

**THE LONDON BOROUGH OF HARINGEY
(HIGH ROAD WEST PHASE A)
COMPULSORY PURCHASE ORDER 2023**

DOCUMENT CD 10.9

WITNESS 6: PASCAL LEVINE, DS2

APPENDICES TO REBUTTAL

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Table One: Comparison of Major Development Appraisal Inputs & Outputs for the CPO Scheme				
	Pascal Levine 5 Oct as submitted [CD 9.12.2]	Mr Cottage 5 Oct 'Planning FVA' (Appraisal One)	Mr Cottage 5 Oct (Appraisal Two)	Comments (in respect of my appraisal and Mr Cottage's Appraisal Two)
Residential base value	£730 psf	£700 to £715 psf (incorporates a 2.5 percent regen premium for later phases)	£730 psf	Consistent
Residential sales post PC rate	Between 9 and 10 units per month	7 units per month	7 units per month	Minimal impact not materially affecting the outturn
Regen / Maturity Premium	Included (in growth)	2.5 percent regen premium	Excluded	I have included the regeneration premium as explained in my Main Proof incorporated into a 5.25 percent growth rate. A scheme of this longevity and complexity requires reasonable growth & inflationary measures to assess the potential outturns
Growth / Inflation	Included	Excluded	Excluded	As above
Development Timetable	As identified in the Statement of Case [CD 7.1] phasing plan (Section 7.39 Timetable for Delivery)	Mr Cottage's interpretation of the Statement of Case [CD 7.1] phasing plan	Mr Cottage's interpretation of the Statement of Case [CD 7.1] phasing plan	
Construction costs	As per my evidence [CD 9.11] as supported by RLB and included in my 05 October development appraisal [CD 9.12.2]	As per the Planning FVA [CD 4.33] agreed position July 22	As per my 05 October development appraisal [CD 9.12.2]	Consistent albeit noting the comments in paragraphs 7.26 to 7.32 of Mr Cottage's PoE
Infrastructure Costs	£43,111,859 as advised by RLB and included in my 05 October development appraisal [CD 9.12.2]	£30,031,745 (apportioned from Planning FVA [CD 4.33])	£43,111,859 as included in my 05 October development appraisal [CD 9.12.2]	Consistent

S106 / CIL	S106 in accordance with the Deed and CIL liabilities as advised by DP9 planning advisors	Not clear but my assumption is that they are apportioned for the Consented Scheme (Phase A) from the Planning FVA [CD 4.33]	As included in my 05 October development appraisal [CD 9.12.2]	Consistent
Timing of cash flows	Market facing	Estimated	Estimated	My cashflow is a combination of market facing & developed through discussions with Lendlease & the Council in respect of the application of Mayor's land fund & GLA housing grant.
Approach to existing land value	Land payments aggregated per phase but in accordance with the Council's Property Cost Estimate (including allowances for property disturbance costs)	As per the Planning FVA [CD 4.33] but with 5 percent added and additional allowances for property disturbance costs	As included in my 05 October development appraisal [CD 9.12.2]	Consistent
Residual IRR	11.59 percent	4.88 percent	minus 1.1 percent	Key variance relates to the approach to growth / inflation in the appraisal



Valuation of development property

Global

1st edition, October 2019

Effective from 1 February 2020

Valuation of development property

RICS professional standard, global

1st edition, October 2019

Effective from 1 February 2020



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RICS standards framework

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The [RICS Rules of Conduct](#) set high-level professional requirements for the global chartered surveying profession. These are supported by more detailed standards and information relating to professional conduct and technical competency.

The SRB focuses on the conduct and competence of RICS members, to set standards that are proportionate, in the public interest and based on risk. Its approach is to foster a supportive atmosphere that encourages a strong, diverse, inclusive, effective and sustainable surveying profession.

As well as developing its own standards, RICS works collaboratively with other bodies at a national and international level to develop documents relevant to professional practice, such as cross-sector guidance, codes and standards. The application of these collaborative documents by RICS members will be defined either within the document itself or in associated RICS-published documents.

Document definitions

Document type	Definition
RICS professional standards	<p>Set requirements or expectations for RICS members and regulated firms about how they provide services or the outcomes of their actions.</p> <p>RICS professional standards are principles-based and focused on outcomes and good practice. Any requirements included set a baseline expectation for competent delivery or ethical behaviour.</p> <p>They include practices and behaviours intended to protect clients and other stakeholders, as well as ensuring their reasonable expectations of ethics, integrity, technical competence and diligence are met. Members must comply with an RICS professional standard. They may include:</p> <ul style="list-style-type: none"> • mandatory requirements, which use the word 'must' and must be complied with, and/or • recommended best practice, which uses the word 'should'. It is recognised that there may be acceptable alternatives to best practice that achieve the same or a better outcome. <p>In regulatory or disciplinary proceedings, RICS will take into account relevant professional standards when deciding whether an RICS member or regulated firm acted appropriately and with reasonable competence. It is also likely that during any legal proceedings a judge, adjudicator or equivalent will take RICS professional standards into account.</p>
RICS practice information	<p>Information to support the practice, knowledge and performance of RICS members and regulated firms, and the demand for professional services.</p> <p>Practice information includes definitions, processes, toolkits, checklists, insights, research and technical information or advice. It also includes documents that aim to provide common benchmarks or approaches across a sector to help build efficient and consistent practice.</p> <p>This information is not mandatory and does not set requirements for RICS members or make explicit recommendations.</p>

Glossary

Term	Definition
Acquisition/disposal cost	The cost associated with the acquisition or disposal of property, usually including legal and agent fees, as well as any purchase or sales taxes.
Alternative use value	See <i>Value in alternative use</i> .
Building costs index	An index relating to the cost of building work. It is normally based on cost models of the 'average building', which measure the changes in costs of labour, materials and plant that collectively cover the basic cost to a contractor.
Cash flow	The movement of money by way of income, expenditure and capital receipts and payments during the development.
Comparable property transaction	A property used in the valuation process as evidence to support the valuation of another property.
Discounted cash flow	A method of valuation explicitly setting out the inflows and outflows of an investment/development. See also <i>Internal rate of return (IRR)</i> and <i>Net present value (NPV)</i> .
Developer contributions	Obligations often tied to the grant of development permissions providing a benefit to the community, either generally or in a particular locality. They are often mandatory requirements that have to be provided in order to undertake a development.
Development appraisal	A financial appraisal of a development. It is normally used to calculate either the residual site value or the residual development profit, but it can be used to calculate other outputs.

Term	Definition
Development profit	The amount by which, on completion or partial completion of a development, the estimated income of a development exceeds the total outlay. This can be expressed in various forms.
Development risk	The risk associated with the implementation and completion of a development, including post-construction letting and sales.
Development yield	The rental income divided by the actual cost incurred in realising the development. This can be based on either current or future estimates of the rental value of the completed development.
Development yield (initial)	The development yield calculated over the entire project. It is defined as the stabilised income divided by the total construction cost (excluding interest and fees).
Discount rate	The rate, or rates, of interest selected when calculating the present value of some future cost or benefit.
Existing use value	See <i>Value in existing use</i> .
Gross development value (GDV)	The aggregate market value of the proposed development, assessed on the special assumption that the development is complete on the date of valuation in the market conditions prevailing on that date. Where an income capitalisation approach is used to estimate the GDV, normal assumptions should be made within the market sector concerning the treatment of purchaser's costs. The GDV should represent the expected contract price.
Gross external area	The aggregate external area of a building or footprint, taking each floor into account, measured with reference to the appropriate code of measuring practice. For more information, refer to <i>International Property Measurement Standards (IPMS)</i> .

Term	Definition
Gross internal area	Measurement of a building on the same basis as gross external area – but excluding external wall thicknesses. Net sales area is the gross internal area of a residential dwelling subject to certain inclusions and exclusions. For more information, refer to <i>International Property Measurement Standards</i> (IPMS).
Highest and best use	The use of the property that would produce the highest value of the asset. It must be physically possible, financially feasible and legal. For more information, refer to <i>International Valuation Standards</i> (IVS) 104, paragraph 140.
Holding cost	The cost involved in owning a site or property, which may include such items as interest on finance used to acquire the asset, maintenance costs, any taxes payable by the owner, etc.
Hope value	<p>An element of market value in excess of the existing use value, reflecting the prospect of some more valuable future use.</p> <p>Note: this term is not specifically recognised by <i>International Valuation Standards</i> (IVS) or <i>RICS Valuation – Global Standards 2017</i> (Red Book Global Standards) but is a well-used phrase in practice in some jurisdictions and the concept is defined in paragraph 4.4 of VPS 4.</p>
Interest rate	The rate of finance applied in a development appraisal. This can vary within a project for different levels of senior and mezzanine finance.
Internal rate of return (IRR)	The rate of interest (expressed as a percentage) at which all future project cash flows (positive and negative) will be discounted in order that the net present value (NPV) of those cash flows, including the initial investment, be equal to zero. IRR can be assessed on both gross and net of finance.

Term	Definition
Market comparison approach	Assessment of appraisal inputs and outputs by reference to comparable transaction evidence, which can include land, values and costs.
Market rent	Defined in <i>International Valuation Standards</i> (IVS) 104 as ‘the estimated amount for which an interest in real property should be leased on the valuation date between a willing lessor and a willing lessee on appropriate lease terms in an arm’s length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion’.
Market risk	The uncertainty resulting from unknown future changes in the economy and financial and property markets, irrespective of the property being developed. See also <i>Property- or project-specific risk</i> .
Market value	Defined in <i>International Valuation Standards</i> (IVS) 104 as ‘the estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm’s length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion’.
Net cash flows	The cash flows generated by the project. These can be assessed both gross and net of taxes and both gross and net of finance costs.
Net development value (NDV)	The gross development value (GDV) minus assumed sale costs.
Net internal area (NIA)	The usable space within a building measured to the internal finish of structural, external or party walls, but excluding toilets, lift and plant rooms, stairs and lift wells, common entrance halls, lobbies and corridors and car parking areas. For more information, refer to <i>International Property Measurement Standards</i> (IPMS).

Term	Definition
Net present value (NPV)	The sum of the discounted values of a net cash flow including all inflows and outflows, where each receipt/payment is discounted to its present value at a specified discount rate. Where the NPV is zero, the discount rate is also the internal rate of return (IRR).
Net present value (NPV) method	A method used in discounted cash flow analysis to find the sum of money representing the difference between the present value of all inflows and all outflows of cash associated with the project by discounting each at a specified discount rate.
Net sales area	See <i>Gross internal area</i> .
Opportunity cost	The return or benefit foregone by pursuing an alternative action. See also <i>Optionality</i> .
Optionality	Often referred to as a real option being the right but not the obligation to pursue a particular course of action, i.e. sell, hold/retain or develop a property.
Outturn model	A development appraisal that has been adapted to project various inputs, usually both in respect of values and costs.
Oversailing licences	An oversailing licence allows a structure – a crane, for example – to overhang public or privately-owned property.
Planning obligations	See <i>Developer contributions</i> .
Pre-lets and pre-sales	Where a developer of a project, usually prior to implementation, has agreed lettings with occupiers or sales of part or the whole of the development prior to commencement or during the development.
Profit on cost	The profit of the project expressed as a percentage of total development costs.

