

Section X: Environmental Sustainability - Energy

DEFINITIONS

- "CHP"** : Combined heat and power.
- "Energy Assessment"** : King's Cross Central Energy Assessment dated September 2005
- "Trigeneration"** : The incorporation of absorption chillers to provide cooling, using the heat generated by CHP systems.

OBLIGATIONS

1. In carrying out the Development the Developer shall use reasonable endeavours to ensure that it does not do so in a way that would materially prejudice the prospects of the Development achieving by 2050, if market and other conditions so allow, the sixty per cent (60%) reduction in carbon emissions from 2000 levels identified in the Energy Assessment.
2. The Developer will carry out its obligations in this Section with the objective of :
 - (a) achieving significant savings in carbon emissions compared with current 'business as usual' benchmarks through:
 - (i) energy efficient building design and technology;
 - (ii) supplying energy efficiently through a site wide approach to district heating, incorporating Trigeneration from distributed CHP; and
 - (iii) using renewable energy technologies.
 - (b) achieving upon the Completion Date carbon emissions from the buildings in the Development which will be 11,315,945 kgC/year or less, being at least thirty two per cent (32%) lower than the 'business as usual' benchmark of 16,645,500 kgC/year identified in the Energy Assessment.
 - (c) using renewable energy technologies such that the carbon emissions from buildings within the Development identified above (11,315,945 kgC/year) are reduced by a further ten per cent (10%) with the objective that upon the Completion Date carbon emissions from the buildings within the Development will be 10,217,765 kgC/year and at least thirty nine per cent (39%) lower than the "business as usual" benchmark of 16,645,500 kgC/year identified in the Energy Assessment.
3. Where measures are proposed as part of the reserved matters with the aim of meeting the objectives in paragraph 2 they shall be implemented as part of the implementation of the reserved matters unless otherwise agreed with the Council.
4. Where measures are installed or taken with the aim of meeting the objectives in paragraph 2 they shall not be removed or materially altered without the prior agreement of the Council.

Energy Efficient Building Design and Technology

5. The Developer shall use reasonable endeavours to incorporate energy efficient building design and technology measures as an integral part of the detailed design of all buildings such reasonable endeavours shall include consideration of the following issues:
 - (a) the physical form of the building;
 - (b) the building envelope, the specification of cladding and glazing systems and their thermal performance;
 - (c) the scope for passive solar design/control of solar gain, taking account of the building's orientation;
 - (d) the scope for using thermal mass;
 - (e) the choice and design of building systems;
 - (f) the scope for natural ventilation;
 - (g) the scope for intelligent lighting systems and other techniques to optimise the use of natural light;
 - (h) the sizing and specification of plant, glazing and other equipment;
6. The Developer shall use reasonable endeavours to ensure that, for each new building within the Development, the measures incorporated achieve a reduction in carbon emissions of at least five per cent (5%) compared with the emissions permitted under the national Building Regulations prevailing at the time of submission to the Council of the relevant application for approval of reserved matters in relation to such building.
7. Such five per cent (5%) reduction (or greater if applicable) shall be achieved against the building and its associated systems, disregarding:
 - (a) any systems installed by occupiers that are not covered by the said Building Regulations and are not within the direct control of the Developer;
 - (b) any efficiency improvement/carbon reductions made through the application of the CHP, biofuel and other renewable energy technology measures referred to in paragraphs 9 – 20 inclusive below.
8. The Developer shall make available for inspection by the Council copies of submissions made by the Developer under the Statutory Building Regulations Part L carbon assessment, in respect of proposed designs of buildings within the Development.

A Site-Wide Approach to District Heating Incorporating Trigeneration from Distributed CHP

9. The Developer shall use reasonable endeavours to :
 - (a) install distributed CHP/energy centres;
 - (b) incorporate absorption chillers within the Development to provide cooling for buildings, using the heat generated by CHP systems to achieve Trigeneration.
10. The Developer shall install within Development Zones A, B, J, K, L, N, P, Q, R, S and T the infrastructure necessary for district heating/distributed CHP systems. No building within these zones shall be First Occupied unless the pipework infrastructure necessary to connect to that building has been Practically Completed.

