TIPPING POINT

The Green Shift

The existing financial incentives for higher environmental performance of new homes Rafe Bertram

24th October 2023

Huge thanks to...

Good Homes Alliance **Enfield** Council Homes England OnePlanet Reusefully Green Finance Institute London Councils Working groups L&Q group Centre for Social Justice BEIS / DESNZ Atelier Useful Projects Net Positive Solutions HTA Architects Savills Inner Circle Consulting

And many others



Acknowledgements

Thank you to everyone who has inputted into this so far. It is so much appreciated.

Authored for the Good Homes Alliance by Rafe Bertram

With special thanks to Larry Tate - Good Homes Alliance

Good Homes Alliance Iulian Brooks Richard Broad Larry Tate One Planet Maresce Stephanus Pooran Desai **Ben Gill** Useful Projects Dan Epstein Gabriela Costa Net positive solutions Nitesh Magdani Reusefullv Gilli Hobbs Introba Dorte Rich Joergensen Periscope Daniel Rea Good Homes Alliance -Financing Net Zero Now working group Julian Brooks, Richard Broad and Larry Tate -Good Homes Alliance Chris Brigstocke -Winckworth Sherwood Gilbert Lennox-King -Construction Carbon. Mark Ogden, Triodos Bank

Emyr Poole - Homes England and technical team. Neil Murphy - TOWN -Ian Rigarlsford - Ecology Building Society Homes England Iane Anderson Haringey Council and the Towards Net Zero Carbon Working group Suzanne Kimman Helen Evans Thomas Lefevre - Etude Currie & Brown Adam Mactavish Department of Management, Society and Communication, Copenhagen Business School Stella Whittaker Green Finance Institute Emma Harvev Matt Ferretti -Maria Dutton Ryan Jude Enfield Council Jen Gutteridge Kate Casey Dominic Millen Tillv Ford Vera Vajda Harriet Potemkin Wesley Pemberton Ed Iones Natalya Palit Jenny Offord Centre for Social Justice Ben Robinson L&Q group Giorgia Franco BEIS Fergus Harradence

Inner Circle Consulting Lucy Webb Nick Blackmore – North London climate leads Sarah Hitchock – Islington Jackson Bylett – Camden loe Baker - Haringev Louise Claeys– Hackney Matthew Carrington -Hackney HTA architects Rorv Bergin Waugh Thistleton Architects Andrew Waugh Kristen Haggart Alastair Ogle Lloyds Bank Robin Daines Newbridge Advisors Chris Evans Savills Marylis Ramos Tanya Broadfield Tom Hill Drees & Sommer Ana Dias AESG Philippa Grant FCB Architects Tim den Dekker Unicorn Asset Management Cordelia Tahany Parity Projects Liz Laine Big Society Capital Anna Shiel ΕY Elana Chester Marcus Richards Josh Dunn

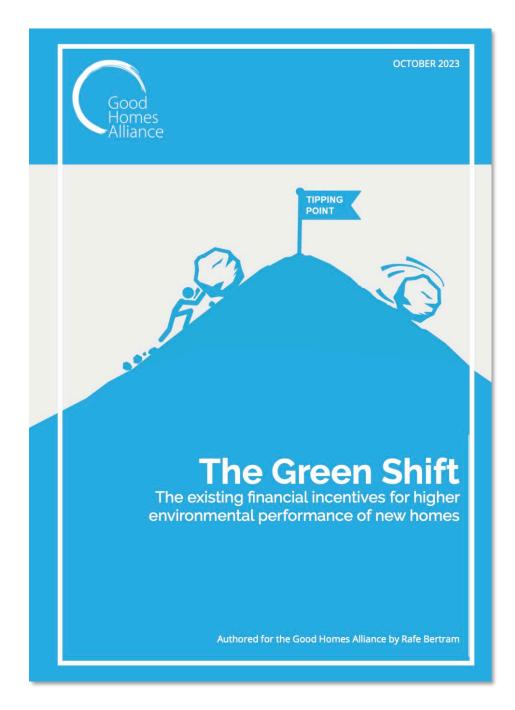
Introduction

In the move toward higher environmental performance, we have developed:

