

Going for Green

Progress towards staging a sustainable Olympic and Paralympic Games

October 2010



Going for Green

Progress towards staging a sustainable Olympic and Paralympic Games

October 2010

Copyright

**Greater London Authority
October 2010**

Published by
Greater London Authority
City Hall
The Queen's Walk
More London
London SE1 2AA
www.london.gov.uk

enquiries 020 7983 4100
minicom 020 7983 4458

ISBN

This publication is printed on recycled paper

Environment Committee Members

Darren Johnson	(Chair) Green
Murad Qureshi	(Deputy Chair) Labour
Gareth Bacon	Conservative
James Cleverly	Conservative
Roger Evans	Conservative
Nicky Gavron	Labour
Mike Tuffrey	Liberal Democrat

The Environment Committee agreed the following terms of reference for its investigation on 11 March 2010

- To assess the progress of LOCOG in preparing to deliver environmentally sustainable events and activities in London during the period of the Olympic and Paralympic Games 2012.
- The project is to focus on environmental sustainability, rather than the wider sustainability issues such as community involvement also included in the LOCOG sustainability work.
- The project is also to focus on the events of the Olympic and Paralympic Games run in summer 2012 by LOCOG, rather than on the ODA's preparations for the Games or on the legacy.

The Committee would welcome feedback on this report. For further information contact:

Ian Williamson, Scrutiny Manager, on 020 7983 6541 or ian.williamson@london.gov.uk.

For media enquiries please contact:

Lisa Moore on 020 7983 4228 or lisa.moore@london.gov.uk; or
Julie Wheldon on 020 7983 4228 or julie.wheldon@london.gov.uk.

Contents

	Chair's Foreword	7
	Executive Summary	9
1	Introduction	11
2	Background	12
3	Minimising CO₂ emissions	15
4	Air quality	29
5	Waste and recycling	35
6	Conclusion	41
	Appendix 1 Key Olympic sustainability commitments	42
	Appendix 2 Staging elements of the reference carbon footprint	43
	Appendix 3 Recommendations	44
	Appendix 4 Orders and translations	46
	Appendix 5 Principles of scrutiny page	47

Chair's Foreword



In bidding for the 2012 Olympics, London promised to provide 'the greenest Games ever', transforming the industries that delivered the Games. This report examines how environmentally sustainable the staging of the Games will be and what kind of transformation we can expect, following our 2008 report into the preparation of the park and venues.

Bringing millions of spectators, athletes and officials from around the world together for a summer of sports will always have huge environmental impacts. The scale of the 2012 Games' impact is staggering – organisers expect the Games to create 8250 tonnes of waste, as much as an entire London borough over one month, and 1.1 million tonnes of carbon dioxide equivalent emissions. To make the Games an environmental success as well as a sporting spectacle, the organisers LOCOG, their sponsors and the Mayor will need to take unprecedented steps to reduce the impacts and compensate for any that are unavoidable.

In many ways the organisers are achieving just that. The committee has heard that new standards in events management have been established; groundbreaking work on measuring, monitoring and reducing the carbon footprint of the Games is underway; genuinely ambitious targets on waste recycling and low-emissions vehicles have been set.

While we welcome the significant steps that have been taken to deliver a sustainable Games we remain concerned that this may not be the transformative event we were promised.

Some of the original promises could have transformed London during Games-time and beyond. It now looks like there will be no new facilities in London to process the waste from the Games, and that the aspiration to generate 20 per cent of the electricity used during Games-time with local renewable technology won't be achieved. We urge organisers to increase their efforts in getting as close to that 20 per cent target as possible.

Other promises may affect Londoners during the Games. The committee is concerned that key transport routes look set to exceed air quality standards, forcing the Mayor to consider intervening during

Games-time with emergency measures. We look forward to the Mayor setting out in greater detail how he will ensure that his areas of responsibility – the transport network and the live sites for big screens and festivals– meet high environmental standards.

For visitors to the Olympic Park and live sites, and for tourists using the city's transport networks for the first time, the most visible aspect of the Games' sustainability credentials will be waste facilities and the food on offer. We welcome the high recycling targets but are concerned that waste reuse has been glossed over. Following recent public interest in food standards such as free range chicken and organic foods, we are also concerned that spectators may see little of these aspirational food standards.

With a little under two years to go, I hope the organisers and the Mayor will pull out all the stops in responding to the recommendations we have made.

I would like to thank all those who contributed to this investigation, both during the Committee meetings and in written submissions, as their input has been valuable in producing this report.

Executive Summary

This report examines the environmental sustainability of the staging of the London 2012 Olympic and Paralympic Games. It looks at London 2012's sustainability aspirations and commitments, and at the progress being made towards putting them into action. We have found that there are many positive and even ground-breaking sustainability improvements that London 2012 is set to achieve over other recent Games. However, some opportunities have been missed and there are other areas where there is significant work still to do. There is a risk of compromise as the pressure of delivery increases and we are concerned that the Games may not prove to be the transformative event it had been hoped.

Our report addresses three main environment areas that will be affected by the staging of the Games: carbon dioxide emissions; London's air quality; and waste management. The report also looks at the environmental impact of Games-related consumer goods such as catering and merchandise.

Reducing the carbon emissions of staging the most spectacular event in the world, whilst also making sure that seats in the venues are full, is a difficult balancing act to pull off. One significant source of carbon emissions is air travel to London by spectators and those involved in the Games. London 2012 has always said that those taking shorter-haul flights would be encouraged to take lower-carbon alternatives where appropriate, such as rail. London 2012 has not yet said how it will do this, and so we recommend some potential methods.

The largest source of carbon emissions that is under the direct control of the London Organising Committee for the Olympic Games and Paralympic Games (LOCOG) is the temporary materials used to prepare the venues for the Games. Whilst venues are being designed to minimise the carbon emissions generated, temporary materials are needed to fit them out to be attractive places to perform and to watch sporting endeavour of the highest quality. If the materials can be re-used after the Games, that reduces their carbon footprint. Therefore this report recommends that there should be targets for re-using temporary materials, with appropriate monitoring and reporting to guide action.

Furthermore, it had been hoped that 20 per cent of electricity used on the Olympic Park at Games time should come from new local renewable sources, including a wind turbine on the Olympic Park. The

turbine is not going ahead and the target looks unlikely to be achieved, but we hope that further efforts may go a good way towards meeting it.

London was awarded the Games on the expectation of meeting international air quality standards. While air quality has improved in London, limits on harmful nitrogen dioxide (NO₂) are still expected to be broken in 2012. The Mayor and the national government are collaborating on an Air Quality Strategy and we are pressing for action to improve London's air quality as rapidly as possible.

A major source of air pollution in London, as in other major cities, is transport. Tighter emissions standards will apply to Olympic vehicles, but the effect of this will be very limited compared to the rest of London's traffic. Furthermore, traffic restrictions to enable Olympic and Paralympic athletes and officials to get around the city (the Olympic Route Network) will affect other traffic, potentially causing congestion and extra pollution. We call for these effects to be modelled and publicised so that London can give informed responses to consultation on the Olympic Route Network. London 2012 had aspired to use a fleet of electric vehicles and give impetus to their take-up across the city. This does not now look likely to be delivered and the chance to catalyse the Mayor's ambitions for London to be the leading electric car using city has been missed.

London 2012 has promised that none of the rubbish generated during the Games will go to landfill, and that most will be recycled. To meet these targets, there will be a system of rubbish sorting and management on the Olympic sites. There is an intention to make spectators aware of the system before they arrive at Olympic venues; to achieve this and to address London's need for 'on-the-go' recycling, we call for facilities modelled on those in the venues to be set up in other areas of the city.

There are just 21 months to go before London stages "the Greatest Show on Earth" and the pressure is mounting on all those involved in delivering such a highly complex series of events. Our report seeks to make practical recommendations to ensure that the staging of the Games are as environmental sustainable as possible. We recognise and value all the hard work that is taking place to achieve the high level aspirations and look forward to continuing our dialogue with all the key stakeholders involved.

1 Introduction

The 'One Planet Olympics'

The vision for the London 2012 Olympic and Paralympic Games has been, since the bid was drawn up, for a 'One Planet Olympics' – a sustainable Games guided by the principle that the world should live within its means.

This report, part of a series of reports by the Environment Committee examining the environmental sustainability of the preparations, staging and legacy¹ of the London 2012 Olympic and Paralympic Games, looks specifically at the environmental impact of putting on the Games.² The Committee has undertaken a review of progress made to date, drawing on discussions with LOCOG³, other key stakeholders and work by the Games' own sustainability watchdog, the Commission for a Sustainable London 2012.

Our report focuses specifically on three areas where staging of the Games is likely to have a significant environmental impact: CO₂ emissions, air quality and waste management. It also examines areas such as merchandise and food that have impacts of several types.

Minimising the impact of staging the Games will be vital to help deliver on the "One Planet" promise, but there are other benefits too. The unprecedented focus of resources and innovative thinking that preparing to stage a Games entails can provide a catalyst for a lasting environmental legacy in London. Also, the dissemination of lessons learned can benefit future bidding host cities.

