rate than that which can be obtained in the open lending market, at least if the developer is forced to seek retail sources of debt. It is therefore a cheaper source of finance to the developer. The developer also gets the security of an exit from the scheme and the attraction to the investor is that they can usually negotiate a lower price for the project. When these types of arrangements work well they are advantageous for all parties but it must be noted that this type of arrangement is only really suitable for institutional quality investment properties that form a relatively small part of the market.

Over the next few pages an illustrative example is shown, using an outline traditional development appraisal (covered in Part 4).

The first calculation is the initial market appraisal for the scheme. This is carried out by the developer to test the viability of the project and to prepare the case for forward funding from the institution. The appraisal illustrates a surplus equivalent to a 20 per cent profit on cost.

AN OUTLINE APPRAISAL OF A COMMERCIAL DEVELOPMENT PROJECT
Initial appraisal assuming conventional market funding

	Rental value		£1,000,000.00
Year's purchase at investors desired initial yield	7%		14.286
			<u>£14,285,714.29</u>
	Less costs	6%	<u>-£808,625.34</u>
	Net value of investment		£13,477,088.95
	Net construction costs		-£9,250,000.00
	(Including all fees and sundry costs, including land purchase)		
Interest charges over development period at commercial rate	10%		-£1,942,500.00
	Profit (Loss)		<u>£2,284,588.95</u>
	Profit on cost to developer		20%

The second appraisal shows the variations as agreed in the funding agreement.

The fund has agreed to purchase the investment based upon a yield of 7.5 per cent, i.e. 0.5 per cent above the market rate of interest. The development funding is then provided by the fund at a rate of 7.5 per cent based upon the opportunity cost of money to the fund. In comparison with the base appraisal this is considerably lower than the developer could achieve in the market for funds.

New appraisal assuming forward funding deal with Investment fund

Rental value		£1,000,000.00
Year's purchase at investors desired initial yield	7.5%	<u>13,333</u>
		£13,333,333.33
Less costs	6%	<u>-£754,716.98</u>
Net value of investment		£12,578,616.35
Net construction costs		-£9,250,000.00
(Including all fees and sundry costs, including land purchase)		
Interest charges over development period at commercial rate	7.5%	-£1,439,531.25
Profit (Loss)		<u>£1,889,085.10</u>
Profit on cost to developer		18%

The funds are drawn down from the fund as if it were a traditional bank-type lender. The balancing payment, reflecting the profit, is not paid until the building is let. The risk is usually transferred to the developer either by requiring the developer to guarantee the rent until letting is achieved or else by the erosion of the balancing payment by the continual accumulation of interest on the drawn down funds.

These arrangements are carefully documented in the development funding agreement. In particular, the funding institution is usually very careful regarding who or what is an acceptable tenant to which the developer can lease the building. It is normal practice to attach a draft lease to the funding document as this forms the basis of the final lease document agreed with the new tenant.

One major issue to deal with these types of arrangements is overage. This is additional value over and above the base value in the agreement. This can occur in rising markets where upward movements in rents and improving investor sentiment can drive up prices.

In some circumstances all overage passes to the investor. This will occur naturally where the agreement is silent regarding overage. The payments

Treatment of overage value assuming 50/50 split with fund

Base rental value	£1,000,000.00
Year's purchase at investors desired initial yield	<u>13.333</u>
	£13,333,333.33
Less costs	<u>-£754,716.98</u>
Net value of investment	£12,578,616.35
Net construction costs (Including all fees and sundry costs, including land purchase)	-£9,250,000.00
Interest charges over development period at commercial rate	
	7.5%
	6%
	7.5%
	Profit
	<u>-£1,439,531.25</u>
	£1,889,085.10

Add: OVERTAGE PAYMENT

Market rent achieved	£1,100,000.00
Less: base rent	<u>£1,000,000.00</u>
Overage	£100,000.00
Developer's share (50%)	£50,000.00
Capitalised at 7.5%	<u>13.333</u>
	£666,666.67
Total Profit	<u>£2,555,751.77</u>

Profit on cost to developer**24%**

stay the same and any increase in value is enjoyed by the investor who acquires the asset at a deeper discount than expected. It is, however, usual to address this issue mainly to give the developer incentive to try to maximise the value of the scheme. It is, after all, usually the responsibility of the developer to find the tenants and agree the lease terms for the scheme. Some reward for maximising the overage should exist.

The procedure normally followed is illustrated in the calculation opposite. The example is based on the example above but here a rent of £1,100,000 has been achieved on the letting, i.e. £100,000 above the originally appraised figure. The parties have agreed to split any overage 50/50. The balancing payment is calculated as shown. The developer thus obtains an extra payment of around £666,666 for achieving the higher rent. The investor receives the full benefit of the increase in value of the asset.

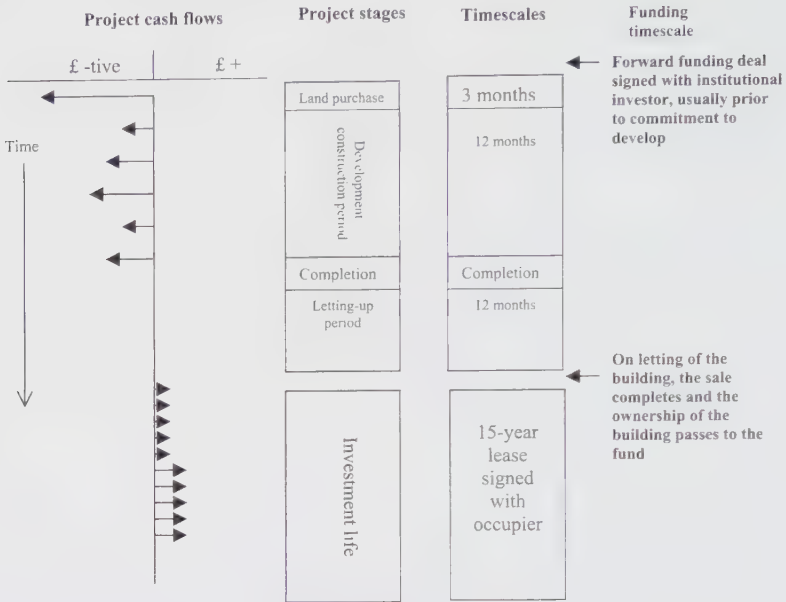
3.2.6 Forward sale agreements

Forward sale agreements are very similar to forward funding arrangements except, of course, for the provision of development finance. The purchaser agrees to purchase the completed development at some point in the future at an agreed figure once the developer has met certain conditions. These conditions include the satisfactory completion of the building and the leasing of the building to an acceptable tenant on lease terms that are agreeable to the funder. The investor usually has control over whom the building can be let to.

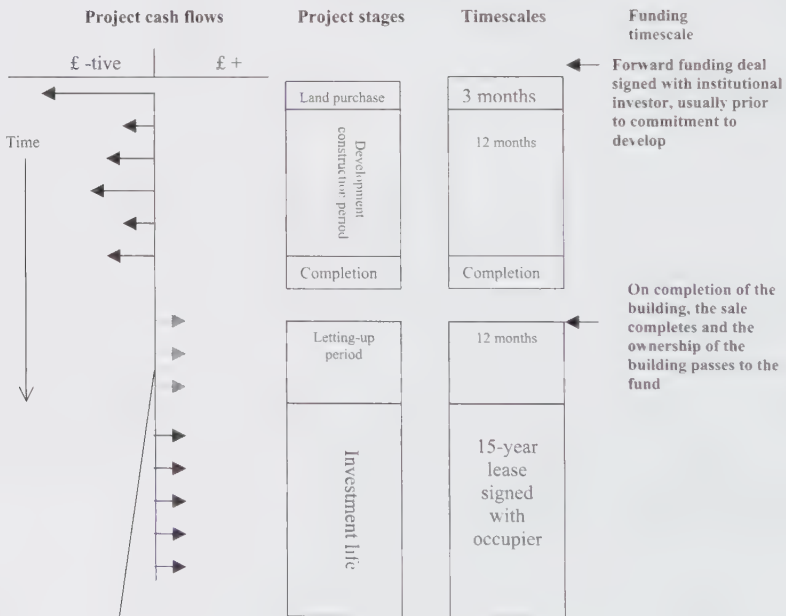
There are numerous alternatives to this, including where the developer guarantees the rent for a period after completion, thereby obtaining full sale receipts from the investor on completion of the building. The developer has, however, got the burden of meeting the rental payments over the period of the rental guarantee until a suitable tenant is found.

These two alternatives are graphically illustrated below. The basics of the deal, predicated on agreed rental and investment yield figures are agreed at the time of the original funding deal. Any overage on rents is treated as per the forward funding arrangement as detailed above.

Base option: forward funding without rental guarantee



Funding option: forward funding with rental guarantee



During the letting-up period the rent is paid by the developer

3.3 Retention financing

The next section, which examines finance in detail, covers the ways in which developers can arrange funding to retain developments. We are therefore examining the point where development funding moves from the project finance stage to the long-term investment finance stage for smaller developers. This section will also look at 'whole life' funding, as occurs most commonly with larger investment. This requires corporate finance to be introduced in addition to project finance. A number of options are available.

3.3.1 Mortgage finance

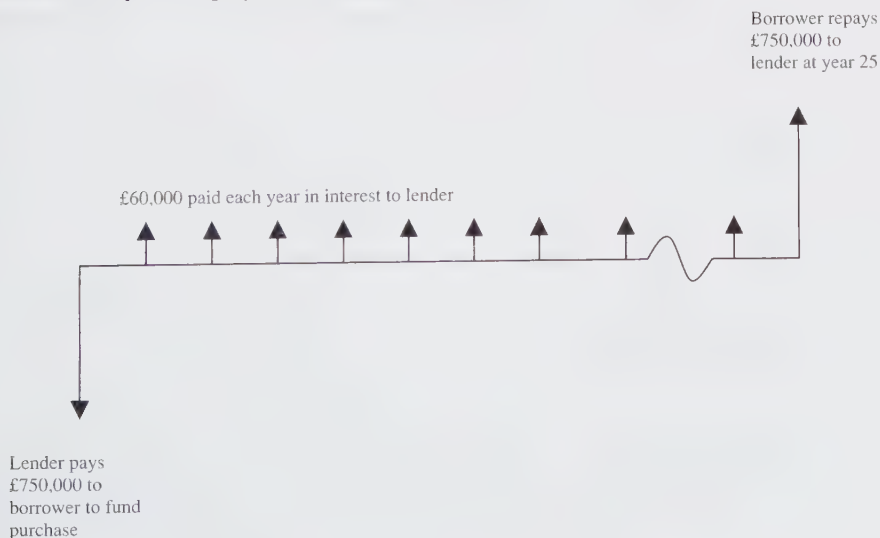
Mortgage finance, i.e. property-backed loans, is the traditional way of obtaining finance to fund property, both in the residential and commercial market. These types of instruments are mainly confined to the funding of the completed standing investment but they can, with some funders, be used for 'whole life' funding of the project.

There are two main types of mortgage: interest-only, and repayment or amortised. These vary according to the way the capital is repaid.

Example

Property value	£1,000,000
Development costs	£750,000
Rent produced	£60,000 pa

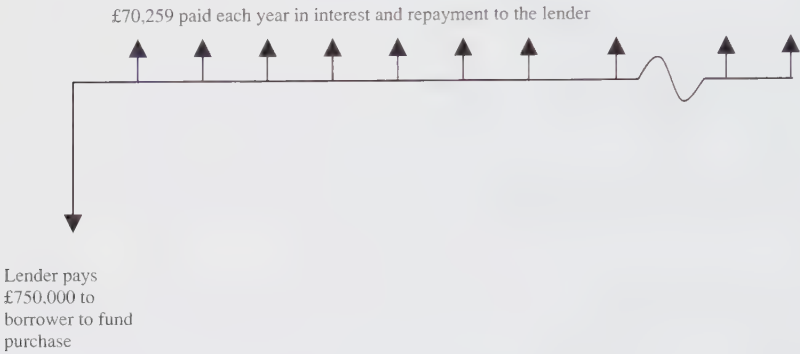
Interest only mortgage – 25 years @ 8% (fixed or variable)



With the interest-only mortgage, no principal is repaid on the loan during its course. The borrower merely pays interest on the loan, either at a fixed or variable rate of interest, at regular intervals and then repays the loan at one step at the completion of the loan.

Repayment mortgage – 25 years @ 8% (fixed or variable)

Repayment on £750,000 mortgage at eight per cent over 25 years works out at £70,259 pa



With the repayment mortgage, both interest and the principal repayments are made on the loan during its course. The borrower pays a single payment either at a fixed or variable rate of interest, at regular intervals. The loan is repaid by completion of the loan's term; therefore there is no balancing payment at the end.

A repayment mortgage works in the following way:

Year 1

Balance owed		£750,000
Interest at 8% on balance	£60,000	
Capital repayment	<u>£10,259</u>	
Total payment	£70,259	

Year 2

Balance owed		£739,741
Interest at 8% on balance	£59,179	
Capital repayment	<u>£11,080</u>	
Total payment	£70,259	

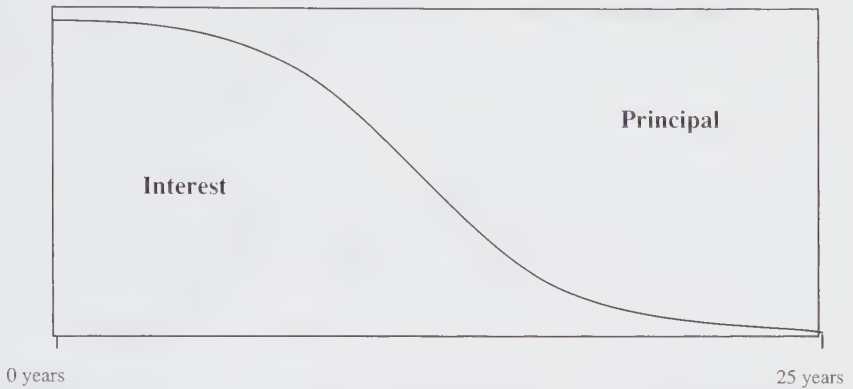
Year 3

Balance owed		£728,661
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etc . . .

This pattern of reducing the balance of the principal as the loan proceeds means that in the early years of a mortgage very little principal is paid off. The pattern is as follows:

£70,259
annual
payment



Repayment mortgages are more expensive on an annual basis than interest-only mortgages.

Mortgages come in and out of fashion as a means of funding property. The main reason for this is the characteristics of property as an investment. Property yields, i.e. the relationship between income return and capital value, are relatively low. This is particularly true at times of high inflation, as property rents and thus capital values tend to rise in line with inflation, making the asset a good inflation hedge. The potential for future growth tends to be factored in by investors who pay higher prices to acquire the investments, thus driving immediate income returns even lower. This produces a strange paradox: property is generally a good inflation hedge yet it is difficult to finance a purchase during inflationary times.

Let us use an example to illustrate this.

Investment 1: high street shop, inflation running at around 10% pa

Development costs	£800,000
Property value at completion	£1,000,000
Rent	£60,000 pa
Yield	Income yield 6% on value (7.5% on development costs)

With inflation running at these levels, bank-lending rates will be high. Bank interest rates reflect inflation rates, as the banks are trying to ensure that they get a 'real' return after inflation has been stripped out. In this sort of environment, interest rates are likely to be in the 12-15 per cent range.

With a 70 per cent Loan to Value ratio (LTV) the loan advanced will be £700,000. This, of course, already indicates a shortfall on development costs. The annual debt service on the loan, on interest-only and repayment basis respectively, at 14 per cent would be:

Interest-only loan	£98,000 pa
Repayment loan	£101,849 pa

This would create huge problems for securing the loan. Lenders usually require that the income from the investment covers the annual repayment. In these circumstances there is a very large shortfall.

Let us examine the situation that exists in a low inflationary environment.

Investment 2: high street shop, inflation running at around 2.5% pa

Development costs	£800,0000
Property value at completion	£1,000,000
Rent	£60,000 pa
Yield	Income yield 6% on value (7.5% on development costs)

With inflation running at these levels, bank lending interest rates will be low. In this sort of environment interest rates are likely to be in the five to six per cent range, a level that will give the lender a similar 'real' interest rate to the first situation after inflation has been allowed for.

With a 70 per cent LTV the loan advanced will again be £700,000. It is more possible in this environment that lenders would extend this LTV ratio. The annual debt service on the loan, on interest-only and repayment basis respectively, at six per cent would be:

Interest-only loan	£49,000 pa
Repayment loan	£60,067 pa

The situation has very much changed. The interest-only loan annual payment is easily serviced out of the rent. The deal is what is termed 'self-financing'. This is almost true of the repayment loan too, indeed this very slight shortfall would probably be acceptable to a lender.

Given this pattern, it will be no surprise to learn that mortgage finance was the king of property deals in the 1950s and 60s which was the last era of

low inflation prior to the current situation. This completely changed from the 1970s when inflation made such financing much more difficult. It was in this era as well that the institutions and pension funds became major players in the property markets, thus providing alternative sources of financing. Mortgage finance was marginalised to the higher yielding end of the property spectrum, particularly in the financing of secondary office and industrial investments. It is possible that we may have come full circle. The economies of the developed world have seen a low inflationary environment established since the early 1990s which seems to be sustainable. The institutions and pension funds are less active in the investment markets, holding lower percentages of property as part of their investment portfolios due to the long-term performance of global equities. Interest rates are low, therefore many more deals are self-financing. Mortgage finance may be the future king.

There are, in any case, ways around both the shortfall in funding due to LTV limitations and the low yield problem. As we have seen from the project finance section, mezzanine finance and insurance backed extensions to the primary loan can close the gap. The low yields of property can be offset by clever structuring of loans to take into account the capital growth potential of the asset.

There are a number of ways of achieving this. One way is to cap the initial payment at or below the initial income, rolling up the debt shortfall and adding it to the loan once the income level of the property has risen. Let us use the same base example as we have considered above, but now we will assume that we have an 80 per cent LTV ratio and the interest rate is seven per cent. We are assuming a slightly higher inflationary environment. On a repayment basis, the annual debt service would be £68,648 pa on a 25-year term. With the income at £60,000 pa as before, there would be a shortfall of £8,648 pa.

Most modern institutional quality leases have rent review clauses. This allows a periodic increase in rents to the current market rental value. The intervals between rent reviews vary, but most institutional leases have reviews every five years. If rental growth in shop rents is at five per cent per annum then the £60,000 initial rent will rise to around £76,500 per annum at the start of year six. The lending pattern would then appear as follows:

Investment 3: high street shop, inflation running at around 5% pa

Development costs	£800,000
Property value at completion	£1,000,000
Rent	£60,000 pa

Yield	Income yield 6% on value (7.5% on development costs)
Repayment loan @ 7%	£68,648 pa
Repayment capped for 5 years to	£60,000
Shortfall	£8,648
Rolled-up value of shortfall over 5 years	£49,732
Adjustment after rent review	
New rental income (assuming 5% pa growth)	£76,500
Amount of loan still outstanding at end year 5 (assuming full payment)	£727,258
Add: rolled-up shortfall	£49,732
Actual amount of loan outstanding	£776,989
Repayment on this total @ 7% on a mortgage with 20 years of term left	<u>£73,342</u>

This now becomes the annual payment on the remainder of the loan – this is easily covered by the new annual income. There is obviously a risk in this to both parties, particularly as the success of the arrangement is dependent upon property rents rising in line with expectations. These rises in incomes are not guaranteed as they are determined by market factors, but historically property rents have grown.

There are many other ways of tackling the low yield problem, in fact the ways of achieving it are limited only by the ingenuity of developers, surveyors, brokers and financiers. Other options include loans that are generally interest only but have periodic repayments of capital, loans with capital repayment holidays, balloon payments and loans with initially low rates of interest at the start balanced by rates that are above the market rate later in the term. All achieve the same balancing act that match property investment characteristics against the lending requirements of the financial community.

3.3.2 Variations on lending

The financial markets have, naturally, become more sophisticated over time. Many different types of instruments have become available and one

particular area of increasing sophistication is the removal of some of the uncertainty about future interest rates. Most shorter-term loans are likely to be at a floating or variable rate of interest. This exposes the borrower to the risk of interest rate movements eroding the profit margin or creating cash flow problems. A solution to this is to 'cap the loan' i.e. set a maximum limit to the interest rate on the loan. This is achieved by taking out an insurance type policy. There is a cost to this but uncertainty can be greatly reduced. There are a number of variations on this, some aimed at reducing the cost of the instrument such as limited or flexible caps, others aimed at providing alternatives (hedging or 'swaps'). Developers concerned about future interest rate movements should explore the options available with their financial advisors.

3.3.3 Corporate finance

So far we have concentrated on the project or property-specific type of debt. There are, of course, options that allow funding of development projects via corporate funding, i.e. the funding of the company itself. This tends to be limited to larger organisations with an established track record in development and, often but not always, substantial assets to act as security for loans. Smaller developers tend to be restricted to project finance. Whatever the case, there is no doubt that a substantial proportion of development in the UK is financed via corporate sources of funds.

The financing of companies falls into the same two types that we have considered before: debt and equity. In practice, companies will attempt to balance the two to achieve financial efficiency and it is therefore hard, in reality, to consider them in isolation. In our case, we will look at debt and equity sources of corporate finance separately, starting with debt.

3.3.4 Corporate debt

(i) Retail debt

Retail debt refers to those sources of finance that arise from borrowings through financial intermediaries. The most obvious source of this is via the company's own overdraft facilities through its own bank, or banks. This is 'normal' lending to the company and the banks will make decisions as to the level of credit to be advanced based on their scrutiny of the quality of the company itself. Banks lend against the security of the business, its ability to earn profits and/or produce cash flow, as well as against the value of the company's assets. These arrangements can be with the company's main bank or else a syndicated loan facility arranged across a range of organisations. Many large organisations have multi-option facilities allowing

them to draw down funds as required. The loans may be open but are often for a fixed period of time (one month, three months or perhaps up to five years). Rather than being repaid on the date, the debt is continually serviced then rolled over into a new loan.

The actual arrangements and operations of corporate debt finance are complex and tend to spill over into the realms of corporate accountancy. The detail is thus largely beyond the scope of this book.

(ii) Stock market debt

Stock market debt refers to instruments issued by companies that raise finance, and can be traded on by the originator of the debt finance but, unlike shares, do not give the owner ownership rights to the holder. These instruments are debenture stock and loan stock issues. The distinction between the two is that the former is secured on specific assets of the company. By definition, this sort of finance is limited to larger companies who have a stock market listing and a sufficiently good track record to attract investors seeking a secure return. This source of finance can provide property developers with a low cost source of long-term money, dependent, of course, on market conditions.

Debenture stock is like a company loan. The company borrows money from investors, usually for a fixed period of time, for example ten years. The company pays the bondholder a coupon, an annual interest rate guaranteed in the debenture certificate. At the end of the term of the loan, the entire sum is repaid to the investor. The stock is often unsecured on any assets of the company, though some floating charge can be made.

The parties involved in debenture issue are outlined in the example below.

There are a number of variants on these instruments. One of the most common is the convertible bond or debenture. This instrument resembles a conventional bond at its outset but there is an option, which can be operated by either the company or the debenture holder, to convert the debt to ordinary shares in the company. This is normally done at a stated price or price range and can be at a fixed date or at a floating point in the future.

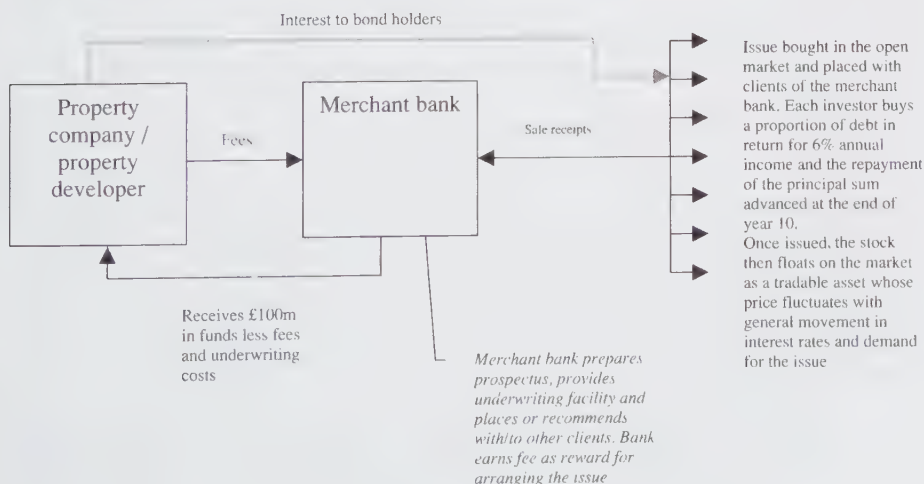
The attraction to the borrower of this arrangement is that it saves the company the need to repay cash. The share conversion is a paper transaction without the need for a flow of funds out of the company. The investor also gains the potential for sharing in the future growth in asset value or profits of the firm, i.e. they move from a fixed interest security to a growth stock. It should be noted that a convertible is only really acceptable

to the market where the company has a good track record and has good long-term growth potential.

Debenture stock or loan stock has a lot going for it, but things can also go wrong. Money can be borrowed in the long term at rates that at the time look cheap. Market movements in interest rates, such as those that occurred in the last decade of the twentieth century can make the money look expensive and damage the returns of the company. Michael Brett, *Estates Gazette's* finance guru illustrated the effects when examining the property company Land Securities accounts on 5 June 1999:

The trouble comes when you look at the true value of Land Securities' £1.59bn of gross debt. It includes various debentures which are not due for repayment for more than 25 years, and were raised at a time when a 10% coupon seemed to offer cheap long-term funding. Judging by their price in the stock market, Land Securities could raise the same money today at a cost of little over 6%. But it is committed to that 10% for the next 25 years and more. Thus the market price of those debentures is way, way above their face value. With the continuing fall in long-term bond yields, the 'fair value' of Land Securities' non-convertible debt has risen by a further £217m (an almost 11% increase) to £1.98bn against a face value virtually unchanged at £1.3bn. Offset this £217m rise in the market value of debt against the £333m revaluation surplus on its property assets, and it is clear that much of the year's gain has, in reality, been wiped out by events on the liabilities side.

Example: £100m conventional debenture issue for ten years paying a coupon of 6%



Variations on the corporate debt type of finance include commercial paper and eurobonds. Commercial papers are short term IOUs issued by large companies in return for loans from investors. They are usually issued at a discount to their true value. The borrower pays no interest during the term of the loan, which is generally for periods of less than one year. At the end of the loan the borrower pays the lender the full face value of the loan, thus giving the former a return on their funds.

For example, a borrower issues £100m of commercial paper for 364 days, receiving £93m from the lender. At the end of the term they pay the full value of the loan, £100m back to the lender. This gives a return of 7.526 per cent to the lender.

Although this paper is short term, it can be used for long-term financing by rolling over the loans into new ones at the end of the term.

The bond and eurobond market is another form of unsecured lending. They are confined to being used by companies with excellent credit ratings and are used to raise large amounts of capital. Eurobonds are usually sold outside the borrower's own country. They are similar to debentures and loan stock in that they are certificates that promise to repay a debt of a fixed amount at a date in the future and rely on the trading and credit record of the underlying company to reassure lenders that the loan will be repaid.

3.3.5 Equity funding

In this context equity funding refers to the money raised by the company itself that is part of the assets of the corporation. It is effectively the company's own money as opposed to borrowed money. People who own shares in a company are sharing in the ownership of the company, they are not lending it money. This is why shares are referred to as equities. The fundamental value of the company arises out of its share capital. Hopefully, this value will grow as the company trades and makes profits. Shareholders share in that growth.

Essentially, there are two types of organisations involved in the corporate side of development in the UK: Private Limited Companies and Public Limited Companies. Private companies cannot sell their shares to the general public. PLCs have the option to make public share issues and thus raise considerable funds but not all PLCs choose to follow this route as certainly many of the larger firms do so. We will examine this route in slightly more detail.

A company can have its shares traded on the stock market in one of three ways. An 'introduction' is when it already has a large number of

shareholders and is not seeking to raise fresh capital. It simply seeks permission for the shares to be dealt in on the market. The second method is a 'placing'. Shares are sold privately to a range of investors and permission for them to be traded on the market is obtained at the same time. Only investors who are existing clients of the proposer, a broker or merchant bank are likely to be involved. The third method, which gives the public at large an opportunity to apply for shares, is the 'offer for sale'. A prospectus and application form (or an invitation to apply for them) are publicised by brokers or banks. Normally the shares are offered for sale at a fixed price, which is calculated by the sponsoring broker or bank by reference to the prices for shares of comparable companies that are already traded on the market.

Companies can launch either on the Stock Exchange itself (the 'main market', in which case they are described as being 'listed'), or on the Unlisted Securities Market or USM (in which case the shares are generally described as being 'quoted' on the USM). Trading procedures are much the same in the two markets, both of which are run under the Stock Exchange aegis. The main difference is that a lower level of trading record and listing requirements are acceptable for the USM. It is also possible to float a smaller amount of the capital on the USM than the main market, and flotation costs may be somewhat lower.

An initial flotation can thus raise considerable funds for a developer. The developer can issue shares representing a proportion of the company to the market whilst retaining control of the remainder of the equity. Further funds can be obtained by further issues of stock, for example by way of a rights issue to current shareholders. Stock market listing is, however, relatively expensive and requires a good trading record over a long period before it can be even entertained. A public company also has less freedom in its actions as it is being monitored constantly by both analysts and its shareholders. Ultimately, the management of the firm may be changed by action of the shareholders. Listing does, however, open up many more opportunities for funding, for example the issue of debenture stock as outlined above.

There are a number of different types of shares, the most common being ordinary shares and preference shares, the latter receiving preference for the receipt of dividends but having limited, if any, voting rights in the company.

3.3.6 Other options

Other corporate type funding routes explored include securitisation. Securitisation has been a holy grail for property financing over the last 25

years or so but, in the UK at least, has largely failed to be achieved. Property has a number of disadvantages as an asset, particularly that it comes in large lumps and is illiquid. Also there are tax disadvantages in holding property indirectly. Securitisation is viewed as a solution to this. Securitisation or unitisation involves the dividing up of the underlying property asset into tradable shares which would be floated on the market and which would be treated like any other share for tax purposes. An alternative approach is to create a unit trust approach but based around a single investment.

Various vehicles have been tried (Property Income Certificates (PINCs), Single Property Ownerships Trusts (SPOTs) and Single Asset Property Companies (SAPCOs)) but all have run into problems regarding taxation transparency and/or legal problems. In contrast, in the US Real Estate Investment Trusts (REITs), a tax efficient vehicle that largely achieves the goals of securitisation, have been very successful. To date, securitisation in the UK remains a holy grail, and one that the market is not sure is really wanted.

3.3.7 Part disposal options

It may seem odd that this section includes what is, in many ways, a procurement option for development rather than a financing route *per se*. However, one of the main motives for entering into an equity sharing deal or partnership is often financial. It is inevitable that there should be some blurring of the division between financing the development and how it is executed.

There are a number of different ways of either achieving part disposal or involving shared ownership of the benefits that flow from the scheme. These are:

'True' joint ventures	These are situations where the parties genuinely enter into the scheme together to carry it out. Risk and expertise are shared (not always equally) between the parties in some respect.
Ground rents or building leases	In this situation, common where a local authority is involved, one party brings only the land to the deal. The developer takes on the risk of completing the scheme, usually receiving a long lease on the property (99-150 years for example). The local authority shares in the investment performance in the long term via a ground rent.

Lending with participation	Equity sharing loans as discussed in the section above and detailed below.
Sale and leasebacks	Sale and leasebacks exploit the fact that a number of different interests can be created out of property. Developers can retain an interest in a scheme by selling on the freehold interest in a property but taking a lease from the freeholder at a rent that is a proportion of the market rental value. There are a number of ways of setting up these arrangements, some of which will be reviewed below.
Forward funding arrangements with leaseback	A combination of forward funding and sale and leasebacks.

Developers are quite frequently in situations where they need a partner to complete a scheme successfully. The reasons why these situations occur are many, including where the partner possesses a key component for the development, such as the ownership of part or all of the site, or where a partner possesses specialist expertise either in a technical aspect or in a particular sector of the market, or that the financial resources of the developer are insufficient to undertake the development alone. Often a combination of reasons contribute to the arrangements coming to pass, though there is little doubt that finance questions are usually central.

There are a number of parties that enter into relationships with developers. These include local authorities, property investment companies, institutions and banks. Of the different types of arrangement there is one that tends to be more closely associated with financing rather than any other motive for entering into the partnership arrangement. This is equity sharing, and will be considered below, separately from other joint ventures and partnerships.

3.3.8 Equity sharing

Equity sharing is an extension of the bank lending arrangement. It is concerned with situations where a developer has a shortfall in funding a scheme through traditional debt. The arrangements have been outlined in the section above. Usually the bank and the developer form a joint venture company that shares in the rewards of the development. The bank has the opportunity to gain a return in excess of the normal margin that would be obtained from lending. Most banks do not have the practical experience and knowledge to become involved with development so, for a relatively small

extension of their financial commitment, are able to enter into the development market.

Equity sharing schemes can be simple, involving the developer and one bank. They can also be intensely complex, with many banks involved in the scheme lending different amounts with varying levels of risk, and with some of the financiers acting as true joint venture partners in the scheme. Below is a diagram illustrating the financing arrangement for a major scheme carried out in the UK in the mid 1990s. The listed property company was the initiating developer. It entered into a joint venture agreement with a major UK PLC and an international bank that both became equal equity partners and who therefore shared the profits and benefits that flowed from the scheme. The bank in the partnership used its financial expertise to arrange a consortium of banks to provide the debt finance for the scheme, both in terms of senior debt but also a degree of mezzanine finance. The UK PLC took some of the space in the scheme. The joint venture partners formed a limited life joint venture body to carry out the scheme; thus they were a distinct legal entity from their parent organisations. This is typical of joint venture schemes.

The example illustrates some of the complexity that can exist in these relationships and also how there is blurring both between the types of financing arrangement (here between equity sharing/participation loans and joint ventures) and between finance and the mode of execution of the development.

<i>UK plc</i> £25m equity	<i>Listed Property Company</i> £25m equity	<i>Major Bank 1</i> £25m equity
Major Bank 2 £15m of mezzanine debt		
<i>Major Bank 3</i> Share in £80m of senior debt	<i>Major Bank 4</i> Share in £80m of senior debt	<i>Major Bank 5</i> Share in £80m of senior debt

3.3.9 Joint ventures and partnerships

Partnerships and true joint ventures can be defined simply as where two or more organisations come together to carry out a development project. As noted above, there are a number of different motives for entering into such arrangements and also a number of different parties who become involved.

Examples of partnerships include:

- Local authorities/private developers
- Financial institutions and private developers
- Banks and private developers
- Government and private developers
- Property investment companies and private developers
- Property companies and property companies
- Owner occupiers and private developers
- Private developers and private developers

The motives for entering into joint ventures are varied and they often depend upon the identity of the parties involved. Local authorities enter into joint ventures to achieve goals within their remit such as urban regeneration or the encouragement of economic activity by linking with the entrepreneurial qualities and skills of the private sector. Traditionally this was done on a development lease/ground rent type of arrangement but increasingly the trend has been towards more direct involvement by the public sector body.

Joint ventures can occur with purely private sector bodies and companies. Again, the motives can vary. It may be that the joint venture is formed to spread the risk from a large scheme. It may be to bring in specialist skill and knowledge, such as the financial acumen and links as per the example given above, or between parties such as landowner, developer and building contractor.

Whatever the arrangement there are some common features that exist with joint venture arrangements:

- They are often formed to carry out a specific project. They usually have a limited lifespan and it is usually necessary to define how the arrangement will come to an end.
- There are two vehicles used for joint venture projects: limited companies and partnerships. The choice depends upon a number of factors, including:
 - the taxation position of the parties;
 - the timescale of the development;
 - the number of participants;
 - the method of financing used.
- The limited company joint venture vehicle has a number of advantages for development projects but also has at least one significant disadvantage. The advantages include:
 - a structure that is familiar and thus is well understood by

- both the parties involved, as well as their advisors and third parties to the scheme;
- a vehicle that offers limited liability in case of failure to all of the parties involved;
- a particularly useful vehicle where there are large numbers of parties involved in the development; indeed where there are in excess of 20 members in the venture, it is the only possible vehicle that can be used under current UK law;
- a vehicle that is adaptable as the project proceeds, with the ability to shrink and contract and also, potentially, to be converted into a securitised single asset property company vehicle at the end;
- a vehicle that enables non-recourse and limited recourse financing to occur.

The major disadvantage is related to tax. This vehicle is not 'tax transparent', meaning that the company vehicle would be liable for corporation tax whilst dividends on the shareholding would also be taxed.

- Partnerships or, to use the current term in vogue, Limited Partnerships (LPs) and Limited Liability Partnerships (LLPs) have become a popular way of owning property. There are a number of reasons for the existence of these vehicles and why they have become more popular as a means of Joint Venturing (JV). As with all types of JVs, limited partnerships enable investors to participate in ventures that might otherwise be too large, complex or risky. Investors in a limited partnership do not own the property itself, they own a share in the limited partnership. The second main advantage is tax: a limited partnership is not, in law, a separate entity. There is no tax on capital gains or income payable at the partnership level. Each partner is solely responsible for their own tax on such income and for the tax on their share of any capital gains. This can be compared with the profits of a joint venture company which are taxed in the hands of the company and then potentially again on payment to the shareholders.
- This reflects some of the fundamental problems of property as an investment. One of the fundamental problems is that property is illiquid. It cannot be split up and traded like an equity share in a company. Similarly, there are taxation problems with owning property indirectly. The UK industry has looked for some time with envy towards the US with its Real Estate Investment Trusts (REITs) which allow liquidity, trading and tax transparency

but so far the UK treasury has yet to be convinced to make the changes to allow REIT type investments in the UK.

- The basic features of the vehicles are as follows:
 - They are a special type of partnership, originally established under the Limited Partnerships Act 1907. At least one partner, called the general partner, must have unlimited liability, but others will have their liability limited by the amount of capital they have contributed to the partnership.
 - LLPs must be registered at Companies House, which will issue them with a certificate of registration. In that sense they are treated like companies, although they do not have the same regime as under the Companies Acts. The key feature to be remembered with LLPs is that they are not legal entities. Like general partnerships, LLPs are simply a group of individuals or corporations who are acting together for a particular purpose. In this case this is the investment in and development of property.
 - LPs have limitations (for example, they are limited to 20 parties). A limited partner may not take part in the management of the partnership. So the management will usually be undertaken by the general partner. The interest held is not easily saleable – for example, they cannot be listed on the stock market.
 - The general rule is that the partnership must consist of one or more ‘limited partners’, who are liable only up to the amount of the capital sum or value of the property contributed by them to the partnership; and one or more ‘general partners’, who are liable for all the partnership’s debts. A limited partner is very much like a shareholder in a limited company – neither risks more than the value of their investment. However, general partners can also protect themselves by becoming a limited company, thereby shielding its shareholders from unlimited liability. Even though LPs cannot exceed 20 people, it is possible to create sub-funds to allow many more to invest and to adjust existing shares if new partners are admitted at a later date. They are usually established for a finite term, often seven or eight years (to reflect the period over which the parties expect to realise their objectives). However, they can also be constituted so as to continue indefinitely, or so that their lifespan can be extended, automatically or by agreement.
- They have been a number of moves to extend the characteristics of limited partnerships, reducing some of the restrictions and changing the tax rules to make them more flexible and attractive

vehicles for both property investment and development. To date, these changes have not met the approval of the UK Government who in successive budgets have failed to implement the necessary legislative and fiscal changes.

- Joint ventures have to be very carefully documented to ensure that the development proceeds smoothly. This is done by way of the participants' agreement. This agreement must detail a number of different aspects of the progression of the development including:
 - the functions of each member of the partnership or company;
 - the responsibilities of the day-to-day management of the project;
 - how strategic decisions should be reached;
 - consultation arrangements;
 - rights of veto;
 - arbitration procedures;
 - the timescales of the development;
 - the exit strategies of the parties, including whether the long-term ownership of the development should pass to one or more of the parties of the agreement and under what terms.
- A 'Texas agreement' detailing the process that should be followed if the parties want to terminate the agreement early.

3.3.10 Other financing options

There are a number of other options for raising the finance for property development. These tend to be used in special procurement arrangements, such as PFI and PPP procurement, or to provide top-up funding for schemes, such as those provided by grant funds.

These are major topic areas in their own right and will only be explored in outline here.

(i) PFI

PFI is not strictly a source of finance for developers. It is a procurement route created by governments, chosen for its ability to potentially save money but in particular to avoid making large-scale public expenditure and thus increasing the Public Sector Borrowing Requirement (PSBR).

The private finance initiative was launched by the Conservative Government in the early 1990s, its principle feature being that facilities such as

government buildings, hospitals and prisons, amongst others, would no longer be procured, built and financed by the Government directly but by the relevant private sector providing the facility. The provision would include the design, construction and financing of the facility and often the management and provision of services over a fixed period (often between 15 to 25 years). The public body requiring the space would then pay an annual fee to the provider for the provision of the specified service over this period, thus saving the need to pay for the capital provision and maintenance of the asset.

PFI and PPP projects have continued under the Labour administration, indeed they have increased apace. They now form a significant proportion of public projects and expenditure and this trend seems set to continue. This type of procurement is of limited relevance to the consideration of finance in mainstream development.

(ii) Grants

Public sector grants have long been available to developers in certain areas. They are an important tool of governments for regeneration and the encouragement of economic growth. For around 20 years in the UK, regeneration of economically disadvantaged areas has been property and infrastructure led, thus grants have been specifically targeted at development and widely used by both developers and development agencies to complete projects. The current trend is to move away from the support of physical projects towards the support of the community concerned itself. This is achieved by programmes of education and training and small enterprise support. Notwithstanding this change of emphasis, grants are likely to remain significant to developers in disadvantaged areas for the foreseeable future.

The principle followed by the grant regime is that public sector money should be used efficiently to 'lever' private sector money and to enable development. Public sector bodies administering programmes often had – and have – lending criteria that require them to achieve a certain ratio of private to public money before aid can be approved. This may be four units of private money to one unit of public grant aid. Usually these criteria go hand-in-hand with other requirements, such as the creation of employment.

The basic problem with development in disadvantaged areas such as inner cities is that the revenues produced are often not high enough to make development profitable. An example is shown below using a simplified development appraisal.

Inner city commercial project: no grant funding

Income		£ 100,000	
Year's purchase @ investment yield	10%		10
Completed value			£ 1,000,000
<i>Less</i>			
Development costs			
Construction			
	Area 1,000m ²		
	Unit cost £600	£600,000	
Fees, etc		£150,000	
Finance		£75,000	
Land cost		<u>£100,000</u>	<u>£ 925,000</u>
		Surplus	£ 75,000

Profit on cost	8.11%
Profit on value	7.50%

An inner city project of a mixed-use commercial building is planned for an economically disadvantaged area. The initial appraisal, below, shows that the project is just profitable, but that the profit margin is too small to give an adequate return to the developer, who can obtain a 20 per cent return by developing elsewhere.

The reason for the shortfall is the combination of income (rent) and investment yield. The tenants in this area cannot pay high rents and still trade profitably. Investors recognise that the traders are not of a high quality, therefore there is an increased risk of tenant default. In addition, the investment growth potential is limited.

Inner city commercial project: with grant funding

Income		£ 100,000
Year's purchase @ investment yield	10%	10
Completed value		<u>£ 1,000,000</u>
Add: public sector grant		<u>£ 110,000</u>
		£ 1,110,000
Less		
Development costs		
Construction		
	Area 1,000m ²	
	Unit cost £600	£600,000
Fees, etc		£150,000
Finance		£75,000
Land cost		<u>£100,000</u> <u>£ 925,000</u>
	Surplus	£ 185,000

Profit on cost	20.00%
Profit on value	18.50%
Private/public sector finance ratio	8.4090909

Without some kind of intervention the project will not go ahead and economic regeneration will be restricted. However, with a grant of £110,000 paid to the developer, the profit margin is increased to an acceptable level and the scheme can proceed.

In this case, the granting body has achieved £925,000 of private sector investment for only £110,000 of public funds. It is this efficient use of funds that most bodies try to achieve.

There are a large number of granting authorities and sources of public grant aid. In the UK a first port of call is the Department for Environment, Food

and Rural Affairs (DEFRA) which administers many of the grants. The European Union also is a major source of grant aid. Both the UK and EU identify certain areas for assistance. In the EU case this is based on target regions that fall at a certain level of average GDP of the EU as a whole. The highest level of assistance is given to regions that fall into 'Objective 1' status, meaning that they are identified as having a very low per capita GDP. The objective set by the EU is to raise per capita GDP towards the EU average. The UK government also identifies towns and regions requiring special assistance. A notable recent example is the former coalfields which received assistance under the 'Coalfields Challenge' programme. Another programme is the 'City Challenge'. Both are competitive bidding programmes usually involving public/private partnerships to obtain a five year rolling programme of central government funds for regeneration programmes.

The funding regime is rather complex and frequently changes. Recent initiatives include the development of the Regional Development Agencies for England (RDAs) who have taken over many of the roles of the former agency for regeneration, English Partnerships (EP). Rather confusingly, EP has continued to act but in a rather changed role. In Wales, the Welsh Development Agency controls some grant funding whilst in Scotland the Scottish Development Agency and the Highlands and Islands Development Board fulfil similar roles, and have done so for many years. Regeneration and economic development have many political aspects and new initiatives are very common. Developers are well advised to keep up to date on the current situation.

3.4 Risk reduction and finance

It seems appropriate at this point to consider risk and financing decisions. There are a number of aspects of risk in development but the one that is the most common concern of developers is financial risk.

The major risks concerned with finance are as follows:

- interest rate fluctuations;
- project over-runs;
- withdrawal of support by lender;
- incorrect forecasting of future values or cash flows.

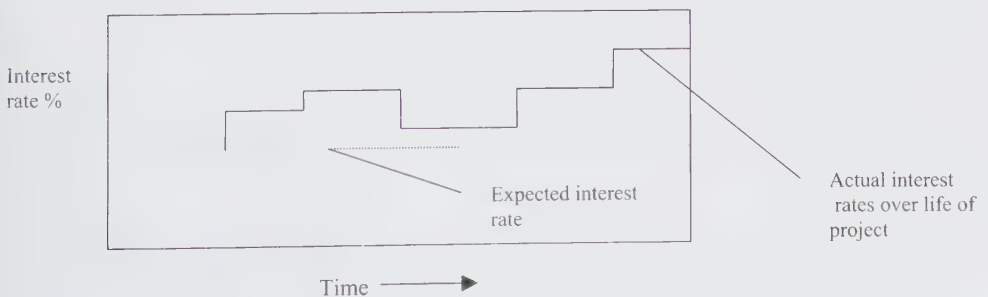
Only with interest rates can anything be done at the beginning of the loan to mitigate the risks involved. The other three areas of risk tend to arise from either changing market conditions over the life of a project, failure to carry out the project appraisal correctly, or the ability to be realistic in the

assumptions made. Some precautions can be taken when setting up the finance, at least by the larger developers. This basically involves engineering flexibility into the financing facility, both in terms of the length of time that finance is required and also in the sources of finance. Usually, however, problems such as these require a measure of renegotiation, refinancing and rescheduling of debt, as well as flexibility of the financiers involved.

The sheer scale of large projects tends to give their developers a big advantage over their financiers who simply cannot countenance failure. Examination of projects such as the Channel Tunnel, the Millennium Dome and Euro Disney (all of which suffered from grossly over-optimistic assessments of cash-flow and underestimates of operating costs) show that the projects were all in such serious trouble that they should have failed and the financiers foreclosed. Instead, the consequences of failure led to each of these projects being refinanced on very generous terms. This generosity by banks does not usually extend to a small developer who defaults on their loan; hence, the fundamental financial risk mitigation measure for this type of body is to ensure that the appraisal is realistic!

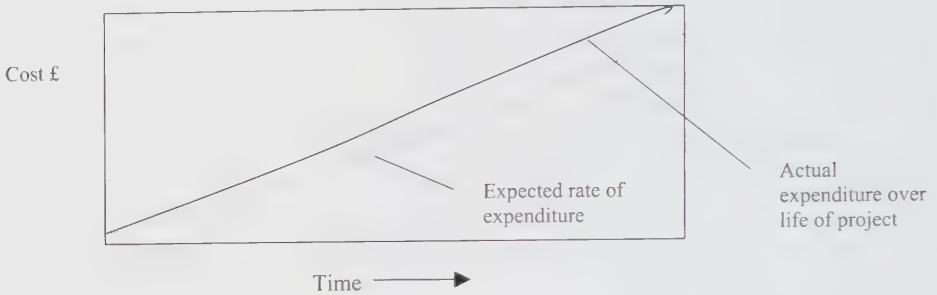
Interest rate fluctuations are a feature of finance. Interest rates are not constant. Fundamentally, market interest rates vary in the financial markets on a minute-by-minute basis although the Bank of England Minimum Lending Rate (MLR) is more stable. Even so, over the space of only a few months interest rates can change quite markedly, particularly as many governments use interest rates as the principle tool of macroeconomic management and manipulation.

Interest rate changes lead to unbudgeted cost increases. This is illustrated below:



The effect on the project depends upon a number of factors including the relative level of debt and timing issues. Some projects are highly sensitive to interest rate changes, others are less heavily affected (see the section on

financial appraisal that discusses project sensitivity). In this case, it would seem obvious that expenditure on the project as a whole would be higher than initially anticipated.



Both the risk of and the effect of fluctuations in interest rates can be mitigated against when the project finance is set up. There are a number of ways of achieving this and these are discussed herewith.

3.4.1 Fixed rate loans

Fixed rate loans are the simplest way of avoiding interest rate movements. This is a good route if either the project's profitability is rather sensitive to interest rate movements or if certainty on this element of future cash flow is required. It is also one of the only hedging routes available to the smaller developer.

There are, however, a few problems with regard to fixed interest loans. Firstly, they are not always available. Financiers have to cover their own commitments and the cost of money to customers is closely related to the cost of money to the bank or lender. In times of financial volatility when there is a risk of general interest rates moving upwards, lenders will be reluctant to lend at low rates of interest. They will, however, be more than willing to fix rates if there is a risk of rates moving down! It must be remembered that banks and financiers are in the business of making profits and will lend on the terms that are most advantageous to them rather than the borrower.

The problem is guessing which way market rates are going to move. The borrower can be left with fixing rates at the wrong time. The author is aware of a university who financed stage one of a conference centre development using variable rate finance. Interest rates then proceeded to move from around nine per cent to 14 per cent very quickly and maintained those levels over the next 18 months. Having suffered this painful lesson, the university secured fixed rate finance at around 13 per cent for phase two. Market

interest rates promptly fell to six per cent! Although this looks like dreadful decision making, the university in question was just terribly unlucky but these things can and do happen.

3.4.2 Derivative-backed hedging

One way of avoiding this risk is to use derivative-backed hedging. Derivatives are financial instruments that allow the borrower to take the alternative financial position to that which will cost them the most. The return from this alternative position balances the increased cost. Derivatives are based upon futures and options and if the future is uncertain, people in the market place will have differing views. For every person who thinks that interest rates in a year's time will be higher than today, there will be some who think that they will be lower. In simplistic terms, futures markets bring those two sides together with one party effectively betting against the other, buying and selling contracts that give the opposite view.

In the context of interest rate hedging, for example, if a borrower was concerned about the possibility of interest rate rises he would arrange a loan that would include, for a fee, a derivative that would pay out a sum that would give a payment equivalent to the cost of the interest rate rise. This would be achieved by the lender taking out a contract or giving an option to a third party in the derivative markets that pays out on the contrary situation occurring.

These types of derivative backed loans include:

Swaps: this fixes the interest rate as per a fixed interest loan. It has the attraction of fixed interests with usually no upfront premium and the borrower seeing no benefit from falling rates.

Collar: here the loan interest rate is restricted to a known maximum and minimum cost.

Caps: these give a known maximum cost.

There are many other options including captions, caplets, limited caps and flexible caps.

3.5 Taxation

3.5.1 Introduction: tax and development

Finally, in this section on money and finance, it is important to consider the government's intervention by way of the tax system. In the past the

government has gone so far as to nationalise development land, taking all but a reasonable return in tax. (This was done in 1947 under the original post-war Town and Country Planning Act and again under the Community Land Act 1975.) The Government now contents itself with using the general tax system to deal with the property markets.

As is well known, tax is one of the two certainties in life. It is also one of the most complex of subjects. The system in the UK is labyrinthine. The rates, rules and regulations are subject to a regular changes. Although the basic taxes have remained the same in the UK since 1973, tax regulations change regularly. These changes can cause a complete alteration in the character of taxes even though the name and the basic method of calculation stays the same. An illustration of this is capital gains tax which was a significant factor to developers and investors in the 1970s and early 80s. The basic principles of the tax remain the same but changes in the rates levied and in allowances given reduced its impact and completely altered the tax strategy followed by investors and developers.

The topic has been introduced in this way to illustrate some of the problems in dealing with taxation through the medium of a book. A comprehensive review would require a considerable amount of detail and there is a risk that it would be rather inaccessible to the reader. There is also a risk that changes in the regulations and rules would rapidly cause the information to be out of date.

What has been attempted here, instead, is a simple and hopefully understandable review of the major taxes in UK and illustrations of how they could affect investors and developers. This basic information should form the basis of future investigations by developers into the detail of the system operating at the time, and also an evaluation of how the specific development is impacted by tax. All parties involved are urged to take professional tax advice prior to the commencement of the project and also during the financial appraisal.

A further point to note is that tax is not just about payment, there are gains to be made in certain aspects of work. Essentially these are not repayments to the recipient but they are reductions in tax liability allowed by the government. This is not down to the charity of the government but instead an illustration of how tax can be used to achieved certain aims. For example, capital allowances for industrial buildings allow their owners and developers to offset tax by way of a depreciation allowance. This is done to encourage the development of industrial buildings which are often the least attractive of property development mediums. Similarly, one hundred per cent of capital allowances were allowed against the construction of buildings in enterprise

zones. This was to encourage the regeneration of deprived urban areas. In this respect, the UK Treasury uses the tax regime far less firmly than other nations – for example, the United States and Australia – to achieve the desired end. However, the tax benefits from these initiatives are worth having and are usually worth investigating by developers.

3.5.2 Taxes that may be encountered by developers

A large number of taxes may be encountered by developers. These fall into two main categories (although there is an overlap between the two).

The first category is taxes on the developer or investor as an individual or company. These include income tax, corporation tax, inheritance tax and capital gains tax (although this is also strongly related to the second category). The development can contribute to the earnings taxed under the systems either by way of profit (corporation tax and capital gains) or income (corporation tax and income tax).

The second category is those taxes more closely related to the development itself, i.e. the property. These include stamp duty, value added tax (VAT) and business rates or council tax.

Each will be briefly outlined below.

(i) Capital gains tax (CGT)

Capital gains tax is a tax on the change in value of capital assets. It thus has a potentially great effect on property, a major capital asset subject to increases in value over time (property is usually taken as a good hedge against inflation as the value of the asset moves at least in line with general inflation) as well as being subject to development and thus the release of latent value. In fact, the way in which the tax is calculated greatly reduces the impact of the tax.

The amount of CGT due is based on the gains made on disposals of assets and capital sums received from assets in the tax year. The amount chargeable to CGT can be worked out, as follows, in a table extracted from the UK Treasury's own guidance documents:

Disposal proceeds
or
sum received from assets

After allowing for reliefs which
reduce the figure to be treated as
proceeds.
Sometimes market value is used
instead of the actual proceeds.

<i>Less</i>	Allowable costs	
	Gain before indexation	If this is a negative number, then you have made a loss, which may be an allowable loss.
<i>Less</i>	Indexation allowance	For inflation, up to April 1998; may not create or increase a loss.
	Indexed Gain	
<i>Less</i>	Other reliefs	Reliefs other than taper relief which reduce or defer a gain.
	Chargeable gain	For each asset individually.
<i>Sum</i>	Total chargeable gains	Total of all the chargeable gains in the tax year.
<i>Less</i>	Allowable losses	Losses in the tax year and unused losses carried forward from earlier years.
	Chargeable gains after losses	
<i>Less</i>	Taper relief	A relief that reduces a chargeable gain after losses according to how long you held the asset. Taper relief is applied separately to each chargeable gain.
	Tapered chargeable gains	
<i>Less</i>	Annual exempt amount	£7,500 for the tax year 2001-02.
	Amount chargeable to CGT	

A few notes are required to explain the calculation of CGT. This tax is only charged on realised gains, the difference between what an asset was bought at and what it was sold at. You are, however, permitted to take into account allowable expenses, such as development expenditure. You can also take into account the effect of inflation using the indexation allowance. This uses a table of inflation covering the period from March 1982 to April 1998 (see treasury figures, below) and has the effect of stripping out the impact of general inflation on the change in asset values in the tax calculation, at least up to April 1998. The Government stopped indexation after this date to increase the tax take from CGT. Although inflation is low at present, this could significantly change tax strategies in the future. Whatever the case, only 'real' growth in the asset value is taxed. Additionally, gains made in one area can be offset against losses made in another part of the business. The tax payer is also allowed 'taper relief' which encourages assets to be held over a long period by progressively reducing the tax paid over time. The rules as they exist for the 2000-01 and 2001-02 tax years are outlined below:

Capital gains tax annual exempt amount	2000-01 (£)	2001-02 (£)
Individuals, etc*	7,200	7,500
Other trustees	3,600	3,750

[* Individuals, trustees of settlements for the disabled, and personal representatives of the estate of a deceased person.]

