

**ilke Homes**

# Revolutionising Housing Supply

***Nigel Banks, R&D Director***

***6th October 2022***



# What if you could...

- **Increase sales values (including available mortgage funds) by £20-40k/house.**
- **For an incremental cost of £15-20k.**
  
- *Recovering more than the cost uplift from new Building Regulations Part L (£3-5k) and those expected from the Future Homes Standard (a further £6-8k).*



# Delivered sites.

## South East

- 1 Swanley, Kent
- 2 Robert Street, Greenwich
- 3 Gallions Reach, London

## South West

- 4 Cattlemarket, Bridgwater
- 5 Coed Darcy, Neath

## Midlands

- 6 Redwood Crescent, Beeston
- 7 Brookvale, Derbyshire
- 8 Williams Lane, Newark
- 9 Victoria Ground, Stoke
- 10 Gedling, Nottingham
- 11 Rosemary Avenue, Mansfield
- 12 Wellesbourne, Stratford on Avon
- 13 Southham, Warwickshire

## North

- 14 Askern, Doncaster
- 15 Victory Road, Bolton
- 16 Wykebeck, Leeds
- 17 Brooklands, Leeds
- 18 Milton Road, Wakefield
- 19 Carr Lodge, Doncaster
- 20 Rockfield Road, Anfield
- 21 Cawthorn Avenue, Harrogate
- 22 Greenway, Speke, Liverpool
- 23 Central Avenue, Newton Aycliffe
- 24 Central Park, Darlington
- 25 Gateshead Innovation Village, Gateshead
- 26 Somerset Place, Newcastle
- 27 Royal Drive, Egremont
- 28 Hawthorne Avenue, Hull
- 29 Granby, Doncaster
- 30 Newholm Court, Hartlepool
- 31 Shorrock Lane, Blackburn
- 32 Prestbury Road, Sunderland, Tyne and Wear
- 33 St Anthony's Road, Newcastle
- 34 Meadow Road, Whitehaven