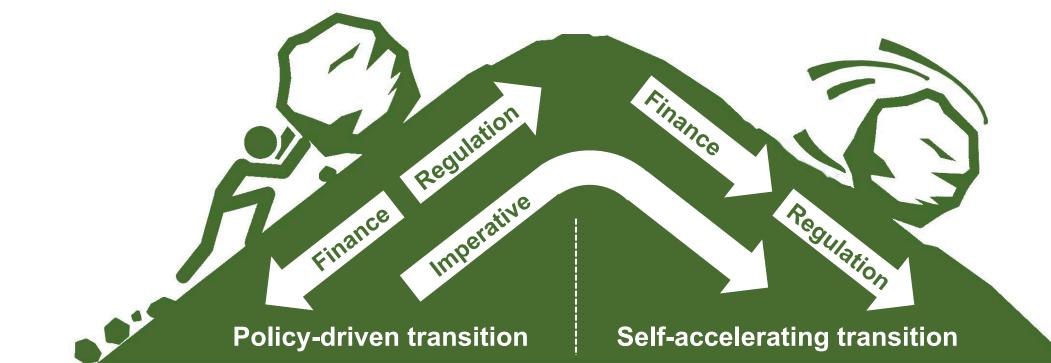
- Understanding of the need
- Storytelling and communication
- Technology and techniques
- Law, Regulation and Policy
- Education and training
- Political and organisational buy-in
- Financial systems

Cost seems to be the biggest barrier to greater levels of sustainability in the built environment.

What Finance is out there? Is it enough?



The hill to climb

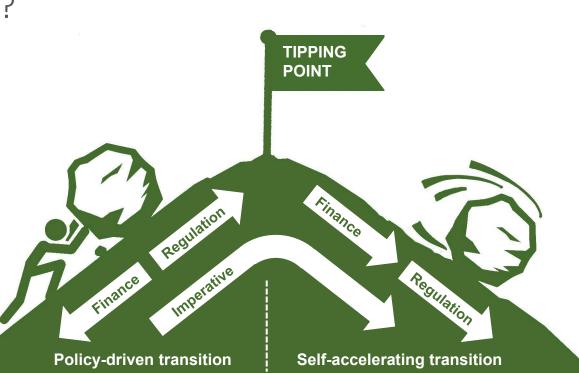


Three questions to answer

1. Would it be interesting to gather all the existing financial incentives together?

2. Do the incentives operate for each stakeholder on their own, or do they need to work in an eco-system of stakeholders?

3. Has a 'Tipping point' been reached where financial incentives support environmental imperatives and regulations to increase the speed of change?



Intended to be useful for:

- Funding proposals, business plans, financial models and business justifications for any of the stakeholders
- Local plan evidence, that could input into viability assessments
- Support for stronger regulations
- Communicating existing incentives, supporting ideas for new ones
- Lobbying to increase availability of these incentives

Policy-driven transition

Finance

Regulation

Imperative

Self-accelerating transition

Regulation

TIPPING POINT

Finance

Its current limitations

- For new build
- For homes
- For existing incentives
- For direct financial benefits
- A concise eco-system of six stakeholder types
- For market sale and rent tenures
- Two scenarios only
 - The baseline taking the Building Regs (Part L 2021), London Plan 2021 and existing Local Plans
 - Evolved scenario comprising new Local Plans, RIBA 2030 climate challenge, LETI guides and targets.
- This is a discussion paper, done over time, and not to be relied upon for project decision making!

Part 1: The evidence

Lists and describes existing financial products, technologies, methodologies, studies and strategies that could be components of a 'Green Shift'.

Focussing on six stakeholders...



For the buyer

Better mortgages available for green homes

- Highstreet lenders eg Barclays
- Specialist lenders who only cater for highly efficient homes
 e.g. Ecology Building Society
- Green Finance Initiative has a tracker for all deals

						Features of p	roduct					
Company Name	Product Name	Link to Product	Launch Year	Low- interest rate mortgage for new and/or existing customers	Additional borrowing for new and/or existing customers	Cashback/ Refund for new and/or existing customers	Energy Efficiency of renovated/retrofitted property must be improved	Property purchased or built must be energy efficient	Validation required?	Type of Building or target market	EPC Target	Aligned or supporters to the GHFPs?
AIB	Green Mortgage Rate	C	Feb-20	0		0		0	0	New Builds and Existing Homes	A/B	
Barclays	Green Home Mortgages	2	2018	0				0	0	New Build	A/B; 81 SAP	
Barclays	Green Home Buy-to-Let Mortgages	ľ	Jan-22	0				0	0	Buy-to-let, Existing and New Build	A/B; 81 SAP	
Coventry Building Society	Green Together Reward	C	Sep-21			0	0		0	Residential and Buy-to- Let		0
Chorley Building Society	Green Home Imporvements	2	May-22			0				Existing Properties	A-B	
Chorley Building Society	Green Home Improvements - Additional Borrowing	C	Jul-22		0		0					
Coutts	Green Mortgage	ľ	Jun-21			0		0	0	Existing Homes or New Build	A/B	0
Coutts	Retrofit Green Mortgage	2	Jun-21		0	0	0		0		A/B/C	0
Danske Bank	Danske Carbon Neutral Mortgage	C	Jan-22	0		0				Existing Homes	A-C	
Dudley Building Society	Two Year Fixed Energy Efficient Remortgage	Z	Jun-21	0		0	0		0	Residential Homes	A/B	0

