

Appendix I

Development Scenarios

Appendix I - Development Scenarios and Key Assumptions Required for South Worcestershire Authorities Viability Study

Site Size Appraised	Scheme Mix (0% Affordable)	Example Likely Occurrence - Urban / Rural	Example Range of Locations	Example Site Type	Indicative Density Estimate (dph)	Affordable Housing Percentage & Tenure Mix												Survey Costs (per site)	Build Period (Months)	Site Preparation
						20%			30% (Current Policy - Wychavon & Worcester)			40%			50% (Current Policy - Malvern)					
						Private	80% AR / 20% SO	60% AR / 40% SO	Private	80% AR / 20% SO	60% AR / 40% SO	Private	80% AR / 20% SO	60% AR / 40% SO	Private	80% AR / 20% SO	60% AR / 40% SO			
5	3 x 3-bed houses; 2 x 2-bed houses	Urban / Rural	Village Centres / Town and City Centres / Suburbs / edge of settlement	Existing commercial / residential replacement / infill / greenfield / garden land	47	3 x 3bh, 1 x 2bh	1 x 2bh AR	1 x 2bh AR	3 x 3bh, 1 x 2bh	1 x 2bh AR	1 x 2bh AR	2 x 3bh, 1 x 2bh	1 x 3bh, 1 x 2bh AR	1 x 3bh AR; 1 x 2bh SO	2 x 3bh, 1 x 2bh	1 x 3bh, 1 x 2bh AR	1 x 3bh AR; 1 x 2bh SO	£2,500	9	£20,000
5	5 x 2-bed flats	Urban / Rural	Village Centres / Town and City Centres / Suburbs / edge of settlement	Conversion / existing commercial / residential replacement / infill / greenfield / garden land	71	4 x 2bf	1 x 2bf AR	1 x 2bf AR	4 x 2bf	1 x 2bf AR	1 x 2bf AR	3 x 2bf AR	2 x 2bf AR	1 x 2bf AR; 1 x 2bf SO	3 x 2bf AR	2 x 2bf AR	1 x 2bf AR; 1 x 2bf SO	£2,500	9	£20,000
7	2 x 2-bed flats; 3 x 2-bed houses; 2 x 3-bed houses	Urban / Rural	Village Centres / Town and City Centres / Suburbs / edge of settlement	Conversion / existing commercial / residential replacement / infill / greenfield / garden land	30	2 x 3bh, 3 x 2bh, 1 x 2bf	1 x 2bf AR	1 x 2bf AR	2 x 3bh, 3 x 2bh	2 x 2bf AR	1 x 2bf AR; 1 x 2bf SO	2 x 3bh, 2 x 2bh, 1 x 2bf	1 x 2bh, 1 x 2bf AR	1 x 2bh AR; 1 x 2bf SO	2 x 3bh, 2 x 2bh	1 x 2bh, 1 x 2bf AR; 1 x 2bf SO	1 x 2bh, 1 x 2bf AR; 1 x 2bf SO	£3,500	9	£28,000
7	4 x 3-bed houses; 3 x 2-bed houses	Urban / Rural	Village Centres / Town and City Centres / Suburbs / edge of settlement	Existing commercial / residential replacement / infill / greenfield / garden land	47	4 x 3bh, 2 x 2bh	1 x 2bh AR	1 x 2bh AR	3 x 3bh, 2 x 2bh	1 x 3bh, 1 x 2bh AR	1 x 3bh AR; 1 x 2bh SO	3 x 3bh, 2 x 2bh	1 x 3bh, 1 x 2bh AR	1 x 3bh AR; 1 x 2bh SO	2 x 3bh, 2 x 2bh	2 x 3bh AR; 1 x 2bh SO	2 x 3bh AR; 1 x 2bh SO	£3,500	9	£28,000