The amount chargeable to CGT is added onto the top of income liable to income tax for individuals and is charged to CGT at these rates:

- below the starting rate limit at ten per cent;
- between the starting rate and basic rate limits at 20 per cent;
- and above the basic rate limit at 40 per cent.

Indexation allowance

The indexation allowance for corporation tax on chargeable gains is published monthly in the form of press releases.

Individuals and others within the charge to capital gains tax are not entitled to indexation allowance for any period after April 1998. To calculate indexation allowance up to April 1998 on disposals on or after 6 April 1998, use Figure 29.

You work out the indexation allowance by multiplying the amount you spent by the indexation factor.

The net effect of this is to greatly reduce the tax consequences of CGT. This may change in future and the tax may return to being more significant to developers and investors.

(ii) Income tax

Income tax is a tax that most individuals are familiar with. It is a tax on income (as opposed to capital) received during the tax year. Income from property such as rents to an individual are taxable as are profits on trading properties (i.e. on properties that were bought to trade on), so a developed property owned by an individual would produce a tax liability. The distinction between trading and investment properties used to be significant when CGT was taxed at a higher rate than income but there is no such distinction now. There are fairly complex rules about allowances and the treatment of various sorts of income (for example, income from overseas properties and the treatment of rental incentives and service charges) that an

Year	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1982			1.047	1.006	0.992	0.987	0.986	0.985	0.987	0.977	0.967	0.971
1983	0.968	0.960	0.956	0.929	0.921	0.917	0.906	0.898	0.889	0.883	0.876	0.871
1984	0.872	0.865	0.859	0.834	0.828	0.823	0.825	0.808	0.804	0.793	0.788	0.789
1985	0.783	0.769	0.752	0.716	0.708	0.704	0.707	0.703	0.704	0.701	0.695	0.693
1986	0.689	0.683	0.681	0.665	0.662	0.663	0.667	0.662	0.654	0.652	0.638	0.632
1987	0.626	0.620	0.616	0.597	0.596	0.596	0.597	0.593	0.588	0.580	0.573	0.574
1988	0.574	0.568	0.562	0.537	0.531	0.525	0.524	0.507	0.500	0.485	0.478	0.474
1989	0.465	0.454	0.448	0.423	0.414	0.409	0.408	0.404	0.395	0.384	0.372	0.369
1990	0.361	0.353	0.339	0.300	0.288	0.283	0.282	0.269	0.258	0.248	0.251	0.252
1991	0.249	0.242	0.237	0.222	0.218	0.213	0.215	0.213	0.208	0.204	0.199	0.198
1992	0.199	0.193	0.189	0.171	0.167	0.167	0.171	0.171	0.166	0.162	0.164	0.168
1993	0.179	0.171	0.167	0.156	0.152	0.153	0.156	0.151	0.146	0.147	0.148	0.146
1994	0.151	0.144	0.141	0.128	0.124	0.124	0.129	0.124	0.121	0.120	0.119	0.114
1995	0.114	0.107	0.102	0.091	0.087	0.085	0.091	0.085	0.080	0.085	0.085	0.079
1996	0.083	0.078	0.073	0.066	0.063	0.063	0.067	0.062	0.057	0.057	0.057	0.053
1997	0.053	0.049	0.046	0.040	0.036	0.032	0.032	0.026	0.021	0.019	0.019	0.016
1998	0.019	0.014	0.011									

Figure 29: 2001 UK Treasury guidance on CGT tax (Source: UK Treasury).

Income tax allowances	2000-01 (£)	2001-02 (£)
Personal allowance	4,385	4,535
Personal allowance for people aged 65-74	5,790	5,990
Personal allowance for people aged 75 and over	6,050	6,260
Income limit for age-related allowances	17,000	17,600
Married couple's allowance for people born before 6 April 1935	5,185	5,365
Married couple's allowance – aged 75 or more	5,255	5,435
Minimum amount of married couple's allowance	2,000	2,070
Children's tax credit	–	5,200
Blind person's allowance	1,400	1,450

Figure 30: Income tax allowances (Source: UK Treasury)

investor/developer should investigate for the current rules. The 2001 UK treasury allowances and rates are presented as Figure 30.

The rate of relief for the continuing married couple's allowance and maintenance relief for people born before 6 April 1935, and for the children's tax credit, is ten per cent.

Taxable bands 2000-01 (£)		Taxable bands 2001-02 (£)	
Starting rate 10%	0–1,520	Starting rate 10%	0–1,880
Basic rate 22%	1,521–28,400	Basic rate 22%	1,881–29,400
Higher rate 40%	Over 28,400	Higher rate 40%	Over 29,400

(iii) Corporation tax

Corporation tax is the equivalent tax to income tax but is applicable to companies. If the company is resident in the UK, it is generally chargeable to corporation tax on its total profits. If it is a club or charity, different rules may apply. The company's total profits are found by adding together the profits from all its activities, including any capital gains. This can therefore include investment income, profits arising from the release of development activity and the rise in value of assets and also on the sale of assets. The starting point for working this out will be the company's accounts, but there are some special rules it must follow for tax purposes.

Companies complete a self-assessment form and pay tax for an accounting period. Corporation tax is different from the charge on individuals, and also on companies that are not resident in the UK and who do not trade in the UK. Individuals and these types of companies pay tax for the year that runs from 6 April one year to 5 April the next. With corporation tax the key period is the company's own accounting period rather than the government's tax year. The company must assess its own liability to tax and pay the tax that is due no later than nine months and one day after the end of the accounting period (the normal due date). The UK Treasury will not send the company an assessment, or work out the tax it must pay.

'Large' companies must pay most of their tax earlier than this date, by Quarterly Instalment Payments.

Again, the 2001 UK Treasury allowances and rates are presented as Figure 31.

The main rate of corporation tax for 2002-03 will be 30 per cent.

Marginal relief eases the transition from the starting rate to the small companies' rate for companies with profits between £10,000 and £50,000. The fraction for calculating this marginal relief will be $\frac{1}{40}$. Marginal relief also applies to companies with profits between £300,000 and £1,500,000. The fraction for calculating this marginal relief will also be $\frac{1}{40}$.

Figure 31: Corporation tax rates 2001 (source: UK Treasury).

(iv) Value added tax (VAT)

VAT is a tax that has significance to developers, though in most respects its effect is marginal in that a VAT registered developer can reclaim all VAT charged on inputs to the development (construction work and the like) if VAT is charged to the end user. The repayment is usually made three months after the expense has been incurred and this can be factored into the cash flow appraisal. There are circumstances where VAT is significant, however. The explanation is rather complex but of great importance.

Value Added Tax is the newest major tax in existence in the UK. It is essentially a 'European Tax', introduced as part of our entry to the EEC in 1973. The legislation introduced then was essentially concerned with levying a turnover tax in connection with the supply of goods and services as set down in the first EC Council Directive of 11 April 1967, the tax being defined to 'cover all stages of production and the provision of services', and as 'achieving the highest degree of simplicity'. In fact, VAT is one of the most confusing and complex taxes in existence. The tax would be levied at each stage of the supply of goods and services, eventually falling on the consumer/end user.

VAT was introduced into the United Kingdom on 1 April 1973 at a standard rate of ten per cent and replaced Purchase Tax and Selective Employment Tax. VAT is a tax on the final consumption of certain goods and services in the home market but it is collected at every stage of production and distribution. It is currently levied at three rates: standard (17.5 per cent), lower (5 per cent) and zero rated (0 per cent). Most items attracting VAT are standard rated but some such as domestic fuel (lower rated) and books (zero rated) are at a lower rate for political or social reasons. Residential property is a zero rated supply.

It was not until the Sixth Directive of 17 May 1977 that the rules for property were clarified. Property in general was exempt from VAT. The Sixth Directive (Article 13, paragraph B) provided that the letting and leasing of property (with certain exclusions), and the supply of buildings or parts of buildings, other than partly and newly constructed buildings, were to be exempt from VAT, i.e. no VAT was to be charged on the supply. This created a potential problem for developers and investors: it was fundamental to the concept of the tax that, at each stage, the VAT charged on the outputs, i.e. the supplies made by the supplying party, was available to offset any input VAT, i.e. on supplies made to the supplier. This ensured, in the chain of goods or services, that the VAT liability was passed down the chain, ultimately to the consumer/end user. But this could not happen with exempt supplies.

Because of this problem, the concept of the option to tax (Article 13, paragraph C of the Sixth Directive) was introduced, giving the supplier the option to charge VAT in certain situations. This came into effect in England in 1989, when it became known officially as the election to waive exemption. The VAT liability has been transferred to the developer, who then has to make taxable supplies to recover his input VAT. The VAT charged to the developer is based upon the price of the freehold together with the stamp duty. The developer's solicitor must always ask whether an election has been made, see a certified copy of it and ensure that it relates precisely to the description of the development being sold. The investor will normally make the election if it would otherwise incur irrecoverable input VAT, thus avoiding, or reducing, a VAT cost on its sale.

The basic rules have evolved considerably since their introduction. Once the election is made, all future supplies in respect of the 'elected' property are chargeable to tax. By making the election, a liability to be registered will usually arise. In the case of an existing lease or licence, the lessor or licensor has a right to add VAT to the agreed rent following an election, unless the lease or licence specifically provides otherwise. If an election has been made but, under the terms of the lease, VAT cannot be added, the rent is regarded as VAT inclusive.

The election is a personal decision of the elector, a purchaser with an interest in land may pay VAT upon the acquisition but is not bound to make standard-related supplies itself.

Buildings, or parts of buildings, that are intended for use as dwellings, or solely for residential purposes, are excluded. Other exclusions include the sale of land (or land with buildings to be demolished) to a registered housing association that provides the seller with a certificate stating that the land is to be used to construct dwellings or residential buildings; buildings, or parts of buildings, for charitable purposes (other than offices); pitches for residential caravans; facilities for the mooring of a residential houseboat; do-it-yourself builders in certain cases; and sales under the capital goods scheme.

This is complex but straightforward so far. However, like other areas of tax law, the rules relating to property have anti-avoidance provisions, which often hit quite innocent transactions. VAT is particularly problematic. Property developers cannot recover input VAT if a development is a bank, an insurance company or other VAT-exempt bodies that intend to occupy the building. The key word is 'exempt'. These bodies are exempt from VAT, therefore they cannot recover VAT charged to them. This includes VAT on sale of buildings and on rent. If a developer elects to charge VAT the building

automatically becomes 17.5 per cent more expensive than a non-elected building to these types of organisations ('normal' companies if VAT registered can also recover input VAT including that charged on rents or sale of buildings). In some markets these companies form a significant proportion of the market. Developers must, therefore, choose to either reduce the competitiveness of the building or not recover their own input VAT. In addition, if the prospective tenant so much as pays for a small variation to the building, the developer may be prevented from recovering all his VAT.

There are other complexities to VAT regarding the supply of land and converting buildings. A developer should take good advice on VAT issues and get up to date on the regulations current at the time of development.

(v) Stamp duty

Stamp duty is a relatively simple tax paid on the 'stamping' of legal documents by the government. These legal documents include the conveyance of freeholds and also the grant of leases. It thus is payable by someone, usually the purchaser in most property developments.

Again, the 2001 UK treasury allowances and rates are presented in Figure 32.

Duty on conveyances and land transfers, as from 28.03.2000*	
Up to and including £60,000 , provided a certificate of value for £60,000 is included in the document	nil
Over £60,000 but not more than £250,000 , provided a certificate of value for £250,000 is included in the document.	1%
Over £250,000 but not more than £500,000 , provided a certificate of value for £500,000 is included in the document.	3%
Over £500,000	4%
[*The old rates of 1%, 2.5% and 3.5% will apply if the contract is dated on or before 21/03/00.]	
NB: all amounts are now rounded up to the next multiple of £5	

Recent changes in the rates of duty on conveyances and land transfers...

Up to and including 07.07.97	1%
08.07.97 – 23.03.98 (inclusive)	1% 1.5% 2%
24.03.98 – 15.03.99 (inclusive)	1% 2% 3%
16.03.99 – 27.03.00 (inclusive)	1% 2.5% 3.5%

Duty payable on leases

On the average rent...

Length of term	Rate of duty
Not more than 7 years or indefinite	1%*
More than 7 years but not more than 35 years	2%
More than 35 years but not more than 100 years	12%
Over 100 years	24%
[* Applies only where the rent exceeds £5,000 per annum]	

On the premium...

Up to and including £60,000 with an annual rent of £600 or less (certificate of value for £60,000 must be inserted)*	Nil
[* If the annual rent is more than £600 a certificate of value for £250,000 may be included and duty is charged on the premium at 1%]	
Over £60,000 but not more than £250,000 (certificate of value for £250,000 must be inserted)	1%

Over £250,000 but not more than £500,000 (certificate of value for £500,000 must be inserted)	3%
Premiums over £500,000	4%
<p>Furnished lettings – a letting agreement for any definite term less than a year of any furnished property where the rent exceeds £5,000 attracts a fixed duty of £5.</p> <p>If the annual rent on a lease for seven years or less is £5,000 or below there is no duty to pay. This also applies in cases where the term is less than one year and the rent for the period is £5,000 or below.</p>	

Figure 32: Stamp duty payable on leases 2001-2002 (Source: UK Treasury).

Stamp duty is the perennial bugbear of the property industry. Governments have used it as a useful cash-cow alternative to income tax that is now politically difficult for them to raise. As stamp duty increases so property must perform better to justify an investor selling it on. Stamp duty has increased from just one per cent on most transactions since May 1997.

The Budget of 2001 introduced an exemption for stamp duty on all property transactions in the most disadvantaged parts of the UK. This was aimed at promoting urban regeneration through the refurbishment and return to use of existing properties and to aid new development. In the Government's own words, 'This will encourage businesses and families to locate in these areas, reviving depressed property markets and providing employment'. However, as property values are usually rather low in these areas anyway it is doubtful whether the actual impact of the changes will be significant.

(vi) Inheritance tax

Inheritance tax (or more strictly Capital Transfer Tax (CTT)) is tax charged on the transfer of assets such as passing on property to relatives, for example in a will. It can also be charged on the transfer of assets between companies. Good tax planning can reduce the burden of CTT almost to zero. CTT is a tax for a developer or investor to be aware of in order to avoid incurring a liability but it is one that is not of particular significance.

(vii) Business rates

Business rates are a UK-wide and nationally collected tax on business premises. They are used to contribute to the funding of local councils but are now completely under the control of central government. They impact on property development and investment in two ways: firstly, rates become due on the product of development once the construction work is complete. There is 'empty rates relief', whereby the tax payable is reduced by 50 per cent but the cost of the business rate has to be factored into the holding costs of completed but vacant premises as the owner is liable to pay it until an occupier is found. The second impact of rates is on the general competitiveness of the product of development; rates are a significant proportion of occupation costs even if they are normally paid by the occupier of the building and the decision by firms as to location are determined partly by an assessment of the total costs of occupation.

Rates are based upon the annual rental value for the property as assessed by the district valuer employed by the government. Rateable values are a key factor in the calculation of business rates and are not the rates bill. In broad terms the rateable value is a professional view of the annual rent for a property if it was available on the open market. A rateable value is a notional rent calculated solely for rating purposes. It may, therefore, differ from the actual rent on the property agreed or set in the open market. Occupiers of identical rented properties will each negotiate the terms of their own leases and the circumstances of the actual landlords and tenants and the rents they pay may differ widely from each other for many reasons. The valuation officer has to make a judgement as to what the reasonably expected rent might be. All properties are valued at a single date.

The valuation office has a legal duty to review all rateable values for non-domestic rates every five years and to assess the rateable values of all non-domestic properties in England and Wales and compile these in to a rating list. They then maintain the lists until the next revaluation. The latest lists came into force on 1 April 2000. The valuation date for the 2000 revaluation is 1 April 1998. The list runs for five years.

The uniform business rate (sometimes known as the multiplier) is an amount set by the government each year. There is a UBR for England and one for Wales. It is set to ensure that the overall amount collected in rates only ever increases in line with the rate of inflation.

For England

The UBR for 2001-02 is 43.0p

For Wales

The UBR for 2001-02 is 42.6p

An example of the tax due on a property is as follows:

Open market rental value of property	£50,000 pa
Valuation office assessment of rateable value (1 April 1998 valuation)	£48,000 pa
Applicable universal business rate	£0.43
Tax due	£20,640

As can be seen this is quite a significant amount and one that developers should budget for if it is anticipated that the property will stay empty for some time.

Appeals against rating assessments are allowed but there are restrictions as to when these can be made.

(viii) Council tax

Council tax is the equivalent tax to business rates for residential property. It is based on property values but uses a much simpler system of banding. Rather than assess a value for each premises as with commercial property, each domestic property is placed into an appropriate value band based upon its market value. There are eight bands, each increasing in value and, hence, demanding a higher level of council tax. The setting of the bands and the valuation of the properties are done nationally by the valuation office. The setting of the rate of council tax is largely a responsibility of the rating authority, the local council. This causes the tax rates to vary markedly across the country.

(ix) Tax relief

As noted above, the government makes use of its discretionary powers in the tax system to give some relief to stimulate activity in certain sections of the market or to achieve what they desire. An investor or developer can take advantage of these concessions to boost the return from property. Recent examples not covered below include Business Expansion Schemes and

Housing Action Trusts, both of which gave tax concessions to investors to ease the supply of affordable housing in inner city areas for rent or purchase.

(x) On interest payments

The effect of tax relief on interest payments has been covered in the earlier finance section. It remains one of the most significant tax concessions to investors and developers.

(xi) Capital allowances

Capital allowances allow the cost of capital assets to be written off against taxable profits. They replaced the charge for depreciation in business accounts, an area in which tax relief is not granted. The UK has no allowance for the depreciation of buildings and property generally, unlike other countries, other than with capital allowances. The reliefs given are limited (see p.201) but can still be significant particularly if, in general buildings, significant amounts of plant and machinery are included. Owners of commercial property can make considerable corporation tax savings if they take full advantage of allowances available on machinery and plant expenditure.

(xii) Industrials, hotels and enterprise zones

An annual allowance of four per cent is allowed by the tax authorities on the cost of agricultural and forestry land, new industrial buildings, and structures and qualifying hotels.

(xiii) Plant and machinery elements of other buildings

Capital allowances may be obtained in respect of machinery and plants in a building. These items attract a written down allowance of 25 per cent on a reducing balance basis against the original expenditure. Sometimes the government give a larger first-year allowance for small/medium-sized businesses. The allowances are deducted from the company's corporation tax computation.

For example, if a company spends £100,000 on a new air-conditioning system for a property it owns, in year one, 25 per cent of the purchase price – i.e. £25,000 – can be deducted in the company's corporation tax computation. In year two, the allowance is 25 per cent of the written-down value (£75,000). This equals an allowance of £18,750. In year three, the allowance will be £14,062.50 (25% x (£75,000 - £18,750)), and so on, until there is no more written-down against which to set allowances.

In an investment situation it is important for the investment owner to retain ownership of the plant and machinery and not pass it on to the tenant in order to claim the sums due.

(xiv) Brownfield development and remediation

In an effort to regenerate inner cities and increase the use of previously used land, the government has placed tax relief provisions within the Finance Act for investors and developers of contaminated land. This effectively creates a tax shelter for companies developing contaminated land. Corporate investors will be able to claim an upfront super deduction of 150 per cent of remediation expenditure, even where the costs are entirely capital and do not normally qualify for a deduction. Developers benefit from an additional 50 per cent deduction in calculating their development profit. Companies that cannot utilise the additional relief may be able to claim a tax credit from the Treasury.

(xv) Listed buildings

It is a popular misconception that listed buildings attract copious amounts of grant aid. The system of securing grants is, in fact, complex and grant aid is only a possibility for a small number of projects. Where they are granted, conditions are often attached which may, in some cases, negate or reduce the grant benefit. VAT applies, in general terms, to all listed buildings and the developer will need to take account of this, particularly where substantial building costs are involved. In certain cases, zero business rating relief is possible, but this depends on individual circumstances.

(xvi) Tax strategies

It is difficult to generalise about tax strategies as each development and each developer/investor tends to have a different tax status and goals. Sensible tax planning at the feasibility stage can, however, increase or even create a profit margin for property development that might not otherwise exist. It is often rewarding to keep abreast of government policy and investigate UK Treasury tax concessions in order to be able to react to any changes in direction and policy. Getting good tax advice is sensible for all businesses but can be especially important in the property markets.

3.5.3 Conclusion to the tax section

Tax is an important and complex issue. It can make or break some developments. A wise developer should seek good tax advice early in a

development project to minimise the impact of tax and engineer the maximum benefits from tax concessions.

3.6 Conclusion to Part 3

Financial matters are often the lifeblood of development. It is very important to secure the right amount of finance, at the right cost and with the right flexibility and risk profile for the development. This is easy to state but often hard to achieve. Finance is one area where the weight of advantage is with the bigger organisations. The options available to these bodies are much wider than to a small developer with a short track record. There is a catch-22 situation operating here but this will probably always be the case. A small developer can, however, have some flexibility in finance and this area will always reward good preparation, diligent research and intelligent strategies.

4 Project appraisal

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Glossary

Discounted Cash Flow (DCF)	An important financial appraisal technique that requires a projection of future cash flows.
Expected Net Present Value (ENPV)	A probability weighted value of a cash flow.
'Fire sale'	The rapid sale of assets, usually not at full market value, undertaken as a desperate measure to raise cash.
Full Repairing and Insuring (FRI)	A typical feature of UK leases that requires the occupier to carry out all maintenance and repairs, and to insure the building against loss.
Internal Rate of Return (IRR)	An important measure of investment return, representing the discount rate that produces a net present value of zero.
Net Present Value (NPV)	The sum of a future series of cash flows whose values have been discounted back to the present using the principles of the time value of money.
Open Market Value (OMV)	A definition of value for property assets as defined by the Royal Institution of Chartered Surveyors. This definition ensures that all values carried out under this basis contain certain common assumptions and should thus be consistent with other valuations.
Rental incentive	A sum paid by a property owner to a tenant as an inducement to sign a lease.
Residual cash flow	A variation on the discounted cash flow approach.
Sensitivity analysis	A test carried out by developers on appraisals of projects to see how sensitive the outcome of the calculation is to different values being experienced for the key components of the appraisal.
Void period	A period in which the developer assumes there will be no income received on a developed property. In practice, this is an allowance for risk and uncertainty in the development, the inclusion having the effect of reducing a potential bid price for land or scaling down profit expectations.
Year's Purchase (YP) figure	A property term used to describe the number of times an annual income from a property is multiplied in order to determine its capital value.

4 Project appraisal

4.1 Financial appraisal of development projects

4.1.1 Introduction: The importance of development appraisal

Financial appraisal is one of the key aspects of assessing the viability of a development project. Development appraisal, to give the alternative name to the process is used throughout the development process to fulfil a number of key tasks.

Firstly, development appraisals are used to determine the price that should be bid for a piece of land. Land for development has no intrinsic or set value, as we have seen in Part 2. Development land has a value derived from the use it can be put to. Each scheme proposed for any plot of land will generate a different land value. A land owner will generally sell to the developer who submits the highest viable bid. The appraisal process, when used to determine land value, determines the highest bid a potential developer can make and still meet their target return.

Secondly, they are used to determine the profit (or loss) that a scheme will make. This is vitally important, not only to show the developer whether the scheme is viable but also as a tool to obtain finance. Potential financial backers, be they commercial lenders or potential purchasers of the final development, are not primarily interested in the aesthetics of the scheme or the cleverness of its technical solution. They are concerned with its financial viability.

Commercial lenders will scrutinise the financial appraisal very carefully before advancing money. They will essentially be looking at two things:

- (a) Whether the assumptions and the programme underlying the development is sound. They will ask a number of questions: for example, are the assumptions made about the value of the scheme sound? Is the selling or leasing programme realistic? Are the construction costs valid? The developer will have to prove that the components of the appraisal are soundly based.

- (b) If this is established, then the financier will look closely at the profit margin predicted by the appraisal. The financiers want to be satisfied that the developer will make a sufficient profit margin. This is not out of concern for the developer's wealth as such but rather because the profit margin reflects a risk margin for a development. Effectively, the larger the profit margin, the less the risk that the borrower will default because there is less chance that the scheme will go into deficit if things go wrong. There is no set scale as to the margin that lenders require, however the table below gives an approximation of what lenders will be looking for.

<i>Type of scheme</i>	<i>Normal return on cost required by lenders</i>
Speculative commercial	20%
Commercial with pre-lettings	10-20%
Residential	10-15%

Both of the above appraisals are carried out early in the lifespan of the project, essentially at the feasibility stage. Later in the project other uses of appraisals are common:

- (a) They are also used by developers to explore the affect of altering, reworking or re-timing a scheme. Projects often require re-thinking during their lives. The appraisal is used to see what the affect of proposed changes is.
- (b) Sophisticated versions of the basic development appraisals are also used during the course of a development as monitoring tools.

This section covers all of these potential uses of appraisal in turn.

4.1.2 How this section is laid out

This part of the book starts by looking at the basics of appraisal and concentrates initially on the appraisals developers need to carry out to assess the bid they should submit when considering purchasing a piece of land. Rather than just illustrate the calculation, the approach followed is to take a detailed analysis of the appraisal, illustrating how a developer needs to build a set of assumptions about the development envisaged. The type of assumptions required and the way values are ascribed to them are considered in detail.

Once all the assumptions have been made then the calculation can be carried out. Again, how the calculations are done is examined in detail.

This approach means that this section is rather long and, on the surface, complex. In justification, it is intended to provide a comprehensive introduction to appraisal. Developers should have a good grasp of appraisal in order to be able to make sound decisions in the development process. This section should provide this.

4.1.3 The basic types and features of development appraisals

The vital role of financial appraisals is unarguable. Constructors and users must, however, be aware of the basic characteristics of these appraisals. The outcome is often extraordinarily sensitive to change in some of the key constructional variables and the appraiser is required to make assumptions about uncertain factors when building the appraisal model. This is inevitable as the appraisal looks ahead into an often uncertain future, dealing with factors that may change. The appraiser must make assumptions about rental levels, investor sentiment, occupier requirements and demand, interest rate levels, the timing of several factors such as how long the scheme will take to get through planning, to build, to let, to sell – the list is almost infinite. It is also inevitable that some of the assumptions made in the model will be wrong, and that appraisers can allow themselves to be too optimistic, to believe that they are being realistic. Developers are naturally optimistic people, risk takers who need to see the upside to actually take the risk. Development appraisals can, with very minor differences in assumptions, be made to show just about anything from a given set of facts. They are easily manipulated and easy to mislead, either deliberately or unconsciously.

A personal anecdote may illustrate this point. As a young surveyor, the author worked for a private practice firm in the Southeast. Part of the job involved assessing developments put forward by development clients or as part of loan security assessments for bank clients. My main role in the firm was preparing formal valuations and valuation reports, a role which required a degree of conservatism to produce a realistic valuation figure the user could rely on. When I carried out development appraisals on projects submitted, almost all my appraisals suggested that the projects would make a loss, or that the purchase figure for the site could not be supported. The developers were, however, keen to proceed with either the development or the land purchase at the agreed figures. Their own appraisals clearly told them a different story even though they dealt with the same sites, in the same market and the same proposed scheme as my own appraisal.

So who was right and who was wrong? The answer was we were probably both wrong. And both right! I was too cautious, the developers too bullish. Only time would tell how wrong or right we both were. It is too easy to look on the black side, to always take the downside risk, or to be too risk seeking, too optimistic. The former would lead to never carrying out a development, the latter to financial ruin. Clearly one must find the middle ground but this area is never clearly labelled! The only sensible course of action is to become aware of both the frailties and failures of both development appraisals and human nature. It is particularly essential that the characteristics of each financial appraisal are fully explored. In particular, it is vitally important that some degree of risk assessment is undertaken with development appraisal. This is usually referred to as 'sensitivity analysis' within the development world, though strictly speaking, sensitivity analysis is just one of a family of risk appraisal techniques that can be applied.

Development appraisals can be carried out to answer one of three basic questions, though in reality only two of the three are common. They are:

- (a) What is the land worth?
- (b) What profit will be made from the development?
- (c) What is the construction budget for the proposed scheme?

The answer to these three questions represents the factor that is unknown at the time of the appraisal. This can be illustrated by looking at the basic components of a development appraisal to assess land value:

VALUE OF SCHEME ON COMPLETION

less

COSTS OF DEVELOPMENT

less

DEVELOPER'S PROFIT

equals

VALUE OF LAND

(the unknown part of the equation)

Here the appraiser knows the top three items. The balancing sum, the unknown, the residual, is the land value for the purpose proposed by the developer.

Compare this with the developer wanting to know what profit can be made on a development. Is it sufficient to go ahead with this scheme, or to purchase a piece of land at the asked price? In this case, the developer must know the price of the land and must form a judgement about the other items. The one piece that is left, the residual in this case, is the profit (or loss) figure to balance the equation:

VALUE OF SCHEME ON COMPLETION

less

COSTS OF DEVELOPMENT

less

PRICE OF LAND

equals

DEVELOPER'S PROFIT

(the unknown part of the equation)

By a process of elimination, the third alternative considered is where both the profit figure and the price of the land is known. This may occur when the land or the building being redeveloped is already owned but it can also occur in other circumstances. Here the unknown is the budget figure for doing the development work, i.e. the total construction budget.

The equation is as follows:

VALUE OF SCHEME ON COMPLETION

less

VALUE OF LAND

less

DEVELOPER'S PROFIT

equals

BUDGET FOR DEVELOPMENT

(the unknown part of the equation)

Although there are many different models for development, these are the fundamental equations that underlie them all. Certainly the two most common are the first two and it is these that we will concentrate on.

We will start with the basic model, the residual or hypothetical development model.

4.2 The basic development appraisal model

There is a fair amount of debate within the property profession about the merits of traditional methods of valuation and those where the assumptions underlying the valuation are made more explicit. This occurs with approaches such as discounted cash flow models (DCF). The debate also takes place with regard to development appraisals. Here there is a traditional model where many of the assumptions made are implicit but there are also more explicit, complex, cash flow models. In the UK property market DCF is most widely applied in development appraisals. In fact, as in other areas of valuation, the truth about the two models is that they are essentially two versions of the same thing. Both the traditional and DCF approaches are, in fact, discounted cash flow approaches. The former is, however, a greatly simplified DCF. This simplification has both disadvantages and advantages, a disadvantage being that simplification leads to inaccuracies that can be serious. The advantages include speed of construction and ease of interpretation.

Rather than one being superior to the other in all circumstances, each has their use and a developer needs to be familiar with both types of approach. As a rule of thumb, the traditional approach is best applied in the early stages of a project, such as the initial appraisal, where the details of the proposed scheme are not certain, whilst the time and effort required to construct a DCF are best rewarded where the scheme's details are at a more advanced stage.

We will first examine the traditional approach. The starting point will be the calculation of a bid price for the land. To do this we need a site to appraise.

4.2.1 Base site for appraisal

The base scenario we will use for the appraisals is a medium sized commercial development, an office, proposed for a site in a provincial city in the UK. This is a purely hypothetical development but is based roughly upon what might happen in reality in current market conditions correct at the time of publication.

The site we are considering is one of 1,000 m², close to the city centre in the established business area of the city. We will assume it is of regular dimensions. It currently has an obsolete 40-year old office building on the site that is both derelict and vacant. The ground conditions are good, with good bearing capacity ground but with no hard rock which will create problems in excavation. There is no contamination on the site. There is clear title to the site with no legal encumbrances. The site is fully serviced. No cables, pipes or sewers cross the site. It is not in a conservation area. There is outline planning consent for the site to be developed for offices up to a total built area of 5,000 m². It is envisaged that a modern, concrete-framed office building will be constructed on the site. The specification will be typical of a high-specification office building in such a location. The office letting market has been good over the last three years with indications that there is sufficient demand for a development of this size. The development will be speculative, i.e. the building will be marketed to the occupational market as it nears completion and will not be built for any specific client, and the developer intends to find an occupational tenant to take a lease on the building. Once the building is let the developer intends to sell the freehold with the benefit of the lease as an investment to an investor.

Some of the assumptions in this scenario give an indication of the areas where complexity can creep into the development appraisal and process. A development value is derived from a combination of physical factors, the legal and planning environment and market conditions. Although property development is not rocket science, as an experienced developer once remarked, the context in which it takes place is often amazingly complex, and the appraiser must be aware of this and consider all these factors.

From this list of assumptions, or the facts that the appraiser must gather in real life, the assumptions specifically related to the development must be made. This stage is like an accounting exercise with all the key factors being considered and appropriate consideration made. These factors and this process are common to whatever appraisal method is applied.

The specific areas where assumptions are required to be made can be broken down into four broad areas:

- the building dimensions;
- the timing of the development and its stages;
- the costs related to the development;
- the factors related to its value.

Each of these broad categories will be considered in turn.

4.2.2 The specific assumptions

In summary, the specific assumptions that are fed into the financial appraisal pertinent to this site are listed below. How each is derived will be considered in turn.

BUILDING DIMENSIONS

Net area	4,000 m ²
Built area	5,000 m ²
Car spaces	15 Nr

TIME

Planning period	6 months
Construction	12 months
Letting	6 months

COSTS

Building cost	£ 946.50 m ²
Contingency	5.00%
Demolition	£ 100,000
Architect	4% cost
Project manager	2% cost
Engineer	2% cost
Quantity surveyor	2% cost
Developer's profit	20% cost
Marketing	1% value
Letting fees	10% ERV
Sale fees	2% sale price

FINANCE AND VALUE FACTORS

Rental value	£ 235.00
Investment yield	7.00%
Rental incentive	12 months
Interest rate	10%
Car spaces	£ 2,500.00

4.2.3 Building dimensions

One of the key factors that will influence the value of the site is clearly what can be built on the site. A number of factors will affect this:

- the physical and spatial characteristics of the site;
- the planning and legal situation pertaining to the site;
- the requirements of the market.

Each of these will now be considered in turn.

(i) The physical and spatial characteristics of the site

Clearly this is a very important factor with a number of interrelated issues which affect individual sites. The physical size of the site is important but the shape of the site is very influential on the size and number of buildings that can be built. Narrow sites or those which are irregularly shaped can lead to problems with access and spacing of individual buildings. In city centre locations where 100 per cent site coverage is to be expected, these factors can lead to problems with layout, and uneconomic remnants of sites and access.

Other factors to consider include the bearing capacity of the ground and topography, i.e. the shape of the ground surface (slopes, etc). These can be negated by the design or engineering of the building. An example is poor ground-bearing capacity which can be corrected by piled foundations. The main impact of these factors is therefore on cost and only indirectly on the quantum of built area that can be constructed by way of reducing the profitability of development.

In our case, as noted, the city centre location implies 100 per cent coverage. The site is regularly shaped so there is no loss of space. The building-on plan will maximise the site area and so will therefore be 1,000 m² on plan.

(ii) The planning and legal situation pertaining to the site

These factors can be divided into two.

(a) The planning system has a major influence on the quantum of buildings produced as well as the type of development allowed in particular areas. Planning authorities can impose density regulations on sites, allowing only a certain number of dwellings per hectare or a certain percentage of site coverage or, as in this case, a restriction on total built area according to a multiple of site area. They can also have requirements for certain types of development to be included on sites such as a requirement for low cost housing or starter industrial units where the developer, if unrestricted, would develop a higher proportion of the most valuable use. Other ways that the quantum developed can be restricted is by height restrictions and by requirements for set backs (allowing a gap between the building and the street) and building lines.

For many years, car parking has been a major concern to planning authorities, particular within cities. Urban authorities have been

pre-occupied with the increase in congestion, parking problems and pollution caused by the increase in car use. To try and counter this, they have tended to impose maximum limits on the number of car spaces that can be provided. This has not restricted built area but has, of course, influenced it greatly. An alternative approach is for planning authorities to impose a car-parking requirement per unit of built floor area, for example a requirement to provide one space per 200 m² of built area. This happens when the authorities want developers to provide spaces so that public or on-street spaces in the locality are not placed under pressure, or when the authorities are trying to restrict the amount of useable space developed.

Planning authorities work within the framework of the Town and Country Planning Acts and within the rules laid down by legal precedents. Their ability to impose restrictions on development is not, therefore, infinite and there are some things that they cannot do legally, even if they want to. One way that planning authorities can get around this is by entering development agreements under section 106 of the Town and Country Planning Act 1990, which can influence the shape and form of development. For example, recently in Warrington a development site existed within an established retail park area which was suffering from excess traffic problems. The purchasers of the site were required to enter into a s.106 agreement that a) restricted the site to non-retail development and b) allowed for a development that would allow no more than 100 employees in the buildings. This naturally has a direct affect on the built area.

(b) The legal characteristics of the site also have similar influence. Development sites can be either freehold or long (in excess of 50 years) leasehold tenure. In the latter case, the detail of the lease contract can determine what is built on the site, indeed that is often the reason that bodies such as local authorities retain the freehold ownership of a site whilst granting a long lease to an occupier or developer. The lease allows control, either specifically in the construction of clauses or simply by requiring the landlord's permission to carry out developments or make alterations. This extra element of control is one of the key reasons why the value of sites held on leasehold tenure are always less valuable than the sites held freehold.

Freehold sites are not, however, unrestricted. It is quite common for owners to place covenants on the title that will run with the land and bind future owners to abide by their requirements. These restrictive covenants are often related to future development by the type, size or sometimes materials to be used. Other covenants include giving certain rights to third

parties, such as the right to extract certain minerals, or to graze animals or to hold markets. Some of these restrictions on the title on land can have a major influence on the building that may be constructed on the site. Historic or unreasonable covenants can be altered or extinguished by application to the Lands Tribunal in England and Wales or by agreement with the relevant beneficiary of the covenant but the process can be time consuming and is by no means certain.

Other legal issues that can affect the form and size of the development include easements, wayleaves, rights of way and rights of light. Easements and wayleaves give rights over land to things such as pipes, cables and electrical transmission lines. Rights of way allow access over the land. Rights of light are enjoyed by neighbours to the site. All these issues need to be fully investigated because they can often have quite major influences on what can be built on a site and where.

In a historical and densely developed country such as the UK, it is very rare indeed for a site to be unaffected by some of these legal factors.

(iii) The requirements of the market

The final set of factors that influence the built dimensions of the development are more indirect but cannot be ignored. In most for-profit developments the requirements of the market are paramount in determining the built form:

- households have requirements for certain features in residential developments;
- retailers from particular sectors will only occupy units of a certain size, shape and layout;
- industrial and warehouse users need units of specific sizes, heights and with sufficient yard or service areas to meet their needs;
- office users require buildings of particular specifications and size, not only in terms of area but also in particulars – such as sizes and shapes of floor plates, etc.

All these factors must be taken into account when the size and form of the building being developed is considered.

The above three factors have been considered in the dimensions of the building as laid down in the assumptions. This has led to the decision that the site can support the development of a 5,000 m² building with 15 car spaces, as laid out in the table below:

BUILDING DIMENSIONS

Net area	4,000 m ²
Built Area	5,000 m ²
Car spaces	15 Nr

Questions may be raised regarding the separate statement of the net floor area of the building. This is a requirement related to the valuation of commercial buildings, particularly shops and offices. Occupiers of these types of buildings will only pay for the space they can actually use for their business. In an office, for example, space lost to columns, lifts, staircases, circulation space, internal walls, toilets and kitchens are, in most cases, excluded for the purposes of calculating rent. How a building should be measured is laid down in the Code of Measurement Practice produced by the RICS. Whatever the case, just as we need to calculate the built area in order to determine the cost of construction, so we need to ascertain the net area of the building in order to assess its value.

4.2.4 Assumptions related to time

Time is often critical to the success of a development, it is very important in the appraisal, and it is related closely to money – the longer a development takes the more interest is charged or the more the cost is incurred for giving up the right to use the money. The longer a development takes to complete, the longer the developer has to wait to recoup the capital expenditure. Money receivable in the future is worth less than money receivable today. The time value of money needs to be carefully taken into account in the appraisal.

A development can usually be broken down into three phases. The first is referred to as the *planning phase*. It is the period that may start with the initial expenditure on the development, such as the purchase of land. However, it is more accurate to consider it commencing from the point where the decision is made to begin development or the actual time of the initial appraisal. It is during this period that the development is designed or the detailed design is finalised. All necessary consents are obtained in this period – planning, listed building, fire and safety and building regulation consents are just some of the things that need to be put into place. The contract documentation for the construction works are prepared and title problems can also be resolved during this time period.

There is no easy formula for determining the length of this period. Obviously, the rough rule of thumb is that it will be shortest in simple developments and will lengthen as complex issues increase but beyond this it is hard to generalise. If there are major planning issues, such as the

development proposal being in conflict with the local authority development plan or where consent has been refused, the planning phase may be lengthy. This is an issue where there is no substitute for experience, particularly of the development team. Some guidance can be gained by looking at what has happened in the past with similar schemes. In our example the planning period has been assessed as being six months long.

The timing of the second phase of development is easier to assess in most cases, though there can still be major problems. The *construction phase* is the period that commences with the start of site works and usually ends at practical completion when the building is handed over from the contractor to the developer or building owner. In a traditional development the developer places the development in the hands of a single building contractor who undertakes to complete the project in the agreed time period and at an agreed cost (see the section on procurement for a more complete discussion on this issue).

The timing of this phase can be assessed in a number of ways. The most reliable way is to consult a construction professional who has experience of the type of scheme planned. One of the functions of a quantity surveyor (QS), as we have seen, is to assess the timing of a scheme as well as the cost implications. In larger schemes it will be the QS in tandem with the other professional team members (particularly the architect, structural engineer, service engineer and project manager) who will assess the timing issues. On smaller scale projects, direct discussions with contractors may assist the assessment. Some guidance may also be found in building price books but these can only be considered to be approximate guides.

A number of issues can affect the timing of the construction phase and the ease of its assessment. Where a greenfield site is being developed and a straightforward type of building is planned, the timing is relatively easy to assess and the estimate is likely to be accurate. The process becomes more difficult and the accuracy of the prediction less certain when the site is in an existing urban centre, where there is substantial excavation in unknown ground, where there is demolition involved or, particularly, where the work involves the alteration of an existing structure. The difficulties arise where there is the unknown or the unusual to consider and to make assumptions about. Consider a developer working on the redevelopment of a nondescript 1950s shop in the centre of an historical British city such as York. York has been occupied for well over 1,000 years. Many of the buildings are historic with substantial archaeology under the ground surface. There are considerable potential problems with getting access to the site due to the presence of tourists and shoppers. In this case, assessing how long the construction will take once work has commenced on site is not

straightforward. It is not easy for the appraiser to find the balance between being too cautious and being over-optimistic. It is here where the importance of sensitivity analysis, considered below, becomes apparent.

In our example, we are assuming that there are few of these problems. Twelve months has been allowed for the development which is about par for the course for a city centre office scheme of this size and specification.

TIME

Planning period	6 months
Construction	12 months
Letting	6 months

4.2.5 Assumptions related to costs

There are ten cost items to consider in our particular appraisal but this list could be longer if we were to include items such as planning fees, a planning consultant, and an environmental consultant. As noted above, an appraisal consists partly of an accounting exercise. For the purposes of our example these items will suffice, particularly as they are the most typical of the cost items involved in a development. Each will be considered in turn.

(i) Building costs

Building costs are dependent upon many factors. These include the specification of the building, its size and shape, the method of construction used, the nature of the site and its surroundings, its location within the country and the time period required to construct it. An example of how costs can vary can be seen from the gross cost per square metre of office construction in the UK that can vary from £300 to £2,500 per metre square.

Building costs in an appraisal can be determined in a number of ways and the cost data derived from a number of sources.

The methods of estimating building costs break down into three main categories:

- superficial area
- elemental cost
- quantity surveyor's approach.

The superficial area approach simply involves calculating an appropriate all-in cost that will approximate to the total cost of the development of all

components of the building. For example, if we know that a 1,000 m² building costs £1,000,000 to construct then we can say that the construction cost was £1,000/m². This figure can then be used to calculate the construction costs of similar buildings. For example, if we are appraising the development of a similar specification building of 800 m² in the same city which is going to be built in a year's time, this figure may give us a good guide. Our estimate of building costs may be as follows:

Built area	800 m ²
<i>Multiplied by</i>	
Construction cost (£1000/m ² + 5% inflation allowance) =	<u>£1,050</u>
Estimated construction costs	<u>£840,000</u>

Nothing could be simpler, indeed this is the method that is used in the vast majority of initial appraisals and is usually perfectly adequate. However, there are considerable problems with the approach that the appraiser should be aware of.

The fundamental problem is one of comparability that this simplistic approach requires. Every construction project is different, buildings are not mass-produced, they are hand built and tailored to meet the differing requirements of the procurer and the differing conditions and characteristics of the site. This is particularly true of commercial properties, each of which tends to be unique. Two ostensibly similar properties can have quite different construction costs because of differences in ground conditions, or problems with access during normal working hours that forces weekend or evening working, or that work has to be carried out by hand instead of machine, the former being highly expensive. One particular source of variance is market conditions: at times when there is little work available, firms may build at cost price or below, simply to maintain cash flow and keep head office staff employed. At other times when there is a glut of work, firms may work with very high profit margins which greatly inflate construction costs. All these factors can be incorporated in the superficial area approach by adjusting the rate upwards or downwards as they are taken into account. It is, however, always going to be an approximation and is likely to be an inaccurate predictor of actual costs, particularly in complex situations.

The problems with this approach do not bar its use. It is still, and will continue to be, the most widely used of methods at the initial appraisal stage. Like many things in appraisal it is, however, best to be aware of the method's shortcomings so as to avoid being misled into making an incorrect decision based on the costs indicated.

The source of cost data used in this model will be considered below.

(ii) The elemental cost approach

The elemental cost approach to the estimation of building cost is not one approach but a family of approaches that attempt to provide more detail regarding the development, thus achieving greater accuracy. The approach requires the built elements of the building to be divided into elemental components for more accurate cost estimation. These components can be technical – for example, substructure, structural frame, structural walls, etc – or else functional – such as parking, office space, etc. This allows a more accurate estimation of cost to be made than with the superficial area method.

The Building Cost Information Service (BCIS) cost element breakdown is as follows:

Element

1 – Substructure

2 – Superstructure

2A Frame

2B Upper floors

2C Roof

2D Stairs

2E External walls

2F Windows and external doors

2G Internal walls and partitions

2H Internal doors

3 – Internal finishes

3A Wall finishes

3B Floor finishes

3C Ceiling finishes

4 – Fittings and furnishings

5 – Services

5A Sanitary appliances

5B Services equipment

5C Disposal installations

5D Water installations

5E Heat source

- 5F Space heating and air treatment
- 5G Ventilating system
- 5H Electrical installations
- 5I Gas installations
- 5J Lift and conveyor installations
- 5K Protective installations
- 5L Communication installations
- 5M Special installations
- 5N Builder's work in connection with services
- 5O Builder's profit and attendance on services

Building sub-total (excluding external works, preliminaries and contingencies)

-
- 6 – External works
 - 6A Site works
 - 6B Drainage
 - 6C External services
 - 6D Minor building works

7 – Preliminaries

8 – Contingencies

Total

(Source and acknowledgement: BCIS Publications)

(iii) The quantity surveyor's approach

The final approach used in cost estimating is the quantity surveyor's method. This is the most accurate but also most detailed and time consuming to produce. It requires the building to be broken down into its building components, each being accurately measured or estimated, with accurate costs per unit attached to each. For example, the quantity of concrete used in the foundations would be calculated and a price to supply and fix that component per m³ would be assessed for the individual case concerned. This would be done for each component of the building, the sum of the total costs being the total construction costs less overheads and (usually) profit.

Although this is the most accurate method of cost estimation used it is often not practical in the early stages of a financial appraisal of a development project. It requires that detailed information be available about the project to justify its use but this information is often simply not available in the early stages of a development.

4.2.6 Sources of cost information

There are a variety of sources of cost information which can be used with the models discussed above. Which is used depends upon a number of factors including which model is used, the nature of the development scheme, the point at which the appraisal is being carried out and the speed that the cost information is required or, more likely, a combination of all of the above factors. The sources of the data vary markedly in terms of speed, ease of use, accessibility and accuracy. Those which are the quickest, cheapest and easiest to access are also usually the least accurate (this statement also applies to the methods of cost estimation). There is a trade-off between these factors that the person constructing the appraisal should be aware of.

Some of the basic sources of data that may be available include:

(i) Building price books

These include those books published by Spon's, Laxtons, Rawlinsons, Griffiths and Wessex. They are commercially available and are compiled from information furnished by contractors and quantity surveyors. The books contain pricing data suitable for use in all three basic methods of price estimation detailed above. They also include information useful for calculating the regional variation in construction costs and for assessing other items related to building cost, such as professional fees.

This source of data is relatively cheap, highly accessible, relatively easy to use and provides a swift estimation of construction cost. However, it loses out in terms of accuracy as it provides general, non-site specific information which may not reflect the circumstances of the development being addressed. Quite often a reasonably accurate estimate of building costs may be made using this method but there is also a danger that the assessment may be inaccurate and even misleading in certain circumstances.

(ii) Computerised databases and estimation systems

One of the main sources of information is produced by the BCIS.

This organisation monitors construction contracts of all types throughout the UK. It collates and analyses data submitted by members of the Service, and incorporates material from other relevant sources. Information is made available through several publications and an on-line service. BCIS is a subsidiary company of The Royal Institution of Chartered Surveyors and was established in 1962. Subscribers are provided with data in an accessible form on the current, historic and probable costs of building maintenance and

property occupancy, and can access cost information for a wide range of commercial, industrial, residential and public sector buildings. BCIS provides capital cost information while Building Maintenance Index (BMI) covers maintenance management information and building maintenance, property occupancy and refurbishment costs.

(iii) Quantity surveyors

Quantity surveyors are the cost experts of the development team. If a QS is part of the team he or she should be the normal source of cost information. If a previous relationship exists with a QS this might still be a viable source of the requisite information.

(iv) Contractors

Contractors are often themselves valuable sources of cost information. Not only do they have hard information on project costs, they also employ professional estimators to price the construction work prior to bidding. If the developer has worked closely with contractors on previous projects it may be wise to consult them in order to obtain current market cost information.

(v) Previous development/construction projects

The final source of information on construction cost may come from the developer's own experience of costs on previous projects. Experienced developers hold a valuable well of information on schemes they have worked on.

4.2.7 Contingency

It is normal to allow for some degree of contingency in the calculation of construction costs. Contingency is effectively an allowance for risk in the construction element. There will always be some items that will be difficult to assess in a construction project prior to the commencement of work. Similarly, when work is underway things can occur which cause construction costs to rise, including unforeseen ground conditions, the effects of adverse weather and the impact of design changes during the construction programme. The contingency is a realistic acceptance that this will occur. This is one area where a degree of pessimism – of anticipating problems – allows a realistic appraisal to be made, rather than one that paints a misleading picture of future profits. It may be that the contingency is not used. In this case, a higher level of profit will be made on the completion of the development. This is always more welcome than the reduction in profit that will result for failing to allow for uncertainty.

The level of contingency allowance will vary from development to development. As a rough rule of thumb lower levels of contingency allowance will be appropriate in simple developments of conventional buildings on greenfield sites, i.e. situations where the risk levels are low. A higher contingency level is appropriate where the development is complex. Particular caution should be taken where the development involves the conversion of an older structure and/or where there is a potential risk of contamination on site.

In this case, a relatively low contingency percentage of five per cent is applied to the construction costs only. Some appraisers apply the contingency percentage to all costs of development including professional fees. There are no hard and fast rules concerning this, it is down to the personal preference of the appraiser (or sometimes to the way that the software package used by the appraiser is constructed).

4.2.8 Professional fees

Most of the normal cost estimation approaches and sources of cost information reviewed above do not include the cost of employing the professional team. These costs are not fixed and are open to negotiation. The relative levels of fees will vary according to the size and complexity of the work involved and, often, the length of the developer's previous relationship with the team. The fees can be a fixed amount agreed between the parties but it is more usual for the team to work for a fee calculated as a percentage of the construction costs. The total fee percentage depends upon the number of different professional disciplines required for the project which naturally depend upon the underlying project's complexity. Here the total percentage is around ten per cent which is relatively low. A range of between eight to 15 per cent of construction costs should be expected.

This is the situation with a traditionally procured project where the design and production phases of the project are separated. In alternative procurement regimes such as 'Design and Build' the design costs are integrated into the construction costs and the total fees will probably, although not certainly, be lower.

It should be noted that recent lending practices of financial institutions have increased the percentage of professional fees that need to be allowed for in the initial appraisal. Banks, in particular, have increasingly insisted on placing their own professional team in the project to monitor progress and safeguard the financial outlay. The cost of this 'shadow' team is borne by the developer. This is strictly a cost of arranging finance and may, more

appropriately be included in the finance section of the appraisal, but it may be allowed for in the 'professional fees' section in some appraisals, depending upon the preference of the person constructing it.

4.2.9 Marketing

With projects other than those where there is a contract with an occupier in place or where one is expected to be in place at the commencement of the scheme, there will need to be an allowance for marketing the property. This sum covers all advertising, publicity fliers, web page generation, etc. It is a separate sum from the allowance for selling or leasing the property, which is covered below. As with most things, the sum allowed for marketing depends very much on the nature of the development. The larger, more unusual the development, the larger the budget needs to be. Residential developments often require an on-site presence during the period in which the units are being sold. It is normal to allow for this in the marketing sum.

The marketing allowance built into the appraisal is normally an appropriate lump sum budget rather than the percentage figure used here.

4.2.10 Letting and sale fees

These are the fees paid to the agent who finds and negotiates with tenants and occupiers for the scheme. The latter applies where owner occupation is the result of the development, as in many residential schemes. With commercial schemes, it is likely that the occupier will lease space in the development. Agents get paid a fee once leases have been signed. This fee is usually based on a percentage of the annual rental value of the space let, though minimum charges may apply or the agent may work to a lump sum fee. This is more rare as it removes the incentive of the agent to achieve the best possible rent for the client.

If the investment is to be sold on letting, and this is a common way for developers to recoup the development costs of a project and crystallise the profit, then a second tranche of fees is usually made. This is for the agreement of the investment sale of the project to an investor with a requirement for this type of investment. This sale fee is usually calculated as a percentage of the sale price of the property, typically between 0.5 and two per cent of this price, though again a lump sum fee can be agreed upon. It is possible that two different firms are appointed to deal respectively with the letting and sale of the property. This occurs typically where the development is located in a provincial town or city and where the likely occupiers are locally based companies in contact with a locally based agent. In contrast, the investment market tends to be dominated by organisations that deal

nationally, usually through a limited number of London-based consultancy firms. These firms have greater access to the investment customers for the product and thus it is usually sensible to appoint one of these agents, even though the overall fee may be higher.

4.2.11 Developers' profit

Developers' profit is a cost which must be accounted for in appraisals. Just as contractors will not carry out construction work without being paid, professional fees accrue to the advisors to the development and interest is paid to the banks for the loan of funds, so developers need a 'payment' to recompense them for the time, effort and risk expended. Banks look very closely at this figure as it is an important measure of the security of their investment. They will expect a developer to receive at least a 15 per cent return on cost and usually more in the appraisal given to them. These funds represent extra security if things go wrong. If a building is not let quickly enough, interest charges will rise and start to eat into the developers' profit. A relatively high profit will ensure that this erosion can be covered for a fairly long time period before the developer goes into the red on the project and thus into potential bankruptcy.

Developers' profit is usually calculated as a percentage of the development cost or as a percentage of development value. Each has their advantages and disadvantages, which will be discussed, in the section covering development appraisal for profit estimation, below.

4.2.12 Finance and value factor assumptions

FINANCE AND VALUE FACTORS

Rental value	£ 235.00
Investment yield	7.00%
Rental incentive	12 months
Interest rate	10%
Car spaces	£ 2,500.00

These are the series of factors that determine the value of the development and also the cost of financing the development (or the opportunity cost of the developer's own money invested in the project – see below).

