

London Organising Committee of the  
Olympic Games and Paralympic Games Ltd

**Sustainability Statement for the London 2012  
Equestrian and Modern Pentathlon events  
Greenwich Park**

November 2009



# *planning*

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## **1 Introduction**

### **1.1 What is sustainability?**

1.1.1 Simply put, sustainability is about making positive and lasting changes in the way we use natural and human resources to improve quality of life for all; now and in the future. In the context of an event such as the London 2012 Olympic Games and Paralympic Games (hereafter 'the 2012 Games') this means:

- providing an accessible and inclusive setting for all;
- providing a safe and secure atmosphere;
- minimising negative impacts on the environment;
- encouraging healthy living;
- promoting responsible sourcing;
- leaving a positive legacy;
- delivering excellent customer experience, and
- encouraging more sustainable behaviour.

### **1.2 What is the purpose of this document?**

1.2.1 London Organising Committee of the Olympic and Paralympic Games (LOCOG) will stage the 2012 Games and is therefore responsible for installing event facilities at temporary and existing venue, operations during the competition phase and dismantling of event facilities after the 2012 Games. The term 'event facilities' refers to the temporary structures and facilities required to stage an event.

1.2.2 This document seeks to place the planning applications made by LOCOG for the Greenwich Park Olympic Equestrian and Modern Pentathlon and Paralympic Equestrian Events within the context of the overall London 2012 Games Sustainability Plan. It outlines LOCOG's commitments to sustainability, how these have been taken into consideration to date and principles going forward for the venue detailed design, set up, competition and removal stages.

1.2.3 The key event facilities required to accommodate the proposed development at the project site are:

- A temporary arena with up to 23,000 seats and supporting facilities (spectator areas, main stables, training and warm up areas, veterinary centre, medical centre, hospitality areas, broadcast compound, media centre, offices, food outlets, toilets, etc) in the northwest side of the Park.

- An Equestrian Cross Country course (approximately 6km in length) and supporting facilities (spectator areas, warm up areas, toilets, food outlets, etc) over most of the remainder of the Park, and a modern pentathlon running course (approximately 1km) to the southeast of the arena.
- Spectator queuing and access, and administration facilities within the grounds of the ORNC and NMM north of the Park.
- Secondary stabling, training ground, logistics compound and a spectator queuing and access area in Blackheath Circus Field, adjacent to the south-eastern side of the Park. This area would also be used as a logistics compound during the set up and removal phases.
- Additional facilities – utilities, use of existing internal roads, lighting, cabling, perimeter fence, etc throughout the project site.

1.2.4 The key elements of existing permanent infrastructure that would be used to provide temporary event facilities at the project site are:

- Accommodation, administrative and hospitality facilities in Devonport House, the Maritime Galleries and the Queen's House respectively, north of the Park. Devonport House would also be used during the Test Event.

1.2.5 A comprehensive description of the proposed development is included within Volume 1 (Chapter 3) of the Greenwich Park Environmental Statement.

1.2.6 Many of the sustainability issues outlined in this document have already been dealt with in detail within the technical chapters of the Environmental Statement or within other key planning documents such as the Design and Access Statement. This document therefore provides a broad summary of the key findings focusing on longer term sustainability.

### **1.3 Structure of the document**

1.3.1 Section 2 outlines the context within which this Sustainability Statement is set. It also provides an overview of the London 2012 Sustainability Plan and LOCOG's Sustainability Management System.

1.3.2 Sections 3 to 7 follow the five themes of the London 2012 Sustainability Plan:

- Climate change
- Waste
- Biodiversity
- Inclusion
- Healthy living

1.3.3 Each section includes the:

- context of that particular issue;
- commitments made in the London 2012 Sustainability Plan; and
- key elements of venue design and operations which have addressed sustainability.

1.3.4 Section 8 outlines a number of cross cutting themes which can help deliver the commitments outlined in Sections 3 to 7.

1.3.5 Section 9 outlines a summary of the key sustainability actions identified and how these will be delivered between now and 2012. It also considers the potential sustainability legacy of the 2012 Games in terms of knowledge transfer of new approaches and ideas.

## **2 Sustainability policy context**

### **2.1 National context**

2.1.1 Planning Policy Statement 1 (PPS1, Delivering Sustainable Development, 2005) reaffirms the Government's commitment to the principles of sustainable development. The key aims for sustainable development include the following:

- Social progress which recognises the needs of everyone. Community involvement is vitally important to planning and the achievement of sustainable development.
- Protecting and enhancing the quality of the natural and historic environment. The condition of our surroundings has a direct impact on the quality of life and the conservation and improvement of the natural and built environment brings social and economic benefit for local communities. Planning should seek to maintain and improve the local environment and help to mitigate the effects of declining environmental quality through positive policies.
- The prudent use of natural resources ie: wise and efficient use of resources through sustainable consumption and production and using non renewable resources in ways that do not endanger the resource or cause serious damage or pollution.
- The maintenance of high and stable levels of economic growth and employment. Sustainable economic development requires promoting a strong, stable and productive economy that aims to bring jobs and prosperity for all.

2.1.2 PPS1 is supplemented by guidance on climate change. This sets out how the planning system should contribute to reducing emissions and stabilising climate change and take into account the unavoidable consequences.

2.1.3 The environmental performance of proposed development should demonstrate that overall it has been planned so as to minimise carbon dioxide emissions, deliver a high quality local environment, provide for sustainable waste management; and create and secure opportunities for sustainable transport in line with PPG13.

### **2.2 Regional context**

2.2.1 The Regional Planning Framework for the proposed development is contained within the London Plan 2008 (Consolidated with Alterations since 2004) and other relevant Supplementary Planning Guidance issued by the Mayor of London.

2.2.2 In October 2009, the Mayor published a consultation document for the review of the London Plan. The London Plan has been consolidated since London was selected to host the 2012 Games, and thus contains a number of key policies

and themes relating to the Games in the light of the scale and impacts which this global event will have.

2.2.3 As with national planning policy, sustainable development underpins policy at the regional level. The Planning Statement which accompanies the planning application outlines the key aspects of the London Plan which are relevant to LOCOG's activities and the following key issues are particularly relevant and a reference is given to the section of the Sustainability Statement where these issues are covered.

- The London Plan sets out sustainability criteria (Policy 2A.1) which includes consideration of the impact of development on natural resources, using a design-led approach, and ensuring that development happens in accessible locations. **See Chapter 3: Climate Change, Chapter 4: Waste and Chapter 6: Inclusion.**
- The Plan identifies that all employment opportunities arising from the 2012 Games should be maximised and used to enhance the job opportunities for local communities (Policy 3B.11). **See Chapter 6: Inclusion.**
- The integration of transport and development (Policy 3C.1) and sustainable travel in London (Policy 3C.3) as key aspects of achieving sustainable development in London. Improving international, national and regional transport links in London (Policy 3C.5) and improving and increasing the capacity (Policy 3C.9) and security (Policy 3C.10) of public transport as well as specifically improving Underground and DLR services (3C.13) are important elements of the plan's strategy. Coupled with policies relating to motorised transport are intentions to improve conditions for walking (Policy 3C.21) and cycling (Policy 3C.22). **See Chapter 8: Cross Cutting Themes – Sustainable Transport.**
- In support of the sustainable development objective of the plan there is the requirement to tackle climate change (Policy 4A.1), including measures such as sustainable design and construction (Policy 4A.3) and renewable energy (Policy 4A.7). **See Chapter 3: Climate Change and Chapter 4: Waste.**
- Consideration of flooding and flood risk (Policies 4A.12 and 4A.13) and sustainable drainage (Policy 4A.14) are also important elements of tackling climate change. **See Chapter 8: Cross Cutting Themes – Water.**
- Consideration and improvement of air quality (Policy 4A.19), reducing noise (Policy 4A.20) and considering waste strategies (Policy 4A.21) are also all part of improving London's response to climate change. **See Chapter 7: Healthy Living and Chapter 4: Waste.**

2.2.1 LOCOG's activities will operate within a sustainability policy framework specific to London contained in various plans, strategies and planning guidance as follows:

- The London Plan 2004 (and associated early and further alterations);
- The Mayor's Waste Strategy 2003;
- The Mayor's Energy Strategy 2004;
- The Mayor's Biodiversity and Wildlife Strategy 2002;
- The Mayor's Air Quality Strategy 2002 (and Draft Air Quality Strategy, October 2009);
- The Mayor's Transport Strategy (July 2001)
- The Mayor's Supplementary Planning Guidance – Accessible London: Achieving an Inclusive Environment (April 2004); and
- The Mayor's Supplementary Planning Guidance – Sustainable Design and Construction (May 2006).

