

# Real Estate & Planning

Working Papers in Real Estate & Planning 03/15

The copyright of each Working Paper remains with the author.  
In some cases a more recent version of the paper may have been published elsewhere.

**FINANCIAL VIABILITY APPRAISALS FOR SITE-SPECIFIC PLANNING  
DECISIONS IN ENGLAND**

Neil Crosby

Peter Wyatt

School of Real Estate & Planning

Henley Business School

University of Reading

Whiteknights

READING

**Acknowledgements**

We would like to acknowledge the funding contributions of the RICS Research Trust and the University of Reading's Research Opportunities Programme and, in particular, Kiyun Hui, who helped with the collation and analysis of the planning appeal documents.

# **FINANCIAL VIABILITY APPRAISALS FOR SITE-SPECIFIC PLANNING DECISIONS IN ENGLAND**

## **Abstract**

In England, appraisals of the financial viability of development schemes have become an integral part of planning policy-making, initially in determining the amount of planning obligations that might be obtained via legal agreements (known as Section 106 agreements) and latterly as a basis for establishing charging schedules for the Community Infrastructure Levy (CIL). Local planning authorities set these policies on an area-wide basis but ultimately development proposals require consent on a site-by-site basis. It is at this site-specific level that issues of viability are hotly contested.

This paper examines case documents, proofs of evidence and decisions from a sample of planning disputes in order to address major issues within development viability, the application of the models and the distribution of the development gain between the developer, landowner and community. The results have specific application to viability assessment in England and should impact on future policy and practice guidance in this field. They also have relevance to other countries that incorporate assessments of economic viability in their planning systems.

## 1. Introduction

In England, local planning authorities can impose planning obligations and charge infrastructure levies on landowners upon grant of planning permission so long as they do not jeopardise the economic viability of the proposed development. A development viability appraisal (DVA) tests economic viability. It is a financial model that is based on the ‘residual method’ of land valuation because the residual amount is that which is left to bid for the land after deducting the estimated costs associated with a development from the estimated value of the completed scheme. As well as construction costs and risk-adjusted return to the developer, the cost of planning obligations and Community Infrastructure Levy (CIL) must also be deducted from the development value. If there is a positive residual amount that is sufficient to persuade the landowner to sell, this indicates economic viability.

DVAs are typically carried out at two stages in the planning process: the policy setting or forward planning stage and the scheme-specific development control stage. This paper focuses on the latter but builds on previous research that has examined the application of development appraisal theory and practice at the area-wide level. That research identified a number of issues inherent in development appraisal modelling in general, and particular issues concerning the application to DVA (Byrne *et al*, 2011; Coleman *et al*, 2012; Crosby *et al*, 2013). This paper categorises these modelling issues and develops a set of research questions, which are addressed using a case study methodology based on planning appeal decisions.

The next section of this paper reviews the existing literature on development appraisal modelling and sets it within the context of development viability. Section 3 introduces the objectives, research method and primary data source. Section 4 sets out the findings and these are discussed in detail in Section 5 before concluding in Section 6.

## 2. Literature review

Christophers (2013) notes that the first official recognition of viability in planning was in relation to the delivery of affordable housing through the use of planning obligations. UK Government Planning Circular 6/98 (DETR, 1998) advised local authorities to ensure financial viability when negotiating the amount of affordable housing that could be supplied from a development scheme. Circular 05/2005 (ODPM, 2005) provided guidance for planners when testing the economic viability of planning obligations: viability was defined as a site's ability to remain sufficiently "profitable" at a given level of planning obligations. As the idea of viability testing took hold, its remit was extended from site-specific development management to forward planning. Planning Policy Statement 12 (DCLG, 2008) stated that viability considerations should constitute part of the evidence base in Core Strategies and other Development Plan Documents, and Planning Policy Statement 3 (DCLG, 2011) required local authorities to set targets for affordable housing and to assess the likely economic viability of these targets. Following the enactment of the 2008 Planning Act by the then Labour Government and the introduction of the 2010 Community Infrastructure Levy (CIL) Regulations<sup>1</sup> by the Liberal Democrat / Conservative coalition Government, local authorities are able to set a CIL to help pay for offsite infrastructure. As with planning obligations, a CIL is also subject to a viability test.

The National Planning Policy Framework supersedes earlier planning policy in relation to planning obligations but retains the need for forward plans to ensure that "...the scale of development identified in the plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened" (NPPF, 2012: 41). More specifically, with regard to the issue of viability in particular, the level of planning obligations

---

<sup>1</sup> SI 2010 No 948

“... should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable” (DCLG, 2012: 41)

Financial viability appraisals are therefore necessary to assess the extent to which a planning policy can be met or the extent to which adverse impacts of development can be mitigated.

To determine viability, the estimated site values are benchmarked against a ‘threshold land value’ (a value at and above which landowners are assumed to be prepared to sell) and therefore the basis on which this threshold is established and the level at which it is set is critical to DVA at the policy-setting (area-wide) level. If the estimated site values are higher than the threshold land value, the policy target is considered viable. Site-specific DVAs, which are the focus of this paper, use the same residual land valuation approach as area-wide DVAs but incorporate more detail about the proposed development scheme.

Coleman, et al. (2012) describe the development viability modelling process. Land valuation models can be very simple, take a single snapshot in time approach and assess the difference between the value of any completed development and the costs of providing that development, including any planning obligations and a reasonable return to the developer.

