

## **Re: The Joint Core Strategy (Policy 4); Focussed Changes; and Affordable Housing Viability Study**

**To:** Greater Norwich Development Partnership

**From :** Drivers Jonas Deloitte

**Date :** November 2010

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### **Response to affordable housing related written representations. (within EIP document 76 and letters relating to matter 2 on GNDP's website)**

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The Study we undertook was a detailed and rigorous investigation into development viability in the Greater Norwich area, with each input being carefully considered and researched by a team of qualified industry professionals. Our key conclusions were, in short:

- viability is site specific - immaterial of what target is set there will be schemes that cannot achieve it, so policy must be flexible;
- based on 40% affordable housing, no grant, 85/15 tenure split, 'neutral' market conditions, and our view on average new build values in mid to late 2010 (£2,250-£2,500psm), 44% of options tested are viable and 9% are marginal;
- the Study effectively assumes development will occur equally (50/50) on Greenfield and Brownfield land, but it is currently anticipated that more Greenfield land will come forward for residential development, which may make a greater proportion of the scenarios tested viable due to the lower benchmark values
- Social Housing Grant has a significant effect on scheme viability and changing affordable tenures has a marginal effect on viability

We have reviewed representations made within EIP 76 ([www.gndp.org.uk/our-work/joint-core-strategy/evidence-base/](http://www.gndp.org.uk/our-work/joint-core-strategy/evidence-base/)) and within letters relating to matter 2 ([www.gndp.org.uk/our-work/joint-core-strategy/jcs-examination/#heading-4](http://www.gndp.org.uk/our-work/joint-core-strategy/jcs-examination/#heading-4)).

Representations have been made relating to the Affordable Housing Viability Study, its findings and related policies. These can be summarised into the following topics: Interpretation of appraisal outcomes; Section 106 (and CIL) costs; Impact of sustainability requirements; Grant funding for affordable housing; Benchmark land values; Target for smaller sites; Density range appraised; Tenure Splits; Model used to undertake the study; and a number of miscellaneous topics.

This document responds to representations made on each of these topics in turn, summarising key comments, the source of comments and our response (evidenced where appropriate).

## Topic 1: Section 106 (and CIL) costs

Respondent	Agent	GNDP Code	DJD Ref
Lothbury Property Trust Company Ltd [8234]	Landmark Planning Ltd (Mr Peter Wilkinson) [6976]	O - 12201 - 8234 - Affordable Housing Study - i, ii, iii	1
Persimmon/Hopkins Homes/Taylor Wimpey [8726]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11932 - 8726 - FC1 Housing Delivery and supporting text - i, ii, iii	5
Easton Landowners Consortium [8547]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11938 - 8547 - FC1 Housing Delivery and supporting text - i, ii, iii	5
Hethersett Land Ltd (Hethersett Consortium) (Mr John Long) [8825]	N/A.	O - 12284 - 8825 - FC1 Housing Delivery and supporting text - i, ii	11
Blue Living (Ray Houghton) [8710]	Bidwells Norwich (309) (Mr Ray Houghton)	No Code – Letter	27

### Extracts from comments made

*"This would appear to be a significant undervaluation, as this only just exceeds the education contribution for individual properties"* (Lothbury)

*"We also consider the study likely to underestimate the S106/CIL contributions"* (Persimmon/etc.)

*"We also consider the study likely to underestimate the S106/CIL contributions"* (Easton)

*"Blue Living also considers that the studies are likely to underestimate the Section 106/CIL contributions"* (Blue Living)

### DJD Response

We have assumed s.106 costs of £7,000 for each residential unit. Our Study takes into account guidance where available and is also underpinned by data provided to us on actual Section 106 contributions received over the last 5-6 years in Broadland and South Norfolk.

Norwich provide s.106 guidance on their website (not an adopted policy) and a calculator to estimate the contribution that may be requested. We used this calculator to estimate a contribution to equate to £7,350 per unit. 70% of this is due to an estimated education contribution, which Norwich state is "dependent on capacity at local schools, figure given is maximum". Broadland and South Norfolk do not provide a calculator.

Broadland have provided data, which is not site specific, but between 2004 and 2009 they confirmed that they received an average of £4,779 per unit through Section 106 payments.

South Norfolk have been able to provide us with site specific data. We have include a summarised version of this in the appendix to this document (we have been asked to keep the identity of each site anonymous). The pertinent points are that on sites of between 20 and 1,000 units, delivered between 2005 and 2009, payments ranged from around £1,000 to £7,000 per unit (£2,678 on average). The largest payment (£7,045 per unit) related to a site for over 100 units, including education contributions, with the Section 106 agreement being signed in 2009.

Norwich have not been able to provide specific data on this but confirm that their secured contributions are broadly similar to the other two local authorities'.

We are also aware of two large schemes (both 500+ units), where the s.106 agreements are currently under negotiation. At this stage we have been asked to keep the locations confidential, but we understand that the contributions are likely to be between £7,000 and £8,000 for both (paid in smaller amounts over several years).

CIL costs are to date unknown, although £7,000 for each unit is the same as CIL costs of around £11,670 for each private unit (assuming 40% affordable housing). We believe that we have taken a robust and evidence based stance regarding Section 106 costs.

## Topic 2: Impact of sustainability requirements

Respondent	Agent	GNDP Code	DJD Ref
Timewell [8209]	Bidwells Norwich (309) (Mr John Long) [8211]	O - 11820 - 8209 - FC1 Housing Delivery and supporting text - i, ii	4
Persimmon/Hopkins Homes/Taylor Wimpey [8726]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11932 - 8726 - FC1 Housing Delivery and supporting text - i, ii, iii	5
Easton Landowners Consortium [8547]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11938 - 8547 - FC1 Housing Delivery and supporting text - i, ii, iii	5
Hethersett Land Ltd (Hethersett Consortium) (Mr John Long) [8825]	N/A.	O - 12284 - 8825 - FC1 Housing Delivery and supporting text - i, ii	11&16
Sunguard Homes [8320]	Bidwells Norwich (309) (Mr Glyn Davies) [7725]	O - 12290 - 8320 - FC1 Housing Delivery and supporting text - i, ii	12
Blue Living (Ray Houghton) [8710]	Bidwells Norwich (309) (Mr Ray Houghton)	No Code – Letter	27
Thorpe and Felthorpe Trust [6993]	Savills (London) (Miss Sarah Beuden) [8612]	No Code – Letter	14

### Extracts from comments made

*“the viability testing has disregarded the JCS policy requirement for homes to achieve Code for Sustainable Home level 6 by 2015”* (Timewell)

*“The study sets out ... additional costs of £7,000 per unit to achieve Code Level 4. ... No evidence is presented to substantiate these estimates”* (Persimmon/etc/Easton)

*“Policy 3 seeks to require Code Level 6 from 2015 and it is this impact which should have assessed by the study in order to inform policy.”* (Persimmon/etc/Easton)

*“no regard has been had in the viability testing to the cost of achieving Code for Sustainable Homes level 6 by 2015”* (Sunguard)

*“Policy 3 seeks to require Code level 6 from 2015 and the impact of this has not been considered”* (Blue Living)

*“Code 6 will be required from housing associations by 2015 and private developers by 2016... it is considered that Code 6 should have also been factored into the assessment.”* (Thorpe)

### DJD Response

Our base construction assumption is for private units to comply with current building regulations and affordable units to achieve Code for Sustainable Homes Level 3 (CSH3). We undertook sensitivity against this based on all units achieving CSH4, and all units achieving CSH5. The uplifts that we used are based on research undertaken by Communities and Local Government published in March 2010 (appended). Our study shows that based on 2010 assumptions achieving CSH4 is achievable, but CSH5 could only be attained in a small number of scenarios.

