

development freakonomics

Many planners nurture misconceptions about development and planning economics and are vague about viability – which can lead to distorted judgements, says **Michael Beaman**



Left

Rosehaugh developed Broadgate in the City of London – where are they now?

Steven Levitt and Stephen Dubner's best-selling book *Freakonomics* was billed as telling you 'things you always thought you knew but didn't, and things you never thought that you wanted to know, but do'. Unfortunately, by focusing on crack gangs, hookers, loaded presidential candidates and cheating teachers, it passed over more riveting issues in development and planning economics.

Shame. The planning system has never worried so much about the viability of development as it does in these straitened times. There seems to be a growing belief that planners should pay more

attention to commercial realities – symptomised by a rash of requirements for viability studies and a lot of talk about how a flexible and responsive planning system can help to bring development forward. In my experience – gleaned directly but also from teaching on PAS (Planning Advisory Service) courses on the subject over the past few years – it is clear that many planners nurture misconceptions about viability. Some of these are entertaining, but they can also distort judgement.

So, here are four of my favourites, with the elephant in the room first.

Developers are rapacious knaves...

When I worked as one, commercial developers were seen as the epitome of rapacious capitalism. But now investment bankers are taking the heat, God bless them, and the builders of offices and sheds that offer employment have never been so popular or pitied! But I still hear planners claim that their profit margins are unjustifiably high. If that were true, super-profits would follow as night follows day and I would buy shares in some of them. But I haven't and bet you haven't either.

And if it were true then you might expect to see a large number of pure development companies listed on the stock exchange, with a long record of profitability. In fact, of the pure developers that were listed, say, 30 years ago, none survive. (The nearest is perhaps Helical Bar, founded in 1984. The Land Securities and Hammersons of this world owe their continued existence to the fact that most of their money is tied up in solid rent-producing investments and not development sites.)

I suspect that this hoary old myth is down to what statisticians call the survivorship bias; i.e. you know the companies that have survived but forget the ones that died. Rosehaugh? London & Edinburgh Trust? London & Metropolitan? Arlington? Speyhawk? All billion pound companies in my memory. It is true that the profits from a good scheme delivered in a rising market can be impressive. But for every plum of a scheme there is a lemon, and the timing risks in particular are horribly real.

... and housebuilders are land-hoarders and speculators...

The planning profession has clung to the argument that housebuilders hoard land for speculative purposes even though two official reports have rebuffed the idea. I do not intend to rehearse those arguments but to make a simple point. The mathematics of speculation don't really add up. A housebuilder will probably aim to make at least a 15% return on their capital every year. So in broad terms land would have to double in price over five years to be worth the punt. That is possible, if they get planning permission on land that previously had little current use or hope value. But that is a risky strategy which should be rewarded through an ever higher return!

The fact of it is that the economics of land speculation are not dissimilar to buying gold bullion with a credit card. Would you buy land with planning permission for residential development on the basis that it would reliably double in price every five years? No, me neither.

In practice, and as I am sure most readers of this journal are aware, most volume housebuilders hold a substantial amount of their landbanks through option agreements. This usually means that most of the increase in the value of a site over time will accrue

to the landowner. This isn't to deny that housebuilders have benefited from rising land prices – and suffered from falls – but it does rather undermine any idea that it could be the main aim of their business.

...but you can confound their duplicity by insisting on an independent viability appraisal...

If only. When a valuer is employed to appraise the worth of land for development, you expect to get a reasonably accurate answer. A common belief is that a margin of error of +/-10% is acceptable. The Royal Institution of Chartered Surveyors (RICS), bless their cotton socks, checks the accuracy of building valuations regularly and reports that this standard is bettered in over half the cases, while a margin of 20% is achieved in over 80%. Hurrah.

But... note the word 'building'.