¹ The Committee's report of June 2008 looked at the preparations for the Games <http://www.london.gov.uk/who-runs-london/the-london-assembly/publications/environment/environmental-sustainability-london-2012>; an investigation of work on the sustainability legacy is planned for 2011

² This report is concerned with the environmental sustainability of the Games – that is, it does not focus on aspects such as inclusion, healthy lifestyle promotion, culture or equity which can be considered part of a wider sustainability agenda.

³ The London Organising Committee of the Olympic Games and Paralympic Games (LOCOG) is the self-funding body responsible for staging the Games.

2 Background

The main Olympic delivery organisations

There is a number of partner organisations involved in the preparation and staging of the Games and the delivery of a lasting legacy thereafter. London 2012 is comprised of the Olympic Delivery Authority (ODA) and the London Organising Committee of the Olympic Games and Paralympic Games (LOCOG). LOCOG is responsible for staging the Games, and so its work has been the main focus of this investigation.

LOCOG works closely with a number of sponsors from the commercial sector who supply products, services and technical know-how – so where relevant their role is also commented on.⁴ The ODA is mainly responsible for the preparation phase, including ensuring the facilities have a viable legacy use; it has contributed to certain aspects of this investigation.⁵

The Mayor's role

The Mayor plays a vital leadership role in the preparation, organisation and delivery of the Olympic and Paralympic Games. The Mayor is a member of the Olympic Board⁶. The Olympic Board provides oversight, strategic coordination and monitoring of the entire 2012 Games project, ensuring the delivery of the commitments made to the International Olympic Committee (IOC) when the Games were awarded to London, and a sustainable legacy from the staging of the Games.

The Mayor has agreed five Olympic commitments of which one is to deliver “a sustainable Games”.⁷ In order to do this the Mayor acts as a champion for stretching environment targets and as an advocate for ensuring that the ODA and LOCOG think through the implications of their actions and activities for delivering a sustainable legacy.

The Mayor has statutory environment responsibilities under the GLA Act which dovetail with his desire to deliver a sustainable Games. In

⁴ Towards a one planet 2012 – London 2012 Sustainability Plan, 2nd edition December 2009 (referred to hereafter as London 2012 Sustainability Plan), page 7

⁵ London 2012 Sustainability Plan, page 6

⁶ Other members of the Olympic Board include Culture Secretary Jeremy Hunt, British Olympic Association Chairman Colin Moynihan, and LOCOG Chair Sebastian Coe. Former Olympics Minister Tessa Jowell and a Liberal Democrat representative also have seats.

⁷ The five Olympic legacy commitments are to: increase opportunities for Londoners to take part in sport, ensure Londoners benefit from new jobs, businesses and volunteering opportunities, transform the heart of East London, deliver a sustainable Games and developing sustainable communities, and to showcase London as a diverse, creative and welcoming city.

particular, his air quality strategy and his municipal waste strategy set out long term targets and detailed action plans for meeting them. Certain actions such as tackling poor air quality “hot spots” are part of these programmes but will also benefit the delivery of a sustainable Games.

At an operational level, the Mayor’s office and the GLA coordinate a multi-agency City Operations programme.⁸ City Operations will be responsible for events outside the Olympic venues, such as at ‘live sites’ with viewing screens, and how the capital operates during the Games, including ensuring the continuity of public services.

London 2012 environmental monitoring and assurance

The Commission for a Sustainable London 2012 (CSL) is a body appointed to examine the sustainability of the Games. It is funded by LOCOG, the ODA, the GLA and the Department for Culture, Media and Sport, and reports to the Olympic Board.

CSL provides expert analysis of the sustainability of the Games. It publishes an overall review each year (most recently covering 2009 in its report of May 2010⁹) and produces a range of subject-specific reports on aspects of sustainability such as waste, food and transport.¹⁰ Our report builds on the Commission’s previous work, which set out in more detail many of the technical issues we have discussed with stakeholders.

London 2012’s sustainability plans and reporting

In 2005, London 2012 produced a binding bid document *Towards a one planet Olympics: achieving the first sustainable Olympic Games and Paralympic Games*, co-authored with WWF and BioRegional. This looked forward to a Games that would operate sustainably within the resources of the Earth by applying the principles of One Planet Living, including zero carbon, zero waste, sustainable transport, local and sustainable materials, and local and sustainable food.¹¹

⁸ London 2012 Sustainability Plan, pages 7 and 89; see also *Raising the Bar: Can London 2012 set new standards for sustainability?* Commission for a Sustainable London 2012 Annual Review 2009, published May 2010 (hereafter referred to as CSL 2009 Review), page 16

⁹ CSL 2009 Review

¹⁰ <http://www.csllondon.org/publications/?category=1>

¹¹ *Towards a one planet Olympics: achieving the first sustainable Olympic Games and Paralympic Games*, produced with BioRegional and WWF and presented to the International Olympic Committee evaluation commission on 16 February 2005 (hereafter referred to as *Towards a one planet Olympics*)

The current London 2012 sustainability plan, *Towards a one planet 2012*, covers all three phases of the Olympic project, and addresses five sustainability themes and a number of cross-cutting issues.¹²

The themes are:

- climate change
- waste
- biodiversity
- inclusion
- healthy living.

The overall plan is backed up by specific plans and policies, such as a sustainable sourcing code and sustainability guidelines for corporate and public events.¹³ The plan sets out a range of commitments and aspirations for the delivery of a sustainable Games. Our report looks at the main environmental concerns of CO₂ emissions, air quality, and waste and recycling.

<http://www.bioregional.com/what-we-do/our-work/one-planet-2012/>. All commitments made by a candidate city are regarded as binding by the IOC – see 2012 Candidature Procedure and Questionnaire, page 33

http://www.olympic.org/Documents/Reports/EN/en_report_810.pdf

¹² London 2012 Sustainability Plan, page 11

¹³ <http://www.london2012.com/making-it-happen/sustainability/index.php>

3 Minimising CO₂ emissions

London 2012 aims to minimise the carbon footprint of the Games. It has published a 'reference' carbon footprint – an estimate of the likely emissions from staging the Games if steps were not taken to reduce emissions.¹⁴ This estimate is to be refined after more work, as part of London 2012's next annual sustainability report.¹⁵ CSL has commended London 2012's carbon footprinting approach as 'groundbreaking'.¹⁶

There is also to be a report after 2012 with more accurate data on what was achieved in reducing the largest carbon emissions items and other visible and symbolic emissions.¹⁷ London 2012 said in 2007 that it would measure and monitor its carbon footprint¹⁸. It also said then that it would build carbon measurement into its own information management systems, and was in discussions with contractors, suppliers and licensees about measuring and reporting on their emissions¹⁹. The actual footprint is to be calculated from the records of materials, energy, and other inputs used.²⁰

London 2012 categorises emissions as either:²¹

- Owned – wholly funded core activities of London 2012
- Shared – jointly funded activities in partnership
- Associated – activities clearly associated with the Games which are not funded by London 2012 but over which London 2012 may exert influence
- Out of scope – activities not closely associated with the Games or beyond London 2012's influence – these are not included in the reference footprint.

The whole reference carbon footprint (for activities from site preparation to legacy transition, 2006–2013²²) is estimated at about 3.4 million tonnes of carbon dioxide equivalents (MtCO₂e).

¹⁴ London 2012 Carbon footprint study – methodology and reference footprint. March 2010 (hereafter referred to as reference carbon footprint study)

¹⁵ Environment Committee meeting 15 July 2010, transcript pages 2–4

¹⁶ Written contribution to this investigation from CSL.

¹⁷ Environment Committee meeting 15 July 2010, transcript page 4. 'Visible and symbolic' items are to be confirmed but could include medals or the Torch.

¹⁸ Towards a one planet 2012, London 2012 Sustainability Plan, first edition November 2007 (hereafter referred to as London 2012 Sustainability Plan first edition), page 15

¹⁹ London 2012 Sustainability Plan first edition, page 22

²⁰ Email from LOCOG to London Assembly scrutiny team, 14 October 2010

²¹ Reference carbon footprint study, pages 12–15

²² Reference carbon footprint study, pages 16–17, and London 2012 Sustainability Plan page 8

Table 1 shows a breakdown of this by component:²³

'000 tonnes CO ₂ e	L2012 Owned (both ODA and LOCOG)	Shared and Associated	Total
Venues	1,728	0	1,728
Transport infrastructure	162	429	591
Spectators	15	655	670
Operations	384	75	459
Total	2,289	1,159	3,448

The spectators and operations components make up the staging phase. The reference footprint for these components comes to about 1.1MtCO₂e – one-third of the total reference footprint for the Games.

Approximate figures for each staging element of the reference footprint are given in Appendix 2. The largest single staging item (spectator air travel), and several other large items, relate to the activities of Games spectators, particularly travelling to the Games, and are largely 'associated' rather than owned by LOCOG. The largest LOCOG-owned item is overlay and temporary materials to fit out venues for staging the Games (part of the operations component).

