

IF YOU WERE GOING TO BUILD A NEW TOWN, YOU WOULDN'T START HERE

1. Matter 5 New Garden Communities Qs 1 and 5 Location and Infrastructure

This Statement has been prepared on behalf of the six Parish Councils identified below and SERCLE (Stop Erosion of Rural Communities in Local Essex). It supplements responses made by the individual bodies to the consultations on the draft Braintree Local Plan in August 2016 and July 2017 in respect of the 'Garden Community' proposed for West of Braintree ('WoB').

2. Absence of any Factor needed to create a new Settlement West of Braintree

a. Preamble

WoB features none of the attributes that have led to the creation of settlements in the past, such as a good supply of water (see below c. Adequate Drainage and Sewerage) or a location with good access (by any means of transport).

No New Town or Expanded /Overflow Town or Garden City in the United Kingdom has ever been pursued without there being, or there being programmed or planned, a railway station.

b. Railway Stations

There are three railway stations at various distances from WoB (using the CM6 3TH postcode);

- i. Braintree: branch line terminus, hourly service to Witham via Braintree (Freeport) and Cressing: 11.5km / 7.1 miles – 13 minutes off-peak drive
- ii. Witham: mainline railway station; 21.2km / 13.2 miles – 21 minutes off-peak drive
- iii. Stansted Airport: 20.6km / 12.8 miles – 21 minutes off-peak drive

The six Parish Councils and SERCLE support initiatives to increase the use of public transport and for people to walk and cycle, reducing the need to sue the car. However, all these railway stations are too far away to be of regular use by people living in the area now, let alone a new town at WoB. For any public body to believe that they have realistic and economical potential as the basis for an ambitious new public transport system featuring rapid transit buses linking them to WoB with no programmed funding at a time of continued austerity is fantastical and delusional.

We note that Network Rail has made no contribution to the plan-making process. As the body that controls railways in this country, this is a significant and troubling absence.

In respect of Braintree railway station, the route of the railway east of Braintree is single track, limited to hourly service and the topic of decades of prevarication about the

'Crossing Loop' that could ease capacity issues to improve the current service from its terminus in Braintree.

There has been reference to Stansted being a transport hub – it is nothing of the sort - a hub is centrally-positioned (as with the hub of a wheel), whereas the railway station serving the airport is a terminus.

Manchester Airports Group, which owns Stansted Airport is on record as saying that it does not want commuters using the railway station which is there to serve the airport alone. The £3.50 charge simply to drop people off at the Airport Terminal would deter all but the most determined and well-off commuter in any event.

There are very limited public transport bus services to Stansted Airport.

The option to extend the railway east of Stansted Airport (as originally envisaged by the architects) was compromised early on as further airport buildings including Radisson Hotel were built.

There is no record of Network Rail ever considering filling the gap in the network between Braintree and Stansted Airport. This is not in itself surprising. What is more surprising is that this section of rail infrastructure could have been a genuine catalyst for Braintree regeneration as Stansted was developed and grew and yet seems to be a blind spot for the County's planners. This all adds to what we as local people regard as a massive credibility gap on the parts of BDC and ECC regarding the integrity of the WoB proposals.

The original Braintree to Bishops Stortford railway line alignment, axed as part of Beeching line closures in the last 1960s, now accommodates sections of Essex County Council's Flitch Way Country Park, underneath the B1256 Dunmow Bypass or is lost under farmland.

c. Adequate Drainage and Sewerage

Dean McBride, who has developed considerable expertise in community sewerage infrastructure, has closely examined the North Essex Sewerage Infrastructure for the proposed Garden Communities, particularly in respect of West of Braintree.

The crux of the problem with West of Braintree in drainage and sewerage terms is quite simply: It is not sustainable, the area has too many constraints to meet the NPPF guidelines. His conclusion is that in respect of this single, important infrastructural point, it is extraordinary that it has been brought forward for housing.

The local sewerage works at Rayne and Braintree are not sustainable. The Braintree District Council Water Cycle Study, published March 2017 states that significant reinforcement of the network of water recycling centres ('WRCs) is required to provide for the additional growth at the West of Colchester Garden Community and may be required for the West of Braintree Garden Community. The WRCs at Braintree, Bocking, Coggeshall and White Notley will require improvements to ensure that the increased

waste water flow discharged does not impact on the quality of the receiving watercourses and their associated ecological sites.