10	3 x 2-bed houses; 4 x 3-bed houses; 3 x 4-bed houses	Urban / Rural	Village centres / Town and City Centres / Suburbs / edge of settlement	Existing commercial / residential replacement / infill / greenfield	30	3 x 4bh, 3 x 3bh, 2 x 2bh	1 x 3bh, 1 x 2bh AR	1 x 3bh AR; 1 x 2bh SO	2 x 4bh, 3 x 3bh, 2 x 2bh	1 x 4bh, 1 x 3bh AR, 1 x 2bh SO	1 x 4bh, 1 x 3bh AR, 1 x 2bh SO	2 x 4bh, 2 x 3bh, 2 x 2bh	1 x 4bh, 2 x 3bh AR; 1 x 2bh SO	1 x 4bh, 1 x 3bh AR; 1 x 2bh SO	2 x 4bh, 2 x 3bh, 1 x 2bh	1 x 4bh, 2 x 3bh, 1 x 2bh AR; 1 x 2bh SO	1 x 4bh, 2 x 3bh AR; 2 x 2bh SO	£5,000	9	£40,000
10	5 x 2-bed houses; 5 x 3-bed houses	Urban / Rural	Village centres / Town and City Centres / Suburbs / edge of settlement	Existing commercial / residential replacement / infill / greenfield	47	4 x 3bh, 4 x 2bh	1 x 3bh, 1 x 2bh AR	1 x 3bh AR; 1 x 2bh SO	4 x 3bh, 3 x 2bh	1 x 3bh, 1 x 2bh AR; 1 x 2bh SO	1 x 3bh, 1 x 2bh AR; 1 x 2bh SO	3 x 3bh, 3 x 2bh	2 x 3bh, 1 x 2bh AR; 1 x 2bh SO	2 x 3bh AR; 2 x 2bh SO	3 x 3bh, 2 x 2bh	2 x 3bh, 2 x 2bh AR; 1 x 2bh SO	2 x 3bh, 1 x 2bh AR; 1 x 2bh SO	£5,000	9	£40,000
10	10 x 2-bed flats	Urban / Rural	Town or City centres / Suburbs	Conversion / existing industrial / commercial / residential replacement	71 / 40	8 x 2bf	2 x 2bf AR	1 x 2bf AR; 1 x 2bf SO	7 x 2bf	2 x 2bf AR; 1 x 2bf SO	2 x 2bf AR; 1 x 2bf SO	6 x 2bf	3 x 2bf AR; 1 x 2bf SO	2 x 2bf AR; 2 x 2bf SO	5 x 2bf	4 x 2bf AR; 4 x 1bf SO	3 x 2bf AR; 2 x 2bf SO	£5,000	9	£40,000
15	10 x 3-bed houses; 5 x 2-bed houses	Urban / Rural	Village centres / Town and City Centres / Suburbs / edge of settlement	Existing commercial / residential replacement / greenfield	46	8 x 3bh, 4 x 2bh	2 x 3bh AR; 1 x 2bh SO	2 x 3bh AR; 1 x 2bh SO	8 x 3bh, 3 x 2bh	2 x 3bh, 1 x 2bh AR; 1 x 2bh SO	2 x 3bh AR; 2 x 2bh SO	6 x 3bh, 3 x 2bh	4 x 3bh, 1 x 2bh AR; 1 x 2bh SO	4 x 3bh AR; 2 x 2bh SO	6 x 3bh, 2 x 2bh	4 x 3bh, 2 x 2bh AR; 1 x 2bh SO	4 x 3bh AR; 3 x 2bh SO	£7,500	9	£60,000