(i) An introductory note on property values

The objective of this section is to give an insight into the way commercial property values are determined. It will not enable you to value your own commercial property but it should give you a good idea of the principles.

The first thing to understand is that there is no magical formula for working out property values. Property does not have an inherent value like most marketable goods; it is worth what somebody will pay for it in the open market, i.e. in competition with everybody else. If you commission a valuation of your property this is essentially how the valuer will work out the figure to report to you: they will look at what similar properties have been sold for or the rent at which they have been let and use this evidence to value your property.

Valuers work to a set of rules when working out a valuation to ensure that the figure they produce is reliable and which would hopefully be reproduced if a property was offered on the open market. These rules are laid down by the professional body dealing with valuation, the Royal Institution of Chartered Surveyors (RICS), in a publication popularly known as the *Red Book*. Amongst other things, the *Red Book* lays down the basis of valuations to be adopted under certain circumstances, clear assumptions that must be made by the valuer in preparing the valuation. There are several valuation bases, the most commonly used is Open Market Value (OMV):

Open Market Value means the best price at which the sale of an interest in property might reasonably be expected to have been completed unconditionally for cash consideration on the date of valuation, assuming:

- (a) a willing seller;
- (b) that, prior to the date of valuation, there had been a reasonable period (having regard to the nature of the property and the state of the market) for the proper marketing of the interest, for the agreement of price and terms and for completion of the sale;
- (c) that the state of the market, level of values and other circumstances were, on any earlier assumed date of exchange of contracts, the same as on the date of valuation; and
- (d) that no account is taken of any additional bid by a party with a special interest.

Appraisal and Valuation Manual, Valuation and Appraisal Standards 4:2.1 RICS 1996

The *Red Book* explains at length that all valuations for a certain purpose are produced using common assumptions and are thus not widely at variance with other valuations.

If this is the technical rule a valuer follows when preparing a valuation, what influences the value of the actual property holding?

Most people have heard the old adage, 'What are the three most important factors in determining the value of property? Location, Location and Location.' This is, of course, essentially true but the detail of what makes up the value of a property is more complex.

With business premises we are usually dealing with two components or types of value: rental value and investment, or capital value.

Rental value is essentially determined by how useful the premises are to the tenant. How good is the property for the tenant's business? What else is on the market? At what point or at what level of rent would the tenant choose to take an alternative set of premises? The answer to these questions depends, of course, upon the nature of the tenant's business and the nature of the property.

At a less fundamental level, rent (or in actual fact, the usefulness of the property to the business) is determined by a combination of the physical make-up of the building, its size, location, quality, etc, and the nature of the legal contract under which it is occupied. These are covered briefly below.

Rent provides the income from property. The capital value of income-producing properties is determined by finding the current value of the future expected income to be earned (or potentially earned in the case of an owner occupied property). This is done by applying a discount factor to the future expected flows of income.¹¹ This discount factor is referred to as a yield in property and is a reflection of investors' desired return for that type of investment given its relative risk, quality and growth potential compared

¹¹ This has already been explained in Part 2 but to save turning back, the explanation is repeated here. An investment usually has two features that make it attractive: features that will either appreciate in value over time or will provide an income flow to the owner (or sometimes in the case of shares and property they can do a bit of both). The former type, which include things like works of art, are actually quite difficult to assess the value of. They tend to be valued subjectively in comparison with similar items sold, for example, at auction. The latter type are easier to assess the worth of because what you are trying to do is set the value of the right to receive the income flow in the future. You can do this by comparing them with the return from other investments of similar characteristics. In this case it is assumed that similar investments return about a ten per cent return. All of the future cash flows expected to be received from the investment can be expressed according to their present worth using this interest rate. This is because of something called the 'time value of money'. Basically, if we had £25,000 today we could invest it and receive a ten per cent return on it, i.e. £2,500. The same sum received in, say a year's time, is worth less to us today because we do not have the opportunity to

with other investments in the market. This may sound complex but in practice both the choice of yield and the mechanics of valuation are relatively simple.

For a start, there is generally no need to try to forecast explicitly the future cash flows from the property if it is a freehold. Freeholds are perpetual interests so therefore it is assumed that the ability to earn income from the property will also continue perpetually. The effect of this is to make the valuation formula for freeholds:

$$\text{INCOME} \times 1/i$$

Where i is the required yield. The formula $1/i$ is the mathematical formula for the present value of a perpetual income. For example, if a property produced a rent of £10,000 pa and this represented the current market rent for this type of property, and investors were seeking a return of nine per cent, the value of this investment would be:

$$\begin{aligned} &£10,000 \times 1/9\% \\ &= £10,000 \times 11.111 \\ &= \underline{\underline{£111,111}} \end{aligned}$$

Where does this yield come from? Essentially it comes from the market. Valuers look at the yields achieved on similar transactions and apply them to the subject, with alterations for any differences between the property being valued and that on which the transaction took place.

invest it. We can calculate how much less it is worth today by using a financial formula, the present value of £1 formula which is $(1 + i)^{-n}$ where i is the interest rate and n is the number of years in the future the sum is received. In this case it is $£25,000 \times (1.10)^{-1}$ or £22,727.27. We could do this for every year that the sums are receivable and total them up to find out the net worth of this investment (which equates to what someone should pay for them). This can get difficult with long cash flows and with freehold property this is virtually impossible as freeholds are a perpetual right and therefore the right to earn an income is also perpetual. Fortunately we can use another formula for working out the present value of a *series* of future income flows. This is $1 - (1 + i)^{-n} / i$ (the letters mean the same as the above). There is also a version of the formula that deals with perpetual income flows, this is $1 - 0 / i$ (it is actually the same formula as the first, it is just modified as when n trends towards infinity the $(1 + i)^{-n}$ bit trends towards giving a value of zero. This all looks complicated but the result is simple: if you multiply an annual sum receivable in perpetuity by the formula $1 / i$ you get the present value of that cash flow, or its current worth. Here then $£25,000 \times 1 / 10\% = £250,000$.

One point to note is that as the yield comes down the value goes up. This may seem illogical but it is not. Investors accepting lower income yields are paying more for a higher quality investment, either in terms of the quality of the existing income flow or in terms of higher growth potential, or usually both.

This is fundamentally how values of market-rented freehold income-producing properties are arrived at. The situation does get more complex where the property is let below or above the current market rent (with UK lease structures this can frequently happen) and with leasehold properties. Both these situations are really beyond the scope of this section but, in short, are valued using adaptations of the above model to reflect the uneven income flows of the former and the terminable nature of the latter.

(ii) Rental value

Rental value is the price per unit of lettable floor area that an occupational tenant will pay per annum as part of the lease contract. In most countries this is market determined by the interaction of the forces of supply and demand for the specification of the floor space available.

Information on rental values for the type of floor space developed may come from a variety of sources. In some countries there is a statutory requirement to report property transactions and this information is available in the public domain. This does not occur in the UK although technically the information is available, at a cost, through the Land Registry. The prime source of information on property transactions, and thus rental values, is through the market makers, the commercial agents. The one way to ensure that a reliable estimate of rental value is made is to employ the services of one of these agents either by way of a formal valuation or, more likely, by bringing the agent into the project as the letting agent.

Rental value varies markedly from one location to another and from one property type to another. For example, within Manchester, current retail rents are around £3,000/m² per annum in the best areas, whilst the best office rent is at around £260/m² and the best industrial rents around £75-80/m². The rental values are location and specification specific: a shop located outside the prime shopping street, perhaps only 100 metres from the highest value shop, may attract a rent of less than one tenth of its better located competitor. A 30-year old office in the prime office core of Manchester may attract a rent of perhaps half of a modern building located nearby. This is simply an effect of image and user flexibility that is so important to current office occupiers. Other factors that may influence rental value include the terms under which the property is leased, including the lease clauses themselves, and the length of the lease. A good example is maintenance

costs: UK leases are usually on what is called Full Repairing and Insuring (FRI) Terms. This means that tenants are responsible for maintaining all aspects of the building, including its structure and fabric, throughout their tenure of the building. The rent received by the building owner is thus not open to any deductions to spend on building maintenance. If the building is maintained by the landlord, the rent will have to be higher on an equivalent building on FRI terms to allow for these costs.

The value factors that influence the main property types have been considered in Part 1.

In our case study a rental value of £235 seems appropriate, given the specification of the building, its location and current market conditions. The building is assumed to have a net to gross floor area ratio of 80 per cent, which is conservative for a modern building.

(iii) Rental value ascribed to car parking

Other elements of a commercial building may provide income and thus value to the property. These include advertising hoardings, aerial sites, 'naming rights' (the ability of the lead tenant to attach their name to the building, e.g. 'BigCo Tower') and car parking amongst others. In this case the only additional item with this particular development is car parking.

Car parking does not always yield income, indeed if the current trend of attitudes as regards car use continues it may be that car spaces will be heavily taxed and thus, become a liability. A rent can only be charged when tenants are willing to pay for it. This is usually in cases where parking is in short supply, such as in city centres. Parking is not usually rented out separately in business park type locations; here tenants expect the provision of parking spaces as a reason for selecting such a location and do not expect to pay an additional rent.

(iv) Investment yield

As we have seen, the investment yield is important in determining the present value of the income flow that an income-producing property generates. The yield is determined by market forces representing the requirements of investors in terms of return for this class of property. This in itself is a very complex issue; a number of factors intertwine to determine it. These include:

- *The rate of return on other investments.* For major investors these include all potential alternative investments including the rate of

return on cash deposits, government loan stocks of differing length of term, home and overseas equities, etc. These in themselves are determined by the spectrum of interest rates in the economy as a whole, including the bank base rate.

- *The cost of finance.* For smaller investors who finance a purchase partly with loaned money, it is often the lending rate that will determine the minimum yield that an investor can pay. For example, if a property is being purchased for £1m, a bank or other financial institution would lend around 70 per cent of that sum, i.e. around £700,000. If the money is loaned at ten per cent this means that the property must produce at least £70,000 (i.e. a yield of seven per cent) to just cover the interest payments on an interest-only loan.
- *The risk characteristics of the investment.* Factors that affect the risk of the property (i.e. the danger of an interruption of the income flow or a significant fall in value of the property over time) include the location of the property, the property type and specification, the lease terms and the lease length, and the quality of the tenant who occupies the space. To illustrate what this means, consider the relative merits of the following investments:

	<i>Investment A</i>	<i>Investment B</i>
<i>Tenant</i>	Boots PLC	Local chemist
<i>Type of location</i>	Large city centre	Small market town
<i>Lease length</i>	25 years	5 years
<i>Type of property</i>	Modern shop unit in modern shopping centre development	Traditional shop unit in parade of local shops

Clearly the investment with the lowest risk of default is Investment A. Any investor buying Investment B would need to be compensated for the extra risk by paying less for the investment and receiving a higher annual return. In today's market Investment A might command a yield of five to six per cent, dependent on the type of city in which it is located whilst Investment B would see an investment yield in the range of nine to approximately 12 per cent.

- *Growth potential.* Investments that have the greatest potential for growth in value also attract the lowest yields. The argument is that

investors seeking growth are willing to accept lower returns in the short term in exchange for this growth which will, if realised, give them a higher overall return. For example, a shop investment bought for a yield of five per cent might expect to see annual growth rates of ten per cent per annum over the long term, giving a total return of 15 per cent. A shop bought for a yield of nine per cent might see growth at three per cent per annum, giving a total return of 12 per cent.

- *Supply of the type of investment in the market place.* Investor sentiment and requirements can be very influential. Sometimes a particular type of investment is in short supply but is one that investors have targeted because of its longer term potential. This happened in the early 1990s with retail warehousing, where yields were driven down by the weight of competition between investors for an asset class that was felt to have huge growth potential but likely to have a restricted future supply because of changing government planning policy.

The result of the interactions of these factors is reflected in what investors pay for property investments in the market place. These transaction prices are the best place to determine property yields. For example, if an office property has been sold for £10,000,000 and produces a rental income of £840,000, then it is relatively easy to calculate the investment yield the investor receives:

Purchase price	£10,000,000
Add: purchaser's acquisition costs (stamp duty, legal fees and surveyor's fees)	<u>£500,000</u>
Total sum expended	<u>£10,500,000</u>
Rental income <u>£840,000</u>	= 0.08 or 8%
Sum expended £10,500,000	

This yield can then be applied to the valuation of similar offices in the vicinity, with appropriate adjustments where required for differences such as in the specification and quality of the location.

It should be noted that this analysis becomes more complex when the rental value of the property being valued has not been set recently. Property markets have a degree of volatility, rental values can move up and down. Commercial property leases only allow for periodic adjustment of rent, usually every five years (although this is sometimes shorter). Rents actually being paid under the lease contract on properties can frequently not be representative of what the property would let for if vacant and available for

letting on the open market. Investors factor this into their decisions about what to pay for investments. For example, if the office example given above had been let three years prior to the sale and rental values had risen since letting, investors would probably accept a lower initial income return in return for the expected rise of rents at the rent review in two years. Let us assume that the rental value of the property has risen to £1,000,000 per annum.

Purchase price	£11,750,000
Add: purchaser's acquisition costs (stamp duty, legal fees and surveyor's fees)	<u>£587,500</u>
Total sum expended	<u>£12,337,500</u>
Rental income £840,000	= 0.068 or 6.8%
Sum expended £12,337,500	

The growth potential is reflected in the greater price paid for the investment (£11,750,000 is based on a valuation of the long-term income stream based on the eight per cent yield suggested in the first analysis). 6.8 per cent is not a good indication of what newly let properties would exchange for in the open market but what this type of growth investment – called a reversionary investment – is producing for investors. This example is used as a cautionary indicator to the unwary as to how they can be misled by market evidence. When appraising a new income-producing investment it is important, where possible, that the evidence should be derived from similar, newly developed and newly let, properties.

In our example, market evidence suggests that a seven per cent yield is appropriate for this type of investment.

4.2.13 Rental incentive

Strictly speaking, this item should be included in the development costs section. It is, however, an item that is directly related to the negotiations connected with the leasing of the completed buildings and thus with the income flow, so there is some argument that it should be grouped with these items.

A rental incentive is a concession given to a tenant as an inducement to sign a lease on the property. Some sort of incentive has always been given to a tenant, though historically this amounted only to a few rent-free months granted to allow the tenant time to fit out the premises before taking occupation. In the market of the early 1990s where supply of space greatly exceeded demand, the size and value of incentives grew enormously in both

size and variety of offers as developers fell over themselves to attract the few tenants that were available to the empty developments. These incentives included long rent-free periods, cash contributions, free fitting out and rental caps. In the more 'normal' market conditions that have followed this period incentives did not completely disappear.

The question might be asked why developers give incentives rather than lowering the rent? There are, in fact, many reasons though three predominate. Firstly, property owners are keen to protect the values of existing properties they own: lowering rents in new developments would have provided evidence of lower rents that could have been used in rent review negotiations. Secondly, lowering rents damages the long-term cash flows and thus values of developments. The argument was that once, say, the two-year rent-free period on a development had expired, the high rent would kick in and the property would be valued off that high-income stream. If a lower rent had been granted, it would have affected the property over at least the first five years of the rental cycle and possibly longer. Finally, tenants tend to prefer the incentives offered as it gives them short-term relief from cash flow problems suffered during the economic downturn.

Rental incentives actually created huge problems for the property market, particularly for valuers and investors. The first two arguments used may also be seen as being both over-simplistic and inaccurate. Whatever the case, incentives are still a feature of many markets. Here a 12-month rent-free period has been granted. This is counted as a cash deduction from the receipts. It may be necessary to make a deduction from the value of the completed property as an alternative to this approach. Deducting cash rent-free and adjusting the valuation would be double counting.

4.2.14 Interest

The final assumption that must be made in the appraisal is to do with the finance charges connected to the development.

Most developers borrow money in some way to carry out a development. This money will have a cost, i.e. an interest rate. However, even where developers are using internal sources of funds to carry out a scheme the cost of money should still be allowed for. This is because all funds have an 'opportunity cost', money expended on a development scheme is money that could have been used elsewhere to gain return. The opportunity cost is the highest return that has been given up by not investing in alternative investment mediums. Some large firms using their own funds to carry out developments use their own internally assumed interest rate which is often

quite low. Although this is legitimate in accounting terms there is a strong argument that the interest rate used should be one that reflects the rate that would be attracted to a project with a similar risk profile to the development scheme, i.e. that the rate should be that which the firm would require if loaning it to another developer to carry out a similar scheme.

This philosophical argument about interest rates can be set aside in the majority of cases where money is borrowed. Interest rates are set competitively by lenders. The rate set will depend upon factors such as the track record of the developer, the risk characteristics of the scheme and, of course, the general tone of interest rates in the market place. Bank base rates (which varied between four and eight per cent between 1997 and 2002) form the basis of the lender's calculation. In a strong letting market, with a developer with a good track record of completing developments and where there are at least some tenants in place, and where the bank has the development (including the land), as security in case of default, the interest rate will be two to four per cent above base. This may rise considerably if any of these characteristics are weakened.

Financing developments is covered in Part 3 but some factors should be noted. Firstly there may be more than one loan in place, at different rates of interest. For example, the land may have been purchased at a lower rate of interest than the funds used to pay for the actual development costs themselves. Similarly, developers sometimes find that they have a funding shortfall and need to acquire additional sources of finance, or mezzanine finance. This is usually available at much higher costs of interest. Finally, banks are more frequently seeking to secure their money by requiring the developer to pay for the bank's own professionals to be in place as additional overseers of the development progress.

In our case study we are considering a simple loan to a developer with a reasonable track record and a moderate level of assessed risk. This equates to an interest rate of ten per cent.

This completes the assumptions required to complete the appraisal. The next section lays out a simple residual approach to the calculation of land value, then shows how each of the components are derived.

4.2.15 Worked example: traditional residual approach – land value

PART ONE: VALUE ON COMPLETION

Expected realisation

ERV

Net office area	4000		
	x	£235.00	£ 940,000.00
Car parking spaces	15		
	x	£2,500.00	<u>£37,500</u>
		Total income	£ 977,500.00
Capitalised at	7.00%	14.28571429	
			£13,964,286
		Less	
		Purchaser's costs (5%)	<u>-£664,965.99</u>
		3%	£13,299,319.73
		LESS	
		Incentive	<u>-£940,000</u>
		Net realisation	£12,359,319.73

LESS: development costs

Demolition		£ 100,000
Construction		
5000	m ² x	£ 946.50
		£ 4,732,500

Finance on construction and demolition

£ 4,732,500	x	
<u>0.5</u>		
£ 2,366,250	x	10%
	for 12 months	£ 236,625

Professional fees: construction

Architect	4%	£ 193,300	
Project manager	2%	£ 96,650	
Engineer	2%	£ 96,650	
Quantity surveyor	2%	£ 96,650	£ 483,250

Finance on professional fees

£ 483,250		
<u>0.66</u>		
£ 318,945	x	10%
	for 18 months	£ 49,019

Finance on void period			
£ 5,601,394	@ 10%		
	for 6 months	£ 273,398	
Professional fees: letting and sale			
Letting fees	10%	£97,750	
Sale fees	2%	£265,986	£ 363,736
Marketing			£ 132,993
Contingency			5.00% £ 236,625
Developer's profit			
20%	on cost	<u>£ 1,321,629</u>	£ 7,929,775
	Residual in		
	24		
	months' time		£ 4,429,545
	x 1/ L+CPL+(CF(L+CPL))		
	1/ 1.2705		<u>0.787091696</u>
SUM AVAILABLE TO BUY LAND TODAY			<u>£ 3,486,458</u>

4.2.16 Analysis of the appraisal

What we have just done is taken the assumptions that we have painstakingly arrived at in the first part of the chapter and translated them into an estimate of the value of the land for the purpose proposed by the scheme. The completed development appraisal suggests that we should bid up to £3.49m for the land in order to meet the targets for the return we have set. How did we arrive at that figure? How is the value of each of the components arrived at? What does it all mean?

We will see below that the assumptions we have made strongly influence this estimate. Before we look at the sensitivity of the appraisal, however, we need to take some time to look at how this calculation was actually arrived at. Though many of the components are obvious, others are less so and need careful consideration as to how they were calculated. We will take each component in turn.

4.2.17 Expected realisation

The expected realisation of the project has been covered in some detail in the assumptions section, however we will look at the salient points here.

The first step in the valuation is the calculation of the total rental roll of the investment. In this case, this comes from the two components: the rent

from the office space and the rent from the car parks. This total income is capitalised using a single yield assuming an income flow into perpetuity, as is the norm with freehold investments. The figure of 14.286 is merely the inverse of seven per cent, giving the income multiplier or Year's Purchase (YP) figure.

In some circumstances, there may be the need to apply different yields to different parts of the income. This may occur in a multi-type or mixed-use investment or where the building is multi-let to different tenants of differing quality. In these cases individual calculations of value for each component are calculated and then summed up to provide the total realisation.

From the figure calculated there is a need to allow for the costs that incoming purchasers would bear. This reflects that purchaser's 'net down', the sum they pay to allow for paying government taxes (stamp duty) and the fees they pay their professional advisors (solicitors and surveyors). This is so they get their stated return on the money they expend. In this case, to get a seven per cent return with their acquisition costs assumed to be five per cent, they need to pay:

$$£13,964,286 / 1.05 = £13,299,319.73$$

The difference being £664,965.99.

The calculation has to be done in this obtuse way in order to make the correct allowance for the actual sum payable by the purchaser as costs that will total to £13,964,286.

The final calculation is to deduct the value of the incentive given to the tenant in order to sign the lease. The treatment of this has been discussed in the assumptions above.

The resultant sum, approximately £12.25m, is the sum actually received by the developer which must cover all the costs of development, all finance charges, the purchase of the land and an adequate return for the developer.

4.2.18 The next step: calculating the development costs

From the sum calculated for the realisation, the development costs need to be deducted. This becomes an accounting exercise, ticking off the value of each. Some of these costs are relatively straightforward to calculate, others less so. The traditional residual model also incorporates peculiarities in the

calculation of certain elements, particularly finance charges. These peculiarities are essentially short cuts or simplifications in calculation, dating from less technically advanced times when calculation aids available to the appraiser were primitive. There is very little justification for the continued use of these short cuts in the development appraisal model, other than that of familiarity, as they do not accurately calculate elements of the appraisal but give generally reasonable approximations of the true values. Most proprietary development appraisal software on the market gives the options of calculating these elements more accurately.

(i) Construction costs

Construction costs are one of the simpler elements to calculate. The basic principles have already been discussed in the assumptions section. A lump sum has been calculated for demolition works and site preparation. The cost of the new build element has been calculated by applying an overall cost per square metre to the gross area of the building.

(ii) Finance on construction and demolition

Whilst the construction cost element is a straightforward calculation, the calculation of finance charges on this element is rather less so. This represents the main area of simplification in calculation in the traditional residual model.

It should be noted that in the simplest of residual calculations interest charges on a development may be calculated as a single, gross element rather than being calculated on a number of individual elements. Here the interest calculation element has been divided into three: construction cost, professional fees and on the void period. Each element has different cost/time profiles and this separation allows a more accurate assessment of interest charges to be made.

Another point to be noted is that this calculation of interest charges should always be made, even when internal and not borrowed funds are used, in order that the true costs of development are assessed. Where borrowed money is used in the development the cost is reflected in the interest charged by the lender. Even when internal sources of finance are used, this money has a cost known as an opportunity cost. The money spent on the development could have been used elsewhere in order to obtain a return. The logic of this has been discussed above, but it is worth underlining at this point. There is no such thing as 'free' money. Some appraisals see own funds and borrowed funds dealt with separately, often at different rates. This is acceptable, however I would argue strictly that all money used in

development has the same opportunity cost and should be valued at the same rate. For simplicity in this and in the majority of other appraisals, it is best to assume that *all* money used is borrowed.

When money is borrowed for a development scheme it is normally executed by arranging a loan facility which is then drawn down in tranches as the project proceeds and expenditure is made. It is only when the money is drawn down that the interest accrues.

In the construction phase, with traditional methods of procurement, the building contractor is paid in stages, usually on a monthly basis. The contractor carries out a valuation as to the value of works completed each month which the client pays, normally after agreeing the sum using their own professional team to certify that the work has been carried out. The amount expended each month accumulates to the final contract sum, plus or minus any variations in work that have been agreed during the course of the work. This process means that the construction cost is only finally expended at the end of the contract and the average balance drawn down from the loan facility is typically rather less than the total, here £4.73m. If finance was calculated at our rate of ten per cent on the entire balance then there would be a gross over-calculation of the amount of interest accruing.

This is where an allowance needs to be made and where the residual model's simplifying assumption is made. The traditional shape of expenditure on a construction project follows an s-shaped curve (see Figure 33).

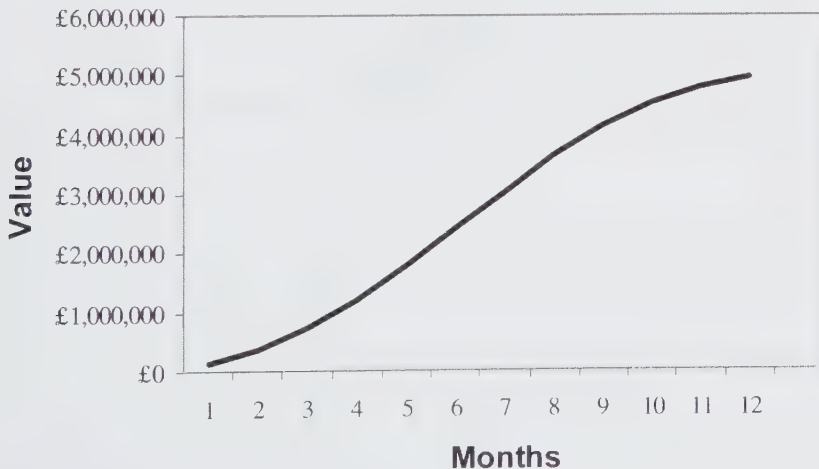


Figure 33: Typical S-shaped curve of construction projects

This shape reflects that expenditure on site tends to be low at first. The initial work, ground preparation, excavation, foundations, etc tend to be low value/low speed functions. The rate of expenditure increases greatly as the expensive high value components (frames, walls, etc) are installed. Towards the end of the construction period the pace falls off again as finishing trades become involved. This work tends to be slow and often only one trade at a time can work (e.g. electricians must finish before plasterers can complete the walls, which then have to dry before the decorating can start).

The normal assumption made in a simple residual appraisal is to simulate this process, albeit in a much simplified way in the traditional models. The normal assumption is that the average balance drawn down will equate to 50 per cent of the time period when 50 per cent of the expenditure has been made (see Figure 34).

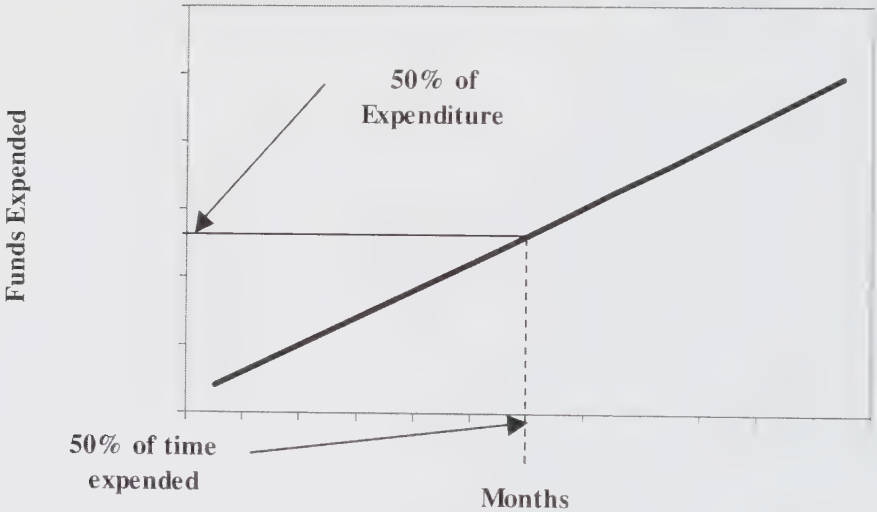


Figure 34: Assumption on Balance Owed

The calculation thus assumes that 50 per cent of the money has been drawn down on average over the construction period. In our example this is $\pounds 4,732,500 / 2 = \pounds 2,366,250$. Using the interest rate of ten per cent per annum this equates to an interest charge of $\pounds 236,625$ for the construction funding.

An alternative way of doing this is to carry out the calculation based upon the full cost of construction but for only 50 per cent of the elapsed time (i.e. $\pounds 4,732,500 \times ((1.10^{0.5}) - 1)$). This produces exactly the same answer, though strictly speaking the logic behind taking this approach is rather suspect.

This assumption about 50 per cent of the expenditure is the biggest single source of inaccuracy in the traditional appraisal model. We will look at ways of improving this problem, below.

(iii) Professional fees: construction

The derivation of the professional fees was discussed above. The calculation is simple as it is calculated normally as a percentage of construction costs.

(iv) Finance on professional fees

The calculation of the finance charges on professional fees is similar to that of the calculation of the charges on construction expenditure. The majority of development appraisals carried out at the early stage of development tend to see these two elements of finance calculated together. It is preferable to separate the calculation in most cases as the expenditure profile and thus the calculation of interest tends to be different between the two. The difference in the final appraisal is marginal as fees tend to be a relatively small proportion of expenditure but the sums involved can be significant.

The differences can be seen from Figure 35. Construction professionals receive payment earlier than the contractor, indeed the bulk of professional fees may be paid before construction work has advanced very far.

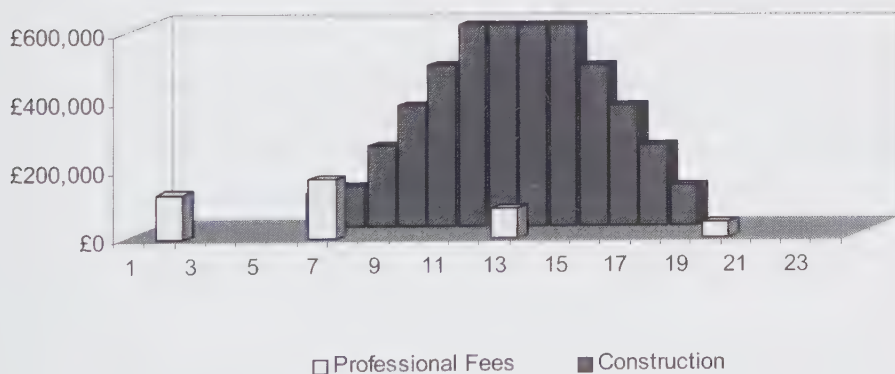


Figure 35: Expenditure patterns for construction and fees

This should be reflected in the finance charge calculation. Reference to the appraisal will show that this is achieved in two ways. Firstly, the average balance taken is not 50 per cent of the total but 66 per cent (this is not a hard and fast figure, it can be higher or lower). Secondly, expenditure is assumed to take place over a longer period, i.e. from the start of the

planning period to the end of the development period. This makes 18 months of interest calculation rather than the 12 months for the construction phase.

(v) Finance on void period

The third element of finance included in the calculation is the void period.¹² This is the period from the end of construction (or practical completion) to the point where the development becomes a saleable investment (usually when the building is fully let in the UK). It is virtually impossible to find a buyer for an empty investment building except at 'fire sale'¹³ prices. One that is partly let may be saleable but at a sizeable discount to the full value. The sum obtainable is usually not sufficient to cover development costs so this is usually a last resort for a desperate developer intent on a damage limitation or time buying exercise. As a result of this, most developer traders tend to hold buildings until fully let and this must be accounted for in the calculation.

Similarly, an allowance for a void period should be included not just where a sale is involved. The letting up process reflects the transition of the building from development to mature standing investment, often from short-term debt finance secured on the site to longer-term mortgage finance secured on the building.

The void period on a speculative development is absolutely critical to the success or failure of the scheme. Finance charges quickly accumulate in this period because they are calculated on the full development costs. The effect of this can be seen in Figure 36. Interest charges accumulate on the development from day one, greatly increasing when construction starts. However, around half of the interest charge on our development takes place after month 18, i.e. when construction has been completed. The effect of compound interest is to give an exponential shape to the curve.

Unless some of the principle debt can be paid off – which is unlikely – this phase has a critical effect on most developers, as this is where the greatest

¹² Strictly a void period only exists in a speculative building, i.e. one where there is no certain occupier known at the time of development inception. A void period may be included, however, as extra insurance when the building is being constructed for occupation under a lease where there is a tenant who has signed heads of terms but not a binding lease. A small void period may occur in other cases to allow for fitting out or legal delays, etc.

¹³ A 'fire sale' refers to rapid selling of assets to raise cash by organisations in financial difficulty. In these circumstances the organisation concerned tends to accept any bid for these assets even those that are at an amount well below the true market value.

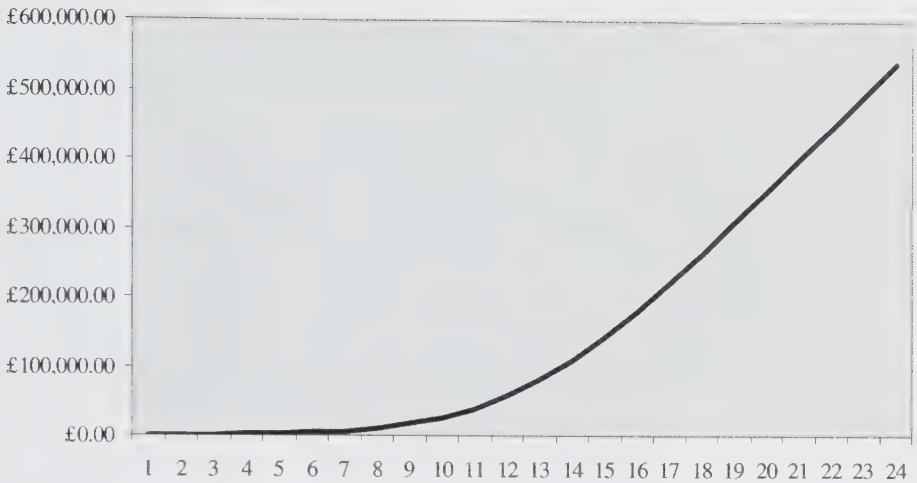


Figure 36: Cumulative interest charges on a typical development project.

concentration exists on risk mitigation in development (see section below). The longer this void period exists the greater the interest charge.

In an appraisal, the void period is the safety net and a financier will need to ascertain whether a sufficient allowance has been made.

(vi) Professional fees: letting and sale

The costs we have dealt with to date have in common the feature that they are assumed to occur at various times up to the end of the letting up period, and are therefore time-critical. The timing and extent of expenditure on these items affects the calculation of the cost of finance. The remaining items in the basic residual model usually take place at the end of the development period and thus have no affect on the interest calculation.

This deserves a note of explanation. The traditional residual is an accumulative exercise. For the most part it works forward, accumulating all the costs together, particularly the accumulated interest charges. This is represented in Figure 37. The items that occur at the end of the period have no additional effect on the interest accumulated.

These are such items as marketing, letting and disposal fees and the developer's profit. These items are usually paid at the end of the development or may even occur after the sale of the building.

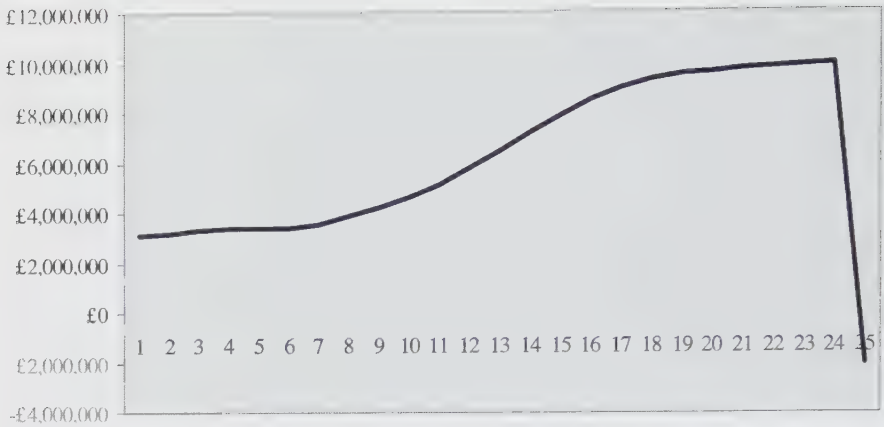


Figure 37: Pattern of expenditure over development period (negative figures represent receipts)

(vii) Marketing

One of the exceptions to this is marketing, although the same basic assumption is made. In fact, common sense tells us that the marketing budget will tend to be expended earlier and indeed will need to be to have any affect. In both residential and commercial schemes it is not uncommon for advertising to take place before construction has commenced. Despite this, it is usually felt that it is not worth taking this early payment into account in a simple residual appraisal as the sums involved are relatively small when compared with the development budget as a whole and, consequently, the impact on the appraisal of this inaccurate assumption is negligible.

(viii) Developers' profit

Developers' profit is also, effectively, a final stage payment. It is the hoped-for surplus after the sale and when all the costs have been accounted for. Normally this is taken as a percentage of development cost or development value.

(ix) Residual in 24 months' time

Once all of the development expenditure has been accounted for, the total sums expended can be calculated and then deducted from the net realisation. In our example we have the following values:

Estimated net receipts	£12,359,319
Estimated net expenditure	<u>£ 7,929,775</u>
Residual	£ 4,429,545

This is the sum that we will have as a surplus in 24 months' time, if all our assumptions come to accurately represent the final course of the development.

This is not what we should pay for the land, however. It is the surplus that will be available at the *end* of the development period. It includes an allowance for holding the land over the two years of the development period and, particularly, an allowance for the cost of finance over this period. To calculate the sum we should actually pay for the land we need to make an adjustment to allow for this finance cost. This is covered in the next section.

(x) *Sum available to buy land today*

What we are seeking is the sum to be paid to the landowner to purchase the interest in the land at the beginning of the development.¹⁴ This sum, L , will attract acquisition costs to the purchaser, i.e. stamp duty, solicitor's costs and surveyor's fees. The land will then need to be held for two years. We need to be able to calculate backwards to solve L in the equation:

1.	2.	3.	4.
$L +$	Cost of purchasing L	$+ \text{Finance costs on } L \text{ and}$ cost of purchasing L for 24 months @ 10%	$= \text{£ } 4,429,545$

We can solve L by solving the equation.

1.	2.	3.	4.
$L +$	5%	$+ (L + 5\%) \times 10\%$ for 24 months	$\text{£ } 4,429,545$

1.	2.	3.	4.
$L +$	0.05	$+ (1.05((1.10)^2 - 1))$	$\text{£ } 4,429,545$

$$\text{If } L = 1$$

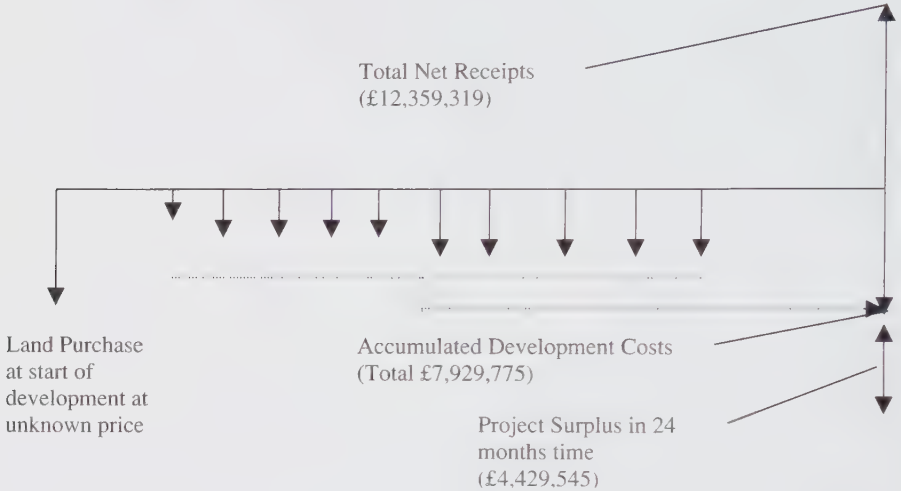
$$1.2705 = \text{£ } 4,429,545$$

$$1/1.2705 = \text{£ } 4,429,545$$

Therefore $L = \text{£}3,486,458$

¹⁴ Or at whatever point the actual land purchase occurs. It is not always at the beginning, in some cases the financial transaction may not occur until the very end of the development.

A diagram may help in the understanding of what has just been done. The appraisal prior to the end adjustment has calculated the surplus money at the end of the scheme which will cover purchasing the land, the cost of paying solicitors' fees, stamp duty and any agents' fees, and then the cost of finance for holding the land over 24 months:



The residual at 24 months is a sum that will cover the land purchase, the acquisition costs and the finance charges over the period. The equation above solves for the unknown, the land price.

If land is bought for	Interest charges at	Land price	£3,486,458
£3,486,458	10% per annum	Plus	
acquisition costs of	+ compounded over	= Acq. Costs	£173,423
5% will be added	the two years.	Plus	
making a total cost	This equates to	Finance Charge	£768,764
of £3,660,781	£768,764	Equals	£4,429,545

4.2.19 Traditional residual approach: assessing the profitability of development

The basic approach used in the calculation of land bid can be applied to the calculation of the potential profitability of the development. As noted in the introduction to this chapter, this is the second most common reason for carrying out a development appraisal.

The full appraisal is shown on the following pages. The casual observer would find it difficult to distinguish between this and the earlier appraisal. Indeed the appraisals only differ towards the end, which is logical as we are

making the same basic assumptions about the same property development project. All we are seeking is the answer to a different question: what profit, or loss, will the development show?

To be able to calculate profitability we will need an additional piece of information: the price of the land. In this case we will assume that the land is to cost us £3.5m, roughly what we calculated in the original land appraisal.

All parts of the appraisal are identical until we reach the final item in the cost column. The allowance for the developer's profit that appears in the land appraisal disappears and is substituted by an allowance for the cost of the land. Two additional cost items need to be accounted for: the costs incurred in acquiring the land and the cost of holding the land over the development period. In our appraisal we will assume the acquisition costs to be five per cent, though in the UK today this may be on the low side, given the level of stamp duty and professional fees. The cost of finance is assumed to be charged at a rate of ten per cent per annum over the 24 months of the development period, i.e. the same as that charged for the development as a whole. It is sometimes possible that the cost of finance for purchasing the land element of the development may be at a different, usually lower rate, than that charged for the development as a whole, as some financiers believe that land represents a lower risk than the actual development itself. If so, the interest rate used here may be different.

The land and associated costs are added to the other development costs and summed as before to calculate the total development costs.

The residual, after the costs are subtracted from the net realisation, is the profit (or loss if this figure is negative).

BUILDING DIMENSIONS

Net area	4,000 m ²
Built area	5,000 m ²
Car spaces	1 Nr

COSTS

Land cost	£3,500,000
Building cost	£946.50 m ²
Contingency	5.00%
Demolition	£100,000
Architect	4% cost
Project manager	2% cost
Engineer	2% cost
Quantity surveyor	2% cost
Marketing	1% value
Letting fees	10% ERV
Sale fees	2% sale price

FINANCE AND VALUE FACTORS

Rental value	£235.00
Investment yield	7.00%
Rental incentive	12 months
Interest rate	10%
Car spaces	£2,500.00

TIME

Planning period	6 months
Construction	12 months
Letting	6 months

Expected RealisationERV

Net office area	4000 m ²		
	x	£235.00	£940,000
Car parking spaces	15 Nr		
	x	£2,500.00	<u>£37,500</u>
		Total income	£977,500
Capitalised @	7.00%		14.28571429
			£13,964,286
		Less	
		Purchaser's costs (5%)	<u>-£664,965.99</u>
		Gross realisation	£13,299,319.73
		LESS	
		Incentive ✓	<u>-£940,000</u>
		Net realisation	£12,359,320

LESS: Development costs

Demolition			£ 100,000
Construction			
	5000 m ²	x	£ 946.50
			£ 4,732,500

Finance on construction and demolition

£ 4,732,500	x		
	<u>0.5</u>		
£ 2,366,250	x	10%	
	for	12 months	£ 236,625

Professional fees: construction

Architect	4%	£ 193,300	
Project manager	2%	£ 96,650	
Engineer	2%	£ 96,650	
Quantity surveyor	2%	£ 96,650	£ 483,250

Finance on professional fees

£ 483,250			
	<u>0.66</u>		
£ 318,945	x	10%	
	for	18 months	£ 49,019

Finance on void period

£ 5,601,394	@	10%	
	for	6 months	£ 273,398

Professional fees: letting and sale

Letting fees	10%	£ 97,750	
Sale fees	2%	£ 265,986	£ 363,736

Marketing			£ 132,993
------------------	--	--	-----------

Contingency	5.00%		£ 236,625
Land Cost			
Purchase		£3,500,000	
Acquisition Costs		<u>£175,000</u>	
Total		<u>£3,675,000</u>	£ 3,675,000
Finance			
	10%		
	24 months		
Total finance Cost		£771,750	<u>£ 771,750</u>
			£11,054,896
		Profit in	<u>£ 1,304,424</u>
		24 months	
		Time	
		Discounted at	10%
			<u>0.826446281</u>
Profit (Today)			<u>£ 1,078,036</u>

There is some argument as to how this final residual sum should be treated. Strictly, these are the profits receivable at the end of the development period, i.e. at least 24 months in the future. There is an argument for discounting these profit figures back to the present using the finance rate as a discount rate. This is illustrated in the appraisal. Many developers prefer to use the raw profit figures and as we shall see below, this produces figures that are in line with those produced by discounted cash flow (DCF) calculations.

The profit figures can be presented in a number of ways, some of which are presented in the table below.

Whilst the raw sum of money that the project returns is important, it is often essential to present the figure as a percentage of costs expended or of value, or as in terms of income return. This is done to ensure that the return is sufficient to justify the development. Property development is risky, and anyone embarking on it should ensure that they are sufficiently rewarded for taking this risk. If an investor could get a return of, say, ten per cent from investing in, say, an industrial building let to a 'blue chip' manufacturer, they should seek at least 15 per cent and probably 20 per cent to invest in a development project to produce a new industrial building of the same specification. Why? Consider the risks inherent in each option. There is risk with the existing investment: property values may decline, though they do tend to recover, and the tenant may go out of business. However, even in this case the building is still there, it can be re-let in time. The risk inherent is much lower than with a development where even a minor change in market conditions can cause a loss, as we will see below.

In order to see if the return is adequate, it is normal to see if certain benchmark figures are met. The most common figure is 20 per cent of costs but this does vary from sector to sector (for example, the development of houses in the UK does seem to work to lower profit figures).

Four of the many alternative measures used to measure profitability are given below. The calculation method for each is given below:

$$\text{PROFIT ON COST (D)} = \frac{\text{RESIDUAL PROFIT FIGURE (DISCOUNTED)}}{\text{ALL DEVELOPMENT COSTS}}$$

$$\text{PROFIT ON VALUE (D)} = \frac{\text{RESIDUAL PROFIT FIGURE (DISCOUNTED)}}{\text{NET REALISATION}}$$

$$\text{PROFIT ON COST} = \frac{\text{RESIDUAL PROFIT FIGURE}}{\text{ALL DEVELOPMENT COSTS}}$$

$$\text{PROFIT ON VALUE} = \frac{\text{RESIDUAL PROFIT FIGURE}}{\text{NET REALISATION}}$$

The above measures are simple expressions of profit as a percentage of something. Sometimes developers and lenders wish to know how much time is available to let the building after completion. Two measures are often used: rent cover and interest cover. The formulae for their calculation are given below. Both of these are essentially benchmark measures, e.g. a lender may seek at least two years' rent cover as an indicator that the developer has plenty of surplus funds to cover outgoings before a risk of failure occurs. In fact, neither calculation accurately predicts the duration of their respective period due to the compounding nature of the interest rate appreciation on the debt.

$$\text{RENT COVER} = \frac{\text{RESIDUAL PROFIT FIGURE}}{\text{ANNUAL RENTAL VALUE}}$$

$$\text{INTEREST COVER} = \frac{\text{RESIDUAL PROFIT FIGURE}}{\text{INITIAL MONTHLY INTEREST PAYMENT}}$$

The figures for our calculation are given below.

PROFIT ON COST	9.75%
PROFIT ON VALUE	8.72%
NON-DISCOUNTED PROFIT ON COST	11.80%
NON-DISCOUNTED PROFIT ON VALUE	10.55%
RENT COVER	1.10 YEARS

The astute reader will have noticed the marked difference between the profits calculated in this appraisal and the profit assumption made in the land residual appraisal. In that case we assumed a profit of 20 per cent on cost in our calculation of a land value of £3.49m. Keeping all the assumptions the same, the profits predicted are very much lower, even using the non-discounted figures (which are in line with the assumptions made in the land residual calculation). There is a considerable difference. Where have these profits gone?

The reason for this is a quirk in the calculation. In the profits calculation, the profits are actually being calculated on a markedly different basis. The 20 per cent calculation of profit in the land residual was of all costs *excluding* the cost of land; the profit appraisal analysis includes land in the development cost.

PROFIT ON COST (EXCL. LAND)	16.31%
NON-DISCOUNTED PROFIT ON COST (EXCL. LAND)	19.74%

In particular, the non-discounted profit on cost figure of nearly 20 per cent is closer to what we would expect.

This raises the question of which appraisal – the land residual or the profit calculation – gives the correct benchmark figure to use in the go/no-go decision in property development? The answer depends upon the developer's desired return. However, there is no doubt that the most accurate reflection of return on costs is provided by the profit appraisal. A benchmark of 20 per cent return on costs means something different between the two appraisals. If a developer states that they are seeking a 20 per cent return on costs in their land residual calculation they will not get a 20 per cent return on costs on the actual development if they (a) pay what the land residual suggests they should pay for the land and, (b) all the assumptions that were made about the development in the appraisal come to fruition. The traditional land residual approach tends to overstate the value of development land.

There are a number of solutions to this problem. The simplest and crudest is to use a higher profit figure in land residual calculations. This has a number of disadvantages, not least of which is that the benchmarking measure tends to be lost as well as the difficulties of making an accurate adjustment (the amount required will vary according to the proportion of total development cost the land element represents). A more accurate adjustment would be to deduct a 20 per cent profit from the land residual element in a similar way to the way in which end adjustment is made for finance costs in the land residual. There are technical problems with this as

well. A more appropriate fix is to abandon the basic land residual model and use the profit appraisal to calculate land value. The land element in the calculation would not be fixed but would be a variable, with the land price adjusted to produce a profit figure of 20 per cent in the residual. This is relatively simple to achieve with both commercially available development software and where the appraisers are using their own models developed using a spreadsheet such as MS Excel. Excel has a goal seek function that enables such values to be calculated. This is illustrated below.

Expected Realisation

ERV

Net office area	4000	m ²		
		x	£235.00	£940,000
Car parking spaces	15	Nr		
		x	£2,500.00	£37,500
			Total income	£977,500
Capitalised @	7.00%		14.28571429	
			£13,964,286	
			LESS:	
			purchaser's costs (5%)	-£664,965.99
			Gross realisation	£13,299,319.73
			LESS:	
			Incentive	-£940,000
			Net realisation	£ 12,359,320

LESS: development costs

Demolition			£ 100,000
Construction			
5000 m ²	x	£ 946.50	£ 4,732,500

Finance on construction and demolition

£ 4,732,500		x	
0.5			
£ 2,366,250		x	10%
	for	12 months	£ 236,625

Professional fees:

Construction			
Architect	4%	£ 193,300	
Project manager	2%	£ 96,650	
Engineer	2%	£ 96,650	

Quantity surveyor	2%	£ 96,650	£ 483,250	
Finance on professional fees				
		£ 483,250		
	0.66			
£ 318,945	x	10%		
	for	18 months	£ 49,019	
Finance on void period				
£ 5,601,394	@	10%		
	for	6 months	£ 273,398	
Professional fees: letting and sale				
Letting fees		10%	£ 97,750	
Sale fees		2%	£ 265,986	£ 363,736
				£ 132,993
Marketing				£ 236,625
Contingency		5.00%		
Land cost				
Purchase			£2,635,263	
Acquisition costs				
			£131,763	
Total			£2,767,026	£ 2,767,026
Finance		10%		
		24 months		
Total finance cost			£581,076	£ 581,076
				<u>£ 9,956,248</u>
			Profit in	£ 2,403,072
			24 months'	
			time	
			discounted at	10% <u>0.826446281</u>
			Profit (today)	<u>£ 1,986,010</u>

NON-DISCOUNTED PROFIT ON COST	24.14%
NON-DISCOUNTED PROFIT ON VALUE	18.07%
PROFIT ON COST	19.95%
PROFIT ON VALUE	14.93%
RENT COVER	2.03 YEARS

Profit figures excluding land from costs:

PROFIT ON COST	30.05%
NON-DISCOUNTED PROFIT ON COST	36.37%

The calculation thus suggests that a developer wanting to see a return of 20 per cent on all costs should pay no more than £2.635m for the land. This is a not insignificant figure, being around £900,000 less than our original appraisal suggests. It is not so much a flaw in the appraisal methods used as a cautionary tale regarding development appraisal.

4.3 Flaws in the traditional model

The traditional model does, in fact, have a considerable number of 'real' flaws. Some of these have already been mentioned. They can be classified into two different classes: those that are inherent in all development appraisal and those that are peculiar to the traditional model alone.

The inherent flaws are connected with the extreme sensitivity of all development appraisal models to the value of the assumptions made in their construction. Only some very small changes in the values of some of the key variables can make enormous differences to the outcome being calculated, whether this is land value or profitability. These flaws exist whatever you do, but can be accounted for in the sensitivity analysis, which is covered below.

The flaws in the traditional models are related to the simplifications included in order to make calculation easier. To be fair to the proprietary software available, most calculate the variable values in a sophisticated way but present them in the familiar appraisal model, so these criticisms are largely negated. However, anyone carrying out development appraisals needs to be aware of the problems that exist and this is particularly true where the appraiser calculates the appraisal manually or by their own spreadsheets.

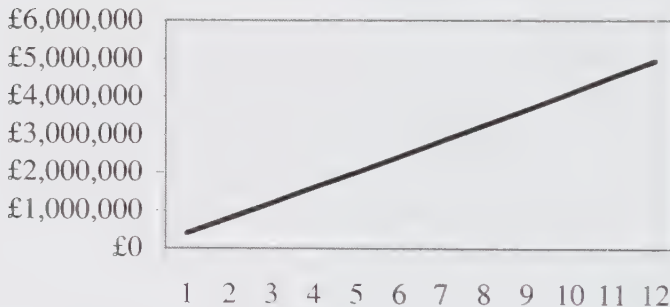
The main problem with the residual models relates to the timing and extent of cash flows. These factors in turn affect the calculation of interest or finance. Let us look at the assumptions made related to construction expenditure. We assumed that average balance owing was 50 per cent of the total budget and this was the figure used in the interest rate calculation. This equated to a total interest rate calculation of £236,625 based on the ten per cent effective rate.

