C80 solutions
Straightforward Building Compliance

PROPOSED RESIDENTIAL DEVELOPMENT

12 HIGH STREET, HAMPTON WICK

KINGSTON UPON THAMES

L1B SAP CALCULATIONS

FOR

City Lofts London

Project no. 15501

Produced by: Matthew Carrick

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REVISION	DATE	PREPARED BY	REVIEWED BY	COMMENTS
0	14.05.2024	MC	HH	For Issue

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1.0 Introduction

1.1 About C80 Solutions Ltd

C80 Solutions are independent Sustainability and Energy Consultants providing carbon reduction solutions to help the UK achieve its carbon emission reduction target of 100% by 2050. Our range of affordable but comprehensive solutions for the construction industry are broken down into two sectors; i) Building Compliance and ii) Consultancy.

Building Compliance:

Our Building Compliance services include; Code for Sustainable Homes Assessments, SAP Calculations, On Construction Energy Performance Certificates, Water Efficiency Calculations, SBEM Calculations, Commercial EPCs, BREEAM assessments and Air Tightness Testing.

Consultancy:

Our experience and exposure to building compliance combined with previous experience and IEMA accredited training means we have built up a vast amount of knowledge which enables us to provide our clients with invaluable advice. Our Consultancy services include; Renewable Energy Feasibility Reports, Energy Statements for planning, Sustainability Statements and Building Compliance Advisory Reports.

1.2 Introduction to the Development

C80 Solutions have been instructed to prepare SAP calculations by City Lofts London for the proposed development at 12 High Street, Hampton Wick
Kingston upon Thames.

Conversion of an existing space into two new flats, one separating a ground floor commercial unit.

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2.0 SAP Calculation Results

2.1 Specification

Initial SAP 10 calculations were prepared based on the construction specification provided to us and shown in table 1 below. This specification is as per the provided by the design team;

Aspect		Existing/Upgraded Elements
Fabric	Proposed External Walls	Build Up: Specification Absent: Limiting standards assumed. U-Value Achieved: W/m²K
	Proposed Insulated Roofs	Build Up: Specification Absent: Limiting standards assumed. U-Value Achieved: W/m²K
	Proposed Ground floors	Build Up: Specification Absent: Limiting standards assumed. U-Value Achieved: 0.25 W/m²K / 0.13 W/m²K separating commercial.
	Proposed Windows (All)	1.4 W/m²K
	Proposed External Doors	1.4 W/m²K
Services	Heating	Combi boiler specified – Model assumed as Ideal LOGIC combi ESP1 24
	Hot Water	From Main Heating system
	Controls	TTZC
Lighting	Efficacy (lm/cw)	100
Ventilation		Natural Ventilation
Renewables / LZC		N/A

Table 1: Proposed Specification

Section 2.2 of this report on the following page shows the results of the initial SAP calculations.

2.2 Initial Calculation Results

Based on using the specification outlined in table 1 above, below are the results of the SAP calculations produced. Copies of both the BREL document and full SAP calculations will also be provided alongside this report:

Element		Minimum U-Value	Achieved U-Value	Pass/Fail
External Wall	**Proposed**	0.30 W/m²K	0.30 W/m²K	**Assumed**
Ground Floor	**Proposed**	0.25 W/m²K	0.25 W/m²K	**Assumed**
Insulated Roof	**Proposed**	0.16 W/m²K	0.16 W/m²K	**Assumed**
Glazing	**Proposed**	1.4 W/m²K	1.4 W/m²K	**Assumed**

Table 3: Achieved Fabric Standards

As can be seen from the calculation results in table 2, the proposed dwelling(s) achieves Part L compliance using the provided specifications for building fabric and services. No further additions or improvements are required to any part of the proposed materials or building services.

These calculations have been produced using the specification provided to us by the design team, and assumptions have been used where information is not available. Any assumptions that we have used are identified in table 1 above.

2.3 Recommendations to Achieve Part L Compliance

The following recommendations have been made to improve the specification of the dwelling(s), to ensure compliance with Part L. These recommendations have been recognised as the most technically appropriate, and cost-effective measures of achieving compliance:

Recommended Improvements-

No Further requirements

3.0 EPC Grades

Table 4 below outlines the EPC grades that have been achieved;

Plot	EPC Grade
1	**81 B**
2	**79 C**

Table 6: Draft EPC Grades