15	10 x 2-bed flats; 5 x 1-bed flats	Urban	Town and City centres / edge of town or city / Suburbs	Conversion / Existing commercial / residential replacement / infill	76 / 40	8 x 2bf, 4 x 1bf	2 x 2bf AR; 1 x 1bf SO	2 x 2bf AR; 1 x 1bf SO	7 x 2bf, 4 x 1bf	3 x 2bf AR; 1 x 1bf SO	2 x 2bf AR; 1 x 1bf SO	6 x 2bf, 3 x 1bf	4 x 2bf, 1 x 1bf AR; 1 x 1bf SO	4 x 2bf AR; 2 x 1bf SO	5 x 2bf, 3 x 1bf	5 x 2bf, 1 x 1bf AR; 1 x 1bf SO	4 x 2bf AR; 1 x 1bf SO	£7,500	9	£60,000
25	8 x 2-bed houses; 12 x 3-bed houses; 5 x 4-bed houses	Urban / Rural	Edge of settlement / Suburbs	Existing commercial / greenfield	30	N/A	N/A	N/A	4 x 4bh, 9 x 3bh, 5 x 2bh	1 x 4bh, 3 x 3bh, 2 x 2bh AR; 1 x 2bh SO	1 x 4bh, 3 x 3bh AR; 3 x 2bh SO	3 x 4bh, 8 x 3bh, 4 x 2bh	2 x 4bh, 4 x 3bh, 2 x 2bh AR; 2 x 2bh SO	2 x 4bh, 4 x 3bh AR; 4 x 2bh SO	3 x 4bh, 7 x 3bh, 3 x 2bh	2 x 4bh, 5 x 3bh, 3 x 2bh AR; 2 x 2bh SO	2 x 4bh, 5 x 3bh AR; 5 x 2bh SO	£12,500	12	£100,000
25	5 x 2-bed flats; 5 x 1-bed flats; 10 x 3-bed houses; 5 x 2-bed houses	Urban / Rural	Edge of settlement / Suburbs	Existing commercial / greenfield	57	N/A	N/A	N/A	7 x 3bh, 4 x 2bh, 4 x 2bf, 3 x 1bf	3 x 3bh, 1 x 2bh, 1 x 2bf, 1 x 1bf AR; 1 x 1bf SO	3 x 3bh, 1 x 2bh AR; 1 x 2bf, 2 x 1bf SO	6 x 3bh, 3 x 2bh, 3 x 2bf, 3 x 1bf	4 x 3bh, 2 x 2bh, 2 x 2bf AR; 2 x 1bf SO	4 x 3bh, 2 x 2bh AR; 2 x 2bf, 2 x 1bf SO	5 x 3bh, 3 x 2bh, 3 x 2bf, 2 x 1bf	5 x 3bh, 2 x 2bh, 2 x 2bf, 1 x 1bf AR; 2 x 1bf SO	5 x 3bh, 2 x 2bh AR; 2 x 2bf, 3 x 1bf SO	£12,500	12	£100,000
25	17 x 2-bed flats; 8 x 1-bed flats	Urban	Town and City Centres / edge of town or city / Suburbs	Existing commercial / residential replacement	78	N/A	N/A	N/A	12 x 2bf, 6 x 1bf	5 x 2bf, 1 x 1bf AR; 1 x 1bf SO	4 x 2bf AR; 1 x 2bf, 2 x 1bf SO	10 x 2bf, 5 x 1bf	7 x 2bf, 1 x 1bf AR; 1 x 1bf SO	6 x 2bf AR; 1 x 2bf, 3 x 1bf SO	9 x 2bf, 4 x 1bf	8 x 2bf, 2 x 1bf AR; 2 x 1bf SO	7 x 2bf AR; 1 x 2bf, 4 x 1bf SO	£12,500	12	£100,000
50	17 x 2-bed flats; 8 x 1-bed flats; 6 x 2-bed houses; 12 x 3-bed houses; 7 x 4-bed houses	Urban / Rural	Edge of settlements / Suburbs	Conversion / Existing commercial / greenfield	58	N/A	N/A	N/A	5 x 4bh, 8 x 3bh, 4 x 2bh, 12 x 2bf, 6 x 1bf	2 x 4bh, 4 x 3bh, 2 x 2bh, 4 x 2bf AR; 1 x 2bf, 2 x 1bf SO	2 x 4bh, 4 x 3bh, 2 x 2bh, 1 x 2bf AR; 4 x 2bf, 2 x 1bf SO	4 x 4bh, 7 x 3bh, 4 x 2bh, 10 x 2bf, 5 x 1bf	3 x 4bh, 5 x 3bh, 2 x 2bh, 6 x 2bf AR; 1 x 2bf, 3 x 1bf SO	3 x 3bh, 5 x 3bh, 2 x 2bh, 2 x 2bf AR; 5 x 2bf, 3 x 1bf SO	4 x 4bh, 6 x 3bh, 3 x 2bh, 8 x 2bf, 4 x 1bf	3 x 4bh, 6 x 3bh, 3 x 2bh, 8 x 2bf AR; 1 x 2bf, 4 x 1bf SO	3 x 4bh, 6 x 3bh, 3 x 2bh, 6 x 2bf AR; 2 x 2bf, 4 x 1bf SO	£25,000	18	£200,000