## 2.3 Local context

### ***Greenwich Unitary Development Plan***

2.3.1 The Local Planning Framework for the proposed development is contained within the Greenwich Unitary Development Plan (adopted 2006) and Supplementary Planning Guidance/Documents. The Planning Statement which accompanies the planning application outlines the key aspects of the Greenwich UDP which are relevant to LOCOG's activities and the following key issues are particularly relevant and a reference is given to the section of the Sustainability Statement where these issues are covered.

- Strategic Policy SJ1 seeks to expand and diversify the Borough's economic base and employment opportunities. Policy SJ5 encourages training and the development of the skills of the Borough workforce and to ensure that the benefits of economic activity are shared by all sections of the community.  
**See Chapter 6: Inclusion.**
- Policy J14 identifies that the Council will support the establishment of training centres, training workshops and other training provision to develop the skills of the Borough's resident workforce, and to help those facing disadvantage in the labour market. In new developments the Council will seek to negotiate commitments or contributions to Greenwich Local Labour and Business, to provide opportunities for local job seekers, contractors and local businesses. Policy J15 states that the Council will use planning agreements to secure

community and workplace benefits as appropriate. **See Chapter 6: Inclusion.**

- The Council has identified a network of sites that are considered of Nature Conservation Importance (SNCI) throughout the Borough and there is a presumption against the development of these sites and the level of protection accorded to a site should be commensurate with its designation (Policy O18). **See Chapter 5: Biodiversity.**
- The protection of the environment is a further key objective, which underlies many of the Council's planning policies. Policy SE2 sets out their objective to protect and improve the environment in terms of air and water quality, reduce the impact of pollution, noise, smell and toxic materials. **See Chapter 7: Healthy Living.**
- In order to promote sustainable redevelopment the Council encourages development to include renewable energy technologies and renewable energy facilities (Policy E9). **See Chapter 3: Climate Change.**
- The Council encourages waste reduction through reuse, recycling, energy recovery - with waste disposal as a final option. In addition, the Council will apply the 'proximity principle' and seek to minimise the effect of developments on the surrounding area; encouraging rail and river movement and optimising location to minimise environmental impact (Policy E14). **See Chapter 4: Waste.**
- Strategic Policy SD1 states that the Council will encourage high quality design in all new developments and alterations to existing developments which positively contribute to the improvement of their accessibility, safety and the built natural environment. **See Chapter 6: Inclusion and Chapter 7: Healthy Living.**
- Policy M1 states that when planning transport provision for single large developments and extensive sites where comprehensive development can take place, among others, developers should pay regard to designing for the needs of pedestrians, people with disabilities, cyclists and public transport, arrange highways networks after these priorities and assess existing and proposed public transport and the impact upon the capacity of networks. **See Chapter 8: Cross Cutting Themes – Sustainable Transport.**

### ***Greenwich Council Sustainable Development Policy***

2.3.2 Greenwich Council has a Sustainable Development Policy to:

- Promote sustainable development through all Council strategies.
- Act and campaign against pollution of land, air and water.
- Act and campaign against anti social levels of noise.

- Implement a waste minimisation and recycling strategy to meet and exceed central government recycling targets.
- Continue to implement energy and water conservation in council properties and promote these issues in the community.
- Protect and enhance open spaces, trees and hedges under its control in accordance with the aims and objectives of the emerging Greenwich Biodiversity Plan.
- Promote the development and implementation of renewable energy sources and purchase renewable energy for council property use when possible.
- Reduce emissions that are recognised to contribute to climate change.
- Promote sustainable construction practices within the development industry.
- Support environmental education in schools and colleges.
- Foster growth within the environmental industry sector.
- Support the use of and improvement to public transport infrastructure and provide where possible improved facilities for pedestrians, cyclists and disabled persons.
- Practice environmentally responsible 'Green' procurement.

## **2.4 The Royal Parks**

2.4.1 The Royal Parks is an Executive Agency of the Department for Culture Media and Sport (DCMS). Their purpose is 'to manage the Royal Parks effectively and efficiently; balancing the responsibility to conserve and enhance these unique environments with creative policies to encourage access and to increase opportunities for enjoyment, education, entertainment and healthy recreation.'

2.4.2 The Royal Parks has a Sustainability Action Plan (2006<sup>1</sup>) and reports against targets set within a framework which includes the following themes:

- Protection of the Environment
- Social Progress
- Prudent Use of Natural Resource
- Economic Growth and Prosperity

2.4.3 Greenwich Park achieved ISO 14001 certification in June 2002 and its environmental policy, objectives and targets, and environmental procedures manual are under constant review.

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<sup>1</sup> The Royal Parks Sustainability Action Plan 2006

2.4.4 Together with the other seven Royal Parks, Greenwich Park successfully achieved Green Flag Standard in 2008 and also achieved Green Heritage Site award. Green Flag status is based upon a series of criteria including a welcoming place; health, safety and security; maintenance of equipment, buildings and landscape; litter cleanliness and vandalism; environmental sustainability; conservation of heritage and nature; community involvement and marketing.

2.4.5 Green Flag status is a Corporate Target for the Royal Parks and therefore they consider it to be very important to maintain this status.

## **2.5 London 2012 Sustainability Policy**

2.5.1 London began its formal bid for the 2012 Olympic and Paralympic Games in summer 2003. As key partners in the process the GLA and the Mayor's Office wanted the bid focus on sustainability and be a catalyst for long term regeneration. As a result the bid was based on an ambitious vision – to use the Olympic and Paralympic Games to make a real change in London, across the UK and globally.

2.5.2 Sustainability underpinned the bid for the 2012 Games, framed by the concept of 'Towards a One Planet Olympics'. This was derived from the WWF/BioRegional concept of 'One Planet Living'®, which encapsulates the challenges facing us in stark and compelling terms: if everybody in the world lived the same lifestyle as we do in the UK, we would need three planets' worth of resources to support us.

2.5.3 As the most high-profile event in the world, the 2012 Games give us the chance to show how changes to the way we build, live, work, do business and travel could help us to live happy and healthy lives, within the resources available to us. Social, economic and environmental sustainability – and the One Planet Living® concept – remain central to the vision for the 2012 Games.

2.5.4 The Olympic Board – co-chaired by the Mayor of London and the Minister for the Olympics – agreed a Sustainability Policy in June 2006, updated November 2009<sup>2</sup>. This incorporates the Government's legacy promises for 2012, published in June 2007 and governs the activities of LOCOG and the Olympic Delivery Authority. Other parties governed by the policy in respect to their London 2012 activities are the UK Government, the GLA Family, and the British Olympic Association.

2.5.5 Members of the Olympic Board take joint responsibility for championing sustainability within their respective organisations, and across the London 2012 programme.

2.5.6 The Olympic Board is supported by the Olympic Board Steering Group (OBSG). This, in turn, sits above the London 2012 Sustainability Group, which comprises senior representatives from London 2012 and the London 2012 Stakeholders,

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<sup>2</sup> [www.london2012.com/ourplans/sustainability](http://www.london2012.com/ourplans/sustainability)

together with other relevant Government departments and the British Paralympic Association. The Commission for a Sustainable London 2012 (CSL) also attends some meetings.