Not 'site'. When you value a building you can see it, measure it and, if you want to be taken seriously, stick probes into the walls. In contrast, the worth of land for development is conventionally assessed by deducting the cost of development from potential sales receipts. At that point the building does not yet exist and in some cases isn't even designed; so you need to anticipate how big it will be, what it will look like and what it might fetch in the future market. A lot of guesswork is involved.

This is important because small differences in the estimates of scale, cost or value will usually make a big difference to the perceived 'land value'. For instance, if a building which costs £150,000 to build will sell for £200,000, then its plot is worth £50,000. But if that sale value has been underestimated by 10% then it could sell for £220,000 and the site would prove to have been worth £70,000, i.e. 40% more. Any error in estimating the value or cost of the building will be magnified in the calculation of the land value. Ouch.

Most valuers would hope to do better than a 10% margin of error when estimating current house prices because there is plenty of market evidence, but commercial and retail buildings can be more difficult, because evidence is normally harder to come by, and in each case you have to assess both the likely rent and the investor's return. On the cost side, while houses can be built from a pattern book, even marginally more complex buildings are not standardised, and external works costs are always unique and more difficult to assess.

On top of that there are flaws in the standard 'residual land value' appraisal model itself. Most models (and valuers):

- don't handle timing issues very well;
- don't include any quantified risk assessment beyond (and only occasionally) a cursory sensitivity analysis; and
- don't reflect the circumstances of individual developers.

Many (such as the Homes and Communities Agency and Three Dragons models) labour over the affordable housing issues they were designed to unpick while skating over others.

Finally, all of them are very open to manipulation, not least because the developer will invariably have access to more information than the planner or independent valuer, and it is that information (rather than using a complicated model) that is critical to minimising inexactitude.

The upshot is that in planning situations the margin of error in any calculation will typically far exceed 10%. Results that are double or half the true figure are a frequent result. Yet in my experience most people have a wholly unrealistic idea of how precise these judgements can be – witness the bloke on a course who asked me what difference it would make to the potential for negotiated planning contributions if a developer of a £5 million house tried to pull a fast one over the intended specification of the bathroom.

business to admit to clients that your methodology is inherently dodgy when there is a fat fee at stake.

The appraisal simply isn't sensitive enough to provide a reliable indication that a Section 106 requirement of £10,000 per dwelling is not viable, whereas £8,000 might be. A good decision on this score needs to be based on a wider feel for the circumstances. The appraisal should only be part of the analysis and not all of it.

...but cut them some slack if it is a brownfield site...

It seems to be taken as gospel that the viability of brownfield development is impaired by higher costs. Typically these will involve some demolition work, remediating the ground underneath, and then reinforcing the substructure of the new buildings.

How much does this cost? A few years ago, a useful ready-reckoner from English Partnerships – *Contamination and Dereliction Remediation Costs*²



Michael Beaman

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Brownfield land – grubby but well serviced

It is noticeable that the Lands Tribunal treats residual land value appraisals as the valuation methodology of last resort, but the 'official view' was most forcefully put by Lord Justice Staughton, summarising in Court of Appeal in the leading *Nykredit Mortgage Bank plc v Edward Erdman Group Ltd* case in 1996. The court in that case 'was shown the details of five different residual valuations of the same site (which had been carried out by leading firms) and found that, by taking the highest and the lowest figure from the five for each element in the valuation, one could arrive at residual site values of either £4,734,422 or £65,666. The reaction of Staughton LJ was: 'Which, as Euclid would say, is absurd!''¹

So why do developers rely on these calculations? The answer of course is that they also rely on tacit knowledge about the market they operate in and the extent to which their appraisal misrepresents the opportunities and risks involved in their scheme. The appraisal informs the decision; it doesn't dictate it. And why do consultant surveyors use them? Partly it is because of the lack of a really good alternative, but also because it cannot be good

– gave indicative budgets for a range of remediation projects. Most brownfield sites fall into the less complex categories the reckoner identified, such as 'industrial sites... factories and works'.

