

ONE PLANET SPORT

Part 1: Beyond London 2012



Supported by:



BioRegional

solutions for sustainability

Introduction

The London 2012 Olympic and Paralympic Games are seen as one of Great Britain's greatest success stories of this century so far. Key ingredients were the sporting success of the home team, the spectacular opening and closing ceremonies and the delivery of gigantic and striking venues set in a magnificent new urban park reclaimed from partial dereliction. And, not least, the welcoming, inspiring atmosphere that endured throughout Games time.

These Games demonstrated that a mega event can support real progress towards sustainable development and act as an inspiring exemplar. Despite some challenges and shortfalls, there was a serious and continuous commitment to sustainability from the time London put together its bid almost a decade ago through to the Games themselves in the summer of 2012 and, thus far, their on-going legacy.

“Sustainability needs to be built-in and embedded rather than a label on the outside, and this is one of the successes... London 2012 achieved.”

Sue Riddlestone OBE, CEO and Co-Founder BioRegional

The innovation and technical solutions that developed have provided practical demonstrators of how a commitment to sustainability can drive improvements in performance and reduce costs, whilst adding value and protecting against risks.

“Sustainable procurement helps ensure value for money and lower operational costs whilst protecting the environment and bringing us wider societal benefits.”

Lord de Mauley, (then) Parliamentary Under-Secretary for Resource Management, Local Environment and Environmental Science (Defra)¹

Some of very positive sustainability outcomes from the Games so far have been the resources produced to support sustainability learning and practice, these include the following:

- The launch of the [Learning Legacy website](#), which contains a wealth of detailed lessons, written by practitioners working to deliver the Games.
- The [Commission for Sustainable London 2012](#) has produced excellent annual reports providing independent monitoring on progress against sustainability.
- The ISO 20121:2012 Event sustainability management system² and the Event Organisers Sector Supplement (EOSS)³ provide a useful management process and list of KPIs respectively.
- Having been a part of the London 2012 journey, from bid to legacy, we want to share our experience and learning to ensure future games and mega events can raise the sustainability bar further still and benefit from what proved to be an exhausting and yet hugely rewarding journey.

This document forms one of three resources that we have designed to support a sustainable legacy for sporting activities and events. Here we present our reflections on the key ingredients needed to ensure a genuinely sustainable sporting event. These are predominantly drawn from the successes achieved, but other points come from the more neglected or incomplete ambitions that we feel need to be better addressed in future.

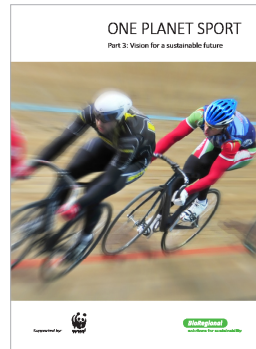
To accompany this we have produced two useful resources to help the sports industry build on the progress of London 2012 to start their own 'One Planet' journeys:



One Planet Sport Part 2: The athlete's role

BioRegional carried out an ecological footprint analysis of four Team GB athletes, who all participated in the London 2012 Olympic and Paralympic Games. This research reveals the range of actions being taken by

athletes to live a sustainable lifestyle and how this is often counter-balanced by the pressures of being an elite athlete in a less than sustainable world.



One Planet Sport Part 3: Vision for a sustainable future

This provides a simple and coherent statement of what genuine sustainability can mean for sporting venues and event organisers. Taking its lead from climate science and ecological

footprinting, the manual updates the sustainability framework that laid the foundations for London 2012 to incorporate lessons learnt from our practical experience in supporting its delivery.

Sustainability-led solutions

LOCOG embedded sustainability into the procurement process to help achieve £75m cost savings against their budget. Specific examples of initiatives which delivered cost savings include the following:

- **Reuse created £8m income** – LOCOG set a stretch target to reuse and recycle 90% of materials, by weight, from temporary buildings and overlay; and actually achieved 99%. This drove procurement of demountable and reusable structures, that were then easier to sell or hire; generating a cost saving as a result.
- **Resource efficiency saved £9.5m** – resource efficiency in electricity and fuel use helped generate significant savings against the budget.
- **Recycling rebate of £150,000** – by creating a revenue sharing contract to incentivise recycling, income from recyclates was shared back to LOCOG reducing waste costs.