Let us now make the calculation making alternative assumptions as to how the money is expended in the construction period. We can assume that the same amount of money is expended each month. This is not, in fact, a realistic assumption in terms of how monies are actually expended during a development. However, this approach tends to produce a more accurate estimate of interest accrual than the rather crude traditional model:

Straight line expenditure assumption

Month 0	Expenditure per month	Interest 10%	Balance owed
1	£394,375	—	£394,375
2	£394,375	£3,144.80	£791,894.80
3	£394,375	£6,314.68	£1,192,584.48
4	£394,375	£9,509.84	£1,596,469.32
5	£394,375	£12,730.47	£2,003,574.79
6	£394,375	£15,976.79	£2,413,926.58
7	£394,375	£19,248.99	£2,827,550.56
8	£394,375	£22,547.29	£3,244,472.85
9	£394,375	£25,871.88	£3,664,719.73
10	£394,375	£29,222.99	£4,088,317.72
11	£394,375	£32,600.82	£4,515,293.54
12	£394,375	£36,005.58	£4,945,674.13
Total	£4,732,500	£213,174	

**Balance Owed: Level Expenditure
Assumption**

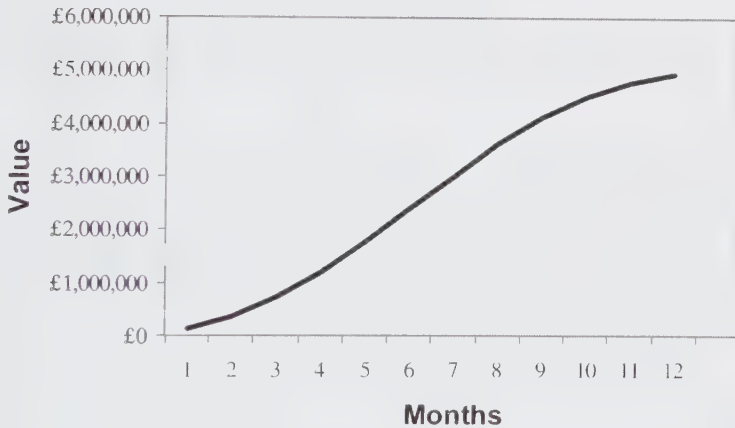


Another approach is to assume a more realistic model of development expenditure, i.e. one following an s-shaped curve. Expenditure in the early months of a construction project tends to be slow as site preparation and lower value ground works are completed. In the middle period, expenditure tends to speed up as working conditions ease and higher value elements are installed. In later months the rate of expenditure slows as finishing trades move in. Often this involves inefficient work, as one trade needs to finish (for example, plastering) before another can start (painting), slowing down the pace of the scheme and reducing the level of expenditure. This can be observed in the calculation and cumulative expenditure diagram below:

S-shaped expenditure curve assumption

Month 0	Percentage expenditure	Expenditure per month	Interest 10%	Balance owed
1	2.50%	£118,313	–	£118,313
2	5.00%	£236,625	£943.44	£355,880.94
3	7.50%	£354,938	£2,837.84	£713,656.29
4	10.00%	£473,250	£5,690.80	£1,192,597.08
5	12.50%	£591,563	£9,509.94	£1,793,669.52
6	12.50%	£591,563	£14,302.97	£2,399,534.99
7	12.50%	£591,563	£19,134.23	£3,010,231.72
8	12.50%	£591,563	£24,004.01	£3,625,798.23
9	10.00%	£473,250	£28,912.62	£4,127,960.85
10	7.50%	£354,938	£32,916.94	£4,515,815.29
11	5.00%	£236,625	£36,009.75	£4,788,450.04
12	2.50%	£118,313	£38,183.77	£4,944,946.31
Total	100.00%	£4,732,500	£212,446	

Typical S-shaped curve of construction projects



Summarising, we now have three different calculations for the finance charges on this section.

Calculation method	Finance calculation	Difference
50% average expenditure	£236,625	–
Straight line expenditure	£213,174	-£23,451
S-shaped curve expenditure	£212,446	-£24,179

Although these differences are relatively insignificant in the greater order of things, they are in themselves substantial sums. They may make a difference between a successful site bid and one that fails, or in achieving or not achieving a benchmark return. They also represent only one area where the assumptions about timing and extent of cash flows in the basic model lead to inaccurate estimation: anything with timing issues are affected including demolition, construction, professional fees, letting and sale fees and marketing.

All of these factors suggest alternative approaches, namely cash flow based models. These will be reviewed in the next section.

4.4 Improving the breed: steps towards greater accuracy

4.4.1 Introduction

To improve the accuracy of the appraisal models there is a need to step away from the simplicity of the residual model.

This does not mean that the residual approach should not be used. In fact, the speed and simplicity of the model is a huge advantage in the early stages of a development, i.e. in the initial feasibility stage, simply to determine whether the project should go ahead before any real details about the development are known.

There is scope for improving the calculation accuracy of the residual model, although this does add to the complexity of the model, increasing the time needed to construct it. The key improvement is to move towards more explicit assumptions, as has been done with the construction expenditure in the previous section. As noted, most of the proprietary models have seen a move towards more explicit calculation.

These changes can be seen as being a move towards cash flow approaches to appraisal.

4.4.2 Cash flow approaches to development appraisal

To move to a complete cash flow approach for the appraisal of a development project is a major step. It requires both more time and more information, and the appraiser must make more explicit assumptions. The resulting appraisal model is harder to interpret at first glance. These models can be difficult to alter and it is quite easy to incorporate errors. In moving from a traditional approach to a cash flow approach, it is very easy for the

same appraiser to make very different assumptions about the project. Given these huge drawbacks, why use the method?

The answer is that some of these flaws are also virtues. The need to be more explicit requires the appraiser to consider the project much more carefully. The goal and major benefit is accuracy. If the assumptions made are correct then the appraisal will much more accurately reflect the actual financial outcome of the project. There are additional benefits to a cash flow approach, the main one being project financial control and monitoring when the project actually goes ahead. Each projected cash flow period can be checked against actual expenditure that can give valuable warnings of the development's progress and possible problems.

Cash flow approaches require the assumptions made to be more 'explicit'. The traditional approach is a 'lumping' approach that, as we have seen, requires a number of approximations to be made in the calculation. Cash flows require not only an estimation of the value of the individual variables but also a requirement to make an assessment of when the cash flows occur.

Although this addresses the weaknesses in the traditional model, using a cash flow approach also requires a much greater degree of information to exist about the development. Consequently, although cash flow appraisals can be done at the early feasibility stage, the value of doing so is questionable. The very nature of this stage is that details of the development are not finalised. The level of information available is low, likely to be sketchy, approximate and incomplete. This logically points to an approach that is quick, flexible and easy to apply and that itself relies on approximation rather than accuracy. This suggests that the traditional residual approach is best suited to application at this point. Using a cash flow approach would give the appearance of greater accuracy but the assumptions made would be based on such tenuous facts that it is unlikely that the figure produced would be as reliable as that produced by the traditional approach, which also has the benefit of being produced in a fraction of the time.

Cash flows should, therefore, only be used later in the appraisal stage when the data is more widely available and more reliable, and when the scheme has started to crystallise. From this point on the benefits of greater accuracy will accrue and, later, provide the tool for managing and monitoring the development.

There are two main forms of cash flow models used in development appraisal: full discounted cash flows and what can be termed residual cash flows.

This is a distinction that some academics and valuers would raise an eyebrow at. It is true that the two approaches represent alternative ways of working the calculation to produce the same end result. In fact, the author would argue that in *practical* terms the two approaches are distinct, particularly in that they are generally used for different purposes by developers.

Both cash flow approaches are similar in that they require the project to be broken down into a framework based upon a time structure and require that all expenditure and receipts are identified, quantified and placed within this time structure. The residual cash flow is an accumulative cash flow, rolling forward the expenditure and receipts as the development proceeds. The DCF is by contrast a discounting approach, in that the present day value of each cash flow is calculated.

To explain what is meant by this we will convert our example project into a cash flow, the only exception to the original appraisal being the adoption of a land purchase price of £3m before costs, this being a reasonable 'mid range' bid figure.

One of the first things that is required is to choose a time interval to form the framework for the cash flow. We can choose any time interval that we see fit or that is most appropriate for the project or appraisal purpose. On very long projects this may be annual or half-yearly cash flows. However, more accuracy is gained by using shorter and shorter time periods. Theoretically, the greatest accuracy may be found by adopting daily cash flow periods but this would be very time consuming and cumbersome to produce. It would also be of doubtful benefit considering that we are dealing with forecasts of questionable accuracy. Most developers find the best compromise between accuracy and practicality is found by adopting a monthly cash flow period.

With our project we will adopt this monthly cash flow period. With a projected life of two years, this would give us 25 individual cash flows, as the project starts at time zero (usually the point when the land purchase takes place) with 24 months of the project ahead of us. The normal assumption is that expenditure will occur at the end of each period for the sake of consistency and simplicity. It is possible, however, to assume any point of expenditure or receipt, for example at the beginning of the period. This makes the calculation slightly more difficult but not excessively so.

The next task in the construction of our cash flow is to forecast when the expenditure or receipts will be made or received. This rather blunt statement

conceals what is actually a very difficult process. Some items are straightforward to forecast, for example it is most common for the land purchase to take place at the beginning of the development, normally at time zero. If a quantity surveyor is employed and the project is well advanced then it may be possible to obtain a forecast of building cost expenditure. Other items are more difficult, requiring assumptions or forecasts to be made. An example of this is the modeling of construction expenditure against the s-shaped curve we saw previously. Using a combination of forecasts and models, all items are logically placed into the time framework. This is illustrated on page 266.

This is a relatively simple cash flow (many 'real life' cash flows are extremely complex). This basic expenditure/receipts framework is used in both the cumulative (residual) model and the discounted cash flow models.

One of the major items that is required to complete the cash flow is the choice of an interest or discount rate, two alternative expressions of the same factor. Which is used depends upon a number of things, for example whether it is a cumulative or discounting approach that has been taken. This will be outlined in the sections below.

It may be that finance rates are being used for the interest or discount rate or else that an internal target rate of return is being applied. In development projects there is strong argument for using the rate charged by lenders as the interest or discount rate. This is because the rates are market derived, being expressions of an adequate return that lenders seek given the risk and return profile of the project. It may well, however, be appropriate to use other rates. Government and public bodies, for example, that do not borrow funds often have internal rates of return or adopt a common rate for the cost of capital. Similarly, commercial organisations often adopt interest rates that reflect the overall cost of capital within the organisation for accounting purposes.

For the purposes of this exercise we will adopt the market cost of finance that lenders require for lending on the project. This is a rate of ten per cent per annum. This equates¹⁵ to a rate of 0.7974 per cent per month.

¹⁵ This is found by taking 1 plus the interest rate (expressed as a decimal) raised to the power of 1 divided by number of interest periods in the year. In this case, this is $1.10^{1/12}$ which gives a figure of 1.007974. Removing the 1 gives us 0.007974 or 0.7974 per cent. This represents the nominal monthly interest equating to a compound or APR figure of ten per cent per annum. Most finance is on a compound interest basis. If simple interest is being applied (i.e. no interest on interest) then the ten per cent can simply be divided by the number of cash flows in the year, e.g. $10\%/12$ which equals 0.8333 ten per cent per month.

Month 0	Construction costs	Fees	Land	Marketing	Income	Expenditure per month
0			£3,150,000			£3,150,000
1						£0
2		£129,675				£129,675
3						£0
4						£0
5						£0
6	£100,000					£100,000
7	£118,313					£291,213
8	£236,625	£172,900		£33,564		£270,189
9	£354,938					£354,938
10	£473,250					£473,250
11	£591,563					£591,563
12	£591,563					£591,563
13	£591,563	£86,450				£678,013
14	£591,563					£591,563
15	£473,250			£53,702		£526,952
16	£354,938					£354,938
17	£236,625			£26,851		£263,476
18	£118,313					£118,313
19						£0
20		£43,225		£20,138		£63,363
21						£0
22					-£36,656	-£36,656
23						£0
24						£0
Total	£4,832,500	£432,250	£3,150,000	£134,256	-£36,656	£8,512,350

We will now examine each of the two main cash flow models used in practice for development appraisal.

4.4.3 Accumulative cash flows or residual cash flows

With the residual model the individual monthly cash flows (CFs) are found by the following formula:

$$\text{CF} + \text{interest (the cost of finance)} = \text{total expenditure in the period}$$

And to calculate the land value for profit, the following equation is used:

Total proceeds of project at time N (the end of the project)

less

Sum of the total expenditure (including interest) at time N

= residual at time N

This can be represented diagrammatically:

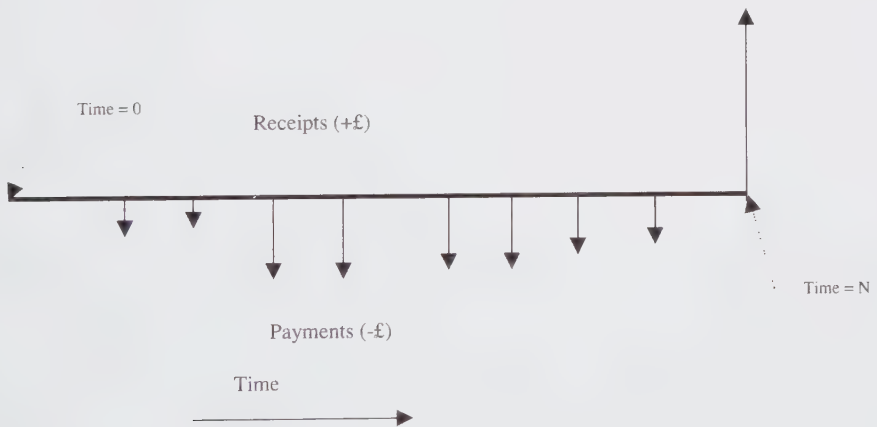


Figure 38: Raw cash flows in time framework.

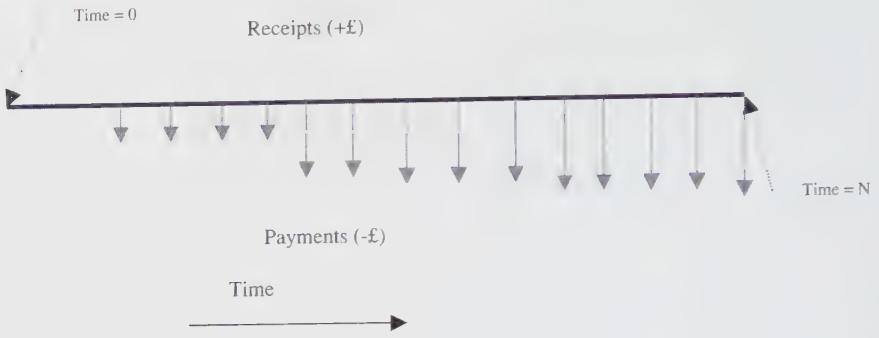


Figure 39: Cumulative interest (not to scale) in time framework.

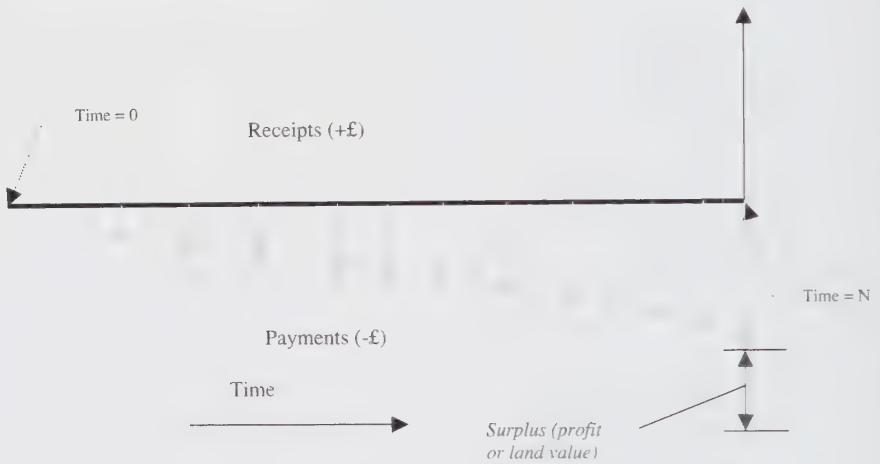


Figure 40: Total cumulative expenditure and calculation of surplus.

A couple of observations can be made from these diagrams: firstly, the accumulative nature of the process can be seen; and secondly, it can be observed that the surplus occurs in the future and must therefore be discounted back to the present day in order to produce a similar result to the traditional residual approach.¹⁶

The cumulative calculation in the residual cash flow sees each period being calculated separately. The full residual cash flow is illustrated later but, in the meantime, the individual calculation needs explaining. We will take the basic cash flow framework as illustrated above and step through the first few months to illustrate the calculation process:

¹⁶ See notes on the time value of money in Part 2 and earlier in this section.

Month	Expenditure	Interest @ 0.79741% (receipts) during period	Total balance owed per month
0	£3,150,000	–	£3,150,000

At the end of the first period in the cash flow there is no interest accrued. This is because the expenditure is assumed to have taken place at the end of the period, so no time has elapsed following the finance draw down.

By the end of the following month, however, interest charges on the amount owing become due. In our example there is no additional expenditure during the first month of the project so the change in the balance owed is merely due to the interest charge in the period, which is rolled up and added to the total amount owed.

Month	Expenditure (receipts) during period	Interest @ 0.79741% per month	Total balance owed
1	£0	£25,118.42	£3,175,118.54

The balance owed at the end of this month is thus the £3.15m for the land plus £25,114 interest charge, giving £3,175,118.54 in total.

Interest again accrues on this sum over the next month, during which further expenditure takes place, in our case the payment of professional fees. Again, these are assumed to occur at the end of the month, the interest only being charged on the balance outstanding from the end of the previous period.

Month	Expenditure (receipts) during period	Interest @ 0.79741% per month	Total balance owed
2	£129,675	£25,318.84	£3,330,112.38

The new balance is made up of £3,175,118.54 (the old balance) + £129,675 (the spend during the month) + £25,318.84 (the interest for one month on £3,175,118.54). This accumulative process then continues until the end of the development. Although these calculations seem cumbersome they are, in fact, very easy to set up on a spreadsheet.

The results of the total calculation are illustrated overleaf:

Month 0	Construction costs	Fees	Land	Marketing	Income	Expenditure per month	Interest 0.7974% per month	Balance owed
0			£3,150,000			£3,150,000	—	£3,150,000
1						£0	£25,118.54	£3,175,118.54
2		£129,675				£129,675	£25,318.84	£3,330,112.38
3						£0	£26,554.78	£3,356,667.17
4						£0	£26,766.54	£3,383,433.70
5						£0	£26,979.98	£3,410,413.68
6	£100,000					£100,000	£27,195.12	£3,537,608.80
7	£118,313					£291,213	£28,209.39	£3,857,030.69
8	£236,625	£172,900				£270,189	£30,756.50	£4,157,976.19
9	£354,938			£33,564		£354,938	£33,156.29	£4,546,069.98
10	£473,250					£473,250	£36,251.00	£5,055,570.98
11	£591,563					£591,563	£40,313.83	£5,687,447.31
12	£591,563					£591,563	£45,352.50	£6,324,362.31
13	£591,563	£86,450				£678,013	£50,431.35	£7,052,806.17
14	£591,563					£591,563	£56,240.07	£7,700,608.73
15	£473,250			£53,702		£526,952	£61,405.74	£8,288,966.87
16	£354,938					£354,938	£66,097.39	£8,710,001.75
17	£236,625			£26,851		£263,476	£69,454.78	£9,042,932.73
18	£118,313					£118,313	£72,109.62	£9,233,354.85
19						£0	£73,628.07	£9,306,982.91
20		£43,225		£20,138		£63,363	£74,215.19	£9,444,561.50
21						£0	£75,312.26	£9,519,873.76
22					-£36,656	-£36,656	£75,912.81	£9,559,130.32
23						£0	£76,225.85	£9,635,356.17
24						£0	£76,833.68	£9,712,189.85
Total	£4,832,500	£432,250	£3,150,000	£134,256	-£36,656	£8,512,350	£1,199,840	

It is possible to calculate the value of the whole project using the cash flow, incorporating all the expenditure and receipt items into the time framework. An alternative is to do what is illustrated in the cash flow and the final calculation, which is to use the cash flow for the time sensitive elements of the project but to use the output of the cash flow as an input into a traditional residual framework. Many proprietary development appraisal software packages use this approach, running the cash flow in the background but expressing the results in a traditional way. This has the advantage of easing the interpretation of the results and is illustrated below:

PART ONE: VALUE ON COMPLETION			
Expected Realisation			
<i>ERV</i>			
Net office area	4000		
	x	£235.00	£ 940,000.00
Car parking spaces	15		
	x	£2,500.00	<u>£37,500</u>
		Total income	£ 977,500.00
Capitalised @	7.00%	14.28571429	
			£13,964,286
		LESS:	
		purchaser's costs	
		(5%)	<u>-£664,965.99</u>
		3%	£13,299,319.73
		LESS:	
		Incentive	-£940,000
		Net realisation	£12,359,319.73
PART TWO: DEVELOPMENT COSTS			
As per residual cashflow			-£9,712,189.85
Developer's profit			
<i>Less</i>			
Professional fees: letting and sale			
Letting fees	10%	£94,000	
Sale fees	2%	<u>£268,571</u>	£362,571
Contingency	5.00%		<u>£236,625</u> -£599,196
		PROFIT	<u>£2,047,933.87</u>
		<i>Profit on cost</i>	19.861%
		<i>Profit on value</i>	16.570%

The residual cash flow solves many of the problems that exist with the model. It also has distinct advantages for development management in that the exact sum owing on the development is predicted for all stages of the project. This is helpful for both financial planning and for progress monitoring, the latter by comparing actual expenditure with that predicted in the cash flow.

4.4.4 Discounted Cash Flow (DCF) approaches

DCF works in a slightly different way. The interest rate for the project is taken as the opportunity cost of the finance invested in the project. The calculation is based around the 'time value of money' in a slightly more explicit way than with the accumulative, residual model, though they use the same principles.

If you had a choice about receiving £1 today or £1 in a year's time it is logical to choose the £1 today, as long as the interest rate achievable in the market is greater than zero per cent, which usually it is. If the interest rate was ten per cent, you could theoretically invest the £1 receivable today at this rate and accumulate 10p over the year, having a year end balance of £1.10. Formulaically this can be expressed as:

$$£1 \times (1 + i)^n$$

$$£1 \times (1.10)^{11}$$

$$= \underline{\underline{£ 1.10}}$$

We can also estimate what the £1 receivable in one year's time is actually worth today, using an adaptation of the formula:

Either

$$£1 \times 1 / (1 + i)^n$$

or

$$£1 \times (1 + i)^{-n}$$

¹⁷ Though in Japan in 2001 the central bank set interest rates at zero per cent, in order to boost consumer demand because of the serious deflationary environment and recession the country found itself in.

Using the latter we find that:

$$£1 \times (1 + 10)^{-1}$$

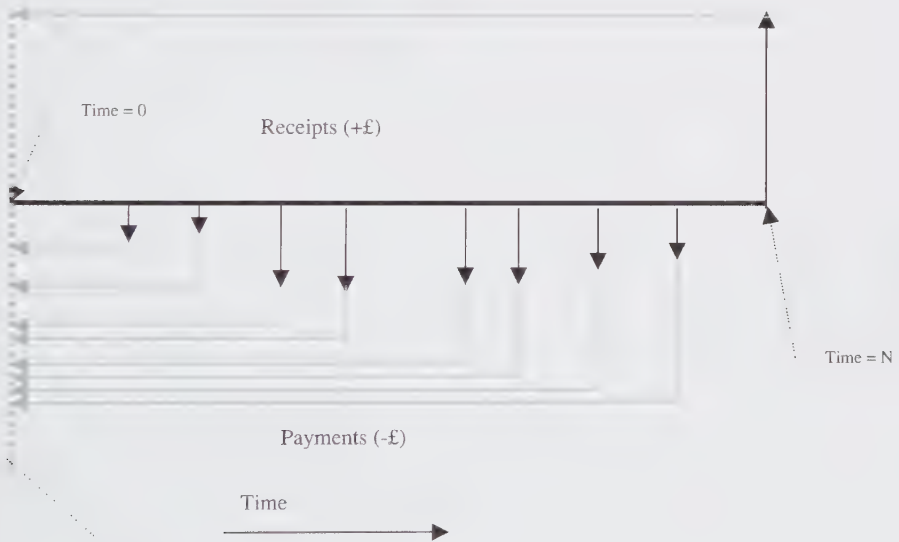
$$£1 \times 0.90909$$

or **91p**

This is basically what is done in the DCF approach in development appraisal. Each individual cash flow has a nominal value, the actual monetary value at the time of the expenditure (or projected time). This is then discounted back to find the current or effective value of the cash flow. The general formula is:

Cash flow x discount factor appropriate for the time period = Present value of expenditure

The land value or profit as appropriate is then the sum of these present values. This can be expressed diagrammatically as:



All cash flows, positive and negative are all discounted back to the same time (time zero) using a common discount rate, usually the finance rate. Note that the interest charge on the outstanding balances is not separately calculated. The sum of the difference between the net positive values and the net negative values is the outcome of the calculation, either land value or profit (or loss if negative).

Using this principle we can see how the first few cash flows of our appraisal are constructed:

Month	Expenditure (receipts) during period	Discount rate @ 0.79741% per month $(1+i)^{-n}$	Net cash flow (effective value at time = 0)
0	£3,150,000	1.000	£3,150,000
1	0	0.99209	£0
2	£129,675	0.98424	£127,631.42

The full calculation using a DCF approach is displayed on p. 275:

The final figure sought, be it profit or land value, is simply found by summing the DCF column. The figure produced is the Net Present Value (NPV). This is one of the beauties of the DCF approach in that no additional step is required to calculate the figure in today's terms. The figure produced is automatically at the present value. A second major advantage is that the approach allows the easy calculation of the Internal Rate of Return (IRR). IRR is a widely used measure of return in the investment world. Using a DCF approach thus gives an additional measure of return that makes the development easily comparable with other investment mediums.

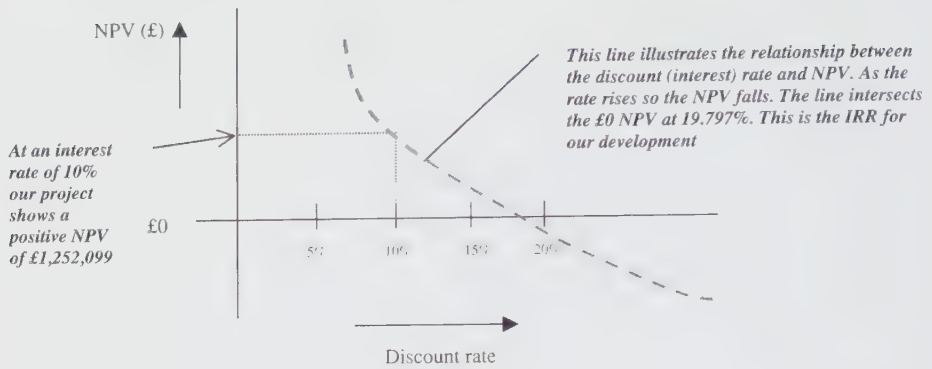
It may be sensible to review what IRR is at this stage, and also discuss how it relates to NPV, the other main measure of return used in the financial world. IRR is simply the discount rate that produces an NPV of £0. NPV varies according to the discount rate (interest rate) applied; as the rate increases the NPV falls. This represents the surplus cash flow in the investment. Eventually, if the discount rate gets high enough, the NPV will actually turn negative, i.e. a loss will be made (or insufficient funds exist to purchase the land). The point where the crossover takes place is the IRR. In reality though the interest rate charged on finance can theoretically go high enough to cause loss (though contrary to laymen's expectations this is rare – it is not usually interest rates alone that cause this to occur), this exercise is carried out not to find the maximum lending rate a project can stand but instead to find the true project rate of return. The IRR percentage measures the rate of return that is peculiar to the cash flows of the project and is not affected by any factors external to the project such as changes in interest rate. The relationship is explained graphically on p. 276.

It should be noted that the IRR figure is usually calculated on the nominal rather than the discounted cash flows. If the discounted figures were used

Discounted cash flow development appraisal

Month	Construction Costs	Contingency 5%	Fees	Land	Marketing	Income	Sale	Letting & sale fees	Expenditure per month	Discount factor	DCF
0				-£3,150,000					-£3,150,000	1.000	-£3,150,000
1									£0	0.992	£0
2			-£129,675						-£129,675	0.984	-£127,631
3									£0	0.976	£0
4									£0	0.969	£0
5									£0	0.961	£0
6	-£100,000								-£100,000	0.953	-£95,346
7	-£118,313	-£5,916	-£172,900						-£297,128	0.946	-£281,059
8	-£236,625	-£11,831			-£33,564				-£282,020	0.938	-£264,658
9	-£354,938	-£17,747							-£372,684	0.931	-£346,974
10	-£473,250	-£23,663							-£496,913	0.924	-£458,972
11	-£591,563	-£29,578							-£621,141	0.916	-£569,176
12	-£591,563	-£29,578	-£86,450						-£621,141	0.909	-£564,673
13	-£591,563	-£29,578							-£707,591	0.902	-£638,175
14	-£591,563	-£29,578							-£621,141	0.895	-£555,774
15	-£473,250	-£23,663			-£53,702				-£550,615	0.888	-£488,773
16	-£354,938	-£17,747							-£372,684	0.881	-£328,209
17	-£236,625	-£11,831			-£26,851				-£275,307	0.874	-£240,535
18	-£118,313	-£5,916							-£124,228	0.867	-£107,679
19									£0	0.860	£0
20			-£43,225		-£20,138				-£63,363	0.853	-£54,057
21									£0	0.846	£0
22						-£36,656			£36,656	0.840	£30,779
23									£0	0.833	£0
24							£11,849,115	-£362,571	£11,486,544	0.826	£9,493,012
Total	-£4,832,500		-£432,250	-£3,150,000	-£134,256	-£36,656			£2,737,569		-£1,252,099

NPV £1,252,099
 IRR month 1.650%
 IRR 19.797%



what would be measured would be the IRR surplus above the ten per cent discount rate, i.e. it would be around 9.7 per cent. This measure is sometimes used but it is more conventional to take the true IRR figure as this rate will not alter with any changes in the rate charged on finance that may occur, as will happen with the alternative approach.

4.5 Summary of the traditional and cash flow approaches to development appraisal

The ability to calculate IRR gives a useful additional measure, and it is the main benefit in adopting a full DCF approach. Many of the more sophisticated investors and financiers require IRR figures from any project being put to them. DCF is less useful for project management than the residual cash flow presentation. The respective merits of the two approaches can thus be assessed:

- Both cash flow approaches are more time consuming to construct than the traditional approaches and require a high level of information and transparency in the assumptions made.
- Both offer a higher level of accuracy as long as the information is accurate and the assumptions made are sound.
- The true DCF approach gives the greatest benefit in analysis of returns, particularly in the provision of the IRR figure.
- The residual or accumulative cash flow is best suited to development management in that it provides true forecasts of cash flows, including accrued interest.

All methods thus have their role for developers, including the traditional residual approach which is best applied in the early appraisal stages.

4.6 Sensitivity analysis

4.6.1 Introduction

The basic appraisal models are not the full story concerned with carrying out the financial appraisal of development projects. Development appraisals are extraordinarily sensitive to the inputs used to construct them, or, to be more accurate, to *some* of these variables.

Any development appraisal, be it calculated traditionally or by way of cash flows, is just one set of assumptions that leads to a single output – the land valuation or profitability figure. It is just one view of how the future is going to pan out. It may be the developer's best estimate of what may happen but it is just a forecast. The assumptions made about the scheme may be wrong: the ground condition may be different to that expected; building costs may rise; market conditions and tenants requirements may change; and the economy may stall or boom. It should be remembered just how long most developments take. A typical commercial scheme will take between two to five years: The reader is invited to think back to what the economy was like two years ago. Whenever this book is being read it can be certain that conditions today will always vary in some way from the past and will thus be different even in small ways from the future.

The question is, does this matter? The answer with development appraisals is almost invariably 'yes'. This is because of their sensitivity. This can be illustrated by turning once again to our base example.

Reproduced below, for ease of reference, is a calculation from just a few pages ago, of the calculation of profitability produced by the residual cash flow:

PART ONE: VALUE ON COMPLETION**Expected Realisation***ERV*

Net office area	4000		
	x	£235.00	£940,000.00
Car parking spaces	15		
	x	£2,500.00	<u>£37,500</u>
		Total income	£977,500
Capitalised @	7.00%	14.28571429	
			£13,964,286
		LESS:	
		purchaser's costs	
		(5%)	-£664,965.99
		3%	£13,299,319.73
		LESS:	
		Incentive	<u>-£940,000</u>
		Net realisation	£12,359,319.73

PART TWO: DEVELOPMENT COSTS

As per residual cashflow	-£9,712,189.85
Developer's profit	

*Less***Professional fees: letting and sale**

Letting fees	10%	£94,000	
Sale fees	2%	£268,571	£362,571
Contingency	5.00%		<u>£236,625</u>
			-£599,196

PROFIT **£2,047,933.87****Profit on cost** **19.861%****Profit on value** **16.570%**

We will now look at the effect of changing just one figure, the rent achieved on letting. Let us assume that the rent achieved by the time the building came to the market was only £220 per square metre. This is a drop of just £15 per metre, or a 6.38 per cent fall in values. This is not a major fall, it may just represent a mild slow down in the economy. The effect on the appraisal, however, is quite striking:

PART ONE: VALUE ON COMPLETION**Expected Realisation***ERV*

Net office area	4000		
	x	£220.00	£880,000
Car parking spaces	15		
	x	£2,500.00	<u>£37,500</u>
		Total income	£917,500
Capitalised @	7.00%	14.28571429	
			£13,107,143
		LESS:	
		purchaser's costs	
		(5%)	<u>-£624,149.66</u>
		3%	£12,482,993.20
		LESS:	
		Incentive	<u>-£940,000</u>
		Net realisation	£11,542,993.20

PART TWO: DEVELOPMENT COSTS

As per residual cashflow	-£9,712,189.85
Developer's profit	

*Less***Professional fees: letting and sale**

Letting fees	10%	£94,000	
Sale fees	2%	£268,571	£362,571
Contingency	5.00%		<u>£236,625</u> <u>-£599,196</u>

PROFIT **£1,231,607.34**

Profit on cost **11.944%**

Profit on value **10.670%**

A 6.38 per cent drop in rent has seen a near 40 per cent drop in profits. This degree of sensitivity is not unusual.

Because of this it is essential that any development appraisal requires that some sort of sensitivity analysis is carried out upon it. This final section of the appraisal review requires an examination of the methods that can be used.

4.6.2 Types of sensitivity analysis

Sensitivity analysis can be carried out in a number of different ways with each method having different utilities and uses. Each form of sensitivity analysis also has a number of sub-types. The basic categories are:

- (i) Simple sensitivity analysis
 - Single variable analysis – changing the variables by fixed amounts
 - Single variable – break-even analysis
- (ii) Scenarios
 - Basic scenario analysis
 - Probability linked scenario analysis
- (iii) Simulation

The categories of sensitivity analysis represent steps towards increasing complexity and sophistication. Simple sensitivity analysis is most useful in identifying areas of vulnerability. This is both in terms of the appraisal and adverse movements in the market or problems on site. The latter is probably obvious. The former refers to the vulnerability of developers to errors in their own assumptions or calculations. Scenarios are more realistic; they examine the effects of movements in the assumed values of pairs or groups of variables. Simulation, on the other hand, can be used in quite sophisticated decision-making techniques. We will examine each in turn and look at the way they can be used to make informed decision-making.

(i) Simple sensitivity analysis

(a) Introduction

Simple sensitivity analysis is the bare minimum that should be carried out in an appraisal. Even so it is very limited in its utility. Simple sensitivity analysis examines the effect of changing one variable at a time on the outcome of the appraisal, very much as was done in the example above.

(b) Single variable analysis – fixed amounts

The standard way of carrying out sensitivity analysis is to use a set fixed amount, usually a percentage figure, and alter the figures for each selected variable by this fixed amount. Below, six key variables in our development have been selected and their values adjusted in the appraisal by +/- ten per cent. The effect on the overall profit level is calculated for each individual variable, which is then returned to its original value.

VARIABLE	EFFECT OF CHANGING VARIABLE ON PROFIT	
	+10%	-10%
Rental value	+62.4%	-62.4%
Investment yield	-59.0%	+72.2%
Interest rates	-6.0%	+6.0%
Construction cost	-25.9%	+25.9%
Letting period	-7.6%	+7.5%
Land value	-18.6%	+18.6%

This type of pattern of sensitivity is quite common. Usually the factors that have the greatest impact on the profitability of a scheme are those concerned with its end value. Factors such as interest rates usually have very little effect, at least directly. Interest rate movements often indicate wider movements in the economy which may have an impact on the key value variables.

There are a number of variations in approach in the use of simple sensitivity analysis. Sometimes monetary variations are used (for example, moving rents in £5/m² intervals) though it is hard to get consistency between variables when this is done. A common approach is to produce a table of sensitivity for each key variable, looking at the effect of 0 per cent, 2.5 per cent, 5 per cent, 7.5 per cent and 10 per cent changes in the variables' value on profitability or land value.

(c) Use in appraisal and decision-making

Simple sensitivity has considerable value to the appraiser but has limited utility in terms of being realistic in the risk assessment for the development. Simple sensitivity enables the developer to identify the key variables in the development, i.e. those that have the greatest potential impact on end value. The developer can also quantify the degree of sensitivity to the variable, i.e. how little or much the variable needs to move in value before serious consequences arise. It is not, however, realistic. Variables such as rent very rarely move in isolation, they tend to move in complex ways with other variables. For example, if rents fall investors tend to become nervous about future rental growth prospects and tend to adjust their yield requirements upwards. This has a double effect on capital values (see the earlier section on property valuation).

(d) Single variable – profit extinguishments or break-even analysis

A valuable variation on the single point sensitivity analysis is to adjust the key variables' values until they produce figures that extinguish the profit produced from a development. This is illustrated below.

VARIABLE	VALUES REQUIRED TO REDUCE PROFITABILITY TO ZERO
Rental value	£197.37/m ²
Investment yield	8.27%
Interest rates	25.91%
Construction cost	£1340/m ²
Letting period	31 months
Land value	£4,611,911

(e) Use in appraisal and decision-making

Although this does not appear unduly different from simple sensitivity, it does provide the appraiser with more information about the nature of the scheme. The developer can identify exactly what point the scheme will fail to make a profit if there are movements in the key variable. For example, it can be seen that rents would have to fall by between 20 and 25 per cent to extinguish the profits of the scheme, *ceterus paribus* (all other things remaining unchanged). In most market conditions such a drop seems unlikely but in extreme conditions this sort of movement can occur. The yield would only have to move from seven per cent to around 8.25 per cent to see this occur. Developers can ask themselves whether this has a real risk of occurrence. This sort of analysis adds considerably to the knowledge about the scheme.

*(ii) Scenarios**(a) Introduction*

Scenarios are a further step in sophistication in analysing the sensitivity of the scheme. They solve some of the problems that were identified earlier regarding the tendency of the individual variables to move together. They require the developer or appraiser to consider what might happen to the key variables in the scheme under differing economic conditions, for example higher or lower levels of economic growth than currently being experienced.

(b) Basic scenario analysis

This process is illustrated below. The expected values, those that form the appraiser's best judgement of how the scheme will be executed, form the base of the analysis. Two further scenarios have also been generated: one that assumes higher than average levels of growth (the optimistic forecast) and one that assumes a lower growth future (pessimistic). The appraiser has formed judgements as to what would happen to the values of the key variables under each of these conditions and the appraisal has been re-run to produce NPV and profit figures under each of these three possible views of the future.¹⁸

Scenario summary			
	Expected values	Optimistic	Pessimistic
Changing variables:			
Rental value (£/m ²)	£235.00	£250.00	£220.00
Car space annual rent	£2,500.00	£3,000.00	£2,000.00
Investment yield	7.00%	6.50%	7.75%
Incentive	-£940,000	-£600,000	-£1,300,000
Total development costs	-£9,712,189.85	-£9,200,000.00	-£10,500,000.00
Result variables:			
NPV (profit)	£2,047,933.87	£4,912,159.31	-£1,216,400.30
Profit on cost	19.861%	50.128%	-10.959%

(c) Use in appraisal and decision-making

Scenarios are a valuable additional step in understanding the risk characteristics of the scheme. They are particularly useful in identifying more reliably the 'bottom line', 'worst case' scenario for the development than the simple approach. In this case, it is apparent that the scheme could make a considerable loss under the pessimistic scenario. The developers could use this information to make a judgement about whether this is a risk they are willing to take.

Scenarios of this form are still limited. They offer only three (in this case) discrete views of the future when we know that the future courses are much

¹⁸ Note that scenario building is not confined to three alternatives, nor is it purely dependent upon differing economic environments. It can be applied to a series of different views about the future.

more diverse. It also says nothing about the probability of each of the scenarios occurring. Similarly, the scenarios are only as good as the underlying constructional assumptions made within them. Notwithstanding this, scenarios are a vital part of the appraisal process and should really be the minimum that an appraiser should undertake in their assessment of financial risk.

(d) Probability linked scenario analysis

Some of the problems that are identified above can be addressed by the ascribing of probabilities to the scenarios generated. This is illustrated below. This approach enables the calculation of Expected Net Present Value (ENPV), expected profit and expected IRR (not illustrated). This calculation of what are risk-weighted assessments of profit (or land price) can add valuable information to the developer's decision-making processes. It is not perfect, there are large questions as to the validity of the assessment of probabilities but it is another valuable aid to decision-making.

Scenario summary	Expected values	Optimistic	Pessimistic
Changing variables:			
Rental value (£/m ²)	£235.00	£250.00	£220.00
Car space annual rent	£2,500.00	£3,000.00	£2,000.00
Investment yield	7.00%	6.50%	7.75%
Incentive	-£940,000	-£600,000	-£1,300,000
Total development costs	-£9,712,189.85	-£9,200,000.00	-£10,500,000.00
Result variables:			
NPV (profit)	£2,047,933.87	£4,912,159.31	-£1,216,400.30
Profit on cost	19.861%	50.128%	-10.959%
Probability	50%	25%	25%
NPV (profit)*prob	£1,023,966.94	£1,228,039.83	-£304,100.08
Profit on cost*prob	9.93%	12.53%	-2.74%

Expected NPV £1,947,906.69
Expected IRR 19.72%

(iii) Simulation

Although scenarios do represent an advance on the single point estimate, particularly for a DCF valuation, the scenario and probability approach is still fairly limited. Only three alternative views of the future are examined, each of which are discrete value assessments. Even taking the limited number of variables we chose, there are an almost infinite number of alternative combinations of values, each of which can produce a distinctly different NPV calculation. To carry out individual calculations for each of the possible alternatives, having decided on its probability of occurrence is possible in theory but impractical.

There is an approach that does move a long way towards examining a larger sample of the possible outcomes. This is Monte Carlo simulation. Simulation has been used since the 1960s to explore many areas of uncertainty. Until recently it has been a cumbersome method. It requires the range of probable values for a variable to be identified, for probability to be ascribed to each and then for random numbers to be generated in order for the value to be used in the calculation to be selected. Taking our example as illustration, the possible alternative values for rental values and investment yield, two of the key variables, are as follows:

Rental value	Probability of occurrence	Ascribed probability numbers
£210	2%	1-2
£215	5%	3-7
£220	7%	8-15
£225	10%	16-25
£230	15%	26-40
£235	21%	41-61
£240	15%	62-76
£245	10%	77-86
£250	7%	87-93
£255	5%	94-98
£260	2%	99-100

Terminal (sale) yield	Probability of occurrence	Ascribed probability numbers
5.75%	1%	1
6.00%	4%	2-5
6.25%	7%	6-12
6.50%	10%	13-22
6.75%	15%	23-37
7.00%	21%	38-58
7.25%	15%	59-73
7.50%	10%	74-83
7.75%	7%	84-90
8.00%	5%	91-95
8.25%	2%	96-97
8.50%	1%	98
8.75%	1%	99
9.00%	1%	100

With our two variable models, two sets of random numbers between one and one hundred would be generated, one for each distribution. For example, for a single 'run' these might be random numbers of 22 and 67. For rental growth this would equate to a rent of £225. For sale yield the appropriate figure would be 7.25 per cent. Combining these in the cash flow would produce an NPV of £1,063,885, a reduction in profitability of 48 per cent.

To produce the final answer this process would have to be repeated at least 100 times which would give an array of NPVs that could then be analysed. In particular, the mean figure is important as this would be the report value figure but the distribution of the NPVs would give a valuable insight as to the certainty or reliability of the value figure.

The big problem with this approach (leaving to one side the problem of forecasting and probability assessment which will be addressed later) is clearly how time consuming it is. It is possible to construct Excel spreadsheets incorporating macro functions that will take some of the drudgery out of the task but this does require a relatively high level of spreadsheet knowledge and skill. Fortunately, there is software available as an add-in to spreadsheets like Excel at reasonable costs that allow

simulations to be carried out very easily. One of the best examples is Pallisade Corporation's @Risk software (tm). @Risk allows any input cell in a spreadsheet to be expressed as a probability distribution and will then use these to quickly recalculate the spreadsheet and analyse the results on any selected output cell. In this case we would clearly select the NPV calculation as the output cell.

An @Risk analysis was carried out on our example appraisal. The two variables were selected as probability distribution. Other variables were also set as being open to variation (construction cost, time, incentives, etc). The software allows you to choose from a wide array of possible distributions. For this example a simple triangle distribution was chosen for each. For this distribution the minimum, maximum and most likely value are required, the software then calculating the probability distribution. The variable values chosen are illustrated in the table below:

The simulation can then be run, selecting the NPV calculation cell as the @Risk output. In this case 1,000 iterations or individual calculations of NPV were carried out. On a relatively modestly powerful PC this process takes 5-10 seconds. The software reports the mean NPV plus a wide range of other statistics including the standard deviation. In this case the mean profit predicted was £1,058,871 with one standard deviation of +/- £812,019. The distribution of profits is represented in Figure 41 and the summary of the outcome in the table overleaf. This level of analysis gives a powerful weapon to the appraiser in the assessment of the inherent risks in the project. We can only touch on the potential of these techniques in this medium.

Name of variable	Minimum	Mean	Maximum
(Input) Building cost	£901.27	£950.00	£998.97
(Input) Rental value	£215.38	£233.33	£249.29
(Input) Investment yield / Investment yield	6.52%	7.50%	8.96%
(Input) Rental incentive / Rental incentive	6.21	14.00	23.66
(Input) Planning period	5.06	7.67	11.97
(Input) Construction / Construction	10.06	12.33	14.95
(Input) Letting / Letting	0.26	6.00	11.75

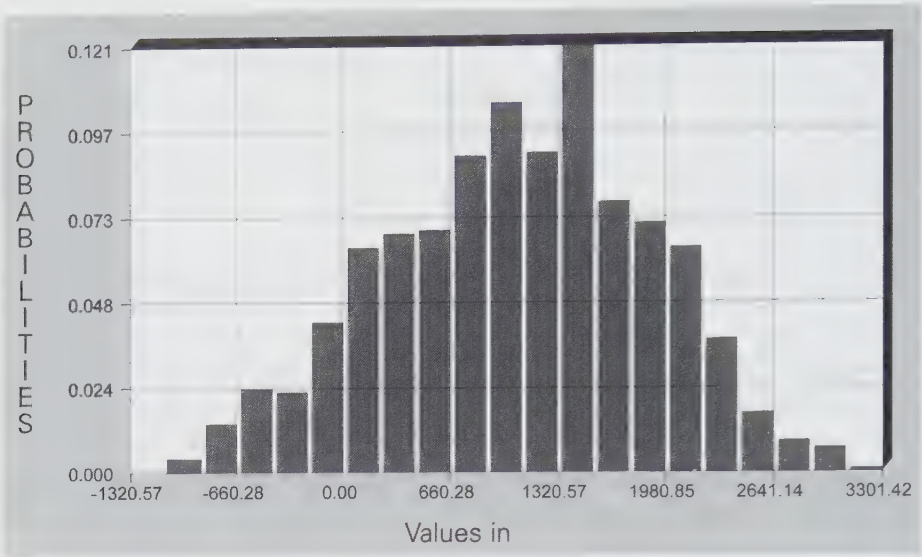


Figure 41: Distribution of profits.

Name	Minimum	Mean	Maximum
Profit (Today)	-£1,097,949	£1,058,871	£3,301,421
Non-discounted profit on cost	-13.31%	12.82%	39.48%
Non-discounted profit on value	-13.41%	9.83%	26.97%
Profit on cost	-11.00%	10.60%	32.63%
Profit on value	-11.09%	8.13%	22.29%

Std Deviation £812,019

4.6.3 Use in appraisal and decision-making

This section was not meant to be a commercial for @Risk. There is no doubt, however, that it greatly increases the ability of the appraiser to carry out very sophisticated tasks. What does the use of simulation add here to our appraisal? Firstly, we have explicitly addressed the uncertainty contained within the appraisal. Secondly, we have revealed more about the reliability of this appraisal based upon our assessment of future uncertainty. This can be used as a benchmark to compare the reliability of the appraisal compared with other developments. For example, we can calculate the co-efficient of variance of this project by dividing the standard deviation by the mean. This produces a figure of 130.4 per cent, illustrating a relatively high percentage of potential variance from the expected result. If most simulations were

producing co-efficient of variations below this level then the commissioner of this appraisal would be able to gauge that the development was subject to a relatively higher level of uncertainty. Analysing the overall results, however, shows that given the distribution of variables chosen, only about 11 per cent of the 1,000 calculations of the profit produced a loss. This type of information would assist lenders on development, in particular, in arriving at more rational decisions.

There are, of course, problems with this approach. Although this extension of the DCF technique counters some of the problems experienced with the scenario approach – namely the problems of accurate forecasting – other problems are peculiar to risk explicit approaches. The principal problem is assessing probabilities. There is insufficient reliable data available to assess the likelihood of certain factors occurring in the future. Past performance and relationships may, indeed, not be a good way of assessing what will happen in the future. In essence, although the knowledge and experience of the valuer is helpful in assessing what the near future is going to be like, no-one has perfect foresight. The assessment of probabilities is likely to be subjective.

Despite these drawbacks, simulation is a very powerful and valuable technique. Just as DCF requires the appraiser to be explicit about what assumptions have been made about the future timing and extent of the key variables, so simulation requires the valuer to be explicit about the reliability of these forecasts. It is a logical extension of DCF that adds much to the single point estimate of NPV produced.

4.6.4 Conclusion to the section on sensitivity analysis

It is essential that developers and appraisers should carry out some kind of sensitivity analysis on their financial appraisals. Development appraisals are inherently unstable and unreliable. A single point estimate of profit or land value may represent the appraiser's best guess as to how the development will proceed but it is likely that the outcome will differ from that projected because of the length of time involved in the development process and the degree of inherent sensitivity to key variables that the process possesses. The bare minimum that should be done is to carry out a simple sensitivity analysis. As noted, it is unlikely in reality that single variables change in isolation. It is therefore recommended that scenario building is undertaken for all development appraisals. Time invested in exploring the financial characteristics of the project can protect the developer from later losses.

4.7 Conclusion to Part 4

Development appraisals are very important to the development process. They are not just simply calculations, they represent an examination of the outcome of the bringing together of the components of the development. This process is complex, the components can be fitted together in a number of ways and many assumptions have to be made. These assumptions that the developer/appraiser makes about an uncertain future must be soundly based; it is easy to be misled and over-optimistic, and the highly sensitive nature of the financial appraisal can lead people into disaster. All developers should spend time getting a full understanding of both the process and mechanisms of the appraisal process, and develop a feeling for what the outcome of the process actually means.

5 Project Evaluation

5.1 Introduction

- 5.1.1 Outline of the procurement routes and consequences to the developer
- 5.1.2 General principles
- 5.1.3 The development team
- 5.1.4 Integration and co-ordination of the development team in the development process

5.2 Methods of procurement

- 5.2.1 Conventional procurement methods
- 5.2.2 Characteristics and qualities of this method of procurement
- 5.2.3 Conclusion to the procurement section

5.3 Contracts and contracting

- 5.3.1 Standard forms of building contracts
- 5.3.2 Conclusion to the contracts section

5.4 Conclusion to Part 5

Glossary

Bill of Quantities

A detailed document produced by a quantity surveyor where all items in the construction are measured and quantified. This document is used by contractors to price the building works.

Certificate of final completion

A certificate issued by the architect that certifies that all the building's works are completed to their satisfaction.

Certificate of practical completion

A certificate issued by the architect that certifies that the building's construction is largely complete, except for very minor items that need correcting or completing. A sum of money is retained by the employer to cover these items that will be released when the certificate of final completion is issued.

Design and build

A method of procuring building works where the contractor is also responsible for the design of the scheme working to the client's brief.

Develop and construct

Similar to the above, except the contractor fulfils a developer's function.

Package deals

A family of integrated procurement routes that bring together some functions that are separated under conventional contracts (see 'turnkey' method, below).

Turnkey method

A procurement system where the end user can move straight in to the facility. All the design, financing, commissioning and construction of a building is carried out for the end user by a single provider.

Value management

A division of the quantity surveying profession that analyses building design and procurement routes to ensure best value is delivered to the commissioner.

5 | Project execution

5.1 Introduction

This section deals with perhaps the most important stage of the development process – the actual execution of the scheme.

It is a fact that the majority of development projects simply do not reach this stage. Most projects that have been started fail to get one or more of the key components in place. The developer may fail to win planning consent, the market need may be satisfied by another project or perhaps a financial backer cannot be found. In addition, in many cases, the bulk of time and effort involved with carrying out a development is in the stage prior to construction. This, in many ways, is reflected in this book where a considerable weight of the text is devoted to these pre-construction issues.

The actual execution of the scheme is, however, the whole purpose of the development and should be treated with the same degree of care as all other parts of the development process. This section, therefore, examines how development schemes are taken from existing only in the minds of their promoters to physical completion.

One of the big differences in character of this phase, however, is the change in role that the developer enjoys. A developer in the early stages of the project often acts alone, employing professional advisors on an occasional basis. In this stage, the developer is still the central catalyst but much more of the actual tasks involved in bringing the development to fruition are executed by the members of the professional team. One of the aspects that this section of the book will look at is the workings and assembly of the team.

How this team works will depend upon the procurement route that is chosen for the scheme. Details of the main building procurement routes are included in section 5.2, below, but it is important to have a preliminary examination of this issue because it determines how the developer should proceed in selecting and assembling the development team.

5.1.1 Outline of the procurement routes and the consequences to the developer

Although there are many variations, there are two basic alternative routes that the developer can choose to take in procuring the building (procuring here being taken to mean the process of designing the building and its contents, constructing and commissioning it).

The first route is termed 'traditional' and two variations of it are presented below. In both it is the developer who assembles and contracts with a development team to formulate the scheme, design it and then subsequently monitor its construction and certify that the completed building meets the requirements of the developer. In the first, the architect acts as the principal consultant, i.e. in addition to their design responsibilities they also oversee the work of the entire development team and the works carried out by the building contractor.

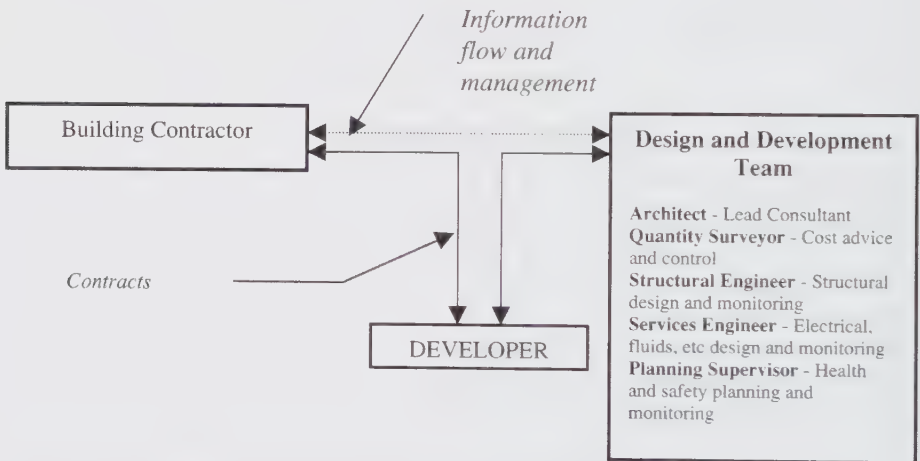


Figure 42: Traditional procurement route: architect as lead consultant.

In the second alternative, a project manager sits between the contractor and the design and development team. The project manager is responsible for bringing the scheme to a successful conclusion whilst the architect maintains the lead design responsibilities.

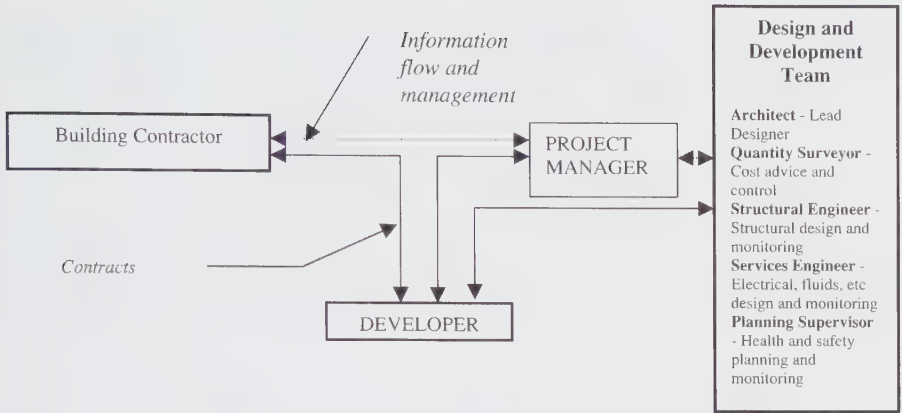


Figure 43: Variation on traditional procurement route: architect as lead designer, project manager controls process.

The alternative route is illustrated below. The main features of this way of procuring a building are that the contractor becomes the conduit for the construction and design of the building based upon a specification provided by the developer.