The difference between development value and cost is known as the residual land value; it is the amount available for the landowner and is compared to the threshold land value. Cash flow applications can be applied to this basic model but still produce a residual land value at a single point in time.

Focusing on the inability of basic residual valuation techniques to deal with multi-site appraisals and market shifts through time, Coleman *et al* (2012) and Crosby *et al* (2013) raise a number of issues concerning the application of development appraisal to DVA within the UK planning system. Essentially, policy is set for wide areas and enforced over long periods

of time and the viability testing methods struggle to deal with this. The main difficulties can be summarised as: spatially and temporally extrapolating from a set of time-specific hypothetical sites to actual development sites; confusion over whether to forecast growth in revenue and inflation in costs; and the impact on marginal sites of using levies and planning obligation targets that are based on land use and size thresholds rather than value. The research concluded that decisions within the planning system were not adopting a consistent approach to the assessment of land value within a residual valuation framework.

This paper develops that critical evaluation of area-wide DVA into a scheme-specific context. In other words, how does contemporary DVA perform when landowners and developers seek planning consent for specific development proposals? A review of Government legislation and guidance (HCA, 2009; RICS, 2012; Highbury Group on Housing Delivery, 2012; Growth and Infrastructure Act 2013<sup>2</sup>; DCLG, 2013; NPPF, 2014) reveals the following points of contention surrounding scheme-specific DVA: the inclusion of a uniform developer's profit for heterogeneous development projects; the handling of development finance and tax; input uncertainty and risk analysis (including whether or not to include inflation, forecasting and review mechanisms); and the approach used to estimate landowner return (threshold land value). The following conclusions can be drawn.

#### *Estimation of scheme-specific development profit*

The profit sum is usually expressed as a simple ratio, for example, a proportion of total costs or a margin on gross development value. These ratios are not sensitive to the development period. For instance, all else being equal, the profit level (if expressed as a ratio of development costs or value) would be the same for a one or ten year scheme. The literature on investment appraisal identifies that a periodic rate of return should be applied and this is a

---

<sup>2</sup> <http://www.legislation.gov.uk/ukpga/2013/27/contents/enacted>

risk adjusted rate of return which equates the cash flow from the development to its cost. An appraisal input that expresses profit as a ratio of total cost or development value is, therefore, unlikely to be the same as the outturn profit.

In addressing this, two difficulties arise. First, what is an acceptable or appropriate risk-adjusted market return for development activity and, associated with this, how is risk-adjusted return to the developer apportioned between the profit margin and the contingency allowance? Given location and scheme heterogeneity and market volatility, it will depend on the type of developer, type and location of the development and the state of the market. Moreover, there can be substantial volatility within the project cash flow itself (Geltner, et al. 2007: chapter 29). Second, estimating a required rate of return for development opportunities requires data that typically do not exist or assumptions that are difficult to verify.

#### *Handling of development finance*

The academic literature summarized in Coleman, et al. (2012) criticizes development project appraisals for assuming 100% debt finance. This approach is at odds with most real development projects which source finance from a combination of debt and equity. This has important implications for the development profit metric; what is the 'correct' measure of developer return?

Combining the two issues of profit specification and finance, there are also questions concerning the different levels of these inputs for different property types and for different forms of the same property type; affordable versus standard housing for example.

#### *Input uncertainty*

The summary of the academic and practice literature in Coleman, et al. (2012) also identified that it is common practice to incorporate *current* values and costs in a development appraisal.



For schemes expected to take a long time to complete or undertaken in phases, the cost and value estimates at the time of the planning application may change significantly. Although two approaches have evolved to handle this – re-appraisals and projection models – often no forecasting of costs or revenue is undertaken, due no doubt to the level of uncertainty surrounding future value change.

Normal valuation uncertainty surrounds estimates of current levels of costs and revenues. However, the very nature of the residual valuation method means that the land value output from a DVA is very sensitive to changes in development value, costs and timing in particular, and many of the other inputs are ratios of these key inputs (e.g. professional fees and transaction costs). The risk associated with this uncertainty is often quantified in the residual valuation by including a contingency allowance or by adopting a suitably high risk-adjusted return to the risk-taker. In some appraisals more sophisticated risk analysis techniques may be employed such as probability analysis and simulation modelling. A concern is how these various risk management techniques work together; is risk double-counted for example?

### *Estimation of land value*

The output from a DVA is a *residual land value* of the site – a value determined by its development potential. This can be compared to the value of the site in its current use to determine the size of the uplift in land value. If this uplift is enough to persuade the landowner release the land for development then the site is deemed viable. However, the landowner's decision may be influenced by a number of issues; current and potential future market states, the size of uplift compared to the current use value, the size of the uplift compared to the cost of the planning obligations, any legitimate alternative use value and the landowner's expectations of how policy may change are examples. Another influence particularly relevant to this paper is any expectation that they can use the current planning

policy framework to reduce the amount of planning obligations that will have to be paid.

This issue may also be influential in determining the price a developer may be prepared to pay the landowner.

Previous research indicates a lack of consensus regarding either the derivation or level of an acceptable uplift in land value. Nearly half of the studies investigated by Coleman *et al* (2012) regarded a scheme as viable if the residual land value exceeded current or alternative use value. A similar number added a premium of 15-30% of either the current or alternative use value as an incentive to the landowner to sell. A minority of studies specified market value as a benchmark, the basis suggested in industry guidance published by the Royal Institution of Chartered Surveyors (RICS, 2012b).

