



# Westcott Court

## 13 Holmdale Road, NW6

### Energy Statement for Planning

Job No: 5566.2

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## 1.0 Introduction

- 1.1 T16 Design has been appointed to produce this Energy Statement for the proposed development at Westcott Court, 13 Holmdale Road, NW6.
- 1.2 The report assesses the predicted energy performance and carbon dioxide emissions of the proposed development in the context of local and London-wide policy requirements and best practice methods.
- 1.3 The methodology used to demonstrate the effects of the proposed energy efficiency measures is the 3-stage Energy Hierarchy expounded by the London Plan, Policy SI 2.
- 1.4 Emissions reductions are shown for the proposed scheme at each of these stages and the strategy underpinning them is detailed in the relevant sections of the report.
- 1.5 The overall effect of these policies are:
  - At least a 35% reduction in onsite CO<sub>2</sub> emissions

## 2.0 Project Summary

- 2.1 The proposal site is at Westcott Court, 13 Holmdale Road, NW6. It is currently occupied by a three storey building.
- 2.2 The proposal is for the conversion of the three-storey building into three two-bed apartments.
- 2.3 The site location is shown below.



Site Location

## 3.0 Policy Requirements and Drivers

- 3.1 The relevant planning policy documents for this site, relating to energy are:
- The London Plan (2021 with June 2022 Addendum)
  - Camden Local Plan Policy CC1 'Climate Change Mitigation'.
- 3.2 This policy sets out that minor residential developments are required to reduce emissions by at least 35% over Building Regulations.
- 3.3 Policy SI 2 also requires residential developments should achieve a 10 per cent reduction in emissions through energy efficiency measures (Be Lean in the energy hierarchy).
- 3.4 In light of these policy requirements and through the developer and design team's commitment to reducing the impact of the development on the environment, this report sets out some of the measures that will be adopted to meet the policy targets.

## 4.0 Energy Strategy and Approach

- 4.1 The London Plan document titled "Energy Assessment Guidance", updated in June 2022 to take into account of the update to building regulations 2021, this provides the parameters by which Energy Statements should be formulated and the approach to be adopted.
- 4.2 The three stages of the hierarchy are referred to as Be Lean (Use Less Energy), Be Clean (Supply Energy Efficiently), Be Green (Use Renewable Energy).
- 4.3 The Be Lean stage of the hierarchy requires development must initially reduce the energy demand of the building through architectural and building fabric measures (passive design) and energy efficient services (active design).
- 4.4 The second part of the hierarchy (Be Clean), is interested in the how their energy systems will exploit local energy resources and supply energy efficiently and cleanly to reduce CO<sub>2</sub>.
- 4.5 The third stage is the addition, where feasible, to introduce renewable technology, which includes PV panels, Solar Hot Water panels and Wind Power and renewable heating systems (ASHPs/GSHPs)
- 4.6 The first stage of this process is to establish the baseline emissions on which the reductions will be based.
- 4.7 This is done using SAP (Standard Assessment Procedure) for residential elements.

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5.0      Baseline Emissions

- 5.1      The baseline emissions on which reduction figures are based are calculated using SAP for residential buildings.
- 5.2      Refurbishments and extensions are based upon a notional specification set out in Appendix 4 of the London Plan Energy Statement Guidance.
- 5.3      The baseline emissions are as follows.

Element	Annual Emissions Tonnes/CO <sub>2</sub> //Year
Westcott Court	4.8

Table 1 – Baseline Emissions

## 6.0 Be Lean Strategy

- 6.1 The next stage, once the baseline has been established, is to make improvements within the "Be Lean" category. This includes improving the U Values and the reduction of thermal bridging.
- 6.2 The U value improvements for each element, with the relevant Part L notional value are shown below.
- 6.3 Gas boilers with an 89.5% efficiency has been proposed at this stage for central heating.

Be Lean Specification		
Element or system	Backstop Value	Proposed Value
Existing Wall	U = 0.30 W/(m <sup>2</sup> k)	U = 0.20 W/(m <sup>2</sup> k)
Extension Wall	U = 0.18 W/(m <sup>2</sup> k)	U = 0.15 W/(m <sup>2</sup> k)
Proposed roofs	U = 0.15 W/(m <sup>2</sup> k)	U = 0.1 W/(m <sup>2</sup> k)
Windows and glazed doors	U = 1.4 W/(m <sup>2</sup> k)	U = 1.8 W/(m <sup>2</sup> k)
Floors	U = 0.25W/(m <sup>2</sup> k)	U = 0.13 W/(m <sup>2</sup> k)
Air Permeability	N/a	8 m <sup>3</sup> /(hm <sup>2</sup> ) at 50 Pa
Lighting	Fixed lighting efficacy = 75 lm/W	Efficacy of all fixed lighting = 120lm/W