Term	Definition
Profit on value	The profit of the project expressed as a percentage of the project's net development value (NDV).
Property- or project-specific risk	The uncertainty attached to the intrinsic development of a site or property in addition to the general market risk.
Projections of values and costs	Projecting from a base rent, sales value or cost to reflect estimated outturn levels in an appraisal.
Residual appraisal	See <i>Development appraisal</i> .
Residual method of valuation	A valuation/appraisal of a development based on a deduction of the costs of development from the anticipated proceeds. The residual is normally either development profit or land value.
Residual site value/residual land value	The amount remaining once the gross development cost of a project is deducted from its gross development value (GDV) and an appropriate return has been deducted.
Return (on capital)	The ratio of annual net income to capital derived from analysis of a transaction and expressed as a percentage.
Risk adjusted return	The discount rate as varied to reflect the perceived risk of the development.
Sensitivity analysis	A series of calculations resulting from the residual appraisal involving one or more variables (rent, sales values, build costs, etc.) that are varied to show the differing results.
Simulation	A simulation considers the probability of outcomes given certain variances applied to key inputs within the financial appraisal through a stochastic process. It can quantify the level of variation in the valuation of the development based on input variation.
Speculative developments	Developments that are generally commenced prior to any agreed sales or lettings.

Term	Definition
Stabilised income	The sum of the rental income, additional rent revenue and turnover (percentage) rent. It is assessed for one year from the earliest lease start date.
Standing investments	Properties that are income-producing, usually with a tenant in occupation.
Target profit	The level of acceptable profit considering the risk of the particular project normally expressed as an individual sum.
Target/required return	The level of commercially-acceptable return considering the risk of the particular project expressed as a periodic rate of return.
Tender price index	Index relating to the level of prices likely to be quoted at a given time by contractors tendering for building work.
Total construction cost	All costs of base construction and construction breakdown from project start to the earliest lease start date.
Total development cost	The total cost of undertaking a development excluding profit and land.
Turnkey development	A type of development in which the property is constructed and fitted out by the landlord/owner to a fully operational standard whereby an operator can commence trading with immediate effect. It also assumes all necessary licenses or registrations have been obtained.
Vacant possession	The attribute of an empty property, which can legally be exclusively occupied and used by the owner or, on a sale or letting, by the new owner or tenant.
Value change	The amount of growth or decline in the capital or rental value of elements of the project, normally projected for the purposes of the valuation/ appraisal.

Term	Definition
Value in alternative use	The market value, or any other appropriate basis, with the special assumption of an alternative use to the existing use or permitted highest and best use.
Value in existing use	The market value, or any other appropriate basis, assuming the property continues in its existing use with no expectation of that use changing in the foreseeable future.
Weighted average cost of capital	The minimum return a company should earn in respect of an asset by reference to relative weight of equity and debt within its capital structure. This may be stated by the client.
Yield	Yield can be applied to different commercial elements of a project, for example, office, retail, leisure, etc. It is usually calculated as a year's rental income as a percentage of the value of the property. Depending on jurisdiction, variations include capitalisation or cap-rate, all-risks yield, equivalent yield, income yield and initial yield.

1 Introduction

1.1 The principles set out in this professional standard apply to all valuations of development property and should be read in conjunction with *RICS Valuation – Global Standards 2017* (Red Book Global Standards) – incorporating the *International Valuation Standards (IVS)*, in particular IVS 410. Where updates to the Red Book Global Standards take effect after the publication of this professional standard, these take precedence and valuers must ensure that they are fully aware of any changes.

1.2 References to Red Book Global Standards use the relevant section identifier only (e.g. VPS 1 or VPGA 1).

1.3 This professional standard supplements IVS 410 with the aim of addressing the most pressing issues in more detail to facilitate its practical implementation.

1.4 The basis of valuation adopted for the valuation of development property must agree with IVS 104 and VPS 4. In addition, note that the purpose of the valuation will influence the assumptions made and the outcome. This may require the use of site-specific assumptions or special assumptions concerning the proposed or anticipated development; these assumptions must be reported in accordance with VPS 3 and VPS 4.

1.5 A development property is defined in IVS 410 as:

‘interests where redevelopment is required to achieve the highest and best use, or where improvements are either being contemplated or are in progress at the valuation date and include:

- a the construction of buildings,
- b previously undeveloped land which is being provided with infrastructure,
- c the redevelopment of previously developed land,
- d the improvement or alteration of existing buildings or structures,
- e land allocated for development in a statutory plan, and
- f land allocated for a higher value use or higher density in a statutory plan.’

1.6 References to development property or development land in this professional standard are interchangeable and should be taken to refer to paragraph 1.5, in accordance with IVS 410.

1.7 Development projects can vary from single or multiple residential projects to industrial estates, shopping centres, other retail developments, offices and mixed-use developments. IVS 410 paragraph 20.2 sets out a non-exhaustive list of different purposes for which a valuation of development property might be required. These may include advice on financial

reporting, loan security, acquisition, sale, the valuation of options (including the sale/ acquisition of a call option to purchase the property at a later date at a specified price) and the assessment of taxes and valuations required within litigation.

1.8 Although there may be differences between, say, a valuation prepared for a proposed acquisition or sale and an appraisal by a developer in connection with its own business model, there are several overriding principles that are relevant to all of these different purposes.

1.9 One of the more complex issues attached to the valuation of property development is valuation variation caused by the nature and timing of the valuation. This creates additional variation around the outputs relative to any variation in the inputs to the valuation, but it also increases the volatility of development property values over time. This in turn introduces more possible options for landowners and developers within the development process and some existing methodology has difficulty in accounting for these features. This professional standard addresses some of these difficulties and their implications on the valuation.

1.10 This professional standard addresses the valuation of development property from a global perspective. However, valuations should always be undertaken within the context of the institutional framework of the country or region where the property is located.

1.11 The aim of this professional standard is to guide the valuer in the approach to development property valuations, which are often complex, have a potentially high variation and incorporate optionality. These types of valuation can relate to specialised markets and therefore require a high level of expertise. Indeed, PS 2 sets out the mandatory requirements concerning appropriate experience, knowledge and skill.

1.12 This RICS professional standard is effective three months from publication.

A development property is defined as an interest where redevelopment is required to achieve the highest and best use, or where improvements are either being contemplated or are in progress at the valuation date.

2 Development valuation process

2.1 Introduction

2.1.1 In undertaking the valuation of development property, valuers should have a full understanding of the process. Figure 1 sets out a taxonomy of the approach to the valuation of development property. It includes instructions and terms of engagement, site investigations, data collection, handling, interpretation and application to the valuation and reporting.

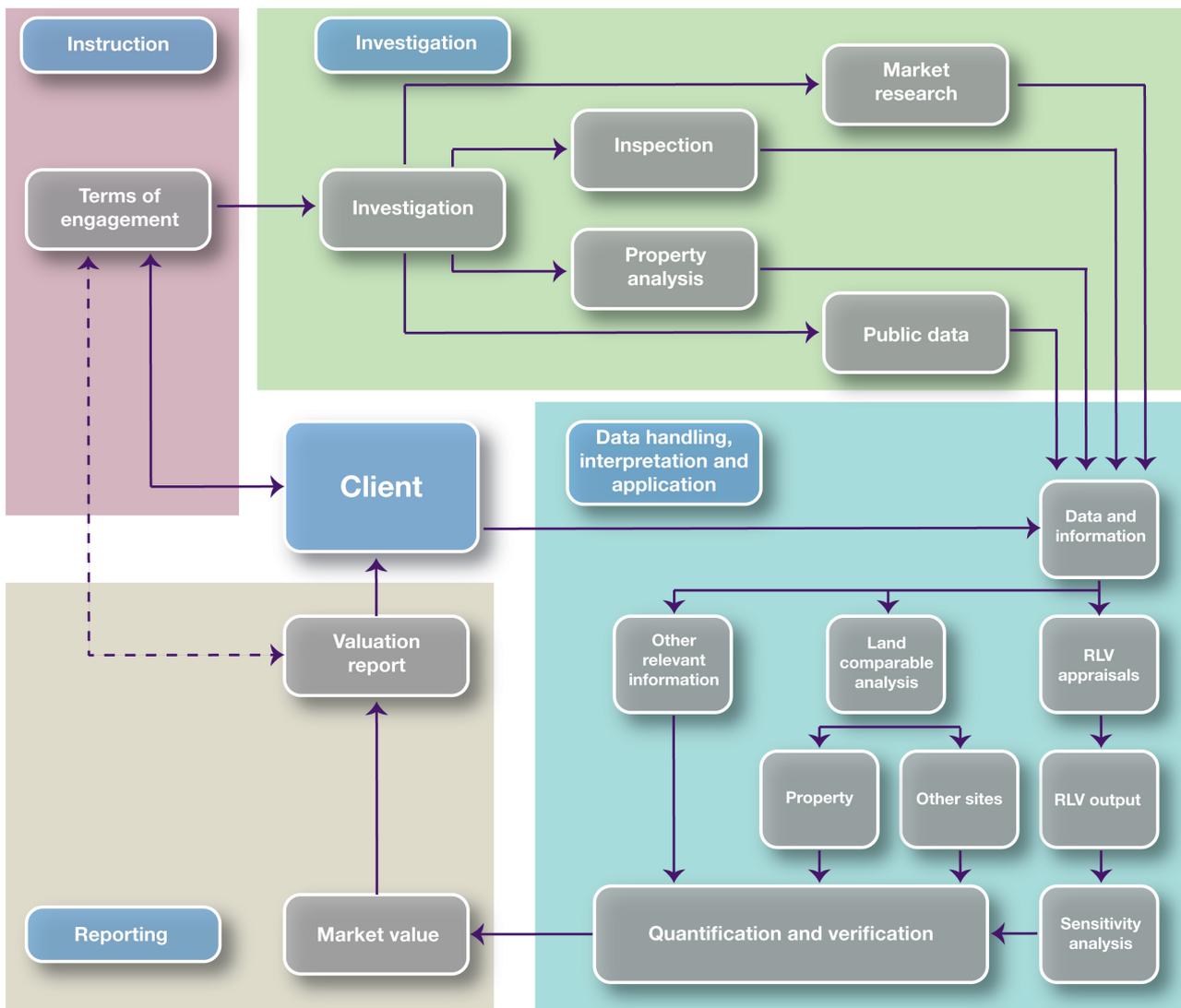


Figure 1: The valuation process for the valuation of development property

2.1.2 In accepting instructions, the valuer will need to include in the terms of engagement an indication of the large number of matters to be agreed before the report is issued. These terms of engagement will differ depending on the purpose of the valuation and must be fully set out and agreed before undertaking the valuation as set out in VPS 1.

2.1.3 In accordance with paragraph 1.4 of PS 2, valuers must only accept instructions to carry out a valuation of development land or property if they have the appropriate technical skills, experience and knowledge of the subject of valuation, the market and the purpose of the valuation.

2.2 Basis of valuation

2.2.1 IVS 104 and VPS 4 identify several bases of value. The valuer is required to select the appropriate basis (or bases) for the task and follow all applicable requirements associated with the chosen basis or bases.

2.2.2 Market value – or market value subject to assumptions/special assumptions – will often be the appropriate basis of valuation. Market value is the value of the development property assuming optimum development, taking into account current and prospective economic and market circumstances and planning conditions. This may include alternative development solutions for the site. The valuer may need assistance from other professionals to form a judgement of the optimum development.

2.2.3 The purpose of the valuation may, however, dictate different assumptions concerning the development – such as the actual proposed development project or alternatives within the existing use, both of which may be required when the property is to be valued for lending purposes. In such cases, assumptions made should be identified as special assumptions where the valuation does not assume the optimum development.

2.2.4 The prospect of a change of circumstance concerning a development property is specifically identified as part of market value in paragraph 4.4 of VPS 4:

‘Notwithstanding the disregard of *special value*, where the price offered by prospective buyers generally in the market would reflect an expectation of a change in the circumstances of the asset in the future, the impact of that expectation is reflected in *market value*. Examples of where the expectation of additional value being created or obtained in the future may have an impact on the *market value* include:

- the prospect of development where there is no current permission for that development and
- the prospect of *marriage value* arising from merger with another property or asset, or interests within the same property or asset, at a future date.’