Clearly the landowner requires *some* level of financial incentive over and above current use value. Estimating this incentive is difficult because it attempts to quantify the amount of land value uplift that *should* go to the landowner and the amount that *should* go to the community. It is, essentially, a question of how the uplift in land value should be distributed. So the key unresolved question concerns the appropriate allocation of the uplift between landowner and community.

As indicated earlier, if there is uncertainty over the level of planning obligations payable then this will increase the option value element of land value due to increased volatility (Titman, 1985), thus increasing land prices. This can lead to higher land prices in the market and a threshold land value that is based on market value will also increase. Developers will appeal to have planning obligations reduced and, if successful, this creates an environment of further uncertainty (as local authorities review their planning obligation targets downwards), higher land prices and the process repeats. It is not surprising that land value is therefore at the heart of both the 2009 Homes and Communities Agency and 2012 RICS definitions of viability:

“The residual land value method of determining viability assumes that a viable development will support a residual land value at level sufficiently above the site’s existing use value (EUV) or alternative use value (AUV) to support a land acquisition price acceptable to the landowner.” HCA (2009: 21)

“An objective financial viability test of the ability of a development project to meet its costs including the cost of planning obligations, whilst ensuring an appropriate site value for the landowner and a market risk adjusted return to the developer in delivering that project.” RICS (2012b: 4)

The concepts “competitive returns to a willing landowner”, “price acceptable to the landowner” and “appropriate site value for the landowner” are included in the National Planning Policy Framework (2014) and, whilst the words ‘competitive’, ‘acceptable’ and ‘appropriate’ are somewhat nebulous, it is generally accepted that the landowner should receive an additional sum over and above the amount that they could sell the site assuming that it remained in its current use.

Industry guidance has attempted to define the uplift as “...the value at which a typical willing landowner is likely to release land for development, before payment of taxes...” (LHDG, 2012: 28). If a site has no possibility of permission for an alternative use then the starting point is based on its current use only. If there is a *prospect* of permission for alternative use(s) (for example, in a development plan for an alternative use) there may be a higher alternative use value. If the site has planning consent for an alternative use then a higher land value usually results. The alternative use land value then becomes the starting point for assessing the size of the uplift, although this use may also have planning obligations attached, which complicates the issue. The actual price at which a landowner would sell will, by definition, be a market price but because market transactions of development sites are not

frequent and sites are seldom comparable, valuers are often required to provide estimates of market price – market value. Market value is defined as an exchange price (IVS 2013) and should price in planning policy requirements. In practical terms the identification of residual land value, current use value, alternative use value and market value requires myriad assumptions and this is confounding the setting of policy and the drafting of guidance.

### **3. Research questions and data**

The review of viability modelling issues identified from the literature in Section 2 identifies two major strands. The first relates to the application of development appraisal techniques, namely the precise modelling approach and the nature of the inputs used within the model. These include uncertainty surrounding the inputs, the assumptions regarding developer's profit and the treatment of finance. The second strand relates to the way in which the model is used to share out the profits of development between the community, the developer and the landowner.

The research objectives relate to both of these strands: the first is to identify how the residual model is being used within development viability assessment at the scheme level, with particular emphasis on the treatment of input uncertainty and the approach to finance and developer's return/profit. This includes the identification of any variability within these approaches. The second objective is to identify the approach to "profit" sharing or threshold land value and whether this approach is changing or has changed through time.

The primary data source for the research is a sample of planning appeals that relate to development viability assessments. These cases were accessed from those uploaded to the Planning Portal<sup>3</sup> as of the 20 November 2014. The main search criterion was cases that had

---

<sup>3</sup> The Planning Portal is a web-based resource for information on planning and building regulations in England and Wales.

references to planning obligations. A further refinement was that only appeals made by landowners, developers and house-builders were selected. The search returned 99 appeal cases. Supporting documentation was available from the local authority websites for 32 cases and these formed the core data set. This documentation included proofs of evidence, valuation reports, DVAs and independent reviews of DVAs. The appeal reports and supporting material were subjected to a document analysis in order to isolate the approach taken by the planning inspector in reaching the decision, identify the method(s) adopted, inputs used and the evidence for those inputs. In some cases full details of the decisions and the evidence behind the arguments was available and in some cases only partial information could be found. Most importantly, the evidence and the decision were analysed to identify the approach to threshold land value.

## **4 Critical review of the appeals**

### **4.1 Application of development appraisal modelling**

#### *The modelling approach*

Use of the residual approach, either expressed as a cash flow or a traditional residual, was virtually universal. More specifically, the residual method was used to estimate developer's profit (where land value was an input), residual land value (where developer's profit was an input) or alternative use value. The general approach was to estimate the residual land value (RLV) of the development site taking into account cost of planning obligations and an appropriate return (profit) to the developer. The amount of planning obligations would reflect the policy target for affordable housing in the locality. If the resulting RLV was higher than the current use value of the site and high enough to persuade the landowner to sell (i.e. it provides an adequate return) then the proposed development scheme was considered viable. If the RLV was negative, viability testing is undertaken at a range of

affordable housing targets to determine what amount might be acceptable to both parties. Alternatively, where profit was the output, the viability appraisal tested whether the level of profit, expressed as a simple return on value or cost, was adequate for the developer. Again, in cases where it appeared to fall below a reasonable level, the determination assessed the level of planning obligations required to create an acceptable return to the developer. The two main issues that result are the basis of land value required where the output was profit or the basis of profit where the outcome was land value. Allied to these issues are the benchmarks against which the outputs are assessed. If the output is a RLV then what should this be compared to (i.e. what is an acceptable return to the land owner) and if the output is profit, what is an acceptable profit margin?

