

Appendix 2: Feasibility Assessment

Delivery routes tested

The schemes tested in this study have been created by the study team as potential delivery routes for community-led housing in response to desk research, a needs assessment, interviews and taking into account site availability through a land search. The community-led housing schemes selected for feasibility assessment are different ways that community-led housing could be delivered in Oxford. These are referred to in this appendix as “typologies” which was a term used in the modelling. Each typology is numbered T1, T2, T3, T4 in the results below and in the charts. The delivery routes for these typologies are discussed in detail in Section 4 of the study.

T1 is a shared house co-operative using as a model Kindling Housing Co-op that was set up in 2016. This delivery route has been proven to work, even at Oxford house prices and could be replicated many times.

T2 is groups of very small units for single people on multiple small sites in the inner city. The study team included this approach given the high levels of need identified for affordable housing for single people who are very unlikely to be allocated social rented housing. The cost of sites will be very high, but the approach models the use of modular, off-site construction with economies of scale through developing a number of sites using the same suppliers, design approach and build methods.

T3 is medium-scale cohousing of 20-40 units. This type of scheme is included in the study because it has been attempted several times in recent years by cohousing groups. Expert advice for each scheme was that the schemes are viable, but they have not succeeded in winning bids for the land on the open market in Oxford.

T4 is large-scale schemes of up to 250 homes which is included in the study because there are many EU examples of community-led housing on this scale and one local group has attempted such a scheme in recent years but did not succeed in bidding for the land on the open market. Expert advice was that the scheme was viable.

Method

The starting point for this feasibility assessment was to deliver affordable units in Oxford for different households through community-led housing. The first stage of the assessment was a standard residual land valuation appraisal with a number of factors that are specific to each delivery route such as lower profit levels or savings on external works. The second stage then used the advantageous financial products available to the community housing sector to adapt the long-term costs such as savings made through the association taking on a single loan for the development. The third stage tested the affordability of each delivery route for different household sizes and units, to check whether Oxford households at different income levels could afford the homes within 35% of their net income.

Professor Stephen Walker (Oxford Brookes) ran residual land valuation development appraisals for each community-led housing delivery route.

Community-led housing scheme	Number of dwelling units	Location
T2 Tiny Modular with Daisy Chain	25 units on 5 sites	Inner city
T2 Tiny Modular	5 units in a single building on a single site	Inner city
T3 Medium Scale	40 units on a single site	Suburban
T4 Large Scale	250 units on a single site	Edge of City; new land release

Note: the appraisal for T1 shared house was based on actual Oxford house prices and did not require a residual land valuation appraisal.

The standard methodology underpinning residual land valuation appraisals involves making a number of assumptions and selecting the appropriate variable inputs. It is important to understand the functional relationship between the primary input variables and the residual (which is the land value bid estimate or the budget that is available to buy land). The most powerful of the variable inputs are:

- Gross Development Value (GDV). These include prices/rents, yields, volume, size. This appraisal used Oxford-specific assumptions and a cash flow model including affordable rent levels which was provided by Jimm Reed (OxCoHoLtd) for this study.
- Building costs. These include volume, floor-space, unit build costs, external costs, abnormal costs, fees. This appraisal used specific build costs and preliminaries from discussion with a local developer, an off-site manufacturer and cross-referenced with the Building Cost Information Service (BCIS, provided via RICS). It is clear that the cost efficiencies of the modular built form is an important factor in delivering the land value estimate – reduced construction time and lower unit costs generate a competitive advantage.
- Interest rate and timeframe. With a cashflow-based appraisal the pattern of revenue and costs will dictate the accrual of financing costs. The higher the rate of interest and the longer the time over which a development is built out and pace and rhythm of the sale of dwelling units will dictate the significance of the compound rate of interest in the appraisal.
- The target rate of profit. Typically, the nation’s house builders take between 17% and 20% of GDV for their target profit. On sites where affordable housing is being delivered, the rate of profit set for the affordable dwelling units is typically 5.66% of GDV which is equivalent to a contractor’s typical rate of profit. Combining these rates produces a blended rate of profit of around 17% of GDV [the ultimate rate will depend on the transfer values of the affordable units and a planning authority’s affordable housing policy requirement]. In the last 3 years, the “booked” profits of the house-builders have been significantly higher than these target rates.¹ This appraisal of the community-led schemes used a 6.5% of GDV target rate of profit. This relatively lower target rate of profit obviously makes a large contribution to the higher land value estimate.

¹ see Financial Analysis Made Easy (FAME) database, Experian

The appraisal resulted in a land value estimate per parcel of land which was grossed up to a value per hectare, with ranges from minimum to maximum to allow a confidence interval. Professor Walker then replicated the land value estimates for Oxford which are prepared by the Valuation Office Agency for the Ministry of Housing, Communities and Local Government² including factors that are specific to the schemes modelled such as affordable housing policy requirements and Oxford City Council's Community Infrastructure Levy payments. This provided a check that the value in the schemes modelled is in each case more than sufficient to pay a market price for the land.

