

## Land adjacent to 4 Gresham Road, Hillingdon, UB10 0HT

Stonham Consultants

Tensteps

Debenham rd

Stonham Aspal

Email [neilstallard2@hotmail.co.uk](mailto:neilstallard2@hotmail.co.uk)

Tel 07856021700

## Sustainability Statement

### Address

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## 1.0 Executive Summary

This report demonstrates how a 10% uplift in CO2 emissions can be achieved for this project.

## 2.0 introduction

Following pre application advice, Stonham consultants have been commissioned by Whymark and Moulton to prepare a planning statement for the above site.

The planning officer has provided the following advice,

### **ENERGY:**

***Policies EM 5 and DMEI 2 of the Local Plan seek a contribution from all development to a reduction in carbon emissions and encourage the use of renewable energy. The potential for renewable energy technologies such as PV's and heat pumps as part of any future development should be explored.***

***A sustainability statement should accompany any forthcoming planning application to demonstrate***

***that the proposed dwelling would achieve an energy efficiency standard of 10% CO2 improvement***

***over Building Regulations requirements Part L 2013 (TER Baseline).***

This report and supporting calculations will demonstrate how this will be achieved for both properties.

## 3.0 The proposal

The proposal consists of 2 semi-detached dwellings.

## 4.0 Energy efficiency

A design assessment has been undertaken using the current SAP 10 software. We have used the following thermal element u-values as shown in the table below,

Fabric	Part L1 2021	Proposed fabric build ups	U-value
walls	0.26	150mm Dritherm 32 batts, insulating locks	0.18
Flat roof	0.18	140mm Celotex warm deck roof	0.15
Roof loft spaces	0.15	400mm of Knauf loft insulation	0.10
Floor	0.18	150mm of Celotex	0.11
Glazing	1.6	24mm double glazed low e argon filled units	1.30
Air permeability	8.0		5.0

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## Heat pumps

We have proposed a 6kw Grant Aerona heat pump which will have an efficiency of 322.9%.

This will provide heating via underfloor heating to the ground floor and radiators to the first floor.

## Hot water

The hot water will be provided by the heat pump and due to the occupancy levels, we have proposed a 120 litre cylinder.

## Predicted energy ratings

The initial design energy ratings are very positive and further information is available in the additional attachments,

	EPC rating	Target emission rate (TER)	Design emission rate (DER)	% uplift in design emission rate
Unit 1	82 (B)	10.44	4.06	61.11%
Unit 2	81 (B)	12.87	4.77	62.94%

## Conclusion

Using SAP10 as a baseline, under the current 2021 Building Regulations requirements, the suggested 10% carbon emissions improvement has been comfortably achieved.

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## Appendix

### SAP calculations (see separate attachments)