50	25 x 2-bed houses; 20 x 3-bed houses; 5 x 4-bed houses	Urban / Rural	Edge of settlements / Suburbs	Existing commercial / greenfield	30	N/A	N/A	N/A	4 x 4bh, 14 x 3bh, 17 x 2bh	1 x 4bh, 6 x 3bh, 5 x 2bh AR; 3 x 2bh SO	1 x 4bh, 6 x 3bh, 2 x 2bh AR; 6 x 2bh SO	3 x 4bh, 12 x 3bh, 15 x 2bh	2 x 4bh, 8 x 3bh, 6 x 2bh AR; 4 x 2bh SO	2 x 4bh, 8 x 3bh, 2 x 2bh AR; 8 x 2bh SO	3 x 4bh, 10 x 3bh, 12 x 2bh	2 x 4bh, 10 x 3bh, 8 x 2bh AR; 5 x 2bh SO	2 x 4bh, 10 x 3bh, 8 x 2bh AR; 10 x 2bh SO	£25,000	18	£200,000
50	35 x 2-bed flats; 15 x 1-bed flats	Urban	Town and City Centres / Suburbs	Existing commercial / residential replacement	78 / 150	N/A	N/A	N/A	25 x 2bf, 10 x 1bf	10 x 2bf, 2 x 1bf AR; 3 x 1bf SO	9 x 2bf AR; 1 x 2bf, 5 x 1bf SO	21 x 2bf, 9 x 1bf	14 x 2bf, 2 x 1bf AR; 4 x 1bf SO	12 x 2bf AR; 2 x 2bf, 6 x 1bf SO	18 x 2bf, 7 x 1bf	17 x 2bf, 3 x 1bf AR; 5 x 1bf SO	15 x 2bf AR; 2 x 2bf, 8 x 1bf SO	£25,000	18	£200,000
100	50 x 2-bed houses; 40 x 3-bed houses; 10 x 4-bed houses	Urban / Rural	Edge of settlement / Suburbs / phase of larger development	Existing commercial / greenfield	40	N/A	N/A	N/A	7 x 4bh, 28 x 3bh, 35 x 2bh	3 x 4bh, 12 x 3bh, 9 x 2bh AR; 6 x 2bh SO	3 x 4bh, 12 x 3bh, 3 x 2bh AR; 13 x 2bh SO	6 x 4bh, 24 x 3bh, 30 x 2bh	4 x 4bh, 16 x 3bh, 12 x 2bh AR; 8 x 2bh SO	4 x 4bh, 16 x 3bh, 4 x 2bh AR; 16 x 2bh SO	5 x 4bh, 20 x 3bh, 25 x 2bh	5 x 4bh, 20 x 3bh, 15 x 2bh AR; 10 x 2bh SO	5 x 4bh, 20 x 3bh, 5 x 2bh AR; 20 x 2bh SO	£50,000	24	£400,000
100	34 x 2-bed flats; 16 x 1-bed flats; 12 x 2-bed houses; 24 x 3-bed houses; 14 x 4-bed houses	Urban / Rural	Edge of settlement / Suburbs / phase of larger development	Existing commercial / greenfield	58	N/A	N/A	N/A	10 x 4bh, 17 x 3bh, 8 x 2bh, 24 x 2bf, 11 x 1bf	4 x 4bh, 7 x 3bh, 4 x 2bh, 9 x 2bf AR; 1 x 2bf, 5 x 1bf SO	4 x 4bh, 7 x 3bh, 4 x 2bh, 3 x 2bf AR; 7 x 2bf, 5 x 1bf SO	9 x 4bh, 14 x 3bh, 7 x 2bh, 20 x 2bf, 10 x 1bf	5 x 4bh, 10 x 3bh, 5 x 2bh, 12 x 2bf AR; 2 x 2bf, 6 x 1bf SO	5 x 4bh, 10 x 3bh, 5 x 2bh, 4 x 2bf AR; 10 x 2bf, 6 x 1bf SO	7 x 4bh, 12 x 3bh, 6 x 2bh, 17 x 2bf, 8 x 1bf	7 x 4bh, 12 x 3bh, 6 x 2bh, 15 x 2bf AR; 2 x 2bf, 8 x 1bf SO	7 x 4bh, 12 x 3bh, 6 x 2bh, 15 x 2bf AR; 12 x 2bf, 8 x 1bf SO	£50,000	24	£400,000