# Pre-operational and operational sites.

## South East

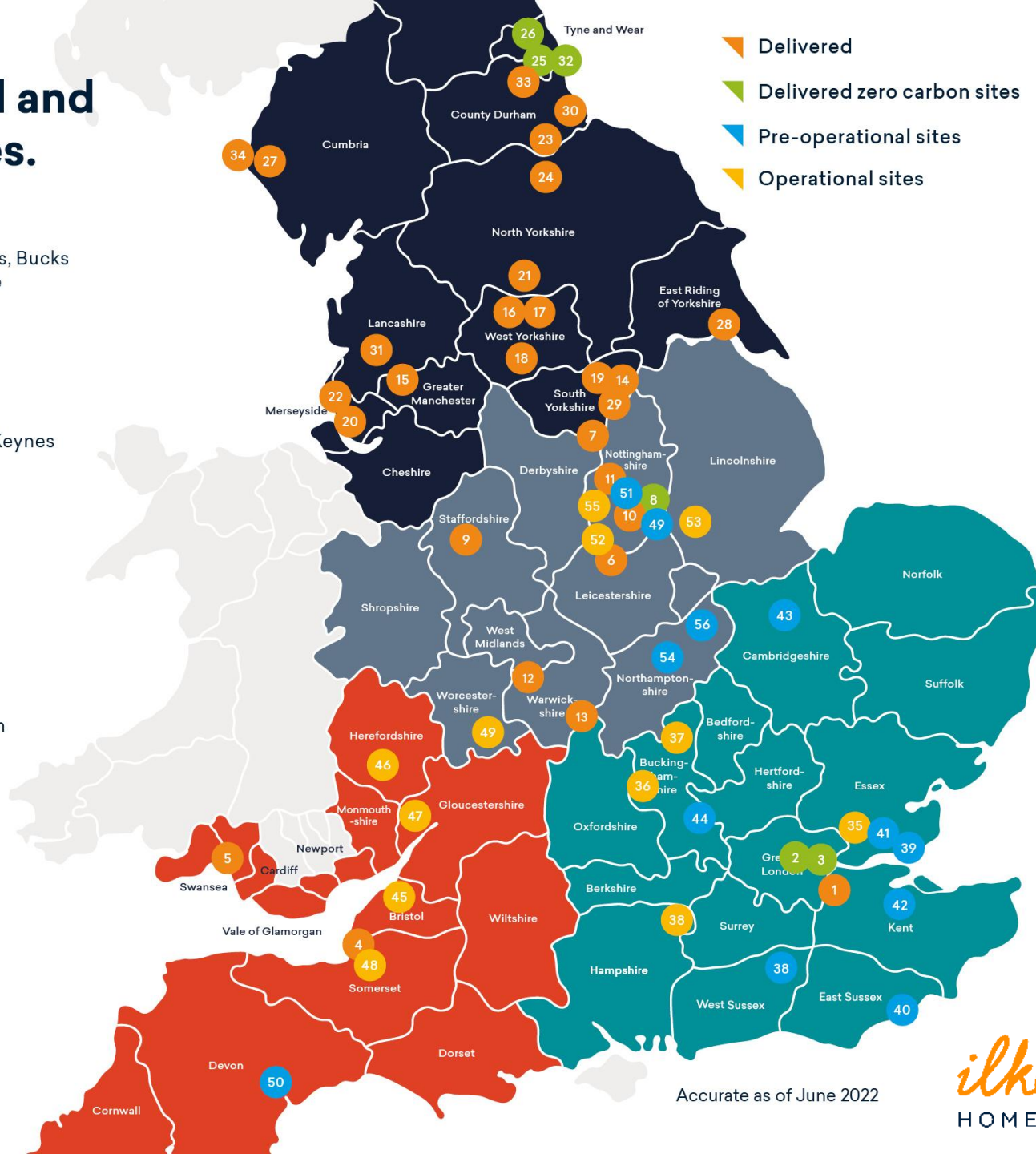
- 35 Stanford-le-Hope, Essex
- 36 Tattenhoe Phase 3, Milton Keynes, Bucks
- 37 Station Road, Bordon, Hampshire
- 38 Burgess Hill, West Sussex
- 39 Southend-on-Sea, Essex
- 40 Hastings, East Sussex
- 41 Linford, Essex
- 42 Staplehurst, Kent
- 43 Springfield Avenue, March
- 44 Tattenhoe Park, Phase 4, Milton Keynes

## South West

- 45 Blackberry Hill, Bristol
- 46 Holmer, Hereford
- 47 Drybrook, Forest of Dean
- 48 Brue Farm, Burnham-on-Sea
- 49 Green Gables, Evesham
- 50 Exeter, Devon

## Midlands

- 51 Thane Road, Nottingham (Boots)
- 52 Beeston Goods Yard, Nottingham
- 53 Dysart Road, Grantham
- 54 Shirley Road, Rushden
- 55 Arnold, Nottingham
- 56 Glenvale Park, Wellingborough



