

Technical Note – Energy & Sustainability

Project: Sullivan Crescent

Ref: J2992

Subject: Energy & Sustainability Note

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This note sets out our approach on the energy and sustainability for the dwellings at Sullivan Crescent. The project proposals currently consist of six new build houses.

Compliance with Condition:

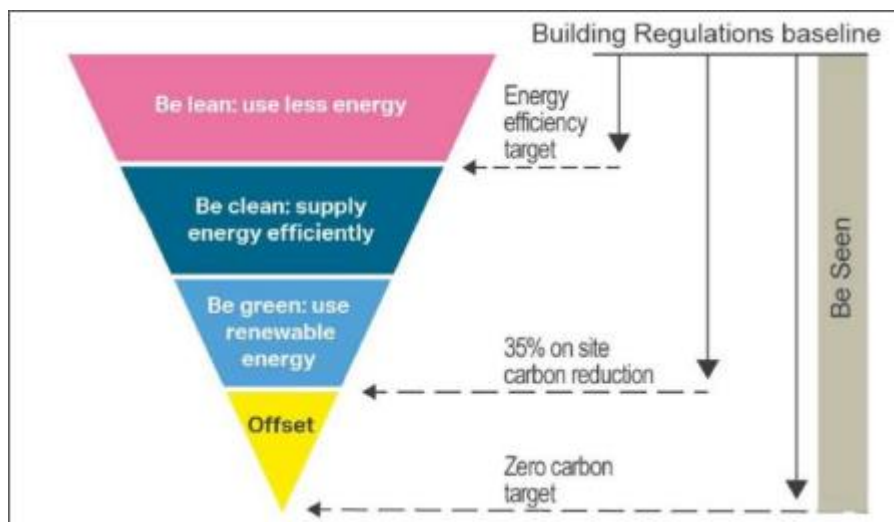
- 8 Prior to the commencement of the development hereby approved, a sustainability and energy statement shall be submitted to and approved in writing by the Local Planning Authority. The sustainability and energy statement shall demonstrate how a 10% reduction in carbon dioxide emissions beyond Building Regulations requirement Part L 2013 (TER Baseline) has been achieved including full technology specifications and locations. Thereafter, the development shall be carried out in accordance with the approved details.

REASON

To ensure the development contributes to minimising the effects of, and can adapt to a changing climate in accordance with Policies DME1 2 and DME1 10 of the Hillingdon Local Plan: Part 2- Development Management Policies (2020) and Policy SI 2 of the London Plan (2021).

As the site is subject to the most recent Part L 2021, it will exceed this requirement simply by passing the latest building regulations.

Energy Strategy Hierarchy: Our design approach follows the London Plan energy hierarchy, as below:



Fabric First Approach: The building specification has been defined including high performing fabric U values, good thermal bridging details and improved building air permeability to maximise reduction achieved via energy efficiency measures.

Efficient Heating Strategy: The developments sustainable design standards are integral to the proposal, these include supplying heating and domestic hot water via Air Source Heat Pumps to the residential properties, which will supply significant Low Carbon Energy.

A summary of the proposed specifications can be found below:

Element	Value (Resi/Com)
External Walls (U-value)	0.16 W/m ² K
Roof (U-value)	0.11 W/m ² K
Floors (U-value)	0.11 W/m ² K
Windows/Doors (Including Frame) (U-value)	1.2 W/m ² K
Glazing total solar transmission (G-value)	50%
Air tightness	3.0 m ³ /h.m ² @ 50Pa

Services	Proposal (Resi/Com)
Space Heating and Hot Water	Air Source Heat Pump - Vaillant Arotherm plus with uniTOWER 5kW
Ventilation	Efficient dMEV system - Vent Axia Lo-carbon NBR dMEV 100

Part L 2021 Results: Below is the performance of each plot against Part L 2021. Full SAP worksheets are in Appendix A.

Plot	Percentage carbon reductions achieved over Part L 2021
1	56.33%
2	54.25%
3	54.25%
4	55.85%
5	53.79%
6	54.14%

Conclusion: The proposed specification will enable compliance with the latest building regulations, and achieve performance in excess of the relevant condition (Condition 8).

Appendix A – SAP 10 Reports