Value Point	Values					
	1-Bed Flats	2-Bed Flats	3-Bed Houses	4-Bed Houses	£ / sq m Equivalent	
1	£87,500	£117,250	£131,250	£148,750	£175,000	£1,750
2	£102,000	£134,000	£150,000	£170,000	£200,000	£2,000
3	£127,500	£167,500	£187,500	£212,500	£250,000	£2,500
4	£153,000	£201,000	£225,000	£255,000	£300,000	£3,000
5	£178,500	£234,500	£262,500	£297,500	£350,000	£3,500
6	£204,000	£268,000	£300,000	£340,000	£400,000	£4,000
7	£229,500	£301,500	£337,500	£382,500	£450,000	£4,500

Sizes (sq m)				
1-Bed Flats	2-Bed Flats	3-Bed Houses	4-Bed Houses	
50	67	75	85	100

Other Assumptions:

Infrastructure Costs per unit: AI to allow £5,000, £10,000 & £20,000 per unit for all units - these sums can actually account for anything as they are a cost to developer / landowner so, for example, could include cost allowance for achieving higher CFSH levels.

- Finance (%) 7.5%
- Build Costs (Flats) £1,250
- Build Costs (Houses) £1,100
- Build Period Lead In 6 months
- Developer Profit: 15% of GDV (sample carried out at 20%)
- Grant Subsidy: Assume Nil Grant (sample carried out with grant)
- Affordable Unit Mix: As per Table Above
- Developer Receipt for Affordable Units (on-site provision): By negotiation in practice - To be calculated using mortgage funded by income stream approach - Proval - normal assumptions for affordable rent (Target Rents); assume 35% initial share for shared ownership, 2.5% rent on (RSL's) retained equity.
- Density: As above (Variations to density to be carried out on a sample basis - TBC)

General Notes: Stated indicative density estimate is based on Adams Integra's assumed dwelling sizes and mixes; and estimated land-takes for those notional schemes. In practice those assumptions and thus densities will vary Above appraisals repeated for each Value Point.

Allowance for meeting Code for Sustainable Homes Standards - applied per unit - see separate sheet
 Example site type includes greenfield and brownfield
 Example range of locations: edge of settlement includes villages, towns and City

Cost of Achieving EcoHomes 2006 Very Good						
	Traditional Detached	Traditional Terraced	Low Rise Apartment	High Rise Apartment	Average Housing	Average Apartments
All	£500	£686	£809	£1,458	£593	£1,134

Additional Cost of Achieving Code Level 3						
	Traditional Detached	Traditional Terraced	Low Rise Apartment	High Rise Apartment	Average Housing	Average Apartments
Scenario 1	£4,525	£4,373	£2,579	£4,900	£3,834	£2,458
Scenario 2	£2,852	£2,786	£1,498	£2,699		
Scenario 3	£3,131	£3,165	£946	£643		
Scenario 4	£5,090	£4,748	N/A	£3,942		

					Average Housing	Average Apartments
Total Cost Average (EcoHomes 2006 + <i>additional cost</i> of Achieving Code Level 3:					£4,427	£3,592

Data Source: A Cost Review of the Code for Sustainable Homes - February 2007