Lancaster West

Becoming a model carbon zero estate

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LANCASTER WEST NEIGHBOURHOOD TEAM W11

Our goal

Our goal is to help the Lancaster West estate build a sustainable future by becoming a net zero estate by 2030.

This means that there will be an overall balance between carbon emissions produced by the estate and taken out of the atmosphere.

We've made progress already, but there is more to be done.

Moving towards carbon zero

What are we doing?

	What's the aim	What's been done	What's to come
Mayors Energy Efficiency Fund	Secure funding to increase energy efficiency across the Lancaster West estate	- Met with Amber Infrastructure - Completed data analysis on stock - Drafted feasibility study	- Review feasibility outputs - Develop whole stock strategy - Agree approach and plan - Agree finance package
EnergieSprong Design Competition	Explore innovative solutions for retrofitting and improving energy efficiency for **Treadgold House**	- Outlined ambitions for the block - Provided data and analysis - Attended design competition launch event - Reviewed design competition entries	- Move forward and develop design proposal in full - Plan next steps with team
PassivHaus Retrofit Feasibility	Develop an example of what can be achieved by retrofitting homes to PassivHaus standards.	- Identified that 50 Verity House has potential to become retrofitted to PassivHaus standards - Met with architect specialising in Passivhaus design	- Feasibility study on options to retrofit 50 Verity to PassivHaus standards - Carry out feasibility study into retrofitting Morland House - Develop project plan and review spec and quotations for work - Engage with providers and residents.

Moving toward carbon zero – What are we doing?

	What's the aim	What's been done	What's to come
Ground Source Heat Pumps (GSHP)	Explore a renewable alternative to our current carbon intensive district heating systems.	- Met with KENSA representative to discuss how GSHPs work and are installed. - Commissioned and received feasibility study of GSHPs around the estate.	- Review proposals made in the feasibility study and costs involved. - Refine scope of the project and identify which blocks are suitable to pilot GSHPs.
Switchee Smart Thermostats	Maintain the smart thermostat functionality of Nest, while getting more data on performance of assets and energy usage, enabling us to pre-empt repairs.	- Met with representative from Switchee who demonstrated its benefits in comparison to the Nest smart thermostats now being installed in voids.	- Pilot Switchee devices in void properties and gather feedback from residents on them in Open House events.
Lancaster West Meadows	Increase biodiversity, improve the look of the green landscape around the estate and promote the well being of our residents.	- Identified company to provide meadows suitable for the estate. - Site survey carried out and recommendations developed for where meadows should be situated on the estate, and which meadow type to use.	- After consulting with residents, create a pilot meadow on the estate based on previous recommendations. - Consider locations for potential GSHP boreholes when planning future meadows to avoid

In the next year, through the measures we have implemented, we are already on track to save:

30,300 KG OF CO2 EMISSIONS FROM ENTERING THE ATMOSPHERE

1,456 LITRES OF FOOD WASTE FROM ENTERING LANDFILL

1.5 MILLION LITRES OF WATER

However, if all properties adopted the energy saving measures we are implementing, this year we would be on track to save:

OVER **1.5 MILLION KG** OF CO2 FROM ENTERING ATMOSPHERE

235,000 LITRES OF FOOD WASTE FROM ENTERING LANDFILL

24.45 MILLION LITRES OF WATER

What measures have we been implementing?

Summer 2018

30% of our repairs operatives, and 20% of LWNT staff are local residents and walk to work.

As a result of these staff members walking to work instead of commuting, each year around 5 tonnes of carbon emissions are saved from entering the atmosphere.

That's saving the equivalent weight of CO_2 as 3 cars!

Hired local staff

Using cargo bikes, our repairs operatives are now cycling between jobs across the estate and transporting their tools.

This ensures our operatives can get to where to they are needed and saving a tonne of CO_2 emissions each year – the same weight as 2 polar bears!

Introduced cargo bikes

Autumn 2018

5 households have started collecting their food waste in small caddies, using a hot box composter to make compost for the community gardens. Hot box composters can work upto 32x faster than normal compost bins, so the compost is quickly ready for use.

In the past year, we estimate that up to 1,456 litres of food waste have been saved so far from going to landfill.

This is enough waste saved to fill 10 large bathtubs!

And if used across the whole estate?

If every household across LancWest were to collect and recycle their food waste, up to 23,5000 litres of waste could be saved from going to landfill.

Enough to fill 20 concrete mixer trucks!

