

Viability, Passivhaus and Cost

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Overview

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Examples of Viability

Housing and Planning Act 2016

London Plan

Sales and costs

Hamson Barron Smith

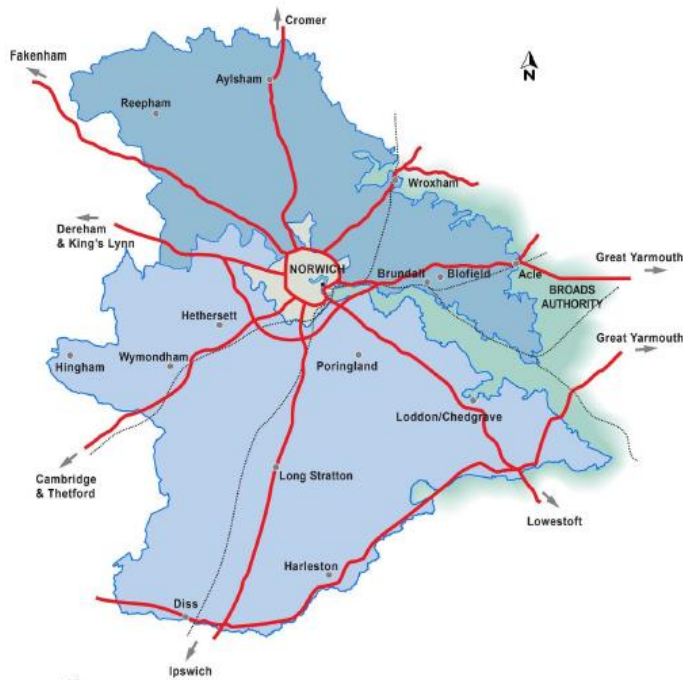
Hamson Barron Smith is an integrated design and building consultancy founded on the principles of quality, innovation, respect and trust.

We operate from a national network of key strategic geographic hubs: London, Brighton, Exeter, Haywards Heath, Norwich and Wakefield.

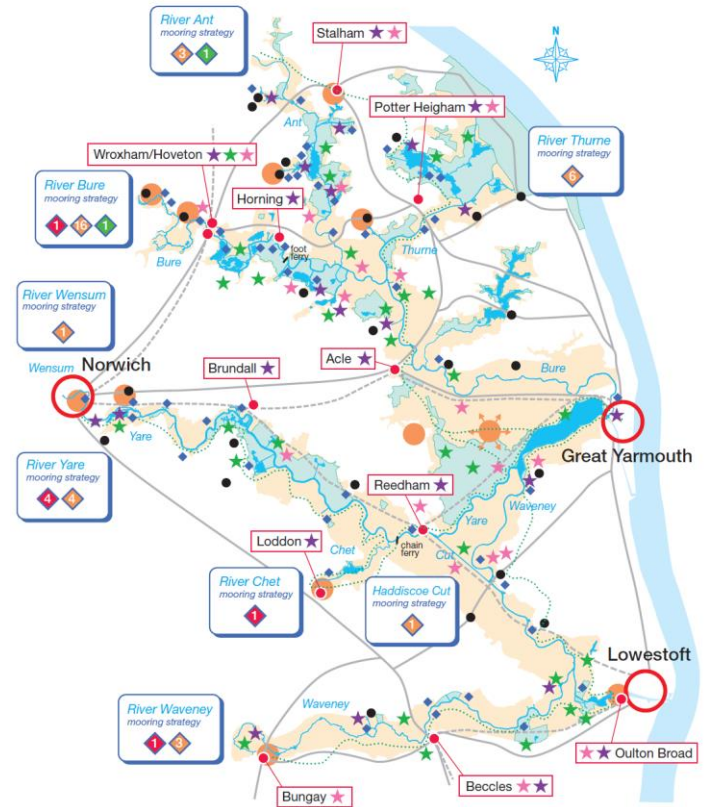
The core services we provide are architecture, surveying, building services engineering, engineering and strategic development & consultancy.