2.2.5 The concept of a potential value emanating from a change in circumstances is sometimes called ‘hope value’ (see the glossary).

2.2.6 In the case of development property, the range of possible scenarios and the difficulties in identifying the impact of any expectation of potential change in circumstances in the future all need to be factored into the valuation. This can, however, lead to additional uncertainty concerning the valuation. Uncertainty is specifically addressed in chapter 9 of this professional standard. This additional uncertainty creates particular reporting issues. Valuation assumptions should be set out clearly in the valuation report. Any assumption that is not part of a market expectation should be identified as a special assumption. As these assumptions can have a significant impact on the valuation outcome they should be as clear and consistent as possible. Appendix C of this professional standard sets out some examples of typical assumptions and special assumptions made within the development property valuation process for guidance.

In the case of the valuation of development property, any assumptions or special assumptions should be set out clearly in the valuation report. These assumptions can have a significant impact on the valuation outcome and therefore should be as clear and consistent as possible.

2.2.7 Where assumptions made within a financial appraisal or valuation relate to a specific entity and/or client, the investment value basis of valuation may be the most appropriate under IVS 104 paragraphs 60.1 and 60.2 and VPS 4 section 6.

Market value – or market value subject to assumptions/special assumptions – will often be the appropriate basis of valuation. In assessing market value, there is an assumption of optimum development, taking into account current and prospective economic and planning conditions.

2.3 The valuation approach

2.3.1 IVS 105 identifies three main approaches to valuation:

- a market approach
- b income approach and
- c cost approach.

2.3.2 Each of these approaches includes different, detailed methods. The approaches and methods used in any valuation will depend on the required basis of value and the purpose of the valuation, as well as asset-specific facts and circumstances.

2.3.3 In the case of the valuation of development property, valuations are normally undertaken in two ways:

- the market comparison approach and
- the residual method.

(see IVS 410 paragraph 40.1).

2.3.4 Best practice avoids reliance on a single approach or method of assessing the value of development property. Normally, any valuation undertaken by the market comparison approach should be cross-checked by reference to the residual method. Where a residual method is used, it is similarly important to cross-check the outcome with comparable market bids and transactions where they exist, including the subject property. The advice to apply both methods when possible has been endorsed by 2019 amendments to IVS 410 (effective from 31 January 2020), which state:

‘ ... the valuer *should* apply a minimum of two appropriate and recognised methods to valuing development property for each valuation project ... ’

(IVS 410 paragraph 120.2).

This recommendation applies to valuations for secured lending but should be best practice for all development valuations.

2.3.5 While there is a relationship between what can be built on the land in question and the resulting land value, they are separate and the valuer should bear in mind any other available options concerning the development property.

2.3.6 Figure 1 (see section 2.1) illustrates the iterative process of the handling and interpretation of data and its application. The weighting attached to the different methods depends on the quality and quantity of the information underpinning each method. This weighting is qualitative in line with the IVS Glossary, paragraph 20.19, which states:

‘The word “*weighting*” refers to the process of analysing and reconciling differing indications of *values*, typically from different methods and/or approaches. This process does not include the averaging of valuations, which is not acceptable.’

Given this iteration process between methods, data and other aspects within the development property valuation process, it is important to sense-check the outcome before final reporting of the valuation.

In the case of the valuation of development property, valuations are normally undertaken in two ways: the market comparison approach and the residual method. Best practice avoids reliance on a single approach or method of assessing the value of development property.

3 Establishing the facts

3.1 To judge the certainty of the outcome of the valuation and the processes involved, it is important that the valuer has an awareness of the characteristics of the existing site and an adequate knowledge of each of the development components. The level of detail that is appropriate when assessing development potential may vary according to the purpose of the valuation. Judgement is required as to what is appropriate in each case.

3.2 The extent of factual information necessary for a valuation is determined by a range of factors, including the stage at which the valuation is being prepared, the purpose and the individual characteristics of the property being valued and any assumptions or special assumptions made. Moreover, local market intelligence is a key element of establishing relevant information for the valuation of a development property. Appendix A sets out a generic list of possible factual issues to be investigated.

3.3 In establishing the facts, as well as Red Book Global Standards, there are a number of documents that should be considered:

- *RICS property measurement*, RICS
- *Environmental risks and global real estate*, RICS
- *International Property Measurement Standards (IPMS)* and
- *International Construction Measurement Standards: Global Consistency in Presenting Measurement Costs (ICMS)*.

3.4 The precise nature of the purpose, basis, assumptions and facts underpinning the valuation is a key component of any valuation litigation. In accordance with VPS 1 and 3 and IVS 101, it is essential that these are all set out clearly in the valuation instructions and report.

The extent of factual information necessary for a valuation is determined by a range of factors, including the stage at which the valuation is being prepared, the purpose and the individual characteristics of the property being valued and any assumptions or special assumptions made.

4 Assessing development potential

4.1 Development can take a number of different forms and this creates a variety of options concerning what is developed and when. It may be appropriate to fully explore these various options and the value of each of these may vary in relation to the different scenarios.

4.2 Within these different regimes, development property may be included in a zone earmarked for future development of a particular type; the property may have detailed or outline permissions for development or the particular planned project of development may be uncertain. When assessing development potential, it is important to specify the assumed development or developments, making the basis of those assumptions clear in the valuation report.

Development can take a number of different forms and this creates a variety of options concerning what is developed and when. It may be appropriate to fully explore these various options and the value of each of these may vary in relation to the different scenarios.

4.3 It may be appropriate to form a view as to what permissions are likely to be obtained and the associated legal planning agreements that would be required to obtain that consent. These may be very different for urban and rural development property where there could be significant potential to develop alternative uses, including the development of new uses.

4.4 Emerging consultative planning and development policies may also be relevant and the impact of any policy differences between different governmental structures depending on the institutional structures of the country – national, regional, local, federal, state, etc. – should be recognised.

4.5 An accurate assessment should be made of the form and extent of physical development that can be accommodated on the site. This assessment should consider the characteristics of the site and the surrounding area, supply and demand constraints and the likelihood of obtaining permission. In more complex cases, it is recommended that this assessment be undertaken in consultation with appointed project advisers, such as architects, quantity surveyors and environmental, planning and energy consultants.

4.6 Matters that should be considered in detail include:

- permissible land uses within the particular planning regime
- potential land uses within the particular planning regime
- density of development, establishing the bulk, scale and massing, particularly in urbanised areas subject to different property types
- topography and site development factors, including availability of services and infrastructure, ground conditions and development restraints
- building-related issues, such as the period of time estimated to complete the new buildings, achieving optimum occupational efficiency ratios, car parking standards and/or restrictions, regulations concerning energy efficiency and the extent to which the development control system is being used to help deliver climate change obligations
- development consent issues, such as requirements as to the provision of developer contributions or planning obligations attached to the permission to develop
- adjacent land: although a valuation is required of the actual subject property, there may be a possibility of increasing the development potential by acquisition of, or merger with, adjacent land. Conversely it may be necessary to acquire adjacent land, or rights over adjacent land, including oversailing rights, before the proposed development could take place
- accessibility and developability of the subject property and
- environmental issues that may have a material bearing on the success of the project. Sufficient enquiries should be made to establish whether the presence of on-site or neighbouring environmental features influence the development process, the density or even the viability of the project. For more information, see the current edition of RICS' *Environmental risks and global real estate*.

4.7 Whether and how these factors should be reflected in the valuation may involve close liaison with other stakeholders in the development process, including clients and the local planning authority, in order to ensure that the valuation fully reflects the various aspects of the proposed development or possible developments, both now and in the future.

4.8 Many of these issues can be characterised as risks attached to the development control process. Where uncertainties exist surrounding the details of the actual developments that can be delivered on any site, they should be factored into any valuation of the site. This can be done by making a specific adjustment to the valuation, together with an explanation of the assumptions underpinning any adjustments. Optionality should be a consideration.

4.9 When using the market approach, how these same factors may have impacted on comparable properties should be considered in any valuation. These risks may have played a similar role in the comparable transaction price and no adjustment may be necessary for these factors.

4.10 With larger sites that will take longer to develop, options within the development process become more likely and ought to be considered in more detail. Four key options are apparent in most development property:

- a develop
- b develop in phases
- c sell or dispose and
- d defer or wait.

4.11 The exercise of these options can significantly affect the valuation of a development property. These options have been the subject of a number of studies using option pricing techniques developed from financial markets to quantify them. Valuers should be aware of these options and their impact on value should be considered in the valuation.

Four key options are apparent in most development property: develop, develop in phases, sell or dispose and defer or wait.

5 Valuation: the market approach

5.1 Valuation using the market approach based on comparables is normally the preferred method of estimating market value. Indeed, it is used as the primary approach in many valuations. But the RICS document *Comparable evidence in property valuation* identifies development property as one where direct comparison on a price per unit basis is rarely valid and that normally a more detailed analysis will be needed.

5.2 This professional standard recommends that reliance on one method applied to the valuation of development property is not advisable and that the valuation should be an iterative process, with checks where possible using other methods. This is due to the individuality of many development properties and the potential difficulties in finding good quality comparable transactions where all of the details of the transaction are known. This iterative valuation process is set out in chapter 2 of this professional standard.

In the context of development property, this professional standard recommends that reliance on one method applied to the valuation of development property is rarely advisable and that the valuation should be an iterative process, with checks where possible using other methods.

5.3 Valuation of development property by comparison requires a depth of information of similar assets normally in a similar type of location or geographical area. The RICS document *Comparable evidence in property valuation* sets out a hierarchy of different types of evidence with direct transactional data at the top. This includes all types of relevant transactional comparable evidence, including:

- recently completed transactions of identical properties for which full and accurate information is available; occasionally, this may include the subject property itself
- recently completed transactions of other, similar properties for which full and accurate information is available and
- recently completed transactions of similar properties for which full data may not be available but sufficient reliable data can be obtained.

5.4 A transaction in the property being valued can provide some of the best evidence available for a valuation, provided it is a recent transaction. Where the subject property, or one very similar to it, has been marketed and, although offers may have been made, a binding contract has not yet been entered into, that can also provide valuable evidence. This assumes that full and accurate information is available concerning the offers received.

5.5 Other evidence lower in the hierarchy includes data, which can provide guidance rather than a direct indication of value, including:

- information from published sources or commercial databases; its importance will depend on its relevance, authority and verifiability and
- other indirect evidence, for example, indices.

5.6 There can also be a wide range of data sources that might provide broad indications to the valuer rather than evidence that directly relates to the property itself. Such sources can include:

- transactional evidence from other property types and geographical locations
- other background data (for example, interest rates, stock market movements and returns, which can give an indication for real estate yields) and
- asking prices (though the weighting will be higher where markets are active and transparent).

5.7 Depending on the individual circumstances, the weight attached to the different sources and information can vary significantly.

5.8 In the case of development property, valuation by comparison is potentially reliable if evidence of sales can be found and analysed on a common unit basis. Units of comparison normally revolve around the relationship between value and size, but other units can be utilised, such as site value per unit or habitable room and the relationship between site value and the value of the completed development.

5.9 Analysis in simple unit terms can sometimes risk overlooking the many other factors that may determine the value in individual cases. In the valuation of development land, the planning status can have a particular impact and land transactions with planning permission or reasonable prospect of permission will increase the reliability of the comparable. Even where reliable information is not available, the market approach may provide an essential check, or inform a valuation prepared using the residual method. The valuer will have to exercise skill and judgement concerning justification of inputs and analysis of outputs.

5.10 Modern methods of comparative analysis using different units of comparison, together with knowledge of the transactional market for development property deals, provide a useful basis to apply the comparative method to development property.