London 2012 CO₂ minimisation commitments:

- 'Green travel plans' for ticketed spectators and workforce²⁴
- Long-distance domestic and near continental visitors (including teams and officials) encouraged to use rail rather than air or car transport²⁵
- Reasonable endeavours to ensure that 90 per cent of venue overlays and temporary materials to be re-used, recycled or recovered after the Games²⁶
- 20% Games-time electricity from new local renewable energy sources (and 20% legacy energy from on-site renewables)²⁷
- Compensating for residual emissions by knowledge transfer, influencing standards and influencing behaviour change²⁸

This chapter considers the steps London 2012 is taking in order to deliver on those commitments.

²³ Reference carbon footprint study, page 28

²⁴ London 2012 Sustainability Plan page 19

²⁵ London 2012 Sustainability Plan page 19

²⁶ London 2012 Sustainability Plan page 34

²⁷ London 2012 Sustainability Plan pages 18-19

²⁸ London 2012 Sustainability Plan pages 22-23

Spectator travel

For its reference carbon footprint, before carbon reduction measures, London 2012 estimates that the Games will attract about:

- 1.8 million visitors from London (travelling entirely by car)
- 2.8 million visitors from the rest of the UK (travelling mainly by rail and car)
- 0.6 million visitors from north-west Europe (travelling mainly by air)
- 0.1 million visitors from the rest of the world (travelling entirely by air).

These spectators would travel between them over 2.8 billion passenger km by air, generating 345,000 tonnes of CO₂e – nearly one-third of the emissions from the staging phase of the Games. There would also be about another 100,000 tonnes from 1.3 billion passenger km of surface transport.²⁹

Spectator travel as a source of emissions is not an ‘owned’ emission – that is, it is not funded or controlled by London 2012. However, it is an ‘associated’ emission – that is, the activity is closely associated with the Games and can be influenced by London 2012.³⁰

London 2012 has committed to minimise the carbon emissions created by Olympic transport arrangements³¹ and to provide ‘green travel plans’ for ticketed spectators and the workforce.

The targets, and measures for achieving them, that have been announced so far focus on travel to the Games venues from in or near London. For example, all spectators will be encouraged to travel to London venues by public transport, walking or cycling. Tickets to London events will include free travel on London public transport on the day, and there will be no private car parking (except Blue Badge) at venues and parking will be strictly controlled around venues. The Active Travel Programme will upgrade cycle paths and provide

²⁹ Reference carbon footprint study, page 34

³⁰ Reference carbon footprint study, page 29 – see also discussion at the Environment Committee 15 July 2010, transcript page 4

³¹ Move: Transport Plan for the London 2012 Olympic and Paralympic Games second edition consultation draft December 2009 (hereafter referred to as London 2012 draft transport plan), page 198

information to promote walking and cycling among spectators and workforce.³²

In contrast, spectator air travel has not been addressed in detail in London 2012 publications. What has been said is that visitors from more distant regions of the UK and the near continent will be encouraged to travel by rail rather than air.³³ As part of the official bid promotion, London 2012 proposed individualised travel plans as part of an integrated ticketing process,³⁴ but has not given further detail since.

The Committee asked LOCOG about these plans, and was told that the ticketing programme is currently being planned. LOCOG's sustainability team is working closely with colleagues in ticketing to establish how LOCOG will communicate with spectators to achieve a shift from air to rail. LOCOG told the Committee that there is a lot of detail to work through and that information on how this would be done would be available when the ticketing programme is launched (in spring 2011).³⁵

The ticketing process gives a clear opportunity to make information on low-carbon travel options available at the point of sale, especially if the tickets are bought on-line. The GLA suggested to the Committee that a suitable method would be to work through ticket distribution outlets aimed at the relevant spectators (particularly National Olympic Committees (NOCs) in France, Germany and the Benelux countries), and that the GLA would encourage and expect LOCOG to put in place detailed proposals.³⁶

³² London 2012 Sustainability Plan, pages 19 and 73, with further detail in chapters 6 and 16 of the London 2012 draft transport plan, including enhancements to London public transport between 2006 and 2012

³³ London 2012 Sustainability Plan, pages 19 and 73. No detail on how this will be achieved is provided in that document and spectator travel is not mentioned in the 'opportunities and challenges' section of the climate change chapter. Air travel is not addressed in either chapter 6 (spectator and workforce transport) or chapter 16 (sustainable transport) of the London 2012 draft transport plan.

³⁴ Towards a one planet Olympics

³⁵ Environment Committee 15 July 2010, transcript page 5

³⁶ Environment Committee 15 July 2010, transcript pages 5-6

Sustainable spectator travel has always been a key aspiration of the 2012 Games but, in the case of spectators travelling to London rather than within it, there is not yet much evidence of further development of the idea since the bid stage.

Recommendation 1

LOCOG should produce, in advance of ticket launch (spring 2011), a plan to promote sustainable travel at the point of ticket sale.

Suggested elements for this plan include:

- working with ticket distributors such as north-west Europe National Olympic Committees
- working with providers of rail and coach transport, and of carbon offsets
- informing spectators about sustainable travel options and facilitating access to them
- developing special promotional fares for the Games period.

Temporary materials

As part of the preparation phase of the Games, the ODA is constructing the Games venues, with the legacy use in mind. To equip the venues for the one-off purpose of staging the Games themselves, temporary overlays and fittings will be required. This is part of LOCOG's work in staging the Games.³⁷

These temporary materials will have used energy in their production, generating greenhouse gas emissions. These emissions (known as 'embodied carbon') are part of the carbon footprint of the Games. The reference footprint for temporary materials has been calculated from the budget available for venue overlay and the typical carbon intensity of one dollar's worth of general manufactured goods such as furniture.³⁸ The estimated footprint of temporary materials and overlay (before carbon reduction measures) is about 197,000 tonnes of CO₂e – nearly a fifth of the total footprint for the staging phase and 50 per cent of LOCOG's owned carbon footprint.³⁹ The recent announcement that the stadium 'wrap' will not be going ahead⁴⁰ will also have an effect on the carbon footprint for temporary materials.

³⁷ ODA programme delivery baseline report, January 2009, pages 5 and 9

³⁸ Reference carbon footprint study, page 49

³⁹ Reference carbon footprint study, page 42; see also Appendix 2 to this report

⁴⁰ http://www.culture.gov.uk/news/ministers_speeches/7508.aspx

To reduce this carbon impact, LOCOG's sustainability team has been working with designers to find designs and materials that require less energy to make. LOCOG has now published guidelines to ensure that this is continued in those plans yet to be finalised.⁴¹

The carbon footprint can also be reduced by sourcing re-used materials, for example by leasing rather than buying them. LOCOG estimates that up to 76 per cent of embodied carbon could be saved in temporary venues in this way.⁴²

Returning materials to the supplier at the end of the lease gives an opportunity for re-use. Where re-use is not possible, steps are being taken to make the materials easy to recycle. It will be important to pay close attention to re-use and recycling in the planning, procurement, management and monitoring of the overlay contracts – LOCOG acknowledged in discussion with the Committee that the type of materials and their condition after the Games is crucial in determining the percentage that can be re-used, and said “we need to be very vigilant that the ... processes are actually operational.”⁴³

London 2012 has published a ‘waste hierarchy’ – the order of preference for how each element of waste should be dealt with:⁴⁴

- Reduction
- Re-use
- Recycling and composting
- New and emerging technologies to recover energy
- Conventional incineration with recovery of energy
- Landfill.

This waste hierarchy orders its points by sustainability, and matches London 2012's sustainability commitments and aspirations, except that it does not differentiate between ‘closed-loop’ recycling (turning used materials back into the same kind of material again) and ‘downcycling’ (making used materials into another, less valuable, kind of material). The London 2012 sustainability plan includes an aspiration for closed-loop recycling, but this is not carried through into the guiding hierarchy.⁴⁵

⁴¹ Environment Committee 16 July 2010, transcript page 19

⁴² LOCOG temporary materials guidelines, May 2010, pages 12-13

⁴³ Environment Committee 16 July 2010, transcript pages 20-21

⁴⁴ London 2012 Sustainability Plan, page 33

⁴⁵ London 2012 Sustainability Plan, pages 33-34

Also, LOCOG has only one point on this hierarchy at which it has set any kind of target or has plans to monitor performance regarding temporary materials; it has set itself a 'stretch target' of 90 per cent re-use and recycling, which it will take 'reasonable steps' to achieve.⁴⁶ Ninety per cent is the same figure as the ODA's target for re-use and recycling of its own demolition and construction waste, and setting this target is new for the temporary materials sector, which is generally much less advanced in this respect than the permanent construction sector.⁴⁷ We welcome this ambition.

However, this target could be achieved through recycling, with little re-use. While financial benefits should incentivise re-use, the Committee believes there is a need for specific targets or monitoring for re-use to ensure that the application of the hierarchy is not compromised, especially given the time pressure and organisational change that will exist post-Games, when materials are disposed of.⁴⁸

Recommendation 2

London 2012 and GLA City Operations should (by June 2011) set targets for the re-use of temporary materials and say how this will be monitored and reported on. When reporting on the leasing of temporary materials, it should be made clear whether materials are new or re-used at the beginning of the lease, and whether they are available for re-use after the lease.

