

Viability Podcast 3 : Transcript

My name is Michael Beaman. What follows is the third in a series of summaries of talks I gave in autumn 2010 as part of the Planning Advisory Service's course on development viability appraisal. The aim of this introductory element of the course was to introduce appraisal techniques in the wider context of the property development business and to show how they can be used and in some cases abused.

The first broadcast covered some of the basic things that you need to understand in order to make sense of how developers operate. The second introduced developers and development as a business. This, the third, is an introduction to appraisal; which is not a science but rather a black art.

People sometimes refer to development appraisals as valuations but they usually aren't. A valuation is an estimate of what you might get for a property if you simply sell it on the open market while a development appraisal is a calculation of how much a site might be worth for development.

You might wonder how the two can be different but in fact they often are. There are several reasons. Firstly the price at which a site is sold might reflect a special interest on the part of the buyer. Perhaps they have a very specific need for it or own neighbouring land. Secondly, developers will have different ideas about how a site might be developed. This will influence the price that they are prepared to pay. When the precise details of the development are unknown it isn't practical to weigh up every potential approach to see which produces the highest land value. Thirdly, there is a buyer's curse. This was referred to in an earlier podcast. Obviously the aim of any developer is to buy a site for less than it is worth for development. But when they need to buy land in a competitive market to keep the business going they can't be too picky and will often pay more than you might think warranted using a conventional appraisal model.

I believe that the distinction is important. If the planning system focuses on market values it will set too high a hurdle of viability and depress the pace of development.

There are several uses for appraisals in the planning system.

A high-level analysis of development viability should be a pre-requisite when formulating strategic land allocation policies and setting levels of development contributions. In my view it is quite possible for the average town planner to become familiar enough with appraisal techniques to carry out the relatively simple calculations that are adequate this purpose. Complicated models and expensive studies are not necessary.

Then there are an increasing number of instances in which developers submit appraisals to a planning authority in support of an application. It is possible to improve your ability to understand and interrogate these and if necessary commission additional specialist advice on a more cost-effective basis, is an achievable goal.

Lastly there are occasional instances in which a local authority will wish to test the viability of a specific scheme which they wish to see developed and which in some cases they might have a direct or indirect role in delivering. When you do this you are moving away from trying to second guess the developer and moving into the realm where the consequences, risk and margin of error are all great. I would caution against the idea that a short course of any type will equip a planner with the skills to do the sums and to draw sound conclusions from them. It needs to be remembered that surveyors who do this should have years of training and experience. Even then any who claim to be able to achieve a degree of certainty and accuracy in these matters are – in my view - charlatans. For my part I have been doing the sums for over 25 years and the only claim that I will make to accuracy is that I am more likely to achieve it than you!

This raises an important point. Forming your own view of what land might be worth for development is not the objective here. What you are trying to do is to look at it through the developer's eyes. After all it is their money and not yours that will be put at risk. In this context I am sometime asked why developers require the level of returns that they do, normally by someone with an interest in seeing it reduced. My rather unhelpful answer is that it is academic because the usual level of profit that is sought in the

business is in most cases these are set by the dynamics of the market and can't be dictated.

I will now move onto the various appraisal models themselves. There are effectively two ways of going about assessing the worth of a piece of land. These are comparative analysis and residual value analysis. Comparative analysis is perhaps less valuable to planners so I will get it out of the way first. As the name suggests it is quite simply an attempt to assess the value of one site by comparing it with another whose sale value is known.

The terminology here leads you to the first issue with this method. Quite simply, it takes you to an estimate of the market value of the land and not to any idea of what it might be worth for development which is what you should be concerned with. There are other problems. In practice few sites are easily comparable and the terms of most transactions are not known in their entirety. For instance the reported price might reflect staged payments or include seller's obligations. I have experienced many instances in which both officers and councillors have told me that a piece of land must be worth a certain amount because a piece of land down the road has been sold for same amount; completely disregarding the fact that the deal was different, that the former was a nice level site adjoining the main road and the latter was an overgrown and steep slope with neither utilities or road access.

Frankly, this practice is usually based on a dodgy anecdote posturing as a valuation and is a curse in this business. Obviously you can make adjustments to the value of one site to make it more comparable to the other but this can be trickier than you think not least because there is no standard index of the costs of dealing with many of the factors that makes sites intrinsically different from each other.

But there is one element of comparative analysis that has its uses and that is benchmarking. You might have heard of the housebuilders rule of thumb. This suggests that housing land is worth roughly one third of the value of what you can build on it before taking into account exceptional costs and planning requirements for contributions and affordable housing. For example if you have a site, capable of accommodating 30 houses, each of which might sell for £200,000 then it should produce gross receipts of £6,000,000 and this rule of thumb suggests that it should be

worth roughly £2,000,000. This works reasonably well for average density schemes in average value locations. Although many things have changed I still see housebuilders using it as a 'finger in the wind' appraisal at the point at which they are selecting which opportunities to pursue and which to forego.