2.5.7 The London 2012 Sustainability Group is co-chaired by the Mayor's London 2012 Advisor and the Sustainability Director from Defra. They are responsible for ensuring that sustainability is represented at the OBSG and in other senior level policy discussions across the London 2012 programme.

## 2.6 London 2012 sustainability themes

2.6.1 Whilst London 2012 addresses all elements of the diverse themes which make up sustainability it believes it can make the biggest impact and achieve the most beneficial outcomes by focusing London 2012's sustainability efforts upon five headline themes:

- **Climate change** – the 2012 Games provide a platform for demonstrating long-term solutions in terms of energy and water resource management, infrastructure development, transport, local food production and carbon impact mitigation and adaptation. London 2012 aims to minimise the carbon footprint of the Games and legacy development, notably by minimising embodied impacts and optimising energy efficiency, energy demand and use of low carbon and renewable energy sources
- **Waste** – London 2012 aims to be a catalyst for new waste management infrastructure in east London and other regional venues and to demonstrate exemplary resource management practices. London 2012 will minimise waste at source, divert construction waste wherever feasible and all Games-time waste away from landfill, and promote the waste hierarchy of 'reduce, reuse, recycle' to facilitate long-term individual behavioural change.
- **Biodiversity** – London 2012 will enhance the ecology of the Lower Lea Valley and other London and regional 2012 venues and will encourage the sport sector generally to contribute to nature conservation and bring people closer to nature.
- **Inclusion** – London 2012 will host the most inclusive Games by promoting access, celebrating diversity, and facilitating the physical, economic and social regeneration of the Lower Lea Valley and surrounding communities. This will be supported by the provision of new infrastructure and facilities, employment, training and education opportunities.
- **Healthy living** – the 2012 Games will be used to inspire people across the country to take up sport and develop active, healthy and sustainable lifestyles.

2.6.2 The five headline sustainability themes and legacy promises reflect the desire to deliver a 'One Planet 2012' which adheres to the 10 One Planet Living® principles. To support these five headline themes, there are three key cross-cutting themes:

- **Planning and design** of the venues considering potential environmental and social impacts from the outset and identifying measures to reduce impacts are followed through by contractors.
- **Sustainable sourcing** of products, materials and services by suppliers and licensees.
- **Sustainable transport** for spectators, staff and Games Family.

## 2.7 Sustainability management and assurance

2.7.1 LOCOG has developed and maintains a corporate wide Sustainability Management System (SMS) in accordance with BS 8901:2009 "Specification for a sustainability management system for events" that sets out the framework for implementing sustainability of LOCOG in its work to stage the 2012 Games.

2.7.2 The Sustainability Management System establishes how sustainability is being embedded into LOCOG's internal management systems and how priority sustainability actions will be implemented. A number of core strategies and supporting policies and tools make up the management system which is subject to regular internal audit and independent assurance.

2.7.3 Independent assurance activities are provided by the Commission for a Sustainable London 2012. The commission provides assurance and expert commentary on the sustainability of the programme but it does not set or deliver sustainability targets itself, rather it reports directly to the Olympic Board on the performance of the delivery bodies.

2.7.4 A first for any Games, the commission's main roles are to:

- provide independent assurance of and commentary on the sustainability of the London 2012 programme. This is done through ongoing monitoring of the progress of the London 2012 programme against sustainability targets and assessing the sustainability of relevant 2012 Games policies, procedures and performance;
- provide a credible point of reference for the London 2012 programme, with respect to sustainable development assurance issues;
- act as a 'critical' friend, providing timely, credible and independent advice informally to assist key stakeholders in meeting objectives; and
- engage with Olympic, Paralympic and wider stakeholders to report openly on the performance of the programme.

- 2.7.5 Sustainability reporting is relatively new to sport events and events generally. London 2012 – with support from Defra – has embarked on a project with the Global Reporting Initiative (GRI)<sup>3</sup> to develop an event sector supplement to GRI's internationally recognised sustainability reporting standard. This project commenced in 2009 and is scheduled for late 2011. Other participating partners in the project include the IOC, UEFA and the environment departments from the governments of Austria and Switzerland.
- 2.7.6 London 2012 will develop its future sustainability reports to align with this new GRI reporting framework. This will enable London 2012's last annual sustainability report before the Games to be issued according to this format in late 2011 or early 2012.
- 2.7.7 To ensure that there is a continuous record of achievement against each commitment, and in advance of the introduction of the GRI format, London 2012 will repeat the process of collating a report card against which current progress for all the commitments in the London 2012 Sustainability Plan will be reported. This will be published on the London 2012 website in early 2010.

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<sup>3</sup> GRI is a network-based organisation that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide - [www.globalreporting.org](http://www.globalreporting.org)

### **3 Climate change**

#### **3.1 Introduction**

3.1.1 There is now strong scientific evidence, both on the potential severity of the threat that climate change poses to our lives and lifestyles, and on the role played by greenhouse gases (GHG), and in particular carbon dioxide, in pushing global temperatures higher. However, GHG emissions are a consequential and direct impact of society – significant amounts of energy and resources are consumed in everyday life.

3.1.2 London 2012 is committed to delivering a “low carbon games” as one of its Sustainability Policy priorities<sup>4</sup>. This means minimising carbon emissions in the run-up to and during the 2012 Games and improving practice in both construction and event management.

#### **3.2 Background to the climate change theme**

3.2.1 International efforts to reduce carbon, and other GHG emissions, are being driven by the Kyoto Protocol, a part of the Framework Convention on Climate Change, ratified by more than 175 countries<sup>5</sup>.

3.2.2 With the end of the first phase of Kyoto coinciding with the staging of London 2012, there is likely to be an unprecedented awareness of the challenges involved in meeting globally binding GHG reduction targets. Discussions about the second, post-2012, phase of Kyoto are already underway and are running along a similar timeline to preparations for the 2012 Games.

3.2.3 The Climate Change Act 2008 sets the framework for how the UK will manage and respond to the threat of climate change. Under the Act, the UK must reduce total GHG emissions by at least 80% below 1990 levels by 2050. Given that UK businesses produce a significant amount of the UK’s total GHG emissions and have direct influence over the management of these gases, they have a significant role to play.

#### **3.3 The London 2012 carbon footprint**

3.3.1 London 2012 is the first Games to attempt to measure and manage its carbon footprint<sup>6</sup> in detail. There is, as yet, no universally agreed set of rules, standards or guidance for predicting carbon dioxide, and other GHG emissions, arising from a major event as multifaceted as the Olympic and Paralympic Games.

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<sup>4</sup> A London 2012 Carbon Management Strategy is currently in preparation and will be incorporated as part of the revised London 2012 Sustainability Plan which is due to be published in December 2009.

<sup>5</sup> The Kyoto agreement came into force in 2005 and committed signatories to a reduction in greenhouse gas (GHG) emissions to between 20-24 billion tonnes by 2050 (about 50-60% below 1990 global levels)

<sup>6</sup> The term ‘carbon footprint’ refers to the total set of greenhouse gas emissions caused by an organisation, event or product. expressed in carbon dioxide equivalent (CO<sub>2</sub>e)

- 3.3.2 London 2012 has developed a methodology to predict direct and indirect GHG emissions<sup>7</sup> from the Games. This has enabled major sources of GHG emissions to be identified and to inform efforts to avoid and reduce such emissions occurring. The method closely follows the international Greenhouse Gas Protocol for Company Reporting<sup>8</sup> and the Publicly Available Specification, known as PAS 2050 'Specification for the assessment of the life cycle greenhouse gas emissions of goods and services'<sup>9</sup> adapted, as required, for application to the Games.
- 3.3.3 Volume 1 (Chapter 7) of the Greenwich Park Environmental Statement estimates the carbon footprint of the venue to be around 18,500 tonnes of CO<sub>2</sub>e. The estimated emissions are less than 0.5% of the total carbon footprint of the 2012 Games which is estimated to be 3.4m tonnes of CO<sub>2</sub>e.
- 3.3.4 The largest component of the carbon emissions comes from the embodied carbon within temporary event facilities such as portable buildings (29%), tent structures (9%) and structural works for the temporary arena and training areas (8%). Therefore, while energy efficiency and renewable energy have been given full consideration, LOCOG has focussed its efforts on reducing the embodied carbon of event facilities.