11. Buildings within Development Zones A, B, J, K, L, N, P, Q, R, S and T shall be connected to district heating networks/zones prior to First Occupation unless the Developer can demonstrate that there is no significant low pressure hot water demand.
12. The CHP systems installed within the Development shall include at least one 250 kw fuel cell to show-case such technology. No more than eighty per cent (80%) of the Development as measured by permitted floor space or 35 of the 44 Development Plots shall be First Occupied until the fuel cell has been Practically Completed and is operational.
13. The district heating pipework infrastructure installed within the Development shall be specified and sized to enable a connection to the district heating pipework within the adjacent Triangle Site development, as shown on the attached Figure 3 from the Energy Assessment.

Renewable Energy Technologies

14. The Developer shall install at roof level the 14 wind turbines shown on Parameter Plan KXC021 Rev A each installation to take place before Practical Completion of the building upon which the turbine is to be mounted.
15. No more than fifty per cent (50%) of any building on which a wind turbine is to be installed shall be First Occupied until the wind turbine has been Practically Completed and is operational.
16. Subject to paragraph 19 the Developer shall install photovoltaic cell arrays at the appropriate locations within the Development as shown on the attached Figure 8 from the Energy Assessment.
17. Subject to paragraph 19 the Developer shall install ground source heat pumps within Cubitt Square and elsewhere, as set out in Section 6 (and attached Figure 8) of the Energy Assessment.
18. Subject to paragraph 19 the Developer shall install solar thermal systems for generating hot water within buildings providing student accommodation, as set out in Section 6 and attached Figure 8 of the Energy Assessment.
19. The obligations in paragraphs 16, 17 and 18 are subject to the Developer having first obtained the necessary planning and other consents for the installation of the relevant items provided that the Developer has :
 - (a) lodged applications for such consents in sufficient time for their approval by the relevant authority; and
 - (b) if the initial applications are refused and the relevant items are capable of being approved through the submission of amended details, submitted and pursued such amended details as soon as reasonably practicable thereafter;
 - (c) if the amended details are not approved, alternative approaches for delivering the photovoltaics, ground source heat pumps and solar thermal systems have been thoroughly explored and applications made for any alternative approaches that are practicable.
20. From the date at which the Developer should properly regard the supply chain for biofuels to be as reliable and cost-effective as gas, having regard to:
 - (a) whether the cost of supplying a unit of heat through the district heating system utilising biofuels (taking into account fuel costs; plant capitalisation including storage; and operating and maintenance costs) is no more than ten per cent

(10%) higher than the cost of supplying the same unit of heat through the district heating system utilising gas;

- (b) whether there are more than three (3) commercially stable suppliers for biofuels capable of meeting the needs of the development; and
- (c) whether opportunities exist to enter into medium-term contracts for at least five (5) years for the secure supply of biofuels

the Developer shall install biofuel boilers/biofuel CHP within the Development, to supplement the energy supplied through any district heating infrastructure. The Developer shall as part of the materials supporting reserved matters submission provide the Council with an analysis of the then present position in relation to the three factors identified in subparagraphs (a), (b) and (c) above.

- 21. After installation of biofuel boilers/biofuel CHP the Developer shall use reasonable endeavours to implement the use of biofuel technologies.

SECTION Y: ENVIRONMENTAL SUSTAINABILITY - CONSTRUCTION MATERIALS/CONSTRUCTION WASTE

DEFINITIONS

- "BREEAM"** the prevailing Building Research Establishment's Environmental Assessment Method.
- "COCP"** The Revised Code of Construction Practice dated September 2005 which sets out how the Developer will implement construction activities throughout the phased implementation of the Development together with such amendments for which there may from time to time be agreed between the Developer and the Council.
- "Construction Materials and Purchasing Strategy"** A strategy that seeks to:
- (a) reduce materials usage, for example by reviewing the structural loading criteria for each building;
 - (b) minimise waste, for example through purchasing to precise specifications and the collection of waste in segregated containers, for subsequent recycling on or off site;
 - (c) use recycled materials, for example materials from those buildings, structures and other surfaces which are to be demolished may be salvaged for re-use or recycled;
 - (d) promote sustainable techniques and principles, for example by designing buildings for adaptability and flexibility and eventual deconstruction/re-use;
 - (e) apply a material selection hierarchy based on sustainability criteria, for example BREEAM assessment, life cycle analysis and/or the UK Ecopoints scheme.
- "Construction Targets"** The following targets:
- (a) eighty per cent (80%) of all high mass elements to attain an "A" rating under BREEAM;
 - (b) eighty per cent (80%) of all medium mass elements to attain an "A" rating under BREEAM;
 - (c) eighty per cent (80%) of all other elements to attain an "A" rating under BREEAM;
 - (d) All other elements forming the twenty per cent (20%) within each category to attain a "B" rating under BREEAM;