Even if a complete new sewerage works is built for WoB even that wastewater still has to be pumped to another sewerage works (at Bocking, 6km / 3.7 miles away) and from there (and with its own treated wastewater) will have to be discharged somewhere upstream.

The two local rivers, Pods Brook and the Ter, are too small to discharge treated wastewater. Nevertheless, the North Essex Garden Communities Integrated Water Management Strategy Stage 1 Report from August 2017 notes that if the new WRC discharges into the river Ter, it is assumed that it would discharge into the upper reaches of the catchment. This option would require approximately 1.3 km of new pipeline and a new pumping station.

There is confusion in the documentation about Bocking Sewerage Works: on one hand it could take sewerage from the WoB development at the beginning and then in another instance it could do take sewerage only up to 2032.

The drainage ditches and other water areas will flood because the density of the clay soil, and in one part of Saling the clay is 10 metres deep, makes using soakaways impractical, leading to excess run-off.

Therefore, the run-off from all the *circa* 9,000- 10,000 new homes will need to discharge into sewers, the majority of them new. Typically, the run-off from perhaps 70% - 80% of homes would discharge into sewers.

The LPA indicates that overhead electrical power lines may have to be used if it is not possible to lay pipes in clay. This further diminishes claims that WoB is sustainable.

The density of clay varies across the area but in the village of Great Saling and Bardfield Saling most people are on the septic systems. Homes with mains drainage are confined to a few 'Grove Villas'.

The alternatives considered included building a 'supersize' sewerage works for the three 'garden communities' to drain to. If that was the case, a super sewer would have to be built for WoB to connect to it (as it would have to bypass the Bocking Sewerage Works), bearing in mind the local rivers used for the dispersal of the treated wastewater would have to be greater in size as not to harm the environmental standards for that much treated wastewater returning to the river system and be more central for all 3 'garden communities' to attach to.

Dean McBride has written that, as an outsider who knew what he was looking for he had found that the information available to the general public to be quite invisible. It took him 3 weeks to obtain constructive information. The general public should have been given information on the state and capacity of the sewerage system in the Braintree 'Infrastructure Delivery Plan' under the section 'Utilities', but it was missing only talking about future 'garden communities'.

Having read the Braintree IDP. Mr McBride challenged BDC that the IDP was not fit as evidence for the BDC Local Plan; the response was 'yes it is'. However, that must be read in conjunction with the Water Cycle Study produced by Anglian Water and the Integrated Water Management Strategy Stage 1. It is highly unreasonable for the LPA to expect the general public to do that before making informed comments as consultees on the Local Plan.

What WoB does feature though (aside from the rural landscape described briefly above) are;

- i. Grade 3 agricultural land which is of good to moderate quality and important to enabling the United Kingdom to produce more of its food.
- ii. Ancient Woodland – Boxted Wood
- iii. Heritage landscape – Humphrey Repton Garden

The latter two have been scarcely acknowledged by BDC in its plan-making.

3. Viability

a. Personal Details and Experience

My name is Edward Charlesworth. I live in Rayne and have been a resident of the area for 3 years. I have followed the Braintree Local Plan process with interest and present this Statement on Viability from a position of some expertise on behalf of the Parish Councils identified in the Overarching Planning Statement and SERCLE. Hence, references below to SERCLE mean me on behalf of the Parish Councils and SERCLE.

I am Managing Director, Head of Latin America Wholesale Credit at Bank of America Merrill Lynch. I have 21 years' experience in European and International lending markets, either as a transactor or as a risk manager. I was previously head of Corporate Credit Risk EMEA at Bank of America Merrill Lynch (a portfolio of more than \$80 billion), and have extensive experience of appraising, approving and managing large, highly structured and leveraged transactions for some of the world's leading companies and financial investors.

b. Preamble

The Viability Assessment produced by Hyas Associates Ltd in April 2017 to support the garden settlements proposed in the North Essex Local Plans ('the Hyas Report') in the Evidence Base does not demonstrate the economic viability of the project due to the lack of information provided and significant flaws in methodology.