Table 2 – Be Lean Fabric Specification

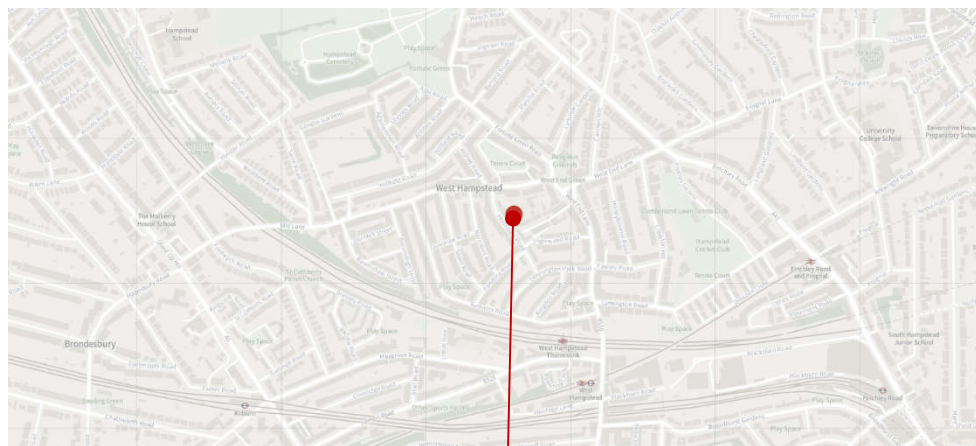
Westcott Court Be Lean Emissions			
	Baseline Emissions	Be Lean Emissions	% Reduction
Regulated Emissions	4.8	3.9	19%

Table 3 – Westcott Court– Be Lean Emissions



## 7.0 Be Clean Strategy

- 7.1 The Be Clean element of the hierarchy refers to supplying energy in a clean manner. This encompasses the use of energy efficient heating sources (such as heat pumps), decentralised energy and heat networks and the consideration of Combined Heat and Power.
- 7.2 The site does not sit within 500m of any existing decentralized energy or heating networks but it is close to a **proposed** network (as shown on the map below).
- 7.3 Due to the small scale of the proposal, CHP is also not a viable solution. London Plan guidance suggests that CHP is most suitable for developments of at least 500 units.
- 7.4 As there is no material change at this stage, no improvements on the Be Lean stage have been made.



Site Location

## 8.0 Be Green Strategy

- 8.1 The Be Green element of the hierarchy requires the consideration of renewable technologies to reduce emissions still further beyond the savings made at the Be Lean and Be Clean stages.
- 8.2 The technologies that are considered here are wind power and solar panels (photovoltaic (PV) or Solar Thermal and ground and air source heat pumps.
- 8.3 Wind power is not suitable in a location such as this. Wind turbines tend to perform poorly in built-up areas.
- 8.4 Any wind that is received on the site would be too intermittent and turbulent to provide any meaningful reduction in emissions.
- 8.5 Ground Source Heat pumps are also unlikely to be a viable proposition due to the ground disturbance required in their installation.
- 8.6 Air Source Heat Pumps (ASHP) however are a suitable solution in this instance and provide substantial improvements in CO<sub>2</sub> emissions when combined with a high-performing fabric such as proposed here.
- 8.7 It is proposed that individual ASHPs with an efficiency of 270% will provide heating and hot water to the dwellings.
- 8.8 Photovoltaics panels are also considered feasible for this site, but are not required in order to achieve a significant reduction in emissions.
- 8.9 The reductions in emissions at the Be Green stage are shown below.

Westcott Court Be Green Emissions			
	Be Lean Emissions	Be Green Emissions	% Reduction
Regulated Emissions	3.9 (Tonnes CO <sub>2</sub> /Year)	1.1 (Tonnes CO <sub>2</sub> /Year)	58%

Table 4 –Be Green Emissions

## 9.0 Summary Of Results

- 9.1 The table below give the percentage improvement in emissions at each stage of the hierarchy and the overall savings made over Part L of the Building Regulations.
- 9.2 The building will be provided with increased U values (as shown above) and ASHPs.

Westcott Court	Carbon Dioxide Emissions (KG CO <sub>2</sub> per annum)	% Reduction
Baseline: Part L 2021 of the Building Regulations Compliant Development	4.8	
After energy demand reduction	3.9	19%
After heat network / CHP	3.9	0.00%
After renewable energy	0.81	58%
Total Savings	1.55	77%

Table 4. Westcott Court summary of results

## 10.0 Conclusions

- 10.1 This report has been set out to demonstrate how the proposed development at Westcott Court, 13 Holmdale Road, NW6, will meet the policy requirement of achieving a 35% reduction in emissions through the Be Lean, Be Clean, Be Green hierarchy.
- 10.2 In doing so, preliminary SAP calculations have been undertaken using the information available and sensible assumptions on construction and M&E parameters.
- 10.3 The baseline figures have been calculated and improvements made to the fabric and plant proposed for the scheme.
- 10.4 The measures proposed are detailed above but summarise as:
- ASHP.
  - Good air tightness.
- 10.5 The results in Section 9 show that a 77.00% reduction in emissions is achieved. This greatly exceeds the minimum 35% reduction target.



