Valuation

Land valuation

Land is the basic essential of property development and unlike building commodities - such as concrete, steel and labour - it is in relatively limited supply. Quality varies between sites, and value is affected by many changeable factors that determine economic availability and market requirement and therefore set the price. Inevitably the value of land has to be the result of a calculation, and two methods are available to enable this:

- The comparison method
- The residual value method

VALUATION METHODS	COMPARISON
	RESIDUAL

The comparison method

The comparison method is the most straightforward valuation calculation. It assigns a value to a site by comparing it with the prices obtained in the market for the sale and purchase of sites with similar characteristics. The weight given to each element of comparable evidence is determined by the valuer based on his judgement, and knowledge of the market. When comparing sites, the things which will affect valuation include the:

- Location - values can vary considerably, even between sites in relatively close proximity;
- Ground conditions – demolition, decontamination, and preparation costs are highly site specific and can differ significantly between brownfield and greenfield sites;
- Timing of the comparable transaction – values for development property tend to be volatile and periods of rapid rises and falls are common;
- Interest to be acquired – a freehold will be worth more than a long leasehold which in turn will be worth more than a short leasehold, and adjustments will be required to allow for discrepancies in interest;
- Occupation of the property – a property with vacant possession will be worth more than one with a tenant in situ, so the cost of obtaining vacant possession must be allowed for;
- Development proposals – the type of development will affect land value with sites allocated for luxury housing being worth more than those for social;
- Permissible density – in general the higher the density that will be approved in the planning consent, the higher the site value for a comparable ground area;
- Planning obligations – the cost of obligations such as infrastructure, environmental standards, affordable housing proportion, and general planning gain, will affect value;

The method is commonly used for small and / or straightforward development projects where the value is unlikely to be distorted much from the general local value by adjustments. Sites for larger schemes may also be valued on this basis where there is sufficient comparable evidence to enable a valuer to arrive at a reliable estimate.

Example:

A valuer is seeking a comparative transaction to help him value a 3 hectare site. He finds that a 5 hectare site nearby was recently sold for £11,000,000. He estimates that remediating abnormal ground conditions will cost the owner £1,500,000. So, he implies a total market value of £12,500,000 for the comparative site, or £2,500,000 per hectare.

Comparative Site - computation	**£**
Transfer price	11,000,000
Add: estimated abnormals	1,500,000
Corrected value	12,500,000
Area of site (hectares)	5
Comparative value per hectare	**2,500,000**

The site for valuation is in a better location where prices for equivalent property are higher so he adds 20% to the comparative value, making £3,000,000 per hectare

Valuation Site - computation	**£**
Comparative value per hectare	2,500,000
Add: better location increment	20%
Comparative value per hectare	**3,000,000**
Area of site (hectares)	3
Comparative valuation	**9,000,000**

Subsequent adjustments may be made for other factors, such as abnormal costs.

The residual value method

The residual value method is the sum remaining from value of the completed property, measured in terms of Net Development Value (NDV), after deduction of the costs of creating the development, the Total Development Costs (TDC), and the developer's Minimum Profit Requirement (MPR). Calculation can be very complex, typically requiring the use of computer spreadsheets or one of the many proprietary valuation software programmes to carry out the necessary computational analysis.

Example:

A developer wishes to calculate what he can afford to pay for a 3 hectare site using the Residual Method. He assumes he can build 150,000 m2 of housing on the site and sell it for £3,000 / m2. He estimates Development Costs at £27,000,000 and will require a profit margin of 20% of GDV.

Residual Value - computation		**£**
Gross Development Value for 150 units of 100m2 each at £3,000 / m2		45,000,000
Less: Total Development Costs		-27,000,000
Less: Minimum Profit Requirement @15% on GDV		-9,000,000
Land Value		**9,000,000**
Equivalent Residual Value per hectare	**3,000,000**	

To populate the calculation, estimates are required for each of the many component factors. These will be specific to each developer, and will reflect their individual views about their vision for the project (in terms of uses, density mix, quality etc), their views on delivery timings and costs, their required rate of return, and their own circumstances (in terms of risk attitude, investor relations, financing ability, resourcing capability etc). In summary the main factors will include:

Net Development Value

- For properties to be let - the expected rental value and the investment yield on sale, net of the purchaser's acquisition costs and remaining rent free; and
- For properties to be sold outright - the expected sale price, net of sales incentives which will reduce the realisable price.

Development Costs

- Land acquisition costs including, for example, finders fees, legal fees, agents fees, options costs, and stamp duty land tax;
- Site preparation costs to convert the site from the its state at the time of purchase to the state required to enable the commencement of the new build including, for example, demolition, decontamination, remediation and site works such as roads and service diversions;
- Off-site infrastructure costs necessary to access the development such as immediate roads, road junctions and roundabouts, and also those cost obligations imposed by statutory authorities as a requirement of the planning consent to accommodate the new development such as motorway junctions, and contributions to public transport schemes;
- Construction costs for the new build including foundations and buildings, landscaping and public realm;
- Fees for professional advisors including for example, architects, quantity surveyors, engineers, and project managers, as appropriate to the development;
- Marketing and sales costs including, show units, promotion events, commission to agents and legal costs; and
- Finance costs being the interest and arrangement fees on funds used for purchasing the site, obtaining the planning consent, carrying out the construction and paying other costs.