There is still a lack of definition about precisely what be required for CSH6 and very little in the way of evidence on costs. The site specific viability clause will ensure that any changes in sustainability requirements are ‘future-proofed’ from a viability perspective.

## Topic 3: Quantum/Use of Grant funding for affordable housing

Respondent	Agent	GNDP Code	DJD Ref
Timewell [8209]	Bidwells Norwich (309) (Mr John Long) [8211]	O - 11820 - 8209 - FC1 Housing Delivery and supporting text - i, ii	4
Hetherset Land Ltd (Hetherset Consortium) (Mr John Long) [8825]	N/A.	O - 12284 - 8825 - FC1 Housing Delivery and supporting text - i, ii	11&16
Thorpe and Felthorpe Trust [6993]	Savills (London) (Miss Sarah Beuden) [8612]	No Code – Letter	14

### Extracts from comments made

*“the levels of public subsidy factored in to the model demonstrate scheme viability with public subsidy seem very generous”* (Timewell)

*“Neither is it believed that the public subsidy assumptions used by DJD are sound at £46,900 per rented unit and £26,100 per intermediate unit”* (Hetherset)

*“it is considered a prudent approach to assume no social housing grant as... (it) is unrealistic that grant funding will always be available and the levels of any funding will not be known at the outset. “* (Thorpe)

### DJD Response

Our Study looked at three grant positions: no grant; grant on all affordable units; and grant on social rented units only. We have taken data available on the Homes and Communities Agency’s (HCA) website relating to grant allocations between Q4 2008 and the most recent data available at the time (Q4 2009). We have appended this data to this document.

The data shows that the HCA assisted in the delivery of 646 social rented homes with grant equating to £46,909 per unit on average, and 91 shared ownership homes with grant equating to an average of £26,133. The HCA attended the stakeholder event and these levels were discussed.

It is now known that the overall pot for affordable housing funding is £4.4bn for the next 4 years. Over that period the government has targeted 150,000 new affordable homes to be built. This equates to an average grant rate of £29,333 per unit, although a proportion of this target will of course be delivered without any public subsidy so the average per unit is likely to be higher.

To ignore the role that HCA funding has, and will have, in the development market would be misleading and prejudicial against those in housing need.

Further, a new Housing White Paper is expected shortly, outlining proposed social housing reform. This is expected to allow RSLs to charge higher rents (up to 80% of market rent) depending on an occupier’s specific financial status, and that this will eliminate the need to use any grant funding.

The results of our appraisals, based on 40% affordable housing and our view on average new build values in mid to late 2010 (£2,250-£2,500psm) are:

	Viable	Marginal	Unviable
no grant	44%	9%	47%
grant on SR only	71%	7%	22%
with grant	74%	7%	19%

## Topic 4: Benchmark land values

Respondent	Agent	GNDP Code	DJD Ref
Lothbury Property Trust Company Ltd [8234]	Landmark Planning Ltd (Mr Peter Wilkinson) [6976]	O - 12201 - 8234 - Affordable Housing Study - i, ii, iii	1
Landstock Estates Ltd & Landowners Group [8809]	Barton Willmore (Mr Andrew Wilford) [8811]	O - 12235 - 8809 - Affordable Housing Study - i, ii, ii	2
Taylor Wimpey Developments & Hopkins Homes (Mr John Holden) [8826]	Pegasus Planning Group (Mr John Holden) [4250]	O - 12277 - 8826 - FC1 Housing Delivery and supporting text - None	9
Trustees of the Gurloque Settlement, Norwich Consolidated Charities, the Great Hospital, Norwich and of Anguish's Educational Foundation (Mr John Holden) [8834]	Pegasus Planning Group (Mr John Holden) [4250]	O - 12287 - 8834 - FC1 Housing Delivery and supporting text - None	9
The Leeder Family (Mr John Holden) [8828]	Pegasus Planning Group (Mr John Holden) [4250]	O - 12281 - 8828 - FC1 Housing Delivery and supporting text - None	10
Thorpe and Felthorpe Trust [6993]	Savills (London) (Miss Sarah Beuden) [8612]	O - 12318 - 6993 - FC1 Housing Delivery and supporting text – ii	14

### Extracts from comments made

*"The Council's estimates regarding land values ... are questionable. The ... Study suggests a land value of between £500,000 - £750,000 per hectare ... a higher range of £750,000 - £950,000 per hectare should be considered low"* (Lothbury)

*"Whilst it is accepted that land values have fallen in recent years ... most developers would have secured options on greenfield sites before the reduction in values occurred"* (Lothbury)

*"The "accepted benchmark" should be the relationship between EUV and/or AUV taking account of factors which incentivise a landowner to sell, and residual land value"* (Landstock)

*"We would question the relevance/validity of the AHVS in the light of local land values and the 'benchmarks' utilised by DJD"* (Pegasus)

*"a developer will only bring forward land if the grant of planning permission creates a uplift in value that is considered to deliver a reasonable profit"* (Thorpe)

### DJD Response

We have assessed viability against six benchmarks of between £100,000 and just over £1.7m per hectare, above which an option is deemed to be viable, below which the option is deemed to be marginal or not viable. These figures are based on the Existing Use Values, plus a premium, of the types of sites that might come forward for development on Greenfield or Brownfield land.

Existing Use Values have been accepted as the appropriate benchmark in other affordable housing viability studies, recent planning inspector and Secretary of State decisions and other toolkits such as the HCA's EAT model and the Three Dragons' toolkit used in London.

Land values are directly linked to planning requirements. The JCS proposes changes to these local planning requirements. To benchmark the results of our appraisals against historic land values is counter cyclical – this would imply that any reduction in land value due to potential changes to planning requirements would then be deemed unviable.

We do not believe that it is the role of the planning system to protect or underpin historic/inflated land values. Options can be renegotiated.

By considering Existing Use Values the interests of all parties are considered. It ensures that potential changes to planning requirements will still enable a landowner to receive a premium on the current use value of their land (although perhaps not the very large uplifts seen over recent years), as well as allowing a developer to build housing profitably.

## Topic 5: Interpretation of appraisal outcomes

Respondent	Agent	GNDP Code	DJD Ref
Lothbury Property Trust Company Ltd [8234]	Landmark Planning Ltd (Mr Peter Wilkinson) [6976]	O - 12201 - 8234 - Affordable Housing Study - i, ii, iii	1
Landstock Estates Ltd & Landowners Group [8809]	Barton Willmore (Mr Andrew Wilford) [8811]	O - 12235 - 8809 - Affordable Housing Study - i, ii, ii	2
Timewell [8209]	Bidwells Norwich (309) (Mr John Long) [8211]	O - 11820 - 8209 - FC1 Housing Delivery and supporting text - i, ii	4
Hethersett Land Ltd (Hethersett Consortium) (Mr John Long) [8825]	N/A.	O - 12284 - 8825 - FC1 Housing Delivery and supporting text - i, ii	11
Sunguard Homes [8320]	Bidwells Norwich (309) (Mr Glyn Davies) [7725]	O - 12290 - 8320 - FC1 Housing Delivery and supporting text - i, ii	12
Blue Living (Ray Houghton) [8710]	Bidwells Norwich (309) (Mr Ray Houghton)	No Code – Letter	27
Mr Hugh Ivins [8500]	N/A	No Code – Letter	30
Thorpe and Felthorpe Trust [6993]	Savills (London) (Miss Sarah Beuden) [8612]	No Code – Letter	14