Review of Local Plans

Figure 1 The GNL area



Core Strategy: Key Diagram



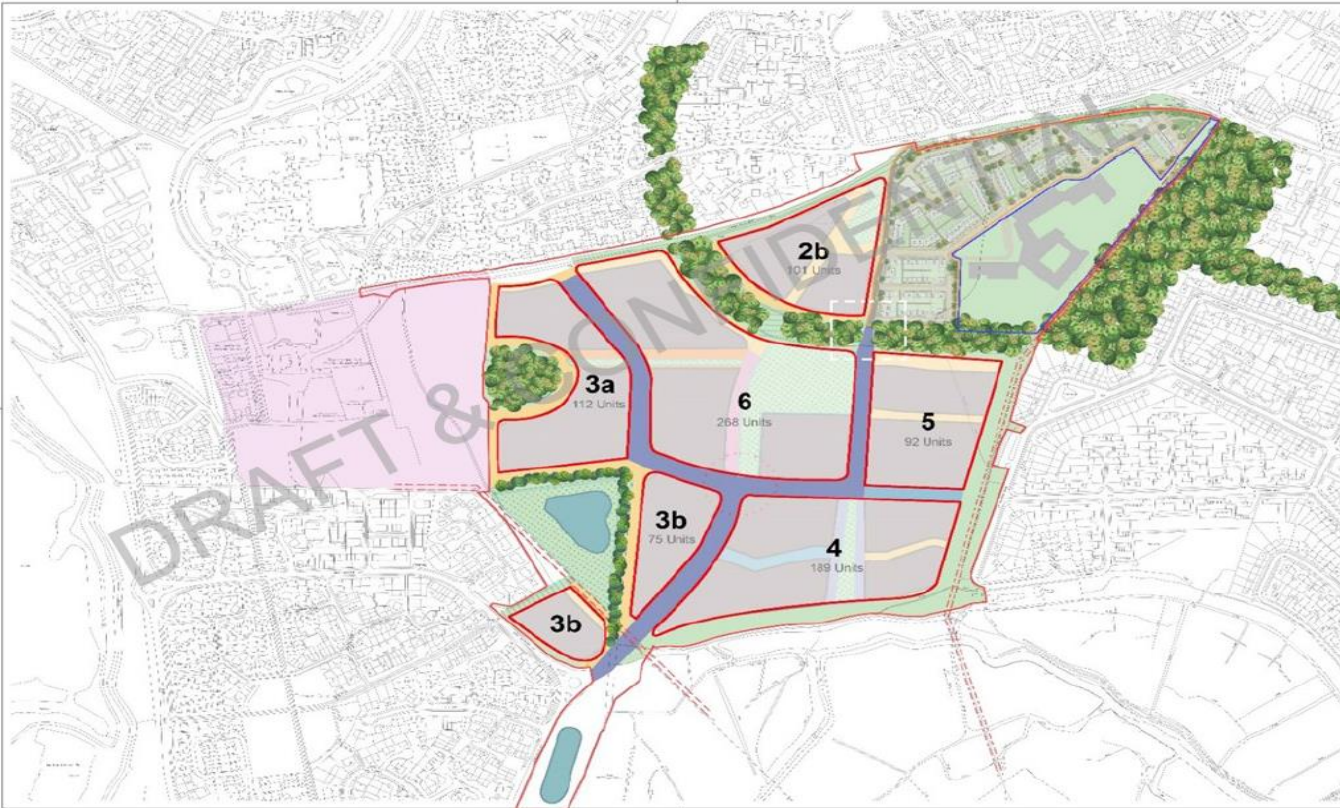
Herefordshire Council

URBAN VILLAGE DEVELOPMENT PROPOSALS



Norwich City Council

Bowthorpe Threescore Phase 3 Report



Which Housing?



Housing and Planning Act 2016



- Change affordable definition to include Starter Homes at 80% of OMV
- Encourages councils to sell off high value assets - £450,000 in London and £250,000 in the rest of the UK
- Right to buy extended to RSLs
- Further changes to come?

End of zero carbon, but not in London from 1st October 2016

'Zero carbon' homes are homes forming part of major development applications where the residential element of the application achieves at least a

35% reduction *in regulated carbon dioxide emissions (beyond Part L 2013) on-site.*