A completely different type of benchmarking involves simply comparing the market in your area with the market in another which is similar both in terms of demand and sales values. Odds-on, if a certain form of development is happening there then it should be viable on similarly blessed sites in your area. If on the other hand, a particular type of opportunity does not seem to be attracting developers there; then there is no reason to suspect that it will be any different where you are. More generally there is serious value in pooling information and comparing notes with surrounding districts. The foundations of appraisal are a good understand of the local market and hard data so the more you have the better.

Now I will turn to the type of appraisal which you will find most useful and are probably most familiar with; namely residual value analysis. This has the great advantage of being relatively simple. In order to calculate the worth of land for development you simply take the projected sale price of a scheme, deduct the estimated costs together with the basic level of profit that a developer will require, and you will be left with the amount that can be paid for the land. Alternatively, if you know price of the land you can add this to the costs, deduct the whole shebang from the projected sales receipts and you will be left with an estimate of the developer's profit.

This classic approach is standard practice for simple and short term projects but has significant drawbacks especially for schemes that are larger or which will take longer. These revolve around the important issues of timing and risk that I referred to in the first podcast.

Firstly, I made the point then that development isn't just about the level of profit but also how long it takes you to make it. A 20% return on capital is fine in over year but over ten years it is not. And I also made the point that while residual value appraisal models usually invite you to assume that a scheme is entirely financed by debt; in fact some firms don't use project debt financing all and in most cases at least some the costs are met by the developer from their own resources. So in both respects it is unlikely that

a residual value method applied in the conventional way will meet the criterion of accurately reflecting the way in which development companies actually operate.

Secondly, the standard model doesn't include any explicit analysis of the risks involved. To the extent that it deals with these at all, it is by fine tuning the judgements on the overall level of values and costs. To say this approach is crude is to put it mildly. And don't believe it when a developer tells you that inflation is never included in an appraisal. They might not do so explicitly but in many cases if they didn't 'take a view' and factor in higher sale prices than could be obtained at the present moment, they wouldn't have won the competition to buy the site.

Of course it is possible to back up an appraisal with some form of risk sensitivity analysis but the problem here is that this doesn't usually include any judgement of the probability of any particular set of circumstances occurring.

The final and possibly the biggest problem with the conventional residual valuation appraisals is that the conclusions are hypersensitive to the assumptions made about costs and receipts. I touched on this in the first broadcast and it is worth reiterating the example but this time I will use the housebuilders rule of thumb.

Let us say that a developer buys a site for a house for one third of the price he can sell it at. But during the course of the development house prices increase by a third. With the benefit of hindsight, the land turned out to be worth double what he paid for it. And when he tries to buy the site next door for another house he might find that it costs him twice as much as the first one. Get it? If not, grab a paper and pencil and work through the calculation for yourself. And note that if house prices go down by a third while he is building, the site will turn out to have been worth absolutely nothing.

The significance of all this becomes apparent when you consider just how accurate the initial assumptions about potential values and costs are likely to be.

The Royal Institution of Chartered Surveyors regularly analyses the relationship between valuations and sales. The majority of valuations - but by no means a large majority - are reportedly accurate to within a margin of error of around 10%. But keep in mind that this is a 10% error in the value of the building and not in the value of the land on which

it stands. And it involves valuations of buildings that exist, that can be seen, touched and measured, while in contrast when you do a development appraisal you have to try and put a price to a building that doesn't exist yet.

Going back to a previous example, which saw a small difference in the estimate of the value of the completed building result in a much larger difference in the worth of the land it was to be built on, you can see why a typical margin of error of 10% in estimating receipts implies a much greater typical error in estimating the worth of a site. And this is before factoring in the problems in correctly anticipating the cost of a scheme which usually hasn't been fully designed at the point at which an initial development appraisal is done.

Complex models are sometimes used in pursuit of greater accuracy. But the fact of it is that even small errors in the underlying assumptions reduce differences in the estimate of the worth of development land that completely dwarfs those that result from using one model rather than another. Quite simply, the magic isn't in the choice of model but in the quality of the assumptions that underlie it. And that is why where absolute accuracy is not at a premium – such as in strategic and policy studies – using a simpler model can cut complexity and cost and provide equally useful results.

So why do developers rely on calculations of this sort? It certainly isn't common in other areas of business or for that matter in the appraisal of major public sector projects. The answer is that they don't really, or at least not entirely. Most have a feel for the sector of the market that they operate in and know value when they see it. Tacit knowledge is important. So for smaller schemes they will often simply use a conventional appraisal as a belt and braces exercise to check their judgements and to make tactical decisions about, say, the trade-offs between value and cost. And, importantly, they will use it in the effort to secure funding.

For larger schemes they will use more complex models. These incorporate a cash flow projection which not only allows them to calculate the finance costs more accurately but which also allows them to calculate the annual return on their investment and makes it easier to factor in changes to values and costs over time and to assess risks. This is much closer to the types of models used in other sectors of commerce.