Assumptions	Baseline Scenario	Evolved Scenario	Notes
Interest rates for mortgage	5.67%	5.14%	Barclay Standard vs Barclay Green

For the buyer and renter

Achieving lower operational and maintenance costs

- Lower running costs are important to the renter and buyer
- Towards Net Zero Carbon Study
- Octopus piloting Zero Bills for homes with solar panels

Mid-rise block of flats | Policy option 2 | Predictive energy modelling (Space heating demand and EUI)



The space heating demand for the mid-rise block of flats modelled varies from 28 (worst) down to 10 kWh/m²/yr (best). The improvement between the business-as-usual and good practice cases is relatively small in comparison to the space heating demand achieved in the ultra-low energy case. The benefit of MVHR and best practice fabric specifications are clearly showing.

The Energy Use Intensity (EUI) of the mid-rise block flats covers all energy uses: space heating, domestic hot water, ventilation, lighting, equipment (cooking, lift etc.) and appliances. The table shows a graduation of improvement as both the building fabric and heating systems become progressively more efficient. The estimated EUIs range from 55 (worst) down to 26 kWh/m².yr (best).

As with the space heating demand, the difference between the good practice and the ultra-low energy is reflected in the EUI results. The cases which generate the ideal compound result for both metrics is the ultra-low energy building fabric with the more efficient heat pump system (e.g. communal heat pump with ambient loop). It leads to significantly lower EUIs due to better heating efficiencies, lower flow temperature requirements and less distribution losses.







Note: the above four heating options are not exhaustive. Other options (e.g. low carbon heat networks with low distribution losses) may perform well.

Assumptions	Baseline Scenario	Evolved Scenario	Notes / units
Using Toward Net Zero Carbon (TNZC) st	udy		
Annual energy costs	£825	£675	Half <u>mid rise</u> , half high
			rise

For the Developer



Evidence now shows property prices reflect the energy efficiency of a home.

Homebuyers pay a 'green premium' of up to £40,000 for the most energy efficient properties



Value added per property based on EPC upgrades:

Change in EPC rating

	G→F	F→E	E→D	D→C	С→В	B→A
Average difference in price (% increase on average house price)	£9,954 (3.8%)	£7,584 (2.9%)	£6,162 (2.4%)	£5,214 (2.0%)	£5,214 (2.0%)	£4,740 (1.8%)

Assumptions	Baseline Scenario	Evolved Scenario
EPC rating	B/C	А
Percentage uplift of house price	0	1.8%

Developer & Operator

- Cheaper funding for greener projects is available
- Environmental, Social and Governance (ESG) has impacted borrowing rates
- Lendlease, Cornwall council and others have taken advantage of this.
- Between 0.5 and 2%
- For Landlords, buy to let mortgages with discount rates are also available

Carbonlite Challenge S	corecar	đ							
	Current Busir Performance	ness As Usual (compliance i	route)	RIBA	PHY R	n track against IBA Challenge v2 D25 target	RIBA	'가보맛' RIB/	rack against A Challenge v2 O Target
Sustainability Outcome Metrics									
Operational energy kWh/m ² /y	1	20 kWh/m²/	y		<60 kWh/i	m²/y		<35 kWh/m²	/y
Embodied Carbon kgC02e/ ²	12	:00 kgC0 ₂ e/1	n²	<	800 kgC0	₂ e/m²		:625 kgCO ₂ e.	′m²
Potable water use Litres/person/day		125 l/p/day			<95 l/p/d	lay		<75 l/p/day	1
Commercial Terms									
	Up to	Up to	Up to	Up to	Up to	Up to	Up to	Up to	Up to
LTGDV	60%	65%	70%	60%	65%	70%	60%	65%	70%
1. Minimum Standard Rate	8.99%	9.99%	10.99%	8.99%	9.99%	10.99%	8.99%	9.99%	10.99%
2. Carbon & Sustainability Rebate	0%	0%	0%	1.50%	1.50%	1.50%	2.00%	2.00%	2.00%
3. Effective Interest Rate (3=1-2)	8.99%	9.99%	10.99%	7.49%	8.49%	9.49%	6.99%	7.99%	8.99%
Minimum Standard Fees	1%	Arrangement 1.5%	Exit	1%	Arrangement 1	.5% Exit	1%	Arrangement 1.59	6 Exit