Accurate as of June 2022



# Vistry: Blackberry Hill, Bristol



# EMH: Beeston, Nottingham



# Gresham House: Essex



# Guinness: Southend





# PfP: Exeter



# TBC: Nottingham



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ZERO

ZERO carbon

ZERO bills

ZERO cost

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# Technical Guide



**ZERO carbon  
ZERO bills  
ZERO cost**

**Technical Guidance Document.**

> June 2021

## ilke ZERO additional material cost matrix.

Housetype	In-roof solar PV system <sup>1</sup>		Battery storage system		Air Source Heat Pump		Material cost uplift to achieve target				
	3kWp to 4kWp	7kWp to 8kWp	6kWh	10kWh	3.5kW <sub>a</sub> _180L	5kW <sub>a</sub> _210L	Zero CO <sub>2</sub> (SAP9)	Zero CO <sub>2</sub> (SAP10)	All electric site	ZERO energy	ZERO bills
Haldon (2b4p)	£1,400	n/a	£2,350	£4,000	£2,900	n/a	£1,400	£4,300	£2,900	n/a	n/a
Holt (2b4P NDSS)	£1,400	£2,300	£2,350	£4,000	£2,900	n/a	£1,400	£4,300	£2,900	£5,200	£9,200
Dalby (3b5p)	£1,400	£2,300	£2,350	£4,000	n/a	£3,100	£1,400	£4,300	£3,100	£5,400	£9,400
Cardinham (2b4p NDSS)	£1,400	£2,300	£2,350	£4,000	£3,100	n/a	£1,400	£4,300	£3,100	£5,400	£9,400
Weston (3b5p)	£1,400	£2,300	£2,350	£4,000	n/a	£3,100	£1,400	£4,300	£3,100	£5,400	£9,400
Dallington (3b5p NDSS)	£1,400	£2,300	£2,350	£4,000	n/a	£3,100	£1,400	£4,300	£3,100	£5,400	£9,400
Thetford (3b5p NDSS)	£1,400	n/a	£2,350	£4,000	n/a	£3,100	£1,400	£4,300	£3,100	n/a	n/a
Bedgebury (4b7p)	£1,400	n/a	£2,350	£4,000	n/a	£3,100	£1,400	£4,300	£3,100	n/a	n/a
Rockingham (4b7p NDSS)	£1,400	£2,300	£2,350	£4,000	n/a	£3,100	£1,400	£4,300	£3,100	£5,400	£9,400
Newborough (5b8p)	£1,400	£2,300	£2,350	£4,000	n/a	£3,100	£1,400	£4,300	£3,100	£5,400	£9,400

Req'd for ZERO carbon (SAP9)	Yes					
Req'd for ZERO carbon (SAP10)	Yes				Yes - correct size	
Req'd for All electric site					Yes - correct size	
Req'd for ZERO energy		Yes			Yes - correct size	
Req'd for ZERO bills		Yes		Yes	Yes - correct size	

<sup>1</sup> Size of solar PV system required to meet targets varies by site location, roof orientation, roof pitch and attachment/external wall area.

Material costs are valid as at May 2021. Labour and commissioning costs vary by site location as well as electricity grid reinforcement requirements, which are typically between an additional £2,000 and £5,000 per home.

More information at: <https://ilkehomes.co.uk/our-impact/ilke-zero-impact/>

Download guide here: <https://ilkehomes.co.uk/wp-content/uploads/2022/01/ilke-Zero-Technical-Guide-1.pdf>