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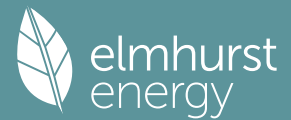
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## Appendix A – SAP Calculations

# Block Compliance



Block Reference	Westcott - Backstop	Issued on Date	14/03/2024
Block Name	555		
Calculation Type	New Build (As Designed)		

Assessor Details	Mr. Samuel Westover	Assessor ID	AX13-0001
Client			

Block Compliance Report - DER				
Block Reference: Westcott - Backstop		Block Name: 555		
Property-Assessment Reference	Floor area (m <sup>2</sup> )	DER (kgCO <sub>2</sub> /m <sup>2</sup> )	TER (kgCO <sub>2</sub> /m <sup>2</sup> )	% DER/TER
Flat 1 - Flat 1 - Backstop	81.00	23.83	12.24	-94.69 %
Flat 2 - Flat 2 - Backstop	68.00	19.47	10.38	-87.57 %
Flat 3 - Flat 3 - Backstop	65.10	24.09	12.43	-93.81 %
Totals:	214.10	67.39	35.05	
Average DER = 22.52 kgCO <sub>2</sub> /m <sup>2</sup>	% DER/TER	FAIL		
Average TER = 11.71 kgCO <sub>2</sub> /m <sup>2</sup>	-92.40 %			

Block Compliance Report - DFEE				
Block Reference: Westcott - Backstop		Block Name: 555		
Property-Assessment Reference	Floor area (m <sup>2</sup> )	DFEE (kWh/m <sup>2</sup> /yr)	TFEE (kWh/m <sup>2</sup> /yr)	% DFEE/TFEE
Flat 1 - Flat 1 - Backstop	81.00	73.72	34.76	-112.07 %
Flat 2 - Flat 2 - Backstop	68.00	47.11	21.88	-115.28 %
Flat 3 - Flat 3 - Backstop	65.10	66.48	30.12	-120.71 %
Totals:	214.10	187.31	86.77	
Average DFEE = 63.07 kgCO <sub>2</sub> /m <sup>2</sup>	% DFEE/TFEE	FAIL		
Average TFEE = 29.26 kgCO <sub>2</sub> /m <sup>2</sup>	-115.54 %			

Block Compliance Report - DPER				
Block Reference: Westcott - Backstop		Block Name: 555		
Property-Assessment Reference	Floor area (m <sup>2</sup> )	DPER (kWh/m <sup>2</sup> /yr)	TPER (kWh/m <sup>2</sup> /yr)	% DPER/TPER
Flat 1 - Flat 1 - Backstop	81.00	130.42	64.23	-103.05 %
Flat 2 - Flat 2 - Backstop	68.00	107.07	54.32	-97.11 %
Flat 3 - Flat 3 - Backstop	65.10	131.96	65.37	-101.87 %
Totals:	214.10	369.45	183.92	

Average DPER = 123.47 kgCO <sub>2</sub> /m <sup>2</sup>	% DPER/TPER	FAIL
Average TPER = 61.43 kgCO <sub>2</sub> /m <sup>2</sup>	-101.00 %	



# Block Compliance



Block Reference	Westcott - Be Lean	Issued on Date	14/03/2024
Block Name	555		
Calculation Type	New Build (As Designed)		
Assessor Details	Mr. Samuel Westover	Assessor ID	AX13-0001
Client			

Block Compliance Report - DER				
Block Reference: Westcott - Be Lean		Block Name: 555		
Property-Assessment Reference	Floor area (m <sup>2</sup> )	DER (kgCO <sub>2</sub> /m <sup>2</sup> )	TER (kgCO <sub>2</sub> /m <sup>2</sup> )	% DER/TER
Flat 1 - Flat 1 - Be Lean	81.00	19.02	12.24	-55.39 %
Flat 2 - Flat 2 - Be Lean	68.00	15.70	10.38	-51.25 %
Flat 3 - Flat 3 - Be Lean	65.10	19.86	12.43	-59.77 %
Totals:	214.10	54.58	35.05	
Average DER = 18.22 kgCO <sub>2</sub> /m <sup>2</sup>	% DER/TER	<b>FAIL</b>		
Average TER = 11.71 kgCO <sub>2</sub> /m <sup>2</sup>	-55.64 %			