Renewable electricity supply

London 2012 has two targets for renewable energy – that 20 per cent of Games-time electricity used on the Olympic Park should be generated from new local renewable sources, and that at least 20 per cent of the Olympic Park's energy (including both electricity and heat) demand in legacy use should be met from local renewable sources.⁴⁹ The focus of this report is on the Games-time target, though some of the measures described also contribute to the legacy

⁴⁶ London 2012 Sustainability Plan, page 34

⁴⁷ No time to waste; Commission for a Sustainable London 2012 report on waste and resource management, March 2010 (hereafter referred to as No time to waste) pages 53-57

⁴⁸ No time to waste, page 62

⁴⁹ London 2012 Sustainability Plan, pages 18-19

target, and the Committee has been told about further work being undertaken towards that target. The ODA expects to meet the legacy target.

The recently-opened Olympic site Energy Centre is a combined heating, cooling and power plant, which will provide for both the Games period and legacy use. The current power source is natural gas, with some heat provided by two biomass boilers using waste wood.⁵⁰

There had also been a plan to install one or more wind turbines on the Olympic site, but London 2012 announced in June that the turbine would not go ahead.⁵¹ The ODA explained to the Committee that issues with leasing of land delayed the contracting process with the preferred bidder. The delay meant that the proposed turbine became subject to a revised EU Machinery Directive⁵². The preferred bidder was unable to meet the requirements of this directive within the time frame for the Olympics, and none of the other shortlisted bidders would re-bid and so the wind turbine was unable to proceed.⁵³ There have also been suggestions that the case for the wind turbine was undermined by a lack of wind at the Olympic Park.⁵⁴

The ODA is looking at increasing the renewable component of on-site generation through advanced biomass gasification to augment the Energy Centre, but this will not be installed until after the Games⁵⁵ and LOCOG, to meet its Games-time target, is seeking additional interim sources.

LOCOG explained to the Committee that it is difficult to secure commercial renewable energy to meet a demand of just a few weeks' duration, and that it is therefore unlikely that the 20 per cent Games-time target will be met in full. LOCOG is working with EDF, its utilities partner, to look at what renewable sources might be available in

⁵⁰ Environment Committee meeting, 15 July 2010, transcript pages 12-14

⁵¹ London 2012 statement, 3 June 2010

<http://www.london2012.com/news/2010/06/statement-on-olympic-park-wind-turbine.php>

⁵² The revised directive (2006/42/EC) had been published in June 2006 and brought into UK law in June 2008 by the Supply of Machinery (Safety) Regulations 2008, but only applied to machinery entering the supply chain from 29 December 2009.

⁵³ Environment Committee meeting, 15 July 2010, transcript pages 12-13

⁵⁴ Olympics wind turbine is scrapped, threatening green pledges for 2012, The Times, 4 June 2010 <http://www.timesonline.co.uk/tol/sport/olympics/article7143826.ece>

⁵⁵ London 2012 statement, 3 June 2010

<http://www.london2012.com/news/2010/06/statement-on-olympic-park-wind-turbine.php>

London and the Thames Gateway, including possible photovoltaic (PV) solar power, to see how far they can go in meeting the target.⁵⁶ Despite these efforts it is disappointing that LOCOG is unlikely to meet the 20 per cent target for renewable energy for Games time.

Recommendation 3

LOCOG should increase its efforts to secure new local renewable sources to deliver 20 per cent of Games-time electricity, provided that these new sources can be delivered with sufficient local capacity and in a cost-effective way.

Energy use in staging the Games

In order to reduce the carbon footprint of staging the Games, and to make the 20 per cent targets for renewable energy more attainable⁵⁷, London 2012 is working to reduce the need for energy in the Olympic venues.

The venues have been constructed to high standards of energy efficiency: they exceed the standards in Part L of Building Regulations by at least 15 per cent (25 per cent for the velodrome), and in legacy aim to achieve BREEAM 'excellent' rating.⁵⁸ Ratings will not be confirmed until the buildings are converted for legacy use. Also LOCOG is working on operational aspects, such as broadcasting, to reduce their energy requirements.⁵⁹

The energy efficiency of the Olympic buildings, and the work underway to improve the energy efficiency of operations, is a positive development. However it does not seem likely to reduce energy demand sufficiently to make the 20 per cent Games-time renewable target achievable.

⁵⁶ Environment Committee, 15 July 2010, transcript page 15; see also London 2012 Sustainability Plan, page 24

⁵⁷ For every reduction of five units in the total energy demand, the amount of renewable energy needed to meet the 20 per cent target is reduced by one unit.

⁵⁸ London 2012 sustainability plan, page 18, and Environment Committee 15 July 2010, transcript page 11.

⁵⁹ Environment Committee 15 July 2010, transcript page 16

Sustainability of City Operations

As outlined in the Introduction to this report, the GLA is co-ordinating City Operations: events and activities around London related to the Games but outside the venues. The GLA is committed to applying London 2012's sustainability principles⁶⁰ to its City Operations work. However, there is as yet no specific publication of the practical implications of these principles for City Operations or detailed GLA plans for applying the principles.

CSL has said that such a publication is essential to support the procurement of services. It said that the GLA had told it in January that detailed plans would be published in March.⁶¹ The Mayor also told the Assembly in May that City Operations sustainability standards would soon be published.⁶² However, in June the Mayor told the Assembly that no separate publication would be made, to avoid unnecessary duplication of work.⁶³

The point is taken that the same standards will be applied to City Operations as to the Games themselves. However, the implementation of these standards in the City Operations context is not covered in London 2012 publications.

Recommendation 4

GLA City Operations should publish, by June 2011, plans showing how London 2012 sustainability standards, including carbon footprint management, will be applied at the live sites they will run and in cultural events which the Mayor sponsors, and how the standards will be monitored and reported on.

⁶⁰ Specifically, those set out in the London 2012 Sustainability Guidelines for Corporate Events and LOCOG's Sustainable Sourcing Code – see CSL 2009 Review, page 16, and Mayoral Answers 1389/2010 and 1390/2010, to Darren Johnson AM on 19 May 2010, and 2151/2010, to Darren Johnson AM on 9 June 2010

⁶¹ CSL 2009 Review, page 16

⁶² Mayoral Answer 1391/2010, to Darren Johnson AM on 19 May 2010

⁶³ Mayoral Answer 2151/2010, to Darren Johnson AM on 9 June 2010

Mitigating the residual footprint

Among the principles of One Planet Living, included in the original bid, was zero carbon impact.⁶⁴ Though some carbon emissions are clearly unavoidable, one way of achieving a net zero or positive carbon impact is to offset or compensate these 'residual' emissions against carbon benefits elsewhere.

Schemes exist to allow carbon emitters to purchase 'offsets', funding schemes elsewhere to reduce carbon emissions or sequester carbon. London 2012 had planned to buy carbon offsets against some of the residual footprint (including a bid commitment to offset all emissions from Olympic travel⁶⁵), but it has since investigated and decided against this option. London 2012 recognises that the carbon offsetting idea has its critics, and says that it can achieve greater benefits more cost-effectively in other ways.⁶⁶

London 2012 now proposes to compensate for its unavoidable owned emissions with carbon savings generated in two ways:⁶⁷

- capturing for future use the skills, tools and knowledge developed in planning and staging the Games
- inspiring lasting behaviour change.

Both of these strands do have potential but there are challenges, both in implementing the approaches to make a practical difference, and in measuring the size of carbon savings that can demonstrably be ascribed to the Olympics and Paralympics.

Knowledge capture

London 2012 is working with the Institute for Sustainability and other partners to bring together lessons in sustainability, and disseminate them. These lessons will cover all key subjects including materials, water and energy. There is also a set of management guidelines for sustainable events, British Standard 8901, which was inspired by the London 2012 sustainability work and which is on the way to becoming an international standard, ISO 2012.1. There is also an IOC knowledge management programme for future host cities.⁶⁸

⁶⁴ Towards a one planet Olympics

⁶⁵ London 2012 Candidate File, theme 5 Environment, page 77

⁶⁶ London 2012 sustainability plan, page 23

⁶⁷ London 2012 sustainability plan, pages 22-23

⁶⁸ London 2012 sustainability plan, pages 22-23, and Environment Committee 15 July 2010, transcript pages 16-18

This knowledge capture and communication is valuable but, if it is to generate carbon savings on a scale comparable to the residual footprint of the Games, it must be applied on a national (and eventually an international) scale. London 2012 is working with the government, including the Office of Government Commerce (now part of the Efficiency and Reform Group in the Cabinet Office), seeking to ensure that the sustainability good practice learned from the Games, for example in procurement, is taken up across the country.⁶⁹

The Commission for a Sustainable London 2012 (CSL 2012) told the Committee that there had been a range of discussions with government and the wider public sector, but so far not very much action had been taken as a result. CSL 2012 called on the Government and the GLA group to take forward this learning as soon as it was available – for example to adopt BS 8901 without delay. CSL 2012 specifically called for the ODA's work on embodied carbon in construction to be taken into the Department for Business, Innovation and Skills' Strategy for Sustainable Construction. At the London level it called for implementation by the LDA and TfL, and in the London Plan.⁷⁰ The Committee supports these calls; implementation is necessary if knowledge capture is to lead to carbon savings.

Recommendation 5

The GLA group should immediately commit to take up the environmental standards coming out of the Olympics and Paralympics, such as BS 8901, and should implement them across all relevant operations as soon as practicable.