### Extracts from comments made

*“Neither figure concludes that the market can support such a high percentage”* Referring to appraisal results (Lothbury)

*“it is difficult to understand how the consultants have arrived at their recommendation ... a 40% strategic policy wide target has not been justified”* (Landstock)

*“Think target should be set at a level that can be shown to be deliverable in the majority of tested viability scenarios without public subsidy.”* (Timewell)

*“Regarding appraisal results: given the ... likely inability for public funding to be available to subsidise all affordable housing in the Greater Norwich area, the GNDP’s suggestion that this represents a “significant” number of instances, sufficient to justify the 40% target is unsound”* (Hethersett)

*“target should be set at a level that can be demonstrated to be deliverable in the majority of tested viability scenarios without public subsidy”* (Sunguard)

*“the proportion of affordable housing sought ... is neither justified nor effective as ... the majority of assessed outcomes were not viable at a level of 40% without social housing grant”* (Thorpe)

### DJD Response

Our appraisals show that 40% affordable housing is achievable in around third of scenarios tested without grant (based on all iterations and the ‘base’ value range). Based on our opinion of average new build values in mid to late 2010 (£2,250-£2,500psm) and 40% affordable housing, with a 85/15 split and assuming ‘neutral’ market conditions, (see the table in our response to Topic 3) 44% of options tested are viable, rising to 74% assuming grant (or an RSL offer of the same amount based on increased rents and nil grant).

Through its affordable policy, GNDP are seeking to secure the maximum fair and reasonable amount of affordable housing that a site can viably deliver. We believe that it is only fair that sites which can deliver 40% should do so.

The Study shows that viability will vary from site to site. PPS3 states that both viability and need should be considered together when considering affordable housing targets. The the proposed site specific viability clause in Policy 4 does precisely that, by requiring the maximum viable amount of affordable housing that a scheme can deliver.

This flexible approach is the best way to meet the evidenced need for affordable housing in the area. Some respondents have suggested that the target should be set where the majority of sites can deliver the target without grant. This would fail to capture those sites that can viably deliver higher levels of affordable housing, and ignores the important role social housing grant (see topic 3).

## Topic 6: Target for smaller sites

Respondent	Agent	GNDP Code	DJD Ref
Landstock Estates Ltd & Landowners Group [8809]	Barton Willmore (Mr Andrew Wilford) [8811]	O - 12235 - 8809 - Affordable Housing Study - i, ii, ii	2
Persimmon/Hopkins Homes/Taylor Wimpey [8726]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11932 - 8726 - FC1 Housing Delivery and supporting text - i, ii, iii	5
Easton Landowners Consortium [8547]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11938 - 8547 - FC1 Housing Delivery and supporting text - i, ii, iii	5
Mr Hugh Ivins [8500]	N/A	No Code – Letter	30

### Extracts from comments made

*“We have considered the DJD report but we do not find any indication that smaller sites can only support lower proportions of affordable housing” Cite work carried out by consultants Adams Integra in 2009 for Aylesbury Vale District Council. (Landstock)*

*“The differential targets in the policy are likely to distort the market. They will make smaller sites more attractive to the detriment of the major sites.” (Persimmon & Easton)*

### DJD Response

We undertook several sensitivities on schemes of between 5 and 15 units. We changed a number of our assumptions from the main study, including slightly higher build costs and slightly higher existing use value (in terms of per proposed dwelling). We found that these small schemes are highly sensitive to appraisal inputs, including the quantum of affordable housing required. Introducing a target without phasing it in dramatically impacts viability. Whilst the proposed site specific viability clause in Policy 4 will assist, we recommend that the target be phased in.

The methodology for phasing the target in that we proposed in our Study is similar to the proposed Policy 4 methodology.

<b>Topic 7: Density range appraised</b>			
<b>Respondent</b>	<b>Agent</b>	<b>GNDP Code</b>	<b>DJD Ref</b>
Mr Hugh Ivins [8500]	N/A	O - 12304 - 8500 - Affordable Housing Study - i, ii	3
<b>Extracts from comments made</b>			
<i>"Density the range from 30 uph upwards does not take account of the lower densities which are prevalent in the Broadland District"</i>			
<b>DJD Response</b>			
<p>We modelled three different densities: low (30 units per hectare); mid (50 units per hectare); and high (100 units per hectare). This is based on local policies and details of real schemes delivered over recent years. We feel this is an appropriate range, which captures the majority of schemes that will be delivered.</p> <p>As with our other assumptions, there will of course be schemes which do not exactly match what we have modelled. If this results in a scheme being unviable the proposed site specific viability clause in Policy 4 will allow a viability case to be made.</p>			



## Topic 8: Tenure Splits

Respondent	Agent	GNDP Code	DJD Ref
Hethersett Land Ltd (Hethersett Consortium) (Mr John Long) [8825]	N/A.	O - 12284 - 8825 - FC1 Housing Delivery and supporting text - i, ii	11&16
Sunguard Homes [8320]	Bidwells Norwich (309) (Mr Glyn Davies) [7725]	O - 12290 - 8320 - FC1 Housing Delivery and supporting text - i, ii	12
Persimmon/Hopkins Homes/Taylor Wimpey [8726]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11933 - 8726 - FC3 changes to paragraph 5.28 - i, ii, iii	22
Easton Landowners Consortium [8547]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11939 - 8547 - FC3 changes to paragraph 5.28 - i, ii	22

### Extracts from comments made

*“the Study suggests that tenure split is stated as having only a subtle effect on scheme viability ... highlighting a difference of £152 per m2”* (Hethersett)

*“little regard has been had to the affects of changing the tenure split, including intermediate tenures”* (Sunguard)

*“strategic developments will be delivered over a considerable period of time and ... the suggested 85%:15% split between social rent and intermediate is inappropriate (and) should be 60% social rent and 40% intermediate”* (Persimmon & Easton)

### DJD Response

Policy 4 proposes that affordable housing should be delivered as ‘approximately 85% social rented and 15% intermediate tenures’. The Study considers the viability of this and looks at the effect of varying the quantity of affordable tenures. We modelled 85/15, 70/30 and 60/40 (social rent/intermediate). We have found that changing affordable tenures has an effect on viability, however the effect is marginal compared to other factors that we tested.

Based on 40% affordable housing, no grant, and our opinion of average new build values in mid to late 2010 (£2,250-£2,500psm) the results of our Study are:

Tenure split	Viable	Marginal	Unviable
60/40	52%	15%	33%
70/30	49%	15%	36%
85/15	44%	9%	47%

Representations made by Persimmon/Hopkins Homes/Taylor Wimpey/ Easton Landowners Consortium seems to suggest a correlation between timing of delivery and affordable housing tenures.