The residual value methodology utilised by Hyas in the model is wholly inappropriate for such a long term project as it fails to take into account the substantial financing costs attached to projects such as this which operates with a cashflow deficit (income from land sales does not cover costs) for a number of years, and therefore has to borrow in order to invest.

Hyas does not demonstrate the financing requirement of the project or provide any sensitivity or stress test to help quantify the risks to the project. Instead, the purpose of the modelling is to determine a 'viable' land value, ignoring the facts that;

- i. landowners have a minimum expectation of land value; and
- ii. the project will need to borrow (either in the form of equity or debt) in order to buy that land.

SERCLE has used the GCLS model to recreate the Hyas viability study in order to more accurately demonstrate the cashflow of the project and to sensitise and stress test the numbers.

This analysis is intended to illustrate how sensitive a 40 year model is to a small number of variables. It should be noted, however, that it makes no comment as to the efficacy or otherwise of the assumptions relating to;

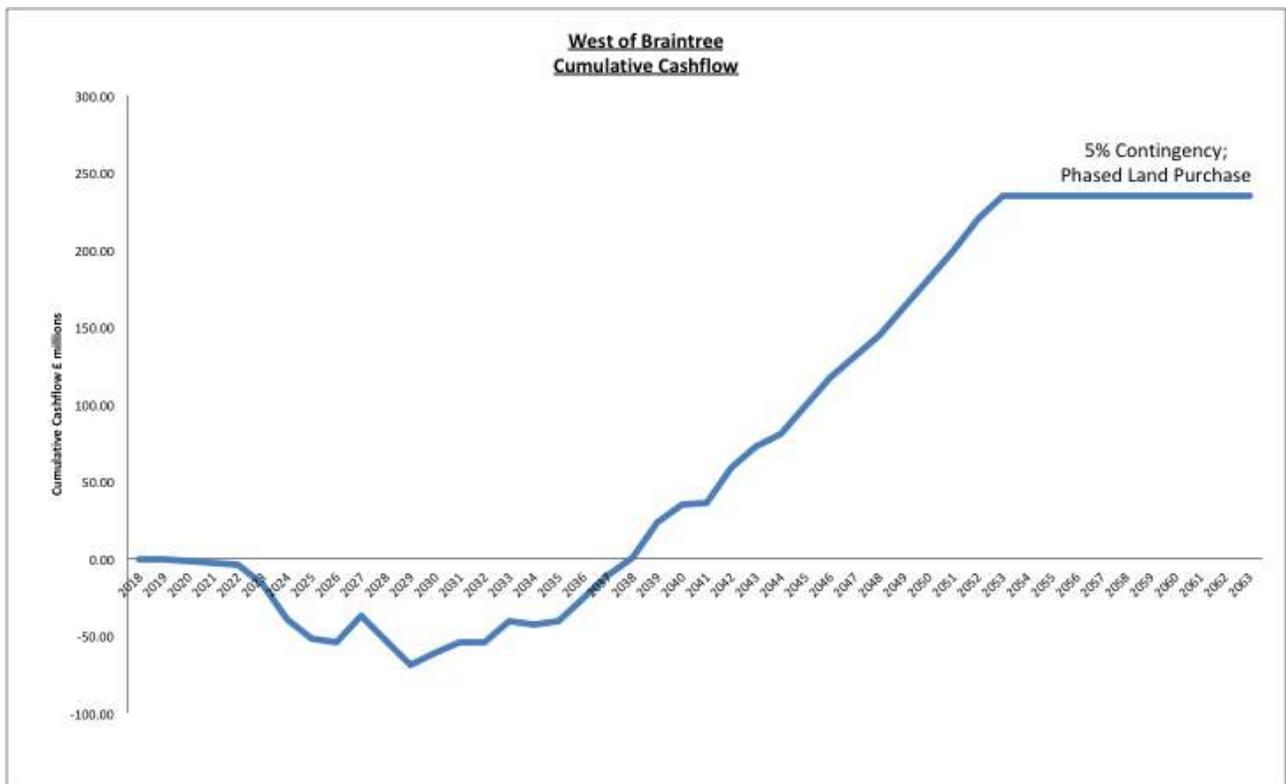
- i. build costs;
- ii. garden city premium;
- iii. application of inflation; or
- iv. the viability threshold.

c. Land Accumulation

The Hyas model does not model the purchase of land. It has been amended by SERCLE to include land accumulation costs on the basis laid out in the evidence base i.e. purchase of land 2 years ahead of disposal. Though it appears implausible that land owners would wait up to 40 years for land proceeds, SERCLE has no evidence that this has not been agreed with landowners as information about deals has not been released into the public domain.