#### *Input uncertainty*

It is widely accepted that input uncertainty is a major issue in valuation as a whole (IVS, 2014) and in development appraisal in particular (Coleman, et al. 2012). Risk analysis in the form of basic sensitivity analysis had only been intermittently undertaken in the appeal cases and the impact this had on the decision is unclear within inspector reports.

Forecasting of costs and values has been attempted in a few cases but was rejected in 2008 in Godalming (APP/R3650/A/08/2063055) and in 2009 in Bristol (APP P0110/A/08/2069226). However, also in 2009, it was deemed reasonable for multi-phase schemes developable over many years (Lydney APP/P165/A/08/2082407). In the same year, the inspector rejected forecasting in another large development site at Innsworth in Gloucester (APP/G1630/A/09/2097181). But this inspector recommended that in large longer-term developments a further review during the development period be undertaken, acknowledging that viability 'moves through time'. This approach was later adopted in Beverley (APP/E2001/V/08/1203215) in 2010.

### *Profit and finance*

There is no evidence from the appraisals that there is a generally accepted level of profit from development. In evidence for the Clay Farm and Glebe Farm, Cambridge appeal (APP/Q0505/A/09/2103592 & 99) the developer's target return was quoted to be in the band of 18% to 21% of GDV. In the Jericho Canalside, Oxford appeal (APP/G3110/A/08/2070447) it was agreed that the target should be 15% of GDV or 20% of costs although they also agreed that this was site specific and would vary depending on the state of the market, the site and the scheme. However, in the majority of cases where the level of developer's profit is discussed, figures equal to or in excess of the two targets agreed at Jericho were used. In the Shinfield Road, Reading case (APP/X0360/A/12/2179141) the Inspector determined that:

“The appellants supported their calculations by providing letters and emails from six national house-builders who set out their net profit margin targets for residential developments. The figures ranged from 17% to 28%, with the usual target being in the range 20-25%.”

In this case, in the model put forward by the appellant, the default settings were 20% of GDV for private sales and 10% of GDV for affordable housing (and 20% of costs for commercial land use), resulting in a blended target profit margin of 18% of GDV. Larger schemes are regarded as more risky, hence the relatively high benchmark set for the Shinfield Road site, which was for 126 dwellings. In the Poplar Business Park case (APP/E5900/A/217892) the profit margin for affordable housing was assumed to be 7% of GDV, and the scheme was regarded as unviable.

Given that not all of the development viability appraisals were based on the standard residual model but had elements of cash flow within them, it might be expected that the pre-finance rate of return and the project rate of return would have been preferred benchmarks but this

was not the case. Even when IRR was calculated, it was the basic ratios of profit to GDV and/or cost which dominated discussions on viability.

Assumptions regarding finance are linked to those relating to profit. One hundred per cent debt financing appears to be universal and unchallenged and even the finance rate appears non-contentious with 7% adopted in four out of five cases where it is mentioned.

#### 4.2 Threshold land value

The determination and role of land value in development viability assessment is the key battleground within the appeals. The main issue centres on whether a policy-compliant level of planning obligations can be supported by the scheme whilst ensuring an acceptable return to the landowner. As described in Section 2, within the residual valuation framework, the uncertainty surrounding valuations gives parties to the case scope to vary the inputs and the outcomes. However, over and above this valuation variation, there is also scope for a more conceptual scrutiny of the application of residual valuation models and the subsequent determination of ‘threshold land value’, below which it is assumed the landowner would not be prepared to sell and therefore development land would not come forward.

##### *Price paid for site*

In a number of cases, developers owning sites have sought to determine the level of threshold land value by reference to the price they paid for the site. This raises an important practical question about the assumptions made by both sellers and purchasers. Purchasers could have paid too little or too much for a site based on inaccurate assumptions; perhaps purchasers’ expectations in terms of planning permission were unrealistic for example. Also, ‘perceived’ high and low prices may be due to the fact that prices are a distribution. There is an extensive real estate literature on valuation accuracy and bias that suggests a wide variation



in valuations and prices, especially in commercial markets (RICS/IPD, 2013); with development sites being cited as one of the most variable situations within negligence cases (Crosby, et al. 1998).

This is not surprising given that development land values are residuals and highly geared in relation to development values and costs (Byrne, et al. 2011). Prices of development land can be volatile in the short term. An historic price may have been right at the time but should that price be relevant to a viability appraisal undertaken at a different time in a different market state? Perhaps more pertinently as far as DVA is concerned, what if a purchaser paid a price that reflected the possibility that they could appeal the level of policy compliant planning obligations under the current viability regime?

Regardless of the motivation, if values have fallen, a threshold land value based on purchase price would be at a level higher than current values would suggest. This, in turn, would reduce the share available for planning obligations, passing some of the value that would otherwise flow to the community back to the developer.

The use of historic purchase prices as a basis for threshold land value has been the subject of a number of appeals. In 2005, an appeal decision in Norwich (Appeal Ref APP/G2625/A/04/1154768) rejected price paid in favour of a RLV that reflected the cost of planning obligations. A year later, and in contrast to the Norwich decision, in a case in Chilworth, the purchase price was used (Appeal Ref APP/Y3615/A/06/2016787). Decisions continued to flip-flop and in 2008, in Homerton Road, London (Appeal Ref APP/U5360/A/07/2059530) it was decided that site value should not be based on purchase price, but the reason in this particular case was that the price was too high and had ignored policy requirements. However, later that same year, using an appraisal model where land cost was an input and developer's profit was the output, a developer successfully argued that

the site value should be based on purchase price (Jericho, Oxford Appeal Ref APP/G3110/A/08/2070447). Given that the site was sold by tender and other bids were close to the purchase price, the inspector accepted its relevance even though it had taken place nine months earlier.