### **3.4 Avoidance measures**

- 3.4.1 LOCOG has established a series of sustainable design principles across all venues to reduce its carbon footprint. The sections below outline how these have been considered for Greenwich Park.

#### ***Reducing embodied carbon within event facilities***

- 3.4.2 LOCOG has undertaken some analysis on the embodied carbon of a range of goods which will be required to create each venue. These include portable buildings, temporary roads, tents, furniture, temporary stands, seating, security fences, field of play, temporary footways, utility services such as power and drainage and so on. The analysis considered the embodied carbon if the items were purchased and if they were rented. When an item is rented, the embodied carbon of the item is subtracted leaving a small component associated with its transport to and from the site.
- 3.4.3 This analysis showed that hiring items such as portable buildings, tents, seating and fences reduces the carbon footprint as these items are returned for reuse. Hiring such items is therefore the preferred option for all temporary venues.

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<sup>7</sup> Direct emissions are from activities owned or controlled by an organisation that release emissions straight into the atmosphere; Energy indirect emissions are emissions released into the atmosphere associated with the consumption of purchased electricity, heat, steam and cooling; and Other indirect emissions relating to all other activities that release emissions into the atmosphere (e.g. use of products and services)

<sup>8</sup> WRI / WBCSD [The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard \(Revised Edition\)](#)

<sup>9</sup> [PAS 2050:2008 - Specification for the assessment of the life cycle greenhouse gas emissions of goods and services](#)

3.4.4 Some items however, cannot be rented and may have to be manufactured for the purpose of the 2012 Games. For these items, the following design principles will be applied to reduce embodied carbon:

- Avoid material use where possible by designing to the standards required for a temporary rather than a permanent venue
- Design venues so that they can be dismantled easily and component parts can be returned to the supplier, reused or recycled
- Avoid materials with high embodied carbon
- Minimise new aggregate use
- Where possible, specify materials to be of a reused or recycled source

***Reducing energy consumption***

3.4.5 The following design principles will be applied to the Greenwich Park venue to reduce non-renewable energy consumption:

- The venue will be designed to maximise the use of natural ventilation and shading and incorporate appropriate shelters and shades. Where appropriate, measures such as using reflective materials for roofs and walls will be considered to minimise the need for energy intensive heating, ventilation and air conditioning systems (HVAC).
- Energy demand will be reduced by designing lighting equipment so that it minimises the upward spread of light and directs light downwards when lighting vertical structures. This will also reduce light pollution with benefits for local residents and sensitive species such as bats.
- Energy efficient products will be used wherever possible for example, those rated in accordance with EU Energy Label Class A + and ++, Energy Saving Recommended (ESR) endorsed, or those compliant with other recognised equivalent standards, such as equipment that meet current 'Energy Star' requirements for PC Monitors.

***Reducing water consumption***

3.4.6 The following design principles will be applied to the Greenwich Park venue to reduce water consumption:

- Exploring opportunities to use grey water for all non-potable uses.
- Specifying dual flush toilets
- Specifying waterless urinals

- Specifying low flow products
- Ensuring that toilet facilities and any other washing facilities are designed as far as possible to be self-contained, modular facilities that can be transferred for reuse with minimal modification

***Sustainable travel***

3.4.7 Transport is a cross-cutting theme and is dealt with in Section 8.4. However, it is worth noting here that by staging a compact Games, London 2012 will maximise the use of existing public transport infrastructure and minimised the distance that spectators and the Games Family need to travel. This will further reduce the carbon footprint of the Games.

## **4 Waste**

### **4.1 Introduction**

4.1.1 London 2012 is committed to minimising waste throughout the programme from planning to legacy. This applies equally to temporary venues and the installation of event facilities at existing venues. LOCOG is committed to design out waste and promote reuse, recycling and recovery of materials with a principal aim of 'zero waste to landfill'. An overriding feature of the waste management approach to the 2012 Games is the planned attainment of very high levels of recycling.

4.1.2 Waste is closely linked to other elements of sustainability, particularly climate change. Landfill creates methane, a more potent greenhouse gas than carbon dioxide, as well as creating carbon dioxide emissions through transport and through the energy embedded in the material we throw away. Aside from climate impacts, waste disposal methods can threaten both biodiversity and human health; reusing wood and other materials reduces the impact of construction on local communities and biodiversity; and a sensible approach to food packaging can go hand-in-hand with promoting a healthier diet and healthier lifestyle.

### **4.2 Background to the waste theme**

4.2.1 The key regulatory, legislation and policy framework documents are set out in the following:

- Waste Framework Directive<sup>10</sup> (WFD-Council Directive 2006/12/EC) as amended by the new WFD (Directive 2008/98/EC, coming into force in December 2010).
- Environmental Protection Act 1990 Part II
- A raft of statutory instruments are in place in of relevance to waste management at the proposed development, including but not limited to:
  - Environmental Permitting (England & Wales) Regulations 2007 (as amended)
  - Animal By-Products Regulations 2005 (as amended)
  - Hazardous Waste (England & Wales) Regulations 2005 (as amended)
  - Site Waste Management Regulations 2008 (as amended)
  - Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991 (as amended)
  - Environmental Protection (Duty of Care) Regulations 1991 (as amended)
  - List of Wastes (England) Regulations 2005 (as amended)

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<sup>10</sup> Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste

- Waste Strategy for England 2007
- Planning Policy Statement 10: Planning for Sustainable Waste Management (PPS10)
- The Mayor of London draft Business Waste Management Strategy<sup>11</sup>

4.2.2 Under the Waste Framework Directive (European Directive (WFD) 2006/12/EC as amended), 'any substance or object the holder discards, intends to discard or is required to discard' is considered to be waste. It is the responsibility of the holder of the substance or object to determine whether it is waste or not.

4.2.3 Once a substance or object has become waste, it is considered to be a waste until it has been fully recovered and no longer poses a potential threat to the environment or human health. Until a substance or object has been fully recovered, its transport, treatment, management and use needs to be undertaken in accordance with the Environmental Permitting (England & Wales) Regulations 2007.

4.2.4 After it has been fully recovered, the substance or object ceases to be waste and there is no longer any reason for it to be subject to the controls and other measures required by the Waste Framework Directive.

4.2.5 All waste generated during the Games within the proposed development will be classed as Commercial and Industrial waste and as such is not subject to the same arrangements that are in place to deal with Municipal (or Household) waste. Generally UK policy on Commercial and Industrial waste is less well developed than on other wastes. However, the Department for Environment, Food and Rural Affairs (Defra) has recently published a policy statement which sets out its policy aims and objectives for Commercial and Industrial waste in England<sup>12</sup>. It also describes a number of new and planned actions to help further these objectives. One of the actions identified specifically relates to the events sector and the opportunity London 2012 has to inspire change.

### **4.3 Waste management in the UK events sector**

4.3.1 Waste management performance in the UK events sector is inconsistent. Some events and venues have achieved good recycling performance whereas generally recycling rates are poor and a significant amount of material often goes to landfill.

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<sup>11</sup> Mayor of London – Making Waste Work in London, The mayor's draft Business Waste Management Strategy February 2008

<sup>12</sup> Commercial and Industrial Waste in England – Statement of aims and actions, published by Defra in October 2009

4.3.2 The underlying concept of the Games Waste and Resource Management Strategy<sup>13</sup> is that waste materials should be viewed as a 'resource'. Everyone has a role to play in reducing and managing waste responsibly. This includes manufacturers and suppliers, caterers and spectators.

4.3.3 There are a number of challenges for managing waste at events which are highlighted in the Waste and Resource Management Strategy. These include the high pace of activity at events, lack of controls and incentives for contractors to 'do their bit' and inconsistencies in how waste is collected and recorded. To address some of these challenges LOCOG aims to use the experience they have gained to produce a 'good practice guide' on events waste management and a technical debrief after the 2012 Games to venue managers and event organisers.