London 2012 has not yet set out how the carbon savings from Olympic and Paralympic learning will be quantified. It has said that it will establish this methodology during 2010.⁷¹ If this methodology is delayed until after implementing bodies have identified their carbon savings, there is the risk that the retrospective quantification of Games-related savings will lack, or appear to lack, rigour.

⁶⁹ Environment Committee 15 July 2010, transcript page 17

⁷⁰ Environment Committee 15 July 2010, transcript pages 18-19

⁷¹ London 2012 sustainability plan, page 23

Inspiring behaviour change

The London 2012 sustainability plan emphasises the potential for the Games to inspire large numbers of people, not just in 2012 but through the four-year cultural and educational work of the Olympiad.⁷² However, there is no indication as yet of what carbon will be saved through this avenue, or how.

Where detail is provided, it relates to the work of London 2012's commercial partners. An example is EDF's 'Team Green Britain' work on energy efficiency. However, this appears to be primarily a corporate responsibility project by EDF as an energy company with the Games link a subsidiary element.⁷³ More closely connected to the Games is BT's work to calculate carbon footprints for its services to London 2012, which will also help inform its other customers about the carbon footprint of their activities.⁷⁴

London 2012 also has a Changing Places Programme, to use the Games as a catalyst for improving local environmental quality in some of the most deprived communities that surround the Olympic Park and other venues.⁷⁵ It is not clear to what extent this work will result in carbon savings.

Carbon savings quantification

For these approaches to be useful in achieving assurance that the Games' carbon footprint has been compensated, the carbon savings achieved must be quantified. It needs to be demonstrated how much carbon has been saved, and whether the savings are attributable to the Games.

This reflects past concerns with commercial carbon offsetting schemes, which led to the establishment under United Nations Framework Convention on Climate Change (the 1992 Earth Summit in Rio, and the update at Kyoto in 1997) of the Clean Development Mechanism standard for offsets, which requires that carbon benefits should be real, measurable and additional, and should not have adverse environmental impact or divert development assistance spending. The Commission for a Sustainable London 2012 has said that offsetting London 2012 carbon impacts should fully conform to these criteria, being equivalent to the Gold Standard carbon offset

⁷² London 2012 sustainability plan, page 22

⁷³ <http://www.teamgreenbritain.org>

⁷⁴ London 2012 sustainability plan, page 23

⁷⁵ London 2012 sustainability plan, page 81

product.⁷⁶ We support this view though, as the Clean Development Mechanism is applicable only to carbon savings in the developing world, would request LOCOG to look also for local equivalents.

Recommendation 6

London 2012 should set out, by March 2011, how it will quantify the carbon savings, to be achieved through take up of best practice standards and wider behaviour change, that are to compensate for the unavoidable emissions of the Games. The quantification and attribution should be robust, matching Gold Standard offsets or equivalent.

London 2012 should also by December 2011 give an initial tonnage estimate for the carbon to be compensated. London 2012 should seek to achieve savings greater than the unavoidable owned emissions and thereby achieve a net-positive carbon impact.

The progress of these residual carbon footprint compensation approaches is something that the Committee will return to in its investigation into the sustainability legacy of the London 2012 Olympic and Paralympic Games, which will take place in 2011.

⁷⁶ *Extinguishing Emissions?* CSL review of the approach taken to carbon measurement and management across the London 2012 programme, December 2009, page 16; see also <http://cdm.unfccc.int/about/index.html> and <http://www.cdmgoldstandard.org/What-we-stand-for.66.0.html>

4 Air quality

London 2012 air quality commitments

- All competition venues to operate as ‘low-emissions venues’ at Games-time

Pollutant levels in 2012

In 2005, London’s successful bid for the Games characterised London’s air quality as ‘good and improving’, and emphasised target dates in the national and London air quality strategies for meeting or exceeding EU air quality targets by 2010 or earlier.⁷⁷ Following receipt of the candidate file, and visiting London to inspect the city and attend presentations, the IOC Evaluation Commission had concerns about ozone levels but concluded “Air quality in London at proposed Games-time is generally satisfactory. ...legislation and actions now in place, such as the “low-emission zone” and the “congestion charge”, are aimed at ...ensuring all air pollutants are within World Health Organisation (WHO) and EU target levels by 2010.”⁷⁸ The Host City Contract requires London and the Government to comply with applicable environmental legislation, including the European directive on air quality.⁷⁹

However, over the last five years, air quality has not improved as expected. Based on 2008 data, the levels of airborne particles (PM₁₀) and nitrogen dioxide (NO₂) in many places in central London, around Heathrow, and near to major roads across the capital exceed European Union limit values. These are all places likely to be frequented by those coming to London for the Games. In the case of NO₂, the Mayor’s Draft Air Quality Strategy is aimed at meeting these limits by the maximum extended deadline, 2015. The draft strategy expresses the hope that air quality will improve sooner than 2015, but its own modelling shows that many places in London are expected still to exceed the NO₂ limits in 2015, some by up to 80 per cent.⁸⁰ A study conducted for the ODA forecast that the NO₂ limits would be exceeded beside most of the core Olympic Route Network and significant stretches of the venue-specific route network during the Games period in 2012.⁸¹ This Olympic Route Network includes the

⁷⁷ London 2012 Candidate File, theme 5 Environment, page 69

⁷⁸ Report of the IOC Evaluation Commission for the Games of the XXX Olympiad in 2012, pages 67-68

⁷⁹ 2012 Host City Contract, clause 21

⁸⁰ Clearing the Air; Mayor’s public draft Air Quality Strategy, February 2010 (hereafter referred to as Mayor’s draft Air Quality Strategy) pages 8-9 and 126-127.

⁸¹ Olympic Route Network Air Quality Analysis – Phase 1 Report, by Ove Arup & Partners Ltd for the ODA, September 2009. Note that this phase of the study does

Embankment to Tower Gateway corridor identified in the Mayor's draft Air Quality Strategy as suffering particularly high traffic-related air pollution.⁸²

The Mayor has emphasised that NO₂ is a problem affecting many parts of the country, and that London-level measures look set to be insufficient to tackle it. The Government also has an important role to play in reducing NO₂ concentrations nationwide.⁸³

Poor air quality affects human health and is a significant issue in assessing host cities bidding for the Games. High levels of NO₂ cause inflammation of the airways.⁸⁴ The Games came to London on expectations of compliance with air quality standards. It is important for London's reputation as well as for the health of those coming to the Games that London's air quality is significantly improved as soon as possible. The Committee has already recommended that the Mayor demonstrate his commitment to meeting EU limit values and tolerance margins⁸⁵ as soon as possible by publishing NO₂ concentration modelling projections for 2012/13.

To seek to address local breaches of EU limits, the Mayor's draft Air Quality Strategy contains a set of policies on priority locations and local measures, and outlines in principle special measures (such as traffic restrictions) that could be applied on days when air quality is expected to be especially poor.⁸⁶ The Committee would welcome a statement from the Mayor as to whether he is prepared to take such measures if needed to prevent harmful levels of air pollutants affecting key locations at Games time, and what the impact would be on travel for the Olympic family and spectators if these measures were to affect the Olympic Route Network.

One possible solution to pre-empt this problem could be the introduction of an additional low emission zone targeted at the air

not take into account the effect of the Mayor's Air Quality Strategy or of Olympic traffic; these factors are to be covered in Phase 2 of the study. For an outline of the designated lanes and other driving restrictions making up the ORN, see also London 2012 draft transport plan, pages 34-38

⁸² Mayor's draft Air Quality Strategy page 32

⁸³ Mayor's draft Air Quality Strategy page 16

⁸⁴ Mayor's draft Air Quality Strategy page 13

⁸⁵ Tolerance margins are concentrations somewhat higher than the limit values. If the EU grants an extension to the deadline for meeting limit values, the tolerance margins must be complied with from the original deadline – 2010 in the case of NO₂

⁸⁶ Mayor's draft Air Quality Strategy pages 57-69 (priority locations) and 83-85 (special measures)

pollution hotspots in central London, if this could be implemented within the necessary timescale. The Committee notes the Mayor's recent suggestion⁸⁷ that a central zone might be based on the Congestion Charge area, if technical difficulties can be overcome.