The ODA also had clear targets during the build phase to drive innovations and cost savings. The total savings have not been estimated, but these included the following:

- **Lean design saves £1.5m** – the choice of a cable net roof design, over the steel arch design, not only used about 1,000 tonnes less steel and resulted in embodied carbon savings of over 27 per cent but also created cost and time savings.
- **Reuse of crushed concrete on the Stadium saved £1m** - Reuse of 104,000 tonnes of recycled crushed concrete saved £1m and more than 20,000 lorry movements.
- **On-site soil remediation saved £68m** – driven by the target to reuse and recycle 90% of waste, the ODA set up treatment plants to clean and reuse all contaminated soil on-site during the construction phase. This created huge savings in costs, lorry movements and fuel emissions compared to sending it off-site for disposal.
- **On-site cement saved £750,000** – by seeking a greener concrete supplier to deliver by sustainable transport, the on-site solution came in under market rate creating a significant saving.

How BioRegional and WWF were involved in the Games

In 2004 BioRegional, with the support of WWF-UK, worked with the London 2012 bid team to write the bid sustainability strategy. The aim was for it to be “the most sustainable Olympic and Paralympic Games of modern times”. The strategy, *Towards a One Planet Olympics*, centred on the One Planet Living approach and ten principles.⁴ It was also backed by a memorandum of understanding signed by the three organisations. This ambition was one reason why, in July 2005, the International Olympic Committee chose London for the XXXth Olympiad.

“The One Planet Living concept created a nice, communicable way to talk about sustainability, and provided a readymade framework to differentiate the London bid”

Simon Lewis, 2012 Manager, WWF-UK

This strategy went on to inform the huge amount of planning and operational work related to sustainability which was done by the Olympic Delivery Authority (ODA), the London Organising Committee of the Olympic and Paralympic Games (LOCOG) and many public and private sector organisations involved in the Games over the following seven years.

The Games, like other great international sports festivals, have huge environmental impacts – think of the extra emissions from use of aviation and ground transport and hotel accommodation linked to hundreds of thousands of spectators, competitors and those who serve them. Add in the extra environmental damage, waste and depletion of natural capital due to constructing gigantic new venues and their attendant infrastructure. WWF had often had to warn about the harm being done by the Games as they move around the world and fight rearguard actions to reduce it.

But we felt London could be different. The chosen site, a vast area of poorly planned and semi-derelict and contaminated land in Stratford, east London, was surrounded by low income communities. Here was an opportunity to make large, mutually supporting gains in all three pillars of sustainability – environmental, economic and social.

Beyond the new Olympic park and venues, the physical legacy of the London games would be tens of thousands of new homes, commercial development and jobs in the surrounding area, along with the infrastructure required to service them.

For WWF UK, the initial impetus to get involved came from its campaigning for sustainable new homes in Britain. For BioRegional, it was the Chief Executive Sue Riddlestone’s membership of the London Sustainable Development Commission (LSDC) which brought us into contact with the capital’s Olympic bid. The two organisations had already begun collaborating on using the concept of One Planet Living as a framework for moving towards sustainability.

The Olympics capture the world’s imagination and attention in a way that nothing else can. Our hope was that the power and inspiration of the Games could be harnessed to achieve major advances in sustainability which would ripple outwards, far beyond Stratford. Bringing the Games to London could create a positive legacy which, over time, would far outweigh any negatives.

They could be used to secure big sustainability gains in the large-scale new development in and around the site compared to the norm. And they could also change people’s behaviour and business thinking and practice, particularly in the construction, catering and food and drink industries and their supply chains.

“We wanted to be able to look beyond the ‘peak’ environmental impacts in preparing and hosting the games and go for the bigger prize of maximising pro-sustainability behaviour in the end.”

