

# **Firethorn Application Ref. 21/01630/OUT**

## **Review of Financial Viability Assessment**

*Prepared by: Bicester Residents Group for a Zero Carbon Eco-Town*

### **Introduction/Background**

Policy Bicester 1 requires developments within the North West Bicester Eco Town to be zero carbon. This application is within the boundaries of the Eco Town, but the applicant does not wish to comply with the zero-carbon requirement and has presented a financial viability assessment (dated May 11<sup>th</sup> 2022) to support their decision.

The viability assessment attempts to convey the message that building homes that are "true zero carbon" is not viable and implies that waiving the zero-carbon requirement would allow them to comply with the affordable homes mandate, putting this "benefit for the community" (from some perspectives) in the balance, apparently in order to convince CDC to make concessions on their commitment to building an Eco Town in Bicester.

This review has been prepared by a group of residents from the Exemplar Phase of the Eco Town, some of them having significant experience in the property sector and in the preparation of economic viability studies. The objective is to highlight the fundamental flaws in the rationale taken by Firethorn's consultants and demonstrate that there is no evidence that the proposed development is not economically viable when complying with true zero-carbon requirements.

The purpose of this review is not to be a voice "against" the proposed development, but support CDC in its vision for an Eco Town in Bicester and suggest solutions for expansion of the Eco Town to go ahead, while respecting the founding principles set in Policy Bicester 1 and the North West Bicester Eco Town Master Plan.

### **The viability assessment demonstrates that the proposed development is profitable, just not as much as the developer would like it to be**

Firethorn's consultants, in § 3.16 of the viability assessment, take the view that "the proposed scheme cannot viably deliver 30% affordable housing (70% AR / 30% SO) when adopting True Zero Carbon House Build Costs" and that "this produces a deficit".

Note that the proposed scheme is not deemed to be unprofitable / generating a loss, but only that it shows a "deficit" relative to a reference used by Firethorn's consultants in their analysis. This reference is the profit that the developer and the landowner would ideally wish to make, which can only be a subjective view of viability. The viability assessment report therefore only manages to point out that, with the affordable housing and true zero-carbon requirements, the profit is not as high as they would wish it to be. It is still generating a healthy profit.

The presentation of the figures tends to blend the objective assessment of the economics of the proposed scheme with the subjective profit expectations in order to convey the point of view of the applicant. It is useful to look at these parameters separately, in a 2-step approach.

#### **Step 1: value creation**

The assumption will be made that the estimates prepared by Firethorn's consultants for the Net development value and the Development costs are not biased. Although they are usually bound by a code of ethics, the view of their client and the conclusion they wish to reach can unconsciously lead to skews in assumptions and risk perception that compound into a significant effect.

It should also be noted though that the assumption is made by Firethorn's consultants that the Net development value is the same whether it is true zero-carbon or not. Although a very significant price premium may be difficult to demonstrate for zero-carbon home prices, experience from the Exemplar Phase is likely to demonstrate that the

uniqueness of the project in the UK creates demand from potential homeowners who would otherwise not consider purchasing a home in this location; this would in effect produce an increase in demand, reducing marketing costs or increasing sale prices. The ongoing energy price crisis is likely to increase the attractiveness of energy efficient zero-carbon homes.

However the objective of this review is not to challenge the assumptions but focus on the broader flaw in the rationale followed by the consultants, consequently their own figures will be deemed accurate for the rest of this review.

Taking into account only the figures used by Firethorn's consultants in §3.15 for Net development value and Development, including the affordable housing and zero-carbon requirements, the proposed scheme generates around £ 28 mn of value.

Net development value	£ 169.99 mn
(-) Development costs	£ 141.95 mn
<b>(=) Value creation by the development, to be shared by the developer and the landowner</b>	<b>£ 28.04 mn</b>

#### Step 2: land price is defined by value sharing, not by market

This value creation figure calculated in Step 1 is by coincidence a figure that is very close to the line labelled 'Profit' in the table shown in § 3.15. This 'Profit' line of £ 28.03 mn, according to § 3.14, is not the result of subtracting the Development costs from the Net development value: it is itself an assumption made by Firethorn's consultants that a profit of 17.17% should be expected on a scheme with a development value of £ 169.99 mn *after deducting land costs*.

Firethorn's consultants also argue that the landowner will expect to sell their land to the developer for a value of £ 11.8 mn as explained in § 3.15.