5.11 Typically, comparison may be most appropriate where there is an active market and/or a relatively straightforward low-density form of development is proposed. Examples might include greenfield land in rural areas, where infrastructure costs are consistent and not excessive, small residential developments or small industrial/warehouse/retail warehouse estates. It is likely that the density, form and unit cost of the development will be similar. Less frequently, it may be possible to compare larger sites for housing or other developments on this basis.

5.12 In comparing sites, the following factors, which are not exclusive, may be relevant and require adjustments to be made when applying to the subject property:

- Values may differ considerably within a small geographical area, particularly in established urban areas.
- The condition of the site and associated remediation costs are site-specific and could differ significantly between greenfield and brownfield, and between brownfield sites.
- Site and construction costs, for example, in terms of infrastructure and service requirements, may differ between sites.
- The type of development may vary between sites. In the case of both commercial and residential developments, the density achieved will also affect the price.
- Specific factors relating to the site or purchaser may also need to be considered, such as adjoining ownership and synergies with adjoining sites.
- The planning status can range from no designation for alternative use through to detailed consent.
- Developer contributions may vary across different jurisdictions and according to the conditions of the permission to develop.
- The date of the comparable transaction should be taken into account.

Modern methods of comparative analysis using different units of comparison, with knowledge of the transactional market for development property deals, provide a useful basis to apply the comparative method to development property.

6 Valuation: the residual method

6.1 Residual valuation method

6.1.1 The residual method is based on the concept that the value of a property with development potential is derived from the value of the property after development minus the cost of undertaking that development, including a profit for the developer. Put simply:

gross development value (GDV) - total development costs (including profit) = residual land value

The residual method is based on the concept that the value of a property with development potential is derived from the value of the property after development minus the cost of undertaking that development, including a profit for the developer.

6.1.2 The residual method can be used to determine other outcomes, such as the surplus available for the developer's profit if the price of the land has already been fixed. This professional standard focuses on the valuation of development land and will initially develop the method on the assumption that the site value is the required outcome.

6.1.3 The residual valuation method is complicated by the fact that development takes time, while the valuation is at a single time point. Because of this, two different applications of the method have been developed: discounted cash flow and a more basic application of the residual method.

6.1.4 This section, and Appendix B, set out the underlying principles behind these two applications of the residual method. This will help valuers identify the appropriate technique and inputs for each individual valuation. Several technical issues arise and these, together with a discussion of the input choices within the two applications, are discussed in Appendix B. The valuer should evaluate these issues when using each application and adjust where appropriate.

6.1.5 The level of detail supporting each application of the residual valuation method will depend on the role of the valuation, the timing within the development process and the type of asset. The basic residual method might be used for less complex assets or indeed early in the development process to consider optimum development; a discounted cash flow method may be used for more complex assets with phased construction or disposal where the timing of events needs to be fully accounted for in the valuation. Phasing of development and other issues of timing can be developed within a basic residual approach and is done so within some proprietary development appraisal software, but those assumptions can be more readily incorporated within a cash flow format.

6.1.6 Many of the inflows and outflows of the development are not affected by the choice of application but each requires careful consideration of how the inputs and outputs are

generated. This professional standard identifies these and suggests some solutions. The market comparison approach will play an important part in the determination of many of the inputs into the residual method. No one solution may be relevant for all circumstances, so it is for the valuer to determine how they deal with the detailed inputs into the residual valuation model. Variations in potential development scenarios may involve different assumptions and projections for the various inputs.

Typical inflows and costs to be considered in residual valuations include:

- the value of the completed property: this is the appropriate basis of value of the completed development without adjustment for any sale costs. IVS 410 employs this term, but it also uses gross development value (GDV). Both terms represent the estimated contract price of the developed property. It assumes, therefore, that any prospective acquisition costs of the purchaser that may have reduced the price have been accounted for
- net development value (NDV): this is the appropriate basis of value of the completed development net of any sale costs
- site clearance, remediation or preparation costs
- costs of construction, including any contingencies
- professional fees related to construction
- costs and professional fees relating to planning
- any planning obligations or levies linked to the development
- finance for the development, including the site
- developer's profit
- any other costs or inflows related to the development and
- site costs where land value is not the residual.

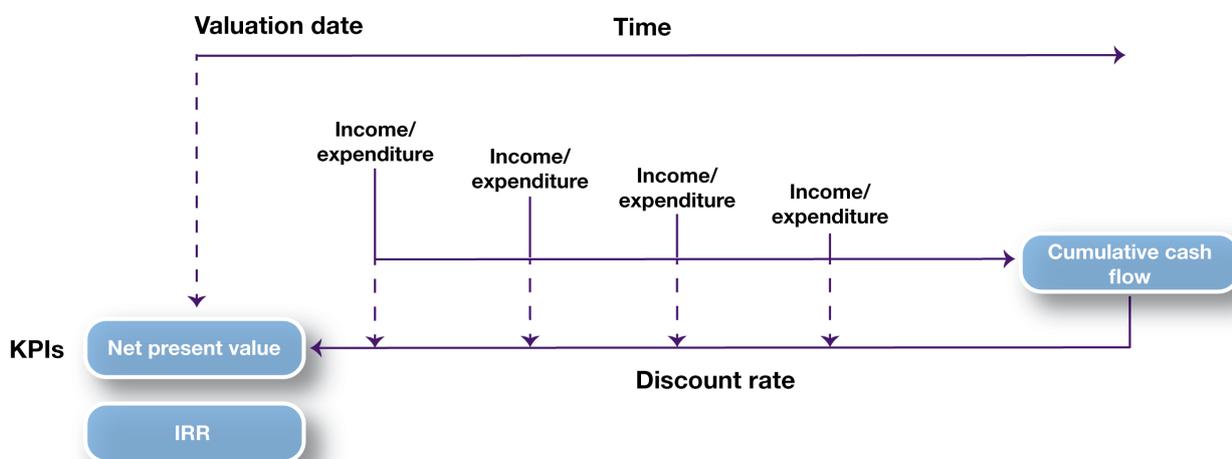
6.1.8 Note that this professional standard does not prescribe the particular application of the residual method – this should always be a decision for the valuer in the particular circumstances, not least considering the asset class involved and the way that the market in that asset class actually operates. There are occasions when both applications of the method may be required and, given the individuality of many development valuations, one application of the method may inform the other. This also conforms to the guidance concerning the choice of method in paragraph 2.3.4.

Two different applications of the residual method have been developed: discounted cash flow and a more basic application of the residual method. The basic residual valuation might be used for less complex assets or early in the development process to consider optimum development. A discounted cash flow may be used for more complex assets with phased construction or disposal where the timing of events needs to be fully accounted for in the valuation. The applications are not mutually exclusive.

6.2 Discounted cash flow application

6.2.1 Cash flow models reflect assumptions about the timing of revenue and expenditure over the development period on a period-by-period basis. The approach of a discounted cash flow is to calculate the net present value (NPV) of the estimated costs and revenues over the duration of the development project. With all other costs and revenues accounted for, the NPV will be a current estimate of the residual land value.

6.2.2 The NPV model is set out in numerous corporate finance and investment appraisal texts. In a standard cash flow, profit is represented as a return on capital (IRR) and the NPV, assuming that it is positive, is then the residual land value. Figure 2 identifies the basic structure of the model.



Notes:

1. NPV discount rate(s) applied either to periodic income/expenditure or to the cumulative cash flow
2. IRR generated from periodic income/expenditure
3. KPIs: key performance indicators

Figure 2: Discounted cash flow valuation model

6.2.3 Some applications of the discounted cash flow technique within the context of development appraisal have been criticised for departing from this basic NPV model and for incorporating inappropriate inputs (or inappropriate application of certain inputs). The main issues surround value and cost changes during the development period, including phasing and value/cost projections, the treatment of finance and the specification of development profit.

6.2.4 The discounted cash flow application requires explicit period-by-period assumptions concerning the breakdown of costs and values during the development period and the time frame, which might be monthly or quarterly, for example. It also requires an assumption for the target rate of return. It allows market dynamics through time to be easily incorporated, such as changes in costs and values where appropriate. If value and cost projections are being adopted, these should be explicitly stated, together with an explanation of the assumptions underpinning those projections.

6.2.5 Other assumptions, including required rate of return, should also be explicitly stated. Evidence of rates of return, projections and other inputs should be tested against transaction evidence wherever possible. The rate of return should be based on the approach to the cash flows. Nominal cash flows require nominal rates of return. Where current values and costs are used, the rates of return should be adjusted accordingly as cash flows are being expressed in real terms. Differential rates to discount different elements of the cash flow according to their risk profile is an acceptable approach (see Appendix B1).

The basic application of a discounted cash flow is to calculate the NPV of the estimated costs and revenues over the duration of the development project. With all other costs and revenues accounted for, the NPV will be a current estimate of the residual land value.

If value/cost projections are used, this should be explicitly stated together with an explanation of the assumptions underpinning those projections. Other assumptions, including required target rate of return, should also explicitly stated.

6.3 The basic residual method

6.3.1 The residual land value is derived from the value of the completed development (net) minus the development costs, including developer's profit, and is illustrated in Figure 3.

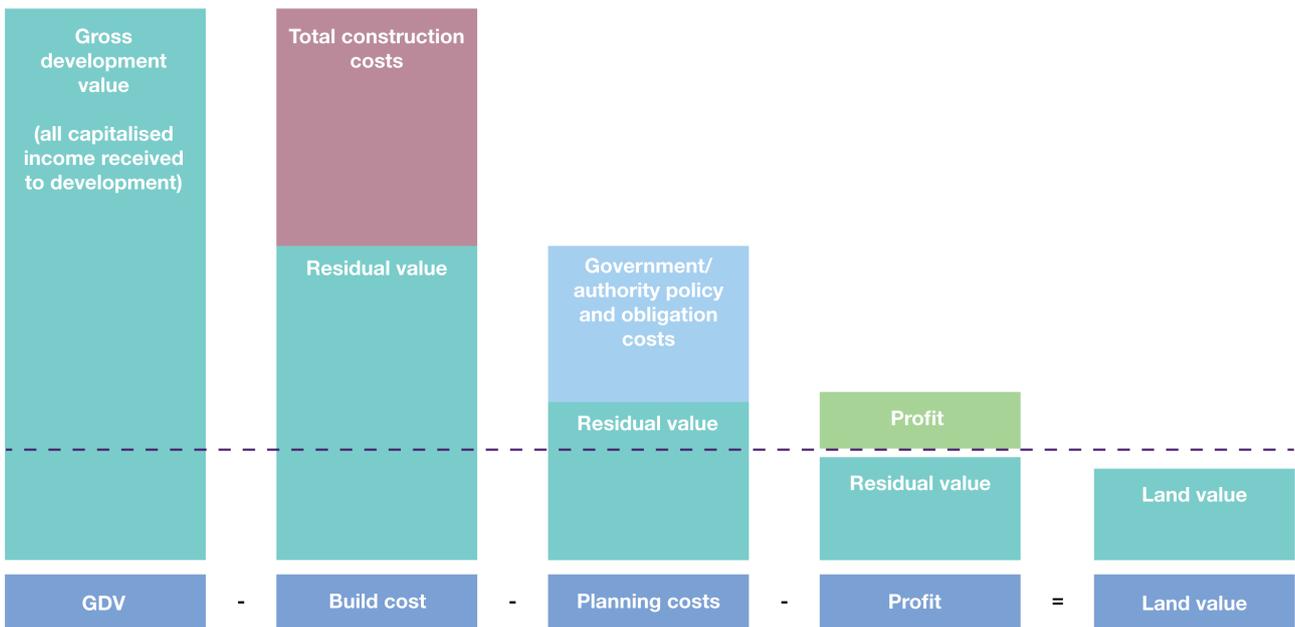


Figure 3: The basic residual valuation model

6.3.2 This application has been subject to major scrutiny – several issues arise as to the simplicity of the application and in relation to the accuracy of the inputs and outputs. For example, changes in value and cost through the development period are more difficult to incorporate in a basic residual valuation.