Other Factors

When a developer conceives of a development, he will be faced with a range of alternatives some of which he will determine, some of which can be influenced and some of which are external. The developer will need to decide on the outcomes he chooses and expects in order to arrive at the cost and value estimates required to populate the residual value calculation. In particular he may consider:

- The planning application stance, being consideration of what he believes is achievable in terms of design, mix and density, and how hard he is prepared to push and how long he may have to wait and what other trade-offs may be involved, and whether or not an inquiry or an appeal may be involved;
- The development plan, comprising both issues of where to pitch the development in terms of the expected market, quality and sustainability which will affect both likely GDV and cost, and what is possible on the site given its constraints;
- The delivery methodology. Developers have a range of choices on procurement , materials, project management and these affect timing and cost;

- The marketing strategy, as more spending on marketing, up to a point, may generate increased sales prices and numbers, and every developer will have a different view on the strategy and the cost;
- The development profit - the criteria applied and the required level of return will depend on the financial circumstances of each developer, their cost of capital, their perception of risk, their tax position, their investors expectations; and
- The timing of the dates of payment for the site. If these are in the future then they are discounted back to the valuation date.

As a result of a number of factors including, convenient and fast computerisation, more complexity in development, a better understanding of financial issues and the need to be more confident about site pricing and profitability, residual valuations are now both easier to carry out than in the past and more necessary, and this has resulted in the method becoming more widespread in the market place.

In addition, where developments are large and complex the comparison method may be inappropriate, either due to the lack of comparable evidence being available for similar schemes, or because what evidence is available has to be adjusted to such an extent that it becomes of little or no use. For such projects residual valuation is now the conventional method.

Because it is a derivative of many estimated factors, residual value is highly sensitive to inputs and may vary widely between different developers, depending on the assumptions used.

Example

A developer wishes to determine how much to offer for a 4 hectare site using the Residual Method. His initial computation is very prudent and assumes a build density of 4,000 m2 per hectare, a selling price of £2,250 per m2, a 10% cost contingency, an 8% interest rate, and a 15% profit on GDV. He then refines each assumption to an acceptable limit to identify the maximum he can afford to pay.

Scenario:	**1** Basecase Input Assumptions	**2** Increased Density	**3** Increased Sales Values	**4** Reduced Contingency & Interest
Variables				
Density (m2 / hectare)	4,000	**6,000**	6,000	6,000
Sales price (£ / m2)	2,250	2,250	**2,500**	2,500
Contingency on costs	10.00%	10.00%	10.00%	**5.00%**
Interest rate	8.00%	8.00%	8.00%	**6.00%**
Profit Requirement on GDV	15.00%	15.00%	15.00%	**12.50%**
Residual Land Value (£)	**2,200,000**	**6,700,000**	**11,300,000**	**15,400,000**
Equivalent RLV per hectare	550,000	1,675,000	2,825,000	3,850,000

Notwithstanding variability in results between valuers, for an individual developer the method provides a consistent way of deriving a valuation for land that is appropriate for that developer.

Minimum Profit Requirement

Developers typically adopt a MPR criteria that seems appropriate to their business. They then tend to stick to it as a measurement method, varying only the level in

establishing the hurdle appropriate to each particular project, say in response to project specific risks. The main MPR methods are:

- Profit Return on Cost (PROC): Project Profit divided by Total Development Costs;
- Ungeared Internal Rate of Return (UIRR): the IRR of the project cashflows before interest;
- Profit Return on Sales (PROS): Project Profit divided by Net Development Value;
- Gross Margin on Sales (GMOS): Project Profit before interest divided by Net Development Value.

Comparison method v. residual value method

The comparison method can only be appropriate where there comparative evidence exists. Where there is insufficient evidence of sales of similar development land, or where the development is so unusual that it is not possible to value the site by direct comparison with other sites, or the land values in the locality are at such a level that the value of such sites are highly sensitive to small changes in factors such as location and development densities, then the residual value method must be used.

As a tool, the comparison method is no more than a rule of thumb used by valuers to estimate the likely open market value of a site. Because it is largely based on comparative evidence of the highest price necessary to secure other sites, it provides an objective view of worth, an indication of what the price would be if the site were to be put on the market immediately. It therefore takes into account the plethora of valuation factors; all the preferences, requirements, and estimates that each potential buyer may apply in arriving at an offer price. As such it anticipates the effects of the supply and demand for land on the valuation price.

The residual value method, however, is highly subjective, derivative, and entirely personal to the potential buyer and it informs the potential buyer of what he can afford to pay and still generate adequate profit.

Since developers are in the market to buy land and competing, usually against other developers, but possibly also against potential buyers with other aspirations for a site, each is obliged to calculate what they are able and prepared to pay for a site using a residual value calculation. In bidding the comparative method is no more than a “sense check”, indeed to use it alone to set a bidding price is to risk offering a price that is unaffordable. Only the residual method indicates the value to the prospective purchaser.

While the comparative method answers the question, “what is this piece of land worth and therefore likely to sell for in a competitive market?” the residual method answers the question “what am I prepared to pay for it?”

Real Estate Financial Solutions provides Excel models and operational expertise to support the valuation process. Available at www.re-financial.co.uk.