



24 LANDCROSS ROAD FALLOWFIELD MANCHESTER M14 6NA





ASSESSMENT OUTLINE

PROPERTY

24 Landcross Road
Fallowfield
Manchester
M14 6NA

PROPERTY TYPE

Six-bed Victorian terraced
house

DEVELOPER

Lavender Property

SUSTAINABILITY

Consult Sustainability

ASSESSMENT DATE

June 2022

The Green Plaque Retrofit Award confirms that the developer has taken significant holistic steps towards reducing the property's environmental footprint, covering the construction work as well as the building's use and future life

HEADLINE IMPROVEMENTS

ENERGY, WATER & CO²

EPC rating: ↑ from F to C

Heating and hot water bills: ↓ 40%
reduced water demand also reduces the heat requirement for hot water production

Property carbon emissions ↓ 45%

Water use ↓ 42%
saving the household up to £170 a year, while also cutting hot water production

OTHER SIGNIFICANT ACTIONS

All internal lighting replaced with 100% high-efficiency LED fittings

Installed modern, efficient appliances
significantly reduced carbon emissions, energy and water use

Significant reduction in use of volatile organic compounds

All these actions reduce the property's environmental footprint and will cut the household's running costs.

ABOUT THE DEVELOPER

Lavender Property Services Ltd is a privately-owned development and investment company.

Its focus is on delivering high-quality, design-led developments in sought-after locations across the UK.

Lavender has brought together a talented team of partners, contractors and suppliers to deliver residential schemes from concept to delivery.

LAVENDER.
PROPERTY

The company's expertise encompasses acquisitions, planning, design and development.

Lavender has an extensive portfolio of completed projects in London, Kent, Surrey, Leicestershire and Greater Manchester.

lavenderproperty.co.uk

The development has been assessed under several different headings, which make up the key environmental parameters within the home.

The property had been used as rental accommodation and was in a very run-down condition. The developer has taken the property right back to the basics and created a safe, high-specification home for use by university students.

Fuel bills have been passed to the residents to create a sense of ownership and responsibility for the use of appliances, as well as the heating and hot water system. However, the design and construction has been implemented with a particular focus on minimising fuel costs.

This was the first project assessed in this way under the Green Plaque Retrofit initiative. However, the project had progressed significantly prior to the Green Plaque’s involvement, which meant there were several specification items that have not been considered for inclusion here. These mainly concern the choice of fabrics, but these will form the assessment process on future schemes.

Future consideration should be given to the introduction of underfloor insulation and internal wall insulation on external exposures, as well as the potential to install underfloor heating pipework where applicable.

Despite our late involvement with this development, the developer

The new Ideal Logic Code Combi ESP1 26kW boiler – which has a SEDBUK energy efficiency of 89.6% – is extremely energy efficient

Score	Energy rating	Current	Potential
92+	A		
81-91	B		
69-80	C	70 c	76 c
55-68	D		
39-54	E		
21-38	F		
1-20	G		

has incorporated several exemplar improvements to the property, which will provide new residents with several advantages, and will reduce both running costs at the property and its environmental footprint.

Reducing energy and carbon
A new Ideal Logic Code Combi ESP1 26kW boiler, which has a SEDBUK energy efficiency of 89.6%, was installed at the property.

This is extremely energy efficient and, being a combination boiler, reduces fuel use by reacting only to demand for hot water. And having no cylinder tank means there is minimal convection heat loss during use.





► This Ideal domestic boiler can run safely and efficiently on a 20% hydrogen blend with no technical adjustments, so future changes to the supply will cause minimal disruption to energy for heating and hot water.

The heating system is fitted with time, weather and zonal temperature controls, as well as a boiler compensator. This allows for more accurate assessments of the actual room temperature. It also provides greater temperature control over different parts of the property.

The controls can also assess the outside temperature before deciding to turn on or not. These delicate revisions to the boiler's operation can significantly reduce its operating temperatures and thus reduce fuel use.

