PREDICTED ENERGY ASSESSMENT

Design SAP
elmhurst energy

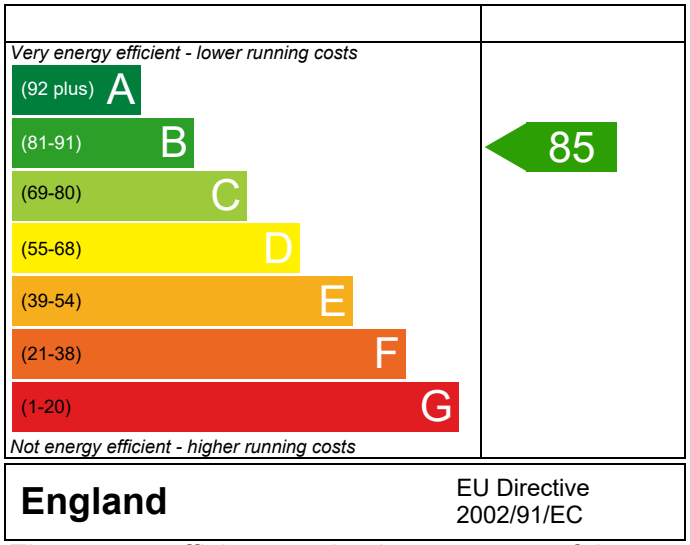
Blk B Plot 69, St Michael's Road,
Croydon,
CR0 1UA

Dwelling type:	Flat, Mid-Terrace
Date of assessment:	04/08/2020
Produced by:	James Darby
Total floor area:	51.16 m²
DRRN:	0734-2508-0304

This document is a Predicted Energy Assessment for properties marketed when they are incomplete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, this rating will be updated and an official Energy Performance Certificate will be created for the property. This will include more detailed information about the energy performance of the completed property.

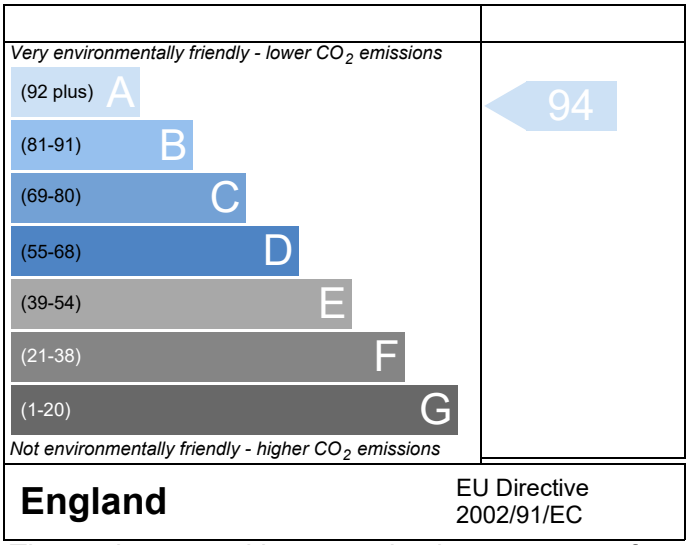
The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO_2) emissions.

Energy Efficiency Rating



The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

Environmental Impact (CO_2) Rating



The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO_2) emissions. The higher the rating the less impact it has on the environment.

This report has been produced by an accredited Elmhurst member whose work is subject to quality assurance audits. The data used to produce the report has been verified by the Elmhurst members' portal.

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ELMHURST ENERGY QUALITY PROMISE ACCREDITED MEMBER

Regs Region: England
Elmhurst Energy Systems SAP2012 Calculator (Design System) version 4.12r02

BUILDING REGULATION COMPLIANCE
Calculation Type: New Build (As Designed)

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Property Reference	20LSSMB069	**Issued on Date**	04/08/2020
Assessment Reference	PEA	**Prop Type Ref**	Plot B-069
Property	Blk B Plot 69, St Michael's Road, Croydon, CR0 1UA		

SAP Rating	85 B	**DER**	9.68	**TER**	17.02
Environmental	94 A	**% DER<TER**	43.12		
CO_2 Emissions (t/year)	0.42	**DFEE**	40.04	**TFEE**	39.72
General Requirements Compliance	Fail	**% DFEE<TFEE**	-0.81		

Assessor Details	Mr. Daniel Hilsdon, Hilsdon Holmes Limited, Tel: 01579 382202, danhilsdon@btinternet.com	**Assessor ID**	W966-0001
Client	London Square, LS		

SUMARY FOR INPUT DATA FOR New Build (As Designed)

Criterion 1 – Achieving the TER and TFEE rate

1a TER and DER

Fuel for main heating	Mains gas (c)		
Fuel factor	1.00 (mains gas)		
Target Carbon Dioxide Emission Rate (TER)	17.02	$kgCO_2/m^2$	
Dwelling Carbon Dioxide Emission Rate (DER)	9.68	$kgCO_2/m^2$	Pass
	-7.34 (-43.1%)	$kgCO_2/m^2$	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	39.72	$kWh/m^2/yr$	
Dwelling Fabric Energy Efficiency (DFEE)	40.04	$kWh/m^2/yr$	
Excess energy	0.3 (0.8%)	$kWh/m^2/yr$	Fail

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.16 (max. 0.30)	0.17 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Openings	1.35 (max. 2.00)	1.40 (max. 3.30)	Pass

2a Thermal bridging

Thermal bridging calculated from linear thermal transmittances for each junction

3 Air permeability

Air permeability at 50 pascals	5.00 (design value)	$m^3/(h.m^2)$ @ 50 Pa	
Maximum	10.0	$m^3/(h.m^2)$ @ 50 Pa	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Community heating scheme	-
Secondary heating system	None	

5 Cylinder insulation

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Hot water storage	Nominal cylinder loss: 0.12 kWh/day Permitted by DBSCG 0.32		Pass
Primary pipework insulated	No primary pipework		
6 Controls			
Space heating controls	Charging system linked to use of community heating, programmer and TRVs		Pass
Hot water controls	No cylinderstat		
7 Low energy lights			
Percentage of fixed lights with low-energy fittings	100	%	
Minimum	75	%	Pass
8 Mechanical ventilation			
Continuous extract system			
Specific fan power	0.16		
Maximum	0.7		Pass

Criterion 3 – Limiting the effects of heat gains in summer

9 Summertime temperature			
Overheating risk (Thames Valley)	Slight		Pass
Based on:			
Overshading	Average		
Windows facing East	12.22 m², No overhang		
Windows facing South	3.38 m², Overhang twice as wide as window, ratio 1.60		
Air change rate	4.00 ach		
Blinds/curtains	None		

Criterion 4 – Building performance consistent with DER and DFEE rate

Party Walls

Type	U-value		
Filled Cavity with Edge Sealing	0.00	W/m²K	Pass

Air permeability and pressure testing

3 Air permeability			
Air permeability at 50 pascals	5.00 (design value)	m³/(h.m²) @ 50 Pa	
Maximum	10.0	m³/(h.m²) @ 50 Pa	Pass
10 Key features			
Party wall U-value	0.00	W/m²K	
Door U-value	1.00	W/m²K	
Community CHP, Mains gas	N/A		
Photovoltaic array	0.06	kW	

RECOMMENDATIONS

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	Typical cost	Typical savings per year	Energy efficiency	Environmental impact	Result
Low energy lights			0	0	Already installed
Solar water heating			0	0	Not applicable
Photovoltaic			0	0	Not applicable
Wind turbine			0	0	Not applicable
Totals	**£0**	**£0**	**B 85**	**A 94**	

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