- (e) fifty per cent (50%) of all aggregate used on site to come from reclaimed materials and sources;
- (f) All paints, sealants and flame retardants to be water based, non toxic and not contain VOCs;
- (g) All timber products to be from sustainable sources and recognised under a registered eco scheme such as the Forestry Stewardship Council scheme or equivalent;
- (h) No ozone depleting chemicals to be used;
- (i) All textile based floor finishes and covering to use natural fibres sourced from sustainable sources.

"Public Realm Areas"

The principal street network and associated public realm for illustrative purposes shaded green on Plan 4 which may be adopted by the Council.

OBLIGATIONS

1. Upon Implementation the Developer shall implement the Construction Materials and Purchasing Strategy provided that from commencement of the Development until the Implementation Date the Developer shall have due regard to paragraph (c) in the definition of the Construction Materials and Purchasing Strategy.
2. The Developer shall apply the Construction Materials and Purchasing Strategy in agreeing specifications and targets in contracts with contractors, designers and suppliers of services in relation to construction of buildings within the Development.
3. The Developer shall use reasonable endeavours to minimise packaging waste associated with the delivery of construction materials for the buildings within the Development.
4. The Developer shall:
 - (a) use reasonable endeavours to re-use, as part of the works to be carried out within the Public Realm Areas, historic surfaces which are reclaimed during the construction of the Development and which are suitable for such re-use; and
 - (b) not dispose of any such historic surfaces which are reasonably capable of recycling or re-use and are not used as part of such works unless it can demonstrate that it has used reasonable endeavours to market and sell such historic surfaces to third parties and has failed to do so.
5. The Developer shall use reasonable endeavours to produce topsoil and subsoil within the Development using subsoil and crushed rubble from the Site combined with organic composts, green composts and organic waste streams for use in areas of landscaping in order to avoid where practicable importing soils.
6. The Developer shall use reasonable endeavours to achieve the Construction Targets during the construction of the Development.
7. The obligations upon the Developer in paragraphs 1-6 shall cease upon the Completion Date.

8. On request the Developer shall provide details of the CEMP audits referred to in Appendix 1 of the COCP.

SECTION Z: ENVIRONMENTAL SUSTAINABILITY - WASTE

DEFINITIONS

"Waste Information Packs"

Information (including appropriate information provided to the Developer by the Council) regarding recycling, and reuse of materials and sustainable purchasing, including:

- (a) advice on waste avoidance through purchasing;
- (b) re-use of unwanted items either directly or indirectly through charity shops;
- (c) unwanted goods exchange;
- (d) junk mail prevention measures;
- (e) recycling services available;
- (f) home composting;
- (g) waste watch business network;
- (h) educational visits to schools, residential groups and businesses.

OBLIGATIONS

1. The Developer shall provide occupiers of the Development with Waste Information Packs and use reasonable endeavours to obtain feedback regarding the success or popularity of the initiatives contained within such Packs.
2. The Developer shall use reasonable endeavours to incorporate within the detailed design of the buildings within the Development best practice design solutions to assist occupiers of the Residential Units segregate and store waste and recycling materials into the various streams collected by the Council and will use reasonable endeavours to maintain such solutions as are implemented.
3. The Developer shall use reasonable endeavours to incorporate within the detailed design of commercial and leisure buildings within the Development best practice design solutions that provide for waste segregation and storage areas and will use reasonable endeavours to maintain such solutions as are implemented.
4. The Developer shall provide and maintain segregated waste containers within the Public Realm Areas at suitable locations and in appropriate numbers.

SECTION AA: ENVIRONMENTAL SUSTAINABILITY - WATER

DEFINITIONS

"BREEAM"	The prevailing Building Research Establishment's Environmental Assessment Method.
"EcoHomes"	The prevailing BREEAM for NEW homes.
"SUDS"	Sustainable Urban Drainage Systems.

