

# Data analysis for sustainability strategies

## British building owner (London, the UK)

### About

A British social impact investment company manages a number of funds, such as the Real Letting Property Fund (RLPF) - consisting of 259 dwellings in the Greater London area. It pursues an environmentally responsible strategy in order to prevent fuel poverty and increase tenants' living standards. This strategy aims to improve the average portfolio EPC rating from D to C.

### Data collection and analysis

A comprehensive dataset was built combining information from technical and financial datasets shared by the BO, showing that:

- More than 88% of the RLPF's dwellings are low-rise buildings;
- The majority of the flats were built after 1950
- The stock has an overall good energy performance; 40% have EPC label C and 38% EPC label B;

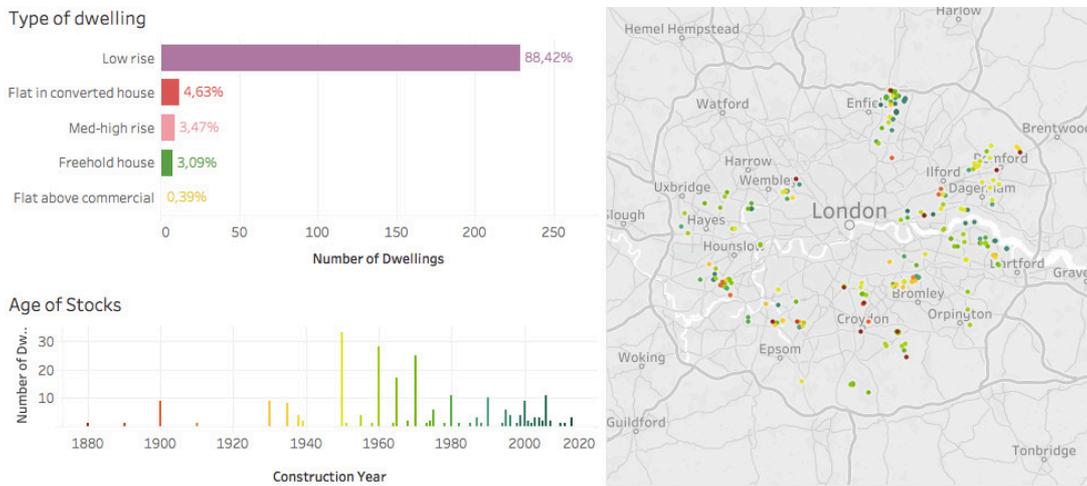


Figure 1. Distribution of the age of the building owner's stock and dwelling types.

### Renovation Packages

The dwellings of the stock are mainly low and mid-rise flats which have been grouped according to their energy performance (3 main energy labels) in three main target groups (Table 1). Dwellings belonging to the same target group usually share similar construction characteristics and energy standards, enabling the identification of all interventions necessary to achieving the established energy efficiency targets.

Table 1. Overview of renovation packages developed .

Renovation package	Renovation groups by type and label	Number of Buildings	EPC	Renovation target
1	Flats	20	E	shallow/deep
2	Flats	88	D	shallow/deep
3	Flats	120	C	shallow/deep
<b>TOTAL</b>		<b>228</b>		

**Shallow renovation:** does not necessarily involve an EPC label improvement and costs £550-690.

**Deep renovation:** entails an EPC label jump, higher energy savings but also higher investment costs (£2700-£4000).

## The energy efficiency value

As the Real Lettings Property Fund aims to provide move-on accommodation for homeless individuals and families, this social investment impact company maintains its rent prices below the market rate. The average discount rate is 26% per dwelling. The market rent prices included in the data were calculated by comparing each property from the portfolio to the closest property match currently available on the rental market based on their indication. As shown in Figure 2, there is no direct link between the energy label quality and the rent price.