<b>Topic 9: Model used to undertake the study</b>			
<b>Respondent</b>	<b>Agent</b>	<b>GNDP Code</b>	<b>DJD Ref</b>
Blue Living (David Copeland) [8710]	N/A	S - 11887 - 8710 - FC3 changes to paragraph 5.28 – None	21
<b>Extracts from comments made</b>			
<i>"Blue Living would much prefer to see a greater measure of objectivity through the use of an agreed model e.g. that provided by HCA"</i>			
<b>DJD Response</b>			
<p>GNDP required a Study to investigate the impact of changing several appraisal inputs, necessitating over 26,000 appraisals to be undertaken. We built a bespoke model to manage this.</p> <p>Our model is an excel based replica of Argus Developer, which is a software programme used extensively by those active in the development market. We have replicated this in excel to allow us to model the very large numbers of development scenarios.</p> <p>'Off the shelf' packages, such as the HCA EAT model and the GLA's Three Dragons' toolkit, do not have this functionality and have a number of other weaknesses and limitations. Whilst a number of Local Authorities require the use of a specific model, GNDP have remained silent, allowing applicants the flexibility to submit models that best accord with their viability proposals. We would however recommend the use of Argus Developer as a robust, functional and flexible model.</p> <p>We have included within the appendix a copy of one of the many scenarios we have tested within our excel model, and the corresponding Argus Developer model.</p>			

## Topic 10: Miscellaneous

Respondent	Agent	GNDP Code	DJD Ref
Persimmon/Hopkins Homes/Taylor Wimpey [8726]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11932 - 8726 - FC1 Housing Delivery and supporting text - i, ii, iii	5
Easton Landowners Consortium [8547]	Savills (Cambridge) (Mr Colin Campbell) [7597]	O - 11938 - 8547 - FC1 Housing Delivery and supporting text - i, ii, iii	5
Thorpe and Felthorpe Trust [6993]	Savills (London) (Miss Sarah Beuden) [8612]	O - 12318 - 6993 - FC1 Housing Delivery and supporting text – ii	14
Hethersett Land Ltd (Hethersett Consortium) (Mr John Long) [8825]	N/A.	O - 12284 - 8825 - FC1 Housing Delivery and supporting text - i, ii	11&16

### Extracts from comments made

*“The study assess viability based on a notional one hectare site. The results are then extrapolated to assess viability on all sites. We consider that approach to be unsound.”* Cite infrastructure needs and other up front costs. (Persimmon & Easton)

*“The three dragons viability model commonly used in London assumes a developer profit of 15%. Clearly, if time frames are longer and development schemes require a more complex infrastructure approach a higher developer profit should be assumed.”* (Thorpe)

*“It is suggested that in order for any future financial non viability arguments ... that the assumptions made during the Drivas Jonas study ... be set out in an appendix to the Joint Core Strategy... In this way if key elements and assumptions ... differ greatly in the future there can be taken into consideration during negotiations.”* (Hethersett)

### DJD Response

Our study is underpinned by data provided to us on actual sites delivered in South Norfolk and Norwich, and current policies relating to target densities over the three local authorities. This shows that the majority of sites being delivered are between around a quarter of a hectare and three hectares. We concluded that a one hectare site was the appropriate size of site to appraise.

The findings of the one hectare site appraisals can be applied to sites of all sizes, with the exception of very small sites, which have been appraised separately. We have reiterated throughout this process that viability can be affected by site specific factors, and where these cause a scheme to become unviable the proposed site specific viability clause in Policy 4 will allow a viability case to be made.

The Three Dragons’ model assumes 17.5% profit on private sales values, and 6% profit on the construction cost of the affordable units. This results in much lower profit assumptions than those used in our model (between 17.5% an 25% profit on all costs – land, construction, fees etc.). Neither the three dragons model nor the HCA’s EAT model provide higher profit rates for schemes deemed to be unusually risky.

All our assumptions are set out in detail within our final report, which is available on GNDP’s website.

## Appendix

### Topic 1: Section 106 (and CIL) costs

#### Summary of all schemes in South Norfolk that collected s106 costs

Size of Scheme	£/unit	Year s.106 signed
less than 25	£5,444	2008
less than 25	£6,098	2006
less than 25	£2,984	2007
less than 25	£2,911	2006
26 to 50	£5,896	2007
26 to 50	£1,660	2007
26 to 50	£4,230	2008
26 to 50	£2,985	2007
26 to 50	£4,682	2005
26 to 50	£5,343	2009
26 to 50	£5,216	2010
51 to 100	£1,335	2007
51 to 100	£5,323	2010
51 to 100	£1,844	2006
51 to 100	£3,729	2007
51 to 100	£3,131	2007
101 to 300	£7,045	2009
101 to 300	£761	2005
301+	£3,251	2006
301+	£1,224	2005

#### Broadland

Average between 2004-9 = £4,779 per unit.

#### GNDP area

Currently under negotiation:

Scheme of 500+ units, with s.106 costs likely to be circa £8,000 per unit, cashflowed over several years.

Scheme of 500+ units, with s.106 costs likely to be circa £7,000 per unit, cashflowed over several years.

## Topic 2: Impact of sustainability requirements

Summary of extra-over costs of building to each level of the Code in each of the dwelling types and for a range of development scenarios.

Extra-over costs (E/O) costs are measured from a baseline of constructing a 2006 Building Regulation compliant dwelling and are tabulated as an absolute cost and as a % increase over the base build cost.

Code Level	2b-Flat		2b-Terrace		3b-Semi		4b-Detached	
	E/O cost	%	E/O cost	%	E/O cost	%	E/O cost	%
<b>Small brownfield (20 dwellings at 80 dph)</b>								
1	£310	0.5%	£230	0.3%	£360	0.4%	£310	0.3%
2	£1,670	2.8%	£1,620	1.9%	£1,040	1.1%	£970	1.0%
3	£2,460	4.1%	£2,420	2.8%	£3,020	3.2%	£2,680	2.7%
4	£5,610	9.4%	£7,360	8.5%	£8,140	8.7%	£6,030	6.0%
5	£17,740	29.7%	£24,370	28.2%	£26,830	28.6%	£30,130	30.1%
6	£28,510	47.7%	£34,810	40.3%	£38,730	41.2%	£42,770	42.8%
<b>Medium Urban (350 dwellings at 80 dph)</b>								
1	£260	0.4%	£170	0.2%	£260	0.3%	£270	0.3%
2	£1,560	2.6%	£1,500	1.7%	£890	0.9%	£810	0.8%
3	£2,340	3.9%	£2,000	2.3%	£2,900	3.1%	£2,510	2.5%
4	£5,440	9.1%	£7,190	8.3%	£7,970	8.5%	£5,660	5.9%
5	£17,570	29.4%	£24,200	28.0%	£26,650	28.4%	£29,960	30.0%
6	£19,580	32.8%	£26,550	30.7%	£28,390	30.2%	£31,230	31.2%
<b>Large Urban (3600 dwellings at 80 dph)</b>								
1	£250	0.4%	£160	0.2%	£250	0.3%	£260	0.3%
2	£1,550	2.6%	£1,490	1.7%	£890	0.9%	£810	0.8%
3	£2,340	3.9%	£2,000	2.3%	£2,890	3.1%	£2,510	2.5%
4	£6,360	10.6%	£6,200	7.2%	£6,580	7.0%	£6,470	6.5%
5	£16,640	27.9%	£23,210	26.8%	£25,580	27.2%	£28,790	28.8%
6	£23,210	38.9%	£29,920	34.6%	£32,390	34.5%	£36,040	36.0%
<b>Small greenfield (10 dwellings at 40dph)</b>								
1	£320	0.5%	£230	0.3%	£330	0.4%	£320	0.3%
2	£1,620	2.7%	£1,560	1.8%	£990	1.1%	£880	0.9%
3	£2,160	3.6%	£2,120	2.5%	£2,720	2.9%	£2,380	2.4%
4	£5,350	9.0%	£7,150	8.3%	£7,860	8.4%	£6,910	6.9%
5	£17,310	29.0%	£26,970	31.2%	£29,260	31.1%	£32,270	32.3%
6	£27,650	46.3%	£37,400	43.3%	£40,800	43.4%	£45,230	45.2%
<b>Medium edge of town (650 dwellings at 40 dph)</b>								
1	£270	0.5%	£190	0.2%	£370	0.4%	£290	0.3%
2	£1,550	2.6%	£1,500	1.7%	£920	1.0%	£810	0.8%
3	£2,090	3.5%	£2,050	2.4%	£2,650	2.8%	£2,310	2.3%
4	£5,280	8.8%	£7,080	8.2%	£7,800	8.3%	£6,840	6.8%
5	£17,240	28.9%	£26,900	31.1%	£29,190	31.1%	£32,200	32.2%
6	£24,080	40.3%	£31,250	36.1%	£33,090	35.2%	£36,180	36.2%
<b>Large edge of town (3,300 dwellings at 40 dph)</b>								
1	£270	0.5%	£180	0.2%	£370	0.4%	£290	0.3%
2	£1,550	2.6%	£1,490	1.7%	£920	1.0%	£810	0.8%
3	£2,090	3.5%	£2,050	2.4%	£2,640	2.8%	£2,310	2.3%
4	£5,280	8.8%	£7,080	8.2%	£7,790	8.3%	£6,830	6.8%
5	£17,230	28.8%	£26,890	31.1%	£29,190	31.1%	£32,200	32.2%
6	£27,710	46.4%	£34,620	40.0%	£37,090	39.5%	£40,990	41.0%