6.3.3 These issues are discussed in Appendix B for both applications of the residual method.

The basic application of the residual method is a simplified representation of the expected revenue and expenditure from a development. The residual land value is derived from the value of the completed development (net) minus the development costs, including developer's profit.

7 Risk analysis and residual profit

7.1 Risk analysis

7.1.1 The valuation of development property by either the market approach or the residual method has some characteristics that make the assessment of the value subject to an increased risk of valuation variation.

7.1.2 In the case of the market approach, the valuation variation comes from the individuality of each site and the impact that has on the quality and quantity of comparisons and degree of difficulty in adjusting comparable evidence. In the case of the residual method, whichever application is adopted, the valuation variation comes from the fact that the residual amount is a function of a number of inputs, which are subject to variation. Small variations in these inputs can cause relatively high variations in the residual output. This professional standard therefore emphasises that reliance should not be placed on a single approach or method of assessing the value of development property.

7.1.3 The presence of various options to develop within different timescales and the range of scenarios inherent in the development process adds to the possible valuation variation inherent in the development process. This suggests some additional analysis would help contextualise the valuation outcome. Risk analysis techniques address some of these issues and can help indicate likely variation around the valuation.

7.1.4 The simplest form of risk analysis is sensitivity analysis, which should be used to evaluate how changes to individual inputs (such as construction cost or sales values) might affect the valuation of development property. It should be undertaken in order to inform the valuation, which may lead the valuer to arrive at a different market value to the residual output single valuation outcome (while also considering any analysis of comparables).

7.1.5 Scenario modelling can also be used to evaluate how different combinations of inputs, perhaps optimistic and pessimistic views of the economy, can affect the valuation. Using these risk analysis techniques in combination with the discounted cash flow technique permits the testing of the impact of different timings of events on the valuation more easily than within the basic residual framework. Where a number of development scenarios need to be tested, scenario modelling combined with sensitivity analysis of each scenario is particularly appropriate.

7.1.6 Taking the analysis of risk further, it is possible to assign probabilities to the various scenarios and use simulation models to combine these probabilities over multiple runs. Note that all these risk analysis techniques rely on valuer assumptions concerning the distribution around the best estimate of each input and any relationships (correlations) between the

inputs. The rational basis for the choice of variations within sensitivity and scenario testing and the level of any probabilities should be clearly set out when reporting valuations of development property. The valuer should also note any emerging technologies in the area of risk analysis.

Risk analysis should be used to evaluate how changes to individual inputs, such as construction cost or sales values, might affect the valuation of development property and to help model various different scenarios.

7.1.7 Individual development projects will have different levels of risk. Valuation uncertainty will often, but not always, be closely related to the level of risk; normally, both the risk of the development and the level of valuation variation will be higher than for many other types of property and valuation. However, valuation uncertainty could be very low where a number of good, directly comparable transactions are available as comparables, even where the actual risk and uncertainty attached to the development is very high. These two types of uncertainty should not be confused with each other.

7.1.8 Risk analysis will enable the inputs that have the most impact on the outcome to be evaluated and also give some relative measure of volatility between different types of investment and development to inform the decision on the appropriate level of development profit. In any event, an explanation of the level of risk and return used and the assumptions relied on to identify the level of risk and return should be explicitly stated by the valuer as this is a key input to the residual method, irrespective of which application is used.

7.1.9 In addition to any quantitative risk analysis undertaken, the outputs of any valuation require some additional non-quantitative reflection on the valuation outcome. For development property, particular issues to reflect on include the potentially large valuation variation caused by the impact of small changes to important inputs into the residual valuation. Development property also includes options that are not always picked up within a valuation method, even though these options impact on the value of the development property.

7.1.10 Valuers should compare residual valuation outcomes with market transactions wherever possible and fully explore alternative scenarios and other potential outcomes.

An explanation of the level of risk and return used and the assumptions relied on to identify the level of risk and return should be explicitly stated by the valuer as this is a key input to the residual approach, irrespective of which technique is used.

7.2 Profit as a residual

7.2.1 Because this professional standard concerns the valuation of land and property with development potential, it has focused on the process underpinning the valuation of development land using both the market comparison approach and the residual method. The residual method, both the basic and the discounted cash flow applications, can also be used to determine the profitability of proposed development projects for the subject

property where land price or value has already been determined. Proprietary software can switch very easily between the two outputs.

7.2.2 In a basic residual, if land price or value is known, the land price becomes a cost to the development. Usually, the land sale takes place at the beginning of the development. All other costs and values are assumed at the end of the development period – costs are assumed to accrue at the borrowing rate and both development costs and interest are paid off at the end of the development.

7.2.3 In order to estimate the profit at the end of the development, the land value (which is a present-day NPV figure) also has to be taken to the end of the development period. This is accomplished by adding interest over the whole of the development period to the land value. The costs including land are then deducted from the NDV to leave the residual profit timed at the end of the development period.

7.2.4 In a discounted cash flow, all inflows and outflows are discounted back to the start of the cash flow. If land cost is a known input, it can be inserted at the beginning of the cash flow (or wherever it occurs) and the internal rate of return (IRR) of the cash flow becomes an estimate of the developer's return. Note that the IRR is a project return, i.e. before finance.

7.2.5 If the valuer wants to determine a profit as a single lump sum at the end of the development, the land value is again inserted at the beginning of the cash flow (or wherever it occurs). Interest on this land price together with interest on all other development costs is compounded to the end of the development period (assuming 100 per cent borrowing). After deducting accrued income within the cash flow, any surplus at the end of the cash flow is the expected profit at the end of the development.

7.2.6 It is possible within the cash flow format to develop applications that take account of the level of borrowing and different costs of borrowing on different forms of debt. When developing these models, the role and purpose of the valuation should be fully recognised. Market valuations require market-based inputs and assumptions as to highest and best use. Specific funding arrangements and rates of return required by individual developers are not necessarily based on market indicators.

The residual method, both basic and discounted cash flow applications, can also be used to determine the profitability of proposed development projects for the subject property where land price or value has already been determined.

8 Land in the course of development

8.1 For assets where work on the development has commenced but is not completed, the market comparison approach is unlikely to be the most appropriate approach to the valuation. Partially complete developments may come to the market for a number of reasons and where market evidence does exist, it should be used, subject to all the caveats concerning full information and adjustments for the individuality of development property set out in chapter 5 of this professional standard.

8.2 A residual method is more likely to take account of the individuality that will exist. There are two basic approaches to valuing land in the course of development:

- the value of the land plus the costs expended (improvements) at the valuation date and
- the completed development value minus the costs remaining to be expended at the valuation date.

8.3 In some cases, both approaches could be employed as a check against the other. However, note that costs expended or to be expended do not necessarily equate to value and therefore the valuer ought to adjust accordingly.

8.4 The valuation approach is the responsibility of the valuer. The approach should be clearly stated in the valuation report. This will probably require a number of assumptions and special assumptions that should be agreed with the client in advance. Assuming a residual method is used as the primary method, the advice set out in this professional standard should be adopted, subject to the following:

- In the case of land where development has commenced, it would be expected that the assumption of optimum development holds. Where the actual development taking place is not the optimum development, the cost of removing the existing works should be allowed unless improving them forms part of the optimum development.
- Where the continuing actual development is the optimum development, the value of the development property is the GDV minus the costs of completing the development. IVS 410 states: 'When valuing a partly completed development property, it is not appropriate to rely solely on projected costs and income contained in any project plan or feasibility study produced at the commencement of the project.' The costs of completing the development should be assessed at the valuation date.
- All other inputs should be assessed at the date of valuation. The valuation should reflect the risks remaining at the valuation date that may be different from the commencement of the project and a reassessment of the rate of return is required. This may be affected by the stage the project has reached, whether building contracts remain in

place or whether any agreements to purchase/let the whole or part of the completed development are in place. A project that is nearing completion will normally be viewed as being less risky than one at an early stage.

- If necessary, an additional risk discount should be added, reflecting the complexity of the project, the stage of construction and the state of the market.
- Valuers may also be asked for a so-called 'low point' projected valuation – this can be lower than the acquisition plus cumulative sums expended, depending on the stage of construction.
- The valuer may need to assume that:
 - the construction contract and subcontracts are active and that the work on-site has not stopped
 - a lender has full step-in rights in all construction agreements, including planning agreements and conditions relating to the permission to develop and
 - any claims in terms of extra work, suppliers' materials, increased costs or delays have been settled in full prior to the valuation date.
- The valuation may need to assume that all collateral warranties and builder (main contractor and subcontractors) and professional team (architect, engineers, and subconsultants) contracts are issued and transferable.

There are two basic approaches to valuing land in the course of development: the value of the land plus the costs expended at the valuation date; and the completed development value minus the costs remaining to be expended at the valuation date. In some cases both approaches could be employed as a check against the other.

9 Reporting the valuation

9.1 The precise nature of the report depends on the instructions given and its purpose, but the requirements of VPS 3, paragraphs 2.2 (a) to (p), must be considered. In particular:

- The basis of valuation must be clearly stated. Where a basis other than market value is adopted, this must be fully explained. See VPS 3, paragraph 2.2 (e).
- All the assumptions/special assumptions made must be stated and, where appropriate, comment made on the effect of those assumptions/special assumptions where they are material. See VPS 3, paragraph 2.2 (i).
- The statement requiring comment on the valuation approach is particularly important in these valuations. See VPS 3, paragraph 2.2 (l).

9.2 The value of development property may include an element that reflects the difference between the value of the land with the benefit of a specific planning consent and the value with the assumption of an enhanced consent that would be included in any expected exchange price. The proportion that can be properly reflected in the reported value is almost entirely subjective, being based on the valuer's experience and knowledge of the market.

9.3 In common with all other valuation exercises, valuers should be transparent about their approach and, particularly when reporting for loan security purposes, this element of the reported value is to be identified as a separate figure. It can be reported as a market value subject to an assumption under VPS 3, paragraph 2.2 (i). It may also be appropriate for some valuation purposes, such as loan security, depending on the instructions, to report the value in the existing use to enable the lender to identify the different risks to their collateral.

9.4 If the valuation of the development property results in a negative value, even if it is not to be developed, the negative value must be reported in accordance with VPS 3, paragraph 2.2 (m). This should be accompanied by an explanation as to why the negative value has resulted. This also may be a matter dealt with in special assumptions to the valuation.

9.5 The use of various risk analysis techniques will often be both appropriate and necessary to identify the variation in the valuations of particular development properties and the source of that variation. This may be more appropriate in development property valuations than for other property types due to the volatility of values and valuations and the range of assumptions identified previously.

9.6 For most purposes the requirement is for a valuation to be reported as a single figure. Where risk analysis has been applied, the valuation should still be reported as a single figure but the potential for significant variation should be reported in an appropriate manner. Where valuation uncertainty is material, VPS 3 states that further proportionate commentary must be added in order to ensure that the report does not create a false impression.

VPGA 10 recommends that material valuation uncertainty should normally be reported qualitatively and that a stated range of values is not good practice.

9.7 This is also recommended for the reporting of normal uncertainty within the valuation of development property. However, where the purpose of the valuation is not one where a single figure valuation is required, it is acceptable to agree with the client that a range of values be reported.

9.8 As all reports should include some form of risk analysis, an explanation of the reasons for the range adopted should be given. It should also be expressly stated in the report that the range of inputs is not to be assumed to encompass all possible inputs. It is solely to give the client an indication of the impact of change in individual inputs on the valuation.