OBLIGATIONS

1. The Developer shall use reasonable endeavours to incorporate within the detailed design of the Development water efficiency measures such that those designs secure at least forty per cent (40%) of the potable water consumption credits available under the BREEAM/EcoHomes methodologies which represents a reduction of approximately twenty to thirty per cent (20-30%) against typical water consumption.
2. The Developer shall use reasonable endeavours to incorporate within each phase of the Development one or more of the following alternative water supplies to meet five per cent (5%) or more of the non-potable needs of such phase:
 - (a) groundwater abstraction;
 - (b) greywater and blackwater recycling;
 - (c) rainwater harvesting.
3. The Developer shall use reasonable endeavours to ensure that the design for the treatment of storm water run off within the Development incorporates, where practicable, filtration, attenuation and other techniques that are consistent with the then best practice advice on SUDS, to control the timing and volume of flows.

SECTION BB: CARBON FUND

DEFINITIONS

"Carbon Fund"

A fund set up in a single account to provide money for the investigation and delivery of ongoing reductions in carbon emissions through the application of new technologies, including capital or seed funding for specific renewable energy ventures within King's Cross Central, direct provision of renewable energy in buildings or infrastructure and direct provision of permanent energy-saving measures in buildings or infrastructure.

OBLIGATIONS

1. The Developer shall pay £100,000 to the Council upon each of the 7th, 8th, 9th, 10th and 11th anniversaries of the First Occupation for B1 purposes of 10,000 sq m GEA of floorspace.
2. The Council shall pay all such payments into the Carbon Fund.
3. The Developer and the Council shall use reasonable endeavours to agree no later than twelve (12) months prior to the date of the first payment under paragraph 1 the criteria and decision making process pursuant to which payments shall be made from the Carbon Fund and shall review those criteria at the request of either party at intervals of no less than twenty four (24) months.
4. The Developer and tenants and occupiers within the Development shall be entitled to obtain payments from the Carbon Fund for work properly related to the purposes of the Carbon Fund where such works fulfil the criteria agreed between the Council and the Developer.
5. The Council and the Developer shall use reasonable endeavours to work together to leverage in any grant funding that is available to further the effectiveness of the Carbon Fund.
6. In no circumstances will any money paid into the Carbon Fund which is attributable to revenues from the Indoor Sports Hall and the Leisure Facility be repaid to the Developer.

SECTION CC: GAS HOLDER GUIDE FRAMES

OBLIGATIONS

1. Following the commencement of development on the Site pursuant to the Planning Permission the Developer and notwithstanding clause 2.2 the Secretary of State shall ensure that prior to their re-erection neither the ownership nor the control of Gas Holder No 8 and the Linked Triplet Gas Holders is transferred outside the parties to this Agreement without the consent of the Council (which consent may be given subject to conditions).
2. Prior to commencing the re-erection of Gas Holder No 8 the Developer shall prepare and submit to the Council for approval in accordance with condition 2 of the consent pursuant to the Gas Holder No 8 Application details of how the future maintenance of Gas Holder No 8 would be funded and delivered and, if maintenance would not be part of a commercial arrangement, the proposed mechanism for securing such maintenance.
3. Prior to commencing the re-erection of Linked Triplet Gas Holders the Developer shall prepare and submit to the Council for approval in accordance with Condition 54 of the Planning Permission details of how the future maintenance of the Linked Triplet Gas Holders would be funded and delivered.
4. Following the re-erection of Gas Holder No 8 and the Linked Triplet Gas Holders the Developer shall implement the proposals for future maintenance in accordance with the details approved by the Council.
5. The Developer shall use reasonable endeavours to place contracts for:
 - (a) the dismantling, refurbishment (including repair) and re-erection of Gas Holder No 8 in accordance with the method statements and programmes approved pursuant to Condition 24 of the Planning Permission; and
 - (b) the movement and secure storage of the Linked Triplet Gas Holders in accordance with the method statements and programmes approved pursuant to Condition 24 of the Planning Permissionwithin three (3) years of Implementation.
6. The Developer shall use reasonable endeavours to secure approval of all reserved matters and any other necessary planning approvals in respect of the scheme shown on attached drawing KXC 020 Rev E providing for the re-erection and re-use of the Linked Triplet Gas Holders and for all necessary works of repair within three (3) years of Implementation or such other period as may be approved by the Council.
7. Subject to paragraph 8, no more than 1,000 Residential Units (excluding Student Housing) shall be First Occupied unless the repair and re-erection of the Linked Triplet Gas Holders in respect of the scheme shown on attached drawing KXC 020 Rev E has been Practically Completed.
8. The Developer shall be entitled to allow the Occupation of more than 1,000 Residential Units (excluding Student Housing) provided that:
 - (a) applications for all consents required to carry out the works of repair, re-erection and re-use were submitted within three (3) years of Implementation;
 - (b) the Developer has demonstrably used reasonable endeavours to secure consents for all the works of repair, re-erection and re-use prior to the Occupation of 1,000 Residential Units (excluding Student Housing);