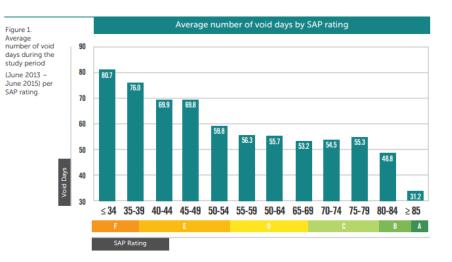
Assumptions	Baseline	Evolved	Notes / units
	Scenario	Scenario	
ESG investment interest rate discount	-	1%	Less ambitious <u>then</u>
			Atelier or Octopus
Buy to Let Mortgage	5.1%	4.65%	Ref. Barclay BTL
			mortgages

For the Developer and Operator

Increased sale velocity Less risk of retrofit needed. Fewer Voids

Time to find a buyer	
EPC - B	30 Days 🕔
EPC - C	32 Days 🔇
EPC - D	31 Days 🕜
EPC - E	33 Days 🕖
EPC - F	35 Days 💟
EPC - G	37 Days 🕓
	*Houses with EPC rating of A have been excluded due to a low count.

Assumptions	Baseline Scenario	Evolved Scenario	Notes
Decreased time for borrowing period	0	1 month quicker	Using the idea of green homes sell quicker from Rightmove Green Homes Report



Assumptions	Baseline	Evolved	Notes
	Scenario	Scenario	
Cost of retrofit	£30,000	£O	Government estimate
Timescale	20 years	Not needed	Assumption to meet UK net zero target
Preparing for forthcoming retrofit costs	£1,500		£ per year set aside

Assumptions	Baseline	Evolved	Notes
	Scenario	Scenario	
Voids per year	26 days	16 days	Ref table 1 of 'Touching the Void' study
Percentage void	7.1%	4.3%	

First question

Would it be interesting to gather all the existing financial incentives together?

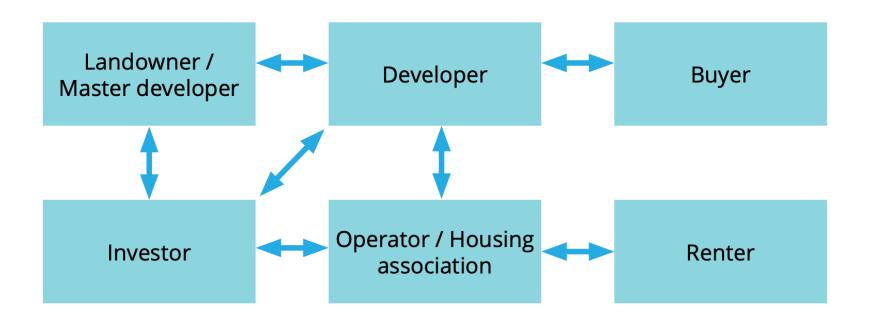
Yes, there are many financial incentives that already exist, that can be of benefit to all stakeholders.

Part 2: Illustration and analysis

How do these incentives fit together?

Using a hypothetical outer London mid-rise development project to illustrate these issues.

Starting with how stakeholders already interact with each other



The illustration

Takes all the evidence from Part 1, using it for an ecosystem illustration.

ion of sustainable infrastruc-	4022	£/home	┥┍╹	Increase in land price	
ional grant funding (included ove)	0	£/home		Home building construction cost increase	1
rease in land sale price from ore sustainable facilities provided	4022	£/home	┨ <mark>┥</mark> ┛	ESG finance borrowing rate reduction	8
lakes sense for land owner?				Carbon offset payment decrease	9
hey can pass on costs to Devel- er		- ✓		Increase in land sale price from more sustainable facili- ties provided	55
				Makes sense for developer?	
				Makes sense for developer? Yes, house prices research shows they can pass on increased costs (less than 1.8%)	
				Yes, house prices research shows they can pass on increased costs (less than	
Investor / Funde	r			Yes, house prices research shows they can pass on increased costs (less than	ing
	r			Yes, house prices research shows they can pass on increased costs (less than 1.8%) Operator / Hous	
nvestment to Developer (1% discounted rate)	r			Yes, house prices research shows they can pass on increased costs (less than 1.8%) Operator / Hous Affect on cost of homes ESG finance borrowing rate	550
nvestment to Developer (1% discounted rate) nvestment to Operator / Housing association (0.5%	r			Yes, house prices research shows they can pass on increased costs (less than 1.8%) Operator / Hous Affect on cost of homes	550
nvestment to Developer (1% discounted rate) nvestment to Operator /	r			Yes, house prices research shows they can pass on increased costs (less than 1.8%) Operator / Hous Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference	550 -90 -15 -50
nvestment to Developer (1% discounted rate) nvestment to Operator / Housing association (0.5% discounted rate)	r			Yes, house prices research shows they can pass on increased costs (less than 1.8%) Operator / Hous Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference Affect on annual rent of homes	550 -90 -15 -50 -30
nvestment to Developer (1% discounted rate) nvestment to Operator / Housing association (0.5%	r			Yes, house prices research shows they can pass on increased costs (less than 1.8%) Operator / Hous Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference	550 -90 -15 -50