# ZERO carbon (DER<0):

Minimise heat loss + Energy efficiency + Air source heat pump + Solar

Solar panels could increase it by around

**£1,350-£5,400**

Efficient LED lighting

High performance windows & doors

Draught free with Efficient ventilation

Installing an air-source heat pump could increase the sales value by around

**£5,000-£8,000**

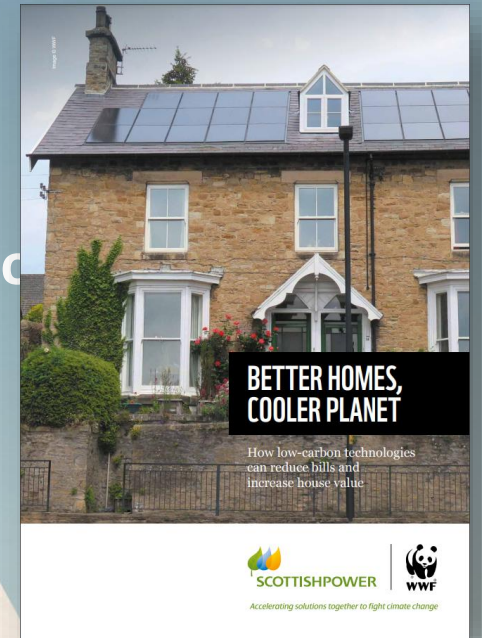
Highly insulated walls, floor & roof

Highly efficient water fittings

Smart meter & smart controls

An EV charge point could increase it by around