In 2010, in an appeal relating to a multi-phase residential development in Cambridgeshire (Appeal Ref APP/Q0505/A/09/2103599), the Planning Inspectorate took the opposite view. It was decided that the price paid for the land was irrelevant to DVA undertaken in any proceeding planning applications. If the landowner was allowed to use the purchase price in DVA and land values had fallen in the interim, this would reduce the amount of planning obligations that could be obtained. The Inspector was not prepared to accept such a fundamental transfer of risk.

Similarly, in March 2010 in Welwyn Garden City, an Inspector repeated that the correct basis for land value in DVA (whether as an input into a model that outputs profit or as a benchmark against which to compare RLV) was current use value and not price paid, reiterating that the developer carries the risk, not the local authority (Appeal Ref APP/C1950/A/09/2113786). Later in the same year, the Planning Inspectorate dismissed an appeal in London (Appeal Ref APP/E5900/A/10/2127467) in which the developer argued that the land value (input/benchmark) should be based on the price paid for the site in 2007.

It would appear that developers attempting to use the price they paid for the site in DVA are not succeeding if it is decided that either they overpaid for the site by not taking the correct level of planning obligations into account when purchasing or the price is too historic.

Where the price is recent and perceived to be 'correct', it might be taken into account. The next question that arises from the appeals concerning land value is what should threshold land value be based upon if it is not purchase price?

### *Current use value*

In a number of appeals, threshold land value is based on current use value either with or without an uplift to persuade a landowner to bring the land forward. In a case in Hampton Hill (APP/L5810/A/05/1181361) in 2007, both parties agreed that current use value should be the basis for threshold land value. The local authority argued that no uplift should be applied and that the landowner should therefore accept current use value only as an acceptable return. The appellant argued that the threshold land value should be current use value plus 25 per cent. The Inspector found for the appellant. However, in the Flambard's Way, Godalming appeal in 2008 (APP/R3650/A/08/2063055), although the Inspector also favoured a threshold land value that was based on current use value, the Secretary of State called in the appeal and preferred an approach that used comparable market transactions as a basis for threshold land value.

### *Market value*

The 'market value' approach used by the inspector in the Flambard's case appears to be recommended by the RICS (RICS, 2012b: 12) but it necessarily assumes all planning obligation policies are fully reflected in the valuation. The market value approach was used in Holsworthy (APP/W1145/Q/13/2204429) and in King Street, London (APP/H5390/A/13/2209347), although it is not clear whether market value was based on policy-compliant assumptions.

Alternative use value is also relevant in development viability modelling. It is defined as the market value taking into account viable alternative, policy-compliant, uses. For it to be a relevant alternative to current use value, it must be assumed that all policy-compliant obligations have been factored into the alternative use value, so reducing its value to one that can support these obligations.

### *Other cases*

There have been a number of cases where it didn't really matter what approach was used. In the 2009 appeal on a site situated on Streatham Rd, Mitcham (APP/T5720/A/08/2087666) the appellant argued that the RLV ignoring planning obligations would have to be below £359,000 (compared to a purchase price of £1.6m) for some affordable housing to be viable. The council argued that the purchase price was not relevant to the decision on how much affordable housing was viable and that current and alternative use values were the appropriate bases for threshold land value. In this particular case no amount of affordable housing was viable so the Inspector's decision did not provide any detailed comments on the basis for land value. The same thing happened in a number of subsequent appeals where the site value for a proposed development, even when planning obligations were nil, was below existing or alternative use value; they were not viable within the context of current planning policy (for example appeal refs APP/D3125/A/09/2104658, 660, 663 in Woodstock, Oxford in 2009 and APP/X5210/A/12/2173598 in St Edmund's Terrace, London in 2012).

### *Sharing the uplift in value between the landowner and the LPA*

Instead of trying to determine a threshold land value that would induce the landowner to deliver the site to the market, and a target level of planning obligations that the local authority requires, an alternative approach is to share the uplift in some way between these parties. The approach requires two valuations; current (or alternative) use value and RLV that ignores the cost impact of planning obligations. The former might be obtained by market comparison while the latter (which is not observable in the market) is the output from a standard residual land valuation, assuming no planning obligations. This approach was adopted in the 2012 Shinfield Road, Reading appeal (APP/X0360/A/12/2179141) where the gap between existing use value and RLV ignoring planning obligations was split 50-50, a division suggested by the