Buyer		
Affect on sale price of home	5508	£/home
Interest difference on mort- gage	-5439	£(5 years)
Change in heating costs	-750	£(5 years)
Saving to household over 5 years	-582	£(5 years)
Makes sense for buyer?		
Yes, savings are achieved ove 5 years	er	

£/home

£/home

£/home

£/home

£/home

Makes sense for operator /

If they can pass on residual

HA?

costs

-	→	Renter		
		Affect on rent price of home	-840	£(1 year)
		Change in heating costs	-150	£(1
				year)
				year)
-		Saving to household over 1 year	-990	f(1 year)
-		-	-990	£(1

Development funding

The investor who feels pressure to fund decarbonised projects and provides a discounted interest rate.

They achieved their aims, via Landowners, Developers and Operators, producing net-zero homes

Investor / Funde	r
Investment to Developer (1%	
discounted rate)	
Investment to Operator /	
Housing association (0.5% discounted rate)	
Makes sense for investor?	1 1
Yes, input into fund seeks	

Landowner / Master Dev

4022

4022

Provision of sustainable infrastruc-

Additional grant funding (included

ncrease in land sale price from

Makes sense for land owner?

decarbonised projects

If they can pass on costs to Devel-

more sustainable facilities provided

n above)

ev 🗲	-	Developer			
£/home		Increase in land price	4022	£/home	
£/home		Home building construction	10488	£/home	
£/home <] ┌►	ESG finance borrowing rate reduction	8040	£/home	
		Carbon offset payment decrease	962	£/home	
V		Increase in land sale price from more sustainable facili- ties provided	5508	£/home	
		Makes sense for developer? Yes, house prices research shows they can pass on increased costs (less than		✓	
		1.8%)			
		Operator / Housi	ng As	ssoc.	
		Operator / Housi		SSOC.	
		Operator / Housi Affect on cost of homes ESG finance borrowing rate	ng As 5508 -9052	SSOC.	
		Operator / Housi	5508	SSOC.	
		Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference	5508 -9052	SSOC.	
∢		Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference Affect on annual rent of home	5508 -9052 -1500 -5043 -303	SSOC.	
		Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference	5508 -9052 -1500 -5043	SSOC.	
 ↓ 		Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference Affect on annual rent of home	5508 -9052 -1500 -5043 -303	SSOC.	

costs

-> Buver

Affect on sale price of home	5508	£/home
Interest difference on mort-	-5439	£(5
		years)
Change in heating costs	-750	£(5
		years)
Caving to household over 5	-582	C/E
Saving to household over 5 vears	-202	£(5 years)
-		
Makes sense for buyer?		
Yes, savings are achieved over		
5 vears		

Renter		
Affect on rent price of home	-840	£(1 year)
Change in heating costs	-150	£(1 year)
Saving to household over 1	-990	£(1
Saving to household over 1 year	-990	£(1 year)

Site preparation

The Landowner / master developer prepares land with more sustainable infrastructure.

Provision of sustainable infrastruc-	4022	£/home
ture Additional grant funding (included	0	£/home
in above)		
Increase in land sale price from more sustainable facilities provided	4022	£/home
Makes sense for land owner?		
If they can pass on costs to Devel-		\neg

They passes costs onto the developer, recoups these costs.