Simon Lewis, 2012 Manager, WWF-UK

Having played a part in London’s bid victory, we watched developments closely during the run-up to the Games. We acted as “critical friends” throughout, as the sustainability delivery strategy⁵ and a sustainability plan, entitled *Towards a One Planet 2012*⁶, were prepared and published in 2007 (the latter was revised and updated in 2009) and as the two main London 2012 bodies, the ODA and LOCOG, worked to implement these.

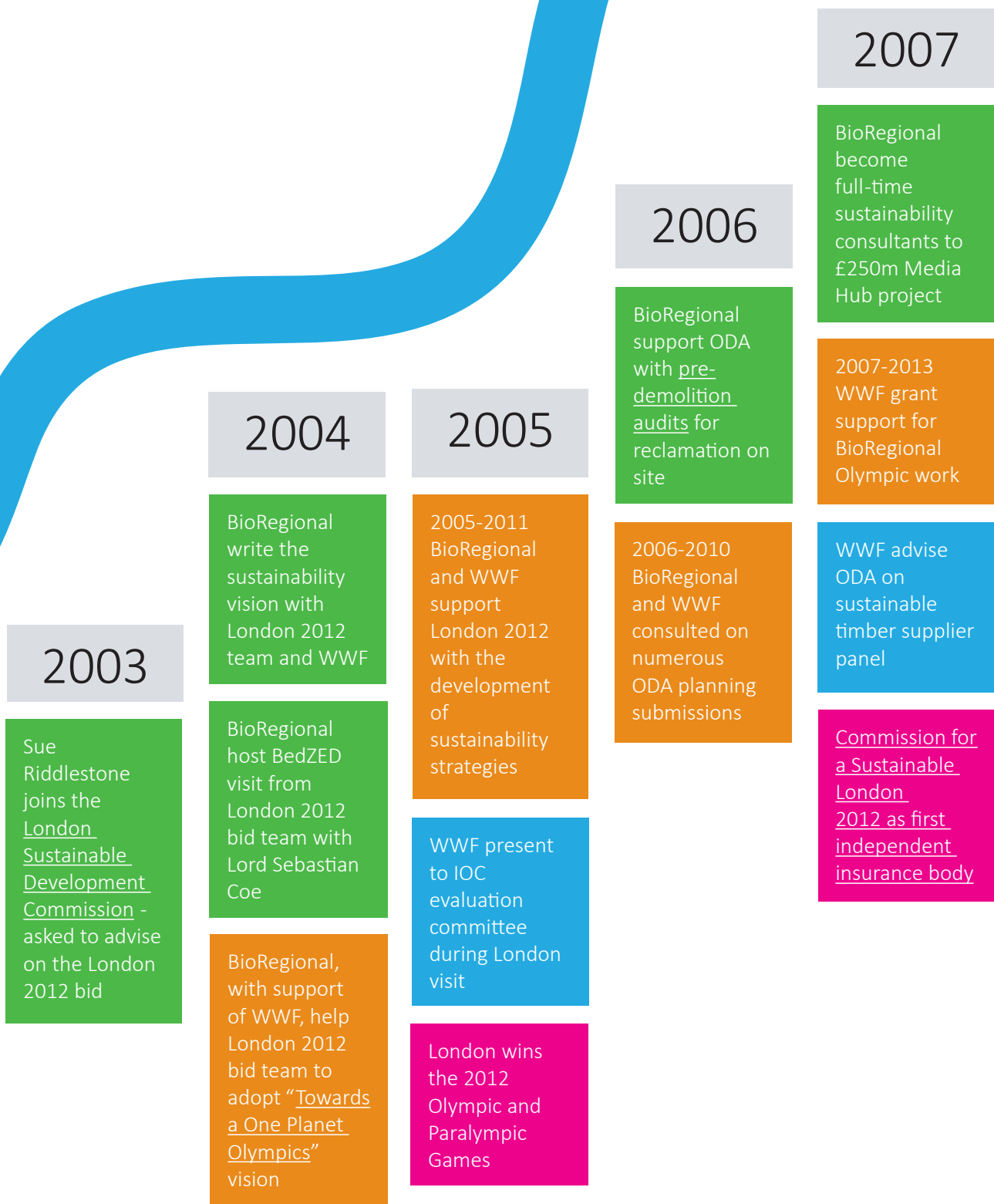
In 2012, just before the Games opened, we published Towards a One Planet Olympics revisited; this looked at how well the Olympics and Paralympics were living up to the sustainability promises made in the London 2012 bid document.⁷