So as an example I will take a typical old factory and its associated hardstanding. *Contamination and Dereliction Remediation Costs* suggests that the average cost of decontaminating such sites for residential use might be around £300,000 per hectare where there is little water risk (at the top end of the range the work involved in, say, decontaminating a gas works is many times higher). Demolition costs obviously depend on what is being demolished, but costs for single-storey factories are not too steep, while adding short bore piles or raft foundations to low-rise buildings might add another £200,000 per hectare to the bill. The actual figures vary a lot, depending on the detail.

Greenfield sites pose their own problems. Slopes can complicate development considerably. Clay or alluvial soils provide an equally poor basis for substructure, and drainage problems are common. But most importantly, they tend to be situated outside of the urban area and are thus usually further away

from existing utility connections, access roads and social infrastructure, including formal open space, which, if provided by the developer, eats up developable land.

It is not difficult to see that the aggregate impact of all of these factors means that in many cases where the value of the eventual buildings is similar, brownfield land should in fact be worth more per gross hectare than greenfield land. This is perhaps the most common misconception to creep into policy formulation and often arises because planners conflate empty unused brownfield land with (for instance) old but occupied industrial estates which



Michael Beaman

Above

Tall, slender blocks of flats – you build a lot more space than you sell

are often valuable in their existing commercial use. For instance, an old industrial estate built to a density of 60% will often be worth £1 million per hectare in less prosperous areas and commonly up to £4 million per hectare around London. Sometimes greenfield development is accidentally subsidised by using a Community Infrastructure Levy (CIL) or tariff to spread the cost of social infrastructure evenly across all types of scheme.

...but watch out for attempts to profiteer by increasing densities...

This particularly relates to suggestions that residential developers will opt to sneak in an increase in densities to improve land values. It can work, but not always. There is a fine balance up to the point at which higher density means building

blocks of flats, after which in most areas the gains go into reverse. There are several reasons:

- With a house, you can effectively sell all of the space that you build, but with flats you must build the common access and circulation space, which does not have any sale value.
- Unlike estate housing, a block of flats is difficult to phase! Usually, full payment is not received until people move in, and this normally follows completion of the construction of the whole block. From a developer's point of view, this means their capital is tied up for longer, which reduces their percentage return when measured on an annual basis. This is a critical performance metric and arguably much more important than the 'margin on cost' figure that is highlighted in conventional viability studies.
- Buildings of three stories or under can be built relatively inexpensively with load-bearing brickwork, but beyond that you usually need a more complex framed structure. In addition, tall and slender buildings suffer from an even lower ratio of saleable floorspace and a high ratio of external building envelope in relation to the total area of the building, which points to higher costs.
- High-rise buildings complicate parking provision. Parking at grade is cheap. Undercroft parking can cost £5,000 a space or more, and underground parking can easily cost four times more, especially if it needs to be mechanically ventilated.

Increasing the density of a scheme will only increase the value of the land in high-value areas and in town centres where the sites lend themselves to it.

This is just a short tour of some of the myths about the financial hydraulics of development. There are many more! Why are they important? If carried into policy and practice, prejudices and misunderstanding can result in poor decisions about both applications and policies, coupled with (thanks!) over-investment in consultancy studies. Already too many of the emerging CIL charging schedules seem to rely on (rather than simply be informed by) dubious number-crunching, while applications are decided with the help of spuriously precise viability studies. Understanding what the numbers can tell you and what they can't is the first step to rescuing the planning system from the dictates of the abacus.

● **Michael Beaman** runs an urban regeneration and growth areas consultancy, Michael Beaman Ltd (see www.regenerate.co.uk). The views expressed are personal.

Notes

- 1 N. Crosby, A. Lavers and J. Murdoch: *Property Valuation Accuracy and Variation and the 'Margin of Error'*. RICS Research: Cutting Edge 1997. RICS, 1997. www.rics.org/site/download_feed.aspx?fileID=2139&fileExtension=PDF
- 2 *Contamination and Dereliction Remediation Costs*. Best Practice Note 27. English Partnerships, 2008