9.9 Valuers should exhibit great care in reporting this variation quantitatively as it may be used in litigation cases as proof of the permissible margin of error in some jurisdictions. There is guidance on the reporting of material valuation uncertainty within VPGA 10. However, valuation variation within the valuation of development property does not constitute material valuation uncertainty in accordance with VPS 3, paragraph 2.2 and is not an example set out in VPGA 10, section 2. Nevertheless, valuers may find paragraphs 3.2 and 3.3 of VPGA 10 helpful in drafting their report.

9.10 In reporting any tolerance around the valuation, valuers may find it useful to refer to the process by which the valuation was produced (see Figure 1, chapter 2 of this professional standard) and highlight issues that contribute to any uncertainty surrounding the valuation, including the different options that may have been identified.

9.11 Where valuers are asked to take particular financial arrangements into account and produce a valuation net of finance, the valuer should report the valuation before finance and any valuation net of finance separately. The valuer should decide whether under any circumstances, a value assessed under a particular financing regime is the market value, the market value under special assumptions or the investment value, and they must report the basis accordingly (see VPS 3, paragraph 2(e)).

For most purposes, the valuation should be reported as a single figure. Where risk analysis has been applied, the valuation should still be reported as a single figure but the potential for significant variation should be reported in an appropriate manner.

Valuers may find it useful to refer to the process by which the valuation was produced and highlight issues that contribute to any uncertainty surrounding the valuation, including the different options that may have been identified.

Appendix A: Factual issues

A1 Inspection and site-specific information

A1.1 Valuers are reminded that sites for potential development may contain many hazards. For a comprehensive guide to safe working practice, see the current edition of *Surveying safely: health and safety principles for property professionals*.

A1.2 Physical inspection of the site, and related enquiries, will reveal site-specific information. Such information, either positive or negative, could include:

- the presence of archaeological features. These may be evident, or there may be a high probability of their presence due to the site location (for instance, close to city centres)
- evidence of waste management obligations and whether these obligations have been fulfilled
- water or mineral extraction rights that may be available
- geotechnical conditions, including potential for contamination or other environmental risks (see RICS' *Environmental risks and global real estate*)
- limitations, encumbrances or conditions imposed on the relevant interest by private contract
- rights of access to public highways or other public areas
- the availability of and requirements to provide or improve necessary services, for example, water, drainage or power and
- the need for any off-site infrastructure improvements and the rights required to undertake this work.

A2 Existing planning matters

A2.1 The planning regime is an important factor in the value of development land. It regulates overall development. However, there are some generic principles and issues to address when undertaking a development valuation. These include:

- the existence of any particular development plan or elements of zoning of land for different uses
- the existence of any current permissions to undertake development. This may be in outline or in full and may include conditions or reserved matters
- where the permission is time-limited, it should be established whether it is still valid and, if close to expiry, whether a similar permission would be granted again

- the existence of regulations that specify the extent to which development of the site might be permissible without the need for a planning application or consent
- the permitted use of existing buildings (if to be retained) or the possibility of identifying an established use
- legally binding agreements that have been, or are to be, documented in order to secure the grant of planning permission
- any special controls that may apply to the site or buildings (for example, these may relate to heritage and conservation of sites or buildings)
- requirements to protect or enhance environmentally sensitive features, such as water courses or wildlife, and to comply with the relevant environmental protection legislation and
- any requirements for view corridors, sight lines or buffer zones.

Appendix B: Treatment of inputs into the residual method

B.1 The form of any inputs into a residual valuation can vary depending on the type and application of the method. For this reason, it is deemed appropriate to look at the inputs into a residual method in more detail than would normally be the case in a valuation professional standard. The discounted cash flow or cash flow technique allows for a more detailed set of assumptions to be applied to many of the inputs into a residual valuation. Appendix B1 addresses the various inputs into a residual by reference to the more detailed cash flow approach. In Appendix B2, the different approach to some of the inputs within a basic residual method is examined.

B1 Discounted cash flow technique

The discounted cash flow model can be summarised as follows:

$$LV_0 = R_0 + \sum_n^1 \frac{R}{(1 + d)} + \frac{DV}{(1 + d)^n}$$

where:

- R = estimated periodic net revenue received, or net expenditure incurred at the end of each period
- LV_0 = land value at time, $t = 0$
- DV = estimate of development value
- n = number of periods over which the development takes place and
- d = target rate of return.

The following sections of this appendix identify the required inputs into this application of the residual method.

B1.1 Value of completed property development and phasing of inflows

B1.1.1 The value to be adopted is normally the market value, subject to any special assumptions concerning the basis of valuation and the purpose. The market value normally reflects an optimum proposed development. The market value is assessed on the special assumptions, in accordance with a defined plan and specification – see VPS 4, paragraph 9.5 – that the development is complete at the date of valuation in the market conditions prevailing at that date. This is referred to as the completed property value (see IVS 410) or GDV.

B1.1.2 There are several RICS documents in addition to those mentioned in paragraph 3.3, as well as plenty of other advice, on the valuation of specific property types and these should be referred to when assessing the market value of these properties. There may be particular difficulties in assessing the value of the completed property for some property types, such as properties that are normally valued using existing accounts caused by the lack of a completed property with existing accounts, and the valuer must ensure they have the appropriate expertise in accordance with PS 2 paragraph 2.1 or take appropriate additional advice. The GDV is likely to be influenced by assumptions made concerning whether the completed property is to be sold at the end of the development period, sold in phases during the development period, let and then sold or held as an investment. Where the income approach is used, assumptions concerning leasing can be made as in any other valuation of an investment property. These assumptions must be fully set out under special assumptions as mentioned in the preceding paragraph.

B1.1.3 For some developments, particularly residential, the approach may be to adopt the total of the values of the individual properties. This may also be the case in mixed-use or any other multi-asset development.

B1.1.4 Where an income capitalisation approach is used for the GDV, normal assumptions should be made within the particular market sector concerning the treatment of purchaser's costs. The GDV should represent the expected contract price – the net proceeds of disposal (or NDV) is the expected contract price minus seller's costs. Fees are dealt with in more detail in Appendix B2.

B1.1.5 Additional assumptions include phasing of rental income and sales that can be explicitly included in the cash flow.

B1.1.6 Where individual buildings or units may be sold within the development period, particularly where the development includes residential properties, the sales need to be phased over a certain period. In these circumstances, the inflow is to be recognised in the cash flow at the appropriate time and the incidence of the relevant costs needs to reflect the actual timing of such payments.

B1.1.7 Larger projects developing a number of discrete assets within the project over longer time frames are more likely to be phased.

B1.1.8 Phasing can include properties that can be let during the development period while other properties are completed and the timing and extent of this additional income within

the development period can be incorporated into the cash flow. Where income-producing assets are included in the development project, the timing of lettings, rent-free periods, capital contributions, etc. can also be incorporated into the cash flow; the development period can also be extended and contracted appropriately.

B1.1.9 Change in values can be specifically incorporated into the cash flow and it is important to identify whether the cash flow incorporates expected changes. The adoption of either current or projected values raises questions of consistent treatment of other inputs, such as the costs; it also raises questions of whether real or nominal rates of interest are used in the valuation, i.e. target rates of return and the use of real or nominal finance rates.

B1.2 Development costs

B1.2.1 The following paragraphs regarding development costs should be read in the context of the comments in B1 concerning the optimum and the actual development. The actual project may not be the optimum project and reduced costs for the actual project (on account of, for example, planning permission being granted before the date of valuation) would not apply for the optimum development if it were different to the actual planned development. That particular example would have major impacts on other inputs into the development valuation.

B1.2.1 Planning permission and associated matters

B1.2.1.1 Where there is no existing planning permission for the project, the costs of obtaining this permission should be allowed for. Where the development may be contentious, allowances may be made for the potential additional costs, including delays caused by appeals and/or inquiries – these include fees and additional holding costs and may extend to creating models, lobbying, etc.

B1.2.1.2 The impact of legally binding agreements linked with the grant of development consent should be considered, since these may involve liabilities that need to be offset against the value of the asset without them. Where developer contributions are made, some will be delivered on-site and may be part of the appraisal, but others could be outside of the site; for example, the provision of off-site highways provision. The requirements might be for a cash payment, the provision of community facilities, affordable housing or providing enhanced public transport. Furthermore, the timing of the payments, or the fulfilling of the obligations, may be relevant in these cases.

B1.2.1.3 There are various matters relating to statutory and regulatory obligations that should be considered. Such matters, which could incur significant costs, will depend on the individual jurisdiction but could typically include:

- heritage building special consents and any associated negotiations
- the accommodation of archaeological surveys or digs
- environmental protection during demolition and construction and
- obtaining necessary approvals under any regulations relating to building construction.

B1.2.2 Site acquisition costs

B1.2.2.1 These include:

- agents' fees
- legal costs and
- any taxes payable on the acquisition of land prior to the commencement of the development.

B1.2.3 Site-related costs

B1.2.3.1 It is necessary to consider the costs to be incurred before the main construction activity can proceed. These include:

- the cost of meeting any environmental issues – while this can relate to any remedial works, it can also reflect important conservation or flood protection requirements
- there may be an obligation to remove contamination and consequential waste management obligations, along with special environmental provisions to abate noise or control emissions
- there may be ground improvement works needed before the main construction period begins to make the site safe for development (liaison with a civil and/or structural engineer may be appropriate)
- any archaeological investigation costs may be borne before the main contract is let – the time to undertake such work and the associated cost should be understood
- diversion of essential services and highway works and other off-site infrastructure costs
- creating the site establishment and the erection of hoardings
- the costs of conforming to appropriate health and safety regulations during the course of the development; there may also be issues surrounding sustainability that may have a direct bearing on the site
- if appropriate, it may be necessary to estimate the costs incurred in securing vacant possession, acquiring necessary interests in the subject site, extinguishing easements or removing restrictive covenants, rights of light compensation, party wall agreements, etc. Realistic allowances have to be made, reflecting that the other parties expect to share in the development value generated and
- the letting out of advertising space on hoardings or the securing of short-term tenancies – for example, surface car parking – can help to offset other costs before and during the development phase.

B1.2.4 Construction costs

B1.2.4.1 An estimation of the construction costs at the valuation date is a major component in a residual valuation. In other than the most straightforward projects, it is recommended that the costs be estimated with the assistance of an appropriately qualified expert. Buildings should be measured in accordance with the appropriate measuring code applicable to the property type and/or jurisdiction, which could be:

- *RICS Code of measuring practice* (6th edition)
- *RICS property measurement* (2nd edition)
- IPMS or
- ICMS.

Always check that calculations provided by other professionals are on the same measurement basis.

B1.2.4.2 The choice of procurement route imposes differing responsibilities on the parties and is a key consideration in determining the construction cost. Reference is often made to a fixed-price contract. While this does allow for inflation, it is only fixed to the extent of the works outlined in the contract. A contractor can amend the pricing if any variations to the specification are made or unforeseen events occur.

B1.2.4.3 It is important that the valuer understands which route has been, or is likely to be, chosen. The suitability for the particular development and the implications of that choice on the relevant elements of the residual calculation may require recourse to other surveying disciplines.

B1.2.4.4 If the cash flow has been constructed using projections of changes in costs, those projections need to be similarly incorporated into the model. The cash flow approach allows for the phasing of costs and requires more specific assumptions regarding the timing and shape of the phasing. Two common shapes for the distribution of costs within cash flow models are:

- **Straight line:** This assumes that the preliminary costs are incurred near to/at the beginning of the development period and the principal development costs are incurred in equal tranches at regular and equal intervals throughout the development period.
- **S-curve:** The weighting of the construction costs may be incurred irregularly within a project and different property types may require a different pattern of delivery of construction costs. Rather than being distributed equally over the development period, generally the costs are quite small at the beginning of a construction project, relatively accelerate in the middle and reduce towards the end of the construction period. The purpose of an s-curve is to reflect more accurately the incidence of the costs in a particular project and may require expert advice from other construction professionals involved with the development.