**£5,000**



# ZERO carbon - Proof of Concept



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ZERO carbon

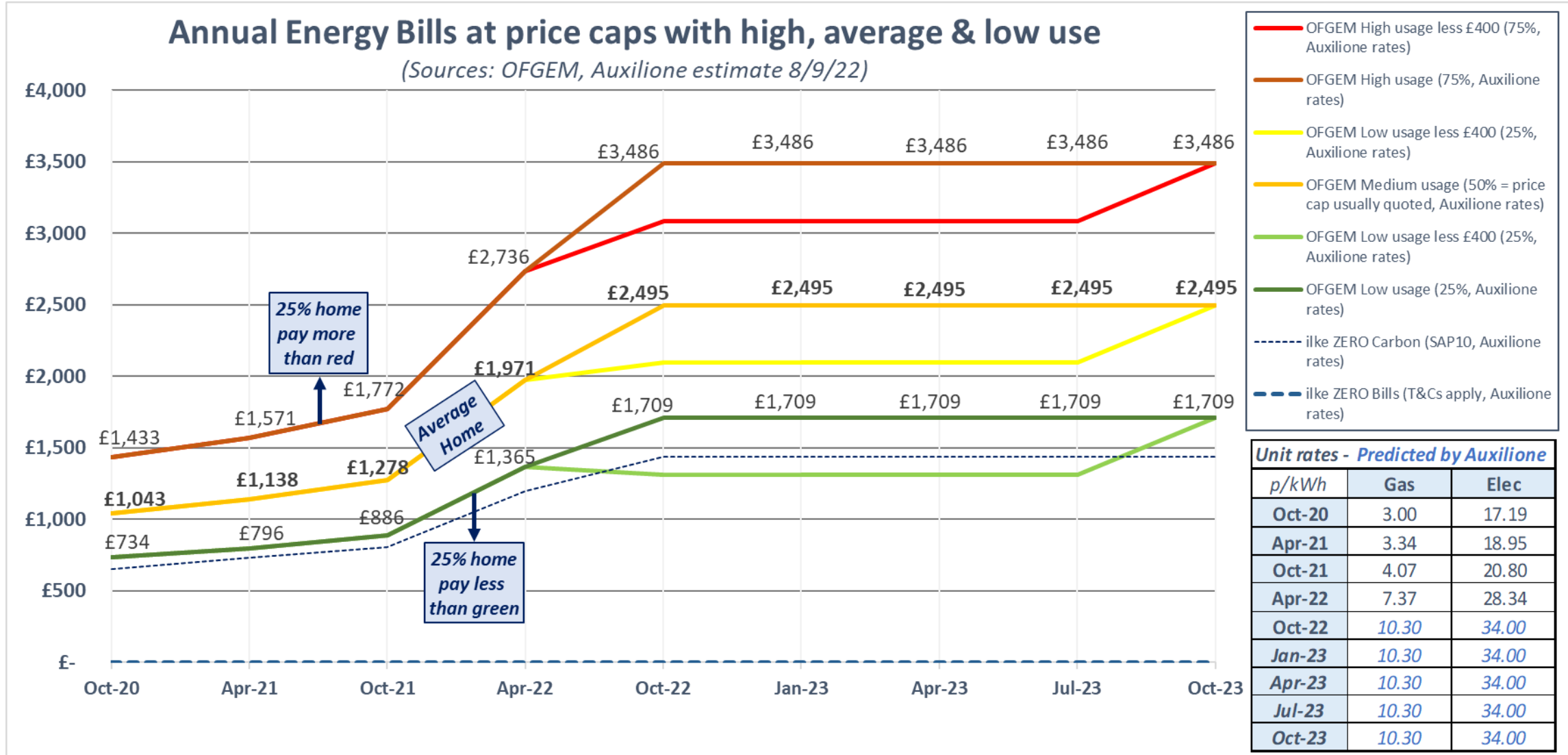
ZERO bills

ZERO cost

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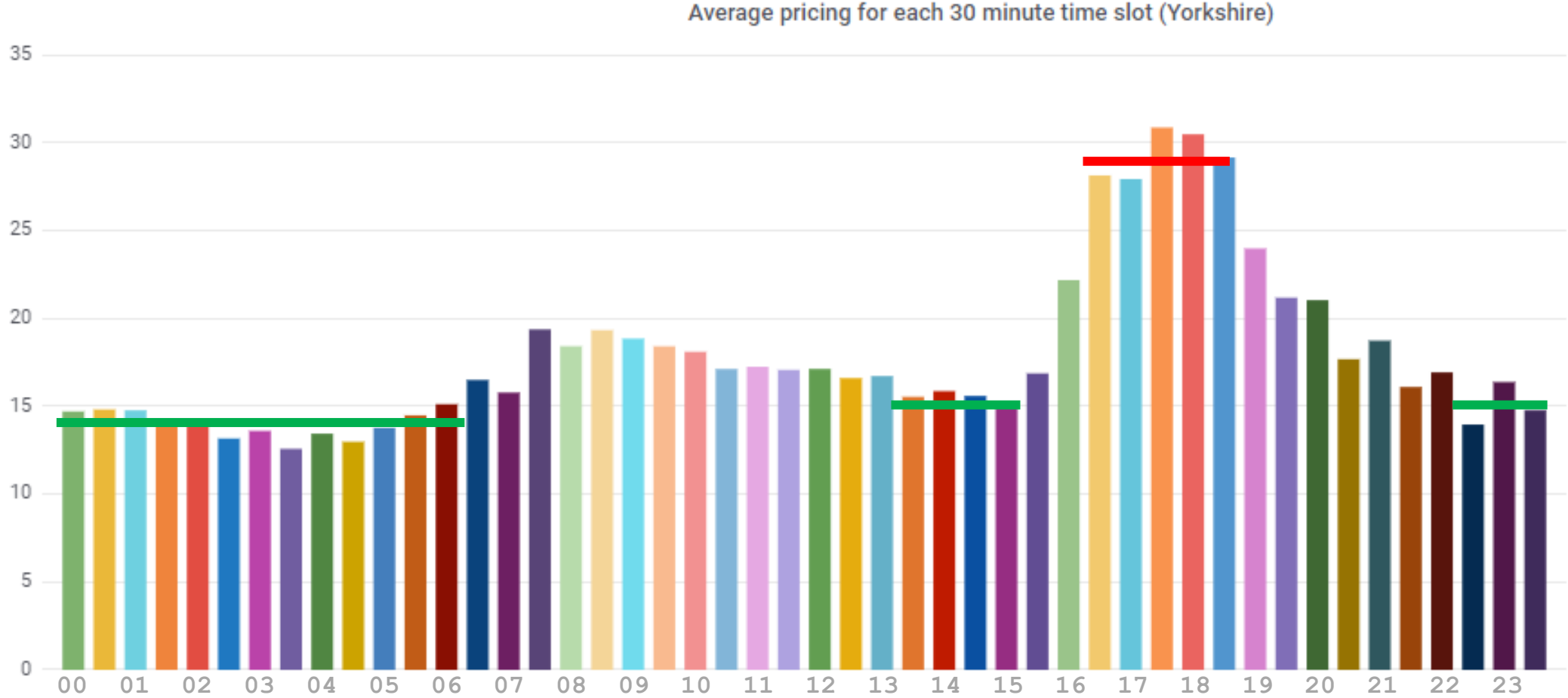


# Average energy bills (price cap)



# Ave. daily wholesale prices (Octopus Agile export)

Average unit price on Agile Outgoing for each 30 minute slot for the last 365 days



# ZERO bills:

Minimise heat loss + Energy efficiency + Air source heat pump + More Solar PV  
+ Smart controls + Smart tariff + Battery Storage