- (c) the Developer continues to use reasonable endeavours to secure consents for such works of repair, re-erection and re-use; and
 - (d) an alternative Threshold or form of security ensuring the repair, re-erection and re-use of the Linked Triplet Gas Holders is agreed between the Developer and the Council.
9. Until the Developer completes the repair and re-erection of the Linked Triplet Gas Holders:
- (a) the Developer shall continue to maintain the Linked Triplet Gas Holders in secure storage; and
 - (b) the Developer may not use the site shown on attached drawing KXC020 Rev E for any development purpose which would preclude the re-erection of the Linked Triplet Gas Holders forthwith upon the later of :
 - (i) 1,000 Residential Units (excluding Student Housing) being First Occupied;
 - (ii) such other Threshold as may be agreed in accordance with sub paragraph 8(b); or
 - (iii) the relevant consents necessary for the repair, re-erection and re-use of the Linked Triplet Gas Holders being granted.
10. Until the Developer completes the repair and re-erection of Gas Holder No 8 the area shown for Gas Holder No 8 on attached drawing KXC005 Rev T shall not be used for any development purpose which would preclude or materially delay the re-erection of Gas Holder No 8 within that area.
11. Having placed a contract for the re-erection of Gas Holder No 8 the Developer shall ensure that such re-erection is completed within ten (10) years of the works of re-erection having been commenced.

SECTION DD: CODE OF CONSTRUCTION PRACTICE

DEFINITIONS

"CEMP"	The Construction Environmental Management Plans meeting the minimum requirements of Appendix 1 of the COCP.
"CSNP"	Camley Street Natural Park.
"COCP"	The Revised Code of Construction Practice dated September 2005 which sets out how the Developer will implement construction activities throughout the phased implementation of the Development together with such amendments for which there may from time to time be agreed between the Developer and the Council.
"Construction Impact Group"	An existing forum adapted to allow for liaison with local residents and other interests regarding potential construction impacts and mitigation as referred to in this Section.
"Environmental Health Officer"	<p>A suitably qualified and/or experienced person employed by the Council whose terms of employment shall include (but not be limited to) the following:</p> <ul style="list-style-type: none">(a) to ensure the Developer's compliance with the COCP on the Site and also for any parts of LB Camden and LB Islington outside the Site affected by the Development;(b) to assist the Developer in implementing the COCP and in remedying any breaches of the COCP;(c) to attend the Construction Impact Group meetings; and(d) to carry out any of the normal functions required by an officer holding a post as an environmental officer within the Council.
"Environmental Health Officer Contribution"	The sum of £360,000 to be applied by the Council for the establishment of the Environmental Health Officer.

OBLIGATIONS

1. Subject to paragraph 2 the Developer shall carry out the Development having due regard to the COCP.
2. Best practice from time to time in the management of the environmental impacts of construction will be used by the Developer as a guiding principle to inform decisions taken during the construction process for the Development.