Investment to Developer (1%	
discounted rate)	
Investment to Operator /	
Housing association (0.5%	
discounted rate)	

ncrease in land price	4022	£/home	-
ome building construction	10488	£/home	
SG finance borrowing rate	8040	£/home	
arbon offset payment ecrease	962	£/home	
ncrease in land sale price rom more sustainable facili-	5508	£/home	
es provided			
Makes sense for developer? Yes, house prices research hows they can pass on ncreased costs (less than		√	
		•	
Operator / Housi	5508	ssoc.	
.8%) Operator / Housi		ssoc.	
Affect on cost of homes ESG finance borrowing rate reduction	5508	ssoc.	
Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference	5508 -9052 -1500 -5043	SSOC.	
.8%) Operator / Housi Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference Affect on annual rent of home	5508 -9052 -1500	SSOC.	
.8%) Operator / Housi SG finance borrowing rate eduction Retrofit preperation Resultant difference Affect on annual rent of home Annual rental void saving	5508 -9052 -1500 -5043 -303	SSOC.	
.8%) Operator / Housi Affect on cost of homes ESG finance borrowing rate eduction Retrofit preperation Resultant difference Affect on annual rent of home Annual rental void saving Affect on annual rent of home Affect on annual rent of home	5508 -9052 -1500 -5043 -303 -538		
Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation	5508 -9052 -1500 -5043 -303 -538		

- Buyer

5508	£/home
-5439	£(5
	years)
-750	£(5
	years)
-582	£(5
	years)
	1
	-5439 -750

Renter		
Affect on rent price of home	-840	£(1 year)
	-150	£(1 year)
Saving to household over 1 year	-990	£(1 year)
Makes sense for renter?		
Achieves annual saving		

Home sales

The developer, helped by ESG lending, sells the home to the buyer, who can gain a reduced mortgage and get energy savings.

ture 0 £/home Additional grant funding (included in above) 0 £/home Increase in land sale price from more sustainable facilities provided 4022 £/home Makes sense for land owner? Increase Carboo decrease If they can pass on costs to Devel- oper ✓ ✓ Makes yes on costs to Devel- oper ✓ ✓	Landowner / Ma	ster [Dev	De
in above) 4022 £/home Increase in land sale price from more sustainable facilities provided Makes sense for land owner? If they can pass on costs to Devel- oper Makes Yes, ho shows increa		4022	£/home	Increa
Increase in land sale price from 4022 ±/nome reduct more sustainable facilities provided Makes sense for land owner? If they can pass on costs to Devel- oper Increase Makes Present Makes Yes, how shows increase		0	£/home	Home cost in
Makes sense for land owner? If they can pass on costs to Devel- oper Increa from r ties pr Makes Yes, ho shows increa		4022	£/home	ESG fir reduct
oper Increa from r ties pr Makes Yes, ho shows increa				Carbo decrea
ties pr Makes Yes, ho shows increa			✓	
				Makes Yes, ho shows increa
	Investor / Funder	ſ		Op
Investor / Funder Op				
Investment to Developer (1% discounted rate)	discounted rate)			
Investment to Developer (1% discounted rate) Investment to Operator / Housing association (0.5%	discounted rate) Investment to Operator / Housing association (0.5%			ESG fi
Investment to Developer (1% discounted rate) Investment to Operator /	discounted rate) Investment to Operator / Housing association (0.5%			ESG fil reduct Retrof Result Affect

/eloper e in land price 4022 £/home ouilding construction 10488 £/home rease 8040 £/home nce borrowing rate 962 £/home offset payment £/home e in land sale price 5508 ore sustainable facilivided sense for developer? use prices research hey can pass on \checkmark ed costs (less than ← \checkmark

Buyer

Affect on sale price of home	5508	£/home
Interest difference on mort-	-5439	£(5
gage		years)
Change in heating costs	-750	£(5
		years)
Saving to household over 5	-582	£(5
years		years)
Makes sense for buyer?		
Yes, savings are achieved over		
5 years		

Renter		
Affect on rent price of home	-840	£(1 year)
	-150	£(1 year)
Saving to household over 1 year	-990	£(1 year)
Makes sense for renter?		
Achieves annual saving		

The Buyer

The buyer saves money with a green mortgage and lower energy costs

	4022	£/home
	0	£/home
in above)		±/nome
Increase in land sale price from more sustainable facilities provided	4022	£/home
Makes sense for land owner?		
Makes sense for land owner? If they can pass on costs to Devel- oper		$\overline{}$

		Developer			
£/home		Increase in land price	4022	£/home	
£/home		Home building construction cost increase	10488	£/home	
£/home		ESG finance borrowing rate reduction	8040	£/home	
	-	Carbon offset payment decrease	962	£/home	
V		Increase in land sale price	5508	£/home	
		from more sustainable facili- ties provided			
		Makes sense for developer?			
		Yes, house prices research shows they can pass on increased costs (less than 1.8%)		✓	
		Operator / Housi			
		Affect on cost of homes	5508		
		ESG finance borrowing rate reduction	-9052		
		Retrofit preperation	-1500		
	-	Resultant difference	-5043		
		Affect on annual rent of home Annual rental void saving	-303 -538		-
\checkmark			550		
		Affect on annual rent of home	-840	£/year	
		Viewer voids			
		Makes sense for operator / HA?			