Professor Walker advised that care must be taken in making any kind of comparison between the Valuation Office Agency generated land value estimates and the land value estimate for the different delivery routes modelled. Site specific requirements are excluded from Valuation Office Agency generated land value estimates which assume a standard, well serviced, flat, green field sites, as well as no policy requirements [e.g. no affordable housing, no CIL payments].

The results indicate that the in-built cost efficiencies associated with the modular construction process (i.e. time savings, locking down costs) and the lower target rate of profit generate significant overall cost savings, which result in higher land value estimates for the appraised schemes. The gross development value of the schemes is much lower as a result of setting rents and house prices at affordable levels. The land value estimate budgets appear to be most competitive for the medium and large-scale schemes. The micro-scale schemes - whether single sites or a multi-site version – may not be as competitive. Given that such sites are likely to be located in the inner neighbourhoods, their market land prices are likely to be higher. The uniqueness of the sites and latent demand [so typical of Oxford] can generate over-inflated land prices. Due to the low number of units which smaller sites can accommodate, the per-unit external costs of developing housing on them is relatively high, which also pushes up the rent levels or sale prices. In order to reach the cost-efficiencies required for the small-sites model community-led schemes will need to take a multi-site approach to development to gain deals on both land and construction negotiations.

There are areas where the study team considers the assumptions could be refined for community-led housing appraisals:

- The study team used an industry standard flat 20% on costs for long-term management and maintenance but an understanding of actual ongoing costs would help increase accuracy on whether households could afford rents.
- Remortgaging rates in the future is impossible to predict. The study team checked with banks and they are happy with this assumption would be possible in year 20.
- Cost of loan stock/share finance. The study team used a standard 2.5% taken from a finance consultant and cross-checked with a share-offer broker.
- For the large partnership project we have applied a 2%per annum interest rate which was sourced from a big institutional partner on an interest-only basis. This could be Oxford City Council.

² This is a Green Book Valuation methodology. It is vital that reference be made to Annex A which can be accessed from Land Value Estimates for Policy Appraisal, MHCLG, May 2018; it sets out the principal assumptions applied in generating the land value estimate.

At the second stage the team met with a Development Agent (Jimm Reed, OxCoHo Ltd) and adjusted the appraisals to reflect scheme-specific costs which are lower due to innovations in community-led housing development. These refinements were informed by experience within the study team and that of two renowned valuation consultants from the community-led housing sector.

The third and final step was to extrapolate scheme costs over the long-term including beneficial financial products that are available to community-led schemes, reduced voids and cost-saving housing management arrangements.

Assumptions

The assumptions used in the feasibility assessments are set out in the following pages.

Assumptions	Shared house	Multiple small sites		Medium scale	Large Scale
	T1 (single house)	T2a (15 units)	T2b (25 units)	T3 (Cohousing)	T4 (Partnership)
Site area (m2)	100	1500	2500	4000	25000
Site area (ha)	0.01	0.15	0.25	0.4	2.5
Building footprint (m2)	0.15	0.02	0.02	0.38	1.74
Dwellings per ha	100	100	100	100	100
Parking spaces reqd.	10	30	50	80	500

Residential units	m2					
Bedroom in Shared House	26	5				
1 bed (1 person)	39		15	25	5	20
2 bed flat (4 person)	67				8	70
2 bed house (4 person)	75					
3 bed flat (5 person)	75				16	110
3 bed house (5 person)	82					
4 bed (7 person)	108				11	50
5 bed (8 person)	118					
Total		5	15	25	40	250
GIA Residential (m2)		130	585	975	3,119	19,120
Social Rent Affordable and Shared Ownership		-	-	-	40%	40%
		-	-	-	10%	10%

Other assumptions made in the modelling (figures confidential)

DEVELOPMENT COSTS

Works Build cost [£/m2]
 External Works [%]
 Preliminaries [%]
 Contingency [%]
 Site infrastructure Extras
 Building Costs, Externals & Extra works

Fees Professional fees [%]
 Legal Fees [site acquisition] [%]
 Legal Fees [sale of units] [%]
 Selling Agents' Fees [housing] [%]
 Selling Agents' Fees [business] [%]
 Marketing & Advertising [£/unit]

Finance Arrangement fee
 Bank Intro Fee
 Bank Exit Fee
 Bank Monitoring Fee
 LTV on LAND
 LTV on COSTS
 Development Finance Rate

Land Land/property cost
 Land cost [£/ha]
 Stamp Duty Land Tax

Profit Housing: Market Sector [% of GDV]
 Housing: AH Sector [% of GDV]
 Commercial Sector [% of GDV]

Duration

Total Development Period [in months]
 Total Building Period [in months]
 Void Period after Build (in months)