Using the blended average £100,000 per acre land purchase cost referred to by AECOM in the Evidence Base, this creates a baseline cashflow profile as shown in **Figure 1** below:

Figure 1: Baseline Cashflow



This would suggest that, after financing costs at a 6% interest rate, the project generates a positive cashflow of £235 million at 2017 prices. This might suggest that there is significant headroom in the plan.

d. Sensitivity Analysis

Some very simple stress testing of assumptions, however, demonstrates how much risk lies in those figures. This is explained below.

i. Infrastructure Costs/ Contingencies

Table 1: Infrastructure Assumptions from Hyas Viability Model

On Site	Total
Country Park Landscaping	£5.0 m
A4 Shalford Road/ Pods Lane Quietway	£0.3 m
PT5 Rapid Transit & Flagship Cycle Route	£5.0 m
PT7 Transit Hub	£6.0 m
Travel Plan measures (@£1,500/unit)	£13.0 m
Employment Support (@£1,000/unit)	£8.5 m
Off Site	Total
Utilities - Primary Substations, gas & telecoms	£13.0 m
Utilities - 5km trunk mains, discharge upgrade & 6km connection to WWTW	£9.0 m
Active Modes A1, A2, A3 & A4 (Cycleway improvements)	£6.7 m
PT4 - A131/A130 Bus Lane	£8.0 m
PT6 - Rapid Transit & Flagship Cycle route NW Braintree	£6.0 m
R2 & R3 - A120/ B1256 improvements (interim & final)	£15.0 m
R1 - A120/B1256 New Western Junction	£7.0 m
Contrib to strategic Public Transport Solutions (@£1,500 per unit)	£13.0 m
Sub Total	£115.5 m

Though difficult to prove as an outsider to the process without resources to conduct commercial due diligence, there are strong reasons to believe that the baseline level of infrastructure spend and the assumed 5% level of contingency on those costs are wholly inadequate. For example, the Viability Model only includes:

- £24 million for Utilities-related infrastructure, despite the need for significant investment in water, waste and electricity;
- £80 million for road, rail, bus and cycling infrastructure, which is intended to include multiple rapid transit routes due to the remote nature of the site. As an illustration of how ambitious / optimistic these costings are:
 - the Cambridge guided busway cost more than £150 million,