### 4.3 Key potential waste streams and predicted volumes

4.2.1 The key potential waste streams from the Greenwich Park venue can be considered under two broad headings:

- **Temporary event facilities** – this consists of wastes arising from infrastructure, facilities, fittings etc put in place at Greenwich Park for use during the competition phase.
- **Operational waste** – this consists of wastes produced during the competition phase primarily by people who are involved in the events including athletes, officials, broadcasters, and of, particular significance, due to their numbers, spectators. The Equestrian and Modern Pentathlon Events at Greenwich Park will also result in wastes related to horses, particularly horse manure and veterinary wastes.

4.4.1 Volume 1 (Chapter 16) of the Greenwich Park Environmental Statement outlines the results of modelling undertaken to predict the volumes of waste generated by the venue.

4.4.2 In total, it is estimated that around 337 tonnes of operational waste will be produced, of which around 70% would be able to be recycled or composted. The remaining 'residual' would be sent for energy recovery or other specialist disposal (including clinical/veterinary waste).

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<sup>13</sup> To be published as part of the revised London 2012 Sustainability Plan in December 2009

## 4.5 Waste minimisation and management

4.5.1 Waste at Greenwich Park will be managed as part of the Integrated Games Waste and Resource Management Plan and through the use of Resource Management Plans, where appropriate<sup>14</sup>. These will be produced by suppliers to manage areas of significant waste generation such as catering and removal of event facilities to support the achievement of LOCOG's objectives and targets. In particular, LOCOG will set contractors a challenging 'stretch target' of 90% recycling/reuse in relation to event facilities and materials and 70% recycling/composting for operational wastes such as catering.

4.5.2 A key aim is to avoid materials ever becoming 'waste' and where possible, recovering any waste that is generated. This will be taken forward through the detailed design of event facilities, and through resource and waste management during the installation, use and removal of event facilities.

### *Designing to avoid waste*

4.5.3 Waste reduction and minimisation principles will be applied to the detailed design of Greenwich Park. The overall aim is to design out waste and promote reuse, recycling and recovery of materials.

4.5.4 A Temporary Materials Handbook is in the process of being developed and the following hierarchy of design principles will be applied to the Greenwich Park venue during detailed design and specification of materials to reduce waste generation by promoting reuse, recycling and recovery of materials:

- Event facilities will be designed so that materials are not used unnecessarily. For example, where appropriate, event facilities will not be designed to a standard which would last 30 years when they are required for only six weeks.
- Where possible, event facilities will be hired or sold back to the supplier after the 2012 Games. This is likely to be possible for the majority of canopies, tents and modular buildings. Where they cannot be returned to the supplier, alternative reuse options will be found such as donations to schools or local communities.
- Where leasing event facilities is not possible, they will be designed with demountable elements which can be reused in alternative venues elsewhere. An example of this could be stamping steel elements to highlight the steel grade, section size and manufacturer's test certificate number to facilitate potential re-use.
- Any non-reusable materials will, to the extent practicable, be designed and specified to be recyclable or compostable.

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<sup>14</sup> WRAP is working with LOCOG to develop, validate and promote the take-up of Resource Management Plans (RMPs) that can be used by event organisers, venues, and / or suppliers to events to manage areas of significant waste generation. Where obligated completion of an RMP will negate the need to prepare a Site Waste Management Plan under the Site Waste Management Regulations 2008

***Waste and resource management system***

- 4.5.5 A consistent system for waste and recycling collection will be used across all venues including Greenwich Park. This will include a simple icon- and colour-based communication scheme to aid visitors in the act of depositing items for recycling. Trained volunteers will be used to help visitors to use the waste collection systems and pre-2012 Games communications will also be used to raise awareness of recycling before the events. Such a scheme would be compatible with national and regional communication initiatives such as Recycle Now and Recycle for London.
- 4.5.6 LOCOG is also working with the events industry to identify new approaches which maximise the potential for recycling and recovery of materials, for example having a single type of material for bottles and others food catering packaging items to maximise opportunities for recycling and composting.
- 4.5.7 An integrated Games Waste and Resource Management Plan will be prepared and will be trialled during the Test Events phase in summer 2011 and finalised by the end of that year

## **5 Biodiversity**

### **5.1 Introduction**

5.1.1 Biodiversity is essential to the global economy, serving a vital function in climate change mitigation, watershed management, provision of sustainable natural resources and enhancing the quality of life that we enjoy.

5.1.2 Respect for the environment has become an increasingly significant concern of the Olympic and Paralympic Movement in recent years. In recognition of the One Planet Living® principle of natural habitats and wildlife, London 2012 is committed to ensuring that the 2012 Games play their part, by taking a responsible attitude to the management of natural resources and through promoting the value of the natural environment throughout UK and international sport sectors.

### **5.2 Background to the biodiversity theme**

5.2.1 The Government sets out its objectives for conserving and enhancing biodiversity in Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9). This is the main source of Government guidance on nature conservation and considers the integration of nature conservation policies within land use planning.

5.2.2 Nature conservation is regulated through the Conservation (Natural Habitats &c) Regulations 1994 (as amended), the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000, and the Natural Environment and Rural Communities Act 2006.

5.2.3 More information on the regulatory context of nature conservation is provided in Volume 3 (Appendix 11A) of the Greenwich Park Environmental Statement.

### **5.3 Protected sites, habitats and species**

5.3.1 An ecological assessment has been undertaken and is reported within Volume 1 (Chapter 11) of the Greenwich Park Environmental Statement. A summary of designations, habitats and protected species is outlined below.

5.3.2 Greenwich Park falls within the 'Blackheath and Greenwich Site of Metropolitan Importance for Nature Conservation' as designated by the Greater London Authority (GLA), under Policy 3D.14 of the London Plan (2008). Blackheath and Greenwich Park is also designated as a Site of Nature Conservation Importance (Metropolitan) under Policy NC6 of the London Borough of Greenwich Unitary Development Plan (UDP). More information is provided in Volume 3 (Volume 9A) of the Greenwich Park Environmental Statement.

5.3.3 All trees within the project site are offered protection under the Greenwich Park Conservation Area designation. A full arboriculture survey has been carried out and is contained within Volume 3 (Appendix 2A) of the Greenwich Park

Environmental Statement. The arboriculture survey has and will continue to inform 'mitigation by design' as all efforts will be taken to minimise potential impacts on trees. Specific consideration will be given to tree protection, including structure, canopy and roots systems.

- 5.3.4 Acid grassland is the most important habitat within Greenwich Park and is a priority habitat within the Local Biodiversity Action Plan. This would be affected by the grassland management works required for the Cross Country course as described in Volume 1 (Chapter 3) of the Greenwich Park Environmental Statement. A comprehensive habitat enhancement, restoration and management programme will be implemented as outlined in Volume 1 (Chapter 11). This will ensure that there will be no net loss in the extent, quality and connectivity of the acid grassland habitats as well as a management and monitoring regime appropriate to their survival in the longer term. Such a programme would result in an overall positive effect for this habitat.

Up to five species of bats were identified during the surveys which are outlined in Volume 3 (Appendix 11D) of the Greenwich Park Environmental Statement. These could be affected by noise and lighting disturbance. Further surveys will be undertaken in between 2010 and 2012 to more accurately identify the location of bat roosts within trees and buildings which are likely to be affected. This will allow the proposals to be modified during the detailed design phase to reduce impacts, for example from noise or lighting disturbance. Design guidance for lighting has been provided in Volume 3 (Appendix 11I) of the Greenwich Park Environmental Statement.