We assessed progress against all 76 of these promises and awarded them green, red and amber scores respectively. As we stated in the report, London 2012 set out with the powerful ambition of being an event with positive environmental, social, sporting and economic impacts. We concluded then that, despite some disappointments along the way, London 2012 set a new sustainability standard for future Games; and that we saw remaining potential to do more to support changes beyond the Olympic Park itself. In this way London 2012 has provided a powerful and overall positive platform for us to move towards more sustainable ways of living.

This view mirrors that of the Commission for a Sustainable London (CSL), who have acclaimed London 2012 as the most sustainable games ever.⁸ Its final report asserted that “the sustainable practices inspired by London 2012 should out-weigh the inevitable negative [environmental] impacts of the Games over time.”⁹

We are hopeful that the commission will be proved right, although it will be several years before a proper judgement can be made.

Key points on our London 2012 journey



- BioRegional
- London 2012
- BioRegional and WWF
- WWF

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2009

BioRegional support ODA to create on-site reuse process for waste during the big build

BioRegional and WWF participation in ODA technical workshops

BioRegional and WWF input to OPLC Legacy Masterplan Framework

WWF begin support to Coca Cola London 2012 team

'Towards a One Planet 2012' Sustainability Plan 2nd edition

London 2012 Food vision

2010

WWF join GRI EOSS advisory board

London 2012 Carbon footprint study

2011

BioRegional run 'One Planet Experience' visitor centre at BedZED

BioRegional and WWF support to LLDC on legacy Sustainability visions and commitments

2012

BioRegional and Coca Cola run the 'One Planet Centre' at the Athletes' Village during Games time

BioRegional and WWF publish: 'Towards a One Planet Olympics Revisited'

LLDC publish: Your Sustainability Guide to the Queen Elizabeth Olympic Park 2030

Learning Legacy website completed with lessons from across the programme

CSL's 2012 post games report declares "most sustainable games ever"

2013

Sue Riddlestone awarded an OBE for services to sustainable business and London 2012

BioRegional support Cofely with Energy Centre Visitor Exhibition at the Queen Elizabeth Olympic Park

Key success factors for a more sustainable Games

Having reflected on the key success factors, from concept to implementation, we have identified the following areas as the key ingredients needed to ensure a genuinely sustainable Games.

“At times the huge complexity of the different organising and political bodies could be a barrier to clear leadership and decision-making. There were dangerous periods when vital sustainability gains were nearly lost.”

Simon Lewis, 2012 Manager, WWF-UK

1. Clear vision and strong leadership at the earliest stage:

Making sustainability a core issue of the London bid was critical to success. So too, was early and sustained commitment to the issue by senior political and executive leaders, including the previous London Mayor Ken Livingstone. Both of these things helped to secure important early and binding commitments on issues such as the Games being served primarily by public transport. They helped ensure a more coherent, over-arching pursuit of sustainability, pushing it downwards and outwards into supply chains.

2. Independent engagement raises standards:

Engaging wider stakeholders and NGOs early on helped to give a breadth of understanding and quickly raised key issues and opportunities. One outcome from such dialogue was the creation of the Commission for a Sustainable London 2012 (CSL), an independent body given responsibility for scrutinising sustainability performance. During six years of existence it produced a [series of reports](#), recommendations and interventions aimed at

keeping the Games on track. We think CSL played a very important role and would urge that similar bodies should be set up for future summer and winter Olympics and other major international sporting events. Alongside this formal ‘watchdog’ role, London 2012 continued to maintain a live dialogue with wider stakeholders such as WWF and BioRegional, allowing input and support in pre-empting and solving challenges as and when they arise. There is great value in allowing for the combination of the high level scrutiny alongside on-the-ground collaboration.

