

POSITIVE HOMES

Building for the future

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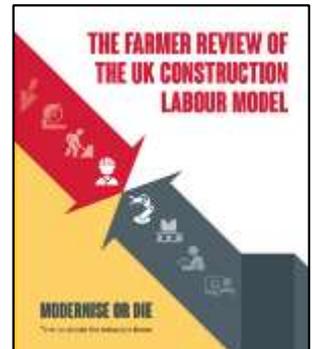
ABOUT US

- We're a small ecohome developer, since 2016
- We're based in Keyworth, Nottinghamshire – building in a 30 mile radius around Nottingham
- We **only** build EPC 'A' rated super-energy efficient homes
- We work with the public sector to regenerate surplus/ difficult sites
- We build and sell at similar prices to the big developers
- We're backed by significant private investment – and Homes England's Home Building Fund
- And we are recognised as one of the 50 most innovative companies in the Midlands too!



HOUSE BUILDING IN CONTEXT

- **Oligopoly of big builders** churning out (not enough) low quality, overpriced, energy poor homes
- 1988: 1 in 4 homes constructed by small developers
- 2018: 1 in 12 homes built by small developers
- Material prices up 30% since 2016
- Skilled labour in increasingly short supply
- The industry must '**Modernise or die**' (Mark Farmer, Government construction expert)



The Government wants the UK to be a 'net zero' nation by 2050. By 2025, no new home will be allowed to connect to mains gas – and if adopted, the Future Homes Standard will require all new homes to be at least 75% more energy efficient than today.

But in the last 12 years, only 1% of new homes meet the highest 'A' rated energy standards. Every year, housebuilders are making the problem worse, not better: British homes are incredibly inefficient – producing around 40% of all CO2 emissions. Why? Because traditional housebuilders are notoriously conservative.

'NET ZERO' CARBON AS STANDARD

Every home we build is at least 'A' rated – and from 2021, all our homes will be 'net zero' emitters of Co2. We are able to profitably achieve this, as a small developer, by adopting a very different approach to traditional housebuilders.

We have a 'blank sheet of paper' mentality – believing that innovation, not cost-cutting, is the best route to building the kind of homes people are proud to live in: Homes that literally don't cost the earth! Our aim is to keep energy bills at no more than £1 a day for the typical household.

'MANUFACTURING, NOT CONSTRUCTION'

We have ambitious plans to develop hundreds of highly energy efficient homes – by adopting sensible, practical, innovative methods to build to the highest standards quickly and safely. Perhaps our biggest innovation is in *culture*: developing a way of building that sees all contractors work together and engage positively in our agenda – where health and safety and quality come equal first.

Our homes are built in modern, high tech factories – before being craned into position in a few days. It's precision engineering, with 95%+ of every home completed indoors, in the dry, by highly trained people. This 'modular' method is the only way to guarantee every home is built to the highest standards – both in terms of its energy efficiency and in the quality of finish.

OUR AMBITION

We aim to build 700 homes by the end of 2026 – predominantly aimed at younger, first time buyers, and older 'downsizers' looking to lower the bills and live a greener lifestyle.

PARTNERSHIPS

We want to join with public organisations who share our philosophy, to develop homes on their land. By working together, we can invest in communities to secure the maximum benefit to the environment. This will not be easy – but we have decades of experience working in the public sector before creating Positive Homes, so we understand the issues and constraints.

INNOVATION

It's one thing to make all our homes zero carbon in use – but we need to cut the amount of CO2 created in the building process too. So we are looking to eliminate concrete in our foundations by using stainless steel 'screw piles'. By cutting out concrete, we can make a massive difference – not least from reducing the number of diesel powered lorries normally required to remove earth and pour concrete into the hole.

We are also partners with the University of Nottingham and others on three Innovate UK funded projects:

- Ground source heat pumps – reduce installation costs and improve efficiency, making it a financially viable alternative to fossil fuels for heating and hot water
- Phase change materials – better control of temperature and humidity levels in new homes
- Seasonal storage – capturing heat in the summer that can be used to heat homes and provide hot water in the winter, cutting energy bills and reducing the need for fossil fuels.

