Thirkill Park - Pannal 8

Nett Zero

The Thirkill Park development consists of the construction of eight new warehouse units which will each be provided with underfloor heating powered by an electric Air Source Heat Pump as well as an array of Photovoltaic panels that will be used to generate energy on site to offset the energy used within the building.

Fixed Building Energy Use

Assessment of the regulated/fixed energy (i.e. heating, hot water, ventilation, lighting, etc) has been modelled in accordance with Part L of the building regulations and the combined units are predicted to achieve an A+ Energy Performance Certificate rating which is the highest possible rating and so achieving a Net Zero rated EPC.

Predicted Tenant Energy Use

A further assessment has been carried out to model the estimated unregulated additional energy used by a typical building users' electrical equipment (i.e. computers, printers, forklifts etc).

Under both the London Energy Transformation Initiative (LETI) and RIBA 2030 Climate Challenge V2 schemes the target for demonstrating Net Zero is 55 kWh/year/m^2 for retail building. The estimated Energy Use Intensity for the assessed building is 48 kWh/year/m^2 based upon a medium energy consumption scenario. This value is lower than the ambitious 2030 targets for both the RIBA and LETI schemes thus demonstrating the low energy use. The calculations estimate the PV array could generate as much energy as is used in the buildings when looking at the year as a whole, based on this scenario. This means that the development is:

"Net Zero Operational Ready"

Summary

Predicted EPC rating (combined units)	A+
Building Regulations Building CO2 Emission Rate (BER)	-7.7
Building Regulations Target Emission Rate (TER)	28.1
Target Energy Use Intensity	55 kWh/year/m^2
Predicted Energy Use Intensity	48 kWh/year/m^2

Please note: the assessments for the individual unit demises will be carried out prior to the completion of the building works and due to variations in the building sizes the final recorded results will vary the above results.

The term net zero ready to our understanding and data at this point is a retrospective view of the current design and build. Hydrock has no control over future use and operations, and therefore there is an uncertainty on the net zero claim moving forward past Hydrock's input. The net zero claim should be verified annually through the life span of the building to account for changes in design and operation. The current calculations and workings have not been verified to a recognised greenhouse standard.