More Solar PV & Battery Storage

Efficient LED lighting

High performance windows & doors

Draught free with Efficient ventilation

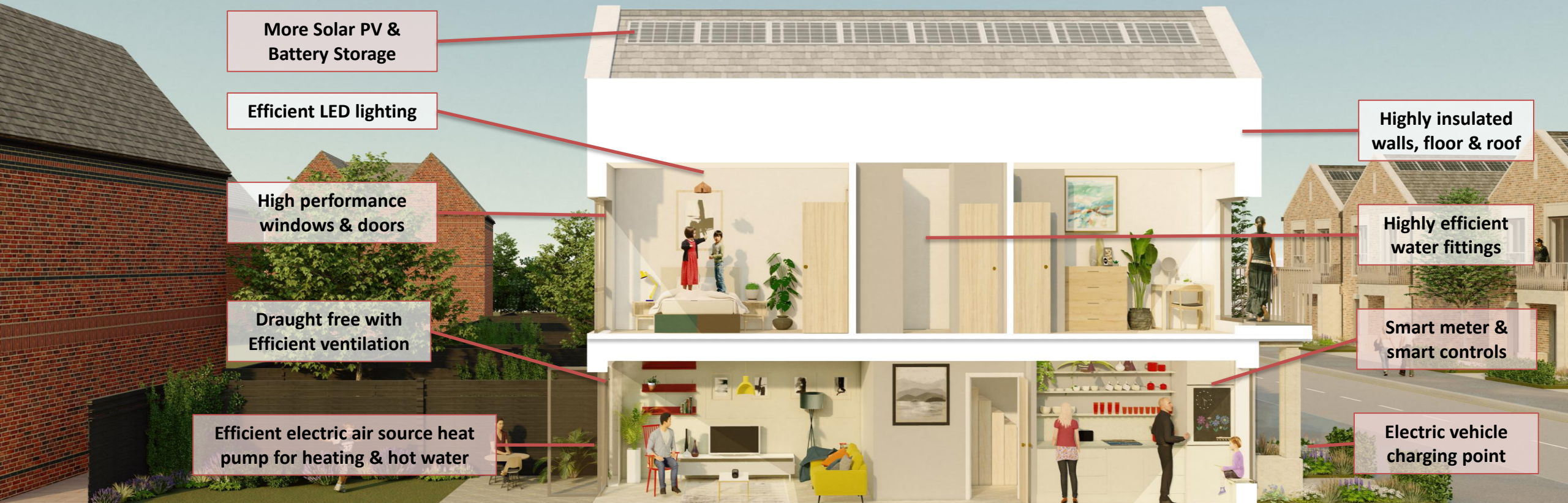
Efficient electric air source heat pump for heating & hot water