As procurement contracts and methods develop and mature both on-site and off-site, the timing and shape of construction costs through a project will also develop and change, reinforcing the need for appropriate additional professional advice.

B1.2.4.5 As procurement practices change, the shape and weighting of costs through a typical development project will also develop and change. The cash flow allows these changes to be incorporated period-by-period.

B1.2.5 Contingency allowance

B1.2.5.1 It is normal to include a contingency allowance for any unexpected increases in costs due to unforeseen circumstances. The quantum, which is usually reflected as a percentage of the building contract sum, is dependent on the nature of the development, the procurement method and the perceived accuracy of the information obtained.

B1.2.5.2 However, whether a contingency allowance is appropriate is linked to the analysis of risk within development projects. A contingency allowance can count the input uncertainty risk twice as uncertainty is also allowed in the risk adjusted discount rates applied within development valuations.

B1.2.5.3 Unforeseen increases in costs are an inherent risk in development and higher development target returns are required to compensate for risks such as these. A higher contingency allowance should be compensated by a relatively lower target rate of return.

B1.2.6 Fees and expenses

B1.2.6.1 The incidence of fees and expenses can vary significantly according to the size and complexity of the development. In the context of the sale, letting, design, construction and financing of the development, consider the following:

- professional consultants to design, cost and project manage the development, including an environmental and/or planning consultant, an architect, a quantity surveyor and a civil and/or structural engineer. Additional specialist services may be supplied as appropriate by mechanical and electrical engineers, landscape architects, traffic engineers, acoustic consultants and project managers
- fees incurred in negotiating or conforming to statutory requirements or any planning agreements
- the costs of conforming to the relevant health and safety regulations during the development
- costs related to the raising of development finance (these can include the lender's monitoring surveyor's fees and legal fees) and
- in some cases, the prospective tenant/purchaser may incur fees on monitoring the development (these may have to be reflected as an expense where they would normally be incurred by the developer).

B1.2.6.2 In the context of the letting and sale of the completed development, consider the following:

- lettings and sales expenses – where the development is not pre-sold, or fully pre-let, as a single unit, this item includes incentives, promotion costs and agents' commissions. The costs of creating a show unit in a residential development may also be appropriate and
- incentives on letting, such as rent-free periods, capital payments to prospective tenants, whether as an incentive or recognising the tenants' fitting out liabilities and time periods. These may be reflected by either continuing interest charges on the land and development costs until rent commencement or taking account of the costs in the valuation of the completed development.

B1.2.6.3 Finally, consider the following in the context of financing the development:

- fees regarding the arrangement of development funding and
- legal advice and representation at any stage of the project.

B1.2.7 Tax relief and grants

B1.2.7.1 For some specific properties, special tax allowances may be available to the developer. These may relate to the cost of remediation of contaminated land, promotion of job creation or assistance to ensure that a project proceeds. The availability of such funds needs to be established with the relevant government office and the possibility of their availability being changed, or withdrawn at short notice, should be recognised.

B1.2.8 Finance and interest payments

B1.2.8.1 Contrary to much custom and practice, appraisal theory is clear that interest and finance on borrowings should not appear in a formal discounted cash flow individual project appraisal. Where cash flows are discounted at a target rate of return, this incorporates a risk premium based on the project risk and should be at a higher rate than the cost of finance. This is true where the lender does not share in the risk of the project. Where the lender does take an equal share of the risk and potential profit, their target rate of return should be equal to the development as a whole.

B1.2.8.2 In many applications in practice, finance does appear in discounted cash flows and it is often a major input into the valuation. Valuers should be aware of the issues introduced by this practice.

B1.2.8.3 Almost invariably, in such an application, the implicit assumption is made of 100 per cent financing of both costs and land value. The finance is rolled up through the development and deducted from the development proceeds at the end of the development (or before if the development is deemed to go into profit before the development appraisal period is complete). This application of a cash flow approach also allows profit to be identified at the end of the development as a single lump sum that is then often tied to the GDV or the overall costs of the development as a simple percentage of GDV or costs.

B1.2.8.4 The discounted cash flow approach should simply identify the actual cash flow from the development and discount at a project risk adjusted target rate of return to represent profit as a periodic return.

B1.2.8.5 A discounted cash flow model could be amended to consider a variety of finance arrangements and loan-to-cost ratios. Although most probably using market-based inputs, appraising the net of finance cash flows and determining the target rate of return or IRR of the equity may come under the investment value definition of value, and valuers should be careful that they are reporting the correct basis of valuation. A net of finance cash flow is constructed on the equity provided by the developer and the rate of return is based on the risk of that equity. Depending on the financial arrangements, that risk would normally be higher than the overall project risk (this assumes lower risk exposure by the lender), and the equity target rate of return would normally be in excess of the project target rate of return.

B1.2.8.6 The issue of cash flows expressed in expected nominal or current values is relevant to the treatment of finance. Interest rates will vary depending on how the cash flow is expressed, with nominal rates of return on nominal cash flows and real rates of return on cash flows that have not been projected forwards. The same assumptions apply to yields on the equity and debt elements of the cash flow.

B1.2.8.7 Interest rates will vary depending on the level of debt and the way in which the project is financed using combinations of different kinds of debt including senior and mezzanine. The costs of the different types of debt should be assessed separately and deducted from the net income each period to create an accurate net of finance cash flow.

B1.2.8.8 If it is required to appraise the cash flow with particular assumptions about the debt, this professional standard recommends that the market value of the site is assessed using both the market comparison approach and the residual valuation, assuming no debt and a project target rate of return. The debt analysis should be undertaken outside of the market valuation and the results of the two appraisals reported separately.

B1.2.9 Development profit

B1.2.9.1 Understanding the nature of risk of the development is crucial to the identification of the appropriate return to the developer. Many of these risks relate to the volatility of the profit relative to input uncertainty regarding the major inflows and outflows over the development period.

B1.2.9.2 In a discounted cash flow, the nominal cash flows are discounted at the project target rate of return. This target rate is based on the required rate of return for a risk-free investment or project plus a premium for the risk undertaken. Development profit is therefore represented as a rate of return, not a single lump sum at some point in the development.

B1.2.9.3 The target rate of return can vary significantly between projects and is extremely hard to determine. Development, depending on any of the contractual arrangements with contractors, prospective tenants and purchasers, planning and other uncertainties within the

development process, is a high-risk activity attracting a high-risk premium. The risk attached to the value components may be different to the risk attached to the cost components and the cash flows can be discounted at different rates, although this is rarely seen in practice. Development profits may fluctuate significantly and small changes in the value or costs can cause major shifts in the level of profit. These effects can cause land value estimates to be volatile but, once the land has been purchased, it is the level of profit that becomes highly susceptible to this volatility.

B1.2.9.4 Where practical, the rate of return should be identified from an analysis of individual land transactions based on assumptions of GDV and construction and other costs.

B1.2.9.5 There are other ways in which profit can be specified within a discounted cash flow approach, but these profits usually introduce other complications over and above the choice of rate of return. For example, it is possible to incorporate profit as a single lump sum element based either on return on GDV or return on development costs. Incorporating a lump sum profit into the cash flow raises issues of what rate to discount the remaining cash flows.

B1.2.9.6 Another common approach to profit is to accumulate the cash flow with interest based on 100 per cent borrowings on both land and construction costs. It is, in effect, a net terminal value over and above a borrowing rate. If required, it can be discounted back at the borrowing rate to identify NPV, which can be used to identify a land valuation residual if no land value element is included.

B1.2.9.7 This approach is designed to be the closest to the application of a more basic residual valuation set out in section B2.

B1.2.9.8 These alternatives do not conform to standard approaches of appraisal modelling in other asset classes; they use profit measures that do not account for time. They often include finance when they should not, and the financing provisions used are often unrealistic. They can lead to a confusing mixture of returns based on periodic rates of return and single lump sums. These practices should be avoided.

B1.2.9.9 All techniques have their limitations. In this case, an approach based on the target rate of return on the direct costs and values has fewer limitations than the alternative applications previously set out.

B2 Treatment of inputs: basic residual model

The basic residual valuation method is a more simplified representation of the expected revenue and expenditure from a development. The residual land value is the value of the completed development (net) minus the development costs, including developer's profit. It can be summarised as:

$$LV_0 = (1 + i)^{-t} [DV_0 \cdot (1 - p) - DC_0 - I]$$

where:

- LV_0 = residual development property/land value at time, $t = 0$
- i = cost of finance (annual interest rate)
- t = development period
- DV_0 = current estimate of development value
- p = profit as a percentage of DV
- DC_0 = current estimate of development costs and
- I = total finance costs.

The following sections of this appendix identify the required inputs into this application of the residual method.

B2.1 Value of completed development

B2.1.1 In the basic residual valuation, the GDV is normally an estimate of the value of the completed development at current prices. It is not normal to adjust the GDV for any increase or decrease in values over the development period or to discount the GDV back to the valuation date. However, it is possible that values will change over the development period and they could be reflected in the valuation.

B2.1.2 The GDV can be phased through the development where part of the development is sold or let during the development period, but this is difficult to incorporate into the traditional layout to a residual calculation. It is one reason why cash flows are often applied to the valuation of development properties in more complex cases.

B2.2 Development costs

B2.2.1 It is not normal in basic residual valuations to incorporate expected construction cost changes (in line with the approach to GDV). Current values and costs at the date of valuation are normally utilised. However, it is possible to incorporate cost change where it forms part of the pricing process, although it is more difficult and less accurate than in the cash flow format.

B2.2.2 Interest or financing costs

B2.2.2.1 In a basic residual valuation, finance is assumed at 100 per cent of both land and building costs.

B2.2.2.2 The development property/land value finance costs are included by reference to the residual value being discounted by the borrowing costs over the development period.

B2.2.2.3 There are three ways to determine the amount of interest paid on the cost of borrowing the building related costs:

- The first is to set out the costs as a cash flow and determine the total interest payments. These are then included as a cost to be deducted from the development proceeds. Some residual valuation proprietary software adopts this approach. In that form, it represents a cash flow model assuming 100 per cent borrowings on land and building/ancillary costs and a fixed profit based on a per cent of GDV or costs.
- Second, interest on construction-based borrowings can be more crudely approximated by assuming that interest accumulates on half the development costs excluding land and profit at the cost of borrowing over the whole construction period.
- Third, it can be approximated by assuming that the whole of those costs is borrowed over half the construction period.

B2.2.2.4 Where the residual does not adopt a cash flow format, interest does play a role in giving the development appraisal some time frame to it with the interest payments crudely representing discounting of all values within the development time frame back to the present-day to form a current value for the land.

B2.2.2.5 It is normal for interest to be treated as a development cost up to the assumed letting date of the last unit, unless a forward sale agreement dictates otherwise.

B2.2.2.6 In the case of residential developments, the sales of individual units may occur at various stages during the development and the drawdown assumptions can be amended to compensate. As with any phasing of sales and lettings, this requires the cash flow format to replace the basic residual approach to identify the total interest payments that can then be deducted within the basic residual model.

B2.2.2.7 If an assumption is made that the completed development is held beyond the date of completion, first the attendant costs of holding that building should be added. These may include such items as insurance, security, cleaning and fuel. A proportion of the service charge on partially let properties may have to be included together with any potential liability for empty property taxes. Interest can then be accumulated in two parts; in the construction period and then in the post-construction period where the full costs of development can be included in the interest calculations.

B2.2.2.8 Where the client requires an appraisal considering particular financial arrangements, this can only be carried out within a cash flow appraisal.

B2.2.3 Developer's profit

B2.2.3.1 The nature of the development, and the prevailing practice in the market for the sector, helps to determine the selection of the profit margin, or rate of return, and the percentage to be adopted varies for each case.