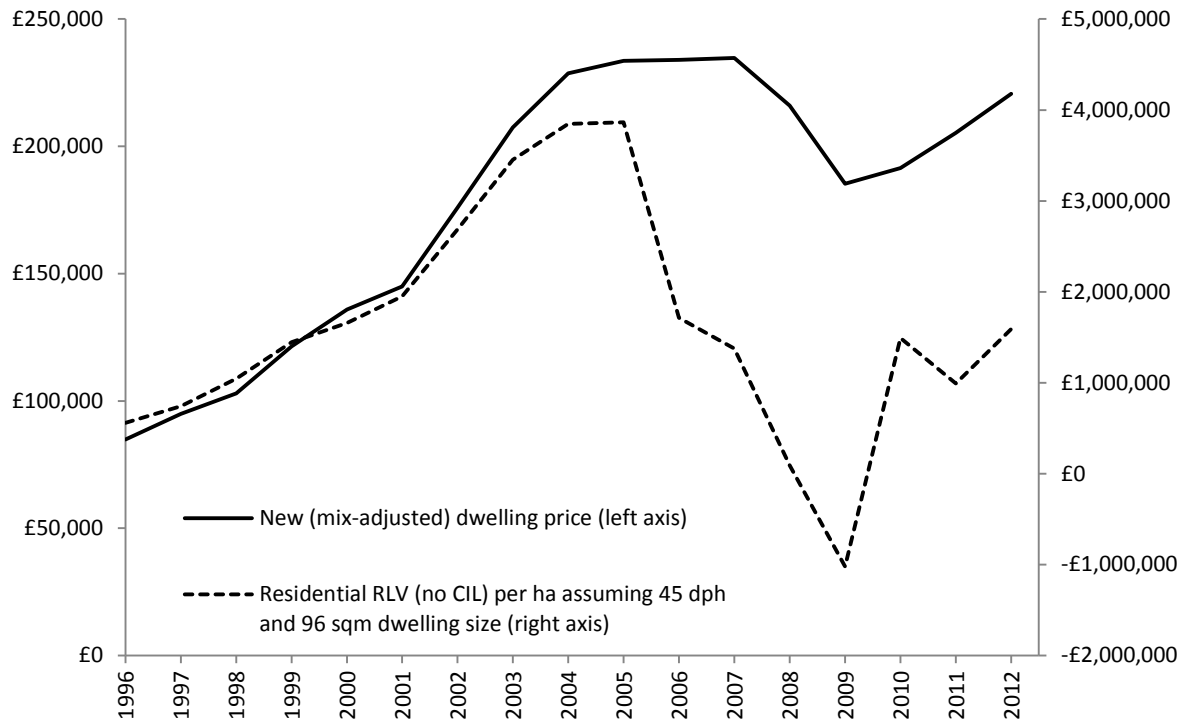
appellant. The inspector in the 2008 Bath Road, Bristol case also previously suggested that the correct approach was based on the difference between residual land values and current use values (APP/P0119/A/08/2069226).

## **5. Discussion**

The grant of planning permission can produce significant uplifts in land value and planning policy in England now acknowledges that the three major stakeholders (landowners, developers and the community) can all participate in that added value. But the mechanism by which this participation is implemented is not straightforward. There is evidence from recorded planning appeals within England of a confused picture concerning the ability to determine the correct framework for assessing appropriate returns to developer, landowner and community. For example, developer's return is highly site and market specific and significantly influenced by project finance structure. To date, the industry's response to these issues is to adopt broad rules of thumb regarding levels of developer and landowner return and to assume very simplistic financial structures. While some of this generality might (arguably) be acceptable for area-wide DVAs, it does not seem appropriate for site-specific DVAs.

One of the main problems with development appraisal is the sensitivity of the residual output to changes brought about by input uncertainty and time. Individual site values are more volatile than the values of developed real estate assets. Consequently fixing cost and value inputs through time magnifies the geared changes in RLV. Figure 1 illustrates this point. The solid line tracks changes in the average price of new dwellings in England between 1996 and 2012 whereas the dashed line tracks changes in residual land value for residential land in England based on national average house prices and build costs. Fixing a threshold land

value through this volatility means that the apportionment of uplift between landowner and community will vary considerably over time.



**Figure 1 – Residual land values for residential land use in England**

There is little argument within both government policy and industry guidance that a developer should be able to obtain an appropriate risk-adjusted return from a development scheme. The landowner will therefore receive the RLV that remains after the costs of development (including developer's profit and planning obligations) have been deducted from the estimated value of the completed development (gross development value). The central issue is the determination of threshold land value at which, it is assumed, a landowner would be prepared to sell.

The residual valuation is a recognised method for assessing the market value of development land and it gives some weight to guidance put forward by the RICS that the market value of a

development site should be the basis for threshold land value. At any point in time the RLV (the market value of a development site) will reflect relevant policy on planning obligations, i.e. the 'cost' of these obligations are included in the valuation as an input. Theoretically, a landowner should be willing to sell development land when its RLV is higher than current use value and the price reflects the new use. On this basis there does not appear to be a problem and the RICS guidance is correct.

However, it appears that this model may have been misapplied in practice. Some of this misapplication surrounds the crucial market value special assumption concerning the inclusion of policy-compliant planning obligation assumptions. If they are not fully taken into account, landowners and developers can manipulate the situation to their financial benefit.

In the appeals, some appellants have argued that the market value of the site should not be used and the historic purchase price for the site should be used instead. However, Planning Inspectors in a number of cases have identified this as an attempt to shift some of the risk of development activity from the developer to the community even though developers use risk-adjusted profit margins in their original decision-making. One of the significant risks associated with development is input uncertainty caused by market changes over time. Once land price has been fixed at the commencement of the developer's involvement, the impact of subsequent market changes will fall on the developer. If they are able to shift any downside risk associated with these market shifts onto the community by fixing the land price in any subsequent viability appraisal, that appraisal should incorporate a more moderately risk-adjusted return to the developer in order to reflect the reduced level of risk. There was no evidence of such risk adjustment by appellants trying to use purchase price in DVAs. The actual price paid should play no part in any development viability negotiations or modelling.

