## Sustainability 9.0 **Energy Hierarchy**

### 9.6 Energy

The Proposed Development will meet its heating, cooling and electrical demands while at the same time reducing to realistic minima its energy consumption and associated CO<sub>2</sub> emissions to the atmosphere. In particular, the Proposed Development is being designed to comply with Building Regulations Part L 2010, which involves an aggregate 25% improvement in CO, emission over the current 2006 Building Regulations.

## 9.7

CO<sub>2</sub> emissions will be reduced by specifying energy-efficient building services. To ensure the energy efficient operation of the Proposed Development a comprehensive commissioning strategy and energy management and targeting system will be implemented and all building users will be provided with information and guidance on how to use energy efficiently.

## 9.8

The overall strategy and measures identified to reduce the energy consumption and CO<sub>2</sub> emissions of the Proposed Development reflect the Mayor's energy hierarchy and include the following.

- Passive design and energy efficiency (i.e. use less energy 'be lean'); -
- Energy efficient supply of services (i.e. 'be clean'); and -
- On site renewable energy technologies to provide energy (i.e. use \_ renewable energy - 'be green').



Fig 9-6. Total savings in CO, emissions for the Energy Strategy stages

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Fig 9-7. Regulated (ADL2A 2006) savings in carbon dioxide emissions for the Energy Strategy stages



Fig 9-8. London plan energy hierachy

Fig 9-9. Potential CO<sub>2</sub> savings of the Proposed Development

# 9.0 Sustainability Energy - Be Lean

## 9.9

## **Energy Efficiency**

Energy efficiency strategies specified for the Proposed Development include heat recovery to ventilation systems, low energy cooling to the data centre, high efficiency lighting, variable volume ventilation and hydronic systems, boiler economisers and reverse osmosis treatment for the steam boiler feed water.

## 9.10

The fresh air supply rates to the different parts of the Proposed Development will be rationalised to ensure the minimum amount of outside fresh air is treated and distributed through the building to maintain the required environmental conditions.

## 9. 11

The incorporation of passive and energy efficiency measures saves approximately 5,400 tonnes CO,/year, which equates to approximately a 17% reduction in CO, emissions over a standard 2006 Building Regulation compliant building (including process loads).