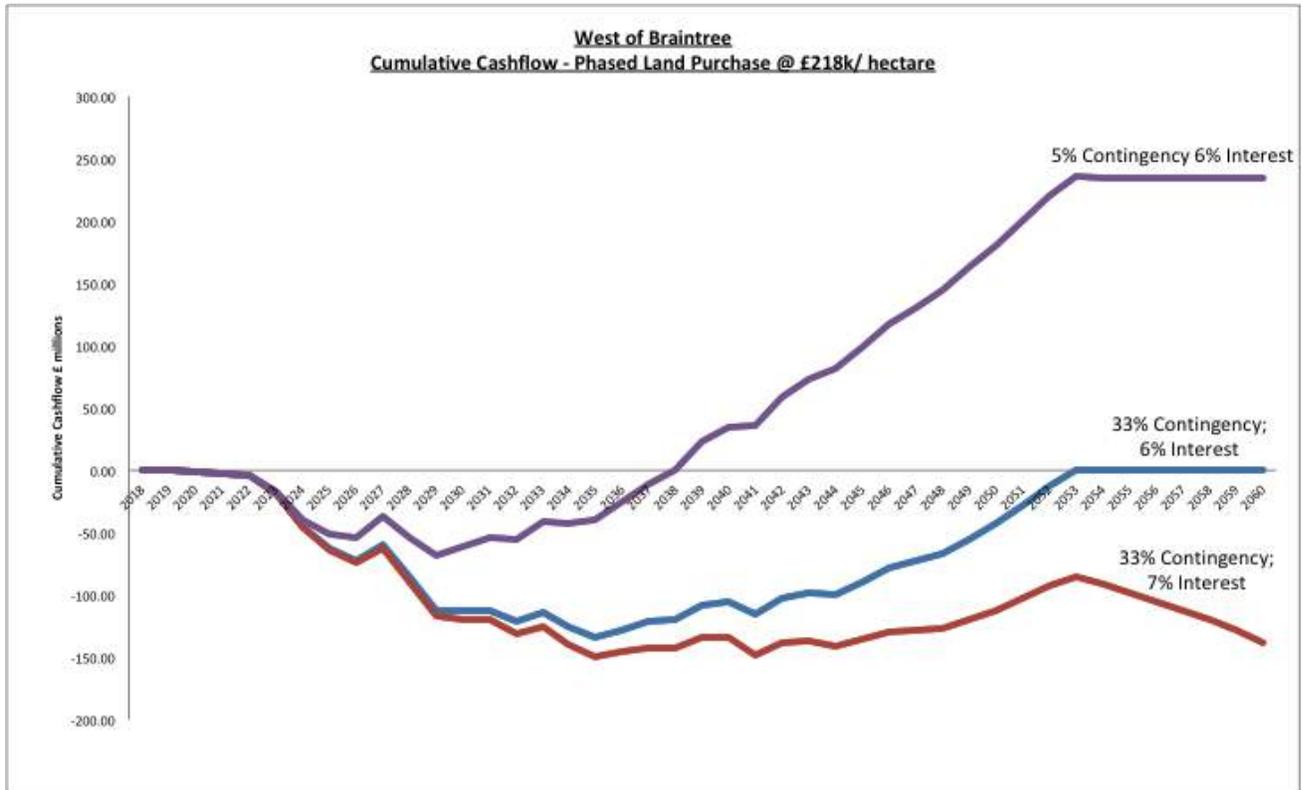
- light rail projects, according to Government figures, have averaged £25 million per mile. West of Braintree to Braintree is at least 5 miles and to Stansted Airport around 10 miles. Hyas has budgeted £11m for rapid transit for West of Braintree. That effectively rules out light rail as an option.

As **Figure 2** below demonstrates, the cost of infrastructure is absolutely vital, as a 33% increase in those costs (either through an increase in the baseline cost or increased contingency) would take the project to a breakeven level – i.e. cash generated would be just sufficient to pay for the infrastructure and other costs, including land. Even with a 33% increase, total infrastructure investment (excluding land and enabling works) for a new, remote town would only be c. £150 million, i.e. similar to the costs of the Cambridge guided busway. It is implausible that total infrastructure costs would be so low when measured against that relevant, costed and similar yardstick.

ii. Interest Rates

Such a long term project is extremely sensitive to prevailing and future interest rates. Hyas has assumed a 6% cost of debt in its assumptions. Assuming the increased level of infrastructure spend and adding just 1% to the interest rate would take the project from breakeven to a £100 million deficit. The project stops generating cashflow before the debt is repaid and is therefore insolvent.