*The remaining regulated carbon dioxide emissions, to **100%, are***

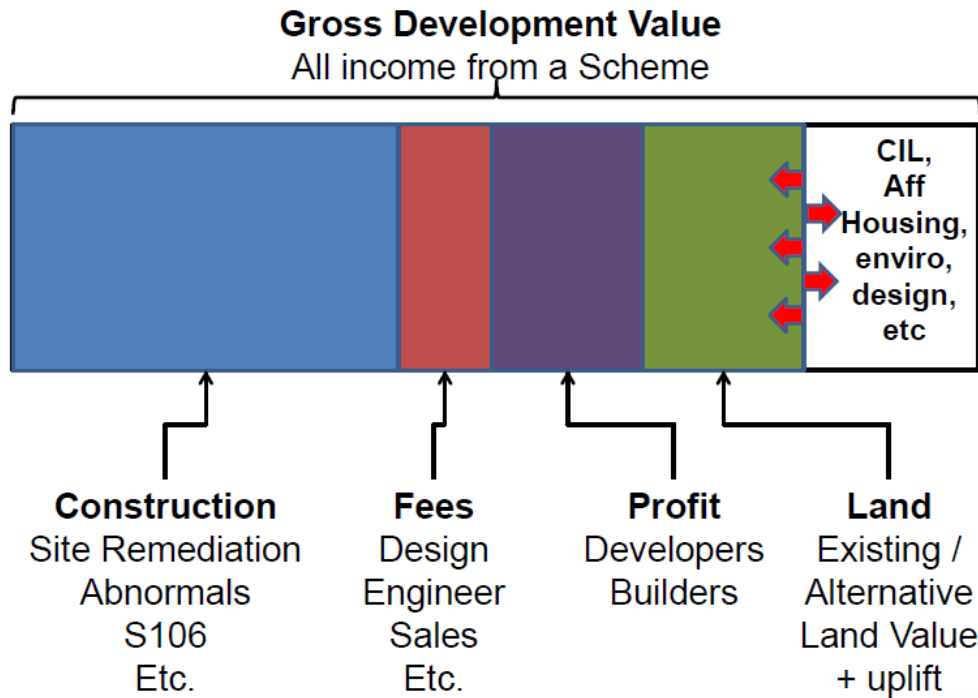
to be off-set *through a cash in lieu contribution to the relevant borough to be ring fenced to secure delivery of carbon dioxide savings elsewhere (in line with policy 5.2E).*

End of zero carbon, but not in London 1st October 2016

*The technical implementation of this policy should be in line with this guidance document. The Mayor's Housing Standard's Viability Assessment assumed a **carbon off-set price of £60** per tonne of carbon dioxide for a period of 30 years.*

*Where the borough applies a carbon dioxide off-set price of £60 per tonne, it is not considered necessary for boroughs to carry out a further viability assessment of the policy approach. High level calculations suggest approximately up to **£2,000 per dwelling**.*

Assumptions: Harman Guidance



- Design fees: 10%
- Contingency: 5%
- Preliminaries, OHP: 20%
- S106 varies
- Developer profit: 20%
- Sales costs 2%-3%
- SUDs
- No abnormals

Sales Revenue

Unit Type	%	#	P/U	Unit Price	m2 GIFA	Sales Value	Social Rents	Starter Homes	%age affordable	affordable: social rents % of GDV	affordable: Starter Homes % of GDV
studio flats A3	0%	0	£	100,000	39	£	-	0	0	#DIV/0!	£
bed 2 person flat - (50sqm) A1	0%	0	£	125,000	50	£	-	0	0	#DIV/0!	£
bed 4 person flat - (61sqm) B1, B2	10%	9	£	155,000	61	£	1,395,000	0	0	0%	£
bed 3 person house - (terraced 70sqm) C1, D1, D2	29%	27	£	170,000	70	£	4,590,000	0	0	0%	£
bed 3 person house - (semi detached 70sqm) C1, D2	7%	6	£	200,000	70	£	1,200,000	0	0	0%	£
bed 3 person house - (detached 70sqm) C1, D1, D2	0%	0	£	v/a	70	£	-	0	0	#DIV/0!	£
bed 4 person house - (79sqm) J1	0%	0	£	190,000	79	£	-	0	0	#DIV/0!	£
bed 4 person house - (2 storey 84sqm) E1	0%	0	£	200,000	84	£	-	0	0	#DIV/0!	£
bed 5 person house - (3 storey terraced 99sqm) F1, F2	18%	17	£	230,000	99	£	3,910,000	0	0	0%	£
bed 5 person house - (3 storey semi detached 99sqm) F1, F2, J2	7%	6	£	240,000	99	£	1,440,000	0	0	0%	£
bed 5 person house - (3 storey detached 99sqm) I1, F2, J2	2%	2	£	260,000	99	£	520,000	0	0	0%	£
bed 6 person house - (3 storey terraced 112sqm) I1, G2	8%	7	£	250,000	112	£	1,750,000	0	0	0%	£
bed 6 person house - (3 storey semi detached 125sqm) G1, G2	17%	16	£	275,000	112	£	4,400,000	0	0	0%	£
bed 6 person house - (3 storey detached 112sqm) I1, G2	2%	2	£	290,000	112	£	580,000	0	0	0%	£
bed 7/8 person house - (3 storey 121sqm) H1, H2	0%	0	£	255,000	121	£	-	0	0	#DIV/0!	£
bed 7 person house - (three storey 125sqm) I1, I3	0%	0	£	265,000	125	£	-	0	0	#DIV/0!	£