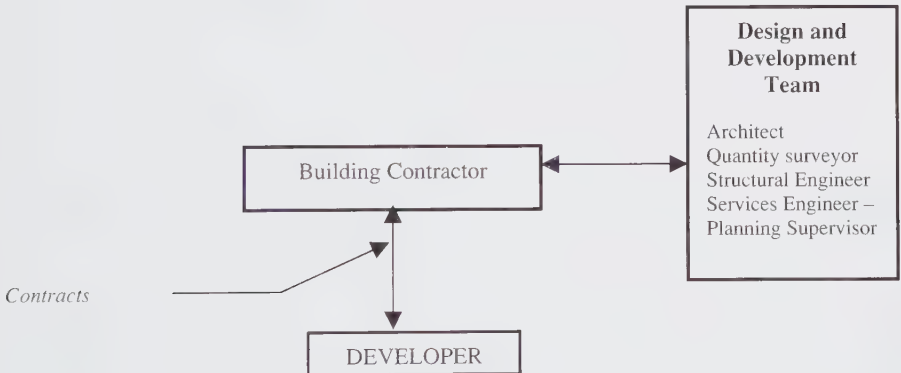


Figure 44: Integrated procurement route: building contractor provides package deal.

The vices and virtues of these main procurement routes are detailed below, however it is clear that they present very different problems for the developer to solve. With the former, the developer needs to carefully assemble, brief and manage the team in order to successfully bring the development to completion. In the latter, this responsibility is passed to the contractor. The traditional methods tend to be good for keeping control of the details of the end product. It requires much more in the way of 'hands-on' control and time by the developer in selecting and managing the development team. With the latter, though there is less absolute control of

the finished product the management and time input requirements on the developer are also much lower. The key part of the process is in the selection of the contractor, ensuring that the quality of the development team is sufficient to meet the requirements of the project.

Recent trends have seen the integrated procurement routes being used more frequently, but the majority of commercial development projects still tend to follow the traditional routes. It is therefore this model that will be considered in the next few sections, with the emphasis being on team selection and management. Later the alternative procurement routes will be considered.

5.1.2 General principles

There are four general guiding principles that developers should follow in executing a development. These are to prepare, plan, and plan and prepare again! It is vitally important for the success of the development that the groundwork is done before the scheme commences and that all the key components to execute the development are in place at the time it commences.

These factors will be considered later. To start, however, it is perhaps useful to outline some of the key components that need to be in place as the project prepares to go on site.

Firstly, a development team will have to be assembled that has the appropriate skills and knowledge to complete the scheme. The selection criteria that the developer should follow in assembling a successful team are discussed in 5.1.3.

After this team has been identified, two important issues need to be resolved before the relationship can develop and the scheme proceeds. Firstly, the terms of engagement must be agreed between the team member and the developer. This also applies to any of the other professional consultants that the developer may appoint. This document details the roles, responsibilities, duties and timescales required of the development team members. Secondly, in this increasingly litigious era in which we live, it is important to investigate the professional indemnity insurances (PII) held by the professional team. PII is an essential safety net for the developer to ensure that if a member of the development team fails to meet their professional requirements any cost consequences will be covered. Property development involves high stakes: an architect, for example, whose design is defective, could be faced with a multi-million pound damages bill. An individual or partnership will probably not have the resources to cover such a claim and it is essential therefore to have adequate insurance in place.

Once this has been done it is important to establish the key goals, timescales and milestones for the project with the development team. Good planning is essential to ensure the project is successfully completed and on time and on budget, though the need for flexibility must be incorporated into the team's thinking in order to be able to accommodate unforeseen events.

All the necessary components to complete the scheme need to be in place before the on-site work commences. In an ideal set of circumstances, to minimise the risk to the developer, the key elements should be in place before even the land is purchased. These include such items as:

- *Finance*. It is impossible to proceed to the contract stage unless the finance is in place to pay for the construction work and the professional team. To do so would risk trading fraudulently.
- *Planning consents*.
- *Legal issues* (ownerships, leases, rights of way, etc).
- *Archaeological reports*. As noted in the section on land acquisition, the UK has a long history of occupation. In many areas, including the so-called 'new towns', there may be an impact on archaeological remains. In historic towns it is almost inevitable that works in the ground or even alterations of existing older structures will have heritage consequences. The commissioning of reports from the local archaeological unit can clarify the situation.
- *Ground contamination investigations*. Similarly it is wise, given the current attitude to contaminated sites, to commission a specialist report on potential contamination of the site.
- *Geo-technical investigations* on the geology and ground conditions on the site. As this has a major impact on the design it is a key report for most developments.

There are other components that may need to be in place prior to commencement on site. These include:

(i) A detailed design of the building and all its components

Whether this is necessary depends upon the procurement route chosen for the project. Some of the main procurement methods are discussed later in this part of the book, but in outline the 'traditional' procurement routes, where the development initiator assembles a team of architect, quantity surveyor and engineer to design and cost the required building and which is then put out to competitive market tender, do require the design to be finalised at an early stage. We will see later that failure to do so will lead to a risk of both cost and time overruns.

The information that most traditional contracts will require includes drawings and a detailed specification of the building and its components. These are normally prepared by the architect.

(ii) Detailed costings and projections

Again, the requirements for this will depend upon the procurement method chosen. Whichever one is chosen, it is in most developers' interests to have a good understanding of the cost consequences of the development they are commencing.

With the smallest contracts (and certain procurement routes) the cost estimate may be in elemental form based upon the architect's drawings and specification. With larger (but often still modestly sized) projects a fully measured Bill of Quantities will be required. This document is discussed below, but briefly, it is a detailed breakdown of the building which involves the measurement of every component. This document can then be used to calculate the price of the completed building works by applying carefully calculated costs to each of the measured components.

(iii) Building Regulations application and approval

Construction work in the UK requires several stages of approval from the authorities, in addition to planning consent. Local authorities are charged with the responsibility of ensuring that construction is carried out safely and that the buildings are structurally sound and meet health and safety requirements both in terms of design and construction. The Building Control office of the local authority will therefore need to approve the plans of the scheme prior to commencement as well as the construction of elements of the work as it progresses. It will also certify the final building on completion.

In addition to their statutory duties, inspectors can offer advice on all forms of property legislation as it affects a development from the initial thoughts of the developer, translated by the architect and moulded by the contractor. Plans and developments are measured against the requirements of the Building Regulations.

(iv) Construction design and management plan

A construction design and management plan (CDM) needs to be put into place. The Construction (Design and Management) Regulations 1994 have effect under the regulatory framework of the Health and Safety at Work, etc Act 1974. The regulations impose legal obligations on the construction team, with attendant penalties for non-compliance.

The regulations relate to all construction work which includes demolition, construction, alteration, fitting-out, commissioning, repair, maintenance and decoration. It is likely that a developer will need to employ a planning supervisor to prepare this plan. A health and safety file will need to be opened and maintained by someone in the development team.

It is important that the developer ensures that a complete and satisfactory health and safety plan is produced before construction commences. The plan is made up of two parts covering the pre-construction stage and the construction stage. The regulations require the planning supervisor to ensure that a pre-construction health and safety plan is included in the tender documentation for procurement of construction. Usually, the planning supervisor is instructed by the developer to compile this plan based on input from the development team.

If these items are not in place then expensive delays or interruptions to the project may be experienced.

The next stage of the execution stage of the project is connected with the construction work itself. Firstly, an appropriate contractor should be selected who is able to successfully complete the work within the specified time period. In addition, the most appropriate procurement method should be chosen for the project. Finally, the most appropriate contract should be selected for the project. These are quite heavily interlinked and it is difficult to make generalisations without first considering the options available.

Once these key components have been put in place, further material is required:

- Tender report. This is the report prepared by the cost consultant/quantity surveyor on the tenders received (depending upon the contract procurement route chosen).
- A final construction programme from the chosen contractor will be required.
- Draft collateral warranties need to be obtained from the main contractor, suppliers and sub-contractors with design liability. Collateral warranties are documents that enable subsequent users or owners of a building to be protected against latent defects in the design or construction of the building. Parties to a contract are protected and there is a duty of care from professionals that they will do their work properly for their client. No such duty is owed to third parties such as subsequent tenants or owners of the building. Collateral warranties give that contractual comfort, albeit of a

generally weaker nature. Recently an insurance route has been followed to cover this area (decennial insurance, so called because its cover runs for ten years).

- Insurances. All-risks cover for the works, endorsement of the existing building policy (if applicable), third party, loss of liquidated damages, terrorism cover, non-negligent damage and business interruption.

Some of the key items in connection with this will be covered in this section. The concentration will be on items not specifically covered to date. The obvious starting point is the development team, given that many of the items listed above are heavily connected with the choice of the team.

5.1.3 The development team

The development team is made up of a group of professionals with very different backgrounds, attitudes and outlook.

The team can be broken down into five loose categories. These are:

- management
- design
- economics
- construction
- others.

We will examine each grouping in turn, focusing on identifying the key member of each group and outlining their main roles and responsibilities. We will try to identify the qualities that a developer should seek when appointing each member of the team and illustrate the working characteristics of each of the main members of each group. This will inevitably involve a degree of stereotyping but such a process is useful to appreciate some of the dynamics of working with such a diverse group of professionals. This diversity of backgrounds can lead to potential conflict as the team constituents may have different roles to play during the project, and sometimes there is a requirement to change personnel as the roles change. All of this can make building the team very difficult and, without careful management, can lead to conflict.

(i) Management

The diverse nature of the team and the complexity of most development projects mean that some kind of project manager is required.

In many traditional projects it was the architect who acted as project manager but this has increasingly changed. It is still quite common for the developer to be the project manager, as he or she is, after all, the entrepreneur and catalyst for the project and has the best overall picture of how the project is to be completed and executed. This is acceptable and achievable only, however, in small projects and with smaller developers where considerable time can be devoted to overseeing the project on a day-to-day basis. In other circumstances, where a number of schemes are involved or are being undertaken simultaneously or where the project is large and complex, it is impractical for the developer to be able to devote sufficient time to adequately supervise the project.

In these circumstances it is best to appoint a specialist project manager as overall coordinator and planner. Although there is an additional fee to be accounted for in the development budget, most large projects find it essential to employ a project manager. Project management is a discipline which has developed greatly over the last ten to 20 years. It is used in many aspects of business as well as in the construction and development field. Project managers are professionals in their own right and many universities have started to run postgraduate programmes in the discipline. In the UK, the Royal Institution of Chartered Surveyors (RICS) has set up a separate project management faculty.

In smaller projects, a key on-site management role is played by a clerk of works. Clerks of works are essentially the traditional coordinator and manager of on-site construction works, responsible for day-to-day activities, short-term planning, material ordering and labour management. A building contractor will generally directly employ their own clerk of works. In a small development project, where perhaps a developer is working with a series of sub-contractors to carry out aspects of the project, it is advisable to employ a permanent clerk of works to oversee the work being undertaken.

(ii) Design

A number of designers are involved in the development process, the key ones being:

- architects
- space planners and interior designers
- landscape architects
- structural engineers
- service engineers
 - mechanical and electrical engineers.

Each of the key contributors to the design issues will be considered in turn.

*(a) Architect**Key roles*

Architects fulfil the key traditional design role in many projects. In fact, the role is often deeper and more important than this: architects work with clients on developing and then producing a brief. They shape the concept and ideas of the client or developer into the final scheme. Architects traditionally take the concept as defined by the commissioning client from an overall outline as to how the building should look and how it should function, and then work towards creating more concrete designs as more information becomes available and as the client's ideas crystallise. They produce the drawings for pricing the scheme and for the construction of the building. Another important role of the architect is to provide a record of what has actually been constructed, something that is essential for future management and alterations of the building.

The central role that architects play in the development process can be seen by an examination of the *RIBA Plan of Work* (RIBA Publications, 2000), a document published to assist in the management of construction projects, being first published in 1964.

The *Plan of Work* identifies a number of work stages into which the process of designing and administrating building contracts may be divided. They illustrate how the architect may be involved at every stage of the development process. A version of the *RIBA Outline Plan of Work* is reproduced below to illustrate this point:

Broad Project Phase	Work Stages	Main activities involved including areas of architect's involvement
FEASIBILITY	A. APPRAISAL	Identification of client's requirements and possible constraints on development. Preparation of studies to enable decision-making process and to select the possible procurement method.

	B. STRATEGIC BRIEFING	<p>Prepare strategic brief on behalf of client confirming key requirements and constraints.</p> <p>Identification of procedures, organisational structure, range of consultants and others to be engaged on the project.</p>
PRE-CONSTRUCTION PERIOD	C. OUTLINE PROPOSALS	<p>Development of strategic brief into full project brief.</p> <p>Preparation of outline proposals and estimate of cost.</p> <p>Review of procurement route.</p>
	D. DETAILED PROPOSALS	<p>Complete development of project brief preparation of detailed proposals.</p> <p>Application for full development control approval.</p>
	E. FINAL PROPOSALS	<p>Preparation of final proposals for the project sufficient for co-ordination of all components and elements of the project.</p>
	F. PRODUCTION INFORMATION	<p>F1. Preparation of production information in sufficient detail to enable a tender or tenders to be obtained.</p> <p>Application for statutory approvals.</p> <p>F2. Preparation of further production information required under the building contract.</p>

	G. TENDER DOCUMENTATION	Preparation and collation of tender documentation in sufficient detail to enable a tender or tenders to be obtained for the construction of the project.
	H. TENDER ACTION	Identification and evaluation of potential contractors and/or specialists for the construction of the project. Obtaining and appraising tenders and submission of recommendations to the client.
CONSTRUCTION PERIOD	J. MOBILISATION	Letting the building contract, appointing the contractor. Issuing of production information to the contractor. Arranging site hand-over to the contractor.
	K. CONSTRUCTION TO PRACTICAL COMPLETION	Administration of the building contract up to and including practical completion. Provision to the contractor of further information when reasonably required.
	L. AFTER PRACTICAL COMPLETION	Administration of the building contract after practical completion. Making inspections and settle the final account.

Source: RIBA Outline Plan of Works 1998

Figure 45: RIBA Outline Plan of Works.

It can therefore be seen that there are many other roles that the architect can fulfil during the development process. These roles include:

- *Project management* (see above).
- *Planning consultation and planning application*. Because of the interaction between the design of the project and the planning issues, it is common, especially in small projects, for the architect to also deal with the planning application. In a large project this role is usually carried out by specialist planning consultants (see p.139).
- *Issue of certificates of progress, practical completion and final completion*. The architect has a very important role to play in monitoring the progress of the building and the degree of conformity with the design, especially in traditional projects. In the majority of the projects that are subject to monthly stage payments from the client to the contractor, it is the architect who certifies the amount of work carried out which is then priced up by the quantity surveyor. Other important certificates issued by the architect include the certificates of practical and final completion. The certificate of practical completion is issued at the end of the main construction phase of the project. It certifies that the building contractor has completed the majority of building works with the exception of minor 'snagging' items – relatively insignificant items that require to be completed or re-done. The building then passes from the contractor to the client or developer. The building contractor has no further interest in the building with the exception of a relatively small sum (usually about five per cent) of the contract money that is retained for a period agreed under the original contract. This money is only passed to the contractor when the architect issues a certificate of final completion. The issue of certificates is therefore a very important role fulfilled by architects under most development projects. This is particularly true of the certificate of practical completion which effectively marks the end of the construction phase of the project and the beginning of the occupation or investment phase.
- Sometimes acting as a *planning supervisor* under the CDM¹⁹ regulations.

¹⁹ Construction (Design and Management) Regulations 1994 – a series of regulations designed to ensure site and construction safety.

Key skills and characteristics to consider when selecting an architect for a development project

The comments made in this section are inevitably going to be broad guidelines and observations. They will therefore provide stereotypical thumbnail sketches of the architectural profession that will be unfair to many members of the discipline (this also applies to the comments made about the other members of the development team). Their inclusion is justified, however, because although comments are made with a very broad brush and unfair to individual architects, there is an element of truth in them as an overall observation that newcomers to the development process should be aware of and may find useful.

The key skills to look for when selecting an architect really depends upon the nature of the development project being considered.

Architects are trained to have artistic flair, a feel for space utilisation and the ability to translate and interpret ideas into reality. As with most professions, there are many different types of architect with different levels of skill and different strengths. Some architects are very good at aesthetics and design but less skilled at producing practical solutions to meet the needs of clients. If the project requires strong design then it is essential to select an architect with flair and imagination. If, however, the project requires a practical solution within a tight budget then it is very important to appoint a pragmatic, experienced professional who is used to working within such constraints. To appoint a 'flair' architect in these circumstances is a recipe for disaster. It is well worth the time to talk over ideas with a range of architects, as well as their former clients prior to making an appointment, if no previous working relationship exists.

There are a number of potential problem areas in working with architects which developers should be aware of. These are as follows:

- Buildability issues. Occasionally there can be failures in the design process or in communication that lead to the provision of details that cannot practically be constructed on-site.
- With architects, costs tend to be secondary to aesthetics.
- Similarly, commercial requirements and market requirements can be secondary to design considerations.

To illustrate the importance of this last point, it is instructive to read the comments made by Peter Foster in his biography of the Reichmann

brothers, the developers of Canary Wharf in London²⁰. Commenting on how they aimed to maximise the end value of their schemes, Foster observes:

At the cost end of the equation, they emphasised efficiency, which meant squeezing the maximum possible rentable and usable square footage out of a building. Gross space is all the square footage within the walls of a building. Obviously, not all that space is rentable, and not all of the rentable space is usable. The space taken up by facilities such as elevators, service shafts, and mechanical rooms has to be deducted to arrive at rentable space. *The Reichmanns soon noticed that architects and engineers did not necessarily share their space saving priorities* [author's italics]. A great deal of time was spent with consultants looking for innovations in areas like elevator systems that would maximise service but take up the minimum floor space. The brothers always took a close interest in blueprints and layouts. Paul [Reichmann] would take home a floor plan, spend the evening mulling it over, and return the following day having squeezed out another couple of per cent of rentable space when it seemed that there was no more to squeeze.²¹

The point is that even a well-briefed consultant cannot share the level of commitment to producing the end product as the developer. It should be noted that commercial space in city centres is incredibly valuable. Every square metre of a top quality West End office in London was worth £12,000 - £14,000 in the year 2001. Small gains in this area soon mount up.

Members of the development team often find the architect the most difficult to work with and understand. This is largely the result of different backgrounds and outlooks, as the architect alone tends to have a background in humanities rather than construction, engineering or economics. The importance of understanding the motivations and backgrounds of each of the members of the development team cannot be understated.

(b) Other designers

Space planners/interior designers

The design of the interior of the building may be carried out by the main scheme architect. On larger schemes a specialist is sometimes employed. It is, however, rare for a developer to carry out a fit-out of a commercial building – this is normally left to the occupier. There will be occasions,

²⁰ Peter Foster, 'Towers of Debt: The Olympia and York Story' (1993), London, Hodder and Stoughton.

²¹ *Ibid.*, p. 28.

however, when the developer is working to a brief produced by the client and will need to employ such skills.

Landscape architects

Landscape architects are a specialist branch of the design profession and, as the name implies, they deal with the external environment of the development. When the development has fairly minimal external works, the planning and layout of the hard and soft landscaping can be carried out by the lead architect; however, with buildings such as office parks, a much higher level of landscaping is required and a specialist landscape architect is essential.

(c) Structural engineers

Key roles

Structural engineers, or civil engineers, have a key role in many commercial projects, as they are specialists in the design of the structural elements of the building. In most cases, the architect will design the general layout of the building but then pass the responsibility for the structural elements to the structural engineer who will be responsible for designing, for example, the structural frame of a building and also calculating matters such as floor loadings and wind loadings of the structure. Architects have very limited knowledge and qualification in these areas. The second key role that structural engineers have in the development is for monitoring and checking progress on site. Engineers will make regular visits to the site, checking calculations provided by the contractor, and inspecting and approving the installation of the structural elements.

Key skills and characteristics to consider when selecting an engineer for a development project

A good structural engineer will need a good level of experience in the type of development being undertaken. They will need to have an established track record in producing practical solutions to engineering problems.

Structural engineers are a vital part of the development team and like other members of the team they have their own characteristics. Although education is changing, engineers have a background in calculation and mathematics with little emphasis on financial and management skills. A developer should be aware of this fact. The actions of civil engineers may be in conflict with the financial aims of the project (see above). Another characteristic is that they tend to be cautious and over-design some elements of their responsibility. This too can have financial implications.

*(d) Service engineers**Key roles*

Service engineers design elements such as air conditioning, heating, lighting and other service elements. They work hand-in-hand with mechanical and electrical engineers who design lifts and air conditioning systems. The work of these engineers quite frequently overlaps.

Key skills and characteristics

Many of the key skills and characteristics of services, mechanical and electrical engineers are similar to those for civil and structural engineers. In particular, it is vitally important in complex buildings that these engineers have relevant practical experience of the type of project concerned.

(iii) Economics

There are a number of professionals who work in this area, with most related to the quantity surveying or construction economist professions. The two main types are quantity surveyors and value managers.

*(a) Quantity surveyors**Key roles*

Quantity surveyors have for many years considered adopting the alternative title of 'construction economist' as they believe this is a title that better reflects their profession.

The key stages of the quantity surveyor carries out in the development team are:

- cost estimation
- cost planning
- cost forecasting.

At the initial feasibility stage the quantity surveyor will produce the budget and cost forecast. At the outline design stage this forecast will be updated and more detail will be supplied to the client. At the detailed design stage the quantity surveyor will prepare a much more detailed cost forecast and estimate which may include a month-by-month projection of future costs. This cost prediction is essential for the client to maintain an understanding of the current viability of the project and the effect of any design changes. Information is also vital in budgeting and in arranging finance.

In the traditional procurement route (see 5.1.1 and 5.2.1), one of the main tasks of the quantity surveyor is to prepare a Bill of Quantities. The Bill of Quantities is a detailed document where all the amounts and quantities of materials and construction elements of the proposed building are measured and described using standardised terms.

The Bill of Quantities has two main functions in the construction process:

- It acts as a tender document which is supplied to the contractors along with the drawings and specification of the building. The contractors then enter prices against the measured quantities, enabling a rapid estimate of the total lump sum cost to be arrived at.
- Once the building contract has been agreed and the work is awarded to the successful contractor, the Bill of Quantities, priced up by the successful contractor, becomes the main method of development monitoring and payment for the contractor. Each month, or whatever the appropriate interval between payments, the amount of work carried out will be assessed against the Bill of Quantities. A percentage estimate of the amount of work completed is then calculated which allows the rapid calculation of stage payments. It also allows variations to be calculated relatively quickly using the rates supplied by the contractor in the document.

We will see when we look at alternative methods of procurement below, that the Bill of Quantities is only really applied in the traditional methods of procurement. When other methods are used by the developer, the quantity surveyor is still a vital member of the development team, but with a somewhat different role – despite having the same areas of responsibility as before, the method of working has to be adapted.

Other roles normally carried out by the quantity surveyor are:

- Tender scrutiny and checking. Despite the presence of the Bill of Quantities, which itself can be inaccurate, it is common for mistakes to be made by contractors when pricing work. One of the roles of the quantity surveyor is to audit contractors' bids and identify errors. These are usually highlighted to the contractor who is given the opportunity to either stand by the original estimate, alter it or withdraw.
- Assessing the viability of the estimates submitted. Although it is normal to take the lowest estimate, it is sometimes obvious that contractors have mis-priced work that cannot be done for the sum

submitted. In these circumstances it may be best to take a more viable tender from an alternative contractor.

- Responsibility, as we have already seen, for stage payments under the majority of building contracts. This normally requires the QS to undertake monthly valuations of work completed on-site, which are then supplied to either the architect or project manager or whoever is responsible for approving payments.
- Responsibility for the pricing of the variations. These are changes in design, quantity or timing of the construction work for which the main contractor will require additional payment.
- Responsibility for agreeing the final account with the contractor.
- A further role is in dispute resolution.
- As well as the initial forecast and cost estimate, the quantity surveyor provides regular updates of the forecast and monitors the expenditure on a week-by-week basis. This is an essential tool of project management.
- In certain circumstances, the quantity surveyor can also act as the project manager.

Key skills and characteristics to consider when selecting a quantity surveyor for a development project

The characteristics of a good quantity surveyor are essentially related to thoroughness and diligence.

With quantity surveyors cost dominates everything else and they will attempt to save money at every turn. This can conflict with the aims of the development as a whole. Another characteristic of quantity surveyors is that much of their dealings with contractors are confrontational. Contractors also employ their own in-house quantity surveyors whose role it is to carry out the financial side of the contract process on behalf of the contractors. This includes agreeing monthly valuations with the developer's surveyor and also in preparing and calculating claims for variations which are subsequently negotiated with the developer's surveyor. All these functions do tend to be confrontational and can spill over into other working relationships.

Notwithstanding this, the quantity surveyor is an essential element of the development team. It is almost impossible to undertake development work and to manage a project without their services.

(b) Value managers

A further member of the team who deals with the economics of development is the value manager. This professional body has its origins in

the United States. Value managers attempt to scrutinise a design before it goes to the tender stage in order to determine whether costs can be saved, i.e. whether the design is efficient or if some other better solution can be found. Value management has been used increasingly in the UK to save costs in construction. It is, however, rare to make use of this in commercial investment developments.

(iv) Construction

Contractors

Contractors are often in an odd position in the development environment. To many outsiders, contractors are the physical embodiment of the development, they *are* the 'developer'. It comes as something of a surprise to many that, in fact, contractors are most frequently only a component of the development, the tip of the iceberg in a way in that they represent only the visible ten per cent of the whole effort. The contractor is a key part of the development process – that goes almost without saying. The development team needs the required skills, knowledge and experience of the contractor to complete the project successfully. In many ways, however, the status of the contractor is ambiguous.

In 'traditional' contractual arrangements (this term will be explained below), the contractor is almost a third party, an outsider, perhaps even considered to be the 'opposition' to the development team. This is because in traditional developments the contractor is not part of the design team but is the last element of the team to be brought in. If we repeat a diagram used earlier, we will see that in Figure 46 the contractor's position is quite separate from the rest of the team in this arrangement. This is something that the construction and development team has long considered to have undesirable characteristics, not least of which is that this arrangement lends itself to conflict. It also means that the contractor's input into the design process is limited; a good contractor can suggest alternative solutions to design or methods of working. It is because of this that alternative methods of procurement have been developed that will be reviewed later in this section which integrate the contractor more into the development. We will also explore why these alternatives have had a limited impact on many types of development.

Key roles

The key role of contractors is, naturally, to complete the scheme as per their contract. They will need to employ the requisite skills, personnel and equipment to do so. How they do this is largely up to each individual contractor, as long as the terms of the contract are fulfilled.

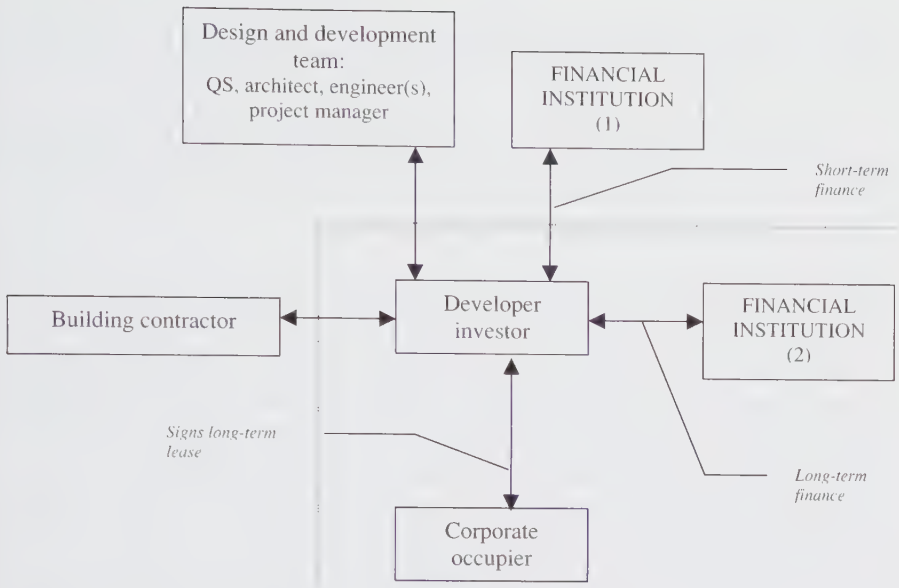


Figure 46: Speculative development: Developer investor.

Key skills and characteristics to consider when selecting a contractor for a development project

Developers should spend considerable time and effort reassuring themselves that the contractors they select to go on the tender list (assuming this is the approach adopted) have sufficient experience and resources to complete the scheme to the standard required and within the requisite time period. Not all contractors are the same, even at the larger end of the market. Large contractors have different strengths and it is worth reviewing the type of contracts they have recently undertaken to see where their experience really lies. Smaller contractors are far more variable in terms of their skills, experience and resources.

Taking the latter as a factor, many of the problems that exist at the domestic and smaller commercial type end of the market in terms of delayed completion and intermittent progress is due to contractors taking on too much work and spreading themselves too thinly whilst attempting to keep everyone happy. Contractors do not like turning down work for fear of not being considered for future work. Hence, they sometimes make irrational decisions about workloads. Although most building contracts contain provision for imposing penalties for late completions these clauses are difficult to enforce, time consuming to pursue and usually give inadequate compensation for the true impact of late delivery on the developer. Late

delivery may mean the loss of a tenant or a sale. It is best to do as much as possible to avoid these problems before the contract is placed.

Similar over-optimism also exists with regards to skill. The skill requirements for a contractor will vary from development to development. It is important for the developer to identify exactly what critical skills are required for the scheme and match these requirements against the list of potential tenderers. Other members of the development team, particularly the architect and quantity surveyors, are important in this process because they often have prior knowledge from previous schemes of contractors in the market place. Even if no direct experience has been gained, the members of the development team are often able to use their contacts with professional colleagues in other organisations to obtain this information.

It is vitally important to most schemes that this investigation work is carried out. Selecting a contractor blindly without prior research is like playing Russian roulette. Usually you will get away with it but the consequences when an incorrect selection is made are usually heavy. The building industry has a bad reputation for very good reasons. Choosing a big name contractor will usually give some guarantees but taking up references and doing plenty of research is absolutely essential.

There are other general points to be aware of when dealing with contractors. Perhaps the most important is that many contractors acquire work with low or sometimes zero profit margins. The reason for this is to simply capture turnover in competition with other firms. They, of course, then need to find a profit margin. They do so in a number of ways:

- *Squeezing sub-contractors' margins*

Sub-contractors are contractors to contractors, employed by the main contractor to carry out elements of work. Many large contractors do not employ much in the way of staff directly but instead operate essentially as management shells employing personnel and equipment as required. Many tradesmen and labourers are 'labour only sub-contractors'. Main contractors also employ smaller firms to carry out specific or specialist tasks. It is these bodies that tender work from the main contractor and who then find their contract sums reduced by negotiation – they have little power and are open to manipulation.

- *Failure to pay sub-contractors on time*

Related to the above is a tendency for contractors to delay paying sub-contractors even though the work has been done, and the main contractor

has been paid by the developer. This enables extra interest and credit to be obtained.

Although neither of the above practices are illegal or strictly the concern of the developer, they can cause bad working relations on site and also force sub-contractors to take short cuts and reduce the quality of the finished product. A wise client would put pressure on the main contractor not to follow these practices.

- *Exploitation of variations and disputes*

This is perhaps the most popular of the methods employed by contractors to maintain margins. Contractors also employ quantity surveyors whose main role is to negotiate interim and final payments for the contractors and also to negotiate variations. Variations, as we have seen, arise out of things such as design changes and, perhaps, changes in the order of work. Another common source of variation claims are errors in the contract documentation. These include items such as mis-description or mis-measurement of work or mistakes on drawings. Once the contract documentation is received, many contractors scour the material searching for errors. Some contractors are more litigious than others – this can be determined at the pre-tender selection enquiry stage.

(iv) Other members of the development team

Just because the members of the team fall into this category, it does not downgrade their importance. These parties tend to have an impact on the design, cost and execution of the project if used correctly. There are a number of bodies that fall into these categories but two of the key ones are property agents or consultants, and planning consultants.

(a) Property consultants

Types and roles of property consultants used on development projects

There are a number of different types of property consultants used by developers. The roles of many will be considered later in Part 6, but the roles within the development process will be considered here.

The most common types of property consultants used are:

Residential agents – used in marketing residential property but also in terms of input into the design process and the make-up of the development.

Residential land agents – these consultants specialise in the identification and acquisition of land, with or without planning consent, for residential development. Quite specialist knowledge is required to successfully fulfil this role, particularly of the practicalities of development and the attitude of the planning authorities.

Valuation surveyor – used during the process mainly to value the site for loan security purposes.

Development surveyors – these are members of the surveying profession who specialise in development work. They are multi-skilled in terms of the tasks they can undertake from valuation and appraisal work, advice on development form and design, marketing of the completed scheme and planning advice and applications.

Commercial agency surveyors – these are probably the most important of the property consultants in commercial schemes. They have three main roles:

- to secure an acceptable tenant for a scheme;
- to negotiate the heads of terms with the occupiers, particularly the rental level and the outline lease terms (period [term] of the lease, rent review details, user clause, repairs and maintenance, etc);
- to advise the development team on current market requirements and trends at all stages of the development but particularly at the feasibility, final design and pre-tender stages, and also during the course of the development.

Getting these professionals involved at an early stage of a development will pay dividends, avoid costly design mistakes and the need for late changes in design. They form a key interface between the market and the production team.

Commercial investment agents – these professionals are not usually the same as commercial letting agents. They have different roles and possess different skills. Commercial investment agents are rather more technical and numerate than letting agents as they have to deal with financial analysis and investment appraisal. Their two main roles are:

- to advise the development team on the market requirements of investors;
- to secure the sale of the investment (as opposed to occupational) interest in the scheme – if, of course, the property is not to be

retained by the developer or sold on to owner occupiers – at an acceptable rate and within an acceptable time period.

Key skills and characteristics to consider when selecting a property consultant for a development project

The main potential problem with property consultants is their tendency to be over-confident and over-optimistic about property markets and thus the prospects for development. An important function of an agent is to 'talk up' markets to maintain confidence. This will enable turnover and activity in the market to be maintained. It can, however, be overdone which can increase the tendency for property markets to crash by allowing unsustainable values and prices to be maintained for too long.

(b) Planning consultants

Planning consultants play an increasingly important role in development. They are the private sector side of the planning profession. Traditionally, planners were only employed by the public sector to fulfil the standard planning role of urban and economic development of an area. Over the last two decades, in particular, planners have crossed over to the developers' side to assist in the navigation of schemes through the planning process. Just as agents give invaluable early input about market requirements into the design process so planning consultants act similarly in advising what is and is not acceptable to the planning authorities.

The main roles of planning consultants are to:

- provide planning input to the design process;
- conduct schemes through the initial application process including negotiations and consultation with the local planning authorities;
- assist in the preparation of reports supporting planning applications;
- prepare and argue the case for development during planning appeals.

There are now few large schemes where planning consultants are not involved. A trend is for local authorities and other public bodies to also employ planning consultants to counter the arguments of developers' consultants, particularly where a planning application is rejected and an appeal is made.

Other professionals employed by developers include environmental assessment consultants, archaeologists and market researchers.

PROJECT STAGES	A Inception	B Feasibility	C Outcome proposal	D Scheme design	E Detail design	F Production information	G Bills of Materials	H Tender action	I Project planning	J Site operations	K Completion	L Feedback	M Letting and/or sale
ARCHITECT'S ROLE	PLANNING PERIOD												
	CLIENT BRIEFING PERIOD		WORKING PLAN PERIOD LEADING TO PREPARATION OF FINAL DESIGN										
	Outline sketches	Revisions	Scheme design plans	Detail design	Contract drawings issued	Monitor/late revisions/issue of details	Certificate of Practical Completion	As built' drawings issued	Certification of Final Completion	Post Completion			
QUANTITY SURVEYOR'S ROLE	COST PLANNING PERIOD												
	Initial cost limits set	Cost limits finalised	Cost checks	Cost checks	Outline cost plan finalised	Bills of Quantities prepared	Cost analysis	Cost monitoring and preparation of periodic valuations for stage payment of contractor	COST CONTROL PERIOD		Preparation of retention account	Release of retention	FINAL ACCOUNT
AGENT/ PROPERTY CONSULTANTS ROLE	INITIAL APPRAISAL												
	Briefing by client	Preliminary valuation advice	Market analysis	Monitoring of markets	Cost checks	Outline cost plan finalised	Final valuation and market advice before commitment to build is made	MARKETING	On going valuation and marketing advice as the scheme develops. Monitoring of market	Marketing and letting programme begins	Negotiations with occupiers and investors	Agreement of sale and/or leasing	

Figure 47: Roles of the main project team members during a typical traditional property development project.

5.1.4 Integration and co-ordination of the development team in the development process

This is a difficult issue to summarise, but an indication of how some of the key members of the development team and the sequence of the development process fit together is indicated in Figure 47.

5.2 Methods of procurement

At some stage a method of project selection must be decided upon for procuring the building work, i.e. the process of physically realising the development. There are various ways of achieving this, the choice being dependent on a number of factors related to the objectives of the developer. The key factors include time, cost, quality, level of control and risk.

All the methods of procurement have different characteristics related to these variables. Some are good for reducing cost, while others allow the development to retain a high level of control, etc. Which one is chosen depends upon the nature of the individual contract or development and sometimes even on the personal preferences of the developer involved. To give an example of this, many institutional investors prefer the conventional methods of procurement which see the separation of the design and construction elements of the project. In such cases, the contractor is placed outside the development team, as we have seen, leading to a more adversarial and confrontational relationship. Institutions need to have both certainty and control, something provided by the traditional methods, despite its other well recognised flaws.

The various methods of procurement and can be summarised as follows:

- Conventional methods:
 - single-stage of selective tendering;
 - two-stage selective tendering;
 - negotiation.
- Integrated procurement systems:
 - design and build;
 - package deals;
 - turnkey method;
 - develop and construct.
- Management orientated procurement systems:
 - management contracting;
 - construction management;
 - design and manage.

5.2.1 Conventional procurement methods

The main feature of these methods, called conventional because they have a long history of use, is the separation of the design from the construction element. The design is largely completed by an architect assisted by other specialist designers such as civil, mechanical and electrical engineers prior to the on-site work commencing. The design work is usually completed prior to tendering. The contractor's main role is in managing the project rather than assisting with the design, giving little scope for the designers and contractors involved in each other's activity.

The conventional method tends to be a sequential process involving four main stages of work:

- preparation
- design
- preparation and obtaining of tenders
- construction.

(i) Preparation

It is at this point that project inception takes place. The client, in this case the developer, establishes his or her concept of the type of building that is required. With most developers the requirement is market led but where there is an occupier identified for the completed building this process directly involves working with the intended occupier. This process will establish or at least outline their requirements. An architect and project manager are appointed to draft the outline of the building to establish the feasibility of the scheme.

(ii) Design

The main outcome of this stage is the establishment of a design that meets the needs of the client. This must be done before obtaining tenders on commencing work on site.

It is in this area that the traditional approach is the most heavily criticised as there is a lack of consultation and involvement between the design team and the contractors. This is due to four factors:

- The client usually chooses to retain control of design.
- A list of tenderers is not usually available until the design is completed.

- The contractor's identity is not finalised at this stage. Different contractors being involved at this stage are likely to give different input which may confuse the design process.
- By the time on-site work has commenced it is really too late to alter the scheme design. Any input from the contractor to change the design will lead to extra cost and delay.

(iii) Preparation and obtaining tenders

In conventional procurement this usually consists of the preparations of drawings, specifications and Bills of Quantities. For smaller projects the Bill of Quantities is sometimes dispensed with and the tender documentation consists of drawings and specification only. As documentation needs to be accurate and as tenders are prepared using these materials, changes made later and mistakes corrected will be expensive.

Usually four to six contractors are selected and invited to prepare a tender. These tenders usually consist of sealed bids prepared without collusion and submitted before a specified time.

(iv) Construction

This phase involves the actual execution of the works. This is usually carried out under a standard building contract, usually one prepared by the Joint Contracts Tribunal (JCT) such as JCT 98. These contracts cover areas such as time period required to complete the work, payment methods, standards required, who has the authority during construction and also methods of dispute resolution. It should be noted that during the contract the site belongs to the contractor who is responsible for issues such as safety and therefore can exclude anyone from the site, including the client.

5.2.2 Characteristics and qualities of this method of procurement

(i) Cost

When the design is fully developed and a Bill of Quantities prepared, the tendering costs are reduced for contractors. There is also a clear definition of the scope and character of the works. This greatly reduces uncertainty and gives a level playing field for true competition between contractors. In other methods, the contractor has to interpret far more, which gives rise to differences between tenders. On the downside, preparation costs for the client are higher and the design must be frozen earlier.

(ii) Time

There are two elements involved when considering the time characteristics of this method of procurement: the pre-contract and on-site works. There is no real difference between this method and others for on-site work, although the sequence of working may be more defined than with other methods. The main difference is in the pre-contract preparation work, making this one of the slowest methods of procurement.

(iii) Quality and control

This method of procurement gives the highest degree of control over the finished product. It is for this reason that this method continues to be preferred by investment clients.

(a) Advantages

- As this method is understood by most members of the team, it has the clear attraction of familiarity.
- The client can control the output of the development process very closely.
- The client can select the design team to suit the needs of the development.
- The client can decide when to commit to the contract.

(b) Disadvantages

- The main disadvantage is speed, or rather lack of it.
- It is not good for achieving cost savings.
- It is difficult to deal with later design changes that may be required in the scheme.
- The contractor is remote, and has very little ability to influence the project, make an impact or make an input into the design or other aspects of the scheme until very late.

Although heavily criticised, this method continues to be used. This is because many clients find that the advantages greatly outweigh the disadvantages. It is particularly true of investment clients, where control is far more important than, for example, cost saving. Many members of the construction team, particularly those concerned with cost, find this a difficult concept to understand. If, however, the relative impact of changing cost and changing values in an appraisal are investigated, in the great majority of cases it is the latter which has a much greater impact. For this reason

control of the output is the major requirement of procurement methods used for the construction of investment properties.

(iv) Variants

(a) Two-stage selective tendering

As the name implies, two-stage selective tendering involves two distinct stages in the tender process. It is best suited to a number of specific circumstances. One example is where the design is not finalised at the time when the procurer wishes to appoint a contractor (the procurer may want to take advantage of competitive market conditions). A second example is where the control of the finished product by the client is not critical. A final reason for use is where the building is complex and more input in terms of design and advice from the contractor is required.

In the first stage of the tender process, outline sketch drawings and an approximate Bill of Quantities are sent out to three to six contractors who are invited to submit tenders. The successful tenderer is then notified of the client's intention to enter into a binding contract, subject to conditions. An acceptable final tender figure is agreed between the client and the potential contractor. The chosen contractor then agrees to cooperate with the design team. They give advice on issues such as buildability, materials, costs, programming and the detailed design.

This approach is worthwhile when the project is complex and when experienced contractors can assist in the design and construction. The disadvantages of this approach are that the competitive element is lost after the first stage of the tender process.

(b) Negotiated contracts

This proceeds as per the conventional single-stage tender process, at least until after the outline design stage. At the detailed design stage a contractor is appointed, an appointment based upon the contractor's past record and expertise on similar projects.

This type of contract is most effective in unusual, innovative or complex projects where the contractor's prior experience is invaluable at the critical design stage. This helps in buildability issues, timing of work and programming, as well as cost forecasting.

There are a number of ways of appointing the contractor, including: (a) interviewing a range of suitable contractors, and (b) negotiating with a single contractor known to the team or the client.

This method of procurement saves time and reduces risk but can be more expensive as the competitive element is reduced.

(c) Continuity contracts

These types of contracts are used where a number of phases are involved. For example, a project with two similar phases may see the first phase contract awarded using a single-stage selective process, as per the traditional approach, while the second phase of the contract is being negotiated. This usually involves modifying or updating the first set of priced tender documents.

This approach reduces the time required and the cost of preparing a second tender process. There are drawbacks with the approach, given that the competitive element is reduced. In addition, there is no guarantee that a contractor who has performed well in the first contract will do so in the second, particularly if there is no further phase of work to consider in the future. A contractor in the second phase of the work may divert labour and machinery to other contracts. What might seem a sensible approach to the client may, in fact, go badly wrong.

(d) Serial contracts

These are similar to the above but, in this case, there are a series of contracts, some of which are consecutive and some which occur simultaneously. In these cases it is cheaper to work to a master Bill of Quantities which becomes a contract document. The master Bill of Quantities contains the rates for a series of activities across the various contracts.

(e) Cost reimbursement contracts

There are a number of types of cost reimbursement contract.

One is the cost plus approach. Here the contract to tender for work is set at an agreed cost and rates supplied by the client's quantity surveyor. The contractor, as part of the tendering process, just adds a percentage for overheads and profit as required. The contract is awarded usually to the lowest percentage bid.

A second type of cost reimbursement contract is the target cost procurement method. Here the contractor is given a target cost. Any savings actually achieved are shared as an additional profit between contractor and

client. There are problems with this approach as well – principally that if the contract goes wrong and the target cost is exceeded, the contractor may lose motivation to complete the project on time.

(v) Non-conventional procurement methods

Another name used for these approaches includes integrated procurement systems. This is because the design and construction elements are the responsibility of a single organisation, usually a contractor. These methods have multiplied over the last 30-40 years. The impetus has come from two sources: contractors who feel that greater and earlier input into the design and development process will increase efficiency and reduce costs; and the wish of some clients to reduce costs and time. Although these methods give distinct advantages, the use of the traditional methods still continue, much to the chagrin and sometimes bewilderment of academics, government and contractors.

The reason for the continuing use of the traditional methods has been outlined above, namely the issues of controlling the project output and familiarity. Cost, as we have seen, is not the key element in many investment projects; control of the project is. In addition, fund managers (who make the key decisions on many development projects) are cautious, risk-averse people. Conventional contracts are a known entity with relatively low levels of risk to the client. Their argument is why, therefore, bother taking on more risk to save a relatively small amount of money?

To illustrate this point we will examine a typical industrial investment project:

Project values

End value	£ 3,000,000
Cost of land	-£ 1,000,000
Cost of construction	-£ 1,000,000
Professional fees	-£ 250,000
Finance cost	-£ 250,000
<u>Profit</u>	<u>£ 500,000</u>

Taking a non-conventional route may save five per cent of the construction costs. There may also, however, be the risk of losing five per cent of the value due to not quite meeting the requirements of the market. As we have seen, these methods do not allow the client the same degree of control as conventional contracts. If we examine the impact of this on the project viability we can see the type of risk the client is running.

Project values

End value	£ 2,850,000
Cost of land	-£ 1,000,000
Cost of construction	-£ 950,000
Professional fees	-£ 237,500
Finance cost	-£ 250,000
<hr/> Profit	<hr/> £ 412,500

In this scenario, although the costs are reduced, profits have fallen because of the impact on the end value. Of course this will not always occur, but why take the risk? Why should investors give up their control? Contractors are not in touch with the market and do not normally share in profits, so why should they worry?

This factor does not rule out the use of these methods nor do these problems occur with every type of project, however the developer should carefully consider the potential downside risk before adopting these methods of procurement.

We will consider four main types of integrated procurement systems:

- Design and build
- Package deals
- Turnkey method
- Develop and construct

(a) Design and build

This is one of the best known of the integrated procurement systems. In this approach the client develops a brief of the type of building required. This brief needs to be clearly presented so that tender bids can be prepared on a competitive basis. The contractor bids a lump sum to cover the design and construction of the building based upon information supplied. The bid is on a fixed price basis, i.e. it cannot change unless there is a substantial change in a requirement from the client. The process produces a simplified contract and functional relationship. The successful contractor commences the detailed design in consultation with the client.

Advantages

- A considerable amount of time can be saved as the contractor is also responsible for the design. This means the contractor is not waiting for details and it is thus possible to overlap elements of the design and construction.

- As long as the brief is comprehensive and accurate it is possible for the developer to achieve certainty in project cost.
- A closer working relationship is developed between the client and the contractor.

Disadvantages

- Perhaps the major disadvantages of this approach is that the client loses detailed control of the finished product.
- In this approach, no Bill of Quantities is produced. This makes the pricing of any variations on the contract very difficult.
- There have been questions about the quality of the finished product produced using this procurement method. The contractor is primarily concerned with cost reduction and maintaining or increasing the margin between actual costs and the agreed tender sum. This can impact on the building produced.

There are other points to be aware of when using this procurement method. An important factor to establish prior to the appointment of the contractor is whether the organisation has sufficient depth of design expertise to adequately complete the work. There are organisations that have the know-how and depth of experience and, indeed, are design and build specialists. There are many other organisations which do not specialise in this field. Many contractors have gone down the design and build route to obtain work but buy in the design expertise by employing outside firms of architects. In this situation the advantages of design and construction integration that design and build offers is largely lost. There is little real advantage over the traditional approaches other than potential cost savings.

(b) Package deals

Package deals are very similar to the above, however a bespoke design is not produced. The contractor instead uses an 'off the shelf' solution, i.e. a design used elsewhere with another building. Using a ready-made design should be both cheaper and also a lower risk option in that any technical defects should have been eradicated in the previous attempts. The main downside of these approaches is that the product may not fully satisfy the client's needs.

(c) Turnkey method

This is a more comprehensive approach to the production of a building. It involves effectively a full facilities management set-up of the building

including installation and commissioning of all operational equipment, sometimes going as far as recruiting and training staff to run the facility. The Private Finance Initiative and Public/Private Partnership approaches are extensions of this. The approach allows a rapid use of the facility by the user. It is therefore particularly useful in complex buildings or facilities such as advanced manufacturing or medical facilities. It has not been widely used in mainstream investment type properties, usually because (a) the end user has often not been identified prior to the development commencing, and (b) there is little demand by end users for these types of services.

(d) Develop and construct

This is another variation on the same theme. In this case the client's consultants are provided with a brief from concept drawings and an indicative site layout is produced. Contractors (as part of the tender process), develop the initial design, producing detailed drawings and specifications, which they submit as part of their bid. The contractor then effectively becomes the developer, coordinating the scheme as a traditional developer would do, sometimes including arranging finance and employing other contractors.

(vi) Management orientated procurement systems

This section deals with a group of procurement methods that sees the main contractor act more as a manager of the construction process than as a direct contractor.

(a) Management contracting

This method has increased in popularity since the early 1970s. The main feature is that the management contractor does none of the construction work, instead operating as a coordinator and procurer of sub-contractors. This service is provided on a fee basis as part of the developer's management team. The management contractor provides and maintains all necessary site equipment such as offices, storerooms and roads, etc and is appointed either because of previous relationships with the client or because of bids on a competitive fee basis for the contract. The management contractor then takes all the steps necessary to complete the building to the client's specification and budget by employing a series of sub-contractors to carry out the various sub-tasks of the building.

This approach offers a number of advantages:

- The contractor becomes part of the development team, adding valuable practical knowledge and input to the planning and design process.
- It is possible that time will be saved by overlapping elements of design and construction.
- It is a useful method when the details of the works are not finalised at the time of the initial tender.
- Splitting up the works into component parts and sub-contracting them out allows the early work to be completed without hold up, whilst the plans for the later stages are defined.

There are, however, disadvantages to the method:

- The final cost of the project is not known until the final contracts are placed.
- The method's flexibility invites variations in design to be made. This can lead to problems with keeping costs under control and may lead to variation claims from individual sub-contractors due to changes in the design in other parts of the works.

(b) Construction management

Construction management is not, in fact, a procurement system. It refers to the service offered to the developer by a professional construction manager, who is often, but not always, working for a major contracting organisation. The service offered is very similar to the situation described in the management contractor section above.

(c) Design and management

Design and management is a variation on the same theme. In this case, however, the construction manager or management contractor also procures the design of the building, either on an in-house basis or, more commonly, with the architect/designer as a further sub-contractor.

With these last two methods the main advantages are related to the closer integration of the construction process into the management of the development. Time should be saved with the input of the construction professionals, particularly with regard to the more rapid identification of practical problems and with the ability of design and construction to proceed in parallel. Again, there are problems with the number of sub-contractors involved (instead of just one main contractor) and with the lack of certainty about the project cost until late on in the process.

5.2.3 Conclusions to the procurement section

As we have seen, there are a number of procurement methods available to a developer. Each has its own strengths and weaknesses. The developer should aim to match their goals with the appropriate procurement strategy when selecting a method. For example, if speed and cost minimisation is the goal then one of the integrated procurement systems should be followed. If certainty of output is required then the choice should be one of the traditional methods. Certainly the investment industry in the UK has tended to stay with the traditional methods which seems to confirm that certainty and familiarity are more highly valued. There has been some movement towards more contemporary methods of procurement in the investment and speculative market however. This tends to happen when the buildings produced across the market are similar and where profit margins are made thin by relatively low rents. This tends to be the situation with the decentralised office market and the industrial market. It seems that the preference for traditional methods in higher value situations such as city centres will be maintained.

5.3 Contracts and contracting

The final component in the execution of the project is the contract itself. This is a specialised area, one that the professional team, particularly the quantity surveyor will advise the developer on. However, a brief summary of the main contract types will be included here.

It is worth reviewing the overall purpose of the contract as this often gets missed in the detail. The purpose of the building contract is simply to ensure that the employer obtains the building or structure that they desire at the cost predicted and that the contractor is able to provide this and receive payment for the work, either as a final lump sum or, more frequently, in stages as the works proceed.

The contract should therefore be a clear and binding document that avoids any ambiguity. It should lay out the work to be done. It should define the information to be provided by each party. It should identify who is responsible for what activity. It should clearly define the monies to be paid and under what basis the money is to be released. It should lay down the procedures and process to be followed, should there be any dispute. All of this is a well-worn path for many in the construction field. Essentially, it means that although individual bespoke contracts for work can be drawn up by a developer, it would be very unwise to do so. It is far better to use standard forms of contract.

5.3.1 Standard forms of building contracts

Most building contracts in the UK involve the Joint Contracts Tribunal.

The Joint Contracts Tribunal was established in 1931 and has, for over 70 years, produced standard forms of contracts, guidance notes and other documentation for use in the construction industry. In 1998 The Joint Contracts Tribunal became incorporated as a company limited by guarantee. The company is responsible for producing suites of contract documents and in operating the JCT Council.

The main contracts offered by this organisation cover most of the main types of development undertaken. They are as follows:

- JCT Building Contract for a home owner/occupier (1999)
- JCT Standard Forms of Building Contracts (1998 Editions)
 - Private Edition With Quantities
 - Private Edition Without Quantities
 - Private Edition With Approximate Quantities
 - Local Authority Edition With Quantities
 - Local Authority Edition Without Quantities
 - Local Authority Edition With Approximate Quantities
- JCT Standard Form of Building Contract with Contractor's Design (1998)
- JCT Intermediate Form of Building Contract (1998)
- JCT Agreement for Minor Building Works (1998)
- JCT Standard Form of Prime Cost Contract (1998)
- JCT Standard Form of Measured Term Contract (1998)
- JCT Standard Form of Management Contract (1998)

These contracts can be seen to shadow the main methods of procurement outlined above. The appropriate one should be chosen according to the procurement route followed. The organisation also issues a series of other documents and materials to assist in the management of construction projects.

Taking the JCT 98 standard form, *Private Edition With Quantities*, which is the most commonly used contract, the following sections are included:

(i) *The articles*

These are the most important parts of the contract as they are the core statement of what the parties have agreed. They record the names and addresses of the parties, identifying them as employer and contractor. The articles then state the obligations of the contractor (for example, to carry out

and complete the works) and the employer (for example, to pay the contract lump sum or other sum as it becomes payable under the contract). JCT is a lump sum contract subject only to approved variations from the contract. Other articles include the identification of the architect, quantity surveyor and planning supervisor as required under the CDM regulations.

(ii) The recitals

The recitals put the articles of agreement into context and operation. There are seven recitals under JCT 98:

- The first recital describes the works as required by the employer, identifies the site and indicates that a design and Bill of Quantities have been prepared.
- The second confirms that the contractor has supplied the employer with a priced Bill of Quantities and other price related information.
- The third identifies the contract drawings by number and states that the bills and drawings have been signed by both parties.
- The fourth deals with the tax status of the employer.
- The fifth deals with the CDM regulations and the extent to which they have been dealt with.
- The sixth is an optional part and deals with the release of information from the employer to the contractor.
- The seventh deals with the situation where the employer requires the contractor to enter into bonds on other terms than those set out in the standard appendices to the contract.

(iii) Conditions, clauses and appendices

The contract then includes conditions, which are clauses that deal with issues such as working on public holidays, retention sums, arbitration and payment. The contract also includes a series of appendices, the entries of which vary. They are not substitutes for the operating clauses nor do they operate in isolation, but instead they are options designed to deal with different contractual circumstances.