- 5.3.5 The Flower Garden, Observatory Gardens, Park Office Gardens and the Dell were identified as areas of concentrated bird activity (see Volume 3 (Appendix 11F) of the Greenwich Park Environmental Statement). These areas will be protected during installation and removal of the event facilities when most species will be breeding. In addition exclusion zones will be created around these areas during the events to discourage large volumes of spectators from entering them. Areas used by foraging house sparrows in the north of the Park will also be protected from disturbance during the events. There are two specific bird species which would require specific mitigation measures:

- There are three pairs of nuthatches nesting within Greenwich Park and one of the nesting sites is close to the Cross Country course. This nest site will be monitored during installation of the Cross Country course and an alternative nest site (nesting boxes suitable for use by this species) would be created before the 2012 breeding season.
- There is one breeding pair of spotted flycatchers within Greenwich Park. These will be protected from disturbance by excluding spectators and film crews from the area used by these birds for breeding. Surveys will be undertaken before and after the events to monitor the status of these birds.

- 5.3.6 Areas of long grass are important for invertebrates and spectators will be discouraged from such areas. The current mowing regime will be retained in these areas to maintain the long swards that are important for these species.

The design guidance for bats (Volume 3 (Appendix 11J) of the Greenwich Park Environmental Statement) will also benefit invertebrates.

5.3.7 Hedgehog boxes would also be installed prior to the installation of event facilities in 2012 to increase tolerance to disturbance of features that they would use for shelter during the summer months.

5.3.8 A monitoring strategy would be produced and implemented which would include monitoring the acid grassland creation and enhancement to maximise the chances of success.

#### **5.4 London 2012 biodiversity initiatives**

5.4.1 London 2012 recognises the huge potential to promote biodiversity conservation more widely through the 2012 Games, especially across the sport sector and through education and green volunteering initiatives.

5.4.2 The London 2012 Biodiversity Group has been working with LOCOG since early 2006 to identify opportunities for Games-related biodiversity conservation initiatives at local, national and international levels. Specific projects are being developed and implemented via the following programmes:

- **Cultural Olympiad Major Project – Discovering Places** (led by Natural England)
- **Inspire Mark projects** which are local projects genuinely inspired by the Games that gain support and are badged with the ‘Inspire Mark’ London 2012 branding. These offer non-commercial organisations to be ‘part of it’.
- **Changing Places Programme** which acts as a catalyst for improving local environment quality in some of the most deprived communities that surround the Olympic Park and other Games venues.
- **Education Programme** which aims to involve children and young people in the excitement and inspiration of the Games. Sustainability underpins all aspects of the education programme, while two of the eight strands directly link to the London 2012 Sustainability programme: Sustainability and Regeneration, and Healthy and Active Lifestyles.

5.4.3 Biodiversity considerations are also factored into LOCOG’s Sustainable Sourcing Code (see Section 8.3), notably with respect to sustainable timber and agriculturally derived products such as cotton and food and potentially biofuels.

## 6 Inclusion

### 6.1 Introduction

6.1.1 Diversity and inclusion were central to London's bid to host the 2012 Games. Our vision is to use the power of the 2012 Games to inspire change and to make 2012 the most diverse and inclusive Games staged to date. LOCOG wants to be an exemplar organisation when it comes to diversity and inclusion, and its approach is set out in its Diversity and Inclusion Strategy<sup>15</sup>.

6.1.2 Inclusion underpins all other sustainability themes – poorer people and minority groups are the first to feel the effects of climate change and declining biodiversity – and has a particularly close link to health. Deprivation also remains a strong determinant of ill-health. It responds to the One Planet Living® Principles of health and happiness, equity and fair trade, and culture and heritage.

### 6.2 Background to the inclusion theme

6.2.1 The Olympic Park is located in one of the most diverse areas in the country. The Five Host Boroughs, one of which is Greenwich, contain 22 per cent of London's total Black, Asian and Minority Ethnic (BAME) population, including almost two thirds of London's Bangladeshi community, almost a third of London's Pakistani community, and a quarter of London's African population. Over a quarter of Host Borough residents were born outside the EU, and 110 different languages are spoken in Tower Hamlets alone. In Newham, BAME communities make up 61 per cent of the boroughs population.

6.2.2 While this diversity is one of the area's greatest strengths, it also brings with it specific challenges in ensuring that all members of the local community are able to engage in the London 2012 opportunities. Diverse communities have traditionally been under-represented, or have experienced discrimination or social exclusion.

6.2.3 The London 2012 Equalities and Inclusion Forum focuses on the Inclusion agenda and focuses on five priority areas to ensure a diverse and inclusive Games: Business; Workforce; Inclusive Design and Service Delivery; Communities and engagement and Participants.

### 6.3 Business

6.3.1 LOCOG has established the following key programmes to help spread the economic benefits of the Games far and wide, to businesses large and small, these include:

- **CompeteFor** which has been established to match buyers and suppliers for the huge range of business opportunities related to the 2012 Games.

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<sup>15</sup> [LOCOG Diversity and Inclusion Strategy. Published February 2008. London 2012](#)

- **London 2012 Business Network** ensures that companies from across the UK have access to contracts in London 2012's supply chains, as well as the support they might need to compete to win those contracts. ]
- **Winning with Social Enterprise** is a national project which aims to optimise the involvement of social enterprises across England in the development, delivery and legacy of the 2012 Games.
- **LOCOG Diversity and Inclusion Business Charter** which sets out the key ways in which LOCOG will encourage diversity and inclusion into all of its procurement activity and that of its principal contractors and suppliers.

6.3.2 Opportunities for Greenwich Park will be available through these programmes.

#### 6.4 Workforce

6.4.1 London 2012 and the Trades Union Congress (TUC) have agreed to work together to help create an 'inspirational' Games. The agreement includes a set of overarching 'Principles of Cooperation' that recognise the importance of joint working. These principles identify key values which are believed to lay the foundations for a smooth and stable industrial relations environment at the broadest level, with the primary objective of achieving the successful delivery of the Games.

6.4.2 They also include developing closer links between local communities and London 2012 to create employment opportunities that will help to regenerate the area around the Olympic Park. The parties recognise that fair wages can make a significant contribution to regeneration, the building of quality employment and poverty alleviation. The Olympic Delivery Authority (ODA) and LOCOG agree that this, along with local initiatives such as the London Living Wage, will be an important consideration in the procurement process.

6.4.3 Over the past year the London Development Agency (LDA) and ODA have worked together to establish and invest in a range of programmes which support Londoners through job brokerage and training opportunities. At this current stage of the programme, many of these projects have focussed around the construction industry. These include employment support through the Five Host Boroughs 'Jobs, Skills, Futures' Brokerage Network, London Employer Accord, Construction Employer Accord, National Skills Academy for Construction, and the Personal Best pre-employment programme. This provides participants with the valuable transferable skills needed to apply to volunteer at the 2012 Games, compete in the job market and to volunteer at other events.

6.4.4 LOCOG aim to increase the proportion of employment opportunities are generated as a part of the Greenwich Park event are captured by local residents. To this end a number of groups and programmes have been established.

6.4.5 Previous experience in the borough from the construction and operation of the O<sub>2</sub> arena has shown that where the project management company are willing to work closely with the local borough labour group and recruiters, significant progress can be made in ensuring a high proportion of opportunities are captured by the local workforce<sup>16</sup>.

6.4.6 LOCOG are therefore working with the Jobcentre Plus, the Greenwich Local Labour and Business group and Adecco recruitment firm in order to ensure that local residents and businesses are made aware of, and are in a position to capture employment and business opportunities which will come forward as part of the delivery of the Greenwich Park event. A close dialogue has already developed between these groups. Once details of the specific nature of opportunities and hence skills sets are developed this group will establish training opportunities in order to provide suitably skilled workers from the local community. Such measures will maximise the opportunities taken up by local residents.

## **6.5 Inclusive design and service delivery**

6.5.1 LOCOG is committed to delivering an inclusive Games and accessible design is of paramount importance when developing venue overlay<sup>17</sup> designs. In support of this, LOCOG have developed the LOCOG Overlay Access File (LOAF), a Games specific, internal design standard to ensure that designers work to the highest standards possible. In addition, a rigorous system for checking and improving designs has been put in place and a strategy for consultation has been developed in support of this. For a more detailed description of access and inclusion issues, please refer to the Design and Access Statement which accompanies the planning application for the proposed development.