## Topic 3: Quantum/Use of Grant funding for affordable housing

Lead Partner Organisation Name	Product Type Description	Sponsor LA Name	Total Grant (Unit)	No. of Units (Unit)	Per unit
Circle Anglia Limited	Homebuy Newbuild	Broadland	£57,500.00	2	£28,750
Circle Anglia Limited	Homebuy Newbuild	Broadland	£88,275.00	4	£22,069
Flagship Housing Group Limited	Homebuy Newbuild	Broadland	£20,000.00	2	£10,000
Orbit Housing Group Limited	Homebuy Newbuild	Broadland	£41,000.00	2	£20,500
Circle Anglia Limited	Homebuy Newbuild	Norwich	£112,044.82	4	£28,011
Circle Anglia Limited	Homebuy Newbuild	Norwich	£207,282.91	5	£41,457
Circle Anglia Limited	Homebuy Newbuild	Norwich	£132,773.11	3	£44,258
Circle Anglia Limited	Homebuy Newbuild	Norwich	£147,899.16	3	£49,300
Circle Anglia Limited	Homebuy Newbuild	Norwich	£302,348.99	10	£30,235
Circle Anglia Limited	Homebuy Newbuild	Norwich	£260,134.23	8	£32,517
Circle Anglia Limited	Homebuy Newbuild	Norwich	£73,020.13	2	£36,510
Circle Anglia Limited	Homebuy Newbuild	Norwich	£44,496.64	1	£44,497
Circle Anglia Limited	Homebuy Newbuild	Norwich	£37,600.00	2	£18,800
Circle Anglia Limited	Homebuy Newbuild	South Norfolk	£99,818.00	4	£24,955
Circle Anglia Limited	Homebuy Newbuild	South Norfolk	£145,952.49	7	£20,850
Circle Anglia Limited	Homebuy Newbuild	South Norfolk	£120,047.51	5	£24,010
Hastoe Housing Association Limited	Homebuy Newbuild	South Norfolk	£32,000.00	2	£16,000
Hastoe Housing Association Limited	Homebuy Newbuild	South Norfolk	£55,878.00	6	£9,313
Metropolitan Housing Trust Limited	Homebuy Newbuild	South Norfolk	£0.00	4	£0
Metropolitan Housing Trust Limited	Homebuy Newbuild	South Norfolk	£0.00	3	£0
Metropolitan Housing Trust Limited	Homebuy Newbuild	South Norfolk	£0.00	1	£0
Metropolitan Housing Trust Limited	Homebuy Newbuild	South Norfolk	£128,659.79	4	£32,165
Metropolitan Housing Trust Limited	Homebuy Newbuild	South Norfolk	£85,113.40	2	£42,557
Metropolitan Housing Trust Limited	Homebuy Newbuild	South Norfolk	£74,226.80	2	£37,113
Orbit Housing Group Limited	Homebuy Newbuild	South Norfolk	£75,000.00	2	£37,500
	Homebuy Newbuild	South Norfolk	37,000	1	£37,000
			<b>2,378,071</b>	<b>91</b>	<b>£26,133</b>

Lead Partner Organisation Name	Product Type Description	Sponsor LA Name	Total Grant (Unit)	No. of Units (Unit)	Per unit
Circle Anglia Limited	Social Rent	Broadland	£316,342.00	6	£52,724
Circle Anglia Limited	Social Rent	Broadland	£336,418.00	8	£42,052
Circle Anglia Limited	Social Rent	Broadland	£102,582.00	1	£102,582
Circle Anglia Limited	Social Rent	Broadland	£186,982.18	6	£31,164
Circle Anglia Limited	Social Rent	Broadland	£83,819.60	3	£27,940
Circle Anglia Limited	Social Rent	Broadland	£76,297.33	2	£38,149
Circle Anglia Limited	Social Rent	Broadland	£135,400.89	3	£45,134
Circle Anglia Limited	Social Rent	Broadland	£315,560.00	4	£78,890
Circle Anglia Limited	Social Rent	Broadland	£73,908.14	1	£73,908
Circle Anglia Limited	Social Rent	Broadland	£81,194.86	1	£81,195
Orwell Housing Association Limited	Social Rent	Broadland	£130,579.35	2	£65,290
Orwell Housing Association Limited	Social Rent	Broadland	£409,420.65	7	£58,489
Flagship Housing Group Limited	Social Rent	Broadland	£107,000.00	3	£35,667
Orbit Housing Group Limited	Social Rent	Broadland	£121,459.85	2	£60,730
Orbit Housing Group Limited	Social Rent	Broadland	£133,917.27	2	£66,959
Orbit Housing Group Limited	Social Rent	Broadland	£64,622.87	1	£64,623
Orbit Housing Group Limited	Social Rent	Broadland	£36,056.60	1	£36,057
Orbit Housing Group Limited	Social Rent	Broadland	£40,471.70	1	£40,472
Orbit Housing Group Limited	Social Rent	Broadland	£172,188.68	3	£57,396
Orbit Housing Group Limited	Social Rent	Broadland	£63,283.02	1	£63,283
Orbit Housing Group Limited	Social Rent	Broadland	£141,948.53	3	£47,316
Orbit Housing Group Limited	Social Rent	Broadland	£105,551.47	2	£52,776
CIRCLE ANGLIA	Social Rent	Broadland	£770,534.00	12	£64,211
CIRCLE ANGLIA	Social Rent	Broadland	£193,576.00	3	£64,525
CIRCLE ANGLIA	Social Rent	Broadland	£437,152.00	6	£72,859
CIRCLE ANGLIA	Social Rent	Broadland	£319,509.00	4	£79,877
Orwell Housing Association Limited	Social Rent	Broadland	£0.00	1	£0
Flagship Housing Group Limited	Social Rent	Broadland	£180,000.00	3	£60,000
Orbit Housing Group Limited	Social Rent	Broadland	£0.00	5	£0
Circle Anglia Limited	Social Rent	Norwich	£19,024.96	1	£19,025
Circle Anglia Limited	Social Rent	Norwich	£52,447.18	2	£26,224
Circle Anglia Limited	Social Rent	Norwich	£115,178.12	4	£28,795
Circle Anglia Limited	Social Rent	Norwich	£242,696.75	8	£30,337
Circle Anglia Limited	Social Rent	Norwich	£61,702.56	2	£30,851
Circle Anglia Limited	Social Rent	Norwich	£411,350.43	8	£51,419
Circle Anglia Limited	Social Rent	Norwich	£391,427.44	6	£65,238

