The Planning Department
Three Rivers District Council
Three Rivers House
Northway
Rickmansworth
WD3 1RL

Merlin Property Services

30th November 2017

Energy Statement

Dear Sirs,

Re: Proposed new house at Windmill Drive, Croxley Green..

We have prepared this energy statement with regard to policy DM4 of the DMPLDD and to support the planning application for the new house.

We have prepared SAP calculations as per the following report. This shows a TER of 18.44 and a DER of 17.33. This is an improvement of 6.04 % over the requirements of Part L1A 2013 which proves compliance with policy CP4.

Yours sincerely

Keith Grace

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

Property Reference	Windmill Drive	Issued on Date	30/11/2017
Survey Reference	001	Prop Type Ref	
Property			

SAP Raing	84 B	DER	17.33	TER	18.44
Environmental	86 B	% DER<TER	6.04		
CO_2 Emissions (t/year)	1.37	DFEE	47.17	TFEE	56.92
General Requirements Compliance	Pass	% DFEE<TFEE	17.13		

Surveyor	Sam Green, Tel: [redacted]	Surveyor ID	8881-0002
Client			

SUMARY FOR INPUT DATA FOR New Build (As Designed)

Criterion 1 – Achieving the TER and TFEE rate

1a TER and DER

Fuel for main heaing	Mains gas		
Fuel factor	1.00 (mains gas)		
Target Carbon Dioxide Emission Rate (TER)	18.44	$kgCO_2/m^2$	
Dwelling Carbon Dioxide Emission Rate (DER)	17.33	$kgCO_2/m^2$	Pass
	-1.11 (-6.0%)	$kgCO_2/m^2$	

1b TFEE and DFEE

Target Fabric Energy Eciency (TFEE)	56.92	$kWh/m^2/yr$	
Dwelling Fabric Energy Eciency (DFEE)	47.17	$kWh/m^2/yr$	
	-9.7 (-17.0%)	$kWh/m^2/yr$	Pass

Criterion 2 – Limits on design exibility

Limiing Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.19 (max. 0.30)	0.19 (max. 0.70)	Pass
Floor	0.13 (max. 0.25)	0.13 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.14 (max. 0.35)	Pass
Openings	1.53 (max. 2.00)	3.00 (max. 3.30)	Pass

2a Thermal bridging

Thermal bridging calculated from linear thermal transmiances for each juncon

3 Air permeability

Air permeability at 50 pascals	6.00 (design value)	
Maximum	10.0	Pass

Limiing System Eciencies

4 Heaing eciency

Main heaing system	Boiler system with radiators or underoor - Mains gas Data from database Vaillant ecoTEC pro 24 H combi A VUW 246/5-3 A Combi boiler Eciency: 89.1% SEDBUK2009 Minimum: 88.0%	Pass
Secondary heaing system	None	

5 Cylinder insulation

Hot water storage	No cylinder	

6 Controls

Space heating controls	Programmer, room thermostat and TRVs	Pass
Hot water controls	No cylinder	
Boiler interlock	Yes	Pass

7 Low energy lights

Percentage of fixed lights with low-energy fittings	100	%	
Minimum	75	%	Pass

8 Mechanical ventilation

Not applicable

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 North	8.25 m², No overhang
Windows facing South	13.46 m², No overhang
Windows facing West	2.10 m², No overhang
Air change rate	8.00 ach
Blinds/curtains	None

Criterion 4 – Building performance consistent with DER and DFEE rate

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals	6.00 (design value)	
Maximum	10.0	Pass

10 Key features

Floor U-value	0.12	W/m²K
Thermal bridging y-value	0.018	W/m²K

Regs Region: England
Elmhurst Energy Systems SAP2012 Calculator (Design System) version 4.04r08