The property is signed up to Octopus Energy, a highly-rated energy company. Octopus guarantees that 100% of all its electricity is generated from renewable sources. Future consideration could be given to using a supplier with full renewable credentials, as some companies can utilise the production of gas from biofuels.

A smart meter has been installed, providing residents with information on costs and carbon reductions. And a 12-month annual boiler service has been initiated, as well as the usual gas check. Boilers operate much more effectively if the full system is regularly maintained.

A Magna clean filter has been installed, which de-ionises the water entering the boiler. This reduces the potential build-up of sludge or similar system pollutants.

All electric appliances have been selected to achieve the very highest energy efficiency. EU standards recently changed on assessment, making it more difficult to achieve the very highest ratings.

However, the performance in this property is exceptional, in large part thanks to the choice of appliances. It is often the case that integrated appliances score lower as the ability to heavily insulate the side panels is lost.

APPLIANCE	RATING
Washing machine	A
Cooker	A
Fridge freezer	A
Integral dishwasher	C

The Green Plaque is using the *Which?* Guide Eco Buy reviews as a prescribed requirement.

Vacuum or PIR switches have been provided to all communal areas within the house, so they are only lit when in use.

Block or highly-accessible wall sockets have been installed, allowing residents to easily access electrical plugs. This aids turning off appliances and helping to avoid 'stand-by' waste.

External lighting with a dusk-to-dawn switch has been installed, meaning it will only operate at night. PIR switches ensure lighting only responds where there is movement.

Where windows and doors have been replaced, consideration has been given to their replacements' specific U-values. ►

► **Saving water**

Water is our most valuable resource. Against standard water bills, savings can potentially save the householder up to £170 per year.

The property's overall water use has been reduced to 103 litres per person per day. This has been achieved in several ways.

Firstly, the property has no baths. Instead, there are shared shower rooms where the shower flow is restricted to a rate of 8 litres/minute.

Secondly, hand washbasin taps are restricted to 5 litres/minute, and the kitchen taps to 6 litres/minute. All WC cisterns are dual-flush 6/4litres.

And, finally, the washing machine has a water use of only 4.22 litres/ per kg/per cycle, and the integrated dishwasher has a water use of 0.61 litres per place setting.

Products, waste and pollutants

All new timber used in this retrofit scheme has been sourced from FSC-accredited suppliers – the FSC promotes environmentally-appropriate, socially-beneficial and economically-viable management of the world's forests.

A skip company has been employed for the retrofit contract; one which aims to divert at least 80% of the waste away from landfill sites.

Care has been taken within the contract to avoid products containing volatile organic compounds.

Against standard water bills, savings can potentially save the householder up to £170 per year





Care has been taken to avoid products containing volatile organic compounds in paints, carpets, vinyl and MDF products

- Consideration has been given to the selection of paints, carpets, vinyl and MDF products.

Recycling bins that comply with the local authority's collection schedule have been provided in the kitchen, together with a food caddy.

The new boiler is NOx class 6 compliant. NOx is a generic term for the nitrogen oxides that are most relevant to air pollution: namely, nitric oxide (NO) and nitrogen dioxide (NO₂).

These gases are usually produced from the reaction between nitrogen and oxygen during the combustion of hydrocarbon fuels in air, especially at the higher temperatures encountered in car engines and boilers.

Lifestyle

Simply taking advantage of free solar and wind energy when possible makes a significant difference to a property's environmental footprint.

Mechanically drying clothes and other linens, for instance, can add up to 15% to the average property's annual energy costs. So, as part of this retrofit project, a retractable washing line has been provided in the rear garden amenity area.

Bird, bat and insect boxes have also been incorporated into this amenity area. This might not be a huge area for improvements in biodiversity, but as they say: 'Every little helps.' ■



An environmental assessment from



lifecycledesign.co.uk