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Circle Anglia Limited	Social Rent	Norwich	£164,811.56	2	£82,406
Orbit Housing Group Limited	Social Rent	Norwich	£327,000.00	6	£54,500
Orbit Housing Group Limited	Social Rent	Norwich	£108,000.00	2	£54,000
Orbit Housing Group Limited	Social Rent	Norwich	£147,740.80	2	£73,870
Orbit Housing Group Limited	Social Rent	Norwich	£172,684.05	2	£86,342
Orbit Housing Group Limited	Social Rent	Norwich	£508,458.59	10	£50,846
Orbit Housing Group Limited	Social Rent	Norwich	£422,116.56	4	£105,529
Orbit Housing Group Limited	Social Rent	Norwich	£94,605.22	2	£47,303
Orbit Housing Group Limited	Social Rent	Norwich	£236,513.05	5	£47,303
Orbit Housing Group Limited	Social Rent	Norwich	£163,327.88	3	£54,443
Orbit Housing Group Limited	Social Rent	Norwich	£610,471.42	9	£67,830
Orbit Housing Group Limited	Social Rent	Norwich	£562,276.30	7	£80,325
Orbit Housing Group Limited	Social Rent	Norwich	£98,175.23	1	£98,175
Orbit Housing Group Limited	Social Rent	Norwich	£389,130.90	4	£97,283
Orbit Housing Group Limited	Social Rent	Norwich	£350,082.24	5	£70,016
Orbit Housing Group Limited	Social Rent	Norwich	£144,917.76	2	£72,459
Orbit Housing Group Limited	Social Rent	Norwich	£147,071.87	1	£147,072
Orbit Housing Group Limited	Social Rent	Norwich	£149,032.83	1	£149,033
Orbit Housing Group Limited	Social Rent	Norwich	£392,191.66	5	£78,438
Orbit Housing Group Limited	Social Rent	Norwich	£184,330.08	2	£92,165
Orbit Housing Group Limited	Social Rent	Norwich	£1,337,373.56	11	£121,579
CIRCLE ANGLIA	Social Rent	Norwich	£412,320.00	6	£68,720
	Social Rent	Norwich	2,250,000	40	£56,250.00
	Social Rent	Norwich	90,000	2	£45,000.00
	Social Rent	Norwich	180,000	4	£45,000.00
	Social Rent	Norwich	290,000	5	£58,000.00
Orbit Housing Group Limited	Social Rent	Norwich	318,500	6	£53,083.33
Orbit Housing Group Limited	Social Rent	Norwich	750,000	15	£50,000.00
Orbit Housing Group Limited	Social Rent	Norwich	944,000	16	£59,000.00
Orbit Housing Group Limited	Social Rent	Norwich	245,000	5	£49,000.00
Circle Anglia Limited	Social Rent	South Norfolk	£117,095.98	4	£29,274.00
Circle Anglia Limited	Social Rent	South Norfolk	£270,221.49	8	£33,777.69
Circle Anglia Limited	Social Rent	South Norfolk	£283,732.57	7	£40,533.22
Circle Anglia Limited	Social Rent	South Norfolk	£243,949.96	5	£48,789.99
Circle Anglia Limited	Social Rent	South Norfolk	£25,500.14	1	£25,500.14
Circle Anglia Limited	Social Rent	South Norfolk	£129,818.87	4	£32,454.72
Circle Anglia Limited	Social Rent	South Norfolk	£38,250.20	1	£38,250.20
Circle Anglia Limited	Social Rent	South Norfolk	£132,137.07	3	£44,045.69
Circle Anglia Limited	Social Rent	South Norfolk	£187,773.72	4	£46,943.43
Orwell Housing Association Limited	Social Rent	South Norfolk	£56,250.00	3	£18,750.00
Flagship Housing Group Limited	Social Rent	South Norfolk	£410,647.19	7	£58,663.88
Flagship Housing Group Limited	Social Rent	South Norfolk	£133,852.81	2	£66,926.41
Flagship Housing Group Limited	Social Rent	South Norfolk	£82,143.00	1	£82,143.00
Hastoe Housing Association Limited	Social Rent	South Norfolk	£111,000.00	3	£37,000.00
Hastoe Housing Association Limited	Social Rent	South Norfolk	£29,855.17	1	£29,855.17
Hastoe Housing Association Limited	Social Rent	South Norfolk	£81,144.83	2	£40,572.42
Hastoe Housing Association Limited	Social Rent	South Norfolk	£28,155.80	2	£14,077.90
Hastoe Housing Association Limited	Social Rent	South Norfolk	£67,353.09	4	£16,838.27
Hastoe Housing Association Limited	Social Rent	South Norfolk	£78,394.58	4	£19,598.65
Hastoe Housing Association Limited	Social Rent	South Norfolk	£44,165.96	2	£22,082.98
Hastoe Housing Association Limited	Social Rent	South Norfolk	£26,499.58	1	£26,499.58
Hastoe Housing Association Limited	Social Rent	South Norfolk	£96,660.45	12	£8,055.04
Hastoe Housing Association Limited	Social Rent	South Norfolk	£78,497.13	7	£11,213.88
Hastoe Housing Association Limited	Social Rent	South Norfolk	£50,541.41	4	£12,635.35
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£0.00	7	£0.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£0.00	6	£0.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£0.00	3	£0.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£0.00	3	£0.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£0.00	4	£0.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£0.00	1	£0.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£0.00	3	£0.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£0.00	2	£0.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£0.00	3	£0.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£70,000.00	1	£70,000.00
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£784,384.76	10	£78,438.48
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£266,325.99	4	£66,581.50
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£273,622.59	3	£91,207.53
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£257,205.23	6	£42,867.54
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£122,218.09	2	£61,109.05
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£122,218.09	2	£61,109.05
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£101,240.36	1	£101,240.36
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£59,284.89	1	£59,284.89
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£107,031.96	2	£53,515.98
Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£279,452.05	5	£55,890.41