Development profit (developer expectation)	£ 28.03 mn
(+) Land sale price (landowner expectation)	£ 11.80 mn
<b>(=) Total profit expectations from the developer and the landowner</b>	<b>£ 39.83 mn</b>
(-) Value creation by the development, to be shared by the developer and the landowner	£ 28.04 mn
<b>(=) "Deficit" relative to expectations of developer and landowner</b>	<b>£ 11.43 mn</b>

Consequently, Firethorn's consultants present the opinion that, in order to satisfy the developer's profit expectation and the landowner's profit expectation, the development should generate value creation of £ 39.83 mn. As the Net development value - Development costs show value creation of £ 28.04 mn, their view is that there is a "deficit" of £ 11.43 mn.

There is a fundamental flaw in this rationale. Land values are defined based on their potential uses, so the sale price that a landowner should expect will be defined by the economics of the property development that can legally and viably be built on it, or its alternative use.

In order to come up with a land sale price expectation of £ 11.8 mn (labelled 'Appropriate benchmark value' in the table in § 3.15), Firethorn's consultants have used a benchmarking approach, but this fails to include the planning restrictions applied to land. CDC made the decision that land in the North West Eco Town would only be used for residential developments that are true zero-carbon. Such mandate has been decided because residential developers do not spontaneously build true zero-carbon homes, most likely because the higher costs/risks involved with such new kinds of development are not offset by sufficiently higher sales prices to homeowner. Consequently, land where only zero-carbon homes can be built has a lower value than land where any type of home can be built, and the £ 11.8 mn value derived from benchmarking is therefore irrelevant.

The lower value for the landowner is supported by the theory of positive economic externalities: there is a benefit for the broader community if zero-carbon homes are built, but the future homeowners are not willing to pay sufficiently higher home prices to cover for all of the extra cost, so according to the theory of options, the residual land value is impacted negatively, as a more profitable option (building traditional homes) is not available.

At the moment, the landowner only has a choice between agricultural use (£ 0.67 mn value according to Firethorn's consultants) and zero-carbon residential development. Developers who are interested in building homes on this land will need to pay more than £ 0.67 mn to the landowner for their offer to be more attractive than agricultural use. The £ 11.8mn benchmark is not an available option, as this is a theoretical land value that would be valid only if traditional housebuilding were allowed on the land.

It should also be noted that the expectation by the developer to make a profit of 17.17% on the net development value is not supported by any tangible rationale. Given the unique nature and risk/reward of the Eco Town, the standard profit margins may also not be relevant.

Consequently, the "deficit" presented by Firethorn's consultants is not a valid indicator of the proposed schemes' viability. The proposed scheme will be viable if the developer and the landowner explore the various possibilities of sharing the value creation of £ 28.04 mn and negotiate a fair division that incentivises both parties to proceed. This can be demonstrated by adding a third step to the calculations, as follows:

### Step 3: value sharing leads to acceptable returns for both developer and landowner

The £ 28.04 mn value creation calculated in Step 1 needs to be shared between the landowner and the developer in a way that is attractive to both parties. This can be measured through the below table, which shows the range of returns for both parties under various scenarios.

(values in £ mn)

Land purchase price	0.67	2.00	4.00	6.00	8.00	10.00	11.80
Landowner profit	–	1.33	3.33	5.33	7.33	9.33	11.13
Landowner multiple	1.0x	3.0x	6.0x	9.0x	11.9x	14.9x	17.6x
Speculative 10y land investment return	0.0%	11.6%	19.6%	24.5%	28.1%	31.0%	33.2%
Developer profit	27.37	26.04	24.04	22.04	20.04	18.04	16.24
Developer profit %	16.1%	15.3%	14.1%	13.0%	11.8%	10.6%	9.6%
Developer 3y return	19.3%	18.1%	16.2%	14.5%	12.8%	11.3%	9.9%

The rows in the above table are defined as follows:

- Landowner purchase price: price paid by the developer to the landowner
- Landowner profit: profit on the sale of the land to the developer, assuming land purchased at £ 0.67 mn agricultural value
- Landowner multiple: value uplift from sale to developer relative to agricultural value (similar concept to 'Premium multiplier' in § 5.12 of viability assessment presented by Firethorn)
- Speculative 10y land investment return: assuming a speculative fund bought the land in December 2012 (before adoption of A2D Eco Town Master plan and 2011-31 Cherwell local plan) and sells it to the developer in December 2022, whilst earning no rent over the period, what would be the average annual return?
- Developer profit: Net development value - Development costs (as estimated in § 3.15) - Land purchase price
- Developer profit %: Developer profit / Net development value
- Developer 3y return: pre-tax return on investment, assuming land and 18% of development paid upfront, 1/3 of net development value realised after 12, 24 and 36 months, and 1/6 of development costs paid after 0, 6, 12, 18, 24 and 30 months.