If the use of market value is deemed to be the correct approach, as indicated above, its practical derivation is problematic. Normal valuation practice is to assess developments with relatively homogeneous characteristics by direct capital value comparison using a unit of comparison such as a price per square metre or, for residential land, price per hectare with suitable adjustments for location and physical differences. For more individual development sites, especially in the commercial sector, a residual method is used (see RICS guidance notes on comparative valuations (RICS, 2012a) and development land (RICS, 2008)).

In the appeals, DVA was based on the residual method but the direct comparison method was often used to determine either (1) the land value input in cases where profit was the output or (2) the benchmark against which to compare the RLV output, ignoring planning obligations, to determine the appropriate level of planning obligations. This introduces an element of circularity into the appraisal, which can be used by appellants to their advantage. If the land value used in the viability assessment is derived from sales of similar sites, developers can argue that the land value benchmark should be based on these transactions – it is *prima facie* evidence of market value. In fallen markets this may not be as favourable as using historic price but is the next best alternative for landowners/developers.

There is little difference in using market values based on direct comparison than using the actual price, apart from any market movements between sale price and valuation date. If market values of comparable sites are used as the basis for the determination of threshold land value, the critical assumption is that the comparable evidence is adjusted to take account of current policy in relation to planning obligations. If this were done correctly within a residual valuation framework, the market valuation would necessarily confirm that the policy compliant planning obligations were affordable and there would be no reduction in planning policy obligations on appeal, precisely because of the circularity issue. The input land values



are adjusted to take account of the cost of planning obligations, and those are the obligations that the DVA is trying to estimate. Hence both the use of either a current purchase price or a current market value therefore suffers from the same issue. If the price and the valuation are correct under the planning obligation policy special assumption, they will automatically confirm that the policy planning obligations are affordable.

The planning obligations will only be unviable if the market value subject to the assumption concerning policy compliant planning obligations is less than the current use value. It is unclear whether planning inspectors realise that actual purchase prices and market valuations of comparable sites raise the same circularity issue. What is clear is that a number of decisions have used purchase price or market value based on comparable transaction evidence and this is an open invitation for developers to overpay for sites in the knowledge that the current application of DVA will enable them to use these prices in assessing reduced levels of planning obligations; either directly by inserting the price or indirectly by using the prices as comparables for market valuations.

What is the solution? In early cases, one approach was to adopt EUV plus a premium to persuade landowners to release the land. However, this takes no account of the substantial variations in the uplift from current use value to RLV. For example, a planning consent to allow residential development on a greenfield site can generate a very large uplift in land value whereas a consent to change the use of a brownfield site from commercial to residential land use might generate a much smaller uplift. The greenfield site would require a very substantial premium to persuade a landowner to sell. In a number of the appeal cases current use value was above RLV even before any planning obligations were deducted. In these cases no planning obligations were required. Effectively the current use value plus a premium approach is confounded by the heterogeneity of development sites.

Finally, we are left with the approach that was adopted in the appeal involving the site at Shinfield Road, Reading (*op cit*). In that case the landowner and community shared the land value uplift equally. This approach addresses the issue of changing viability through time and avoids the circularity issue that afflicts threshold land values that are based on market values or purchase price. It does not resolve any of the difficulties associated with input uncertainty. But those are inherent within the residual valuation method and no resistance to the use of this method in DVA was found in the appeal cases, despite the theoretical and practical criticisms levelled at it (see Coleman, et al. 2013, Crosby, et al. 2013). The decision in the Shinfield case amounted to a proportionate sharing of the land value uplift, essentially a tax on the development gain. Consequently, despite its advantages over alternative approaches, it might be viewed as a politically difficult solution to implement.

Alternative use value does impact on this proposed solution. If there are no planning obligations associated with the alternative use value, then it becomes the starting point for the uplift in value. If there are planning obligations associated with the alternative use value then the solution becomes less complicated. Assuming the same basis for planning obligations in both the grant of the proposed permission and the alternative use planning permission (say half of the uplift), the alternative use value can be ignored and the planning obligations for the proposed development are simply half of the difference between RLV for the proposed development and the current use value, as if the alternative use value did not exist.

## **6. Conclusions**

This research has examined appeal cases relating to scheme-specific DVAs where the level of planning obligations was one of the issues in dispute and identified threshold land value as the main point of contention. The present position is confused and conflicting. There is evidence within appeal cases that planners, planning inspectors and surveyors acting as

evidence providers are doing so within a poor quality modelling environment. There is little evidence that the financial theories underpinning appraisals and rates of return are understood and consequently models are not being applied consistently. The appeal cases have provided evidence that the institutional background has not supplied the expertise necessary to carry out rigorous development modelling in the English planning system and that educators, trainers, learned societies, and industry have failed to deliver this expertise. In particular, the research questions whether planning inspectors are sufficiently versed in the expertise of development appraisal and finance to be able to spot the inconsistencies. Their decisions are evidence that they cannot.

The paper has scrutinised the various approaches to determining land value and supported the view that the use of the historic purchase price is flawed as it attempts to transfer one of the primary risks of development – changes in market state and its impact on costs and values within the development – to the community. The *risk-adjusted* rate of return already rewards developers for taking these risks.