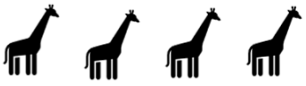
Piloted composting

X 20

Spring 2019

So far, 6 void properties have switched to and are using a net zero energy provider. As a result, each year, 21 tonnes of CO_2 will be saved from entering the atmosphere.

That's the same weight as 4 giraffes!



Switched to net zero energy provider

And if used across the whole estate?

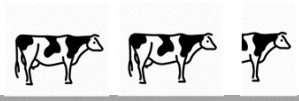
If the whole estate switched to net-zero energy providers, we would be saving 1,100 tonnes of CO_2 from entering the atmosphere each year.

That's the same weight as 10 blue whales!

We've fitted all of the voids with LED light bulbs, which use 6x less energy that standard bulbs. Each standard bulb is replaced by approximately 4 LED bulbs.

So far, each year we are saving 31kg of CO_2 from entering the atmosphere.

By the end of next year, we will be on track to save 1.5 tonnes of CO_2 – the same weight as two and a half cows!



Installed LED lights

And if used across the whole estate?

If all properties managed by LWNT were fitted with LEDs instead of standard bulbs, assuming the estate had not yet switched to Bulb, 26 tonnes of CO_2 would be prevented from entering the atmosphere each year.

That's the equivalent weight as 4 t-rex!

Spring 2019 cont.

We've been installing Nest 'Smart' Thermostats into void properties, which learn from resident heating preferences and adjusts the temperature accordingly. This is estimated to save between 8.4% - 16.5% of energy used for heating.

So far, the let voids with Nest installed will save up to an estimated 7834 KWh hours each year, preventing 2217 kg worth of CO_2 emissions – the same weight as a rhinoceros!

Installed Nest Thermostats

And if used across the whole estate?

If all properties managed by LWNT were to start using a Nest Smart Thermostat, we would save around 349 tonnes of CO_2 from entering the atmosphere!

This is as heavy as around 30 double decker buses!

X 30

Gas has been removed in 4 let voids, and electric hobs and ovens have been installed, replacing their less efficient gas equivalents.

So far, 50kg of carbon emissions are being prevented from entering the atmosphere each year, the same weight as an octopus!

Removed gas in voids

And if used across the whole estate?

If gas was removed in all properties managed by LWNT, assuming the properties had not switched to a net zero energy provider, we'd save around 41 tonnes of CO_2 emissions.

That's the same weight as around 7 elephants.

Summer 2019

Methven 'Aurajet' shower heads are now being installed in all the voids, which save 25% of water used each shower (around 24 litres).

By the end of next year, we anticipate that per year we will be saving around 750,000 litres of water as a result of the installation of these shower heads in the voids.

Methven Shower Heads

This means in a year, we will be saving enough water to fill 5 coaches!

And if used across the whole estate?

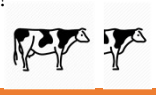
If the whole estate switched to Methven shower heads, we could be saving 12.5 million litres of water each year.

That's enough to fill 5 Olympic swimming pools!

Autumn 2019

We are replacing the Lancaster West Neighbourhood Team's diesel VW Transport van with 2 zero-emission electric vans.

As a result, each year we could be saving around a tonne of CO_2 entering the atmosphere each year. That's the same weight as 1 and a half cows!



We are introducing dual flush toilets, which saves nearly 50% of the water used flushing a typical toilet.

By next year, we will be on track to save around 730,000 litres of water per year.

This is enough water to fill 8 double decker buses!

Electric Vans

Dual flush toilets

And if used across the whole estate?

If dual flush toilets were installed in all properties managed by LWNT, we would be saving around 12 million litres of water each year.

This is enough water to fill 5 and a half hot air balloons!

What's next?

We are exploring a number of options within properties such as:

- **Better insulation** – This will help to reduce heat loss from properties and in turn, reduce the amount of energy required to heat homes.
- **Double glazed windows** – A significant proportion of heat is lost through windows in each property, so replacing them with double glazed, sustainably sourced alternatives will reduce heat loss and the energy required to heat homes.
- **EnergieSprong** – An innovative approach to retrofitting homes to make them significantly more energy efficient. We are currently exploring if their approach could work at LancWest and are exploring securing a £19m loan from the GLA Mayor's Energy Effiency Fund (MEEF) to fund it.

We are also exploring opportunities across the wider estate such as:

- **Renewable district heating system, such as a ground source heat pumps**
- **Urban wind**
- **Solar power**
- **Community energy company/sharing project**
- **Rainwater collection**
- **Using sustainable materials across the refurbishment project**
- **Planting meadows to encourage biodiversity**