 \checkmark

Buyer		
Affect on sale price of home Interest difference on mort-	5508 -5439	£/home £(5
zage Change in heating costs	-750	years) £(5 years)
Saving to household over 5 years	-582	£(5 years)
Makes sense for buyer? Yes, savings are achieved over 5 years		\checkmark

	0.40	6/4
Affect on rent price of home	-840	£(1 year
	-150	£(1 year
Saving to household over 1	-990	£(1
Saving to household over 1 year	-990	
	-990	£(1 year

Asset purchase

The developer passes these costs on in the sale to the Operator or Housing Association, who makes savings primarily because of the discounted lending from the investor / funder.

	4022	£/home
	0	£/home
Increase in land sale price from more sustainable facilities provided	4022	£/home
Makes sense for land owner?		
If they can pass on costs to Devel- oper		

Investor / Funder	
Investment to Developer (1% discounted rate)	
Investment to Operator / Housing association (0.5% discounted rate)	
Makes sense for investor?	
Yes, input into fund seeks decarbonised projects	✓

ncrease in land price	4022	£/home
lome building construction ost increase	10488	£/home
SG finance borrowing rate eduction	8040	£/home
arbon offset payment ecrease	962	£/home
ncrease in land sale price rom more sustainable facili- es provided	5508	£/home
Makes sense for developer?		
es, house prices research hows they can pass on ncreased costs (less than		✓
.8%)		
ţ.		
Operator / Housi	ng As	ssoc.
Operator / Housi	ng A:	ssoc.
Operator / Housi		ssoc.
Affect on cost of homes ESG finance borrowing rate reduction	5508	SSOC.
Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation	5508 -9052	ssoc.
Affect on cost of homes CSG finance borrowing rate eduction Retrofit preperation Resultant difference	5508 -9052 -1500	ssoc.
Affect on cost of homes SG finance borrowing rate reduction Retrofit preperation Resultant difference Affect on annual rent of home	5508 -9052 -1500 -5043	SSOC.
Affect on cost of homes SG finance borrowing rate eduction Retrofit preperation Resultant difference Affect on annual rent of home Annual rental void saving	5508 -9052 -1500 -5043 -303	SSOC.
Affect on cost of homes SG finance borrowing rate eduction Retrofit preperation Resultant difference Affect on annual rent of home Annual rental void saving Affect on annual rent of home	5508 -9052 -1500 -5043 -303 -538	
1.8%) Operator / Housi Affect on cost of homes ESG finance borrowing rate reduction Retrofit preperation Resultant difference Affect on annual rent of home Annual rental void saving Affect on annual rent of home Viewer voids Makes sense for operator /	5508 -9052 -1500 -5043 -303 -538	

If they can pass on residual

Buyer

Affect on sale price of home	5508	£/home
Interest difference on mort-	-5439	£(5
		years)
Change in heating costs	-750	£(5
		years)
Saving to household over 5	-582	£(5
years		years)
Makes sense for buver?		
Yes, savings are achieved over		
5 vears		

Renter		
Affect on rent price of home	-840	£(1 year)
Change in heating costs	-150	£(1 year)
Saving to household over 1 year	-990	£(1 year)
	-990	

Renting

The operator / housing association can now discount the rent, adding to the energy savings of the renter.

4022	£/home
0	£/home
4022	£/home
	0

Increase in land price	4022	£/hom
Home building construction	10488	£/hom
cost increase ESG finance borrowing rate reduction	8040	£/horr
Carbon offset payment decrease	962	£/hom
Increase in land sale price from more sustainable facili- ties provided	5508	£/hom
Makes sense for developer?		
Yes, house prices research shows they can pass on increased costs (less than 1.8%)		\checkmark

Affect on sale price of home	5508	£/home
Interest difference on mort-	-5439	£(5
		years)
Change in heating costs	-750	£(5
		years)
Saving to household over 5	-582	£(5
years	-502	vears)
Makes sense for buyer?		
Yes, savings are achieved over		- /
5 years		

Investor / Funder	
Investment to Developer (1% discounted rate)	
Investment to Operator / Housing association (0.5% discounted rate)	
Makes sense for investor? Yes, input into fund seeks decarbonised projects	