Low emission Olympic vehicles

Road transport contributed 79 per cent of central London's PM₁₀ emissions and 46 per cent of Greater London's NO_x emissions in 2008.⁸⁸

London 2012's bid highlighted the role of the congestion charge in cutting emissions of nitrogen oxides and particulates, and the further role of the Low Emission Zone (LEZ).⁸⁹ The LEZ imposes emissions standards on heavier vehicles entering an area that covers most of London. A planned tightening of the restrictions in 2010 was delayed by the Mayor, but is now planned to go ahead in 2012. The Mayor also proposes to apply restrictions to more vehicles in 2012.⁹⁰

London 2012 made a bid commitment to an Olympic Park Low Emission Zone and an Olympic fleet of low emission vehicles.⁹¹ This commitment will be fulfilled through the vehicle access permits for entering Games venues, and through the standards set in procuring the major Olympic vehicle fleet (BMW) and logistics (UPS) contracts. These standards will require cars and light vehicles to meet Euro 6 emissions standards two years ahead of their becoming generally compulsory.⁹²

However, the Commission for a Sustainable London 2012 told the Committee that it would be more challenging to ensure that firms with smaller contracts signed up to the standards, and that the standards were enforced in all cases.⁹³ CSL 2012 has also said that the function

⁸⁷ Mayor's Question Time, 13 October 2010

⁸⁸ Mayor's draft Air Quality Strategy pages 36 and 38

⁸⁹ London 2012 Candidate File, theme 5 Environment, page 69; see also Report of the IOC Evaluation Commission for the Games of the XXX Olympiad in 2012, pages 67-68

⁹⁰ Mayor's draft Air Quality Strategy, pages 78-80

⁹¹ London 2012 Candidate File, theme 5 Environment, page 77

⁹² Environment Committee meeting 15 July 2010, transcript pages 7-8; see also <http://www.london2012.com/press/media-releases/2009/11/london-2012-plans-move-up-a-gear-with-bmw-announced-as-the-latest-sponsor.php>

⁹³ Environment Committee meeting 15 July 2010, transcript pages 7-8

of the Olympic LEZ is to send a message; it is too limited and of too short a duration to have any notable impact on London's air quality.⁹⁴

The emissions standards for accredited vehicles meet London 2012's commitment to declare a 'low emission zone' for the Games but, as highlighted above, there are still challenges in the detail of implementation. Also, the zone will not be a solution to London's air quality problems for Games time.

Electric vehicles

Electric vehicles have very low emissions of local air pollutants. The Mayor had planned for the Olympic fleet to include a substantial proportion of electric vehicles,⁹⁵ supporting both the sustainability of the Games and the delivery of the Mayor's plans for sustainable transport in London more widely – though London 2012 had not committed itself on this point⁹⁶.

The BMW Olympic fleet contract offers some scope for a small number of electric vehicles and charging points, but how many has not yet been agreed. LOCOG has said that the size of the fleet and the operational demands on it meant that it would not be practical for most of the fleet to be electric vehicles.⁹⁷ At the Committee meeting the Commission for a Sustainable London 2012 supported this position, citing technical obstacles as well as the risk of a relatively new technology not working as well as expected on a large and high-profile one-off project.⁹⁸

However, the car manufacturer Nissan has contended that it offered, in partnership with Renault and EDF, a viable proposal at half the fleet average carbon emissions of BMW, with half the vehicles being an electric car that is to be launched commercially in early 2011, for which it has taken several thousand orders. Nissan also said that it would have secured charging points around the city.⁹⁹ The detailed

⁹⁴ All Change; CSL 2012 snapshot review of sustainability and transport, June 2010 (hereafter referred to as All Change) page 16

⁹⁵ An Electric Vehicle Delivery Plan for London, GLA, May 2009, page 25

⁹⁶ See for example London 2012 Candidate File, theme 5 Environment, page 79 and London 2012 Sustainability Plan first edition, page 19

⁹⁷ Environment Committee 15 July 2010, transcript page 10

⁹⁸ Environment Committee 15 July 2010, transcript page 11; see also All Change, page 11

⁹⁹ Nissan's '60 g/km' Olympic plan, Autocar, 27 November 2009

<http://www.autocar.co.uk/News/NewsArticle/AllCars/245345/> and Nissan Leaf leaps towards profitability, BusinessGreen.com, 30 April 2010

<http://www.businessgreen.com/business-green/news/2262324/nissan-leaf-leaps->

rationale behind the decision on the Olympic fleet has not yet been made public.

The failure to deliver a major electric vehicle component in the Olympic fleet seems to be a missed opportunity for the longer-term sustainability agenda of the Mayor. It is to be hoped that some benefit can still be gained from the electric element of the Olympic fleet, and that the Mayor's delivery plan for electric vehicles is not set back. The Committee also hopes that charging points installed in the Olympic park will use renewable electricity.

Games-time traffic

As well as the amount of travel done by pollutant-emitting vehicles, air quality is affected by the way the vehicles are driven. It is a significant element of the Mayor's transport policy that reducing congestion and smoothing traffic flows reduces emissions.¹⁰⁰

The Committee therefore asked about the impact of Games-related vehicle traffic and the Olympic Road Network (ORN; the designated lanes and other driving restrictions that will be in place during Games-time¹⁰¹) on the normal road network and traffic. The existing environmental assessments of the impact of Olympic transport do not take into account any traffic effects from the ORN.¹⁰² A revised environmental assessment is being prepared to take account of this and other developments to the plan; the Committee is to be consulted as part of this process and may take a view on further scrutiny.¹⁰³

Olympic transport issues are to be addressed in more depth by the Assembly's Transport Committee which began its work in September.

The Olympic Route Network involves restrictions on other traffic in London and may therefore increase congestion and consequently

towards; see also

http://insidethegames.biz/index.php?option=com_content&view=article&id=8257:london-2012-defend-choice-of-bmw-as-nissan-claim-they-would-have-been-greener-choice-&catid=1:latest-news&Itemid=1

¹⁰⁰ Mayor's draft Air Quality Strategy, pages 47-48

¹⁰¹ London 2012 draft transport plan, pages 34-38

¹⁰² Strategic Environmental Assessment of the Olympic Transport Plan (first edition), 2006; also Olympic Route Network Air Quality Analysis – Phase 1 Report, by Ove Arup & Partners Ltd for the ODA, September 2009; see also letter from GLA Director of London 2012 Co-ordination to London Assembly staff, 24 September 2010

¹⁰³ Environment Committee 15 July 2010, transcript pages 9-10; see also letter from GLA Director of London 2012 Co-ordination to London Assembly staff, 24 September 2010

vehicle emissions per journey. Given the air quality problems that London is expected still to have in 2012, there is a pressing need to model the effects of the ORN on air quality so that mitigation measures can be considered.

Recommendation 7

The ODA should ensure that the revised Strategic Environmental Assessment of the Olympic transport plan is published, with the modelling of Games-related traffic and emissions, in time to inform the consultations on each element of the ORN. Decision on the ORN should not be taken until this informed consultation has taken place.

Air quality conclusion

Optimism about projected air quality in London reassured IOC members that athletes and visitors would be protected from such harmful effects. Modelling now suggests that there will still be harmful levels of NO₂ in crucial parts of London in 2012. However, the modelling conducted so far does not take Olympic traffic into account, and plans to reduce other traffic at Games time have not been published¹⁰⁴.

Recommendation 8

The Mayor should publish, by December 2011, NO₂ concentration modelling for Games time, taking into account traffic and other activity related to the Games. The Mayor should take, or secure from the Government, action to ensure that NO₂ levels are reduced as far as possible towards the EU limit (or, failing that, the tolerance margin) by the time of the 2012 Games.

¹⁰⁴ There is a tentative outline in the London 2012 draft transport plan, page 36

5 Waste and recycling

London 2012 Waste and recycling commitments

- 70% of Games-time waste re-used, recycled or composted
- No Games-time waste to go direct to landfill
- To be a catalyst for new waste management infrastructure in East London

The Games-time waste stream

Currently, events in the UK achieve on average 15 per cent recycling, even lower than municipal rates.¹⁰⁵

Most of the spectator waste will be food-related so LOCOG is planning for a composting waste stream and a recycling waste stream. There will be work on the materials available on the Games sites to ensure that they are as recyclable as possible – for example, Coca-Cola is providing all of its drinks in the same kind of bottle, to minimise the waste processing required.¹⁰⁶ How to separate waste into these streams will be communicated to spectators by a simple system of signage, likely to involve colour-coding. LOCOG is working with partners such as WRAP and Coca-Cola to design the system, and to have pilot events and pre-publicity. It is hoped that the system developed will serve as a model for other events.¹⁰⁷

LOCOG stated that its aim is to work with partners to get its recycling message across to Londoners and visitors before they arrive at Olympic and Paralympic events, and indeed before the Games begin, to help ensure that the waste stream separation system is used successfully.¹⁰⁸ To reach visitors before they arrive at events, it will be important to have a presence in other parts of London, potentially including visitor accommodation, transport links, public areas in central London, live sites and tourist attractions. Such wider recycling facilities would also help visitors to recycle during the times in their stay when they are not at Olympic and Paralympic venues.

In our report “On the Go Recycling”¹⁰⁹, the Committee recommended that “The Mayor needs to work with Olympic organisers to ensure sponsors fund and help deliver best practice recycling ‘on the go’ at the Olympic and Paralympic Games in and around sporting venues,

¹⁰⁵ Environment Committee 15 July 2010, transcript pages 21-22

¹⁰⁶ Written contribution from Coca-Cola to this investigation

¹⁰⁷ Environment Committee 15 July 2010, transcript pages 21-23

¹⁰⁸ Environment Committee 15 July 2010, transcript page 22

¹⁰⁹ <http://www.london.gov.uk/who-runs-london/the-london-assembly/publications/environment/go-recycling-case-mayoral-actions>

both for the duration of the Games and beyond, to ensure a lasting legacy. The Mayor also needs to ensure this happens on the transport system, to collect recyclables whilst travelling to and from the sites.” The Mayor has recently announced¹¹⁰ that more bins will be made available across the transport network which will capture all kinds of waste for sorting into recyclables and residual waste, though we note that this single waste stream approach does not fully correspond to the system proposed for the Games.