Highly insulated walls, floor & roof

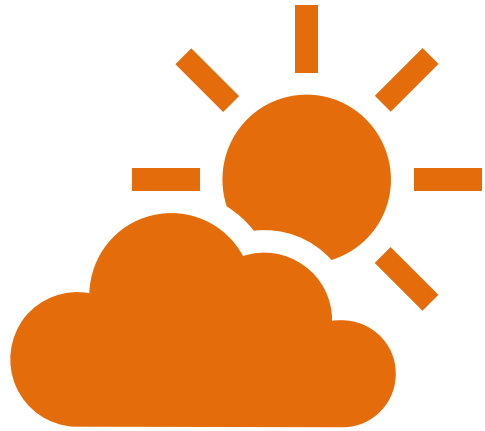
Highly efficient water fittings

Smart meter & smart controls

Electric vehicle charging point

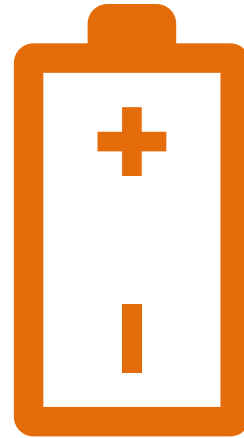


# ZERO bills



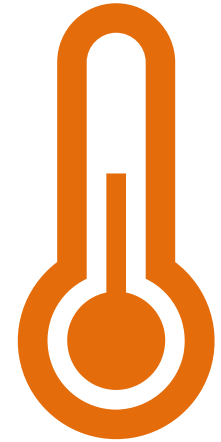
## Solar Panels

“Free” energy



## Battery

Energy when you want

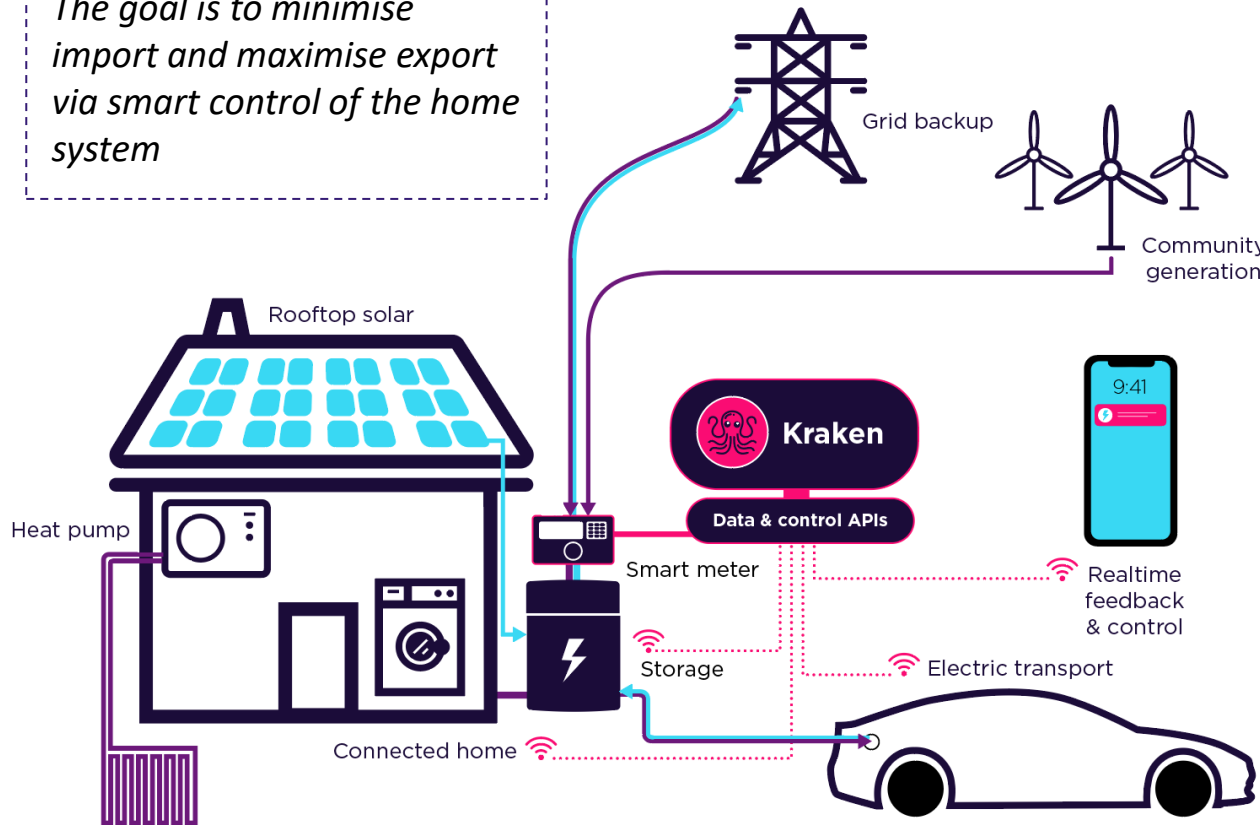


## Heat Pump

3x Heat : Energy

# Octopus Energy's Kraken & Kraken Flex platforms optimise the home energy system to achieve a zero bill

*The goal is to minimise import and maximise export via smart control of the home system*



Using our “Intelligent Octopus” platform (Kraken & Kraken Flex) we are able to optimise the home energy system for a Zero Bill over 12 months by:

- Optimising around customer controls and preferences
- Controlling the heat pump in the home
- Controlling solar and battery systems in the home
- Taking feed from weather forecasts
- Dynamically accounting for market conditions
- Providing flexibility services to the grid

# Hope Green, Stanford le Hope



By Metropolitan Thames Valley

Since 1837  
**Gresham House**  
*ilke*  
 Specialist asset management HOMES

# Hope Green, Stanford le Hope



# ZERO Carbon + ZERO Bills, Essex



By Metropolitan Thames Valley



Gresham House  
Specialist asset management

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# Cost – Benefit analysis:

Simple payback (years)		Cost uplift					
		£0	£5,000	£10,000	£15,000	£20,000	£25,000
Benefit	£500	0.0	10.0	20.0	30.0	40.0	50.0
	£1,000	0.0	5.0	10.0	15.0	20.0	25.0
	£1,500	0.0	3.3	6.7	10.0	13.3	16.7
	£2,000	0.0	2.5	5.0	7.5	10.0	12.5
	£2,500	0.0	2.0	4.0	6.0	8.0	10.0
	£3,000	0.0	1.7	3.3	5.0	6.7	8.3
	£3,500	0.0	1.4	2.9	4.3	5.7	7.1