GDV:

No uplift for Passivhaus

2 bed 3 person house - (70sqm)
£170,000-£200,000

3 bed 4 person house - (2 storey
84sqm) £200,000

3 bed 5 person house - (3 storey
terraced 99sqm) £230,000-
£240,000

4 bed 6 person house - (3 storey
semi detached 112sqm) £275,000

Social rents is 50% OMV

Starter Homes is 80% OMV

Affordable % based on local authority policy

Build costs

BUILD COSTS									
Dwellings	Unit Type	%	Building Regs		m2 GFA	costs/m2		Build Costs	
			passive	active		Building Regs	Passive		
studio flats A3		0%	0	0	39	£1,200	£ 1,350	£	-
1 bed 2 person flat - (50sqm) A1		0%	0	0	50	£1,200	£ 1,350	£	-
2 bed 4 person flat - (65sqm) B1, B2		10%	9	0	64	£1,200	£ 1,350	£	658,800
2 bed 3 person house - (70sqm) C1, D1, D2		20%	33	0	70	£1,050	£ 1,150	£	2,425,500
2 bed 4 person house - (79sqm) J1		0%	0	0	79	£1,050	£ 1,150	£	-
3 bed 4 person house - (2 storey 84sqm) E1		0%	0	0	84	£1,050	£ 1,150	£	-
3 bed 5 person house - (3 storey 99sqm) F1, F2, J2		18%	25	0	99	£1,050	£ 1,150	£	2,598,750
4 bed 6 person house - (3 storey 112sqm) G1, G2		8%	25	0	112	£1,050	£ 1,150	£	2,940,000
4 bed 7/8 person house - (2 storey 121sqm) H1, H2		0%	0	0	121	£1,050	£ 1,150	£	-
5 bed 7 person house - (three storey 125sqm) I1, I3		0%	0	0	125	£1,050	£ 1,150	£	-
TOTAL No			92	0		dwelling Build Cost		£	8,623,050

10%-20% uplift in cost for Passivhaus



Standard % for fees, contingency, OHP, preliminaries



Site specifics

Assumptions

Assumptions	Maximum affordable	Mixed affordable and Passivhaus	Maximum Commercial
affordable	33%	30%	20%
social	80%	50%	0%
starter homes	20%	50%	100%
Passivhaus	0%	50%	0%