Block Compliance Report - DFEE				
Block Reference: Westcott - Be Lean		Block Name: 555		
Property-Assessment Reference	Floor area (m <sup>2</sup> )	DFEE (kWh/m <sup>2</sup> /yr)	TFEE (kWh/m <sup>2</sup> /yr)	% DFEE/TFEE
Flat 1 - Flat 1 - Be Lean	81.00	52.37	34.76	-50.64 %
Flat 2 - Flat 2 - Be Lean	68.00	31.56	21.88	-44.22 %
Flat 3 - Flat 3 - Be Lean	65.10	48.80	30.12	-62.01 %
Totals:	214.10	132.73	86.77	
Average DFEE = 44.67 kgCO <sub>2</sub> /m <sup>2</sup>	% DFEE/TFEE	<b>FAIL</b>		
Average TFEE = 29.26 kgCO <sub>2</sub> /m <sup>2</sup>	-52.68 %			

Block Compliance Report - DPER				
Block Reference: Westcott - Be Lean		Block Name: 555		
Property-Assessment Reference	Floor area (m <sup>2</sup> )	DPER (kWh/m <sup>2</sup> /yr)	TPER (kWh/m <sup>2</sup> /yr)	% DPER/TPER
Flat 1 - Flat 1 - Be Lean	81.00	104.26	64.23	-62.32 %
Flat 2 - Flat 2 - Be Lean	68.00	86.56	54.32	-59.35 %
Flat 3 - Flat 3 - Be Lean	65.10	108.98	65.37	-66.71 %
Totals:	214.10	299.80	183.92	

# Block Compliance

Average DPER = 100.07 kgCO <sub>2</sub> /m <sup>2</sup>	% DPER/TPER	FAIL
Average TPER = 61.43 kgCO <sub>2</sub> /m <sup>2</sup>	-62.91 %	

# Block Compliance



Block Reference	Westcott - Be Green	Issued on Date	14/03/2024
Block Name	555		
Calculation Type	New Build (As Designed)		
Assessor Details	Mr. Samuel Westover	Assessor ID	AX13-0001
Client			

Block Compliance Report - DER				
Block Reference: Westcott - Be Green		Block Name: 555		
Property-Assessment Reference	Floor area (m <sup>2</sup> )	DER (kgCO <sub>2</sub> /m <sup>2</sup> )	TER (kgCO <sub>2</sub> /m <sup>2</sup> )	% DER/TER
Flat 1 - Flat 1 - Be Green	81.00	5.30	11.79	55.05 %
Flat 2 - Flat 2 - Be Green	68.00	4.47	9.91	54.89 %
Flat 3 - Flat 3 - Be Green	65.10	5.51	11.90	53.70 %
Totals:	214.10	15.28	33.60	
Average DER = 5.10 kgCO <sub>2</sub> /m <sup>2</sup>	% DER/TER	PASS		
Average TER = 11.23 kgCO <sub>2</sub> /m <sup>2</sup>	54.57 %			

Block Compliance Report - DFEE				
Block Reference: Westcott - Be Green		Block Name: 555		
Property-Assessment Reference	Floor area (m <sup>2</sup> )	DFEE (kWh/m <sup>2</sup> /yr)	TFEE (kWh/m <sup>2</sup> /yr)	% DFEE/TFEE
Flat 1 - Flat 1 - Be Green	81.00	52.37	34.76	-50.64 %
Flat 2 - Flat 2 - Be Green	68.00	31.56	21.88	-44.22 %
Flat 3 - Flat 3 - Be Green	65.10	48.80	30.12	-62.01 %
Totals:	214.10	132.73	86.77	
Average DFEE = 44.67 kgCO <sub>2</sub> /m <sup>2</sup>	% DFEE/TFEE	FAIL		
Average TFEE = 29.26 kgCO <sub>2</sub> /m <sup>2</sup>	-52.68 %			

Block Compliance Report - DPER				
Block Reference: Westcott - Be Green		Block Name: 555		
Property-Assessment Reference	Floor area (m <sup>2</sup> )	DPER (kWh/m <sup>2</sup> /yr)	TPER (kWh/m <sup>2</sup> /yr)	% DPER/TPER
Flat 1 - Flat 1 - Be Green	81.00	55.59	61.85	10.12 %
Flat 2 - Flat 2 - Be Green	68.00	47.31	51.83	8.72 %
Flat 3 - Flat 3 - Be Green	65.10	57.89	62.52	7.41 %
Totals:	214.10	160.79	176.20	

# Block Compliance



Average DPER = 53.66 kgCO <sub>2</sub> /m <sup>2</sup>	% DPER/TPER	PASS
Average TPER = 58.87 kgCO <sub>2</sub> /m <sup>2</sup>	8.85 %	