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## **Energy Statement to show a 20% Reduction in CO2 Emissions**

**SITE:** 14 Pilgrims View, Guildford, GU12 6HU

**CLIENT:** Jake Ball

**ASSESSOR:** Andrew Simpson OCDEA, DEA and Code for Sustainable Homes Assessor of Premier Assessors

**PLANNING REFERENCE:** 24/P/00206

**DATE:** 05/03/24



The following calculations are to show a 20% reduction in CO2 Through renewable energy at 14 Pilgrims View, Guildford GU12 6HU

Reason: To reduce carbon emissions and incorporate sustainable energy in accordance with the Council’s Sustainable Design and Construction SPD. This pre-commencement condition is required in order for measures to be considered at an appropriate time of the building.

### Reduction in CO2 Emissions through Renewable Energy Calculations

The tables below show the reduction in Carbon Dioxide emissions for the development known as 14 Pilgrims View, Guildford GU12 6HU. These figures are based on the proposed development TER – 13.44 and the DER – 3.95 kgCO2/yr/m2

**Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy**

	Carbon dioxide emissions (Kg CO2 per m2/yr)	
	Regulated	Unregulated
Building Regulations 2010 Part L Compliant Development	A 13.44	5.64
After energy demand reduction	B 13.44	5.64
After CHP	C N/A	N/A
After renewable energy	D 3.95	1.66

**Table2: Regulated carbon dioxidesavings fromeach stage of the Energy Hierarchy**

	Regulated Carbon dioxide savings	
	(Kg CO2 per m2/annum)	%
Savings from energy demand reduction	A - B 13.44-3.95= 9.49	$(A-B)/A*100$ $9.49/13.44*100=70.61\%$
Savings from CHP	B-C N/A	$(B - C)/B * 100$
Savings from renewable energy	C-D 13.44-3.95= 9.49	$9.49/13.44*100=70.61\%$
<b>Total Cumulative Savings</b>	<b>A - D</b> 13.44-3.95= 9.49	$9.49/13.44*100=70.61\%$

#### CONCLUSION

The reduction in CO2 Emissions is through the installation of a a highly efficient air source heat pump as well as a highly efficient fabric is 70.61%.

These calculations will be supported by the BREL Compliance Report showing CO2 emissions after Energy Efficient Measures

End of Report