3. Comprehensive ‘3 –pillars’ approach to sustainability:

Bringing environment, social and economic issues together created a coherent overarching framework that all parties could buy in to. Being comprehensive meant that issues were properly understood, in order to find the most beneficial solutions. For example, the decision to estimate the full carbon footprint of the Games¹⁰ early on. This focussed attention on where the biggest savings in greenhouse gas emissions could be made. It demonstrated that half of these emissions were ‘embodied carbon’ linked to the materials and construction of the venues¹¹. This helped steer the direction taken in seeking cost and efficiency savings towards the use of lower carbon construction materials and techniques, to make the venue structures more lightweight and to maximise the use of temporary buildings which could be dismantled and reused. The embodied carbon of venues was reduced by 17%, from an anticipated 1.73 million down to 1.44 million tCO₂e. This demonstrated that cutting carbon also cut costs. It also compelled the major construction groups and their suppliers to keep focussing on these issues, to learn how to make progress and sometimes to collaborate on them. Future events can benefit from embedding a comprehensive carbon management strategy early on to identify similar savings opportunities.

4. Established management systems with targets in contracts:

Amid the enormous complexity of delivering mega events, the establishment and implementation of thorough management systems, and ensuring these are fully tiered down into contracts and subcontracts, is critical to achieving the aspiration. Where this did happen during the London 2012 programme, it proved extremely effective in ensuring key sustainability criteria didn't get lost amongst the complexity and pressure of delivering such an enormous project. Where it didn't, often because no precedent had been set and systems had to be devised from scratch, progress was slower and lessons were learnt as a result. For example, during the period when LOCOG and the ODA were being initially set up and senior leaders appointed, some of the early and strong initiative on sustainability was lost and the ball was in danger of being dropped. Some contracts were agreed which failed to deliver on the bid's high aspirations, and there was an early failure to maximise the reuse of materials arising from demolition on site in constructing venues and infrastructure. Some of this lost ground was recovered later on. Future events can benefit by adapting the ready-made suite of valuable resources developed during the London 2012 programme, such as the ISO 20121:2012 Event sustainability management system¹², the Event Organisers Sector Supplement (EOSS)¹³ and the policy and guidance templates available in the Learning Legacy¹⁴ website's 'champion products' section.

5. Influencing behaviours: Mega events, with their enormous reach to millions of people, offer the perfect opportunity to ask visitors and spectators to understand the issues and adopt pro-sustainability behaviours. People flocking to the Park could see how easy it was to get there without using cars and how easy it was to dump litter and waste into separate bins to facilitate recycling. They could enjoy beautiful, semi-natural planting all across the Olympic Park. Several of the companies selling products and services on site had strong stories to tell about reducing environmental harm, boosting recycling and conserving natural resources. London 2012 could have gone further in using sustainability achievements to engage hundreds of thousands of visitors and the watching millions.

6. Appropriate partnerships: High profile events bring higher reputational risks, and it is vital to choose partnerships carefully. The main business activity of some of the commercial sponsors of London 2012 seemed at odds with progress on environmental sustainability; all the more so for some of the 'sustainability partners'; for example, oil and gas exploration and production in the case of BP. This newly created category may have brought in £15m of sponsorship revenue, but the choices made laid the Games open to potential accusations of greenwashing. This missed the opportunity to identify sponsors with more compelling stories to tell on sustainability.¹⁶

7. Spreading knowledge and transforming business:

Delivering such an enormous programme engages a diverse range of industries and practitioners. This creates huge potential to develop new best practices and share these as widely as possible. We particularly welcome the setting up of the Learning Legacy website for London 2012, www.learninglegacy.independent.gov.uk, with a mass of material which passes on lessons learned from constructing the Park and venues and planning and operating the events during games time. Much of this material concerns sustainability. We are beginning to see the huge extent to which this has influenced practices across the industries involved. Among the dozens of reports, case studies and research summaries, we would like to have seen one examining the financial costs and benefits resulting from the strong focus on sustainability as compared to a "business as usual" approach.