# Deriving value from Zero Carbon and Zero Bills.

## ➤ EPC A (92+) or B (81+)

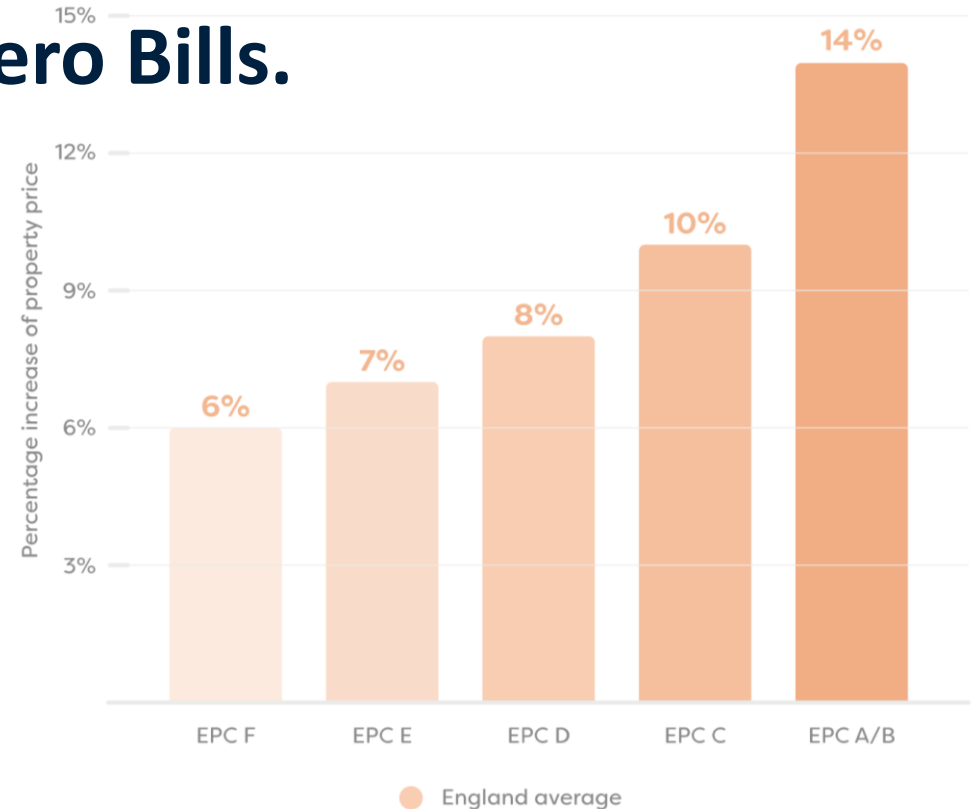
- Higher property values by EPC ratings (not Ldn).
- Lower “Green” mortgage rates & cashback.
- Data on rent arrears and bad debt (RP data).

## ➤ Zero Carbon

- Lower cost of finance (via ESG funds).
- Reduced offset costs for carbon neutrality.

## ➤ Zero Bills (Guaranteed)

- ilke Homes to trial on sites in 2022.
  - Increased sales value (at Hope Green)
  - Increased rental level (TBC – within cap)
  - Wrap into an “all in” rent?



Barclays Green Home Mortgages  
Buy an energy efficient home and  
get a lower rate

If you're buying a home with a Nationwide mortgage, we'll reward you with:

- ✓ £500 cashback, for a property with a score of 92 or above.
- ✓ £250 cashback, for a property with a score of 86 to 91.

This cashback offer is available in addition to our other cashback offers.

A row of modern brick townhouses with solar panels on the roof. The houses are two stories high, built with grey and red bricks. They have multiple windows and small awnings over the entrances. The solar panels are dark and cover a significant portion of the roof area. The scene is set in a residential area with trees and a clear sky in the background.

*ilke ZERO*

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