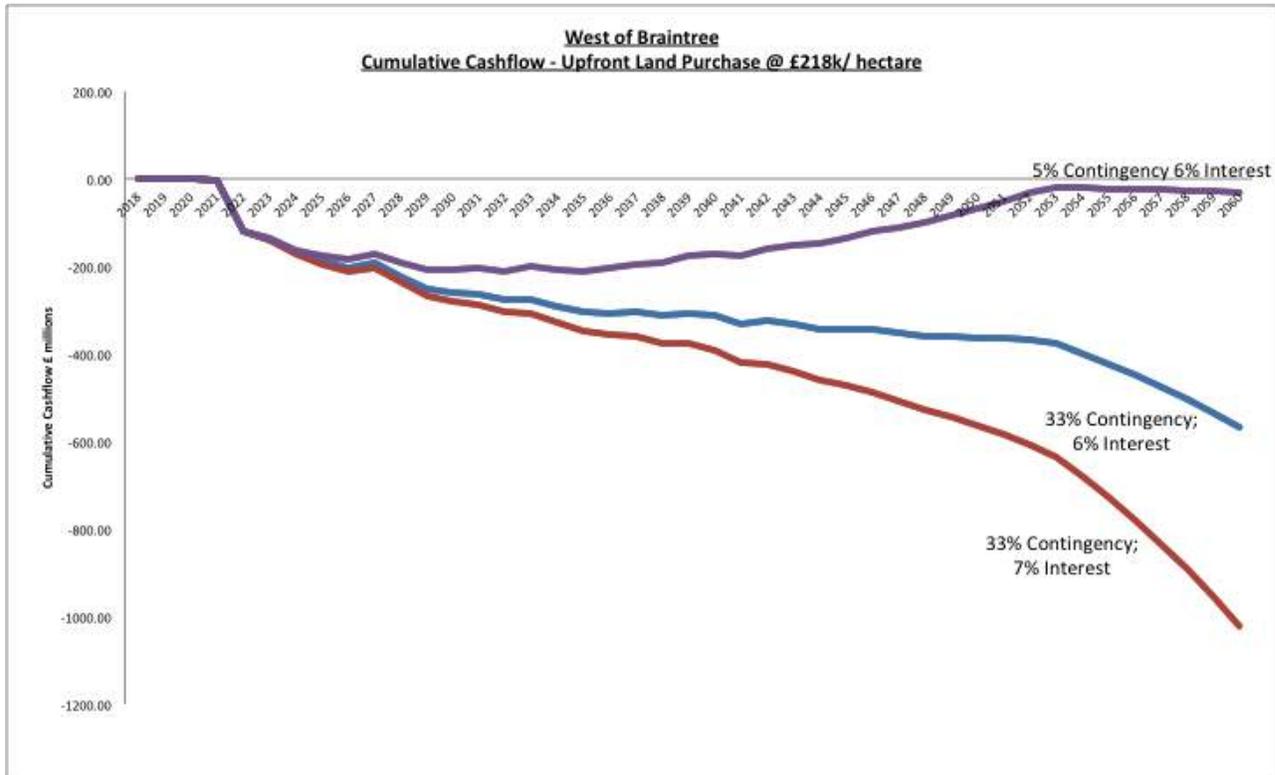
Figure 2: Contingency and Interest Rate Sensitivity



iii. Land Accumulation Assumption

Though better from a cashflow perspective, a phased land purchase appears implausible. The phasing of the land purchase is vital in determining viability as the cost of the land will need to be financed, potentially for a large number of years, before it is sold on in parcels. To illustrate this, **Figure 3** demonstrates the cashflow of the project under the same scenarios as **Figure 2**, but with the land cost taken in year one.

Figure 3: Sensitivity Analysis with Upfront Land Purchase



In this scenario, even the Baseline (5% infrastructure sensitivity, 6% interest rates) does not cover its costs over 40 years. In the arguably more realistic scenarios with 33% increase in infrastructure costs, the debt level spirals out of control as the income in each year is insufficient to cover project costs and interest on the accumulated debt.

e. Affordable Housing

This Statement on Viability has, for simplicity, largely focused on infrastructure and land costs as well as the sensitivity to interest rates. However, it is vital to note that Hyas makes clear at the start of its Report that the modelling in its appraisal illustrates a scenario in which affordable housing is provided at 30% of total housing stock. BDC policy requires 40% affordable housing. **Figure 4** demonstrates, under the phased land acquisition case what impact Affordable Housing has upon the cashflows of the project.