Recommendation 9

There should be best-practice re-use and recycling facilities not only in Olympic and Paralympic venues but around them, at live sites, on London’s transport system and in other key visitor destinations. The Mayor, with Games organisers, sponsors and GLA City Operations, should (by June 2011) set out plans to achieve this.

Waste disposal facilities

The GLA had hoped for the Games to catalyse the provision by the private sector of new sustainable waste disposal facilities in East London. However, this has long been acknowledged to be a challenge.¹¹¹ There is little scope to bring projects forward purely for the Games, as a short-term waste stream can only be a small element of the business case for a long-term facility. It now looks unlikely that any more¹¹² new Games-inspired projects will be in operation by July 2012; the difficulties have increased following the reduction in bank lending in a crucial period and by the lack of availability of public funds.¹¹³

Given existing facilities, LOCOG is confident that its waste will be handled within the UK, and will include the proximity principle in its contracting.¹¹⁴ A report on waste management by the Commission for a Sustainable London 2012 concurs that there is sufficient capacity

¹¹⁰ Mayor to increase bins on the Tube by 25 per cent in fight against litter , Mayoral press release, 21 September 2010

¹¹¹ London 2012 Sustainability Plan first edition, November 2007, page 29

¹¹² The success of the 2012 bid helped to ensure the success of the new Closed Loop plastics recycling plant in Dagenham

¹¹³ Environment Committee 15 July 2010, transcript pages 23-25

¹¹⁴ Environment Committee 15 July 2010, transcript page 25

around 50 miles from London, though it advocates London facilities as a better application of the proximity principle.¹¹⁵

The Committee shares the disappointment of LOCOG and CSL that new Games-inspired sustainable waste disposal facilities look unlikely to be in operation by the time of the Games. The ambitions for the Games to catalyse sustainability have not been matched by the implementation.

Merchandise

LOCOG's funding comes from commercial sources, including the sale of London 2012 merchandise. Merchandise also forms a part of the Olympic and Paralympic experience for many fans and spectators.

Merchandise has a carbon impact, dependent on the number of each item produced and the weight and material of the items and packaging. Also important for assessing the carbon impact is whether the item and packaging is recycled or re-used, or whether it is thrown away after use.¹¹⁶ The estimated carbon footprint of merchandise for London 2012 is 66,000 tonnes of CO₂e, about six per cent of the estimated footprint for staging the Games.¹¹⁷

The utility, and useful life, of merchandise can also be a part of calculating the costs and benefits of merchandise.

LOCOG's sustainability team is working closely with the procurement team to promote the use of recycled and recyclable materials in merchandise and packaging, and to ensure that items have recycling labels. One partner, Hornby, has changed its packaging strategy as a result of the London 2012 merchandising link.¹¹⁸

LOCOG and its partners are making efforts to promote the recycling of merchandise and packaging, but it is not clear how much effect this will have on consumer behaviour or the carbon footprint of merchandise. For future Games, the International Olympic Committee could potentially explore the scope for sustainability improvements alongside the commercial and spectator benefits of merchandising.

¹¹⁵ No time to waste, CSL 2012 review of waste and resource management, March 2010

¹¹⁶ Reference carbon footprint study, page 38

¹¹⁷ Reference carbon footprint study, page 34

¹¹⁸ Environment Committee 15 July 2010, transcript pages 26-27; LOCOG also emphasised its work on labour standards and the broader aspects of sustainability, but these issues are outside the scope of this investigation

Catering

London 2012 aims to enhance the experience of the Games by celebrating the diversity and quality of British food and drink at affordable prices.¹¹⁹ It has published a Food Vision, setting out the commitments and objectives for catering at Olympic and Paralympic venues. Linked to this will be a campaign directed at catering and food outlets linked to the Games but outside the venues and LOCOG's partnership structure.¹²⁰

The Olympic and Paralympic venue Food Vision commits to sourcing food and beverages to high 'benchmark' and 'aspirational' environmental, ethical and animal welfare standards.¹²¹ It says that all food must achieve the relevant benchmark standards or a demonstrable equivalent. They include:

- Red Tractor or Lion Mark assurance for applicable British produce
- Free Range (eggs)
- Use of British produce in season where available
- Full traceability for products not available in the UK
- Fairtrade or similar ethical sourcing status for bananas, tea, coffee, sugar, chocolate
- Percentages will be set for chicken and pork to be RSPCA Freedom Food certified
- FAO Code of Conduct for Responsible Fisheries and similar fish sustainability standards.

The Food Vision says that as many of the aspirational standards should be achieved, or a demonstrable equivalent, where food is available and affordable:

- LEAF Marque certification
- Organic certification
- Further products to be ethically traded or sourced, including Fairtrade and Rainforest Alliance certification
- GLOBALGAP or comparable certification
- Animal welfare standards such as RSPCA Freedom Foods certification, Free Range status (chicken), outdoor reared in a straw-based system (pork)
- Diverse species of fish and shellfish, additional welfare and sustainability standards in fish farming.

¹¹⁹ London 2012 sustainability plan, page 61

¹²⁰ For Starters, Food vision for the London 2012 Olympic Games and Paralympic Games, December 2009 (hereafter referred to as Food vision)

¹²¹ Food vision, pages 17 and 18

The application of the benchmark standards across the Games venues catering offer is to be welcomed. However, limited evidence has so far emerged of the extent to which aspirational standards are likely to be met – the Commission for a Sustainable London 2012 has said that it expects to see evidence in 2010 to support their take-up, including percentages for achievement of those standards in the caterer procurement process.¹²²

LOCOG told the Committee of its developing plans to communicate information about the sustainable food choices on offer at Games venues. It emphasised the difficulties of communicating complex information at the crowd-catering points of sale, which need to serve each customer quickly, and the extent to which the hospitality industry lags behind the retail sector in food standards labelling for customers. LOCOG also emphasised the need for affordability.¹²³

Catering is another area where there is a risk of London 2012's laudable sustainability aspirations not being fully delivered. However, unlike the energy and waste capacity projects with their extended lead times, there should still be scope for action to improve delivery.

Recommendation 10

LOCOG should take active steps to secure the achievement of Food Vision aspirational standards. With sponsors and suppliers, it should set out (by March 2011) how and to what extent each aspirational standard is expected to be met.

Part of London 2012's Food Vision is to support a broad supply chain including smaller scale British, regional and local enterprises.¹²⁴ There has been an emphasis on local food and its sustainability advantages since the bid stage.¹²⁵ The Olympic and Paralympic venues are covered by the Olympic sponsorship agreements, which give major partners exclusive rights to brand certain types of product – for example,

¹²² On your marks, get set, grow, CSL review of food across the London 2012 programme, April 2010 (hereafter referred to as CSL 2012 food review) page 28

¹²³ Environment Committee 15 July 2010, transcript pages 27-28

¹²⁴ Food vision, page 16

¹²⁵ Towards a one planet 2012; see also London 2012 Candidate File, theme 5 Environment, page 87

Cadbury is the exclusive branded provider of chocolate and packaged ice cream. Catering is provided by other suppliers on an un-branded basis.¹²⁶

Catering outside the Olympic and Paralympic sites (such as on live sites) is to be provided under separate procurement arrangements and therefore provides a further opportunity to use local and independent catering suppliers.

Recommendation 11

The GLA should set out (by June 2011) how and to what extent the live sites they will run expect to use and promote local and independent caterers and food producers.

¹²⁶ CSL 2012 food review, page 18

6 Conclusion

We welcome the significant steps that London 2012 is taking to make the 2012 Olympic and Paralympic Games sustainable. We commend the innovative work they have done in terms of mapping the carbon footprint and reduction work, in terms of developing the low-emission Olympic fleet, and the management of waste from the Games.

However, there have been some areas where the aspiration has not been met; the London sustainable waste handling and energy generation sectors have not been able to respond to the Games in all the ways that had been hoped.

There also remain a number of areas where there is still significant work to do to ensure that the Games lives up to its environmental aspirations. It remains to be seen how carbon emissions from travel to London will be reduced, and there needs to be more evidence that the approach to compensating for residual carbon emissions will work. London's air quality in 2012 is likely to remain an issue, and the impact of the Olympic Route Network on air quality is still an unknown factor.

Also, the GLA's plans for London as a host city – the experience of visitors and locals at Games time – are much less developed and remain an area of serious concern. This report highlights the post-use management of temporary materials and of Games-time waste, the application of sustainable events standards, and the implementation of sustainable food standards and aspirations.

For the challenges that London has overcome and will overcome between now and the establishment of the Olympic legacy, it is vital to capture the detailed learning, to inform planning for other events, and to set a standard for future Olympic and Paralympic Games. The Committee hopes not only that London is the most sustainable recent Games, but also that the lessons learned from London's experience ensure that every future Games does even better.

