West Tey

Technical Paper

Contents

1. Approach to Viability

1.1. We have produced a bespoke excel financial model to assess the schemes viability, this includes a fully functional cashflow with core flexibility around the key inputs and outputs.

1.2. Due to the size and complexity of the site (and the need to model various scenarios and sensitivities) we opted not to use Argus Developer (or a similar software package).

1.3. The methodology we have adopted is that the site is sold unserviced to a housebuilder / master developer consortium who take profit from delivering infrastructure and selling serviced land and also take profit from selling houses.

1.4. We have also run a parallel model as a scenario where a master developer purely delivers infrastructure and sells land to the market, to ensure there is enough return by solely opting for this business model.

1.5. We feel that this approach is required for a site of this scale where the deliver route (or permutations of) is not known at this early stage – therefore a triangulated approach is necessary. However note for the purposes of providing one answer, the core methodology we have adopted is the assumption that the site is bought and delivered by housebuilder / master developer consortium.

2. Key Assumptions and Methodology Notes

Table 2.1 – Summary of Methodology Used

Appraisal Methodology	The model assumes the subject site is sold unserviced to a housebuilder, who installs the infrastructure and builds / sells all units.
Land Payment	It is assumed land is paid all upfront in one payment (no deferment).
Infrastructure	Infrastructure costs have been taken from (Create Consulting Engineers, summary note in Appendix 5, EXD/061), these are cashflowed on a straight line basis across the 4 phases.
Build / Sales Rate	Build is offset 6 months back from sales completions. Sales have been assumed as an average 354 per annum across private and affordable.
Developer Margin / Assumptions	We have assumed a developer margin of 27.50% on GDV (post finance). Typically PLC housebuilders seek a 18-20% operating margin (after overhead costs) at a corporate level, therefore their assets need to make a c. 20 - 23% margin on GDV. Due to the increased delivery risk of large scale projects and the capital intensive nature, the higher margin reflects the increased risk associated with the project. In practice a housebuilder or consortium of housebuilders will also sell off serviced land to third parties. Therefore if they are buying the land at a 27.50% margin and can sell it at a 20% margin to third parties, then there is additional master developer profit embedded in there.
Finance	**Finance is applied to 100% of the cost at a rate of 6.00% per annum, it is assumed this is rolled up and is only applied to negative cash balances (i.e. no credit rate).**
Inflation	**The model excludes inflation for this sale / delivery option due to the fact it is assumed the land is sold unserviced at point of planning. Therefore this is the point in time that a housebuilder would appraise the site, so it is only fair to inflation up to this point.** **In our experience it is typically best to exclude "underlying market inflation", as it is very dependent on getting your timing assumptions correct and never takes into account the likely recessions that will happen during the period. However we note on the larger scale sites, it is often unfair to ignore the placemaking uplift and regeneration premium that typically happens. Therefore in certain instances we would price the phases on a "today" basis, but assuming the additional units and infrastructure had been delivered.**

Table 2.2 - Model Assumptions (further detail and justification contained in EXD/061)

	Additional Savills Assumptions
Dwellings	17,000
Date	Q4 2018
Benchmark Land Value	£100,000 Per Gross Acre
Approach	Master Developer / Master Housebuilder
Blended Build Out	354 p.a average (500 p.a. max)
End Date	2069
Infrastructure (I)	£45,711 per unit incl contingency & pro fees
Professional Fees	10%
Contingency	5% on build & prof 10% on Infrastructure
Sales Values	Open Market - £334 psf Affordable - £211 psf (63%)
House Types	80% houses 20% flats
Build Costs	Flats - £157 psf Houses - £121 psf
Sales & Marketing	2% of GDV
Aft Sales Fee	£500 per unit
Finance - debit rate	6.00%
Finance – credit rate	-
Return	27.5% of GDV
Commercial Land Values	£400k - business park £500k - neighbourhood centre
Inflation	3% (sales) / 2.75% (costs)
House Sizes	1 bed flat – 554 sq ft 2 bed flat – 678 sq ft 2 bed houses - 775 – 872 sq ft 3 bed houses - 1,028 - 1,125 sq ft 4 bed houses - 1,270 sq ft 5 bed houses - 1,450 sq ft

Table 2.3 – Summary of Model Outputs

Simple Summary

Project Timing Assumptions			
Planning Obtained / Land Sold	Dec-22		
Infrastructure	Jan-22	48.00 yrs	Dec-69
Build	Dec-23	47.50 yrs	Jul-71
House Sales	Nov-23	48.25 yrs	Jan-72
Total Project Length	**Jan-22**	**50.00 yrs**	**Jan-72**

Revenue - Private	Units	Ft²	Rate Ft²	Unit Price	GDV
Phase 1	1,750	1,652,182	334	315,329	551,828,625
Phase 2	2,450	2,313,054	334	315,329	772,560,075
Phase 3	2,100	1,982,618	334	315,329	662,194,350
Phase 4	5,600	5,286,981	334	315,329	1,765,851,599
Total Private	**11,900**	**11,234,834**	**334**	**315,329**	**3,752,434,648**

Revenue - Affordable	Units	Ft²	Rate Ft²	Unit Price	GDV
Phase 1	750	708,078	211	199,441	149,581,433
Phase 2	1050	991,309	211	199,441	209,414,007
Phase 3	900	849,693	211	199,441	179,497,720
Phase 4	2400	2,265,849	211	199,441	478,660,586
Total Affordable	**5100**	**4,814,929**	**211**	**199,441**	**1,017,153,746**

Revenue - Commercial	Net Acres	Value per NDA	GDV
Business Park - Phase 2	82.47	400,000	32,986,257
Neighbourhood Centres - P1	5.04	500,000	2,520,170
Neighbourhood Centres - P2	6.72	500,000	3,360,226
Neighbourhood Centres - P3	3.36	500,000	1,680,113
Neighbourhood Centres - P4	6.72	500,000	3,360,226
Total Commercial	**104**	**420,940**	**43,906,992**

TOTAL GDV	**4,813,495,386**

Land Acquisition Costs			Total Cost
Stamp Duty on Land (+ VAT)	5.00%	*of land value*	(9,573,120)
Legal Fee (+ VAT)	0.50%	*of land value*	(957,312)
Agency / Advisory Fee (+ VAT)	1.00%	*of land value*	(1,914,624)
Total Land Acquisition	**6.50%**		**(12,445,056)**

Construction			Total Cost
Infrastructure			(777,089,000)
Construction			(2,017,838,932)
Site Overheads / Professional Fees	10.00%	*of build*	(201,783,893)
Contingency	5.00%	*of build + fees*	(110,981,141)
Total Construction	**15.00%**		**(3,107,692,967)**

Sales and Marketing			Total Cost
Marketing Budget	1.00%	*of private GDV*	(37,524,410)
Sales Agent Fee (Resi)	1.00%	*of private GDV*	(37,524,410)
Legal Fees (per unit)	£500	*£ per unit*	(8,500,033)
Total Sales and Marketing			**(83,548,853)**

Debt and Finance			
Finance	6.00%	*per annum (paid current)*	(94,636,565)
Loan to Cost	100%		

LESS DEVELOPER PROFIT	**27.50% on GDV**	**(1,323,711,872)**
RESIDUAL LAND VALUE		**191,460,073**
Say		**191,400,000**
Per Gross Acre =		***110,127***

DEVELOPER RETURN METRICS	
Developer Profit	1,323,711,872
Profit on GDV	27.5%
Profit on Cost	37.9%
Return on Capital Employed	56.7%
Equity Multiple	5.22
IRR (excluding finance)	10.7%
Peak Capital / Equity	(288,629,432)

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