The JCT standard forms of contract are meant to be comprehensive but they can be amended by the parties. Amendments are common and are often successful but they can also be the source of litigation and should be avoided or, at least, very carefully considered.

5.3.2 Conclusion to the contracts section

The comments to conclude this section are similar to those made at the end of the section dealing with procurement. It is important to select the contract that is best suited to the aims of the developer. Essentially, however, it is the chosen procurement route that will determine which contract is chosen. It is very important to get advice on this area, particularly from the developer's quantity surveyor. This is one of the main areas of their expertise, and this knowledge should be exploited.

5.4 Conclusion to Part 5

The execution stage of the project represents the culmination of what is often a long, difficult process. It is a stage where the project vision becomes, literally, concrete. In order for the completed project to realise the developer's vision this stage must be carefully planned. It is a stage that rewards attention to detail and careful preparation. If this is not done considerable delays can result, costs can mount and the end product may not be that required by either the developer or the market.

Of all the areas in this phase of the project, it is perhaps those concerned with the personnel element that are the most critical. Time taken to assemble the right team, with the right knowledge and skills, will be well spent. The right team will greatly ease the burden on the developer and ensure that all the requisite pieces of the development jigsaw are put in place.

6 Post-construction phase

6.1 Introduction

6.2 Activities involved in the post-completion phase

6.3 Responsibilities for the main activities in the post-completion phase

6.4 Sales and letting

6.5 Marketing

- 6.5.1 Residential
- 6.5.2 Commercial
- 6.5.3 Forms of marketing
- 6.5.4 Marketing for investment sales

6.6 Disposing of development projects

- 6.6.1 Sales of freehold and long leasehold interests
- 6.6.2 Lettings

6.7 Successful management of investment properties

- 6.7.1 Factors related to the quality of income flow
- 6.7.2 Commercial leases: important clauses

6.8 Conclusion to Part 6

Glossary

Break clauses	Special clauses in a lease which allows it to be terminated early instead of running its full course. These give the holder considerable flexibility in their occupation choices.
Fee simple absolute interests	Another name for freehold interests, the highest level of land ownership able to be enjoyed by private individuals in England, Wales and Northern Ireland (in Scotland the equivalent is Feuhold).
Full Repairing and Insuring (FRI)	A term used to describe the practice in many UK leases to pass all the costs of maintaining, repairing and insuring the property from freeholder to leaseholder.
General Practice (GP) firms	A generic term used to describe UK commercial property consultants.

6 Post-construction phase

6.1 Introduction

What is a successful development? There are many definitions but one overrides the rest for the majority of developers: a successful development is one that does not lose money! Part of the process that results in a successful development is related to how the product is treated after completion. This section looks at this post-completion phase.

6.2 Activities involved in the post-completion phase

There are three main options at the end of the development process. These are:

- Sell the building to an owner occupier.
- Lease the building to an occupier and sell the freehold investment interest onto a third party.
- Lease the building to an occupier and retain the freehold as an investment.

There are a number of variations and options on these but these are the fundamental choices. Each requires different activities to be carried out by the development team in the post-development phase:

- The first option requires marketing and advertising to be carried out to find occupiers and/or purchasers for the completed scheme.
- The second option requires:
 - (i) the setting up of an acceptable investment vehicle that will be suitable for occupiers and acceptable to investors;
 - (ii) marketing and advertising to find occupiers;
 - (iii) marketing and advertising to find investors willing to purchase.
- The third option requires the first two options, as above, as well as the creation of an on-going management system to service the property as an investment. This system will need to cover income collection, tenant monitoring, assessment of

maintenance, etc – all factors necessary to maintain the future value of the investment.

These activities and processes are ones that should not be carried out as an afterthought but must be integrated into the design and planning process.

6.3 Responsibilities for the main activities in the post-completion phase

The activities introduced above are largely typical functions of a good chartered surveying firm, though a separate marketing consultancy may need to be employed for specialist areas. Even if this is the case, it is best to coordinate proceedings through a partnership with a commercial agent.

It is worthwhile to thoroughly understand the make-up of chartered surveying firms. Traditionally, firms involved in this area would be termed 'General Practice' or GP firms. Strictly speaking, today this type of surveyor does not exist as the professional body, the Royal Institution of Chartered Surveyors (RICS), has reorganised its divisions into several faculties. These are:

- Antiques and Fine Art
- Management Consultancy
- Building Surveying
- Minerals and Waste Management
- Commercial Property
- Planning and Development
- Construction
- Plant and Machinery
- Dispute Resolution
- Project Management
- Environment
- Residential Property
- Facilities Management
- Rural
- Geomatics
- Valuation.

It is likely that the majority of surveyors involved in the post-completion phase will be drawn mainly from the commercial property faculty, though surveyors from other disciplines will also be used. It should also be noted that surveyors can and do have multiple membership of several faculties.

As we have seen in the development team construction, surveyors are an integral part of the team and it is important to involve them at the design stage. The list of the functional specialisms of surveyors involved in the process is quite extensive:

- Residential land agents
- Residential sale agents
- Residential letting agents
- Commercial agents
 - Retail²²
 - Office
 - Industrial
- Investment agents
- Investment and portfolio managers
- Management surveyors
- Professional surveyors
 - Valuation
 - Rent reviews
 - Lease renewals.

Although general practice surveyors can technically carry out work in all these areas, specialisation usually occurs. If the development is complex and requires many different areas of work in the post-completion phase, it is worthwhile to ensure that the firm employed can service all the areas required.

The level of fees charged by each function is rather complex as each rate is agreed by negotiation rather than by a centrally agreed scale of fees. To give an idea of the level of fees involved in some of the key functions, the following list is offered:

Residential letting	10 to 15% of gross rental value
Commercial letting	10% of annual rent (excluding advertisements, marketing fees and disbursements)
Sale to owner occupier (commercial)	1-2% of capital value

²² Larger firms will see a separation of these functions. When specialisms are allowed by the size of the organisation, agents will concentrate on one commercial sector. The markets are so different that concentrating on one type of property is required to work efficiently. In small firms, agents work across many market areas.

Sale to owner occupier (residential)	1-5% of capital value
Sale to investors	1-2% of capital value
Management fee	Either a lump sum is agreed or a percentage of annual rent is taken
Rent reviews/lease renewals	Either 10% of the new rent or a percentage of the uplift or a fixed fee with overage over a certain figure or a fixed fee
Valuation	Varies from a lump sum to 0.25-0.75% of the capital value

We will now examine each of the main functions required in the post-completion phase.

6.4 Sales and letting

This is one of the more important areas of commercial development. The timing and amounts of rent achieved can make a huge difference in the success or failure of the scheme. The agency selected should have the right blend of experience specific to the type of development being undertaken.

In agency work, particularly commercial agency, staffing and personnel issues are critical. Good agents are like gold dust. They are well organised and motivated, with good contacts in both the offices of potential occupiers and also other firms who may act for potential occupiers. These contacts make life much easier than for firms that are less experienced or less well respected, and who rely far more on 'cold calling'. In many aspects of the property world success is based upon building up a network of contacts. Property is a 'people' profession requiring a melding of technical skill and knowledge with a gregarious nature that stresses the importance of good oral and written communication. This is especially true of commercial agency work.

It is these agents who should have the greatest input into the design and planning of the project. This allows the application of information on current market requirements and future trends as inputs into the design process. They can also give advice on timing issues, e.g. at what time of year the developer should aim to finish the scheme in order to capture the greatest interest from potential occupiers.

6.5 Marketing

When to start the marketing phase, who to involve and what form the marketing of the property should take depends upon the type and size of the project being undertaken.

6.5.1 Residential

With residential property the preference is to 'sell off the plan', particularly if the scheme is being undertaken by a well-known developer who produces a type of end product with which the market is familiar. An example of this would be a major house builder, a leading player in the apartment market or a developer of retirement flats. This type of organisation is usually a national player with whom many of the potential market members will be familiar.

Usually projects such as this start with an initial announcement being made when site works commence. If the announcement is made any earlier, there is the risk that image problems may occur if the project is abandoned for some reason. This most frequently occurs due to market conditions changing, for example if the economy slides into a period of recession or if there is a marked rise in the cost of borrowing. In such cases, it is only practical to stop a development before the building works commence. However, only something as extreme as bankruptcy will stop a project when it is on site.

Once the on-site work has started then advertisements are placed in local newspapers. Quite frequently a marketing suite is placed on site.

6.5.2 Commercial

The decision as to when to commence marketing in commercial property involves similar considerations.

In a poor market, or one that follows a downturn in the market, there is effectively no choice but to try to secure an agreement to lease (pre-letting) or an agreement to buy (pre-sale) prior to the site purchase. As we have seen in the finance section, the developer will not receive funding for a speculative scheme without these agreements being in place in weak markets or where financial bodies have suffered recent losses, such as may follow a market downturn.

In a rising, strong market the initial marketing may occur at the beginning of the project in order to attract expressions of interest but most developers will wait until towards the end of the construction phase before the main

marketing is undertaken. This is because the developer will wish to capture any rise in market values and will not want to enter into a premature agreement which may be at a lower rental level than could be achieved. The marketing expenditure made too early would be premature and may well be wasted.

6.5.3 Forms of marketing

There are several forms of marketing that can be used for the different types of development project. We will separate our examination of these methods into residential and commercial projects.

(i) Marketing residential developments

- (a) The preparation of brochures giving a description of the project, a layout of the site, the types of houses and flats being built, the numbers of each type, a floor plan with outline specifications and a price schedule.
- (b) Large feature hoardings with an artist's impression of the completed project on or near the site. Many developers have found this to be one of the more useful types of marketing that targets the core market for the project.
- (c) Advertisements in local newspapers and magazines advertising the existence of a project, the type of building being produced (sizes, layout, quality) and also indicative prices.
- (d) On-site marketing presence. This usually consists of either a temporary marketing suite or a completed suite within the development manned by a representative of the developer. This representative can introduce the scheme to prospective buyers, take details of their requirements and ensure that follow-up calls are made as the scheme approaches completion. This requires good promotional literature being available for distribution to callers.
- (e) Appointments of a local agent or agents who will promote the scheme through their offices.
- (f) Web-based advertising. This has become more far more important over the last two to three years, given the number of people who would initially search for new property using this medium. For larger schemes it is worth having a dedicated site; for smaller schemes advertising through some of the more general residential sales sites may suffice.

(ii) Marketing commercial developments

The first step in commercial marketing is to appoint a suitable agent. This may be a single agent or it may be a joint agency, for example a local agent of a

national agent. There are a number of advantages as these agents will prepare the following marketing material:

- (a) A brochure with an artist's impression giving a brief specification.
- (b) A one-page flier for posting to other agents and potential occupiers or purchasers. This will give outline details of the development which will then hopefully translate into further interest on contact with the appointed agent.
- (c) A hoarding usually containing an artist's impression and an outline of the floor areas and specification of the building.
- (d) A detailed technical specification that should be drawn-up for parties displaying serious interest. This can be a limited print run.
- (e) Where the property is to be leased and to be sold on to investors, an outline lease with 'heads of terms' should be indicated.
- (f) As with residential development, web-based advertising has become more far more important. Again, for larger schemes it is worth having a dedicated site; for smaller schemes advertising through some of the more general commercial sites may suffice.
- (g) For larger schemes other advertising medium may be considered. A number of schemes have had CD-Roms prepared that allow the brochure material to be presented in a more interactive way. This may duplicate or substitute what is in the web advertisement and may include, for example, animations or films of the scheme. 'Walk through' 3-D design material used by the designers on CAD systems may be incorporated in this material.

The appointed agent will prepare mail-shot lists of parties to receive information. These will be potential occupiers or purchasers who are known to have a requirement or other agents who are known to act for such parties. Agents will tend to prepare a telephone contact list to follow up these parties.

The agent may wish to place advertisements in the trade press. There are two main national property publications in the UK (*Estates Gazette* and *Property Week*, both published weekly) and a number of smaller, sometimes regional, publications. Both the national publications also have websites offering the opportunity to advertise. Advertisements for commercial schemes are not always required. Targeted marketing via mail shot and telephone is usually far more effective and certainly, for the very large schemes, press advertising is almost seen as an admission of failure. With smaller schemes that appeal to local markets this approach may, however, tease out occupiers from the local market who had not registered interests with agents and who may not, indeed, have considered moving prior to

becoming aware of the scheme. In these cases, advertising in the local press and trade magazines may prove useful. Very occasionally radio or even TV advertising may be undertaken.

Later on in the development process of a speculative building the agent may promote the use of a launch party. This is usually done on completion of the scheme where part or all of the building remains vacant. The guest list should include local businesses, potential occupiers and their agents. These events are popular with agents in particular who always enjoy free food and drink and are useful in getting the development known in the market place – but these events can be expensive.

It is worth defining the terms ‘retained’ and ‘un-retained’ agents at this point. Retained agents are those employed directly by the property developer or investment client. In this case they are retained to secure a successful letting of the scheme and will be paid a fee by the client when they do so. Occupiers searching for space can also retain agents to find space on their behalf. These agents get paid a fee by their own clients when they successfully fulfil their instructions but not by the developer.

There are also ‘un-retained’ or free agents who operate somewhere in the middle ground and who are not under instruction by any party. What these agents try to do is put together two parties who are not aware of each other. If the letting proceeds they will try to obtain a fee from one or the other of the parties. It is at times a precarious existence but one that many agents survive and thrive on, and these agents do receive the protection of the law for the introductions they make, even if they do no more than get verbal confirmation over the phone.

Whatever the type of property or the approach taken, time taken to come up with a coherent marketing strategy with a good firm of agents early in the development scheme will pay dividends later on. Rapid leasing or sale of the scheme does more than anything else to save money and maximise profitability.

6.5.4 Marketing for investment sales

It should be noted that preparing a development for sale as an investment is not usually carried out by the same team who deals with the leasing of the property, unless a smaller firm of agents is employed. This is not simply because firms look to make multiple fees out of the same property instruction (though admittedly this is the effect of their actions) but simply that investment agents have different skills and contacts than those possessed by letting agents. How the marketing is done depends upon the

nature of the scheme. An investment grade building will only appeal to a relatively narrow range of potential purchasers and therefore a relatively limited marketing programme can be undertaken. This will effectively involve personal contact between the retained agent and investors and their agents. With smaller projects that may have wider appeal, a marketing programme similar to that outlined for commercial and residential letting above, may be required.

Methods of actually achieving sales or lettings of properties will be discussed in the next section.

6.6 Disposing of development projects

Most developments will involve some kind of disposal process. Properties for sale to owner occupiers, whether they are residential or commercial, require the sale of the occupational freehold or long leasehold interests. Investment properties will involve at least the disposal of the occupational interest on a lease. If the investment is not retained the freehold reversionary interest will also require disposal. This next sub-section looks at the methods of disposal and gives a thumbnail guide to the processes and procedures involved.

6.6.1 Sales of freehold and long leasehold interests

For the purposes of this section, sales of these two types of interests will be considered to be the same. As a brief explanation, fee simple absolute (feuhold in Scotland) or freehold interests are the highest bundle of rights that can be held in Britain below the Crown. Leaseholds (term of years absolute) are a lesser interest created out of freeholds where a consideration passes from the leaseholder to the freeholder (or higher landlord as tiers of leaseholds can be created) in return for a grant of lease, giving the right to occupy the property for a given term of years. Long leaseholds are those created for a period usually in excess of 99 years. These can be created for a number of reasons but the two most common are (a) development leases where the landowner wishes to retain overall control of the site, and (b) in properties that are in multiple occupation such as residential flats. In the latter case, this approach is required due to the peculiarities of UK common law that does not allow the enforcement of positive covenants such as to repair or to provide support. The lease contract is enforceable, hence at present all flats for owner occupation should be leasehold. The consideration, the rent, is usually nominal in the cases that we are considering here and the interest for sale is taken to be a virtual freehold.

There are a number of ways of achieving sales, though in the UK one dominates. The three main types are:

- sale by private treaty
- sale by tender
- sale by auction.

<p>Sale by private treaty</p>	<p><i>No fixed date of sale. The property is marketed as described above and the price is agreed by private negotiation.</i></p>	<p>This is by far the dominant form of sale used in the UK.</p>
<p>Sale by tender</p>	<p><i>The vendor asks for 'best bids' for a property by a given date. Usually these are submitted sealed, and opened at a given time.</i></p>	<p>Tenders are not frequently used for the sale of completed developments unless the property type concerned is rare in the area and substantial levels of interest are generated. Tenders are, however, widely used for selling development sites where developers are competing for the opportunity to develop.</p>
<p>Sale by auction</p>	<p><i>The property is offered for sale on a specific day and time, and will be sold at this time unless a previously set reserve has not been reached.</i></p>	<p>Auctions have an odd position in the UK market. In other parts of the world auctions are a sensible and widely-used method of selling. In the UK there is a cultural problem with auctions. – they are viewed as a last resort to sell 'problem' buildings such as repossessed homes, secondary investment properties and student houses. Despite this 'blight', auctions are widely used in the UK and good prices can be achieved. Several of the leading surveying practices run auctions in which some good quality property is sold.</p>

With private treaty sales, and sometimes following the receipt of tender bids, the client's agent will normally negotiate the terms of the sale with the prospective purchaser, with the ultimate approval of the instructing client. These 'heads of terms' will then be passed to the parties' solicitors for agreement of the detailed contract of sale and the final conveyancing of title.

6.6.2 Lettings

Where the property is to be leased, the retained agent has a key role to play. The agent identifies prospective occupiers and deals with general enquiries arising from other sources. He or she will arrange viewings and supply information to the potential lessees. Where the party is interested, the agent will lead the negotiations based upon the parameters laid down by the client. If the negotiations proceed to a point where the party agrees to take space then the agent will agree 'heads of terms'. These will usually include:

- the initial rental level;
- the demise of the property (the definition of what is actually being let under the lease);
- the term of the lease (its length);
- key details such as the period and mode of the rent review clause, the alienation clause, repairs and maintenance responsibilities, etc;
- any special features of the deal such as rent-free periods given at the start of the lease, or fitting-out contributions paid for by the landlord, break clauses, etc.

Once these have been agreed the terms will be passed to the other parties' solicitors for the full preparation of the lease document. The basic lease documentation will be prepared by the developer's solicitor but its final form will be negotiated between the parties, the lease being passed between each side with alterations being made until agreement is reached as to the final form.

It should be noted that in multi-let properties that are to become investment properties, it is important to keep the lease terms as similar as possible across the building. Variations in lease terms, particular key clauses such as rental values, rent review clauses and terms, and the repairing clause will impact on the overall value of the investment. Investors will seek a discount for the management problems created by having a multi-let building with a variety of lease terms. Essentially, then, the actual changes that result from this iterative process must be limited.

The interaction between the letting and the subsequent management and investment performance of the property is closely interrelated. The property's characteristics in these areas must be set up correctly from the beginning otherwise problems will persist over most of the investment life of the building. These areas will be covered below.

One of the other key roles that the agent needs to fulfil at this stage is closely related. The agent needs to carry out investigations into the quality of the potential occupiers. They will need to ensure that the tenant will:

- be able to pay the rent both now and in the future;
- be a conscientious tenant who will obey the lease covenants and look after the building.

This is again where the agency, management and investment requirements overlap. Although the agent will want to let the property as quickly as possible to secure its fee, the investment and management departments will want as good a quality tenant as possible to maintain the investment value. The value of a cash flow is not only dependent upon the quantum of money but also on the quality of that income flow, i.e. the ability of the party to pay it. A local company with little track record in business may be able to pay the same rent as a large PLC corporation, but the cash flow from the latter will be worth more because it is more secure. A managing agent will not want a tenant to fall into arrears or not maintain a property or to use it in breach of what the lease states, as this will create additional management costs and problems, for example with neighbouring tenants. All of this means that good quality tenants (good covenants) are to be preferred even if they pay less rent.

The investigations that agents should undertake will depend upon the identity of the proposed tenant. With larger PLCs little investigation should be required, although it is worthwhile to check whether the lease is with the parent company or a subsidiary, the former naturally being preferred. With smaller companies the agent should seek to obtain at least the last three years' trading accounts where possible. This should give information as to how solvent the companies are. Larger companies can be investigated using credit rating and company analysis agencies such as Dun and Bradstreet, and Standard and Poors. References should be obtained from previous landlords where possible and the companies' accountants and bankers. Many of these references are often too general to have much utility. Decisions over tenants often become a matter of personal judgement. Where there is doubt it may be possible to get additional security using factors such as performance bonds, simple deposits or personal guarantees from the directors of the companies signing the lease.

6.7 Successful management of investment properties

The following guidelines are aimed at developers who intend to retain their investment properties. They are equally valid, however, for situations where the property is to be disposed of. As we have seen from the preceding section there is a strong interrelationship between investment performance and the management structure.

There is insufficient space here to do more than give an outline of good management practice with regard to commercial and residential property. We will concentrate on the key factors that affect the performance of commercial investment property. It is these areas that the developer should concentrate on at the commencement of the investment life of the project as it makes the transition from the development phase.

An important starting point with the proper management of investment property is to hire good quality managing agents as they have the experience and the systems in place to ensure the smooth operation of the property during its life.

When looking at how to manage a commercial property we will consider the following points:

- lease length
- covenant strength
- service charges
- repair and maintenance
- rent review clause
- user clause
- alienation clause
- alterations and improvement
- other clauses.

What we are essentially looking at is the structure of a commercial lease. This document is at the heart of good management practice with commercial property and must be correctly constructed at the beginning in order to ensure smooth management in the future. It is very important to get advice from the management surveyor when these leases are being constructed.

6.7.1 Factors related to the quality of income flow

Cash flow from a property investment is what gives the property its value. As we have already seen, this value is related to both the quantum of the

cash flow and also its quality. Although quantum issues are partly management related, in the main they are determined by market forces. Quality, however, is mainly determined by management decisions, though these, of course, are also heavily influenced by market conditions. The two main areas that affect the quality of the cash flow are the lease length and the covenant strength of the tenant.

(i) Lease length

One of the key issues with regard to leases is their length. The lease length must both satisfy occupier requirements and also be long enough to suit investors. Commercial tenants want both flexibility and security. This is slightly contradictory: security comes from having a long lease; a long lease is, however, inflexible. An ideal situation for tenants is to have the choice of either giving up the lease with no penalty or continuing in occupation. Investors, on the other hand, value the certainty that comes from a long lease. The requirements of both sides of the letting equation have been in conflict for many years in the UK. The strengths of each party have varied according to market conditions, whether the market is considered to be a 'landlords' or 'tenants' market. The former exists where there is strong competition for space or the latter when there is an over-supply in the market. The situation is made more complex by the intervention of the government in the operation of the free market. A substantial amount of landlord and tenant legislation exists which investors and occupiers need to take into account. Some of this legislation affects this issue of security of tenure and the flexibility in the actions of occupiers and landlords.

As noted, this is a complex area. These are some of the issues to note as we stand at the beginning of the 21st century in the UK:

- (a) Most business tenancies in England and Wales have an automatic right to renew their leases under Part II of the 1954 Landlord and Tenant Act. The landlord has only limited grounds to oppose the grant of a new lease, therefore even a short lease taken out by a business tenant can be extended. In many respects this gives the best of all worlds to business tenants.
- (b) The market in the early 1990s in the UK was very weak. The UK saw a reduction in the length of leases from 25 years, to ten to 15 years at the prime end of the market. This effectively meant that leases would be granted on investment grade property. Even following the recovery in the market in the second half of the decade, the trend for shorter leases has been maintained.
- (c) Another feature of the market at this time was the fact that break clauses in commercial leases became far more frequently

applied and invariably in the tenant's favour. This allowed more tenants to terminate their leases early.

- (d) Changes in legislation in the 1990s in England and Wales further altered the balance in favour of the tenant. The Landlord and Tenant (Covenants) Act 1995 ended something called 'privity of contract' from leases granted after the 1 January 1996. If the tenant wants to dispose of a lease they effectively have two choices. One is to sub-let the property which creates a level of interest below the tenant's lease. The other alternative is to assign the lease. This is effectively the sale of the lease with, in theory, the original tenant dropping out of the picture with the obligations under the lease been taken on by the incoming purchaser of the lease. This was naturally the favoured option for tenants who no longer wished to have the liability of the premises. However, prior to the 1995 Act, although the original tenant was no longer in occupation nor paid the rent, and where the lease had been altered to note the change in occupier, the original tenant still had the residual responsibility for the premises. This was due to the original landlord and tenant having been party to the contract negotiations and agreement to which only they were privy. As a result of this, the landlord could revert to the original tenant if the assignee defaulted or breached a lease clause at some point in the future. In normal circumstances, therefore, it did not really matter if a PLC covenant assigned its lease to a much weaker tenant as the privity of contract acted as a virtual 'back stop' in the case of future default by the new tenant. This situation was felt to be onerous on tenants and much lobbying was done in the early 1990s which resulted in the legislative change.

All of the above factors have made it much more difficult for an investor to secure a good tenant on a long lease. The developer has to be much more conscious than they used to be in the creation of the investment vehicle, in order to ensure that value is maintained. Some ways in which to protect future security of income are:

- The inclusion of authorised guarantee agreements in the lease. These agreements arose out of the 1995 Covenants Act and are intended to mitigate the effect of the loss of privity contract. They allow the landlord to require the initial tenant to offer limited guarantees on future payment of rent if they choose to assign the lease to a third party.
- A tighter alienation clause can be included in the lease that requires the landlord's written approval of any assignee to be

obtained by the existing leaseholder. These clauses also give the landlord the ability to reject the tenant on the grounds of quality. Prior to the 1995 Act, such clauses were illegal.

- It is possible to jointly agree to have the lease of the commercial property outside the 1954 Act, i.e. giving the tenant no security of tenure. This has to be done by joint application of the parties to the courts. This may seem perverse, in that it may automatically shorten the lease, but it can swing the power of negotiation to the landlord if the tenant has no security at the end of the lease. This system has worked very successfully in Scotland for many years as the 1954 Act provisions do not apply north of the border.

(ii) Quality of the tenant who signs the lease

As we noted, one of the main issues regarding the management of an investment property is to ensure that the highest quality tenant possible is signed up to the lease, even if it means accepting a lower rent.

Where this is not possible there are mechanisms that can be put into place to mitigate the effect of a weak tenant. Two ways of achieving this are outlined below:

- (a) To enter the tenant into a personal or third party guarantee. This is particularly useful where the business signing-up for lease is of dubious quality or where it has not been in existence for many years. As there is a separate identity to a limited business and its directors, without a guarantee a default on business debt cannot be corrected if the business goes into liquidation or otherwise fails. Where a personal guarantee or a guarantee from a solvent third party exists, the property owner can at least cover some of the costs and recover some unpaid rent from this source.
- (b) A similar effect can be achieved by requiring the incoming tenant to take out a bond with a financial institution. The bond is effectively an insurance policy for which the tenant pays a one-off or annual premium. The bond is made in favour of the landlord who can only access it if the tenant is in serious default.

6.7.2 Commercial leases: important clauses

The following clauses in commercial leases should be very carefully considered in order to maintain the value of investment property.

(i) Repair and maintenance clause

It is important to ensure that the buildings/premises are well maintained and are returned to the owner in an acceptable state. In most cases, investors in the UK seek to pass all the costs of maintaining and repairing a building to the tenant. In a single-let building this is done by way of the repairing clause, in multi-let buildings this is done using service charges (see below).

The majority of leases in the UK are what is termed full repairing and insuring (FRI). This is a description of what has been outlined above, namely that the tenant is responsible for all outgoing costs including those of insuring the building. Most of leases also require tenants to carry out periodic decoration to maintain the image of the building. This maintenance clause states the normal number of years to pass between redecorating internally and externally. The repairing clause usually defines how the building is to return to the owner at the end of the lease.

Again, it is good management practice not to be too strict nor to create onerous repairing clauses, as these will make the premises difficult to let and reduce the value in the long term.

(ii) Service charges

Service charges are essential in multi-let buildings. A basic requirement of UK investors is that rents should be net rents, i.e. no deduction should be made from the rent for repairing, maintaining, heating or lighting a building. In a single-let building this is generally covered in the repairing clause (see 6.7.2(i)), which makes the tenant responsible for all repairs both inside and outside the building. In multi-let buildings, however, the work needs to be undertaken by a central agency to ensure that it is carried out and managed by the landlord's representative. To ensure that the rent received on the property is still a net rent, the costs of all of the work required should be recovered from the occupiers. This is done by way of a service charge. There should be no shortfall on the service charge, otherwise the investment value of the building will be reduced.

There are various ways of calculating a service charge and constructing it for the recovery of the landlord's outgoings. This varies from an estimate of the annual or quarterly costs of maintaining the building with an up-front payment and mechanisms for additional recovery or repayment, to actual recovery of costs as the work proceeds. The service charge clause needs to be accurately constructed. It should also not be too onerous as this can reduce the attractiveness of the property in the market and impact on its investment value.

There is sometimes a tendency to make service charge provisions too clever. Some allow almost unlimited recovery of cost as the landlord sees fit, up to and including the complete rebuilding and redevelopment of the building. This is particularly true of residential buildings. As we have seen, multi-let residential buildings are leasehold. There must, however, be an overriding freehold interest. The leaseholders normally pay a nominal rent to the freeholder who is responsible for the maintenance of the building. The main trouble is connected with the quality of leases in residential property. They are often very loosely constructed as compared with a commercial lease. They are therefore rather easy to exploit by the unscrupulous. There are a number of examples of residential leaseholders finding themselves with excessive bills charged under the service charge.

(iii) Rent review clause

The rent review clause is one of the critical areas of the lease, though its importance has waned as leases have got shorter.

The clause is the mechanism that allows periodic reviews of the rent to take place – normally each year for residential properties and poorer quality commercial properties, every three years for secondary commercial properties, and every five years for top quality, prime property lets on longer leases (ten to 15 years).

There are various ways in theory of constructing a rent review clause. For example:

- an adjustment of the rent using an index (retail price index, building cost, etc);
- fixed rate increases (e.g. five per cent per annum);
- periodic review of the rent to the current market rental value of similar properties on the market at the time of the rent review.

Although all three are a viable method on paper, it is only the latter which is actually acceptable in UK practice. It is also, although looking simple, actually very difficult to operate successfully as it requires a set of circumstances to be clearly defined so that each party knows exactly what is being valued.

Effectively, what the parties are asked to do in rent reviews is to assume that the premises are vacant and to let at the time the review occurs. What, then, would this property be let for in the open market to an occupier acting with normal business motives in mind? This sounds straightforward and, indeed, the original rent review clauses were very simple.

When considered more carefully, however, it is much more complex. What terms of the new lease are to be considered? What state of repair is the demised property assumed to be in? Should incentives that are being given to tenants in the open market at the time of the review be taken into account in the calculation of the new rent? Should any improvements that have been undertaken by the tenant be included in the calculation of the new rent? These and a whole host of other questions have to be addressed in the clause. Modern rent review clauses attempt to comprehensively cover all these questions.

The rent review clause should be carefully considered as it is perhaps the single most important clause for investors.

The rent review clause in the UK normally does not allow the rent to fall at review. Inaccurately, these clauses are referred to as being 'upward only' whereas, in fact, they are ratchet clauses whose normal wording is that the rent on review should be higher than the current market rent or the existing rent passing on the property. Certain tenants and pressure groups have lobbied government to outlaw clauses such as these, but at the time of writing these clauses are almost universal in the market place.

Although on the surface they do appear onerous they are, in fact, only an issue when market rents have fallen severely and rapidly. This has only occurred twice in the post-war period and then only for fairly limited periods. The clause does, however, provide investors with considerable security and is highly valued by the investment community.

The detailed construction of the rent review clause should be left to the advice of a rent review surveyor and solicitor working in tandem. The clause should have a timetable and must also have some mechanism for dispute resolution by a third party, either by resort to determination by an independent expert or by an arbitrator. The timetable should not be strictly construed, otherwise the lease will be deemed to be onerous.

(iv) User clause

The use of building or premises can be defined in two ways: fundamentally by the land use planning system and also by the user clause that exists in the lease.

Why would a landlord wish to regulate the use of the building? The answer is to do with management. In a residential building the landlord would wish to ensure that no commercial use occurs that could interfere with other occupants in the building. In retail property, the mix between tenants is

important in order to ensure that a good range of shoppers visit the shopping centre. With office property, you would not want an undesirable use to upset the other tenants.

User clauses enable the building owner to maintain a balance between tenants. All user clauses, however, should not be 'closed', allowing no other use than the one defined. This also applies to all other clauses. Normally clauses should be constructed to define the use that allows other users to be considered on written application to the landlord. It should be written in the lease that the landlord's consent 'should not be unreasonably withheld'. These five magic words should be applied to many of the clauses in the lease as they allow the landlord to keep reasonable control yet allow the tenant some leeway and flexibility.

(v) Alienation clause

The alienation clause deal with disposals. Normally leases should allow the sub-letting of all or parts of the demised property but allow the assignment of the whole of the property only (i.e. a tenant cannot sell a part interest in a lease but can create an under lease of part of the property). All such transactions should require the landlord's consent but such consent should not be unreasonably withheld. As we have noted, the ending of privity of contract in England and Wales means that this clause requires greater scrutiny.

(vi) Alterations

Normally, leases should allow all non-structural alterations, e.g. work to internal partitioning, without the need for additional permission from the landlord. All other alterations should require consent, particularly if they involve the alterations of pipe work and wiring, the movement of fixtures and fittings or any work that involves any element of the structure of the building. The reason for this is to ensure the safety of other tenants, the structural integrity of the building and indeed the value of the building. Whilst the landlord should retain an absolute right to prevent structural change to the building, any other work should require the landlord's consent which is not to be unreasonably withheld.

(vii) Other lease clauses

Other clauses include such things as access rights, arbitration, issues to do with the landlord's interest disposal, and should also define the landlord's responsibilities. Commercial leases in particular are very thorough documents with a typical commercial lease being in excess of 100 pages

long. Landlords should resist the temptation, however, to make leases too onerous as this tends to have a major impact on value.

6.8 Conclusion to Part 6

There are some simple rules which affect the management of investment property:

- Good management and good investments work together.
- The value of investment is essentially determined by the quality of the income flow it produces. This is only partly determined by the quality of the building and its location. A very important element is the quality of the tenant for the terms under which they occupy the premises, i.e. the lease. Each clause in the lease is important and the whole should be carefully scrutinised by both investors and occupiers.
- When the lease is signed it is too late to correct any mistakes, at least in all practical terms. Every effort should be made to ensure the lease structure is correct, even before the first draft is delivered to a prospective tenant's solicitor.
- Tenant selection and careful vetting of prospective tenants is essential to ensure that the building will be properly maintained and that the income flow will have as few interruptions as possible.

If these rules are followed then management should be straightforward and the investment performance of the building should run smoothly.

Does everyone get this right? The answer is, in fact, that considerable money can be made in the secondary property market by property companies who purchase older investments and 'work' them. 'Working' can mean refurbishment and remodelling but often means correcting errors in leases and problems in occupation, therefore adding back 'lost' value. Admittedly, part of this opportunity arises out of the passage of time and changing market practices but a lot is due to the errors made when the building was first let.

The overall rule for success is to get the investment vehicle right from the beginning!

7 Risk appraisal and risk mitigation: A common sense approach

7.1 Introduction

7.2 Identifying risk

- 7.2.1 Delays in construction and development
- 7.2.2 Changes in costs or unforeseen expenditure
- 7.2.3 Reduction in value of completed development

7.3 Conclusion to Part 7

7 Risk appraisal and risk mitigation: A common sense approach

7.1 Introduction

Property development is a risky business for a number of reasons. Firstly, the returns from development are very high. The reason for this is that people who are involved in property development are compensated for the high levels of risk that they run. You do not get something for nothing. Secondly, there is evidence that the degree of risk involved in development can make a number of property developers go out of business, often spectacularly.

If you search through the recent past in the financial press you will find a number of examples of companies who have failed. One example is the developer of Canary Wharf in London Docklands. Olympia and York was one of the world's most successful property developers who initially set up in Canada but undertook successful schemes all over the world, including most notably, New York. It was led by two of the most successful entrepreneurs, the Reichmann brothers. Both, but particularly Paul Reichmann, were considered to be two of the most astute, bold and, indeed, successful people in property. However, in early 1992 they became part of what was then the biggest private financial failure in world history. They were trapped by taking too much of a development risk, essentially in the London Docklands project. There were not alone as many developers went out of business at this time – all essentially failing because they took on too much risk.²³

The way fluctuations in the expected outcome of the development can impact on the profitability of the project can be illustrated in a simple example. Here we have a simple commercial project at the appraisal stage. The market and site have been analysed and the following values for the key variables have been assessed:

²³ It should be noted that Paul Reichmann has risen phoenix-like from the ashes of the Olympia and York fiasco. He has purchased Canary Wharf from the receivers and from being in serious difficulty the project has gone from strength to strength with a substantial and very successful development programme. In many ways this underlines the fact that the concept of the project was correct but that the developers were simply overtaken by events.

SPECULATIVE OFFICE PROJECT

Built area	1,000 m ²
Net area	800 m ²
Rental value	£250 m ²
Investment yield	7%
Interest rate	8%
Development costs (inc. all fees)	£900 m ²
Land cost	£1,000,000
Planning	6 months
Construction	12 months
Letting	3 months
Incentive	3 months

When these figures are put into a simple residual calculation a healthy profit is predicted:

SIMPLE APPRAISAL		
Value on completion		
	Rental value	£200,000
	Capitalised @	
	7%	<u>14,286</u>
		£2,857,143
	Less costs@ 6%	<u>- £161,725</u>
		£2,695,418
Less costs		
	Development costs	£900,000
	Interest charge (construction)	£36,000
	Land cost	£1,000,000
	Interest charge (land)	£122,369
	Void cost	£39,987
	Incentive	£50,000
	TOTAL COST	<u>£2,148,356</u>
	PROFIT	<u>£547,062</u>
	Profit on cost	25.46%

Given these figures, the project is given the go-ahead. The land is purchased and the planning stage of the scheme commences. Here is where the first minor problems occur. The planning negotiations take longer than expected, forcing the developer to make changes to the scheme that

cause a small rise in construction costs. In the meantime, interest rates have moved up two per cent, a relatively small change but one that increases the costs of the scheme a little more. When the scheme gets on site, unforeseen problems in the ground delay construction and increase costs, again only slightly. By the time the scheme is completed, the letting market has deteriorated slightly. Rents are some £20 per m² less than expected. Lettings are taking longer to negotiate and tenants are wanting a little more as an incentive to sign leases. In the investment market investors are now seeking one per cent more per annum as an initial return to compensate them for the lower rental growth they perceive will occur in the future.

The final, actually achieved, values for the key variables are as follows:

SPECULATIVE OFFICE PROJECT – ACTUAL VALUES ON COMPLETION

Built area	1,000 m ²
Net area	800 m ²
Rental value	£230 m ²
Investment yield	8.00%
Interest rate	10%
Development costs (inc. all fees)	£950 m ²
Land cost	£1,000,000
Planning	9 months
Construction	15 months
Letting	9 months
Incentive	6 months

What we have seen, therefore, is a fairly typical project that has not quite turned out as the developer expected but is not that far removed from the initial appraisal figures. The consequences for the profitability of the project, are, however striking:

CALCULATION OF ACTUAL RETURN ON PROJECT**Value on completion**

Rental value	£184,000
Capitalised @	
8%	<u>12,500</u>
	£2,300,000
Less costs@ 6%	<u>- £130,189</u>
	£2,169,811

Less costs

Development costs	£950,000	
Interest charge (construction)	£60,099	
Land cost	£1,000,000	
Interest charge (land)	£210,000	
Void cost	£164,508	
Incentive	£92,000	
TOTAL COST	£2,476,608	<u>£2,476,608</u>

PROFIT - £306,796

Profit on cost - 12.39%

This is a graphic illustration of the degree of risk that developers run. For a small developer this loss of over £300,000 on the £2.476m invested would probably mean financial disaster. Small changes are magnified, there also tends to be 'double hits' on the value of the completed schemes; if rents move down so yield tends to move up, lowering the income multiplier applied. This is essentially what happened to many of the developers in the early 1990s although what finally tends to drive developers out of business is their inability to service debt.

Our example underlines the fact that when doing any sort of development project, risk should be considered at every turn and avoided where possible. Where it is not possible to avoid it, it should be mitigated as far as is possible and should only be accepted when no other course of action is open. You can never fully eliminate risk but you can be sensible with it. Risk should not be ignored or hidden from. This is the worst possible course of action. It should be identified, quantified and then avoided, mitigated or accepted. This should be the standard process followed throughout the development.

7.2. Identifying risk

Risk as a topic can be addressed in several ways. For example, it is possible to break risk down into its component parts, as is done in the capital markets where risk is classified as being systematic or specific. This book will not take a high-level theory approach but will try, instead, to stay in the practical realm.

The concept of risk is not uniform. Some things have a high probability of occurrence but a very low level of consequence. An example of this in development is a movement in interest rates. There is a reasonably high chance of interest rates moving during a project but the consequences are not usually serious unless the movement in rates is excessive. On the other hand, some things have a low risk of occurrence but when they happen the consequences are severe. For example, a military coup in the UK would have a huge impact on the investment market but the chance of this occurring is fairly minimal and can, to all intents and purposes, be ignored. One of the key skills in risk appraisal in property development is to identify those risks that are of major consequence and also have a significant risk of coming to pass. It is these factors that should be concentrated on.

The key goal of a development project for most developers is to minimise the risk of the development costing more than is worth. Essentially, it is as simple as that.

What might cause this to occur? There are three main areas to consider:

- Delays in construction and in the overall development programme.
- Unforeseen costs.
- A reduction in the value of the completed development as compared with the original appraisal.

It is these three areas, either singly or occurring in combination, where the greatest problems can occur. We will consider each of the three areas in turn.

7.2.1 Delays in construction and development

Delays in the construction programme can create a number of problems: they tend to cause costs to increase; they add to the interest charges; they may cause the developer to lose a tenant if the scheme is late and key dates are missed. Delays are to be avoided wherever possible. We will consider some of the most common reasons for delays in the construction and development programme below.

(i) Problems in the ground

One of the most common reasons for delays in construction is a problem in the ground. These include problems that arise from:

- poor ground-bearing capacity;
- hard rock on-site;
- ground contamination;
- archaeology.

The identification of all these factors is down to proper investigation prior to construction. Money should be spent on proper, comprehensive surveys and testing of the site. This includes investigations of documentary evidence from past users of the site, checking the county archaeologist department and soil and geological surveys of the site. If possible, a full site survey, both surface and sub-surface should be undertaken. Basically, if any doubt exists about the site then investigations should be carried out wherever possible.

Quantification should be carried out at the appraisal stage. Any information that comes from the site survey should be incorporated into design and fully costed. Those areas where there is uncertainty should see the variations in possible outcomes priced and the impact on the profitability of the scheme should be assessed using these different scenarios. The reader's attention is directed to Part 4 where scenario analysis was examined. If the impact is significant on the project outcome, the probability of the outcome occurring should be assessed.

Mitigation depends upon the factors being considered. If the ground conditions are an unknown quantity, it is important to have contingency plans such as alternative designs for the execution of the project or key aspects of the project such as the foundations. With issues such as potential archaeology on-site it is possible to programme, in time, a 'rescue bid' period with the cooperation of the county archaeology department. This body will then know the time period available for the excavation and also what funding is available.

(ii) Planning delays

Delays that arise from problems in planning are usually related to issues such as refusal of consent or the alteration of details of the design following the initial grant of planning permission.

To avoid the maximum impact on the programme it is ideally best not to proceed with the scheme without detailed consent being in place. This is, of

course, not always possible but certainly it is best to avoid major financial commitment if the planning situation is uncertain. A very important risk reduction technique is the basic consultation with the planning authorities. It is also advisable to enter into dialogue and discussion with any neighbours to the development. If possible, within the boundaries of commercial confidentiality, it is worth being as open as possible so that the application does not come as a surprise to neighbouring occupants. This will reduce the risk of objections to the scheme being made at a later date. If planning is to be a problem, it is best to bring issues out into the open as early as possible and to employ planning consultants in order to avoid expensive disruption later in programme.

(iii) Problems with existing structures

The problems with existing structures can fall into two categories:

- Problems with structures on-site. These problems are related to the refurbishment, alterations and demolition of the structures actually existing on-site.
- Problems with structures off-site. These problems are related to the support of, damage to, trading performance of, and rights such as rights of light, etc enjoyed by neighbouring buildings.

Existing structures are extremely difficult to deal with as there are many unknowns, particularly with older buildings. Refurbishment is particularly tricky, especially if major structural alterations are involved. The solution – although solution may be too strong a word – is to carry out as much prior investigation as possible, including partial dismantling of the building to reveal the internal structure.

Rights of third parties and the effects on neighbouring structures of the development should be very carefully investigated and a proper due diligence process should be undertaken for this area. This is due to the fact that the courts are very protective of third party rights. Neighbours who have been, or are potentially going to be, affected by construction can take out injunctions to prevent the scheme proceeding until the issue has been resolved. This can be extremely expensive. With these issues the best mitigation is, again, prior investigation.

Again it is very important to test the impact of different scenarios on the appraisal where doubt exists. It is best to be realistic rather than optimistic and find that the development is heavily exposed to risk. Risk is essentially uncertainty. Investigations should have the aim of reducing the uncertainty, of making the unknown known. It is only those items that cannot be fully

investigated that should be appraised in this way. Appraisal and scenario analysis is no substitute for proper site investigation.

(iv) Failure of contractor/sub-contractor

The failure of a contractor or a critical sub-contractor can have dire consequences on the project. Problems that can occur include interruptions of work, additional costs from finding a substitute contract and failure to meet completion dates. One key problem is that it is very difficult to predict when these problems may occur and consequently, what the delays and consequences may be. It is therefore almost impossible to quantify the impact of contractor failure.

The best mitigation and risk reduction technique to follow is, again, investigation. The list of potential contractors should be examined very carefully to check both the experience of the contractor and their financial standing. Credit checks should be carried out to ensure that the contractor is paying his or her bills within a reasonable time. If there is any doubt about the contractor but the client wishes to proceed with the individual, performance bonds and insurance taken out by the contractor and payable to the developer on the default of the contractor can reduce the effect of failure.

(v) Construction and buildability issues

This factor could fall into the cost element. It is mainly related to design issues, usually where the building is technically innovative or is designed to make a visual or aesthetic impact. All too often there is insufficient practical detail available to the contractor to actually build the building. This may seem unlikely to the outsider but it is not unusual for contractors, even with fairly modest buildings, to be waiting for details to be supplied from the design team on-site. It is also not uncommon for the contractor to resort to 'self design' elements of the building. This can lead to delays and inefficient working for the contractor for which the procurer will pay heavily.

The classic example of this is the Sydney Opera House. The original architect came up with the concept, reputedly by slicing an orange and rearranging the segments. However, this is just about all he did. When construction commenced there was effectively no detail as to how the building should be built or as to what went inside. Not surprisingly, this project was extremely late and also well over budget. The project was a national scandal in Australia, perhaps similar to the recent Millennium Dome project in the UK. Fortunately, the building has enjoyed a happier life since it was completed.

How to mitigate or reduce the risk of this factor is difficult. The obvious answer is to keep the project simple and avoid unnecessary design problems. Where this is unavoidable, the selection of the architect is the critical factor. The past record of the architectural practice should be scrutinised not only for architectural excellence in the field related to the project but also for their record of practicality in construction. If the project is shown to be highly sensitive in the appraisal to changes in cost or in timing then the developer is running a very high level of risk if he or she chooses to proceed with an innovative design. This is one of reasons why the investment properties built in the UK tend to be bland and unadventurous. Investment clients tend not to want to make statements, preferring instead safe projects that make money.

(vi) Weather related delays

Frustratingly, the construction industry is largely carried out outside and is thus subject to the same difficulties that affect our sporting programmes. Cold, freezing weather can prevent concrete being poured; rain can prevent a whole host of activities.

Mitigation and risk reduction is again not easy. Careful consideration of the programme and timing of activities should be carried out where possible to reduce the risk of weather-sensitive construction being disrupted. If this is not possible then the design should be scrutinised in order to determine whether alternative solutions are possible which may avoid some of these problems.

(vii) Poor project planning

This is more of an internal project problem but it can affect the overall timing of the project. Whilst there is flexibility in some components of a building as to when and in what order work is carried out, it is more common for tasks to be dependent upon the prior completion of others. For example, a decorator needs the plastering completed, the plasterer needs all of the electrical and plumbing installation to be done, whilst these trades need the internal walls and floors in place, etc. Failures and delays downstream in the project can have considerable knock-on effects.

Mitigation, like many of these factors, is down to good planning. In particular, a specialist project manager should be employed if the project has complex elements to interact and correctly sequence. One of the key tasks of the project manager is to prepare a critical path analysis of the project. This process identifies the key tasks that need to be completed and the logical sequence in which they must occur. This will enable the project to proceed smoothly and without delays.

7.2.2 Changes in costs or unforeseen expenditure

Many of the items mentioned above also lead to increases in the cost of the development. There are, however, specific factors that can occur during the development which lead to an increase in cost. These need to be identified separately and appropriate action taken.

There are two common causes of changes in cost: changes in the interest rate and changes in the actual cost of construction. We will deal with each in turn.

(i) Interest rate movements

Interest rate movements are almost inevitable and it is extremely rare for them to remain stable for more than a year. Interest rates are the primary tool of economic management used by contemporary governments.

In reality, interest rates themselves have very little effect on 'normal' development projects. This is despite a widespread belief that it is changes in interest rates and consequential rises in the cost of financing projects that are the prime cause of project failures. In fact, there is a relationship between interest rates movements and project failure but it relates to the fact that the movements are a symptom of wider problems in the economy. Rises in interest rates in recent years have been associated with financial constraints being imposed by the Government to control excessive demand and thus, control inflation. There is a direct effect on the profitability of both projects and development companies generally but perhaps the biggest effect comes from the consumers of the end product of the development process cutting back on demand. As we have seen from the appraisal section, development viability is most sensitive to changes in the value of the end product and a reduction in demand tends to have a consequent effect on prices. The effect is perhaps most direct and most marked on the residential market where consumers are directly influenced by the cost of borrowing on mortgages.

Although this section deals with factors that can lead to rises in construction costs, developers should also be concerned about proceeding with developments where interest rates are falling, even though this will, of course, lead to a reduction in construction costs generally. The reason for this concern lies in the reason for the cuts in interest rates – to stimulate demand in the economy. Small cuts in rates can be seen to be prudent economic management and fine-tuning. Larger, more sustained cuts suggest an economy in decline with general reductions in levels of corporate and private spending and thus a reduction in the demand for the products of development.

Rises in interest rates can be mitigated against in a number of ways, many of which were reviewed in the finance section. These include fixed rates loans and hedging using financial instruments. These measures can deal with the symptoms of increasing costs but they can do little to mitigate against the demand side of problems. This can be partly addressed in the letting and sale phase (see below) but primarily dealing with these factors is down to the developer making prudent decisions as to the timing and nature of the development produced, even in making a decision as to whether to proceed or not. Developers should keep up to date with trends in the local, national and world economy and develop an understanding of how the economy works. An economically literate developer is likely to be more aware of potential risks and be less likely to be suckered into the over-optimism that is the primary cause of failure amongst the sector.

(ii) Rise in construction cost

There are two slightly different circumstances to consider in this section:

- When the final tender sums are in excess of the initial estimates.
- When the final contract sum is in excess of the initial estimate and/or the tender figure.

The first situation comes about when the project goes out to tender prior to the building contract being awarded. It can arise from a number of causes: the design of the building may not have been finalised at the feasibility stage; the quantity surveyor may have under-estimated the practical problems of carrying out the project; the market circumstances may be less competitive than expected. This occurs when there is a glut of construction work allowing contractors to pick and choose the developments for which they will tender competitively, putting high prices in for the remainder.

Mitigation or avoidance of this is difficult. Fully designing the project as early as possible is certainly a wise move, although taking one of the alternative procurement routes may be an alternative. This may also be the most appropriate route to encourage more competition for the contract; an alternative procurement route that offers a contractor the ability to make a better profit margin may, ironically, see the overall construction costs being reduced. The need for balancing control with cost discussed in the procurement section should, however, always be paramount.

In the second situation there are two major causes of fluctuation between tender prices and the final cost of construction. The first is due to the effect of unforeseen problems during the construction work. This may be due to previously unknown problems in the ground (for example, contamination or

unforeseen hard rock hindering excavation) or with working with existing structures (conversion work is particularly prone to this). These risks can be largely mitigated by good site investigation, though the risks can never be completely eliminated. The second major cause of price changes is due to changes in design or client requirements between the tender process and final completion.

The public has become used to large, public contracts never seeming to come in on budget or on time. There is a myth that all construction is the same, that cost and time targets are rarely met. In fact, an examination of most investment development projects will show that there is rarely much difference between the initial cost estimates, the tender sums and the completed contract sum.

The reason for this is the way in which the projects are organised and conducted. By their nature, public type projects are subject to considerable consultation, discussion and thus design change throughout their lives. This is an undesirable state of affairs on a construction project, particularly where on-site work has commenced. Under the construction contract, the contractor is allowed to claim for disruption of work, additional head office and supervision time, abortive expenditures on material or plant order, as well as higher rates for actually carrying out work that differs from the original contract documentation. This is how many contractors make an adequate profit margin on construction work and contractors often employ cost specialists to exploit these opportunities.

Although, again, an alternative procurement method other than the traditional approach could be considered (i.e. one that would allow a scheme to proceed prior to the final design being completed) this is often not appropriate. In most investment type projects it is important to ensure that all the design work has been completed prior to the tender process being initiated and that there is strict control of the project during the construction phase. The temptation to change details of the project should be resisted unless the reasons for change are significant for the success of the project. These reasons may include changing the form or specification of the building to suit the requirements of a particular end user. All other changes after the tender documents have been finalised should be resisted.

7.2.3 Reduction in value of completed development

The final factors that will be considered in this section are the most important. These are the factors related to the end value of the development. As we have seen, development appraisals are most sensitive to these factors and it is these that are biggest killers of development projects.

The main risk areas to the end value of a property development scheme are:

- Adverse movement in the market:
 - falls in prices of properties for sale;
 - reductions in rents achievable on properties to let;
 - increases in the investment yield on investment properties for sale.
- Delays in letting.
- Changes in the quality of the investment vehicle produced.

(i) Adverse movement in the market

Developers will always be vulnerable to adverse movements in the market. The timescale of the majority of development projects means that the market into which a property is introduced will almost certainly be different in some way from that envisaged at the time of the appraisal.

If variability must be expected then it is imperative for developers to fully explore the nature and extent of their exposure to adverse fluctuations. We have already seen that this is done by sensitivity analysis. It vitally important that this analysis is carried out at the appraisal stage, preferably using the most sophisticated technique possible. The developer must understand how much they are at risk in order to take the basic decision to accept the risk and to proceed with the development.

There are steps that can be taken to mitigate the effect of adverse market movements during the course of development. In good markets most commercial developers will avoid making a decision about letting or selling the property until as late as possible for fear of reducing profits by accepting a price that might be exceeded later on. In poor markets the reverse is true: it will pay developers to try and achieve pre-lettings (lease agreements before the completion of the project) or pre-sales (sale of the long-term interest in the project prior to completion) to secure the income flow, the yield and the financial exit strategy from the project. When projects are commenced under poor market conditions many developers find that this is the only course of action that they can follow as pre-lettings and pre-sales will need to be in place before finance can be secured. These actions greatly reduce the risk inherent in a development project.

(ii) Delays in letting

As we have seen from the financial appraisal section, in a speculative development it is the period from the end of construction to final letting

where the finance charges on a conventionally funded development project increase at the greatest rate. Delays in letting a building can seriously jeopardise the success of a scheme.

One solution to this has already been discussed. Attempting to agree pre-lets early in the scheme or before it has even begun removes this risk, albeit at the cost of agreeing the rent at too low a level. The other main mitigation methods are really down to preparation and planning. Firstly, it is important to stress the significance of appointing a good letting agent at an early stage of the project. A good agent will target those occupiers who are genuinely in the market for space. They will also provide input into developing the marketing and advertising strategy that will see the property exposed to the right decision makers at the right time, as well as ensuring that the right product is produced at the right time.

(iii) Changes in the quality of the investment vehicle produced

This is not strictly a risk factor but is rather a step that a developer may consider as a reaction to a deterioration in the market. It is included, however, because it represents a type of risk that could be classified under the heading of 'temptation' and is thus one that a developer should try to identify and take steps to avoid. It concerns one of the most difficult areas for a developer facing a downturn in the market, underlining the fact that, in commercial development at least but increasingly in residential development, the developer is serving two markets: the occupation market and the investment market.