Appendix 1 Key Olympic sustainability commitments

In each section we examine a number of key London 2012 commitments. These are summarised below:

- 'Green travel plans' for ticketed spectators and workforce
- Long-distance domestic and near continental visitors (including teams and officials) encouraged to use rail rather than air or car transport
- Reasonable endeavours to ensure that 90% of venue overlays and temporary materials to be re-used, recycled or recovered after the Games
- 20% Games-time electricity from new local renewable energy sources (and 20% legacy energy from on-site renewables)
- Compensating for residual emissions by knowledge transfer, influencing standards and influencing behaviour change
- All competition venues operated as 'low-emissions venues' at Games-time
- 70% of Games-time waste re-used, recycled or composted; zero direct to landfill
- To be a catalyst for new waste management infrastructure in East London

Appendix 2 Staging elements of the reference carbon footprint¹²⁷

Item	Status	Thousand tonnes CO ₂ e	Percentage of staging emissions
Spectators – air travel	Associated	345	31%
Operations - overlay	LOCOG owned	199	18%
Spectators - accommodation	Associated	102	9%
Spectators – car travel	Associated	68	6%
Spectators - merchandise	Shared/LOCOG owned	66	6%
Operations - media	Shared/associated	66	6%
Operations – IT services	LOCOG owned	50	4%
Operations – transport services	LOCOG owned	34	3%
Operations – travel grants (athlete and official travel)	LOCOG owned	29	3%
Spectators – catering and waste (ticketed events)	Shared/LOCOG owned	27	2%
Spectators – rail and tube travel	Associated	23	2%
Spectators – catering and waste (non-ticketed events)	Associated	20	2%
Operations – Games workforce and athletes (uniforms and catering)	LOCOG owned	16	1%
Operations – ODA staff and travel	ODA owned	14	1%
Operations – venue energy use	LOCOG owned	14	1%
Spectators – coach or bus travel	Associated	13	1%
Operations – LOCOG staff and travel	LOCOG owned	9	1%
Operations – ceremonies and culture	LOCOG owned	9	1%
Operations - other	LOCOG owned	9	1%

¹²⁷ The figures are derived from the Reference carbon footprint study. For some items, tonnages are given explicitly in that report, but for others the tonnages have been derived from percentages given on pages 32 and 42 for each item within spectator or operations emissions. That study is itself based on initial data of varying quality, so all of these figures are in any case approximate only.

Appendix 3 Recommendations

Recommendation 1

LOCOG should produce, in advance of ticket launch (spring 2011), a plan to promote sustainable travel at the point of ticket sale.

Suggested elements for this plan include:

- working with ticket distributors such as north-west Europe National Olympic Committees
- working with providers of rail and coach transport, and of carbon offsets
- informing spectators about sustainable travel options and facilitating access to them
- developing special promotional fares for the Games period.

Recommendation 2

London 2012 and GLA City Operations should (by June 2011) set targets for the re-use of temporary materials and say how this will be monitored and reported on. When reporting on the leasing of temporary materials, it should be made clear whether materials are new or re-used at the beginning of the lease, and whether they are available for re-use after the lease.

Recommendation 3

LOCOG should increase its efforts to secure new local renewable sources to deliver 20 per cent of Games-time electricity, provided that these new sources can be delivered with sufficient local capacity and in a cost-effective way.

Recommendation 4

GLA City Operations should publish, by June 2011, plans showing how London 2012 sustainability standards, including carbon footprint management, will be applied at the live sites they will run and in cultural events which the Mayor sponsors, and how the standards will be monitored and reported on.

Recommendation 5

The GLA group should immediately commit to take up the environmental standards coming out of the Olympics and Paralympics, such as BS 8901, and should implement them across all relevant operations as soon as practicable.

Recommendation 6

London 2012 should set out, by March 2011, how it will quantify the carbon savings, to be achieved through take up of best practice

standards and wider behaviour change, that are to compensate for the unavoidable emissions of the Games. The quantification and attribution should be robust, matching Gold Standard offsets or equivalent.

London 2012 should also by December 2011 give an initial tonnage estimate for the carbon to be compensated. London 2012 should seek to achieve savings greater than the unavoidable owned emissions and thereby achieve a net-positive carbon impact.

Recommendation 7

The ODA should ensure that the revised Strategic Environmental Assessment of the Olympic transport plan is published, with the modelling of Games-related traffic and emissions, in time to inform the consultations on each element of the ORN. Decision on the ORN should not be taken until this informed consultation has taken place.

Recommendation 8

The Mayor should publish, by December 2011, NO₂ concentration modelling for Games time, taking into account traffic and other activity related to the Games. The Mayor should take, or secure from the Government, action to ensure that NO₂ levels are reduced as far as possible towards the EU limit (or, failing that, the tolerance margin) by the time of the 2012 Games.

Recommendation 9

There should be best-practice re-use and recycling facilities not only in Olympic and Paralympic venues but around them, at live sites, on London's transport system and in other key visitor destinations. The Mayor, with Games organisers, sponsors and GLA City Operations, should (by June 2011) set out plans to achieve this.

Recommendation 10

LOCOG should take active steps to secure the achievement of Food Vision aspirational standards. With sponsors and suppliers, it should set out (by March 2011) how and to what extent each aspirational standard is expected to be met.

Recommendation 11

The GLA should set out (by June 2011) how and to what extent the live sites they will run expect to use and promote local and independent caterers and food producers.

Appendix 4 Orders and translations

How to order

For further information on this report or to order a copy, please contact Ian Williamson, Scrutiny Manager, on 020 7983 6541 or email: ian.williamson@london.gov.uk

See it for free on our website

You can also view a copy of the report on the GLA website:
<http://www.london.gov.uk/assembly/reports>

Large print, braille or translations

If you, or someone you know, needs a copy of this report in large print or braille, or a copy of the summary and main findings in another language, then please call us on: 020 7983 4100 or email: assembly.translations@london.gov.uk.

Chinese

如您需要这份文件的简介的翻译本，
请电话联系我们或按上面所提供的邮寄地址或
Email 与我们联系。

Vietnamese

Nếu ông (bà) muốn nội dung văn bản này được dịch sang tiếng Việt, xin vui lòng liên hệ với chúng tôi bằng điện thoại, thư hoặc thư điện tử theo địa chỉ ở trên.

Greek

Εάν επιθυμείτε περίληψη αυτού του κειμένου στην γλώσσα σας, παρακαλώ καλέστε τον αριθμό ή επικοινωνήστε μαζί μας στην ανωτέρω ταχυδρομική ή την ηλεκτρονική διεύθυνση.

Turkish

Bu belgenin kendi dilinize çevrilmiş bir özetini okumak isterseniz, lütfen yukarıdaki telefon numarasını arayın, veya posta ya da e-posta adresi aracılığıyla bizimle temasa geçin.

Punjabi

ਜੇ ਤੁਸੀਂ ਇਸ ਦਸਤਾਵੇਜ਼ ਦਾ ਸੰਖੇਪ ਅਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਲੈਣਾ ਚਾਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਇਸ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਉਪਰ ਦਿੱਤੇ ਡਾਕ ਜਾਂ ਈਮੇਲ ਪਤੇ 'ਤੇ ਸਾਨੂੰ ਸੰਪਰਕ ਕਰੋ।

Hindi

यदि आपको इस दस्तावेज़ का सारांश अपनी भाषा में चाहिए तो उपर दिये हुए नंबर पर फोन करें या उपर दिये गये डाक पते या ई मेल पते पर हम से संपर्क करें।

Bengali

আপনি যদি এই দলিলের একটা সারাংশ নিজের ভাষায় পেতে চান, তাহলে দয়া করে ফো করবেন অথবা উল্লেখিত ডাক ঠিকানায় বা ই-মেইল ঠিকানায় আমাদের সাথে যোগাযোগ করবেন।

Urdu

اگر آپ کو اس دستاویز کا خلاصہ اپنی زبان میں درکار ہو تو، براہ کرم نمبر پر فون کریں یا مذکورہ بالا ڈاک کے پتے یا ای میل پتے پر ہم سے رابطہ کریں۔

Arabic

الحصول على ملخص لهذا المستند بلغتك،
فارجاء الاتصال برقم الهاتف أو الاتصال على
العنوان البريدي العادي أو عنوان البريدي
الإلكتروني أعلاه.

Gujarati

જો તમારે આ દસ્તાવેજનો સાર તમારી ભાષામાં જાણતો હોય તો ઉપર આપેલ નંબર પર ફોન કરો અથવા ઉપર આપેલ ટપાલ અથવા ઇ-મેઇલ સરનામા પર અમારો સંપર્ક કરો.

Appendix 5 Principles of scrutiny page

An aim for action

An Assembly scrutiny is not an end in itself. It aims for action to achieve improvement.

Independence

An Assembly scrutiny is conducted with objectivity; nothing should be done that could impair the independence of the process.

Holding the Mayor to account

The Assembly rigorously examines all aspects of the Mayor's strategies.

Inclusiveness

An Assembly scrutiny consults widely, having regard to issues of timeliness and cost.

Constructiveness

The Assembly conducts its scrutinies and investigations in a positive manner, recognising the need to work with stakeholders and the Mayor to achieve improvement.

Value for money

When conducting a scrutiny the Assembly is conscious of the need to spend public money effectively.

Greater London Authority

City Hall
The Queen's Walk
More London
London SE1 2AA

www.london.gov.uk

Enquiries 020 7983 4100
Minicom 020 7983 4458