"We want to pass on nine years of hard won experience...in the end it wasn't that complicated; it added genuine delight, such as the natural planting across the Olympic Park, and it saved an absolute fortune!"

Sue Riddlestone, CEO and Co-founder BioRegional

The future

We want a great sustainability legacy from London 2012 – one that continues to grow deeper locally and across the UK, that ripples out to the wider UK and international business communities, and one that builds momentum with each of the upcoming Olympic and Paralympic Games.

Local Legacy

We hope it will be found in new homes and buildings around the Queen Elizabeth Olympic Park and beyond, and we will be working with our existing and new partners to help support the delivery of this.

Business Legacy

We also hope it will be found in changes embedded in the operations and development of thousands of businesses, large and small, which were involved in London 2012 and had to learn new lessons in sustainability as a result.

Sporting Legacy

We now need the International Olympic Committee, alongside other international sports organisations and sponsors, to respond to London 2012's high ambitions, its high achievement and its shortcomings, by setting clearer sustainability standards and raising the aspiration to at least what has now been demonstrated possible.

In doing so we would ensure that future Olympic and Paralympic games and other international sports events will be competing to take our global journey towards sustainable development, further and faster than ever before.

End notes

1. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224038/pb13977-sustainable-procurement-construction.PDF
2. ISO 20121:2012 specifies requirements for an event sustainability management system for any type of event or event-related activity, and provides guidance on conforming to those requirements. The standard was adopted and implemented in the delivery of the London 2012 Olympic Games. www.iso.org
3. The GRI Event Organisers Sector Supplement (EOSS) provide tailored range of indicators suitable for reporting on the impacts of events. The London 2012 Olympic Games adopted selected indicators from these in reporting environmental impacts. www.globalreporting.org
4. <http://www.bioregional.com/flagship-projects/london-2012/one-planet-2012/>
5. <http://learninglegacy.independent.gov.uk/documents/pdfs/sustainability/22-sustainable-development-strategy-sust.pdf>
6. <http://learninglegacy.independent.gov.uk/documents/pdfs/sustainability/1-cp-london-2012-sustainability-plan-2nd-edition.pdf>
7. <http://www.bioregional.com/files/publications/towards-a-one-planet-olympics-revisited.pdf>
8. http://www.cslondon.org/wp-content/uploads/downloads/2012/11/CSL_Post%20Games%20Report_Final.pdf
9. <http://www.cslondon.org/wp-content/uploads/downloads/2013/03/CSL-Making-a-Difference-2013.pdf>
10. The London 2012 Carbon Footprint Methodology and Reference Footprint is available here: <http://learninglegacy.independent.gov.uk/publications/london-2012-carbon-footprint-methodology-and-reference-f.php>
11. <http://learninglegacy.independent.gov.uk/documents/pdfs/sustainability/rs-carbon-reduction-and-compensation.pdf>
12. ISO 20121:2012 specifies requirements for an event sustainability management system for any type of event or event-related activity, and provides guidance on conforming to those requirements. The standard was adopted and implemented in the delivery of the London 2012 Olympic Games. www.iso.org
13. The GRI Event Organisers Sector Supplement (EOSS) provide tailored range of indicators suitable for reporting on the impacts of events. The London 2012 Olympic Games adopted selected indicators from these in reporting environmental impacts. www.globalreporting.org
14. The champion products section provides key policies on issues such as sourcing Materials and Waste <http://learninglegacy.independent.gov.uk/themes/sustainability/champion-products.php>
15. <http://learninglegacy.independent.gov.uk/documents/pdfs/sustainability/cs-london-2012-sustainability-partners.pdf>

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