The first impact on the property market of adverse movements in the economy is usually on the former. Developers frequently face a situation where good quality tenants shelve plans for new space in the face of falling demand in their own market sectors. When this occurs developers may be tempted to secure a letting by compromising the assumptions originally envisaged. This may be by:

- accepting an offer from a lower quality tenant;
- agreeing to shorter lease lengths;
- relaxing the terms of the lease away from those required by the mainstream investment market (i.e. away from an 'institutional' lease).

This is a dangerous as all these steps will have a major impact on the investment value of the investment. Our 'base' appraisal used throughout this book applied a yield of seven per cent to the investment produced which assumed a letting to a good quality tenant on an institutionally

acceptable lease. This equated to an income multiplier of 14.286 times the annual income. Taking the three steps above but keeping all else the same might see the yield move out to nine to ten per cent because the security of the investment would be so eroded. This would equate to an income multiplier of 10 – 11.111, i.e. a reduction in value of around a quarter. The changes may, indeed, make the investment unsaleable.

This, then, is a step that a developer should only make as a last resort when all other routes have been exhausted and when foreclosure is imminent. Alternative steps that may be considered are to offer more substantial rent-free periods or other incentives to take space.

7.3 Conclusion to Part 7

This section of the book may have put prospective developers off the idea of ever carrying out a development. It is often said that people who spend time considering all the risks involved in a development would never do it. There is a grain of truth in this as it is easy to become obsessed with the downside risk of development. However, although we have concentrated on downside risk here because it is that which developers should be most concerned with, it should also be noted that property development is also subject to upside risk, i.e. that the factors we have considered here can move in favour of the developer giving sometimes quite astronomic returns. Also there is no excuse for a developer playing Russian roulette and ignoring risk. Risk is there, sensible decisions should be taken to deal with it. This means that it is important for developers to specifically address it.

Much of this part of the book keeps returning to the same thing: the need for diligence in the preparation and planning of the development project. In many ways a developer needs to be schizophrenic in personal qualities, needing the vision of an architect, the boldness of a gambler and the diligence of an accountant in order to succeed. It is perhaps the latter quality that should come to the fore as the scheme proceeds from idea to reality. This underlines the fact that there are no easy answers in development.

To misquote Einstein, success in development is 90 per cent perspiration spent in getting all the details of the scheme, including assembling the team, right at the start.

Case study 1

Macintosh Mill, Macintosh Village, Manchester 2001-present

Developer: Taylor Woodrow Capital Developments Ltd¹

Introduction

This case study illustrates the depth of work required in the early stages of a development of a major city centre scheme, and the level of activity necessary to obtain the consents and to establish the conditions required to bring a development to site.

Project outline

The project is a mixed use development of Macintosh Mill and its associated buildings. The development was intended to provide 510 residential units in a mixture of new build and conversion of existing mill buildings. The new build sections included two 15-storey towers whilst three 19th-century mills were to be refurbished and converted for residential use. Other parts of the complex were to be converted to offices whilst five three-storey live/work units were also to be built.

The formal description of the development included in the planning application was:

Part demolition and redevelopment and part reconfiguration and refurbishment of Macintosh Mill and redevelopment of land to the north of Macintosh Mill and East of Cambridge Street, for mixed use

¹ I would very much like to thank John Cooper and John Adams of Drivers Jonas, Manchester, John Letherland of Terry Farrell and Partners, Architects and Mike Coulter of Taylor Woodrow for their generous assistance with obtaining the details of this project.

development, predominantly residential (510 units) – Use Class C3; offices and live/work units – Use Class B1; landscaping and environmental improvements; creation of public spaces; access works; highways works; and other related works.

The project had a number of problems to overcome prior to commencing construction works. Manchester was at the heart of the industrial revolution in the UK and retains many historic industrial buildings that are part of the country's historical heritage. The Macintosh Mill complex dated to the early part of the 19th century and the mill buildings were Grade II listed. The works involved substantial alterations to the buildings as well as demolition works. In addition, the financial viability of the scheme was dependent upon the construction of the new build parts, particularly the towers. The imposition of these towers into the existing context of rather less important historical buildings was problematical. As the site had also had over 160 years of virtually continuous industrial use, the question of site contamination had also to be resolved.

The site

A location and site plan is included in the appendices. Essentially, the site consisted of the mill buildings and a cleared site on the opposite side of the street.

History of the site

The complex developed on the site commenced with the construction of a mill in 1825 to produce rubberised cotton by the Macintosh process. The site then had a long association with the production of 'Macintoshes' and was enlarged continuously into a complex of buildings. The original mill no. 1 was destroyed by bombing during the second world war but many of the other older mill buildings dating from the 19th century survived. These included:

Mill 2	Built c.1830
Mill 3	Built 1850-1855
Vulcan House	Built c.1849
Chimney	Built c.1851

The site was acquired by Dunlop in 1929 and was subsequently altered by additions, extensions and demolition. Dunlop initially produced solid tyres on the site. Later, much of the early plant and equipment was removed and a

major part of the floor space was converted into administrative, testing and research facilities.

A block site plan indicating the date of development is included in the appendices.

Although the buildings had some historic significance with their association with, initially, Macintosh production and later with the tyre industry, they were not in themselves highly significant buildings, being relatively 'standard' mill or industrial buildings for their day. The mid-19th century buildings were constructed of double pile brick walls with timber floors. The spanning beams were supported on cast iron columns. The windows were timber casements with stone sills. The roofs were mainly pitched, covered with Welsh slate, though some flat and bitumised roofs existed on site. The walls and structure were basically sound but were poor in some places. The roof covering was generally in poor condition at the time of the site acquisition by the developers.

The site became redundant following the rationalisation of Dunlop's core business, and was thus ripe for redevelopment.

The site and its relationship to the locality

The site is located in an area termed the 'Southern Gateway'. It is on the southern edge of the city centre, close to both the commercial areas and the university sector, and forms part of the southern entry to the centre – hence the name. The main urban motorway, the Mancunian Way, and the main railway line from the west pass close to the site. The Universities of Manchester, UMIST and Manchester Metropolitan are close to the site with the University of Salford being only approximately one mile away.

The central urban area of Manchester has gone through a period of major change and development over the last 20 years. The surrounding area was one that showed classic symptoms of inner urban decay until the formation of the Urban Development Corporation in the early 1980s and following the positive intervention of Manchester City Council to promote regeneration. This has led to a transformation in these areas in the city, characterised in particular by repopulation. The surrounding suburbs have seen a huge increase in residential property with the population rising by literally many hundredfold over the period 1986-2001. Many redundant commercial and industrial buildings have been converted to residential use. This, in turn, has supported a vibrant entertainment and business sector expansion. Many of the occupants of these properties are young affluent

professionals, further boosting the trend to make the surrounding area economically viable.

The Southern Gateway area has not seen the intensity of development that some suburbs have. It has been identified by the City Council as being a priority area for regeneration and a conceptual master plan for the area has been developed, which has had to be taken into account for development control purposes. The basic idea is to create an area characterised by relatively high density residential schemes. Other similar developments have taken place close by, including the development of the Student Village by the conversion of mill buildings. Other residential schemes completed within recent years include Chorlton New Mill and the Little Ireland scheme located very close to Macintosh Mill. The developer, Taylor Woodrow Capital Developments Ltd, also own a number of other sites in the area and had other developments at various stages of completion underway at the time that Macintosh Mill was at the planning stage.

The area is not designated a conservation area although individual buildings are listed.

The parties involved in the development

The following parties were involved in the development:

<i>Landowner</i>	Southside Regeneration Ltd
<i>Developer</i>	Taylor Woodrow Capital Developments Ltd
<i>Local government</i>	Manchester City Council
Development Team	
<i>Architect</i>	Terry Farrell and Partners
<i>Structural engineer</i>	Waterman BBT
<i>Environmental consultant</i>	Waterman Environmental
<i>Planning consultant</i>	Drivers Jonas
<i>Quantity surveyor</i>	Rex Procter and Partners
<i>Contractor</i>	Taylor Woodrow Construction

Development inception

The scheme essentially started with piecemeal assembly of the site by Westport Development who acquired a number of sites in the area including cleared sites at Little Ireland. Westport sought to bring a bigger player into the development to assist in the long-term programme. A scheme was drawn up for the smaller, less complex sites in the area and planning consent was gained for mainly new build development of these sites, whilst a partner was sought to assist with the more complex Macintosh Mill site.

Taylor Woodrow Capital Developments was soon identified as a potential partner. Taylor Woodrow had carried out a number of developments in London, including residential developments as part of regeneration programmes. They were keen to expand into the regional markets and Manchester was particularly attractive, as the city centre residential market was both well established and vibrant.

Taylor Woodrow commissioned a master plan study of the area from Terry Farrell and Partners. This covered a wider area than the site confines itself to, and was intended to identify the development capacity and potential of the area. Macintosh Mill was identified as a key component of the development.

Ultimately, the developer's success in obtaining planning and listed building consent caused a rethink of the project. Taylor Woodrow took over the whole project and redesigned the layout of the scheme, including the new build section at Little Ireland, to maximise the scheme's appeal to both the planners and purchasers of the site.

Site acquisition and investigation

As noted, the site was already in the ownership of the original developer. Taylor Woodrow agreed to develop out the site on obtaining full planning consent.

A number of reports were prepared on aspects of the existing building and the site. They were mainly prepared by the engineers and environmental consultants, Waterman BBT and Waterman Environmental. These reports also formed part of the planning application. This was an important part of the due diligence process of acquiring the site, considering the location had seen industrial processes carried out for around 160 years. Any contamination

that presented a potential risk to health needed to be removed or remediated, a process which could affect both the programme and costs of the scheme, and thus influence its viability. In addition, information was required as to the quality of the ground in order to assist the design and specification of elements such as the foundations.

The reports produced on these areas included:

- A structural report on the existing buildings.
- A site investigation and environmental assessment of Macintosh Mill.
- A site investigation and environmental assessment of the cleared part of the site (called Little Ireland Block C).
- A hazardous materials survey.

Structural survey of the existing buildings

As noted, the development works were partly new build and partly conversion of the existing mill structures. It was important to assess the state of the existing structures in order to assess the degree of work that would be required.

The survey, carried out by Waterman BBT, structural engineers, found that the Mill complex had exhibited heavy use over a period of many years. A number of defects were identified, some of which were common to all buildings and included:

- spalling external brickwork;
- eroded mortar joints;
- vertical cracking of brickwork;
- loose, missing brickwork;
- bulging brickwork;
- displaced coping stones;
- degraded stone window sills.

Some more serious individual defects were noted, including fractured trusses and spalling, cracked concrete and exposed reinforcement in soffits in some buildings. In the case of the Solid Tyre Building this was felt to be so extensive that repairs would not be economic.

All the defects could be repaired but in many cases this would have proven uneconomical, based upon the potential use of the buildings. The observations and information from the survey were incorporated into the schedule of works and design of the building.

Site investigation and environmental assessment of Macintosh Mill

The investigation was carried out by Waterman Environmental Ltd, initially by a desk study that investigated the use history of the site, and subsequently by sampling and monitoring the soil and groundwater.

The principle areas of contamination found were:

- Moderate contamination by metals and sulphates in areas of 'made ground'.
- Under an area that was originally occupied by a gas holder (which overlapped with a neighbouring site) organic contamination (hydrocarbons) and inorganic contamination (metals, cyanide and sulphates) was found.
- Hydrocarbon contamination was generally found to a depth of 4.0-9.8 metres within the eastern area of the site.

The contamination in the groundwater was found to be within EU limits by the time it drained into the River Medlock. Thus, no action was required. The contamination beneath the former gas holder was considered to be a greater risk and the contents of the soil required treating or removal from the site. The majority of the site of the former gas holder was located off the site boundaries. It was therefore recommended that a cut-off wall be built between the two properties to protect the mill and its users from any residual contamination. The excavation of the basement car park would lead to the removal of other contaminating material from the site.

The high structural loadings that were envisaged for some elements of the new build of the site had implications for the design of the foundations. The site investigation reports suggested that piled foundations be used. Recommendations as to the grade of concrete to be used were included in the report, given the potential for chemical attack due to the make of the ground and its contaminants.

Site investigation and environmental assessment of Little Ireland Block C

The findings for this site were similar to that of the main mill site. The investigations found evidence of contamination but, following remediation, the risk to the environment and end-users would be negligible.

The site had been a greenfield site until the 1820s. By 1829, it had been developed and occupied by a large building. By 1948 the site was part of the Dunlop Rubber Works and remained as such until the 1990s. An underground naphtha tank and other storage tanks were either known of, or

suspected to exist, on the site. As per the main mill site, hydrocarbon contamination was found at a depth of 4.0-9.8 metres beneath the eastern part of the site. The recommended remediation was the removal and disposal of the underground storage tanks and the removal or treatment of soils and groundwater contaminated with hydrocarbons.

Hazardous materials survey

This survey was also carried out by Waterman Environmental Ltd and assessed potential environmental and health risks at the site to be addressed by the site clearance/demolition contractors and site developers. The investigation comprised a site inspection, sampling, laboratory analysis and risk assessment associated with hazardous materials present within the existing buildings and structures on the site.

A number of hazards were identified, including lead in paint and elevated concentrations of metals, fractions of organic dust and some limited impregnation of concrete and wooden flooring surfaces.

Although the site was found to pose no more than a low risk to current site personnel, it did provide a risk to the health and safety of site operatives during the course of the development. Each of the hazards thus needed to be removed as part of planned remedial work and the site subject to revalidation prior to redevelopment.

Scheme design

The scheme architect was Terry Farrell and Partners, the internationally renowned architecture practice.

The architects worked to a number of overall design considerations. The new parts of the structures had to complement the existing, historical buildings whilst providing an economic solution for the developers. In addition, the scheme as a whole had to fit within the context of the locality.

The Southern Gateway was perceived by the architects as connecting the city centre to three strands of new development on the south side of the city: along Chester Road, The Princes Parkway and the Universities corridor. The Southern Gateway could also be viewed as an extension to the city centre. Cambridge Street itself was historically a gateway between the city centre and Hulme across the River Medway. It was separated from the city centre by the development of the railway, canal and urban motorways. The site is dominated by the railway viaduct in particular, and the definition of a gateway has been lost. The architect thus proposed that twin towers be built

one on each side of Cambridge Street but set back and staggered to define a new urban square and re-establish the impression of a gateway, the towers forming a new urban marker for the city.

The new towers needed careful design to fit into the context of the site. The towers, or *campanile*, were designed to be slender with recesses at the top and bottom to give a greater degree of elegance, and to remove the illusion of dominance created by a more imposing block. The tall buildings still retain the ability to better define the public domain. The podium height of the remaining new build was set by the height of the existing buildings. The towers were placed in gaps away from the main mill buildings, again to reduce the potential for dominance over the historic context.

In addition to these considerations, the design aimed to incorporate traffic calming measures into the Cambridge Street area to reduce the degree of speeding traffic. These included changes in material from the street to the 'square' area. The design also greatly improved pedestrian access to the river and the urban areas around the scheme.

Finally, Taylor Woodrow was keen to exploit the market for premium residential space in Manchester. It wanted to bring some principles used in its prestige London schemes to the Manchester market. These included both a high quality specification and also rather larger floor areas than the market had generally seen to date. Rather than trying to maximise the number of apartments developed, there was concentration on producing a high quality environment. This was additionally reflected in the provision in the design of a 'green' building on the island site opposite the mill that incorporated a wind-powered generator on the roof, natural ventilation and was to include a nursery and doctor's surgery, as well as apartments. This, combined with small commercial premises to be included in the scheme, was intended to add to a village/community feel to the development.

This integrated approach certainly assisted in the planning consent process but also established the development in the market as something more distinct than just another residential scheme.

Planning application and planning process

The planning application consisted of the statutory forms and the following supporting documentation:

- A plan showing the boundary of the application site.
- A set of drawings prepared by the architect illustrating the existing and proposed buildings.

- An environmental report that considered the impact of the proposals in relation to planning policy, townscape and cultural heritage, contamination, groundwater and water quality, air quality, noise and vibration, socio-economics, and the likely construction impacts and proposed mitigation.
- A transport statement dealing with the transport impact of the scheme.
- A statement on the proposals in relation to Planning Policy Guidance Note 15 (Planning and the Historical Environment).
- A condition survey of the mill buildings prepared in connection with the above.
- A landscape plan prepared by Edward Hutchinson Landscape Architect.
- A landscape principles document.
- A note on the technical specification on the proposed electricity substation prepared by Arup Engineers.
- A structural report on the existing buildings.
- A site investigation and environmental assessment of the cleared part of the site (called Little Ireland Block C).
- A site investigation and environmental assessment of Macintosh Mill.
- A hazardous materials survey.

The planning application commanded a fee of £9,500.

Many of these items included – in support of the planning application – are statutory requirements of the planning process.

In addition, the developers were required to consult a number of bodies, including statutory, public and interest groups as part of the planning consultation process. Some of this consultation was done directly by the developers, others by the planning officials of the City Council as part of their decision-making process. The bodies consulted and their responses were:

<i>Body consulted</i>	<i>Comments</i>
Director of Operational Services	No specific objections.
Head of Engineering Services	No specific objections.
Director of Housing	No specific objections.
Environmental Health	No specific objections.
The Environment Agency	No specific objections.
The Coal Authority	No specific objections.

Greater Manchester Passenger Transport Executive	No specific objections.
English Heritage	Supported the principle of the development. No objection to the twin towers in principle but wanted to approve the material used, signage and the elevational details of the new build parts. The body had concerns about traffic flow and expressed a preference for Cambridge Street to be closed.
Commission for Architecture and the Built Environment	No specific objections but would prefer the closure of Cambridge Street.
Manchester Conservation Areas and Historic Building Panel	This body praised the quality of the information that was provided by the applicant who was clearly dealing sensitively with the site. There was concern about the towers and this issue was debated at length. They questioned the ability of the developers to deliver the new public space, requested that a survey be done prior to development to record the industrial archaeology, and they recommended that a condition be placed upon the consent that no additions above the roofline of the listed buildings be allowed.
Society for the Protection of Ancient Buildings	In general, the society welcomed the conversion. They wanted more trees to be included in the landscaping and regarded the towers as too tall and too stark in contrast with the existing structures.
The Victorian Society	The society supported the principle of the proposal but objected to several elements. These included the West Tower and the Cambridge Street elevation.

In addition to these specific consultations, the normal publicity requirements of the application process were followed. A notice bringing the public attention to the planning and listed building application was posted on the site and advertised in the local newspapers. Letters were sent to the neighbouring occupiers. Copies of these letters were included in the planning application. No representations were received.

A report was prepared by the Head of Planning of the City Council for presentation to the Council's planning committee. The report made recommendations based upon the material presented by the applicants, the representations received by the consultation process and by the planning officers addressing the application against national planning guidelines. The recommendation from the Head of Planning was that the committee should:

- A. Be minded to approve full planning application 062484 and listed building consent 062485 subject to the conditions laid out below;
- B. Refer listed building consent application to the Secretary of State for the Environment for him to determine whether to call in the application for his determination;
- C. Authorise the Head of Planning to determine the applications using the delegated powers should the Secretary of State not call in the applications for his determination.

The reference of the listed building consent is normal procedure, reflecting that historical buildings in the built environment are part of the national heritage and not just a local concern. The majority of such referrals do not result in the call in of the application.

Fifteen conditions were recommended to be applied to the main application. Similarly, 14 conditions were attached to the listed building consent. The principal conditions to the main application were:

1. The development must be begun not later than the expiry of five years beginning with the date of permission.
2. The development should be carried out in accordance with the submitted drawings.
3. Details of the construction timetable relating to any phasing of the development should be submitted to and improved in writing by the Local Planning Authority prior to the works under that phase being commenced.
5. The development shall not commence until detailed drawings of the external elevations ... have been submitted to and approved in writing by the Local Planning Authority.

6. Samples of the materials to be used in the external elevation ... have been submitted to and approved by the Local Planning Authority.
10. A scheme for acoustically insulating the proposed residential accommodation against noise ... has been submitted to and approved in writing by the Local Planning Authority.
14. The development ... shall include a building lighting scheme and a scheme for the illumination of external areas during the period between dusk and dawn ... [These] have been submitted to and approved in writing by the Local Planning Authority.
15. Before development commences full details concerning the layout and treatment of the Gateway Square across Cambridge Street shall be submitted to and approved in writing by the Local Planning Authority. Details shall include how the continued use of Cambridge Street as a vehicle route shall be integrated into the physical layout and environmental treatment of this area.

The conditions recommended for the listed building consent were similar in character to those attached to the main application concerning matters such as time limits, construction plan and approval of drawings, etc. There were also requirements to provide statements and accurate drawings dealing with the proposed strip-out works for the internal features of the listed buildings, and also works to provide fire protection, acoustic insulation and fume extraction in these structures. In addition, the Council required that schemes for the refurbishment and repair of the existing windows, brickwork cleaning, existing roof and rooflights should be submitted to, and approved in writing by, the Local Planning Authority. A full photographic and archaeological survey of the site and the buildings was also required.

The recommendations of the Chief Planning Officer were approved and Full Planning Consent and Listed Building Consent (subject to the provisos made above) was granted at a meeting of the City Council's planning committee in October 2001. This was much faster than anticipated and the mill scheme was brought forward to development in the last months of 2001. The earlier sites with existing consent had already seen development start in mid-2001.

Construction phase

A modified design and build route was chosen, using the JCT 98 contract with contractor's design. This was done for two main reasons. Firstly, it enabled a rapid start on site with the contractors using the Terry Farrell design for the overall layout with the detail design provided by the contractor's design team as the work proceeded. The second reason for the

adoption was that the sister company of Taylor Woodrow Capital Developments, Taylor Woodrow Construction was selected as the contractor. The working relationship was thus different to the standard working relationship where the contractor is a separate company.

In common with many developers, the remaining members of the development team were selected from prior experience. With the exception of the main scheme architect, all of the team had worked on other projects with Taylor Woodrow.

Post-construction phase

At the time of writing (early 2002), the main scheme has been on site for around six months. The total development programme is of five years' duration, with the new build parts on the adjacent sites being built out first.

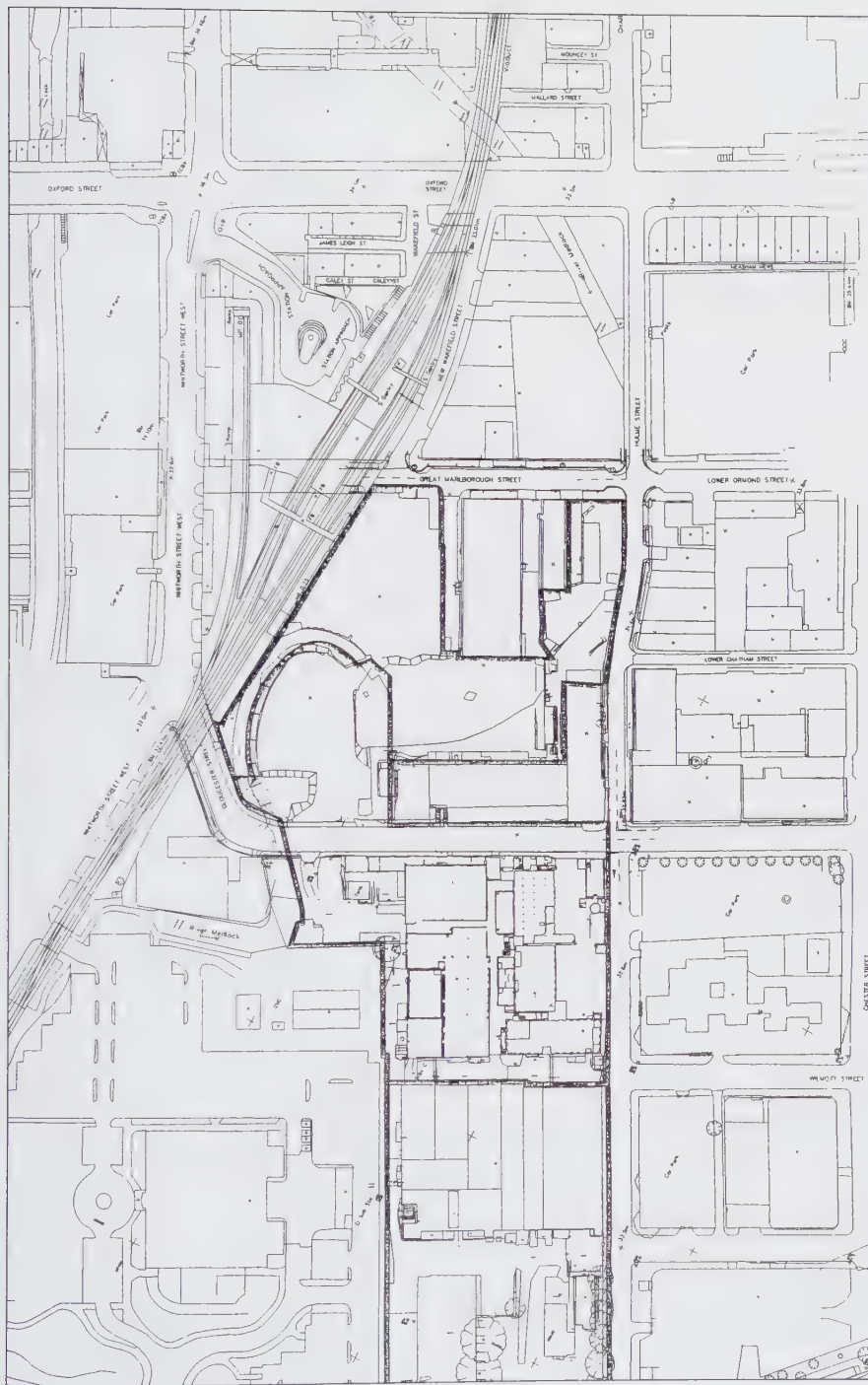
In early February 2002, a marketing suite was installed on the site. This was placed upon part of the Macintosh Mill site that is not due to be developed until later in the project. It is a two-storey structure furnished to a high standard with models and plans of the scheme on one level and fitted out examples of the bathrooms and kitchens on a lower level. The marketing suite is open seven days a week, from 11 am to 6 pm. Attractive brochures are available on each phase as they commence. Prices in the early phases range from £87,000 for a ground floor one-bedroomed flat to £189,500 on the larger upper storey two-bedroomed apartments in the new build parts.

Around half of the apartments sold in the early stages of the project were bought as investments with the remainder being sold for owner occupation.

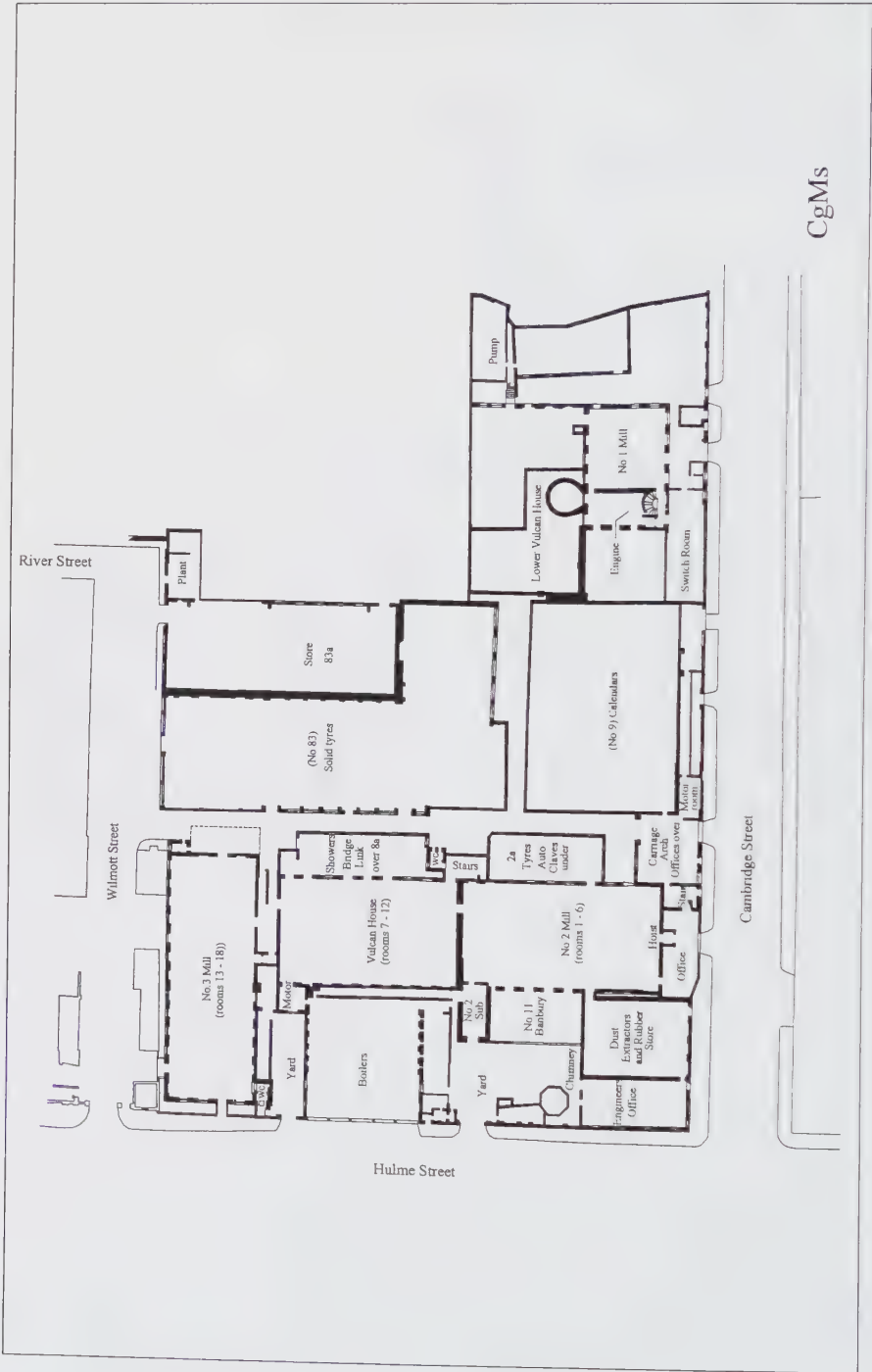
Conclusion

The Macintosh Mill project is in its early stages at the time of writing and thus it is difficult to assess how successful in it is in commercial terms. The main issues explored in examining the project are found in an appreciation of the amount of work that is required to get such a scheme to site. Obtaining planning and listed building consent whilst retaining commercial viability and meeting the timescale requirements required the integration of a large team of diverse professionals. Each contributed to the work of the other and all had to work together to achieve the goal. This project is large, with likely end values in the £60-70m range, but similar levels of co-ordination and effort can be found and is required in much smaller projects.

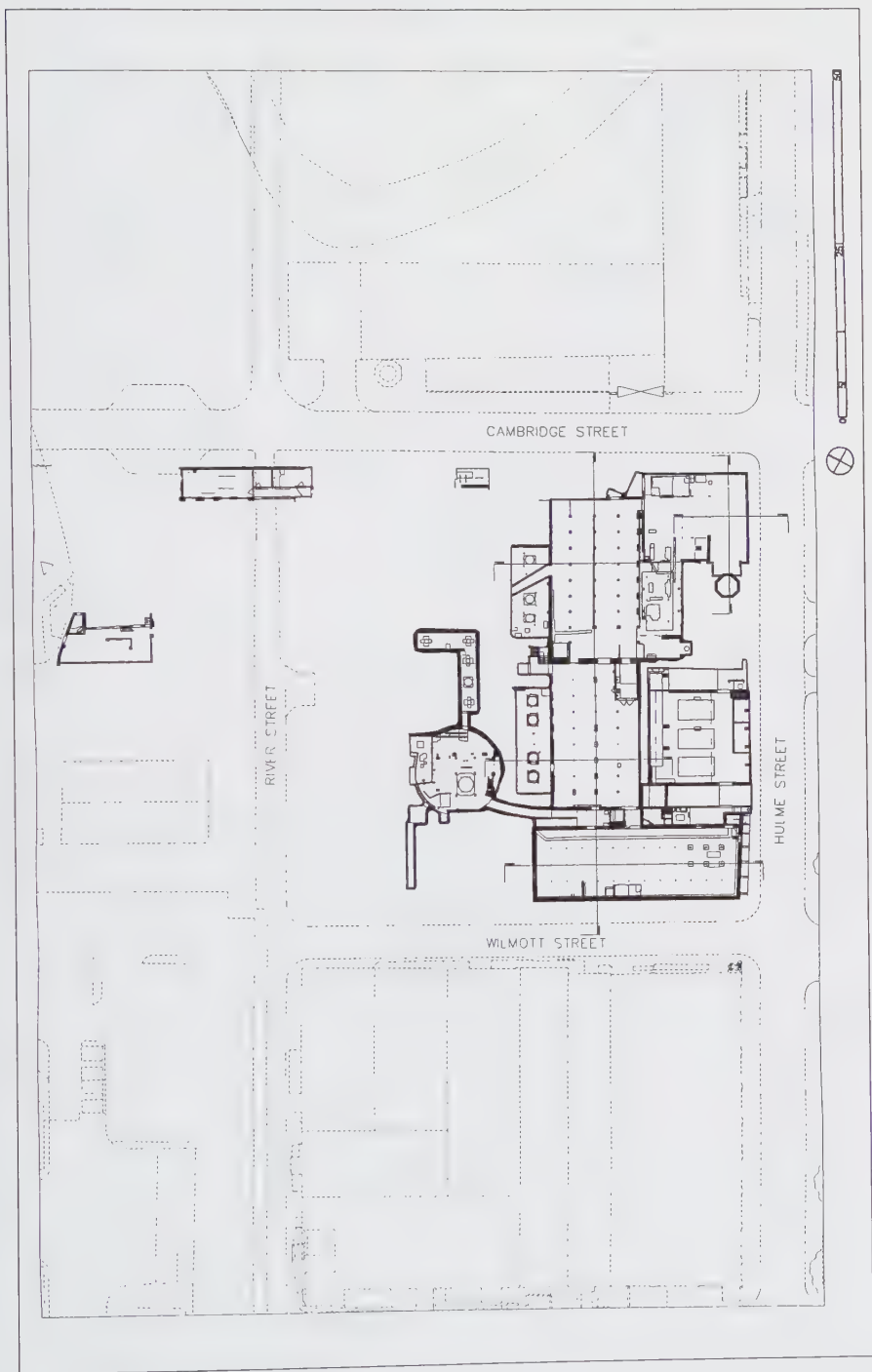
Appendix



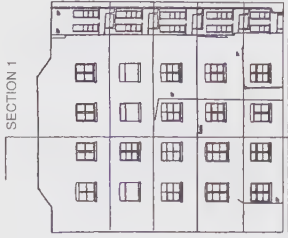
MACINTOSH MILL – MANCHESTER
APPLICATION SITE BOUNDARY – PLANNING APPLICATION SCALE 1:1250
JUNE 2001



Building identification plan based on 1929 survey

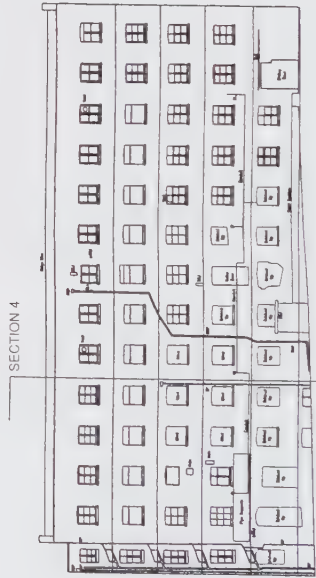


MACINTOSH MILL – MANCHESTER
AS EXISTING BASEMENT FLOOR



FOURTH FLOOR LEVEL
 THIRD FLOOR LEVEL
 SECOND FLOOR LEVEL
 FIRST FLOOR LEVEL
 GROUND FLOOR LEVEL
 BASEMENT LEVEL.

SECTION 1
 ELEVATION 1



FOURTH FLOOR LEVEL
 THIRD FLOOR LEVEL
 SECOND FLOOR LEVEL
 FIRST FLOOR LEVEL
 GROUND FLOOR LEVEL
 BASEMENT LEVEL

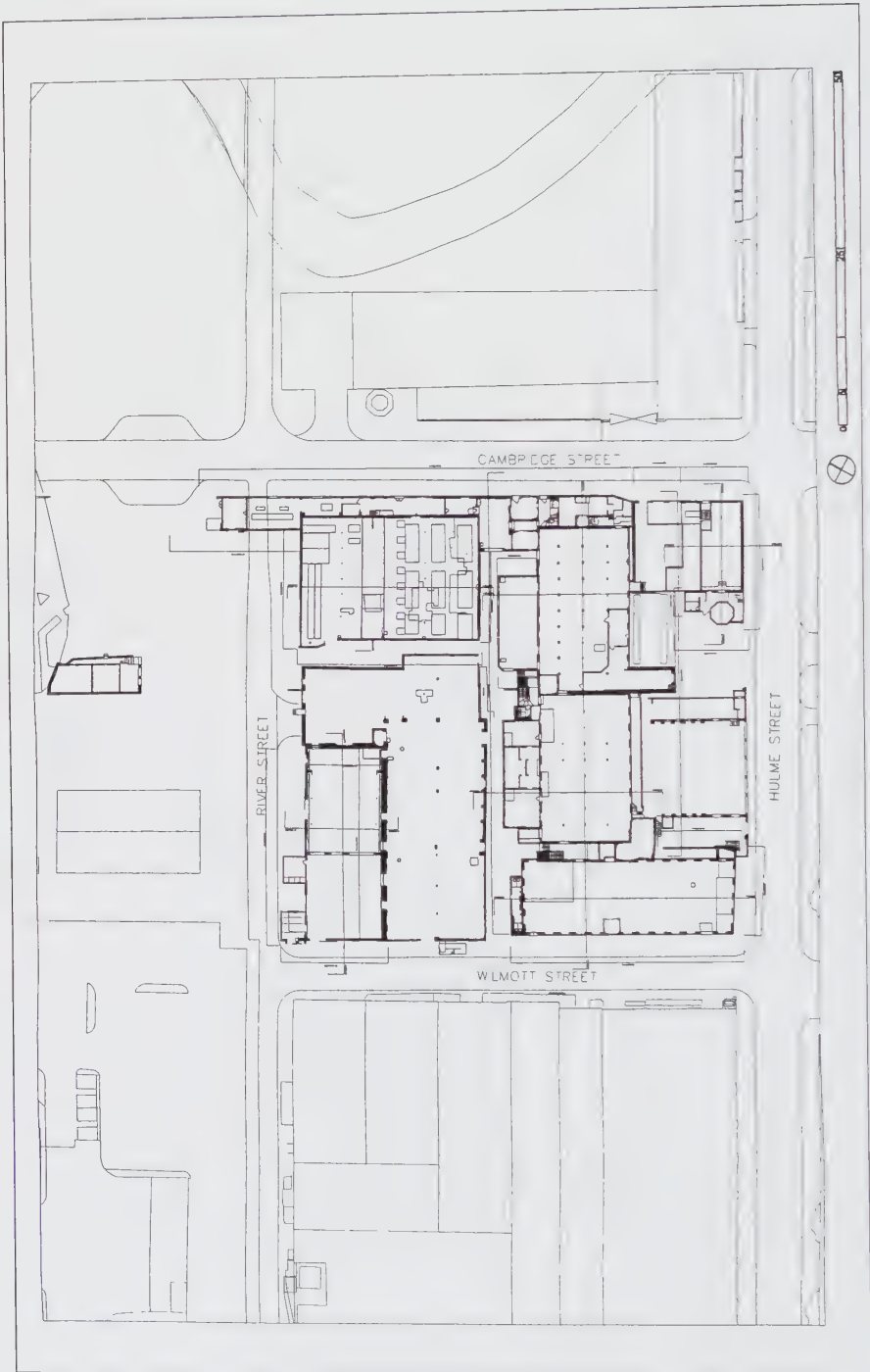
SECTION 4
 ELEVATION 2



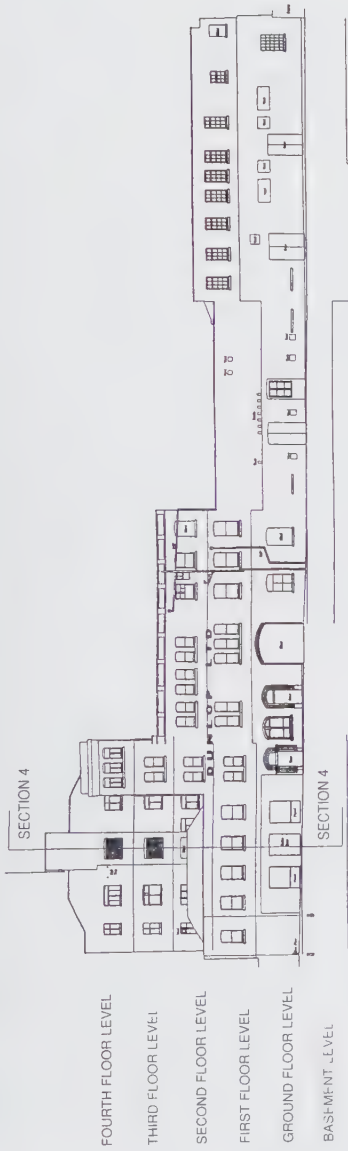


MACINTOSH MILL - MANCHESTER

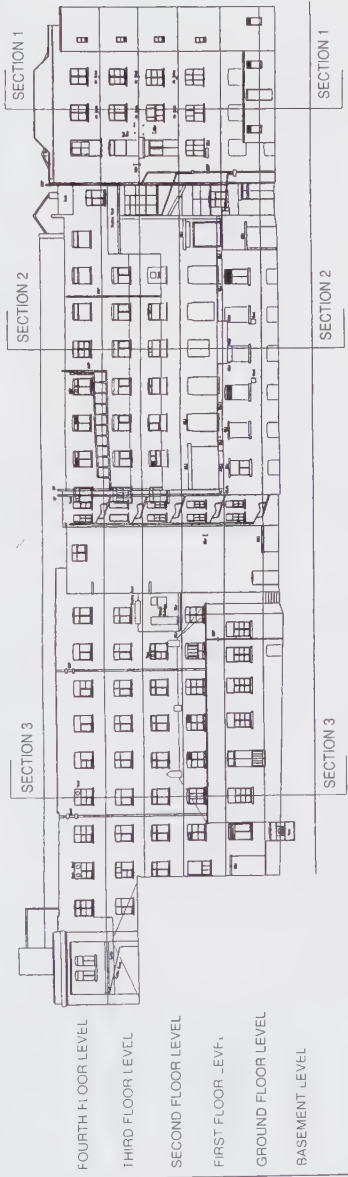
AS EXISTING - ELEVATIONS 3 & 4 SCALE 1:100 @ A0