6.5.2 The ODA has published an Accessible Transport Strategy for London 2012, setting out priorities for improving accessible transport provision in London.

## **6.6 Communities and engagement**

6.6.1 Consultation has formed an important part of the pre-application process and has been ongoing since May 2008 initially with Greenwich Council, statutory consultees and established stakeholder groups throughout the borough of Greenwich. The purpose of this was to consult on the emerging plans with the statutory consultees and stakeholder groups to help understand the technical, policy and statutory services and infrastructure issues. At the same time, LOCOG began to engage with members of the public in and around Greenwich Park and across the borough by attending local events, organising exhibitions and holding meetings. The purpose was to increase awareness and to understand any issues of concern to local residents that could be addressed as the plans developed. As a result of consultations, many aspects of the plans were altered and developed in greater detail as described in Volume 1 (Chapter 4) of the Greenwich Park Environmental Statement.

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<sup>16</sup> Discussion with Greenwich Council, September 2009

<sup>17</sup> 'Overlay' is a technical term for event facilities

6.6.2 By mid-September 2009, the proposals for Greenwich Park had evolved to a stage where they were sufficiently robust for wider engagement with the local communities around the borough and around Greenwich Park in particular. A technical forum was held in October 2009 to present the plans to statutory consultees and stakeholder groups and obtain their feedback through break-out group discussions. Also from mid-September 2009 through to the end of October, a public consultation exercise took place.

6.6.3 A Report on Community Engagement has been submitted with the planning application which details the methods used to consult with the local stakeholders and communities, provides details of the key findings from the consultations and how they have shaped the proposals.

## **6.7 Participants**

6.7.1 The 2012 Games provide a once in a lifetime opportunity to inspire people across the country to participate in sport and disability sport. The aim is to increase the number of people who participate regularly. LOCOG is working with a number of delivery partners to explore ways to increase participation and to highlight examples of good practice and replicate them across the UK, an area led by the UK Government with its agencies and the Mayor together with the LDA.

6.7.2 Programmes for increasing participation have been designed in five distinct areas – sport for young people; community sport; disability sport; international inspiration; and for coaches and officials – while the aim of the Equality Standard for Sport is to monitor and evaluate sporting organisations' commitment to equality.

## **7 Healthy living**

### **7.1 Introduction**

7.1.1 London 2012 is committed to maximising the health benefits that the 2012 Games programme will bring – to spectators, to workers on site, to the whole UK.

7.1.2 Healthy lifestyles are tightly linked to other sustainability themes and to the One Planet Living® principle of health and happiness. Access to good quality green space encourages both sports participation and play for children; walking and cycling is pollution free; healthy food from environmentally responsible agriculture is good for consumers and for the planet.

### **7.2 Background to the healthy living theme**

7.2.1 Advances in public health mean that some of the greatest health benefits that can be achieved are those that are within our own control: eating well, engaging in physical activity, and living in a healthy environment are the most important things that can be done to improve quality of life, well-being and happiness.

7.2.2 As the world's pre-eminent festival of sporting excellence, the 2012 Games offers huge opportunities to inspire and promote sports participation, play and other forms of physical activity, and other elements of healthy living.

7.2.3 The 2012 Games also offer the chance to tackle health inequalities that profoundly affect east London's communities. Improving the economic prosperity of these communities could have a major impact in redressing this balance.

7.2.4 The key areas for action to maximise the health benefits of the 2012 Games are:

- Health and safety
- Air quality
- Sustainable food
- Sport participation and physical activity
- Legacy facilities for community and elite sport and culture

7.2.5 The sections below discuss how these key areas for action have been taken forward. The latter two are not included as these are the responsibility of others.

### **7.3 Health and safety**

7.3.1 LOCOG will abide by all health and safety legislation including the Construction (Design and Management) Regulations 2007 and the Health and Safety at Work Act 1974. The LOCOG goal is to have a zero harm safety culture where partners, suppliers, and workforce work together in establishing and maintaining a safe and healthy work environment. The objectives are to:

- Deliver a safe 2012 Games by managing risks in the planning and execution phase of operations.
- Promote safety culture across the workforce, suppliers, and partners.
- Ensure accidents and near-misses are reported and investigated thoroughly with appropriate corrective actions and lessons learned.
- Train the workforce in health and safety for both a preventative and legacy measure.

7.3.2 To achieve its aims and objectives. LOCOG's Health and Safety Management Strategy is focused around six key initiatives:

1. Developing policies and procedures
2. Managing risk
3. Instilling a safety culture
4. Reporting
5. Managing Contractors
6. Reviewing and auditing of the health and safety programme

7.3.3 LOCOG has produced a Health, Safety and Sustainability Standard, which sets an ambition to be accident, ill health and incident free. The Standard sets a range of performance indicators, where cases of work related ill health and accidents are minimised and requires all design teams and contractors to work actively to reduce risk to those constructing, operating, using and maintaining buildings and infrastructure.

7.3.4 It is LOCOG's aim to work collaboratively with the Health and Safety Executive and Local Authorities to ensure that the safety and welfare of all involved is maintained throughout all aspects of LOCOG's work.

## 7.4 Air quality

7.4.1 Along with many other European cities, parts of London are not meeting EU targets for the most harmful pollutants nitrogen dioxide (NO<sub>2</sub>) and fine particulate matter (PM<sub>10</sub>) and Greenwich is itself within an Air Quality Management Area (AQMA). An air quality assessment has been undertaken and is reported within the Greenwich Park Environmental Statement Volume 1 (Chapter 6). This identified that emissions associated with the changes in traffic due to the Greenwich Park events would not significantly increase NO<sub>2</sub> or PM<sub>10</sub> concentrations. Dust generation will be managed through best practice controls within the Environmental Management Plan.

7.4.2 Although the emissions for the Greenwich Park venue would be negligible, to address the potential impacts from the 2012 Games as a whole, London 2012 will focus upon two areas to improve air quality:

- Regional air quality levels determined by national and city level policies, particularly through the Mayor's Air Quality Strategy. Preliminary analysis indicates that the proposed measures within the strategy, if appropriately resourced, will enable the UK to meet its legal targets for PM<sub>10</sub>. However, meeting the NO<sub>2</sub> limit values will be more of a challenge; strong action by the Mayor of London will help but will not be enough for the UK to meet its targets in London. The Mayor will be working with the Government to develop a full plan of action that will allow NO<sub>2</sub> targets to be met.
- Games-specific measures to optimise air quality in and around venues and to minimise additional or collateral impacts from Games transport and logistics within London. These include:
  - Application of the GLA and London Council's Code of Construction Practice at all venues.
  - Procurement of low/zero emission vehicles across Games transport fleet
  - Specifying emission standards for buses and coaches
  - Increasing proportion of spectators using trains/underground, or cycling and walking to venues through the Active Travel Programme for workers and spectators
  - Impact assessment study of Olympic Route Network
  - Procure low emission temporary generators

## **7.5 Sustainable Food**

- 7.5.1 The quality of food provision is consistently highlighted as one of the critical issues for all user groups involved in the Games including spectators, athletes and VIPs. LOCOG recognises this challenge and is committed to making food a positive part of the Games experience for everyone and also making the most of the opportunity to celebrate and promote the variety and quality of British regional food. It is also an opportunity to use the power of the Games to inspire lasting, positive change in the event and hospitality sectors in respect of sustainability and to contribute to the growing public agenda on healthy living.
- 7.5.2 A London 2012 'Food Vision' for the Games will be issued in December 2009 and provide more detailed information on the specific objectives and commitments based on five key themes:
- 1) Food safety and hygiene
  - 2) Choice and balance
  - 3) Food sourcing and supply chains
  - 4) Environmental management
  - 5) Skills and Education
- 7.5.3 Implementation of the Food Vision objectives will be through a combination of the procurement process and partnership working with commercial partners, caterers and other industry bodies.