1			
Operator / Housi	ng A	ssoc.	Renter
Affect on cost of homes ESG finance borrowing rate reduction	5508 -9052		Affect on rent price Change in heating c
Retrofit preperation Resultant difference Affect on annual rent of home Annual rental void saving	-1500 -5043 -303 -538		
Affect on annual rent of home	-840	£/year	Saving to household
Viewer voids Makes sense for operator / HA? If they can pass on residual costs		 ✓ 	year Makes sense for rei Achieves annual sa

	Renter		
•	Affect on rent price of home	-840	£(1 year)
	Change in heating costs	-150	£(1 year)
	Saving to household over 1	-990	£(1
	year		year)
	Makes sense for renter? Achieves annual saving		

Second question

Do the incentives need to work in an eco-system of stakeholders, or can they operate for each stakeholder on their own?

Yes, they work as an interconnected ecosystem working together. No incentives work just for one stakeholder in isolation. Most work by because of a relationship between three or four stakeholders.

Part 3: Conclusion

So, has a 'Tipping Point' been reached, where financial incentives support environmental imperatives and regulations to increase the speed of change?

Yes, this illustrates the tipping point has been reached for knowledgeable early adopters, who have the understanding, motivation and the connection to likeminded stakeholders to make this connected ecosystem work.



Third question

But, although its starting, the knowledge and use of these incentives are not widely distributed.

Therefore, the most effective lever of change remains:

- communicating these incentives.
- increasing regulation

Knowledge and use of incentive is here

Regulation

Self-accelerating transition

TIPPING

Finance

POINT

Regulation

Imperative

Finance

Policy-driven transition

Other Conclusions

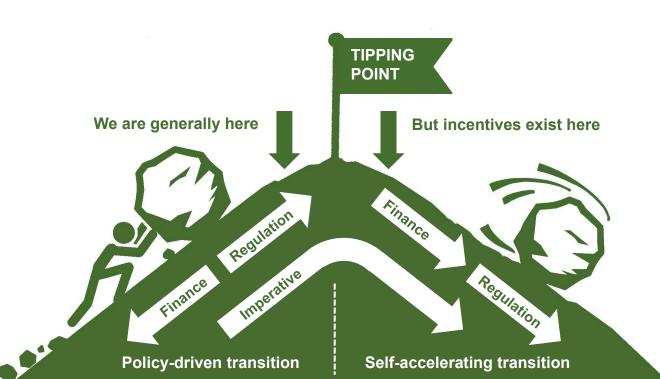
Viability Assessments

For ambitious Local Plans, financial viability is not a barrier to increased performance. For those accessing this ecosystem, this increased performance asked for is more viable, not less.

Business planning

We hope this can feed into

- funding proposals
- business cases and plans
- financial models and business justifications.
- Public Value and other wider economic, social and environmental appraisals.



Some recommendations

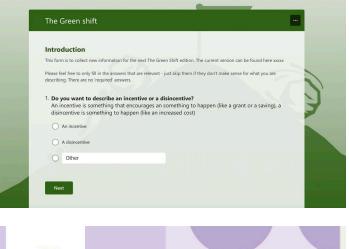
- **Spread knowledge of these incentives -** So all stakeholder know what is available, so ecosystems of connected stakeholders evolve forming a market that performs well. More marketing, advertising and forums?
- **Keeping consistency** for those providing them, keeping these initiatives and scaling them
- Stronger incentives would scale this more rapidly
- **Clearly defined ESG guidance** well defined criteria using widely adopted metrics set at a level beyond regulatory minimums.
- **Stronger regulation** eg. Embodied carbon and net zero roll out, working with the knowledge of these growing incentives we would get closer to achieving building net zero at large scale.

Repeat as an annual review of environmental incentives – and aim to expand...

- To including Retrofit of existing buildings
- Going beyond direct financial benefits to wider social & environmental value & how economics increasingly incorporates externalities
- Looking also at future incentives
- Beyond just market sale and rent tenures.
- Beyond just two scenarios? Include super low embodied carbon scenarios, incorporate Net Zero Building Standard? Less ambitious baseline?
- Beyond just six stakeholders
- Engaging more with viability experts and cost consultants.
- Enhance data collection

Please get involved

- Email us at greenshift@goodhomes.org.uk
- Send us what you know https://forms.office.com/r/dLKasa93sj
- Join our LinkedIn group https://www.linkedin.com/groups/12901702/
- Share the link to GHA website





The Green Shift

iii Public group

Earn an Active Group badge