At this juncture I need to tell you a bit more about cash flow based appraisal. But I should preface this with a mental health warning; even though I doubt that you will want to try and get to grips with some of the more sophisticated approaches. If you feel at sea with money matters you might be a bit baffled by what follows. Frankly it isn't very easy to explain. So if after this you are tempted to stick your head in the oven or to reread the Planning Acts for light entertainment, before you do so, please google some of the terms that will come up in a minute and you will find numerous online guides to the whole business.

At their most simple, cash flow models simply tell you when money is coming in and going out; how much you need and when. This is useful in itself but for a deeper analysis of the economics of a scheme a developer will normally use a tool known as Discounted Cash Flow Analysis or DCF.

This is based upon the simple concept that cash in your hand now is worth more than cash in the future. So you would rather have £1000 now than £1000 in two year's time, if only because if you have the money now you buy something you want two years earlier, or you could bank it and earn some interest or pay off your brutal loan shark.

DCF analysis effectively discounts future income and costs so that money earned in the future will not do as much for the bottom line as money earned now and costs incurred in the future will not hurt as much as costs incurred then. The figure that remains after all of that income and costs have been accounted for is known as the Net Present Value. In development appraisal the Net Present Value effectively represents the residual worth of the land for development.

The conclusions from a DCF analysis are also sensitive to the underlying assumptions and an additional key judgement here is the choice of the rate at which you discount the future costs and receipts. That should depend on how the project is configured. When you are doing strategic studies for policy purposes you are considering a variety of sites and the developers involved will each have their own approach. So you have to generalise. For instance my own preference when doing strategic housing land studies is to ignore finance costs entirely - because volume housebuilders don't make much use of loans for specific projects - and to simply use a typical target for annual return on their capital as the discount rate. Say, 20% per year.

In doing this I am effectively saying to the developer 'I can't anticipate exactly how you will choose to finance your scheme. So I have allowed a 20% annual return on the cost you will incur excluding interest payments. That is reasonable by market standards and given the usual risks and it is up to you how you choose to finance your scheme from within that 20%'. Most seem to accept that but obviously they need their own appraisal, specific to their scheme and based on the actual approach to financing that they intend to adopt.

Pushing on, if you looking at an DCF appraisal with a known land cost or alternatively are doing an appraisal to underpin strategic policies which starts from an assumption about how much will be left for the landowner; you can work out what discount rate would be just enough to leave the land price affordable. This is known as the Internal Rate of return or IRR and it is a useful but imperfect proxy for the formal measures of Annual Return on Capital that the larger developer's use.

There is no doubt that in theory discounted cash flow analysis produces better results than the conventional forms of residual value analysis. The reason that developer's don't use it if they don't feel that the scale and the length of the project or for that matter their financiers absolutely demand it, is the same reason why I am assuming that you won't want to go into it too deeply. Namely that it can be fiendishly complex.

Going through a DCF appraisal for a complicated scheme can leave you feeling like you're drowning in numbers, and I have frequently seen models incorporating dozens of intricately linked spreadsheets. Not only does that make it more difficult to spot the wood for the trees, but if you want to check the calculation it is simply not practical to go through every figure and every formula in every spreadsheet. So you have to take some of it on trust.

If you do want to look for more on DCF on the internet you will find plenty there. Wikipedia has a section on it but there are numerous less complicated explanations. It is also referred to in both the Treasury's Green Book and the various guides produced by the Office of Government Commerce. But beware, the principles are the same all over but the logic behind the choice of discount rates for public sector projects is very different from the private sector

In summary, it needs to be understood that the residual value approach to appraisal is flawed. The models are hypersensitive to the underlying assumptions and inadequately fail to deal with issues of timing, risk and the variety of approaches to financing in practice. That is not a huge issue for the developers who understand what the sums can and cannot do and often mainly use them to double check judgements made equally on the basis of sentiment and experience. Cash flow based models provide a more sophisticated and explicit map of the economics of a scheme but succeed by adding complexity which in turn makes it more difficult to check and draw conclusions from the analysis.

In short the tools you using are blunt. But do not despair. You are not being asked to build the Taj Mahal. Rather, think of yourself as a caveman of the valuation world. Blunt tools are fine for the simple shelter that will adequately meet your needs just as they are fine when doing appraisals to underpin strategic or policy studies because in these instances the appraisal is not based on any specific site so the underlying assumptions will be normative estimates of likely receipts and costs and any degree of precision would be spurious.

And at the project level, your job is not to arrive at an accurate estimate of the land value on your own but rather to second guess the developer. You can equip yourself - to some degree at least - to read his mind and to anticipate what conclusions he might draw and which would influence his judgements on whether to proceed with a scheme or not. In short the hurdle is lower.

My advice is to put the effort into refining your underlying judgements about the main drivers of value and cost. Don't worry about small beer or put too much faith in a model simply because it is complex. As John Maynard Keynes once said, "it is far better to be roughly right than precisely wrong".