In addition the paper suggests that the market value approach is only theoretically correct if applied as per the assumptions set out in the RICS Guidance Note. A correct application of market value would protect the community from changes in market state and ensure that any site brought forward for development would be able to provide policy-compliant planning obligations. If market value is based on comparable evidence without proper adjustment to reflect policy compliant planning obligations, this introduces a circularity, which encourages developers to overpay for sites and try to recover some or all of this overpayment via reductions in planning obligations. However, a correct interpretation of market value would not persuade landowners to bring forward sites for development in weak land markets and so acts against the policy imperative. This is also the case as the residual approach to valuation

does not take into account the option value of holding onto land due to the volatile nature of land value illustrated in Figure 1.

A possible solution lies in the use of current use value but, if that is not related to the development in any way, it becomes a very blunt instrument that takes no account of a landowner's perspective when deciding to bring a site forward for development.

The problem centres on the difficulty in selecting an appropriate threshold land value, whether it is reliant upon purchase price, comparison-based market value or current use value plus a premium. One solution is to avoid setting a threshold land value altogether. By estimating current use value and a RLV that ignores planning obligations, the Shinfield appeal case split the uplift in value between the landowner and the community. This approach has the trace of a development gains tax – the rate was 50% in the Shinfield case – but it is capable of tracking changes to market states and shares the profits of development between developers, landowners and the community in a way that is more equitable and responsive than current approaches.

## References

- Allmendinger, P (2011) *New Labour and planning: from new right to new left*, Routledge: Abingdon, Oxon.
- Byrne, P., McAllister, P. and Wyatt, P. (2011) Precisely wrong or roughly right? An evaluation of development viability appraisal modelling, *Journal of Financial Management of Property and Construction*, 16(3), pp. 249-271.
- Christophers, B. (2013) Wild Dragons in the City: Urban Political Economy, Affordable Housing Development and the Performative World-making of Economic Models. *International Journal of Urban and Regional Research*, 38(1), pp 79-97.

Brown, G. and Matysiak, G. (2000) *Real Estate Investment: A Capital Markets Approach*.  
Financial Times Prentice Hall: Harlow, Essex.

Byrne, P., McAllister, P. and Wyatt, P. (2011) Precisely Wrong or Roughly Right? An  
Evaluation of Development Viability Appraisal Models, *Journal of Financial  
Management in Property and Construction*, 16, 3, 249-271.

Coleman, C., Crosby, N., McAllister, P. and Wyatt, P. (2012) Development appraisal in  
practice: some evidence from the planning system. *Journal of Property Research*, 30 (2),  
pp. 144-165.

Crosby, N., McAllister, P. and Wyatt, P. (2013) Fit for planning? An evaluation of the  
application of development viability appraisal models in the UK planning system.  
*Environment and Planning B: Planning and Design*, 40 (1). pp. 3-22.

Crosby, N., Lavers, A. and Murdoch, J. (1998) Property valuation variation and the 'margin  
of error' in the UK. *Journal of Property Research*, 15(4) : 305-330.

DCLG (2008) *Planning Policy Statement 12 Local Spatial Planning*. Department for  
Communities and Local Government: London.

DCLG (2011) *Planning Policy Statement 3 Housing*. Department for Communities and  
Local Government: London.

DCLG (2012) *National Planning Policy Framework*. Department for Communities and Local  
Government: London,

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/6077/2116950.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf)

DCLG (2013) *Section 106 affordable housing requirements: review and appeal*. Department for Communities and Local Government: London,

<https://www.gov.uk/government/publications/section-106-affordable-housing-requirements-review-and-appeal>

DETR (1998) *Affordable Housing Circular 6/98*. Department of Environment, Transport and the Regions.

Geltner D., Miller, N., Calyton, J. And Eichholtz, P. (2007) *Real Estate Analysis and Investments*. Thomson: Mason, Ohio.

HCA (2009) *Investment and planning obligations: responding to the downturn, Good*

*Practice Note*, Homes and Communities Agency: London,

[http://www.homesandcommunities.co.uk/sites/default/files/investment\\_and\\_planning\\_guidance\\_practice\\_note.pdf](http://www.homesandcommunities.co.uk/sites/default/files/investment_and_planning_guidance_practice_note.pdf).

Highbury Group on Housing Delivery (2012). *Viability in Planning – Discussion Paper*.

University of Westminster: London

<https://rtpilondoncalling.files.wordpress.com/2012/09/12-09-12-highbury-group-paper.pdf>.

LHDG (2012) *Viability Testing Local Plans : Advice for Planning Practitioners*. Local

Housing Delivery Group: London,

[http://www.local.gov.uk/c/document\\_library/get\\_file?uuid=e317f7aa-488b-40fb-9e5c-c18417e678dc&groupId=10180](http://www.local.gov.uk/c/document_library/get_file?uuid=e317f7aa-488b-40fb-9e5c-c18417e678dc&groupId=10180).

NPPF (2014) National Planning Policy Framework Guidance.

<http://planningguidance.planningportal.gov.uk/blog/guidance/viability-guidance/>

ODPM (2005) *Planning Obligations Circular 05/2005*. Office of the Deputy Prime Minister:  
London.

RICS (2008) *Valuation of Development Land*. Valuation Information Paper No 12. RICS:  
London.

RICS (2012a) *Comparable Evidence in Property Valuation*. Information Paper. RICS:  
London.

RICS (2012b) *Financial Viability in Planning*. Guidance Note. RICS: London.

RICS/IPD (2013) *RICS IPD Valuation and Sale Price Report UK 2012*. RICS/IPD: London.

Titman, S. (1985) Urban land prices under uncertainty, *The American Economic Review*,  
75(3), 505-514