

The Heygate Masterplan
Elephant and Castle
Outline Planning Application

Energy Strategy Addendum

Prepared for Lend Lease by **E.ON**
September 2012



Lend Lease is
committed to
the successful
regeneration
of **Elephant
and Castle**

Application Documents September 2012

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1. Introduction

This document is provided as an addendum to the Energy Strategy submitted with the Heygate Masterplan outline planning application in March 2012. It is intended that this addendum be read in conjunction with the original Energy Strategy (dated March 2012).

The addendum has been produced following revisions to the proposed Development that have been carried out following pre and post-submission consultation with Southwark Council, other relevant consultee bodies, and the public, and discussions with Southwark Council.

A full description of the revisions is provided in the Summary of Revisions to the Outline Planning Application (September 2012) document, and are briefly summarised below:

- Amendments to the Parameter Plans, including:
 - Providing additional clarity on the proposed conditions to Plots H1 and H2, and Wansey Street
 - Reductions to maximum and minimum AOD levels of Plot H11b and removal of the mid-rise building facing the Park
 - Reduction to the minimum AOD level of Plot H3
 - Introduction of B1 (Office) use in Plot H11a
- Additional design commitments in the Design Strategy Document;
- An updated affordable housing proposal;
- An increase in the maximum number of residential units from 2,462 to 2,469;
- Removal of demolition from the outline planning application;
- Associated revisions to the Illustrative Masterplan;
- Additional material to reflect developments in planning policy, the status of other cumulative developments, and revised figures for existing Heygate Estate buildings; and
- Additional modelling / clarification of certain supporting documents.

An additional 'Design User Guide' has also been provided with the revised submission to respond to frequently asked questions and aid the understanding of the design documents submitted for approval (Parameter Plans, Design Strategy Document, and Development Specification) and how they interact with each other.

The Energy Strategy has been reviewed and a number of changes are proposed, which are identified in this addendum. These changes are not considered to have any significant environmental effects as a consequence.

This addendum provides an update of the following sections in the original Energy Strategy (March 2012) as follows:

- | | |
|------------------|--------------------------------|
| • Table 8 | Page 12 of the Energy Strategy |
| • Figure 7 | Page 13 of the Energy Strategy |
| • Section 3.3.10 | Page 23 of the Energy Strategy |
| • Section 3.3.11 | Page 24 of the Energy Strategy |
| • Section 3.3.12 | Page 24 of the Energy Strategy |