ENERGY DEMAND COMPARISON

This table shows how the energy demand for heating, hot water and lighting for our homes compares to a typical new home, older home, and one built to the very highest 'passivhaus' standards*:

	House size (m2)	EPC Rating	EPC	Energy cost p/y	Energy cost (inc. solar PV payment)	Total supply requirement (kWh)	Solar PV (2.2kWh)	Total (kWh)
Passivhaus	81	100+	A	£174	£48	3215	2106	1109
Positive Home	81	94	A	£320	£194	5897	2106	3791
Typical new build (no PV)	81	79	C	£478	n/a	9153		9153
Typical older house (no PV)	81	58	D	£967	n/a	16200		16200

*To allow comparison, this assumes all homes are the same size, and all use mains gas for heating and hot water. South facing roof.

'NET ZERO' CARBON AS STANDARD – the numbers

Our approach is the best balance between affordability and practicality – built to perform to the same standard year in, year out. By using a highly efficient air source heat pump instead of gas, our homes will generate more energy than they need to provide heating, lighting and hot water to a typical family – and at a cost of less than 35p a day!

	House size (m2)	EPC Rating	EPC	Energy cost p/y	Energy cost (inc. solar PV payment)	Total supply requirement (kWh)	Solar PV (2.2kWh)	Total (kWh)
2021 Positive Home + air source heat pump	81	95	A	£253	£127	1685	2106	-421

So why not build to 'passivhaus'?

Building to 'passivhaus' is certainly a great idea – but the cost and time involved to achieve it makes it too expensive for our target market of first time buyers and older 'downsizers'. The risk of a passivhaus is that, over time, the building's performance will start to suffer. Our approach means we have a solid platform to develop even better, innovate ways to improve building performance – safe in the knowledge that, as of 2020, we are already guaranteeing buyers a carbon-free future.

OUR WORK SO FAR

- Four, 2-bedroom homes at Prospect Road, Old Whittington, Chesterfield, S41 9DU
- Three, 3-bedroom homes at William Street North, Old Whittington, Chesterfield, S41 9DT
- Two, 4-bedroom homes at Dale Road, Keyworth, Nottinghamshire, NG12 5HS (+ refurbishment of 7 Dale Road – Victorian semi).
- Eight, 3-bedroom homes at Farmlands Close (off Cottam Gardens), Nottingham, NG5 9DX on land bought from Nottingham City Council.

All built to highest 'A' rated standards (Energy Performance Certificate system) including features such as PV panels, mechanical ventilation and heat recovery, LED lighting, high-spec double or triple glazing.

LATEST DEVELOPMENT: The Newlands, Fernwood, Newark

- Nine, 3 bedroom 'A' rated homes
- Site purchase for £250,000 from NHS Trust – putting money back into the public sector
- Modular construction system – (with *ilke* Homes) – core install in just five days
- Planning permission secured February 2019
- Flat site surrounded by existing services
- Demolition of existing building/ site preparation – summer 2019
- Completed 2020
- **Private Development of the year, 2021 Offsite Awards.**



This scheme uses the Ilke Homes modular housing system (www.ilkehomes.co.uk). Homes are built to exacting standards in a precision engineering factory in Knaresbrough, Yorkshire, before being craned into position on site. We have halved the amount of concrete (a huge generator of CO2) used in the foundations compared to a typical new house. This is a true 'modern method of construction' (MMC) system.

All homes on this site have an 'A' rated Energy Performance Certificate. Since EPC was introduced in 2008, only 16 homes in Newark and Sherwood have been built to 'A' rated standards. These '£1 a day' homes are a truly sustainable development, which out-performs almost every other housing development in the UK.

The project is part-financed by a £700,000 loan from Homes England, through the Home Building Fund – the first time it had invested in a small developer building 'eco-MMC'.

NINE HOMES IN FIVE DAYS: Watch the installation film:

https://youtu.be/pDk9pu_RJZE



CONTACT

We are always looking for suitable sites across the East Midlands. If you want to work with us to build a zero carbon, low energy, greener future, just get in touch:

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PREVIOUS PROJECTS

'Almost Passivhaus' standard:

- Air changes = 1m³/hr/m² @ 50Pa
- PV/ LED lights/ Triple glazing
- Air source hot water heating

PROSPECT ROAD, CHESTERFIELD
2016/17: Four, 2 bed homes
Energy bills: 76p a day



WILLIAM STREET NORTH, CHESTERFIELD
2017/18: Three, 3 bed homes
Energy bills: £1 a day



FARMLANDS CLOSE NOTTINGHAM, 2018/19

Eight, 3 bed homes

'A' Rated for energy – top 1%
Timber SIP system

Six homes sold to first time buyers
One to a family
One to a retired 'downsizer'

Land bought from Nottingham City
Council – contract requirement to
build highly energy efficient homes