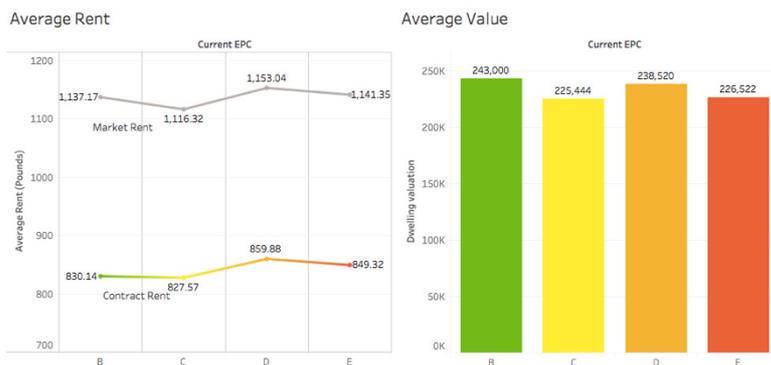


Figure 2. Average rent and value prices per energy label.

Assessing the financial impact of energy efficiency interventions, rental values usually remained the same before and after renovations, while the dwelling value increased (estimation based on average 2016 RICS valuations per label).

## Investment pathways

The projection of the current investment practices in energy renovation shows that investing £100,000 over 5 years will bring 87% of the portfolio up to an average SAP score 73 (EPC C). By prioritising the dwelling groups with the poorest energy performance, this building owners would renovate 91% of the stock to EPC label C allocating the same investment. Alternatively, a deep renovation strategy with a higher annual investment of £65k would increase the average SAP score of the portfolio up to 75 and double the lifetime CO2 savings.

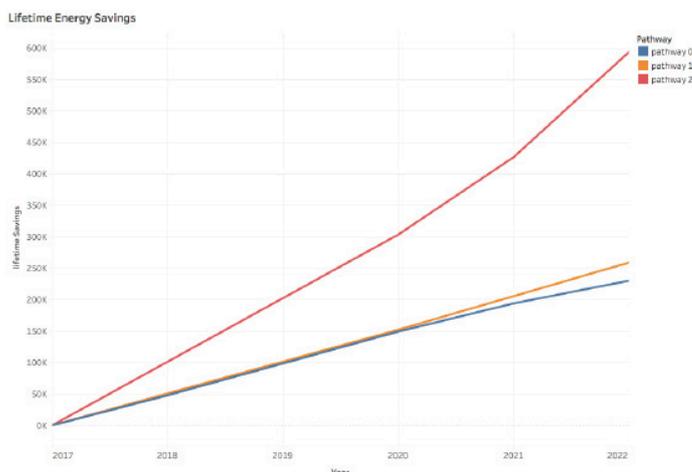


Figure 3. Lifetime energy saving projections of different pathways

## Social impact and financial returns

Investment strategies need to be a trade-off between financial and social return. Living conditions improvements need to be maximised while investment has to be recoverable through stock appreciation. Stock valuation before and after renovation has been estimated and projected according to the investment pathways developed. Pathway 2 generates the highest energy and CO2 savings while still having a positive return on investments thanks to the stock's appreciation, related to better efficiency.

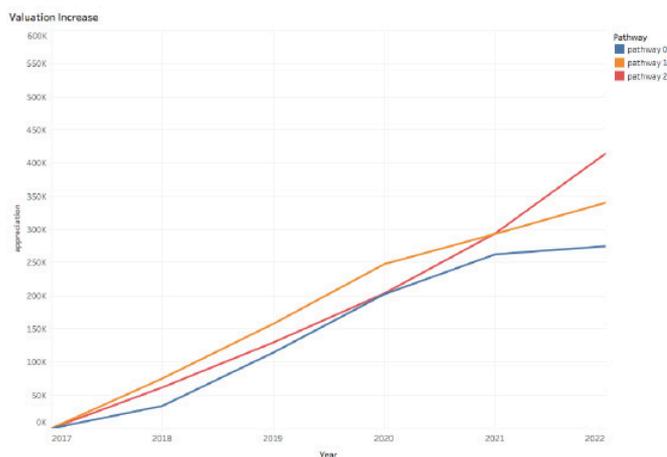


Figure 4. Valuation increase projection