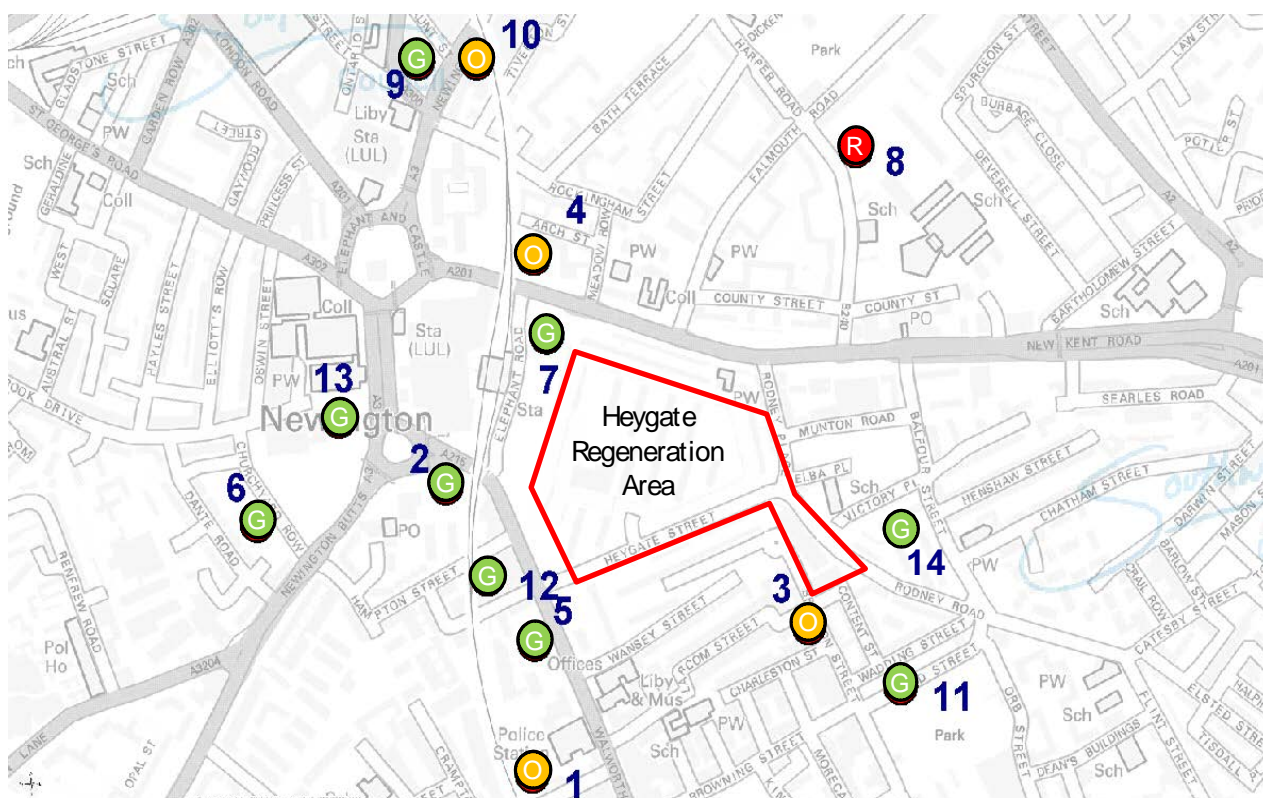
2. Amendments

The following Table and Figure have been updated to reflect that Phase One of the Heygate Regeneration is a possible future District Heat Network (DHN) connection.

Number	Property	Suitability (kWh/m)
2	Strata Tower	29,004
7	Oakmayne Plaza	14,115
14	Phase One of the Heygate Regeneration'	8,744
12	1 Hampton Street	7,619
6	London Park hotel	6,101
13	St Marys Residential Development	6,100
5	120-138 Walworth road	5,047
1	Printworks, Amelia Street	3,184
9	Eileen House	2,931
11	Stead Street	2,482
4	New Kent Road	2,083
10	89-93 Newington Causeway	828
8	Harper Road	813
3	Brandon Street	633

Table 8 Future DHN Connections

Figure 7 Future DHN Connections (numbers correspond to properties as listed in Table 8.)



3.3.10 Recommended Strategy

With each future Reserved Matters application, a detailed energy strategy will be completed and submitted in order to explore the feasibility and viability of options to include the maximisation of the delivery of on-site produced renewable energy.

From the renewable energy options appraisal matrix in Table 21, the use of biomethane within both the gas CHP and gas boilers as a renewable fuel source has the highest score and is therefore, at this stage, the recommended renewable energy option for the Heygate Masterplan. For clarity, the use of biomethane within both gas boilers and gas CHP, is considered by the Energy Strategy as a single renewable energy technology. Within the options appraisal, biomethane is considered as an on-site renewable energy source in line with the recommendations from the Zero Carbon Hub for the provision of Allowable Solutions as shown in Table 1.

With this option, biomethane will be supplied to the gas CHPs and gas boilers within the Energy Centre through the existing gas network. This arrangement has the least impact on the surrounding area as it simply offsets some of the existing gas supply to the proposed Development, requires no fuel storage, provides no increase in local transportation, is not visually intrusive, minimises impact on air quality, uses standard technology and provides the highest CO₂ savings. It also future proofs the on-site energy generation allowing the incorporation of less disruptive changes to both the fuel supply (e.g. hydrogen injection) and the generating technology (e.g. fuel cell CHP – see Appendix N).

Biomethane grid injection is recognised by DECC within the Renewable Heat Incentive (RHI) scheme whilst OFGEM regard it as a key performance metric for gas distribution network operators. It is estimated that 15% of the UK residential gas demand can be met by biomethane by 2020.¹ Biomethane is also being implemented across other countries as detailed in Appendix M.

The use of biomethane as a renewable fuel can meet SC's 20% renewable energy target and in doing so provide a reduction in on-site CO₂ emissions of 853 tonnes. This equates to displacing 27% of the Heygate Masterplan site demand for natural gas for the gas CHP and boilers with biomethane. However if all gas required at the Energy Centre is displaced by biomethane as shown in Figure 10, this reduces the regulated emissions to zero and the net CO₂ emissions of the proposed Development to 1,129 tonnes CO₂.

The first demand for biomethane as an Allowable Solution will be on completion of the first ZCH plot.

¹ The potential for Renewable Gas in the UK, National Grid, January 2009

Should the required amount of biomethane not be secured and implemented, any shortfall in achieving the 20% CO₂ reduction from on-site renewable energy, will be met through other renewable or low carbon energy measures which will be confirmed during the detailed design stage and the submission of detailed energy strategies with Reserved Matters submissions.

3.3.11 Plan B - **REMOVED**

3.3.12 Option Summary - **REMOVED**

Our vision is to
re-establish
Elephant and Castle
as one of London's
most flourishing
urban quarters.



The Heygate Masterplan **Elephant and Castle**

Outline Planning Application
September 2012



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