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Metropolitan Housing Trust Limited	Social Rent	South Norfolk	£53,515.98	1	£53,515.98
Orbit Housing Group Limited	Social Rent	South Norfolk	£147,899.16	4	£36,974.79
Orbit Housing Group Limited	Social Rent	South Norfolk	£39,663.87	1	£39,663.87
Orbit Housing Group Limited	Social Rent	South Norfolk	£94,117.65	2	£47,058.83
Orbit Housing Group Limited	Social Rent	South Norfolk	£198,319.33	5	£39,663.87
Orbit Housing Group Limited	Social Rent	South Norfolk	£112,435.20	2	£56,217.60
Orbit Housing Group Limited	Social Rent	South Norfolk	£287,539.20	4	£71,884.80
Orbit Housing Group Limited	Social Rent	South Norfolk	£80,179.20	1	£80,179.20
Orbit Housing Group Limited	Social Rent	South Norfolk	£45,158.40	1	£45,158.40
Orbit Housing Group Limited	Social Rent	South Norfolk	£50,688.00	1	£50,688.00
Orbit Housing Group Limited	Social Rent	South Norfolk	£108,825.62	2	£54,412.81
Orbit Housing Group Limited	Social Rent	South Norfolk	£130,590.75	2	£65,295.38
Orbit Housing Group Limited	Social Rent	South Norfolk	£231,501.78	3	£77,167.26
Orbit Housing Group Limited	Social Rent	South Norfolk	£85,081.85	1	£85,081.85
Orbit Housing Group Limited	Social Rent	South Norfolk	£176,161.57	6	£29,360.26
Orbit Housing Group Limited	Social Rent	South Norfolk	£442,277.97	12	£36,856.50
Orbit Housing Group Limited	Social Rent	South Norfolk	£184,907.18	4	£46,226.80
Orbit Housing Group Limited	Social Rent	South Norfolk	£157,420.97	3	£52,473.66
Orbit Housing Group Limited	Social Rent	South Norfolk	£284,232.31	5	£56,846.46
Orbit Housing Group Limited	Social Rent	South Norfolk	£237,103.45	3	£79,034.48
Orbit Housing Group Limited	Social Rent	South Norfolk	£184,413.79	2	£92,206.90
Orbit Housing Group Limited	Social Rent	South Norfolk	£158,068.97	2	£79,034.49
Orbit Housing Group Limited	Social Rent	South Norfolk	£184,413.79	2	£92,206.90
Orbit Housing Group Limited	Social Rent	South Norfolk	£167,802.17	3	£55,934.06
Orbit Housing Group Limited	Social Rent	South Norfolk	£62,557.83	1	£62,557.83
Orbit Housing Group Limited	Social Rent	South Norfolk	£319,491.53	5	£63,898.31
Orbit Housing Group Limited	Social Rent	South Norfolk	£108,135.59	2	£54,067.80
Orbit Housing Group Limited	Social Rent	South Norfolk	£75,367.23	2	£37,683.62
Orbit Housing Group Limited	Social Rent	South Norfolk	£77,005.65	1	£77,005.65
Orbit Housing Group Limited	Social Rent	South Norfolk	£0.00	2	£0.00
Orbit Housing Group Limited	Social Rent	South Norfolk	£0.00	12	£0.00
Orbit Housing Group Limited	Social Rent	South Norfolk	£0.00	17	£0.00
Orbit Housing Group Limited	Social Rent	South Norfolk	£0.00	10	£0.00
Orbit Housing Group Limited	Social Rent	South Norfolk	£0.00	1	£0.00
Orbit Housing Group Limited	Social Rent	South Norfolk	£0.00	1	£0.00
Orbit Housing Group Limited	Social Rent	South Norfolk	£0.00	2	£0.00
	Social Rent	South Norfolk	787,500	15	£52,500.00
	Social Rent	South Norfolk	216,000	6	£36,000.00
	Social Rent	South Norfolk	373,126	9	£41,458.44
	Social Rent	South Norfolk	199,000	5	£39,800.00
	Social Rent	South Norfolk	195,000	6	£32,500.00
Orwell Housing Association Limited	Social Rent	South Norfolk	0	1	£0.00
Flagship Housing Group Limited	Social Rent	South Norfolk	181,333	2	£90,667
			30,303,195	646	£46,909



# Drivers Jonas Deloitte.

Topic 9: Model used to undertake the study





**APPRAISAL SUMMARY****DRIVERS JONAS DELOITTE****GNDP - Affordable Housing Viability Study****Sample Argus Developer appraisal to demonstrate capability of excel model used**

## Appraisal Summary for Part 1

**REVENUE**

Sales Valuation	ft <sup>2</sup>	Rate ft <sup>2</sup>	Gross Sales	
Private Resi	31,888	£209.03	6,665,549	
Affordable (blended)	15,520	£101.80	1,579,936	
Totals	<u>47,408</u>		<u>8,245,485</u>	<b>8,245,485</b>

**NET REALISATION****8,245,485****OUTLAY****ACQUISITION COSTS**

Residualised Price (2.47 Acres £182,447.26 pAcre)			450,645	
Stamp Duty		3.00%	13,519	
Agent Fee		1.00%	4,506	
Legal Fee		0.50%	2,253	
Town Planning	50 units	300.00 /un	15,000	
				<b>485,924</b>

**CONSTRUCTION COSTS**

Construction	ft <sup>2</sup>	Rate ft <sup>2</sup>	Cost	
Private Resi	32,565	£101.26	3,297,568	
Affordable (blended)	15,850	£101.26	1,604,938	
Totals	<u>48,415</u>		<u>4,902,506</u>	<b>4,902,506</b>

Contingency		5.00%	245,125	
				<b>245,125</b>

**Municipal Costs**

Municipal Costs	50 units	7,000.00 /un	350,000	
				<b>350,000</b>

**PROFESSIONAL FEES**

Architect		12.00%	588,301	
				<b>588,301</b>

**MARKETING & LETTING**

Marketing		1.00%	66,655	
				<b>66,655</b>

**DISPOSAL FEES**

Sales Agent Fee		1.25%	83,319	
Sales Legal Fee		0.75%	49,992	
				<b>133,311</b>

**FINANCE**

Debit Rate 6.50% Credit Rate 0.00% (Nominal)				
Land			43,036	
Construction			46,707	
Other			9,671	
Total Finance Cost				<b>99,414</b>

**TOTAL COSTS****6,871,236****PROFIT****1,374,248****Performance Measures**

Profit on Cost%	20.00%
Profit on GDV%	16.67%
Profit on NDV%	16.67%

Profit Erosion (finance rate 6.500%)	61.60%
	2 yrs 10 mths

**GNDP - Affordable Housing Viability Study  
Sample Argus Developer appraisal to demonstrate capability of excel model used**