MACINTOSH MILL - MANCHESTER
AS EXISTING - GROUND FLOOR



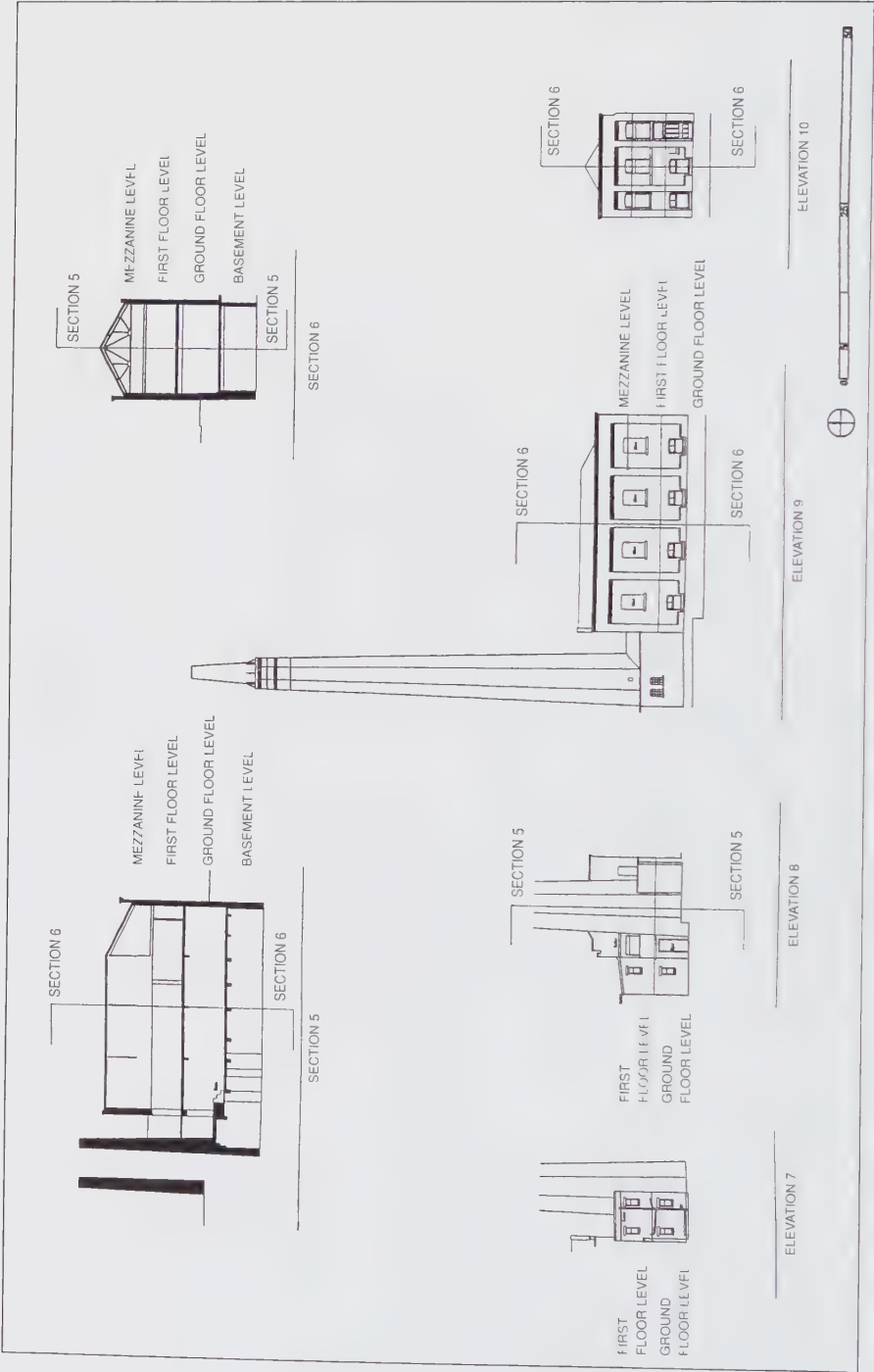
ELEVATION 5



ELEVATION 6

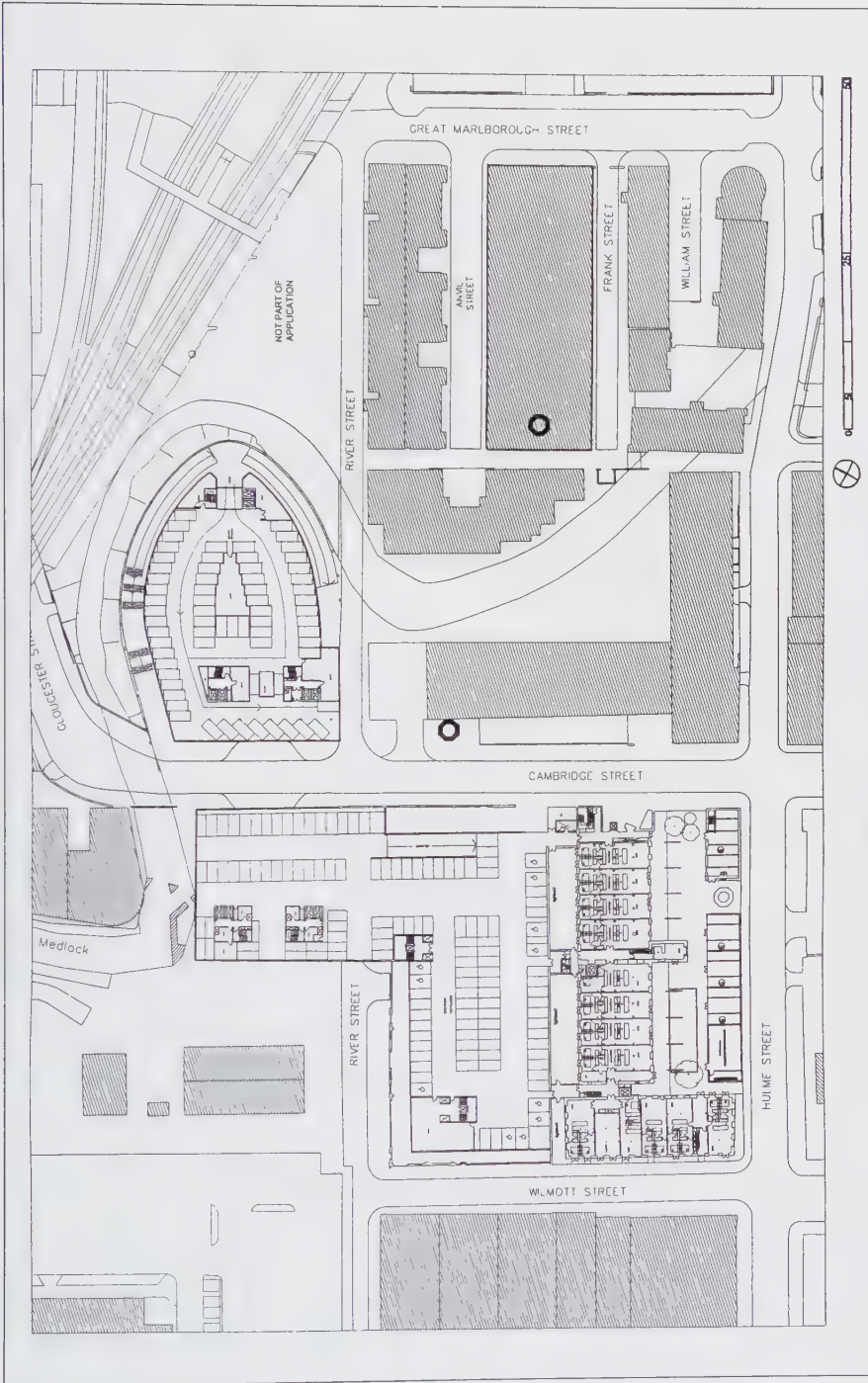


MACINTOSH MILL – MANCHESTER
AS EXISTING – ELEVATIONS 5 & 6 SCALE 1:100 @ A0

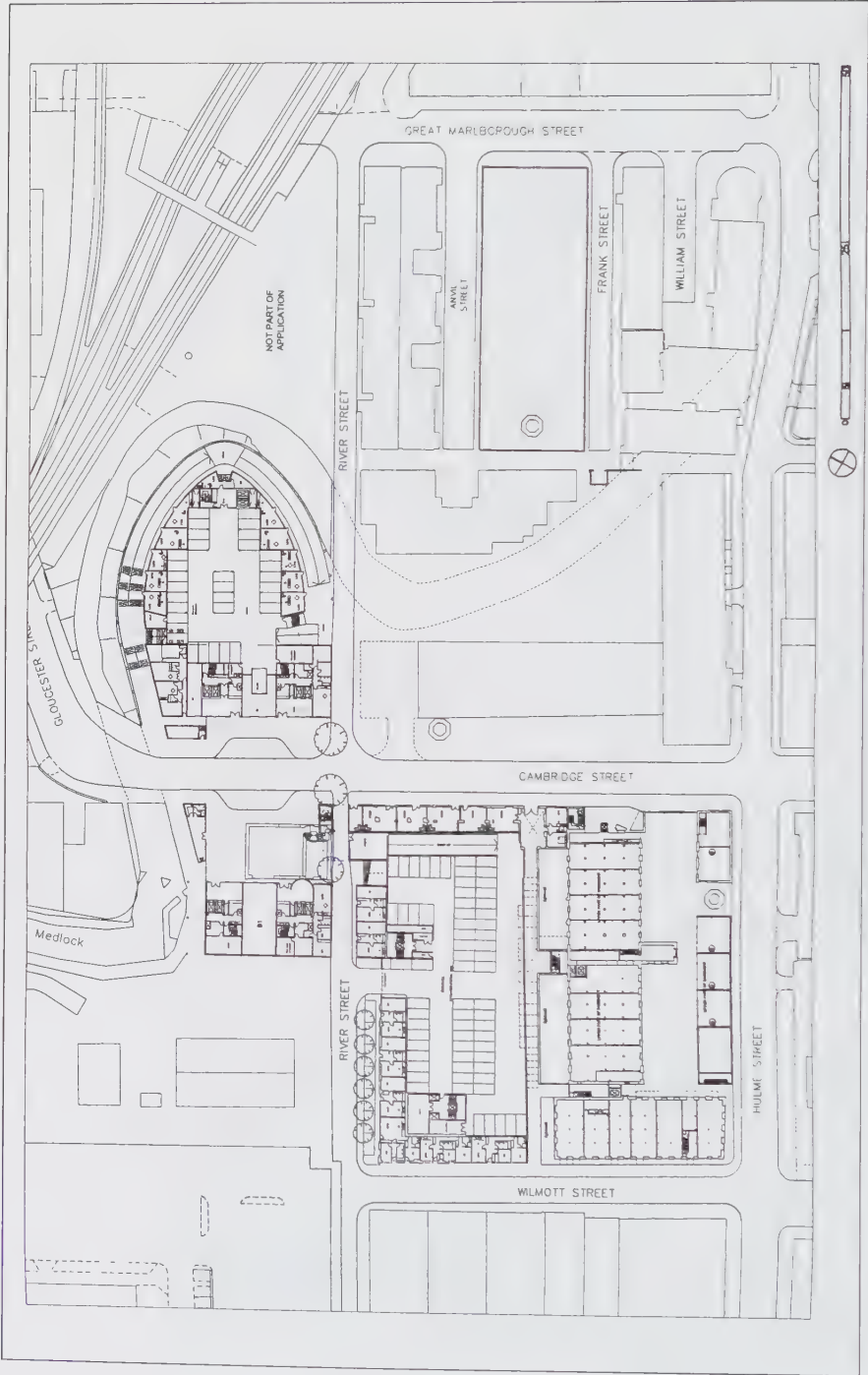


MACINTOSH MILL - MANCHESTER

AS EXISTING - ELEVATIONS 7, 8, 9, 10 AND SECTIONS 5 & 4 SCALE 1:100 @ A0

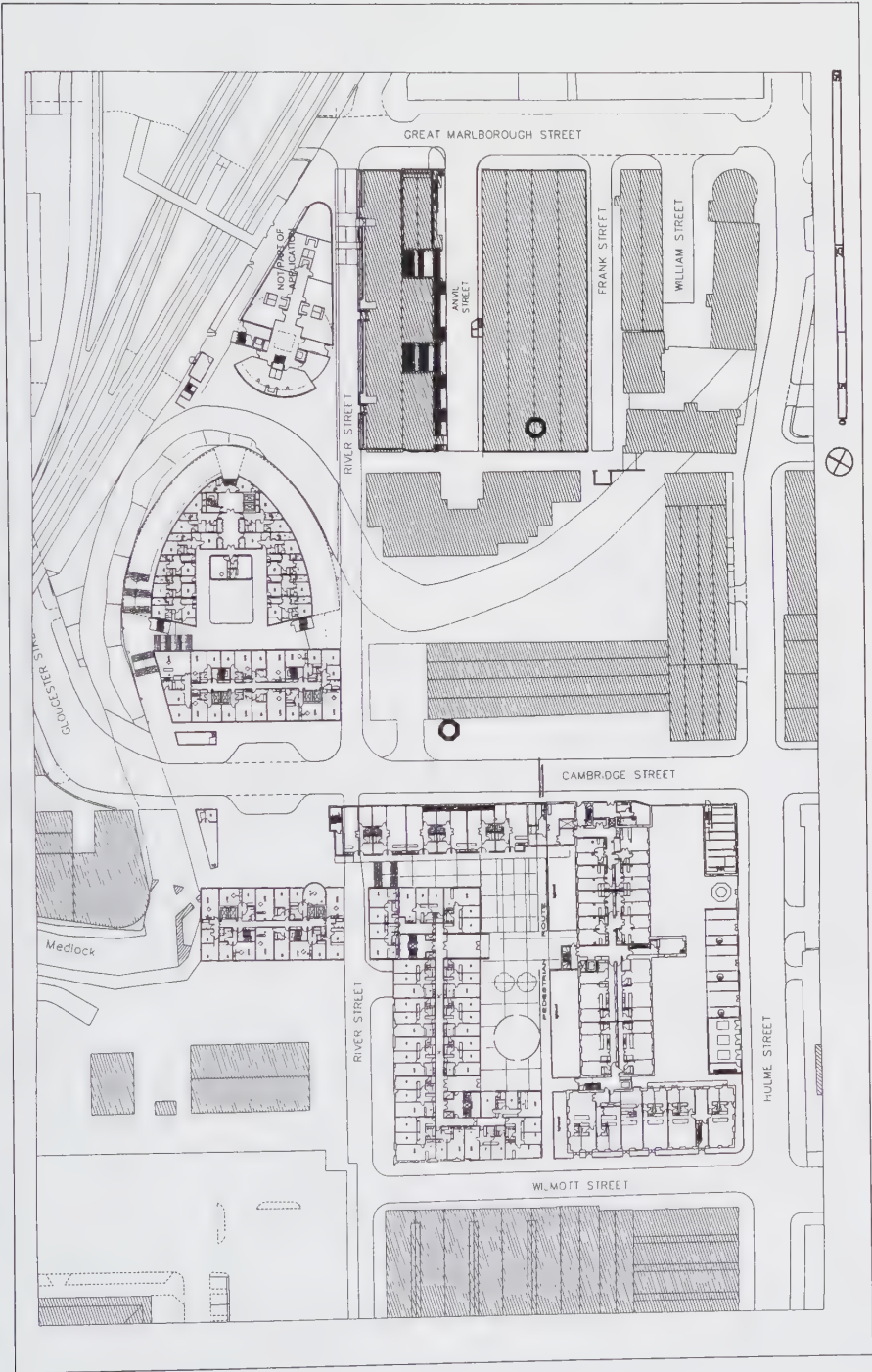


MACINTOSH MILL – MANCHESTER
MASTERPLAN – BASEMENT FLOOR SCALE 1:250



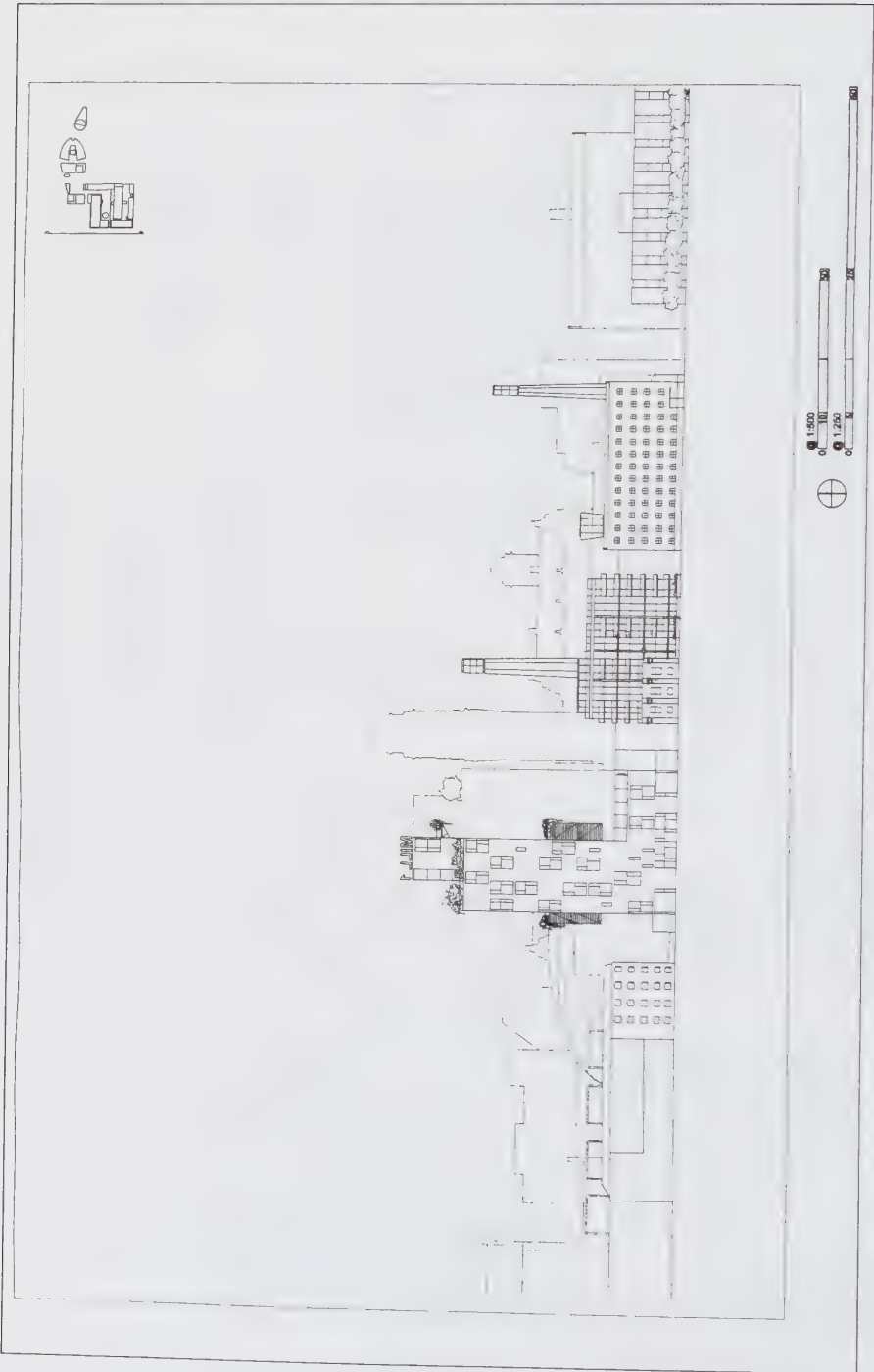
MACINTOSH MILL – MANCHESTER

AMASTERPLAN – LOWER GROUND FLOOR SCALE 1:250

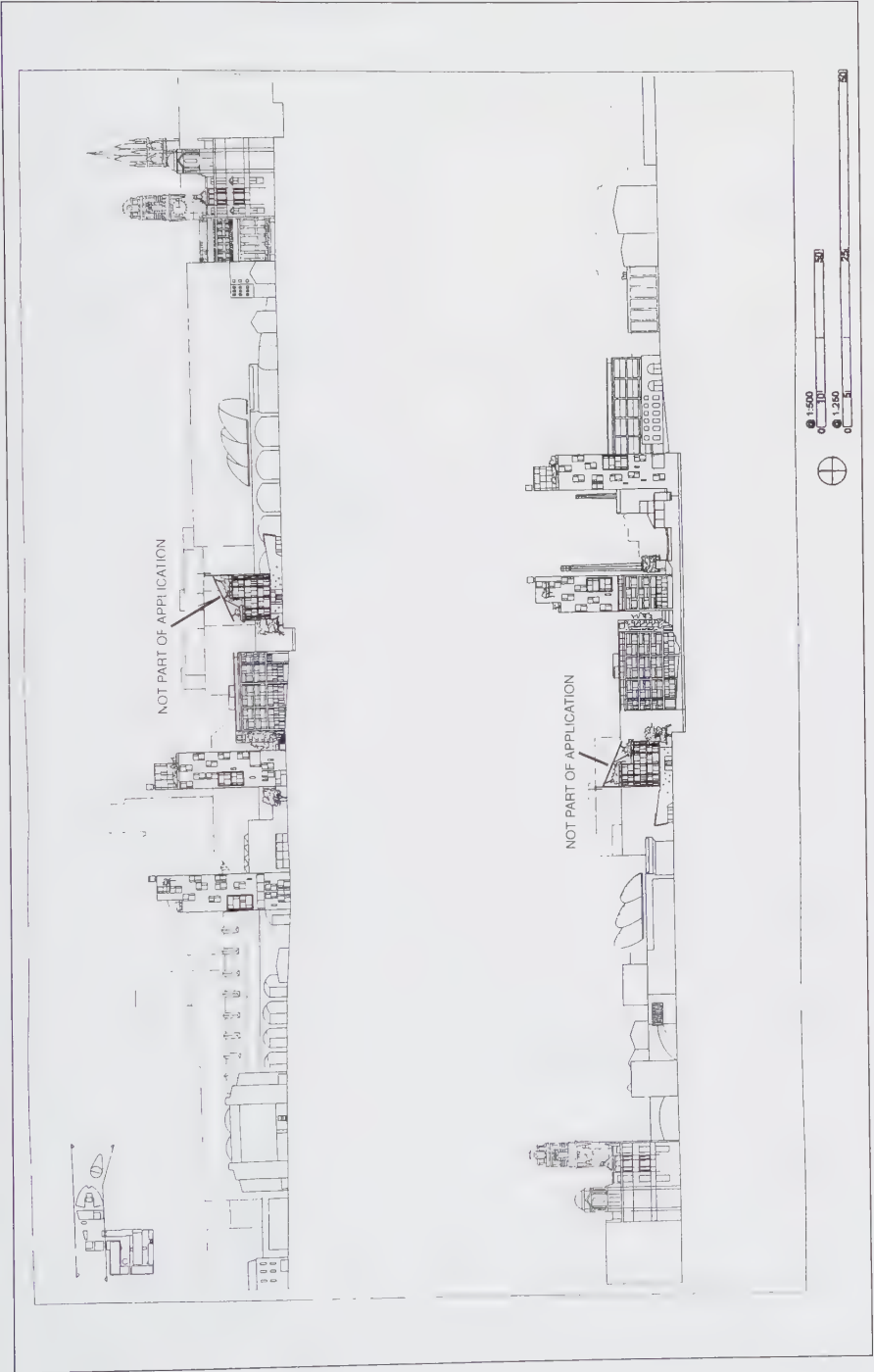


MACINTOSH MILL – MANCHESTER

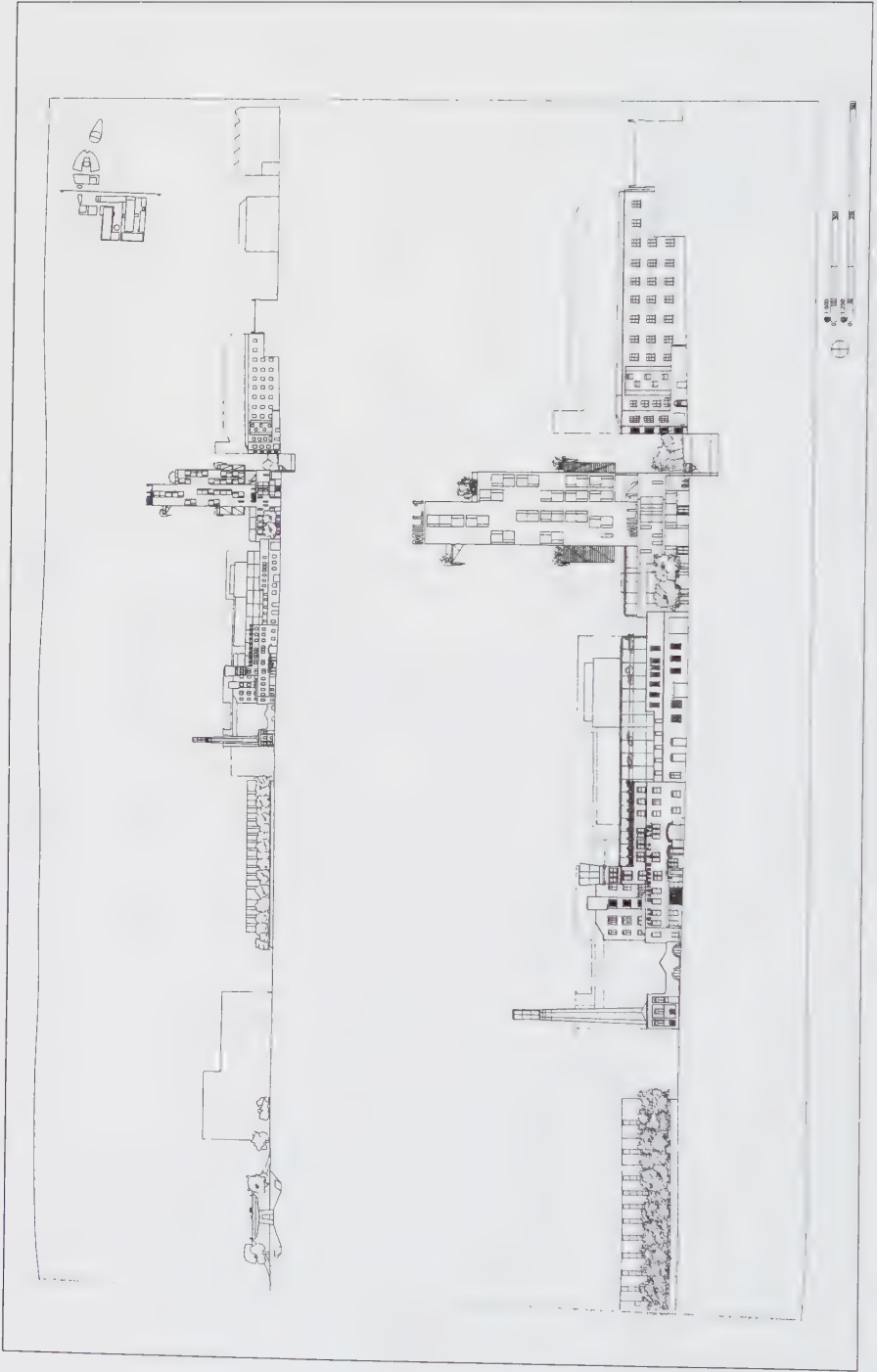
MASTERPLAN – UPPER GROUND FLOOR SCALE 1:1250



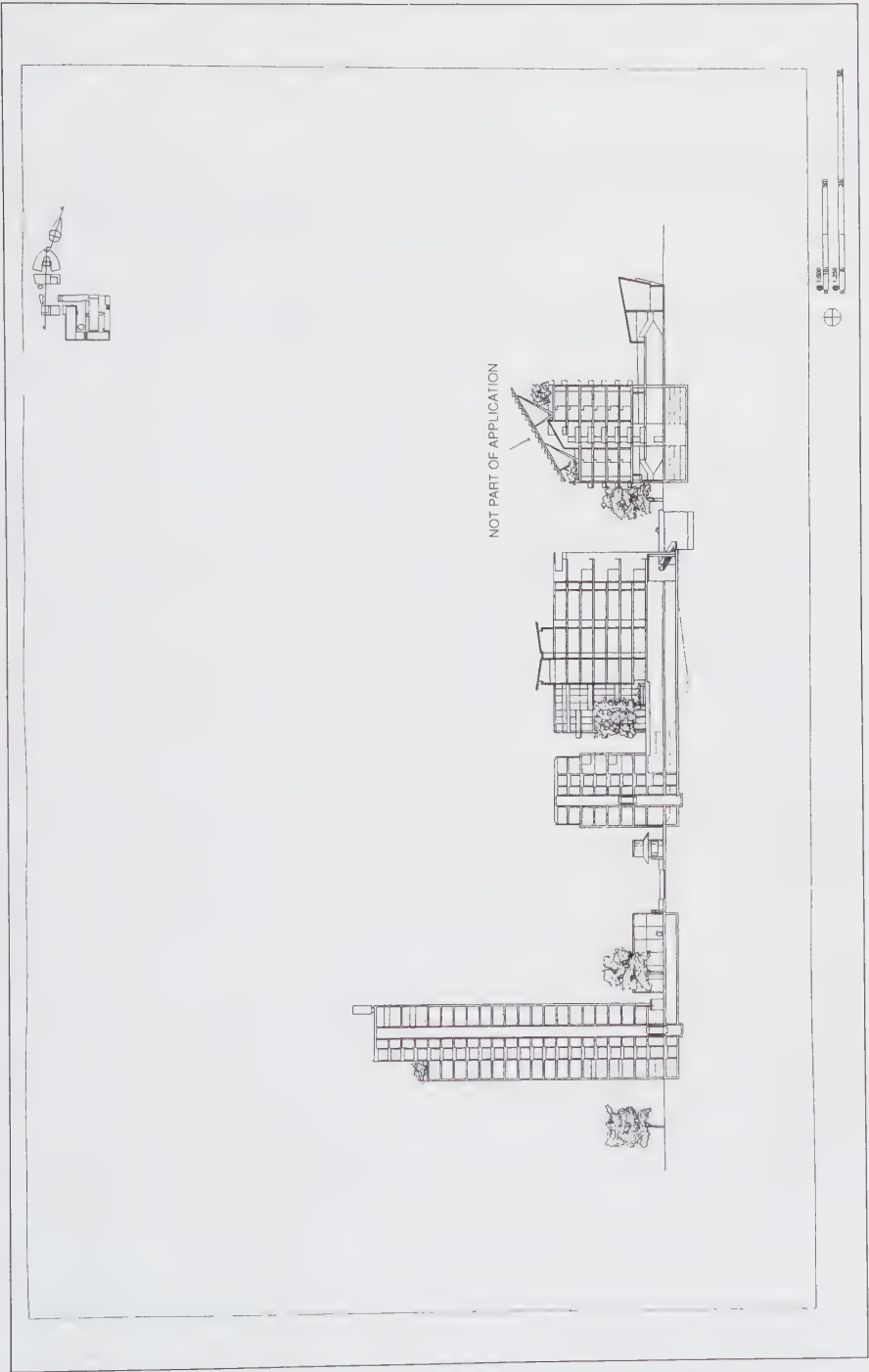
MACINTOSH MILL – MANCHESTER



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MACINTOSH MILL - MANCHESTER

Case study 2

Investigating a residential development opportunity, Northern Quarter, Manchester Late 2001-early 2002

Prospective developer: Jon Berry, Berry Investments, Manchester

Background

This case study examines how a smaller developer addresses a development opportunity.

Although the development examined here did not proceed, the study illustrates the steps that need to be followed to bring a development to reality.

The prospective developer, Jon Berry, has many years' experience running a family property business specialising in the acquisition, refurbishment and letting of residential buildings, predominantly for the student sector. For a number of years he has been looking at the prospects of moving into the development of houses or apartments for sale.

In many ways this represents a position in which many people with either professional or practical experience of the built environment or property industry find themselves – at the point of making the big step into the riskier world of development. This case study follows the steps taken in assessing the opportunity, the raising of the finance, the problems that arose during the feasibility study and the final decision that was made as to whether to proceed with the project or not.

Project outline

The project concerned a residential development opportunity to convert the ground and upper floors of a former commercial building in the Northern

Quarter, close to Manchester city centre, that was being marketed by a local agent. A separate sub-basement was given over to retail use and was held under a different lease, excluded from the interest in the property being offered.

The agents were offering a 99-year leasehold interest in the ground and upper floors of the property with a main street entrance. The owner had obtained planning consent for the conversion of the existing building to one- and two-bedroom apartments with the addition of two further new-build floors to accommodate new-build duplexes. This allowed for the construction of 14 apartments in total. The asking price for the leasehold interest was £500,000.

The site and its relationship to the locality

The existing building comprised the ground and three existing upper floors of a former commercial building in the Northern Quarter, an area in transition. Traditionally, the area was one of mixed commercial uses although it is now primarily associated with the textile and garment industry.

In recent years, a number of residential developments and conversions have taken place in the vicinity of the site, reflecting the move within Manchester as a whole towards 'City Living'. Manchester city centre has been transformed over the last ten years with an enormous expansion of the number of residential schemes in many areas. The city became a fashionable place to live for young single professionals, young professional couples and older, wealthy business people wanting a second home closer to their place of work. The Northern Quarter has, by 2002, not been developed to the same degree as other areas but offers a number of development opportunities and generally lower prices than those around the universities and the gay village area to the south of the city centre.

The site itself is located in the heart of the Northern Quarter. Some of the buildings in the vicinity have been converted to residential use for sale and/or letting whilst others remain in a variety of commercial uses, including many still being retained by the textile industry. The street where the building is located contains a mix of generally low value secondary retail uses but with a number of vacant premises. The area is popular with many people, representing an affordable opportunity for city centre living. Apartments offered for sale in recent years tended to sell readily and good uplifts in prices had been achieved.

The building's structure is around 70 years old and is entirely conventional, consisting of load-bearing solid external walls, stone faced on the ground

floor and brick faced above with timber floors, sash windows and a flat roof. The existing structure seemed to be in reasonable condition and was not listed nor was it in a conservation area.

The scheme as drawn, and for which planning consent was obtained, provided the following accommodation:

<i>Apartment number</i>	<i>Floor</i>	<i>No. bedrooms</i>	<i>Area (m²)</i>	<i>Area (Ft²)</i>
1	G	1	53	574
2	G	1	43	467
3	G	2	58	622
4	1	1	55	586
5	1	1	47	508
6	1	2	65	698
7	2	1	55	586
8	2	1	48	519
9	2	2	66	711
10	3	2	86	922
11	3	2	78	839
12	4 & 5	2	78	834
13	4 & 5	2	76	820
14	4 & 5	2	93	1,000

The parties involved in the development

Berry Investments was to be the sole developer of the scheme, subject to the provisions of the financing deal as described below.

Development inception

The originator of the scheme was a local entrepreneur who ran a commercial property agency in the city. He acquired the property, employed an architect to design the scheme and then obtained planning consent. There was never any intention of the owners carrying through the

development themselves; their interest was in the gain in site value that was achieved by obtaining planning consent that would be realised by the re-selling of the site. As noted in the main text, this is common practice amongst many in the development sector.

Appraisal process

A number of steps were followed by Berry Investments to determine whether the scheme was viable and whether a purchase should go ahead. This involved consultation with a number of parties, principally involving seeking development advice from a firm of chartered surveyors, a cost consultant (via the agent), the planning department and financiers, and consultation with selling agents. The results of these consultations are outlined below.

Consultation with selling agents

A small developer working with a moderately sized development project has neither the time nor resources to carry out extensive market research. Establishing the nature and extent of the demand for the product is, however, one of the key parts of the development process both in assessing the overall viability and in determining the final design and specification of the scheme.

The best solution to this problem for a developer is to make extensive consultation with local agents – as did Berry Investments. This was done as part of the selection process for the agent who would handle the sale of the completed apartments at the end of the development. This process allows agents to reveal their knowledge about the local market and to explain how they would market the property, enabling the developer to get a range of views about the prospects for the scheme and the likely sale prices achievable on the apartments and duplexes.

The agents all commented upon the increasing popularity of the Northern Quarter as galleries, bars and restaurants moved into the area, and its good location due to its proximity to the railway station and city centre. Advice was given on creating brochures and the fact that the apartments would appeal to the investment market with individuals seeking to 'buy to rent'. Most agents discussed strategies that would exploit this market, with a number highlighting their track record and contacts in this area. Some recommended fitting out a show flat, although others considered this to be an unnecessary expense. All this advice was provided freely.

The selection of an agent was made by the developer and the following was agreed to be realistic selling prices, given the state of the market at the time that the development was being considered:

<i>Apartment number</i>	<i>Floor</i>	<i>No. bedrooms</i>	<i>Area (m²)</i>	<i>Area (Ft²)</i>	<i>Proposed selling price</i>
1	G	1	53	574	£105,000
2	G	1	43	467	£ 90,000
3	G	2	58	622	£120,000
4	1	1	55	586	£105,000
5	1	1	47	508	£ 90,000
6	1	2	65	698	£125,000
7	2	1	55	586	£105,000
8	2	1	48	519	£ 95,000
9	2	2	66	711	£130,000
10	3	2	86	922	£175,000
11	3	2	78	839	£155,000
12	4 & 5	2	78	834	£160,000
13	4 & 5	2	76	820	£160,000
14	4 & 5	2	93	1,000	£185,000
		Totals	901	9686	£1,800,000

Structural survey of the existing buildings

A structural survey would have formed part of the final site acquisition process and was budgeted for in the financial appraisal.

Site investigation, environmental assessment and hazardous materials survey

Not carried out. The building's structure was largely unchanged although a small passenger lift was to be incorporated in the scheme that did involve excavation. In addition, the existing fittings and fixtures were to be removed. Although both processes may have revealed deleterious material such as asbestos, this was not considered to be a major risk and would have, in any case, been picked up in the structural survey.

Scheme design

The site sale included a set of plans commissioned by the vendor of the site that detailed the development scheme. It was these drawings that were used in the planning application and to which the full planning consent referred. The purchaser would receive the intellectual rights to the drawings and would be able to build out the scheme.

Finance

Berry Investments sought project finance to fund 100 per cent of the development costs. A number of banks were approached to secure funding but the best options seemed to lie with a smaller specialist lender who was better experienced at dealing with the risk involved with the scheme.

One specialist property fund was located who would provide 100 per cent development funding subject to the following criteria:

X Limited normally chooses to invest in schemes that have sales revenue in excess of £1m ... for housing development, subject to the creation of a new company, usually a wholly owned subsidiary of the current operating company, which would act as the contractor for the development. X Limited would then enter into a joint venture agreement with this new company, and under this agreement, would arrange the finance necessary for the development.

The following general criteria are usually required for an acceptable proposal:

- The site is located where people choose to live.
- The planned house types are consistent with the existing accommodation in the area.
- The sale prices ... are reconcilable with those of existing surrounding properties.
- The required rate of sale can be demonstrated to be achievable in current market conditions.
- All permissions necessary to enable the foregoing assumptions to hold true are available.
- The Joint Venture partner can demonstrate his financial standing, his ability to construct and manage the development and has a proven track record of successful projects.
- The proposed development appraisal demonstrates an acceptable profit level.

If these criteria are met, financing would be granted to the development company and would be secured by way of a first charge over the site to a joint stock bank, which would provide the primary loan. X Limited would be granted a second charge to cover the remaining top slice of finance, which would be provided from the company's own funds. A management charge would be made reflecting the interest rate applicable to the primary debt.

Building costs and fees would be fixed and warranted by the contractor and would be paid by certified monthly valuation, by an independent surveyor. We would then share with you the risk of other time related costs and selling prices.

To enable us to evaluate your development proposal we would need to receive a viability appraisal from you. It should include a copy of the any relevant planning permissions, a site layout, market research to establish and confirm sales income, a breakdown of building and development costs, your company profile, previous experience and track record and ... a detailed cash flow, tracking the development from start to finish, and including interest ...

The guidelines as laid down by the financier have been extensively reproduced as they provide a very clear statement of what a developer must provide in order to gain finance. It can be seen that a blend of a viable project with a degree of prior experience is needed. It should be noted that, in this case, Berry Investments was judged to be an acceptable partner and, that in order to obtain 100 per cent finance (i.e. to cover all of the development costs), it was necessary to enter into a joint venture agreement, i.e. the requirement to give over the rights to 50 per cent of the profits (although these were to be shared on a vertical split, rather than giving the financier first call on the profits). Effectively, the financier is providing a viable level of security for a bank to advance funds for the scheme and in return for a relatively small risk exposure, stands to gain a share of the profits.

Planning application and planning consultation

As noted, full planning consent had been obtained by the current owner of the building. Planning permission was granted by Manchester City Council in October 2001.

The consent was subject to a number of conditions though most were standard (for example, the consent was limited to a five-year period

following the date of the permission, and that the development should be carried out in accordance with the plans as submitted) but there were also requirements to agree to some of the details of the scheme on the execution of the project. These were seemingly minor issues such as the location of, and access to, bin stores, and the provision of cycle stores on the premises.

In fact, consultation with the planning authorities showed that some significant changes were required to the layout of the ground floor that could have had an impact on both the marketability and the sale price of one of the apartments on this floor. There was also a small increase in construction costs. The negotiations with the planning department on this issue were protracted, being set back, in part, by the planning department's delay in retrieving documents on the scheme from archive storage. This information was received after the initial appraisal for the financiers had been completed. The figures included at the end of the case study are based upon the original sale values and cost estimate – the loss of revenue allied to a rise in costs would have eroded the profit figure further from that given.

Construction issues

The surveying firm providing development advice had the scheme costed for Berry Investments. This suggested a total build cost of around £800-£850/m².

Berry Investments decided to follow a 'design and build' route for the project, should it choose to proceed. This provided a number of advantages, including certainty on cost and on speed of construction. It would also have greatly simplified the coordination of the project during its execution. There was also little need to keep a strict control of the detailed output of the construction process. A short list of contractors was drawn up by Berry Investments's development consultants.

Post-construction phase

A local firm of surveyors was to be appointed to advise on project management and construction costs. One of the agents who was consulted about the market potential of the project was to be appointed to conduct the marketing and sale of the completed apartments.

Outcome of the appraisal process

Bringing together the various threads of the development project in the appraisal (the cash flow produced by Berry Investments is reproduced in the Appendix) caused the following conclusions to be reached:

- The development scheme in terms of the marketability of the product was viable.
- Finance was available at an acceptable rate and on acceptable terms.
- Berry Investments was confident that it could successfully complete the scheme.

However:

- The purchase price for the land was too high at £500,000.

Allowing for all costs, an acceptable profit margin for residential schemes (around 15 per cent) was only approached when the land price was reduced to around £400,000. This gave the following figures:

Profit	JOINT VENTURE	Assumptions
Revenue	1,800,000	Development period 7 months
<i>Less:</i>		Sales period 7 months
Development costs	1,461,461	Total project duration 15 months
Sales costs	36,000	Interest rate 7% (principal & mezzanine)
Interest	91,117	Build method Design/build
	1,588,578	Build costs Provided by building surveyor
Profit	211,422	
Lender's profit share (50%)	105,711	
Developer's profit share (50%)	105,711	
Profit on cost before interest	21%	
Profit on cost after interest	14%	

Berry Investments attempted to secure the site at a lower price but the vendors were not willing to negotiate at this level. Berry Investments was unofficially advised that the vendors were expecting property prices to appreciate by ten per cent over the next year, which would underpin the higher valuation.

Rather than buying the site at the full asking price and running the risk of house price inflation not being the amount expected, Berry Investments withdrew its interest from the property, and the development did not proceed.

Conclusion

The study might perhaps have been more instructive if the scheme had proceeded in that it would have allowed an examination of how a small developer would have managed the execution of the scheme. It does, however, provide valuable insights in a number of areas:

- It illustrates that a single individual can bring together all the components necessary to carry out a development, if they have the time, knowledge and expertise to do so. There is a considerable infrastructure of professional knowledge and sources of finance that can be tapped into and co-ordinated to complete a scheme. One of the main difficulties a new developer faces is in identifying these sources and establishing a working relationship with them. Berry Investments succeeded in this and the network of contacts built up was taken to the next development opportunity.
- The study gives an insight into the requirements of financiers. Finance is the lifeblood of development and it is the one single component that can make or break a scheme. Finance was sourced in this case, although on terms that greatly reduced the overall return to the developer. It is also instructive to note that the financier required a detailed cash flow appraisal rather than the traditional residual that most UK developers are perhaps more familiar with.
- Finally, the study illustrates the importance of researching the detail of a development project. Berry Investments had already found that the development was not really viable at the original asking price, based upon its initial examination of the market using

the scheme as drawn up. The minor alterations made by detailed application of the planning conditions showed that a considerable reduction in asking price was required. It was laudable that the prospective developer was not swayed into bidding closer to the asking price by being more optimistic about the rate of inflation in residential prices. Their sensitivity analysis had revealed that the project's profitability was extremely sensitive to this issue and they would be running a far greater risk if they proceed at that price. Berry Investments decided to be patient and wait for a more viable, less risky alternative opportunity.

APPENDIX

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8
Receipts								
Sales								257,143
TOTAL RECEIPTS	0	0	0	0	0	0	0	257,143
Expenditure								
BUY								
Purchase price	425,000							
Stamp duty	14,875							
Legal costs	1,500							
Valuation fees	1,000							
DEVELOPMENT PHASE								
Professional fees:								
Employer's agent (2.5%)	24,525							
Party wall surveyor (0.5%)	4,905							
Planning supervisor (0.5%)	4,905							
Buildings costs (£83 per sq ft)		122,625	122,625	122,625	122,625	122,625	122,625	122,625
Building's insurance	60	77	94	111	128	128	128	128
NHBC guarantee								
Total before interest	476,770	122,702	122,719	122,736	122,753	122,753	122,753	122,753
Loan interest – monthly step up (7%)	2,781	716	716	716	716	716	716	0
Loan interest – total monthly (7%)	2,781	3,497	4,213	4,929	5,645	6,361	7,077	7,077
SALES PHASE								
Estate agent's fees (1.5%)								3,857
Legal fees (0.5%).								1,286
TOTAL COSTS	479,551	126,199	126,932	127,665	128,398	129,114	129,830	134,973
Profit/(loss)	-479,551	126,199	-126,932	127,665	128,398	-129,114	-129,830	122,170
Cash flow								
Loan advance	476,770	122,702	122,719	122,736	122,753	122,753	122,753	0
Repay loan								-122,170
Cash flow	-2,781	-3,497	-4,213	-4,929	-5,645	-6,361	-7,077	0
Opening bank balance	0	-2,781	-6,278	-10,491	-15,420	-21,064	-27,425	-34,502
Closing bank balance	-2,781	-6,278	-10,491	15,420	-21,064	-27,425	-34,502	-34,502

	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	TOTALS
Receipts								
Sales	257,143	257,143	257,143	257,143	257,143	128,571	128,571	1,800,000
TOTAL RECEIPTS	257,143	257,143	257,143	257,143	257,143	128,571	128,571	1,800,000
Expenditure								
BUY								
Purchase price								425,000
Stamp duty								14,875
Legal costs								1,500
Valuation fees								1,000
DEVELOPMENT PHASE								
Professional fees:								
Employer's agent (2.5%)								24,525
Party wall surveyor (0.5%)								4,905
Planning supervisor (0.5%)								4,905
Buildings costs (£83 per sq ft)	122,625							981,000
Building's insurance	128	128	128	128	128	128	128	1,751
NHBC guarantee	2,000							2,000
Total before interest	124,753	128	128	128	128	128	128	1,461,461
Loan interest – monthly step up (7%)	0	0	0	0	0	0	0	0
Loan interest – total monthly (7%)	7,077	7,077	7,077	7,077	7,077	7,077	7,077	91,117
SALES PHASE								
Estate agent's fees (1.5%)	3,857	3,857	3,857	3,857	3,857	1,929	1,929	27,000
Legal fees (0.5%)	1,286	1,286	1,286	1,286	1,286	643	643	9,000
TOTAL COSTS	136,973	12,348	12,348	12,348	12,348	9,777	9,777	1,588,578
Profit/(loss)	120,170	244,795	244,795	244,795	244,795	118,795	118,795	211,422
Cash flow								
Loan advance	0	0	0	0	0	0	0	1,213,186
Repay loan	-120,170	-244,795	-244,795	-244,795	-236,461			-1,213,186
Cash flow	0	0	0	0	8,334	118,795	118,795	211,422
Opening bank balance	-34,502	-34,502	-34,502	-34,502	-34,502	-26,168	92,627	
Closing bank balance	-34,502	-34,502	-34,502	-34,502	-26,168	92,627	211,422	

Project Appraisal Summary

Profit	JOINT VENTURE	Assumptions
Revenue	1,800,000	Development period 7 months
<i>Less:</i>		Sales period 7 months
Development costs	1,461,461	Total project duration 15 months
Sales costs	36,000	Interest rate 7% (principal & mezzanine)
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Lender's profit share (50%)	105,711	
Developer's profit share (50%)	105,711	
Profit on cost before interest	21%	
Profit on cost after interest	14%	

Case study 3

Industrial development, Wearside Mid-late 1990s

Developer: Edinburgh-based financial institution

Background

This case study examines in outline the construction of an industrial scheme comprising eight units of differing sizes undertaken by an Edinburgh-based life assurance company. Some of the details of the scheme have been changed to respect the commercial confidentiality of the parties concerned.

The development is unusual in a number of respects. Firstly, it is relatively unusual for a financial institution to carry out direct development projects. In this case, the property team of the organisation had built up many years of experience in direct development projects. Secondly, it was also unusual in that the institution was developing investments to sell on rather than to retain and hold in an investment portfolio. The reason for this was tax driven. The site had enterprise zone status allowing the first owners of the buildings to claim capital allowances for their construction which could be offset against other tax liabilities.

Setting these distinct features to one side, however, the development does reflect a reasonable example of non-residential development of an investment grade property.

Project outline

The project involved the development of 15,000m² of industrial B1, B2 and B8 buildings on a site of 35,000m² located on Wearside in the northeast of England. The six buildings making up the estate were to be let on full repairing and insuring (FRI) leases to manufacturing and warehouse companies, and the freehold investment interests sold off to investors. The

originally envisaged development period was 18 months, including letting voids.

The site and its relationship to the locality

The site is located close to the A19 trunk road and the A1231 about five miles from the centre of Sunderland. It is thus close to the A1M motorway and the Nissan factory, a major employer in the Sunderland area. Mainline railway stations were to be found in Sunderland and Newcastle, and airports at Teeside and Newcastle. The international freight port at Teeside is located approximately 30 miles to the north.

The Sunderland area is one that was dominated in the past by heavy industry, particularly ship building. These industries had been in decline for many years and most had closed down by the time the development took place. New industries such as the Nissan factory had been established in the area but considerable development assistance was available and the Wearside/Sunderland area became one of the last enterprise zones to be dedicated in the UK. These zones encouraged occupiers and investors by providing tax breaks for new property construction and business establishment.

The site prior to development

On first inspection, the site appeared to be a greenfield site prior to the development. In fact, it had been used for industrial processes for many years but had been cleared several years before development commenced. The site was owned by Sunderland Borough Council whose economic development department was promoting the area and trying to attract new investment into the region.

There were no existing structures on the site at the time it was brought to market.

Development inception

Inception arose from the investment requirements of the Edinburgh-based financial institution. Each January it held meetings amongst its investment staff to review the performance of its existing portfolio and to identify in which sectors of the property market the portfolio was over or underweight. This review meeting identified that the institution was underweight in

industrial property. It was felt that this sector would perform well over the next few years and, in particular, that opportunities in northern England offered the greatest chance to acquire good quality high-yielding investments.

Over the next few months the property investment team examined a number of existing investment opportunities in the key areas identified. None were found to be satisfactory and a decision was taken to examine development opportunities that would allow the quality of the end product to be more strictly controlled.

During the course of the investigations the site at Sunderland was brought to the attention of the property team. It had a number of advantages that were attractive to the institution, including the fact that it was close to a major focus of other investment activity where mainly office buildings were being constructed. There was, however, a shortage of high-grade industrial and warehouse facilities in the area. Consultation with a local agent confirmed that there was considerable demand for higher grade properties from some of the newer industries in the area but that these were not being provided by the market. The downside to the site was that it had enterprise zone status. The institution had beneficial tax status as it was a pensions and savings product provider. Enterprise zone status best suited higher rate taxpayers.

The council was very keen to see a high-grade industrial development placed upon the site and was willing to offer the site on very advantageous terms to the institution. The purchase price suggested was 5.5 per cent of the end value of the scheme, payable on sale of the investment. This offered the advantage to the developer of having very low initial costs and predictable cash flows. The original feasibility study showed that the development returned an internal rate of return (IRR) in excess of 30 per cent and a return on cost of around 20 per cent.

Although it was an unusual step, the property team decided that there was an opportunity to act as if it were a developer trader, developing out the scheme with the intention of selling it on to investors with a different tax status to the institution. The latter could then gain benefit from the one-off developer's profit. The decision was taken to proceed and an agreement was signed with the City Council. This agreement covered the purchase of the site, as well as the type of operator that the properties were to be let to. The council was keen to encourage employment in the area so the institution had to enter into a binding agreement only to lease to companies who met the minimum level of employment per square metre of let floor space.

The development team

The institution relied heavily upon the local letting agent's advice on the form that the building should take. The agent was one that the institution had worked with on an acquisition made several years before. The agent had considerable experience of the industrial market in the Northeast, having started his career with English Estates, a quango charged with the responsibility for the development of new industrial buildings in areas where the private sector market would not make provision. He had been working in the private sector for about ten years prior to the commencement of the development.

Later in the project it was decided to appoint a joint agent. This agent was one of the international central London property consultants. The reason for this appointment was that the likely buyers of the investment interests in the property would probably go through a London firm to obtain investment advice appertaining to tax shelters. The firm appointed was a specialist in tax shelters and had advised a number of other developers in this area over previous years.

The institution assembled a development team based mainly upon prior working experience. The architects were one of the larger UK practices who the institution had worked with on other projects in southeast England. The architects had a Newcastle office, and a director of the practice from London worked with the local team on liaison with the institution in the early stages of the development of the design of the scheme in order to build a good working relationship. The relationship did develop very smoothly with a practical yet distinctive design.

The quantity surveyor was, again, from one of the UK's largest practices which the institution had many years' experience working with on several projects throughout the country. This practice also had a Newcastle office and, fortuitously, this was headed up by a surveyor with whom the institution had worked on a project in Birmingham, and who had impressed with his accuracy of cost forecasting and the way in which he had managed an extremely difficult project.

The institution used its usual solicitors for the legal issues concerned with the development, such as conveyancing and the drawing up of leases, etc. This solicitor's practice was based in central London.

The engineers (both structural and services) were locally based. The institution had no prior experience of working with either but were selected upon the recommendation of the architect and quantity surveyor.

The scheme design and specification

The initial vision for the scheme was for relatively conventional steel portal frame industrial buildings with around ten per cent of office space. This concept was later developed in discussions between the institution, the letting agent and the scheme's architect. It was decided that to achieve maximum market impact it was necessary to produce buildings that were of higher grade than those available elsewhere in the region. This development was to be the first private sector industrial scheme to be constructed by a financial institution in the region and it was felt that the higher quality buildings and image would attract tenants to the scheme more readily. This was backed up by informal market research carried out by the letting agent in meetings with occupiers in the region. These meetings also acted to bring the prospect of the development to the attention of those in the market, and was considered to be far more cost effective than advertising.

The final scheme design was for high-grade industrial buildings with brick cladding to two-storey offices located at the corner of each building. Rather than produce terraces, the market research suggested that the larger occupiers preferred stand-alone buildings. The bigger buildings were given 'towers' above their office areas to emphasise their distinctiveness. Four larger stand-alone units were planned, with two further units sub-divided to produce four smaller units.

A schedule of accommodation is given below:

<i>Unit</i>	<i>Area (m²)</i>
1	3,500
2	3,000
3	2,550
4	1,545
5	1,300
6	1,035
7	1,035
8	1,035
	<i>Total 15,000</i>

The specification of the offices included:

- tinted double glazing;
- prestige reception areas with feature staircases;
- open plan accommodation;
- suspended ceilings with integral grid lighting;
- quality carpeting;
- gas central heating;
- three-compartment perimeter trunking;
- fully tiled male and female toilets.

The production/warehouse accommodation was finished to a shell specification allowing maximum flexibility of use. It featured:

- electrically operated high-lift loading doors;
- good natural light provided by double skin translucent roof panels;
- high specification insulated profile metal cladding;
- separate production area toilets;
- minimum internal clear height of 5.8 metres at eaves.

The yard areas were tarmacked. Landscaping and tree planting was provided at the site and unit boundaries and substantial areas of car parking were provided.

Planning and pre-construction phase

Site assembly/acquisition

The land acquisition process took around 12 months from the commencement of negotiations. This was not due to any particular problem but rather because the institution wanted to ensure that the conditions were right for development. The local council was always keen for the development to proceed and recognised the institution as the preferred developer for the site. There were occasions when the council indicated that it was impatient with the lack of progress in proceeding with the scheme, but eventually the agreement to purchase was made.

The negotiation period enabled the detail of the scheme to be drawn up, for a list of potential contractors to be finalised and for site investigations to be made. The site survey revealed that the site had been used largely for open storage associated with railway use. No contamination was found, although an area of filled land associated with an old railway cutting was identified. This potential problem was incorporated into the works as described in the contract drawings and included into the Bill of Quantities.

Planning/consents

The site had existing outline consent for the development of up to 15,000m² of B1,B2 or B8 buildings. Detailed consent was obtained prior to the signing of the agreement to purchase the land. The planning process was very straightforward with few objections from neighbouring occupiers and businesses. The enterprise zone status of the site in any case offered a simplified planning regime to applicants.

Finance

The scheme was financed using internal funds of the institution. Main board approval was gained to commit up to £8,000,000 of funds to the development. Later, additional funds were committed to the scheme. A notional opportunity cost of nine per cent per annum was applied to the finance.

Appraisal

The final appraisal prior to the commencement of the scheme is attached as Appendix A. The appraisal was based upon advice given by the letting agent, the investment agent and the quantity surveyor who provided a detailed cost plan based upon the design and specification provided by the architect and engineers. The letting agent advised that the scheme would attract rents of around £50/m² pa. A six-month letting void was built into the appraisal. The yield on the scheme would be 7.75 per cent, reflecting the tax status of the scheme. The after tax returns after the capital allowances had been allowed for were anticipated to be around 12.5 per cent for top rate tax payers. The cost of construction, including all external works was anticipated to be £355/m².

The appraisal showed the following:

<i>Summary</i>	
Total development cost	-£7,254,041
Net development value	£9,032,258
Developer's profit (£)	£1,562,340
Developer's profit on cost (%)	21.54%
Developer's profit on value	17.30%
Rent cover (years)	2.08
IRR (month)	2.77%
IRR (pa)	33.19%

This was considered to be acceptable and the scheme proceeded.

Construction phase

A traditional procurement route was chosen by the institution. This was due to the organisation's familiarity with the technique and the desire to maintain control of the finished product. The architect was responsible for the detailed plans, the engineers designed the structural frame and floors, and the M and E consultant the services. A full set of construction drawings was prepared, as was a Bill of Quantities. These documents formed the basis of the tender documentation. The architect was to be the project leader of the development as the work continued and chaired the monthly site meetings. The institution also had representatives at these meetings.

A shortlist of six contractors was drawn up in consultation with the quantity surveyor and architect. All were national or international contractors with substantial experience of a range of commercial construction work. All indicated their willingness to tender for the work. The tenders were received on time and were all extremely competitive and close. The contract was awarded to the lowest tender received. The contract agreed used a standard JCT form of contract with quantities allowing for stage payment. A 12-month build period was agreed.

It should be noted that the design team and the contractor were required to enter into collateral warranties with the benefit lying with third parties, namely the future owners and occupiers of the building. This was important in order to pass comfort on design liability to those who had not been party to the original contracts. These documents took time to agree, with the insurers of the consultants having a considerable input to the process.

On site, the programme of works proceeded generally well. Construction started in January and there were some early weather-related delays as the first two months of the year saw a number of days of extreme cold. On these days it was impossible to pour concrete as the temperature did not climb above zero. Later, there were problems with high levels of rainfall. As a result, the predicted spend in the early months of the scheme was less than that anticipated. However, lost time on the programme was made up during the summer months.

There were some problems with steel delivery for the portal frame and also with the alignment of a set of frames in one of the larger buildings. This was not spotted by the consultant engineer until later in the programme when the sub-frames and cladding were installed. Although calculations provided by the steel sub-contractor that were checked by the institution's engineer showed that there were no structural or safety issues with the misalignment, this issue did create problems at the end of the scheme.

By the time practical completion was approaching, all the units had been sold to investors. The sale receipts were to be forwarded on practical completion. The prospective owner of the building raised objections to practical completion being granted because of the misalignment. Hence, practical completion was delayed until satisfactory evidence was obtained to show that there were no significant structural issues to be resolved.

Post-construction phase

The nature of the scheme led to a two-pronged approach to the marketing of the scheme. As capital allowances were only available on new buildings it was important that the building's investment interest was sold first, so that the allowances could be claimed by those with the greatest beneficial motive. Letting the units meant that the capital allowances could only have been claimed by the tenants as first occupiers. This led to one case where a letting was lost because the unit that the tenant was interested in had not been sold.

Investment sale programme

In order to maximise the appeal of the scheme to tax shelter investors, certain components had to be put into place:

- As part of the sale agreements drawn up for the investors, the institution undertook to lease the properties to acceptable tenants. It provided a rental guarantee for the full outgoings on the property for a period of up to five years after the sale of the investment interests. When an acceptable letting was in place, this rental guarantee would end.
- A draft lease was drawn up by the institution's solicitor. This document had to form the basis of the lease terms under which the properties were let. These leases were effectively of institutional grade, i.e. they were of long duration, on an FRI basis and contained 'upward only' rent reviews that occurred every five years. The sight of this documentation was intended to reassure the prospective investors of the quality of the income flow that was expected to be attracted to the scheme. It gave them an effective further guarantee that the institution would not lease the properties on weak occupational contracts to secure a quick letting and thus end the rental obligation of the institution early.
- Similarly, a specification defining an acceptable tenant was also drawn up and put into the sale documentation. Incoming tenants had to produce three years of trading accounts that illustrated that

they had been trading profitably as well as providing trade and financial references. If this record was not available, the tenant was required to lodge a bond equivalent to six months' rent to be paid to the freeholder in case of default. This latter clause was very useful to the institution in the subsequent letting programme.

An investment brochure was prepared by the investment agent. The agent's clients were contacted and the scheme discussed.

The investment sale programme was extremely successful. All the units had sale agreements in place prior to practical completion, which was much earlier than had originally been assumed to be the case in the cash flow. To a certain extent this complicated the practical completion process as many of the prospective owners sent representatives to the practical completion site meeting. These representatives were typically building surveyors representing their clients' interests.

Letting programme

The letting programme proceeded in parallel with the investment sale programme. An artist's impression was commissioned using the architect's elevation drawings. This was incorporated onto a large hoarding giving details of the development and the units available, and was visible from the main A19 road. The artist's impression was also included in the letting brochure for the development which provided details of the specification of the buildings and the lease details. Some 500 of these brochures were produced. In addition, a technical brochure was prepared with a limited production run of 50. A marketing consultancy was used in the preparation of the brochure. Advertising space was taken in local trade publications and in local papers. An initial marketing budget of £32,000 was set.

The target market was firms in the Washington, Sunderland and general Wearside area. Many such successful firms in the area were operating out of older industrial premises often located on industrial estates built by the regional assistance agencies. Whilst functionally acceptable, many of these premises presented a poor image for customers of the firms.

The letting programme went more slowly than originally anticipated. By the time the development was underway there had been a downturn in the national and local economy. The terms of the investment sale restricted the room for negotiation with prospective tenants. The units did let – albeit more slowly than anticipated – and at the rental levels and on the lease terms that were anticipated. The quality of the tenants was, however, more mixed than

expected, and the need for a rental bond to be put in place was required on a number of units. The overall letting programme took six months longer than anticipated, requiring the institution to face nearly a full year of paying the rent on the property to the investment owners. In addition, security was required for the site to prevent vandalism and break-ins. There was no liability for rates due to the enterprise zone status.

Outcome of the development

The earlier than anticipated sale of the scheme was more than offset by the increased letting programme. The actual cash flow on the scheme is presented in Appendix B. The returns on the project are summarised below:

<i>Summary</i>	<i>Expected</i>	<i>Actual</i>	<i>Difference</i>
Total development cost	-£7,254,041	-£8,280,712	+14.15%
Net development value	£9,032,258	£9,032,258	0.00%
Developer's profit (£)	£1,562,340	£787,460	-49.60%
Developer's profit on cost (%)	21.54%	9.51%	-55.85%
Developer's profit on value	17.30%	8.72%	-49.60%
Rent cover (years)	2.08	1.05	-49.60%
IRR (month)	2.77%	3.16%	+14.17%
IRR (pa)	33.19%	37.90%	+14.17%

The early receipt of the sale receipts had the effect of boosting the IRR figure (though it seems likely that this is a false IRR due to the change in sign of the cash flows). The extension to the letting programme did, however, have a considerable impact on the profitability of the development. The profit figures were effectively halved by the extension and by the institution's rental guarantee.

Conclusion

Although in some respects an unusual development, this outline case study does illustrate how a project goes from a concept to final execution. Some of the uncertainties of the process are illustrated, particularly regarding the problems with predicting the letting up rates. Although enterprise zone tax shelters are largely a thing of the past, the study does illustrate generally how investment concerns can subordinate other issues in the development.

Appendix A

Details of development

Type	Industrial Units
Area (m ²)	15,000
No. units	1
Total area (m ²)	15,000
Construction (£/m ²)	355
Total construction costs	-£5,325,000
Rent/year	£50
Area	15,000
No. units	1
£ total	£750,000
Deductions	£-
Gross income	£750,000
Capitalisation rate	7.75%
Sale costs	2%
Contingency	2.50%
Prof fees	11%
Finance cost (pa)	9%
Finance month	0.721%
End value	£9,216,590
Marketing	£32,000
Letting fee	10.00%
Site purchase	£506,912
Incoming purchaser's costs	4.00%
Developer's profit	20.00%

Month	16	17	18	TOTAL PAYMENTS
Site purchase			-£506,912	-£506,912
Purchase cost			-£13,940	-£13,940
Construction				-£5,325,000
Fees			-£29,288	-£585,750
Contingency				-£133,125
Site investigations				-£35,000
Marketing				-£32,000
Institution's legal costs			-£5,000	-£5,000
Letting fee			-£75,000	-£75,000
Other costs (security, etc)	-£1,500	-£1,500	-£1,500	-£9,000
Monthly spend	-£1,500	-£1,500	-£631,640	Monthly spend
Interest	-£46,691	-£47,038	-£47,388	-£533,314
Balance	-£6,526,475	-£6,575,013	-£7,254,041	-£7,254,041
Sale			£9,216,590	Sale
Sale cost			-£184,332	Sale cost
Cash flow excluding interest				
Developer's profit	-£1,500	-£1,500	£8,400,618	Project surplus at end
			£1,778,217	Net present value
				£1,562,340

Profit on Cost 21.538% IRR (Month) 2.766% IRR (Year) 33.190%

SUMMARY

Total development cost	-£7,254,041
Net development value	£9,032,258
Developer's profit (£)	£1,562,340
Developer's profit on cost (%)	21.54%
Developer's profit on value	17.30%
Rent cover (yrs)	2.08
IRR (month)	2.77%
IRR (pa)	33.19%

Appendix B

Details of development

Type	Industrial Units
Area (m ²)	15,000
No. units	1
Total area (m ²)	15,000
Construction (£/m ²)	357.4
Total construction costs	-£5,360,518
Rent/year	£50
Area	15,000
No. units	1
£ total	£750,000
Deductions	£-
Gross income	£750,000
Capitalisation rate	7.75%
Sale costs	2%
Contingency	2.50%
Prof fees	11%
Finance cost (pa)	9%
Finance month	0.721%
End value	£9,216,590
Marketing	£42,838
Letting fee	10.00%
Site purchase	£506,912
Incoming purchaser's costs	4.00%
Developer's target profit	20.00%

Month	24	TOTAL PAYMENTS
Site purchase	Site purchase	-£506,912
Purchase cost	Purchase cost	-£13,940
Construction	Construction	-£5,360,518
Fees	Fees	-£589,657
Site investigations		-£35,000
Marketing		-£42,838
Institution's legal costs		-£5,000
Rental guarantee		-£1,312,500
Letting fee		-£75,000
Other costs (security, etc)	Other costs	-£18,000
Sale	Sale	
Sale Cost	Sale Cost	-£184,332
Monthly spend	Monthly spend	
Interest	Interest	-£137,015
Balance	Balance	-£8,280,713
Cash flow excluding interest	Project surplus at end	£935,878
Developer's profit	Net present value	£787,460

Profit on Cost 9.510% IRR (Month) 3.158% IRR (Year) 37.90%

SUMMARY

Total development cost	-£8,280,712
Net development value	£9,032,258
Developer's profit (£)	£787,460
Developer's profit on cost (%)	9.15%
Developer's profit on value	8.72%
Rent cover (yrs)	1.05
IRR (month)	3.16%
IRR (pa)	37.90%

Contemporary Property Development

Contemporary Property Development is an in-depth examination of the process of developing property for commercial gain. Written with construction and property professionals and students in mind, it provides both a basic level of information as well as the opportunity to acquire more advanced skills. Explaining each stage of the development process in detail using worked examples, it ends with three case studies drawn from relatively small residential projects to much larger commercial developments that link the theory with the practice of development.

The scope is comprehensive, offering a solid introduction to all aspects of development in the UK. *Part 1* takes a detailed look at the background to property development in the UK, discussing development routes, the players in the market, the property markets and the investment markets. *Part 2*, Development Inception, explains how projects get off the ground. *Part 3* looks at finance, in particular, retention financing, risk reduction and tax. *Part 4*, Project Appraisal, presents the nuts and bolts procedures that developers use in practice to assess project viability, including the basic, cash flow, accumulated cash flow and discounted cash flow appraisal models, pointing out their relative merits and sensitivity. *Part 5* discusses procurement routes and *Part 6* highlights the post-construction phase. *Part 7* analyses the issue of risk in property development, and how to identify and mitigate it using common sense techniques. Finally, three case studies describe in depth how the process works in the real world.

Contemporary Property Development reflects recent marked changes in the industry. Traditional roles have changed or blurred and the end market is volatile, with user requirements changing rapidly. At the same time, development has also become more accessible to participants from a wide variety of backgrounds, particularly architects, whose design creativity puts them in a unique position to influence the end product so as to meet both the requirements of an increasingly demanding market and the wider needs of society as a whole.

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