## 8 Cross-cutting themes

### 8.1 Planning and design

8.1.1 Sustainable design is an important element and helps to ensure that the environmental and social impacts of the venue during its installation, testing and commissioning are taken into account from the outset. This enables, as far as possible, for environmental and social impacts to be 'designed out'.

8.1.2 LOCOG has established the following sustainable design aims, going beyond regulatory compliance:

- **Zero harm** – the prevention of accidents and ill health and the promotion of well being for everyone involved in work for the London 2012 Olympic and Paralympic Games, and anyone who may be affected by that work.
- **Leave no trace** – the prevention of permanent adverse impacts on the environment through design, and prevention of environmental incidents.
- **Zero waste to landfill** – the reduction of waste through design and good practice, and the maximisation of reuse and recycling of materials.

8.1.3 Practical, innovative design approaches will be developed and applied, together with the use of 'best available techniques' to ensure designs are efficient in their use of energy and materials, consider global environmental responsibilities for resource use and waste reduction and nurture positive enhancement for the wider community. As well as contributing to the sustainability of the venue, such measures should yield savings, either on capital costs and / or whole-life costs.

8.1.4 Sustainability requirements will be included within the contracts for the set up and removal of event facilities. Contractors working for LOCOG are required to support the core values of sustainable development and operate certified environmental management systems to ensure the delivery of projects that meet sustainability requirements. LOCOG will expect the development to be designed, installed and dismantled in accordance with industry best practice on sustainable development.

8.1.5 Environmental impacts will be avoided or minimised by imposing conditions on the Contractor and the working methods via the Contract Documents. The control of working practices will be important in limiting the short-term impacts of the proposed development on the environment. The Contractor will be required to prepare method statements, as inputs to the Environmental Management Plan (EMP) during the installation stages and similarly for the removal stage. Further information is given in Volume 1 (Chapter 17) of the Greenwich Park Environmental Statement.

## 8.2 Sustainable sourcing

8.2.1 London 2012 aims to encourage high standards of environmental and social performance amongst its suppliers and licensees and their supply chains. It requires suppliers and licensees to identify, source and use environmentally sound and socially responsible materials using the following principles.

- **Responsible sourcing** – ensuring that products and services are sourced and produced under a set of internationally acceptable environmental, social, and ethical guidelines and standards.
- **Use of secondary materials** – maximising the use of materials with reused and recycled content, minimising packaging and designing products that can either be reused or recycled.
- **Minimising embodied impacts** – maximising resource and energy efficiency in the manufacturing and supply process in order to minimise environmental impacts.
- **Healthy materials** – ensuring that appropriate substances and materials are used in order to protect human health and the environment.

8.2.2 LOCOG has developed these principles into a comprehensive Sustainable Sourcing Code<sup>18</sup> across all supply, licensing and sponsorship contracts. This approach applies to all materials for construction, equipment, merchandise, catering, printing and clothing. The Sustainable Sourcing Code supports the implementation of these principles into supply chain management, by setting out expectations of suppliers and licensees.

## 8.3 Transport

### *London 2012 Transport Plan*

8.3.1 The first edition of the London 2012 Transport Plan was issued in October 2007. It was been prepared by the ODA in association with LOCOG. One of the key aims of the London 2012 Transport Plan is to achieve 100 per cent of ticketed spectator travel to competition venues by public transport, walking or cycling. There will be no public car parking at any competition venue except for some blue badge parking. Ticket holders will be entitled to free travel within the Greater London area on the day of competition.

8.3.2 A second edition is currently in preparation alongside which there will be a separate Sustainable Transport publication.

8.3.3 As part of the development of the first edition of the Transport Plan, the ODA undertook a Strategic Environmental Assessment (SEA). The purpose of the SEA was to ensure that environmental impacts were taken into consideration at the earliest opportunity. In particular it covered areas such as climate change, air

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<sup>18</sup> Originally published by LOCOG in November 2008 (second edition due in December 2009)

quality, and noise related to the transport plan. This SEA will be formally reviewed and updated and published alongside the second edition in autumn 2010.

8.3.4 London 2012 is also promoting walking and cycling as key parts of the transport strategy. Encouraging and enabling spectators and workforce to walk or cycle to certain events for some or all of their trip will:

- help to reduce the carbon impact of transport provision;
- provide a healthy journey option;
- create an additional sustainability experience for Games visitors; and
- assist in reducing demand for public transport in peak periods.

8.3.5 The ODA is making investment in walking and cycling infrastructure and will provide information to promote walking and cycling during the Games. The ODA and its partners have also invested heavily in other infrastructure projects which are expected to contribute to longer term, reduction in carbon emissions through potential mode shift.

### ***Greenwich Park Transport Strategy***

8.3.6 A transport strategy has been developed specifically for Greenwich Park which embraces the principle of sustainable spectator travel. The majority of spectators would travel to the site via public transport, or by walking or cycling. On arena days, approximately 80% will travel by rail, with 8% coming by bus, 5% by river, 5% by direct coach, and 1% each by walking and cycling. On Cross Country day, 63% are anticipated to travel by rail, with 10% coming by direct coach, 10% by strategic park and ride, 7% by river, 8% by local bus and 1% each by walking and cycling. All ticketed spectators would be provided with free public transport within Greater London.

8.3.7 The Greenwich Park venue offers excellent accessibility by public transport. It is located in close proximity to a number of key bus routes, as well as National Rail and DLR railway stations, and Greenwich Pier. All ticketed spectators will be provided with free public transport within Greater London.

8.3.8 In addition, there are a number of significant transport improvements proposed for Greenwich which are being funded by the ODA as follows:

- £80m of funding to upgrade and extend the DLR line to Woolwich Arsenal and the provision of an additional 22 rail cars;
- £1m towards enhancements to the local walking and cycling network;
- funding towards a new roof for Greenwich Pier to encourage the use of river services; and

- the ODA is also funding additional rail services to be provided during the 2012 Games to meet the anticipated spectator demand.

- 8.3.9 London 2012 will deliver an Active Spectator Travel Programme in the lead up to the 2012 Games. This programme is designed to which will encourage, promote and facilitate active travel options in the lead up to and during the Games. Appropriate to the venue, this may include guided walks and cycle tours, provision of secure cycle parking, and general promotional activities to encourage people to walk and cycle more.
- 8.3.10 Walking and cycling will also be important modes of transport for travel to Greenwich Park. Temporary cycle parking will be provided in the vicinity of the spectator entrances to the north and south of the Greenwich Park venue. Walking and cycling are practical and attractive ways to travel and make a significant contribution to the healthy living theme of the London 2012 Sustainability Plan.
- 8.3.11 London 2012 is improving eight walking and cycling routes which link different parts of London to the Olympic Park and other venues have been identified in East London; 2 new routes and 6 upgrades to existing routes. One of these routes follows the route of the Thames Path connecting Maritime Greenwich with the North Greenwich Peninsula and Woolwich.

## **9 Taking Sustainability Forward**

9.1.1 Sustainability is a relatively new concept within the events sector. Many of the initiatives being planned by London 2012 have not been done before and these provide a unique opportunity to set new standards of sustainability. While this creates difficulties in identifying benchmarks and setting new targets – because of a lack of reliable data from other events – London 2012 intends to address this through measuring progress and openly reporting results. The knowledge gained through such a process will be hugely valuable to the wider event sector, and its application will lead to significant long-term sustainability benefits including:

- Pioneering new approaches to tackle sustainability issues (for example the carbon footprinting methodology discussed in Section 3.3);
- Using the power of sponsorship, media and communications to change people's behaviour across the world;
- Inspiring new standards of sustainability for the construction, events and hospitality sectors (for example through the use of a consistent system for recycling collection as discussed in Section 4.3);
- Influencing our supply chain to adopt more sustainable practices (for example through the sustainable sourcing code as discussed in Section 8.2); and
- Transferring our learning and knowledge (for example through the waste management good practice guide as discussed in Section 4.3).