Assumptions

Surplus

Maximum
affordable

5.78%

Mixed affordable
and Passivhaus

~~16.08%~~
16.08%

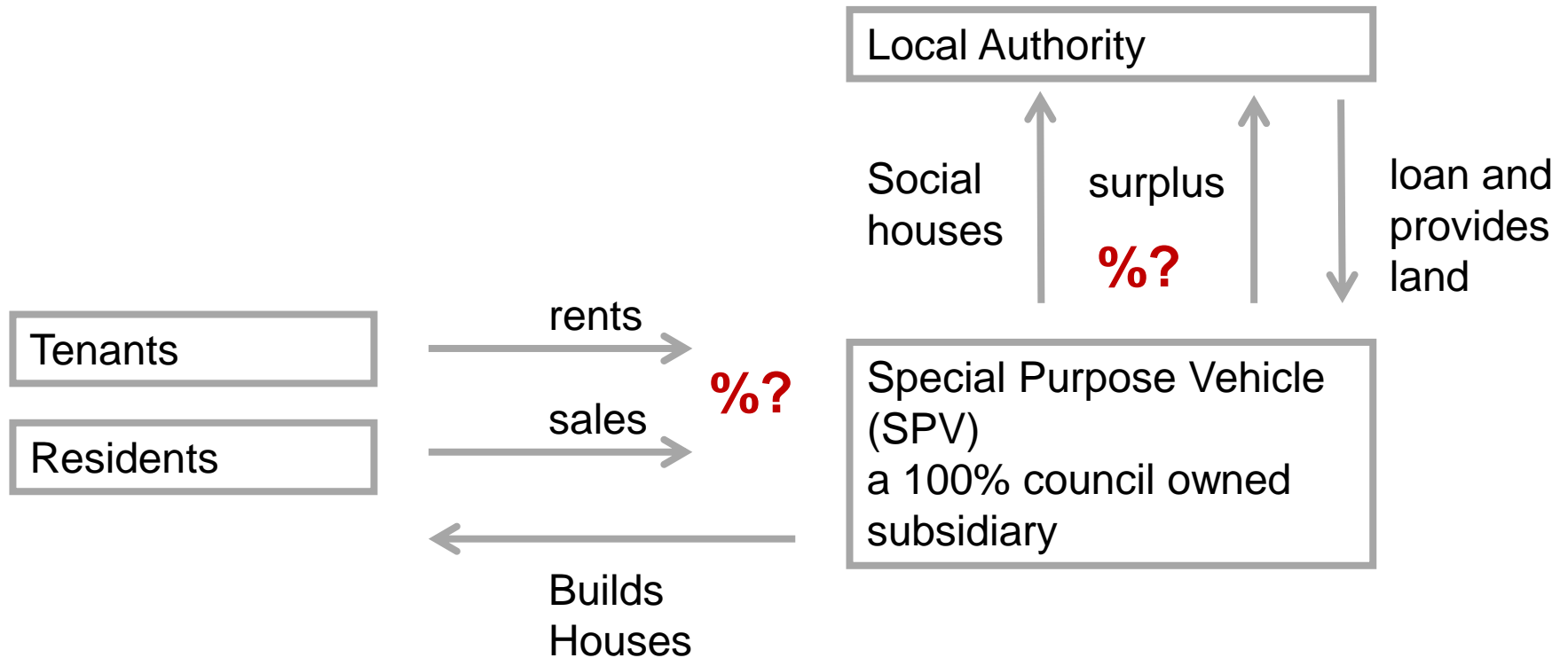
Maximum
commercial

18.75%

10% uplift in Passivhaus GDV



Delivery Vehicle



Summary

- Passivhaus adds cost –10%-20% or more in viability subject to client aspirations
 - Cost of zero carbon for London Plan is £2000 per dwelling or 1%-2% premium
- No uplift in GDV for Passivhaus sales – yet (!)
 - However, if there is a 10% premium for Passivhaus sales it has a significant impact on viability
- To achieve 20% surplus on a 100 dwelling development with 50% Passivhaus and 30% affordable (50% social and 50% starter homes) will require 3 bed terrace selling for £300,000
- For councils, there are options on company structure and financing

General Exclusions

- The costs included are high level costs and have been completed without the benefit of detailed intrusive site investigations and surveys and without the benefit of the design team.
- Flood Risk Assessment and recommendations therein
- Abnormal ground conditions including remediation
- Removal of asbestos
- Loose FF&E and ICT installations
- Client finance costs and insurances
- Local Authority charges, road closures, etc.
- Diversion / upgrade of services outside the site
- Capital allowances or other incentives/grants
- Underpinning to any existing owned or neighbouring structures
- Value Added Tax
- Phasing of construction
- Stamp Duty

Cost Value the business case for Passivhaus

By

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Hastoe Housing Association

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Hastoe
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October 2016

Hastoe Housing



- Innovation
- Rural specialist
- Environmental sustainability
- Quality new homes & services



Hastoe overview



- 50 years old
- 7,500 homes
- Working in more than 200 villages and 70 local authorities
- Subsidiaries:
 - Hastoe Wyvern
 - Sustainable Homes



Why Passivhaus

- Low (ish) technology – Contractors risk
- Innovative, but tested
- European experience
- **Benefits to residents**
- Cost more to Build – values now starting to reflect this.

Over 100 Passivhaus homes built

❖ Hastoe – Rent arrears

❖ Open Market sales

❖ Customer satisfaction

❖ RICS valuers

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Quality

- ❖ Defects
- ❖ Maintenance
- ❖ Getting the right contractors