Figure 4: Affordable Housing Sensitivity

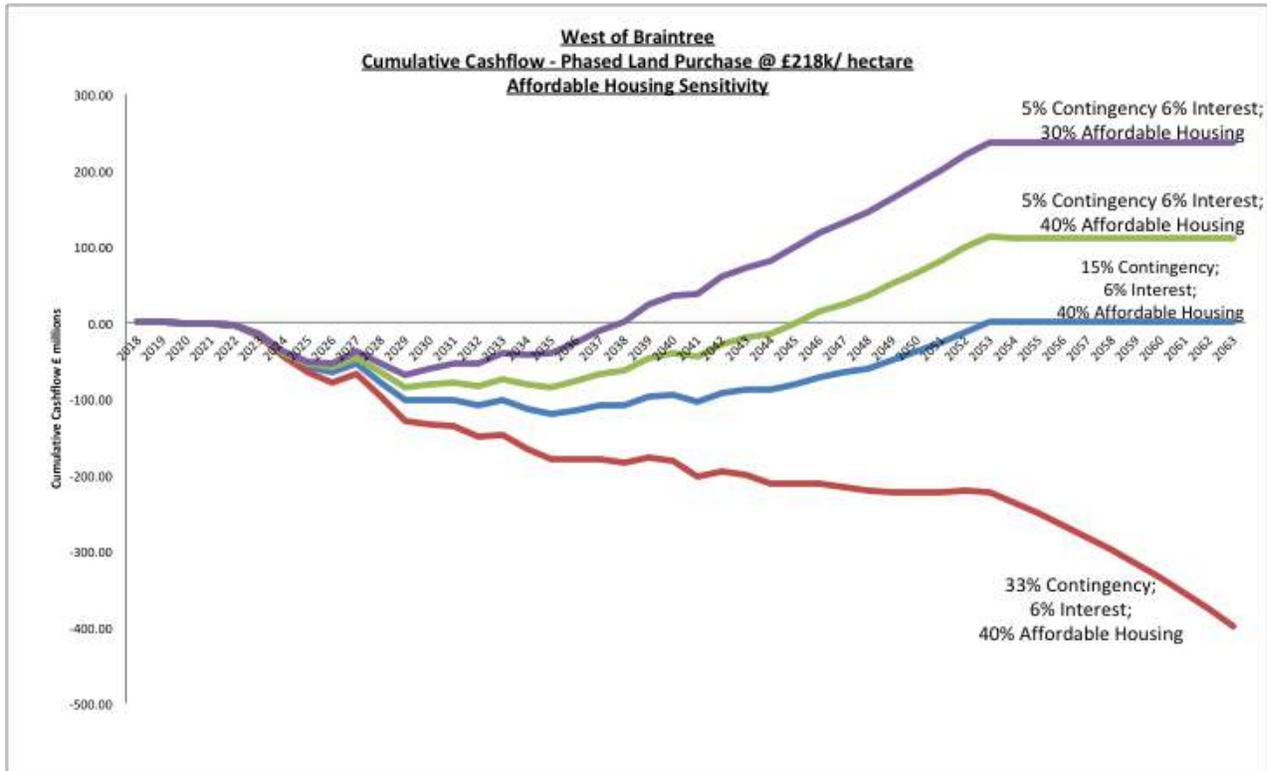


Figure 4 demonstrates that breakeven on Infrastructure Costs with 40% Affordable Housing is only a 15% increase from Hyas' Base Case (versus 33% in the 30% Affordable Housing case). That renders the business case marginal by any sensible definition.

f. Conclusions

It is clear from the simple sensitivity analysis above that either insufficient stress testing has been undertaken by BDC and NEGC, or that the stress testing has been undertaken but the results not made public.

No commercial lender would consider lending to a proposition such as this, where relatively small changes to key assumptions render the project insolvent. Basic financial due diligence has not been undertaken, which puts taxpayers in peril and may lead to material unexpected public subsidy being required.

The Statement on Viability prepared for the Parish Councils and SERCLE is confined to infrastructure and land costs. However, it is vital to note that Hyas Associates Ltd makes clear at the start of its Report that the modelling in its appraisal illustrates a scenario in which affordable housing is provided at 30% of total housing stock. BDC policy requires 40% affordable housing.

This further signifies the significant unviability of the project. It also invites serious objection on planning policy grounds at national and local levels, as it goes fundamentally against the Core Principles for Garden Cities set out by the TCPA and mocks the Government's very recently re-espoused emphasis on the need for balanced communities and homes for first time buyers.

The Statement on Viability should leave no one in any doubt about the financial stupidity and inherent bad and rushed planning of this project, built on the shakiest of foundations.

on behalf of;

Bardfield Saling Parish Meeting

Felsted Parish Council

Great Bardfield Parish Council

Great Saling Parish Council

Rayne Parish Council

Shalford Parish Council

SERCLE (Stop Erosion of Rural Communities in Local Essex)