

140-146 Camden Street, London

Energy Strategy Report Addendum v2



Date: 23rd February 2015

Project number: 22059

Prepared by: Jessica Gray

Contents

Contents..... 2

1. Introduction 3

2. Local Authority Comments – Renewables..... 3

3. Renewables - PV panel options 3

4. Conclusion 6

1. Introduction

This document provides an addendum to the original energy strategy report produced by Price & Myers for the 140 -146 Camden Street project, dated 16th December 2014. It has been developed to address comments from the London Borough of Camden.

2. Local Authority Comments – Renewables

The energy statement states that an 11.3% reduction in CO₂ will be achieved through renewables but they have included the reductions resulting from the CHP in this as well, which is not a renewable technology. In fact the proposed renewables (PV) will only reduce emissions by 2.8% - so some way off our policy target of 20%. Looking at the roof plan, there appears to be more space available where PV could be located, so I'd recommend this is explored further.

3. Renewables - PV panel options

The entire top roof as well as part of Block C roof space are utilised as shown in Fig.1. It is expected that the proposed 25.2 kWp system with 101 panels results in 5.4% CO₂ emissions reduction from on-site renewables. The detailed results are summarised in Table 3.1.

Table 3.1 The proposed PV system size and the estimated energy and carbon emissions savings and financial feasibility for the tested option

Proposed LZC Technologies	Energy & CO ₂				Life Cycle Carbon and Cost Analysis		
	Energy Generated (kWh/yr)	% site energy demand met	CO ₂ saved by system (kgCO ₂ /yr)	% reduction in site CO ₂ emissions	25 year CO ₂ saving (kgCO ₂)	Estimated capital cost	Payback period
25.2 kWp PV system 5° angle, South facing Approximately 101 panels*	19,374	3.98%	10,249	5.4%	256,218	~£40K	7.5 yrs

* Panels assumptions: 0.25kWp (Dimensions: 1.6m x 1m)

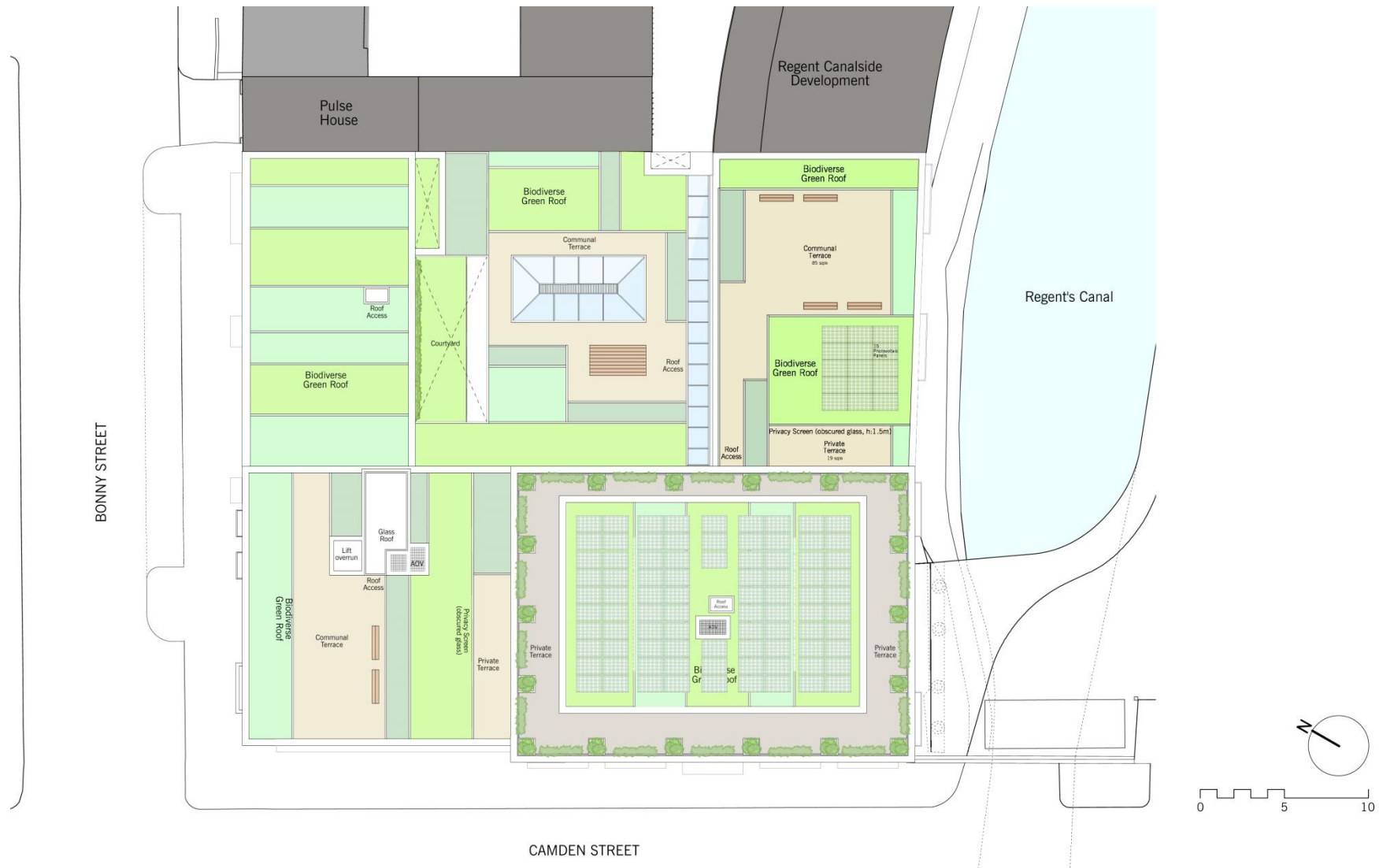


Fig 1 Scenario 3, 25.2 kWp PV System, 101 panels (As per architect's drawing)

4. Conclusion

The current version of the London Plan prioritises overall carbon reduction over contribution from renewables, due to the challenges faced by larger schemes and the fabric first approach. For high density schemes, providing a high proportion of energy from renewables is not practical. Most of the available roof space is dedicated to amenity, so additional panels here would result in unacceptable loss of amenity. Therefore, PV panels are incorporated mainly on the highest roof. The exercise showed that a few more panels could be partially added on the roof of Block C, resulting in 5.4% reduction in CO₂ emissions from on-site renewables.