Planning

CIL [£/m2]
 Planning Obligations [£/m2]

Existing Property Start-up costs

LONG TERM FINANCIAL COSTS

Voids
 Management and Maintenance
 Inflation
 Traditional lending amount
 Borrowing rate
 LTV of OMV
 Period (years)
 Early repayment charge
 Arrangement fee
 Debt service coverage
 Refinance periods and rates
 Loanstock/Shares
 Loanstock blended rate
 Debt Finance
 Internal Rate of Return
 Prudential Borrowing

UNIT COSTS for each size m2 of residential unit

UNIT SIZES

1 bed (2 person)	39
2 bed flat (4 person)	67
2 bed house (4 person)	75
3 bed flat (5 person)	75
3 bed house (5 person)	82
4 bed (7 person)	108
5 bed (8 person)	118

House Price Evidence (5-bed+, <£500,000)

Taken from Zoopla on 27/07/2018

	Address	Listed Price	Listed
1	Forest Road, Headington, Oxford OX3	£450,000	24th Jul 2018
2	Fern Hill Road, Oxford OX4	£500,000	20th Jul 2018
3	Long Lane, Littlemore, Oxford OX4	£400,000	20th Jul 2018
4	Headington, Oxford OX3	£400,000	16th Jul 2018
5	Bulan Road, Headington, Oxford OX3	£475,000	13th Jul 2018
6	Pinnocks Way, Oxford, Oxfordshire OX2	£460,000	11th Jul 2018
7	Cranley Road, Headington, Oxford OX3	£469,950	28th Jun 2018
8	Firs Meadow, Greater Leys, Oxford OX4	£385,000	10th May 2018
9	Brasenose Driftway, Oxford OX4	£425,000	14 th March 2018
10	Barns Road, Oxford OX4	£450,000	26 th March 2018
11	Green Road, Headington, Oxford, Oxfordshire OX3	£410,000	10th Feb 2018
12	Headington/Marston Borders, Oxford OX3	£475,000	5th Jan 2018
13	Sandy Lane, Littlemore, Oxford OX4	£350,000	-
14	Littlemore Road, Oxford OX4	£430,000	20th Jun 2017
15	Bertie Place, Oxford OX1	£325,000	6th Dec 2016
16	Kestrel Crescent, Blackbird Leys Oxford OX4	£400,000	20 th July 2016

Oxford house price data

Period	Sales volume	Average price All property types	Average price Detached houses	Average price Semi-detached houses	Average price Terraced houses	Average price Flats and maisonettes
2017-06	120	£411,177	£803,520	£502,136	£398,385	£287,282
2017-07	160	£413,515	£804,955	£505,722	£400,374	£289,133
2017-08	138	£416,177	£811,320	£508,673	£403,887	£290,123
2017-09	124	£420,704	£824,054	£515,333	£408,130	£292,436
2017-10	102	£422,236	£830,544	£517,885	£409,944	£292,482
2017-11	77	£418,742	£824,247	£514,667	£406,058	£289,932
2017-12	112	£410,180	£806,531	£504,719	£397,730	£283,824
2018-01	91	£396,315	£777,504	£487,750	£384,221	£274,427
2018-02	81	£395,231	£776,654	£486,229	£383,481	£273,432
2018-03	107	£397,422	£780,597	£488,986	£386,126	£274,549
2018-04	88	£403,747	£793,239	£497,250	£392,844	£278,038
2018-05	93	£409,952	£805,828	£505,900	£399,184	£281,297
Average	99	£409,617	£803,249	£502,938	£397,530	£283,913

Source: UK House price Index, Oxford, June 2017 to May 2018

Local Market Evidence

Assembled by Development Agent Jimm Reed of CoHo Ltd.

Property value data for Oxford

Property type	Avg. current value	Avg. £ per sq ft.	Avg. # beds	Avg. £ paid (last 12m)
Detached	£797,878	£448	4	£733,962
Semi-detached	£472,741	£449	3.3	£483,731
Terraced	£448,376	£479	3	£473,400
Flats	£324,020	£508	1.8	£328,131

Current asking prices in Oxford Average: £483,749

Property type	1 bed	2 beds	3 beds	4 beds	5 beds
Houses	£228,857	£353,114	£418,000	£613,590	£889,902
Flats	£240,611	£340,620	£432,333	-	£850,000
All	£239,193	£345,261	£418,874	£613,590	£888,615

Current asking rents in Oxford Average: £1,813 pcm

Property type	1 bed	2 beds	3 beds	4 beds	5 beds
Houses	£690 pcm	£1,373 pcm	£1,659 pcm	£2,159 pcm	£2,709 pcm
Flats	£999 pcm	£1,414 pcm	£2,078 pcm	£2,330 pcm	£3,467 pcm
All	£912 pcm	£1,404 pcm	£1,714 pcm	£2,173 pcm	£2,720 pcm