

1 INTRODUCTION

The objective of this project is to:-

- Significantly reduce the energy needs and CO2 footprint for the property at 8 Piping Close, Colden Common.
 - Ideally, no heating required during the winter period, but supplemented with a wood burning stove.
 - Electricity consumption sufficiently reduced and offset by PV.
 - Rainwater harvesting system.
- Incorporate a conservatory extension within permitted building rights (which I'm not sure I have since I have a loft extension).
- Video, document and share the approach taken and the progress made by the project through blog submissions to greenhomedairy.com, youtube.com and Guardian websites.
- Minimise the costs.
- Where possible, the work is to be done by the owner (myself).

This project is a major retrofit to the property. Where possible, (and where it makes sense), installation should be staged to spread costs over a longer timescale. For example, installation of PV is one objective. PV is improving over time, therefore it may make sense to install the basic infrastructure (inverter etc) and add additional panels over time.

Note, this is a one time major disturbance to the house.

2 SERVICES REQUESTED

Some investigation has been done regarding the retrofit requirements & proposed approach, which are listed below. The services requested are:-

- Drawings and submission for planning permission and building regulations covering External Wall Insulation, Solar Panel and conservatory (passive) extension, assuming assumptions are correct in the feasibility document.
- Ability to visualise the changes by "walking" through the drawings.
- Assistance / Advice / Recommendations with:-
 - Understanding the approach and methods required to achieve primary energy and CO2 objective. i.e. I would like to understand the methodology by which the plan and cost benefits are derived.
 - Selection of materials.
 - Selection of suppliers and builders where required.
- General advice.

3 BUDGET

The monies available are £60,000 which includes furniture and internal decoration. This is staged, with about £25K becoming available in August 2009. Given I am retired, I would like to implement as much as is feasible myself in order to save on labour costs. Additionally, where possible, I would like to use local business in the

Village and I am in the process identifying them. The long term intention is to possibly redeploy onto another project.

4 OTHER HIGH LEVEL REQUIREMENTS

- Refurbishment of Loft Extension roof and cladding.
- Replacement of Loft Extension windows (blown)
- Replacement of Velux windows (blown)
- Installation of Hot Water Solar Panel (tank already in place)
- Removal of radiators and replace with under floor heating to existing condensing boiler.
- New flooring in hall, sitting room, and extension.
- LED lighting through out.
- Heat recovery system (assuming draft proofing and external cladding make this a dependency)

5 FURTHER INFORMATION

A amateur “whole house” feasibility study has been done. See [Feasibility.pdf](#)