3. In the carrying out of the Development the Developer shall, in the manner set out in the COCP:
- (a) maintain an individual with overall responsibility for implementing the COCP;
 - (b) make the COCP part of each contractor's contract documents;
 - (c) use reasonable endeavours to ensure that the same terms are set out in the terms of appointment of statutory undertakers and other utility providers;
 - (d) form a community relations team;
 - (e) procure the preparation of and make available and review as appropriate the CEMPs in each case in consultation with the Council;
 - (f) prepare method statements setting out the way in which the objectives of the COCP and CEMP will be addressed in relation to particular tasks and in particular locations;
 - (g) identify a focal point for the dissemination of information and handling of any complaints about construction issues and the administering of a helpline and website;
 - (h) implement a public relations strategy;
 - (i) set on site working hours and advance notification procedures for activities likely to generate high levels of noise that meet the objectives of the COCP and CEMP;
 - (j) apply a good housekeeping standard to site layout and site appearance;
 - (k) address site security and evacuation arrangements;
 - (l) carry out works in such a way that inconvenience to the public arising from increases in traffic flows and the disruptive effects of construction traffic on local and main roads is limited;
 - (m) use best practicable means to control and limit noise and vibration levels so that residential properties and other sensitive receptors are protected from excessive or unnecessary noise and vibration levels arising from the construction activities;
 - (n) use best practicable means to minimise the emissions to air of pollutants (particularly dust, fine particles and nitrogen dioxide);
 - (o) carry out the works in such a way as to prevent, contain or limit, as far as reasonably practicable, any adverse impacts arising from the presence of contaminated material encountered during the construction activities;
 - (p) manage the disposal of waste, including surplus spoil, to maximise the environmental and development benefits from the use of surplus spoil and to minimise any adverse effects of disposal, as far as practicable, through the control measures specified;
 - (q) protect surface and groundwater from pollution and other adverse impacts including changes to water levels, flows and quality, through the control measures specified;
 - (r) contain disturbance to landscape and townscape;

- (s) carry out construction works so as to ensure that disturbance to CSNP and Regent's Park is controlled and that appropriate measures are adopted to protect the ecology of these areas and avoid impacts on protected species;
 - (t) carry out construction works in such a way that any adverse impact on historic structures, surfaces, other Conservation Area features and areas of archaeological interest are limited;
 - (u) carry out construction works in such a way as to minimise any detrimental effects to the health of local residents, visitors to the area and construction workers, through the control measures specified;
 - (v) ensure the provision of information to local authorities and the wider public;
 - (w) consult with local residents and businesses particularly at the start of or during major civil and infrastructure works and where particular or local effects may be anticipated;
 - (x) implement the suggested approach to workforce opportunities consistent with the requirements of Section A;
 - (y) report the results of the monitoring of noise and air quality, and of the effect of the COCP and CEMP, to the Construction Impact Group for review.
4. The Developer shall resubmit an updated COCP to the Council for further approval no later than three (3) years from the Implementation date and thereafter once every five (5) years and once approval has been granted the Developer shall thereafter comply with the amended COCP and in relation to existing contracts shall use reasonable endeavours to procure compliance with the amended COCP.
5. The Developer shall pay to the Council the Environmental Health Officer Contribution in accordance with paragraphs 6 and 7.
6. The Developer shall not Implement or permit Implementation of the Development until such time as the Developer has paid to the Council £48,000 as part of the Environmental Health Officer Contribution.
7. The Developer shall make the further following payments as further parts of the Environmental Health Officer Contribution:
- (a) a further payment of £48,000 on the first anniversary of the date in which the payment in paragraph 6 properly fell due; and
 - (b) a further payment of £48,000 on the second anniversary of the date in which the payment in paragraph 6 properly fell due; and
 - (c) a further payment of £48,000 on the third anniversary of the date in which the payment in paragraph 6 properly fell due; and
 - (d) a further payment of £48,000 on the fourth anniversary of the date in which the payment in paragraph 6 properly fell due; and
 - (e) a further payment of £24,000 on the fifth anniversary of the date in which the payment in paragraph 6 properly fell due; and
 - (f) a further payment of £24,000 on the sixth anniversary of the date in which the payment in paragraph 6 properly fell due; and

- (g) a further payment of £24,000 on the seventh anniversary of the date in which the payment in paragraph 6 properly fell due; and
 - (h) a further payment of £24,000 on the eighth anniversary of the date in which the payment in paragraph 6 properly fell due; and
 - (i) a final payment of £24,000 on the ninth anniversary of the date in which the payment in paragraph 6 properly fell due.
8. The Council shall ensure that the Environmental Health Officer provides the Developer with a dedicated single point of contact in relation to the implementation of the COCP and related environmental health matters within LB Camden and shall use reasonable endeavours to procure the same in relation to LB Islington.