Detailed Cash Flow Phase 1

Page A 1

Monthly/B/F	SET Int Inf	000:May 2010	001:Jun 2010	002:Jul 2010	003:Aug 2010	004:Sep 2010	005:Oct 2010	006:Nov 2010	007:Dec 2010	008:Jan 2011
		0	0	(475,924)	(483,502)	(491,121)	(493,781)	(496,456)	(499,145)	(578,731)
<b>Revenue</b>										
002 Private Resi	YN	0	0	0	0	0	0	0	0	0
003 Affordable (blended)	YN	0	0	0	0	0	0	0	394,984	107,723
<b>Disposal Costs</b>										
005 Sales Agent Fee	YN	0	0	0	0	0	0	0	0	0
006 Sales Legal Fee	YN	0	0	0	0	0	0	0	0	0
<b>Acquisition Costs</b>										
007 Residualised Price	YN	0	(450,645)	0	0	0	0	0	0	0
008 Stamp Duty	YN	0	(13,519)	0	0	0	0	0	0	0
009 Agent Fee	YN	0	(4,506)	0	0	0	0	0	0	0
010 Legal Fee	YN	0	(2,253)	0	0	0	0	0	0	0
011 Town Planning	YN	0	(5,000)	(5,000)	(5,000)	0	0	0	0	0
<b>Construction Costs</b>										
013 Private Resi	YN	0	0	0	0	0	0	0	(71,291)	(168,554)
014 Affordable (blended)	YN	0	0	0	0	0	0	0	(34,697)	(82,036)
017 Municipal Costs	YN	0	0	0	0	0	0	0	(350,000)	0
018 Contingency	YN	0	0	0	0	0	0	0	(5,299)	(12,530)
<b>Professional Fees</b>										
020 Architect	YN	0	0	0	0	0	0	0	(12,719)	(30,071)
<b>Marketing/Letting</b>										
021 Marketing	YN	0	0	0	0	0	0	0	0	0
<b>Period Total Before Finance</b>		<b>0</b>	<b>(475,924)</b>	<b>(5,000)</b>	<b>(5,000)</b>	<b>6,50</b>	<b>6,50</b>	<b>0</b>	<b>(79,022)</b>	<b>(185,468)</b>
Debit Rate (1) %pa			6,50	6,50	6,50	6,50	6,50	6,50	6,50	6,50
Credit Rate (1) %pa			0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Finance Costs (All Sets)			0	(2,578)	(2,619)	(2,660)	(2,675)	(2,689)	(2,689)	(2,551)
<b>Period Total After Finance</b>		<b>0</b>	<b>(475,924)</b>	<b>(7,578)</b>	<b>(7,619)</b>	<b>(2,660)</b>	<b>(2,675)</b>	<b>(2,689)</b>	<b>(79,586)</b>	<b>(188,019)</b>
Cumulative Total C/f Monthly		0	(475,924)	(483,502)	(491,121)	(493,781)	(496,456)	(499,145)	(578,731)	(766,750)

**GNDP - Affordable Housing Viability Study  
Sample Argus Developer appraisal to demonstrate capability of excel model used**

Detailed Cash Flow Phase 1

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	009:Feb 2011	010:Mar 2011	011:Apr 2011	012:May 2011	013:Jun 2011	014:Jul 2011	015:Aug 2011	016:Sep 2011	017:Oct 2011	018:Nov 2011
<b>Revenue</b>										
002 Private Resi	0	0	0	512,735	512,735	512,735	512,735	512,735	512,735	512,735
003 Affordable (blended)	107,723	107,723	107,723	107,723	107,723	107,723	107,723	107,723	107,723	107,723
<b>Disposal Costs</b>										
005 Sales Agent Fee	0	0	0	(6,409)	(6,409)	(6,409)	(6,409)	(6,409)	(6,409)	(6,409)
006 Sales Legal Fee	0	0	0	(3,846)	(3,846)	(3,846)	(3,846)	(3,846)	(3,846)	(3,846)
<b>Acquisition Costs</b>										
007 Residualised Price	0	0	0	0	0	0	0	0	0	0
008 Stamp Duty	0	0	0	0	0	0	0	0	0	0
009 Agent Fee	0	0	0	0	0	0	0	0	0	0
010 Legal Fee	0	0	0	0	0	0	0	0	0	0
011 Town Planning	0	0	0	0	0	0	0	0	0	0
<b>Construction Costs</b>										
013 Private Resi	(247,739)	(308,846)	(351,873)	(376,822)	(383,692)	(372,483)	(343,195)	(295,829)	(230,384)	(146,860)
014 Affordable (blended)	(120,576)	(150,316)	(171,258)	(183,401)	(186,744)	(181,289)	(167,034)	(143,981)	(112,129)	(71,477)
017 Municipal Costs	0	0	0	0	0	0	0	0	0	0
018 Contingency	(18,416)	(22,958)	(26,157)	(28,011)	(28,522)	(27,689)	(25,511)	(21,990)	(17,126)	(10,917)
<b>Professional Fees</b>										
020 Architect	(44,198)	(55,099)	(62,776)	(67,227)	(68,452)	(66,453)	(61,228)	(52,777)	(41,101)	(26,200)
<b>Marketing/Letting</b>										
021 Marketing	0	0	0	(5,127)	(5,127)	(5,127)	(5,127)	(5,127)	(5,127)	(5,127)
<b>Period Total Before Finance</b>	<b>(323,206)</b>	<b>(429,487)</b>	<b>(504,340)</b>	<b>(50,385)</b>	<b>(62,335)</b>	<b>(42,838)</b>	<b>8,107</b>	<b>90,498</b>	<b>204,336</b>	<b>349,621</b>
Debit Rate (1) %pa	6,50	6,50	6,50	6,50	6,50	6,50	6,50	6,50	6,50	6,50
Credit Rate (1) %pa	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Finance Costs (All Sets)	(3,570)	(5,340)	(7,695)	(7,691)	(8,006)	(8,387)	(8,664)	(8,667)	(8,224)	(7,162)
<b>Period Total After Finance</b>	<b>(326,776)</b>	<b>(434,836)</b>	<b>(512,036)</b>	<b>(58,076)</b>	<b>(70,341)</b>	<b>(51,225)</b>	<b>(558)</b>	<b>81,830</b>	<b>196,112</b>	<b>342,459</b>
Cumulative Total C/f Monthly	(1,093,526)	(1,528,362)	(2,040,398)	(2,098,474)	(2,168,814)	(2,220,039)	(2,220,597)	(2,138,766)	(1,942,655)	(1,600,196)

**GNDP - Affordable Housing Viability Study  
Sample Argus Developer appraisal to demonstrate capability of excel model used**

Detailed Cash Flow Phase 1

	019:Dec 2011 (1,600,196)	020:Jan 2012 (1,108,734)	021:Feb 2012 (614,610)	022:Mar 2012 (117,809)	023:Apr 2012 379,544	024:May 2012 876,896
<b>Revenue</b>						
002 Private Resi	512,735	512,735	512,735	512,735	512,735	512,735
003 Affordable (blended)	0	0	0	0	0	0
<b>Disposal Costs</b>						
005 Sales Agent Fee	(6,409)	(6,409)	(6,409)	(6,409)	(6,409)	(6,409)
006 Sales Legal Fee	(3,846)	(3,846)	(3,846)	(3,846)	(3,846)	(3,846)
<b>Acquisition Costs</b>						
007 Residualised Price	0	0	0	0	0	0
008 Stamp Duty	0	0	0	0	0	0
009 Agent Fee	0	0	0	0	0	0
010 Legal Fee	0	0	0	0	0	0
011 Town Planning	0	0	0	0	0	0
<b>Construction Costs</b>						
013 Private Resi	0	0	0	0	0	0
014 Affordable (blended)	0	0	0	0	0	0
017 Municipal Costs	0	0	0	0	0	0
018 Contingency	0	0	0	0	0	0
<b>Professional Fees</b>						
020 Architect	0	0	0	0	0	0
<b>Marketing/Letting</b>						
021 Marketing	(5,127)	(5,127)	(5,127)	(5,127)	(5,127)	(5,127)
<b>Period Total Before Finance</b>	<b>497,352</b>	<b>497,352</b>	<b>497,352</b>	<b>497,352</b>	<b>497,352</b>	<b>497,352</b>
Debit Rate (1) %pa	6,50	6,50	6,50	6,50	6,50	6,50
Credit Rate (1) %pa	0,00	0,00	0,00	0,00	0,00	0,00
Finance Costs (All Sets)	(5,890)	(3,228)	(552)	0	0	0
<b>Period Total After Finance</b>	<b>491,462</b>	<b>494,124</b>	<b>496,801</b>	<b>497,352</b>	<b>497,352</b>	<b>497,352</b>
Cumulative Total C/f Monthly	(1,108,734)	(614,610)	(117,809)	379,544	876,896	1,374,248