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DESIGN AND FINANCIAL VIABILITY

The basic design of a scheme has a fundamental impact on its financial viability. Changes in design will affect development costs, values and marketability. To explore the relationship between design and financial viability, we will use an example scheme and subject it to a critical, comparative analysis. This consists of four parts that are described below (and that you should try yourself).

Two principles underlie the approach.

First, in order to identify the specific impact of a particular change in design, all aspects of design other than the one being assessed must be held constant.

Second, in order to compare like with like, the same proportionate change must be made to each aspect of design. Three aspects of scheme design will be analysed: the development density, the mix of uses and the quality of the building specifications.

1. Change in the development density of the scheme, keeping the mix of uses and building specifications constant.

To do this, the gross floor space of each of the buildings on the site (apartments, offices and refurbished offices) is increased by 10%, increasing the total gross floor space by 10%. The respective figures in the CONSTRUCTION COSTS and the VALUATION pages of the spreadsheet are changed as follows:

Apartments	from 5,000 m ²	to 5,500 m ²
Offices	from 3,750 m ²	to 4,125 m ²
Refurbished offices	from 600 m ²	to 660 m ²
(Total gross floor space	from 9,350 m ²	to 10,285 m ²)

The spreadsheet does the remaining calculations. The new developer's profit is 27.18%. (Before starting the next part, make sure that you return the gross floor space of each building to its original amount.)

2. Change in the mix of uses in the scheme, maintaining the original amount of gross floor space and specification level.

To do this, calculate 10% of the total gross floor space of the original scheme (10% of 9,350 m² is 935 m²). Reduce the largest use by this amount and increase the next largest use by the same amount (that is, transfer 10% of the total gross floor space between the two largest uses; in this example, from apartments to offices). The respective figures in the CONSTRUCTION COSTS and the VALUATION pages of the spreadsheet are changed as follows:

Apartments	from 5,000 m ²	to 4,065 m ²
Offices	from 3,750 m ²	to 4,685 m ²
Refurbished offices	from 600 m ²	to 600 m ²
(Total gross floor space	from 9,350 m ²	to 9,350 m ²)

The spreadsheet does the remaining calculations. The new developer's profit is 19.66%. (Before starting the next part, make sure that you return the gross floor space of each building to its original amount.)

3. Change in the scheme's building specification, maintaining the original mix of uses and amount of gross floor space.

To do this, increase the construction costs by 10% (to reflect a higher specification) and the rents/prices by 10% (to reflect a willingness by occupiers to pay proportionately more for higher quality accommodation) by inserting 10% in the relevant cells in column B of the table in the ANALYSIS page of the spreadsheet (that is, both changes in the same column). The spreadsheet does the remaining calculations. The new developer's profit is 26.20%. (Before using the spreadsheet for any more analyses, make sure that you return all cells in the table in the ANALYSIS page of the spreadsheet to 0%).

4. A comparative analysis of the results.

It will be clear from the description of the first three parts of the approach that – as outlined at the outset - the original scheme has been subject to design changes of the same proportion (10% in this case). Consequently, by comparing the results, the relative impact of each design change on the profitability of the scheme will be revealed. Two design changes enhance profitability and one reduces it (see Table 4). When the density and the specification are increased – for a site where the land costs are fixed, as in this example – the developer is generating more value on the site. While the construction and related costs also rise by the same proportion, the land cost element of the total development costs does not. Consequently, the unit development costs are reduced and the profit rate rises. When a larger proportion of the scheme is given over to offices rather than to apartments, the rate of profit decreases. This indicates that, in this example, offices are a less profitable land use than are apartments (check this by analysing what happens if 10% of the total gross floor space is transferred from offices to apartments). Obviously, having more of a less profitable land use on the site will lower the overall rate of profit.

Nature of Change (10%)	Original	New	Change in Profit	
	Profit	Profit	Absolute	%
Higher density	24.66%	27.18%	2.52%	10.22%
Different mix of uses	24.66%	19.66%	-4.99%	-20.24%
Increased specification	24.66%	26.20%	1.55%	6.27%

A developer may try to enhance the profitability of a scheme by some combination of the above design changes. However, **planning policy** and **market constraints** will limit the scope for such change. For example, there may be

- (i) policies on building height or plot ratios that restrict development density; or
- (ii) policies on achieving vibrant, mixed use areas that prevent the use of larger sites predominantly or entirely for a particular, highly profitable use; or
- (iii) market conditions in which large additions to the supply of a particular use may reduce rents/prices, so reducing the profitability of developing buildings for that type of use ; or where
- (iv) there is no demand for very high (or very low) quality buildings of different types, restricting the scope for changes in building specification/price.

Remember, all of the above – and indeed every aspect of a development – are particular to the site, the scheme, the location and the market under consideration. All development characteristics display enormous variation.

5. Planning, Design and Profit

The above principles can be used to assess the impact that planning policies may have on the financial viability of a proposed development. There are two broad approaches.

- (i) Market-led Analysis. Design a scheme that maximises profit by ‘fitting’ most closely with current market requirements; identify the aspects of the design that do not comply with existing planning policies; revise the design so that it complies fully with planning policies; and estimate the difference in the developer’s profit between the two designs.
- (ii) Planning-led Analysis. Design a scheme that complies fully with existing planning policies; identify aspects of the design, required to comply with planning policies, that restrict profitability by increasing costs or reducing values, in the current market climate; revise the design to produce the best ‘fit’ with market requirements; and estimate the difference in the developer’s profit between the two designs.



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