The calculations above demonstrate that attractive return profiles can be achieved by both parties along the spectrum of possible land purchase prices.

## **What are the alternative solutions if Firethorn and the landowner cannot reach a fair division of the profit?**

### Identify more competitive / efficient developers

Other parcels of land within the Eco Town are currently subject to pending and approved planning applications where the true zero-carbon requirement is respected:

- Himley Village (14/02121/OUT).
- Hawkwell (21/04275/OUT). Although it should be noted that a recent 'Place and Growth' internal memo (dated April 28<sup>th</sup> 2022) identified that the proposed scheme zero-carbon features, though present, were still below expected standards.
- Aldershot (22/01070/SCOP). This applicant for this proposed development is A2D, who also developed the Exemplar Phase of the Eco Town.

Although there is limited public information on the profit metrics for these applications, and the Exemplar Phase has suffered delays in part due to the Covid-19 pandemic, the fact that new applications have been made and progressed in the last three years demonstrate that other developers assess the Eco Town zero-carbon approach to be economically viable. In particular, the proposed Aldershot development is of comparable size to Firethorn (whereas the proposed Hawkwell development is much larger, for example) – thus Firethorn cannot argue that the smaller scale of development contributes.

It should be noted that in the specific case of the development proposed by Firethorn, the applicant will benefit from the Master Plan expenses and spine road infrastructure already implemented by the Exemplar Phase developer. Most of the land use is dedicated to residential units, without requirements to commercial or education amenities – which are additional costs which the other proposed developments all contain.

The fact that the applicant, with a much less complex proposed development and without these additional costs, argues that it is not economically viable, while other developers proceed with more complex projects that comply with the environmental requirements, seem to indicate that the applicant has not demonstrated the skills, experience and knowledge required to prepare a proposal that is viable.

If the applicant and the landowner cannot find a solution that is mutually profitable, engaging with other developers with the capabilities to develop a viable proposal may be an alternative solution.

### Wait for more cost-efficient technology

Although the Eco Town has been perceived by some stakeholders as not developing as fast as expected, the other proposed schemes (e.g. the much larger Hawkwell application) are proposing a density of homes that is larger than the original Eco Town Masterplan had anticipated. It therefore seems the overall objectives in terms of number of homes built in the Eco Town would be reached through the existing planning applications *excluding* Firethorn's.

In addition, as the Firethorn development does not include any commercial or education infrastructure that would be needed by the larger Eco Town, a delay in the development of these two particular fields would not significantly impact the broader Eco Town. (NB: also, their construction access points do not impinge on the other areas to be developed.)

Consequently, if Firethorn or any other developers are not able to present a viable economic proposal for this land, rather than allow one specific part of the Eco Town to be built in breach of the zero-carbon requirement, it may be appropriate to wait for new construction and energy technology, which would be more efficient and less costly, as there has been rapid progress in this area.

## **Additional note on the district heating system**

The Eco Town's Exemplar Phase currently runs a District Heating System. In the absence of obvious zero-carbon alternative to gas boilers, this allows to benefit from effects of scale, with a central gas boiler being more efficient than individual boilers, the ability to introduce a mix of gas and biomass, and in the future convert more easily a single equipment to the latest technology, without intrusion and upfront investment for each individual home.

SSE is currently operating the system and the Exemplar Phase's residents have limited visibility on the economics. At the moment, the system has a high fixed cost burden for the residents, relative to individual boilers, and the benefits from any efficiency are captured by the operator. But there is also an understanding that, with less than 400 homes on the system (by the time Elmsbrook, the Exemplar Phase, is completed in late 2023), the operator is currently operating at loss because it is below the required scale of 1,200 homes ( - we have been told that the “break even point” is at least 900 homes).

The Firethorn application currently envisages not to join the system, or (according to a more recent update – though the actual situation remains unclear) for the system to be significantly altered as a condition for joining it. There is also limited information in the Hawkwell application, a proportion of which would also be required to join the current system in order to ensure its economic and environmental sustainability, and for the next-generation version of the system (i.e. replacing the existing one at end of life), scale benefits might require more or all of Hawkwell – and other applications – to join up.

This is a concern for Exemplar Phase residents: if new developments within the Eco Town are not required to join the system so that it can operate so as to obtain the maximum benefits of scale for all, the negative externality would be a burden for all current and future residents, but especially the Exemplar Phase residents, who would face higher fixed charges, excessive cost savings by the operator or even a wish by the operator to abandon the concession, if the operator does not expect a reduction of their loss through scale when other parts of the Eco Town join the system. This structural trend would compound the already high energy costs, which are impacting the Eco Town in spite of its energy efficiency features.