B2.2.3.2 As indicated in this professional standard, although the IRR is a truer measure of the required return of a development project taking the timing into account, it is usual to express profit within a basic residual valuation as a capital profit expressed as a percentage of the total development cost (including finance) or of GDV.

B2.2.3.3 It is also common practice for development companies who retain completed projects in their investment portfolios to judge the success of a project in terms of the enhancement of the balance sheet (net asset value) rather than the profit and loss account (income).

B2.2.3.4 There are, however, other criteria that are sometimes adopted. These include:

- initial yield on cost: the net rental return calculated as the initial full annual rental on completion of letting expressed as a percentage of the total development cost. This criterion may be significant in establishing whether the developer could service a long-term mortgage loan, or for evaluating the effect of the development project on the profit and loss account of the company
- cash-on-cash (or equity yield): the capital uplift or (more usually) net income (after interest charges on any long-term mortgage loan) expressed as a percentage of the long-term equity finance provided by the developer
- interest on capital employed: a technique that has regard to the rate of return on actual costs expended, calculated net of interest, and any relevant taxes and
- amount of cover: the extent to which the rent or sale price can be reduced, or the letting or sale period extended (often expressed as a number of months of rolled-up interest or loss of rent) without suffering an overall loss on the development.

B2.2.3.5 The appropriate profit to be expected from a development will be influenced by a number of factors that either increase or decrease the risk and uncertainty within the development. These issues include the certainty of inputs, such as pre-sales or pre-lettings, fixed construction costs or variable costs, long- or short-term projects and fixed or variable finance rates.

B3 Assessing the land value

B3.1 In a basic residual, the land value is expressed as a gross residual at the end of the development period after deduction of costs including finance and profit from the development proceeds to determine the amount available to pay for the land.

B3.2 As the land value is placed at the end of the calculation the same device of 100 per cent finance is used to move the residual value from the end to the beginning of the development

period, discounting the residual at the finance rate rather than accumulating it. This has the effect of bringing both GDV and all costs including profit from the end of the period to the beginning and producing a residual amount for the land at the date of valuation.

B3.3 To complete the basic residual valuation, the land value is reduced for purchase costs as the residual amount is the total amount available to fund the site purchase, which is the contract price plus the legal and agency costs and any relevant taxes.

B3.4 The land value in a discounted cash flow is the NPV of the project cash flows and requires no manipulation to represent the current value apart from the deduction of purchaser's costs.

Appendix C: Development valuations – illustrative assumptions and special assumptions

C.1 Development property can include existing buildings; a number of the following assumptions relate to such existing buildings.

C1 Illustrative standard assumptions

C1.1 Title

C1.1.1 We will assume that the borrower has or will have a good and marketable title, free from any encumbrances, restrictions or other outgoings of an onerous nature other than those that are disclosed to us; and that if leasehold, the lessee's interest is a qualifying interest for statutory lease extension or enfranchisement in accordance with the relevant legislation.

C1.2 Mortgages or charges

C1.2.1 For the purposes of our valuation, we will assume that the property is free and clear of all mortgages or other charges on or over them.

C1.3 Compliance with covenants

C1.3.1 We will assume that the tenant will comply with the lease covenants. Therefore, should we note during our inspection a certain want of repair and decoration in the property, this want of repair will effectively be ignored.

C1.3.2 We will also assume the tenant will comply with the other terms of the lease and that there are no material breaches of covenant, or unresolved disputes with the tenant, that might affect the value of the property.

C1.4 Site investigation

C1.4.1 We will not undertake any site investigation or geological, mining or geophysical survey and, therefore, cannot clarify whether the ground has sufficient load-bearing strength to support any of the existing buildings or any other constructions that may be erected in the future.

C1.4.2 The report will give no warranties as to the condition of the structure, foundations, soil and services.

C1.5 Condition surveys

C1.5.1 We will not instigate any environmental audit or other environmental investigation or soil survey on the property that may evidence any contamination or the possibility of any such contamination. Therefore, we will assume that there have been no contaminative or potentially contaminative uses ever carried out on the property. Should it be established that contamination, seepage or pollution exists at the property or on any neighbouring land or that the premises have been, or are being, put to a contaminative use (unless stated otherwise in our report), this might affect the values stated in the report.

C1.6 Where existing buildings are present

C1.6.1 We will not carry out building surveys nor will we inspect those parts of the properties that are covered, unexposed or inaccessible. Such parts have been assumed to be in good repair and condition, unless we have been informed otherwise. We cannot give any warranty concerning the condition of the properties and have relied on the information provided to us in allowing for the reasonable costs of maintaining the properties in our financial projections.

C1.6.2 We will not examine or test any of the services installed or connected and will assume that all such services have been installed and connected in accordance with appropriate regulations. We will assume that they are in full working order and not in need of repair or replacement, unless advised to the contrary.

C1.6.3 We will not make any allowance for extra repair costs and liabilities that might arise if high alumina concrete or any other deleterious or hazardous substances have been used in any part of the existing construction. Nor will we make any specific provision regarding latent defects. We will not arrange for any investigation to be carried out to determine whether any deleterious material has been used in the construction of the properties or has since been incorporated. We will, therefore, be unable to report that the properties are free from risk in this respect.

C1.6.4 For the purposes of these valuations, we will assume that such investigation would not disclose the presence of any such material to any significant extent. We will, therefore, assume the following:

- there are no abnormal ground conditions, archaeological remains, hazardous or deleterious materials or organic growth, such as Japanese knotweed or other invasive species, present that might adversely affect the present or future occupation, development or value of the property
- the property is free from rot, infestation and structural or design defect
- no high alumina cement or other currently known prohibited or suspect materials or techniques have been used in the construction of, or any subsequent alterations or additions to, the property

- there are no deleterious or hazardous materials or any defects or want of repair of those materials that would have an effect on value
- the property is not contaminated and is not adversely affected by environmental legislation
- any processes carried out on the property that are regulated by environmental legislation are properly licensed by the appropriate authorities and operated in accordance with the licence and
- all appropriate building regulations have been or will be followed in the construction of the property.

C1.6.5 If any of these assumptions prove to be inappropriate, the value of the property concerned may be affected.

C1.7 Energy performance certificates

C1.7.1 For the purposes of this valuation, we have not been provided with a copy of an energy performance certificate for the premises. Our valuation assumes that any transaction will be conducted in accordance with the relevant legislation.

C1.8 Plant and machinery

C1.8.1 In accordance with standard valuation practice, our valuation will include land, buildings, site works and all plant, machinery, fixtures and fittings associated with the mechanical and electrical services of the buildings, site and site works. These services will include lifts, window cleaning equipment, heating, lighting, air conditioning and the ventilation equipment normally associated with the building.

C1.8.2 No process plant or installations associated with telephones and computers will be included in our valuation. Goodwill and specialist plant and machinery, including that used for specific computer installations, telephones, computers, tenants' fixtures, fittings, furnishings and equipment, will be excluded from the valuations.

C1.9 Computers

C1.9.1 For the purpose of the valuation, we will assume that all systems and services that are reliant on any form of computer or micro-processor are functional and have no inherent software defect that might now or in the future cause them to cease operation. Should it, however, be established that significant cost will arise in achieving continuous operation of these services, the values reported could be reduced.

C1.10 Statutory notices

C1.10.1 We will assume that there are no outstanding statutory notices other than those that are identified to us.

C1.11 Statutory requirements

C1.11.1 We will assume that there are no contraventions of any statutory requirements.

C1.12 Tax

C1.12.1 No allowance will be made in our valuation for any liabilities for tax. Our valuation will be expressed exclusive of any tax liabilities that may become chargeable.

C1.13 Service charge

C1.13.1 We have assumed that the service charge is run cost effectively and efficiently and thus not for profit. Also, unless otherwise advised or stated, we have not allowed for any major items of expenditure, which any ingoing tenant/occupier may be liable for and may potentially have an adverse effect on the value/values reported herein. It is also assumed that the service charge is managed in accordance with the current edition of RICS' *Service charges in commercial property*.

C1.13.2 We would recommend that information regarding service charges, including any substantial shortfalls or known and foreseeable major items of expenditure and or repair, are verified by your legal advisers. On receipt of further detailed information we will be more than happy to comment on these and, where applicable, the effect on the figures reported herein.

C1.14 Grants

C1.14.1 No allowance will be made for the incidence of grants except insofar as the availability of government financial incentives for industry influences general levels of value.

C1.15 Costs of acquisition

C1.15.1 We will [*insert 'not' if appropriate*] reflect a purchaser's costs of acquisition to take account of stamp duty, agents and legal fees, including VAT.

C1.16 Costs of realisation

C1.16.1 No allowance will be made in respect of costs of realisation.

C2 Illustrative special assumptions

The following paragraphs are examples of special assumptions that may appear in the report. As with any special assumption, they should be specific to the situation. Therefore, use of these paragraphs should be adapted accordingly.

C2.1 Development land with existing buildings

C2.1.1 The valuation assumes that the site has vacant possession.

C2.2 Special assumptions for strategic land portfolio

C2.2.1 Our valuations have been prepared on the assumption that all landowners required for the delivery of a comprehensive project have entered into agreements that involve the equalisation (or sharing) of cost and value.

C2.2.2 We have assumed that as the owner of the freehold interest of the land that is being valued, *[insert name of the owner]* is also the option holder over the adjoining optioned land.

C2.2.3 The valuations assume that no party claims any special ransom value for the provision of access and/or services and that there are no abnormal costs associated with the construction of infrastructure.

C2.3 For greenfield site adjacent to existing settlement and identified for potential release

C2.3.1 The property is valued with vacant possession.

C2.3.2 The property has planning permission for a comprehensive development of up to *[insert number of dwellings]* residential dwellings as detailed in the masterplan.

C2.3.3 There is an agreement with the adjoining landowner to work in collaboration to deliver a comprehensive residential development of up to *[insert number of dwellings]* residential dwellings over both sites.

C2.3.4 Any planning obligation costs are pro-rated between the property and the adjoining site.

C2.3.5 Any payment for the property is likely to be received in tranches.

C2.4 Vacant possession and mortgage default

C2.4.1 The property was occupied at the time of our inspection, but we have reported our opinion of the market value of the freehold interest in the subject property under the special assumption that it is subject to vacant possession at the valuation date.

C2.4.2 Our estimate of market value assuming a restricted marketing period of *[insert number of days]* days is on the special assumption that the constraint preceded the valuation date due to the default of the mortgagor and the mortgagee being in possession but that the property is the same at the valuation date, or the inspection date (notional or actual) if later, including any tenancy.

C2.4.3 Our estimate of market value assuming a restricted marketing period of *[insert number of days]* days is on the special assumption that the constraint had arisen at the valuation date due to the default of the mortgagor but that the property is the same as at the valuation date, including any tenancy.

C2.5 New build residential

C2.5.1 GDV is the aggregate of the individual unit market values of each unit to be constructed and assumes that:

- they have all been finished to a good standard, in compliance with all information provided for the proposed planning application for a *[insert number of storeys]* storey project and building control

- all collateral warranties from the builder and professional team are issued and transferable and
- any appropriate building quality guarantees will be issued.

C2.6 Adjoining land agreement and vehicular access

C2.6.1 The borrower has an informal agreement with an adjoining land owner to sell jointly. Our valuation is subject to the special assumption that this arrangement has been formalised.

C2.6.2 There was no direct vehicular access at the time of our inspection, due to there being *[insert specific activity]* construction activity in the area. Our valuation is made on the special assumption that the property has direct access to the adopted public highway.

Delivering confidence

We are RICS. Everything we do is designed to effect positive change in the built and natural environments. Through our respected global standards, leading professional progression and our trusted data and insight, we promote and enforce the highest professional standards in the development and management of land, real estate, construction and infrastructure. Our work with others provides a foundation for confident markets, pioneers better places to live and work and is a force for positive social impact.

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