

HEALTH AND SAFETY EXECUTIVE			
CONSTRUCTION INDUSTRY ADVISORY COMMITTEE (CONIAC)			
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## London 2012 Learning Legacy Research

### Summary

1. This paper provides information about the Olympic Delivery Authority (ODA) London 2012 Learning Legacy research.

### Background

2. The ODA created its Learning Legacy programme to share the knowledge and lessons learned from the construction of the Olympic Park and other venues (known as the 'Big Build'), to help improve standards within the sector and act as a showcase for a major British infrastructure project.
3. At its July 2011 meeting Lawrence Waterman, ODA Head of Health and Safety gave a presentation to CONIAC entitled '*London 2012 Introduction to the Learning Legacy Programme*'. (see [www.hse.gov.uk/aboutus/meetings/iacs/coniac/130711/13-july-2011-olympic-hs-legacy.pdf](http://www.hse.gov.uk/aboutus/meetings/iacs/coniac/130711/13-july-2011-olympic-hs-legacy.pdf)).

### Argument

4. The ODA worked closely with contractors, industry partners, Government bodies (including HSE) and academia to capture the lessons learned and document best-practice examples and innovations for the benefit of future projects.
5. The Learning Legacy programme is categorised into 10 themes, including; design and engineering innovation; procurement and supply chain management; project and programme management; sustainability; and transport; as well as health and safety. Within each theme, there are short reports, tools and templates, case studies and research summaries that document how each area of work was approached and the lessons that have been learned that could benefit others.
6. The Learning Legacy presents HSE with a unique opportunity to identify lasting benefits from the approaches taken to managing health and safety throughout the project. It is an opportunity to promote and

embed the good practices developed during London 2012 into the culture of other construction projects, and to apply innovative approaches to risk management. HSE managed the health and safety theme, and a series of seven research projects were carried out to identify and analyse health and safety good practice and lessons learned. The projects were funded by HSE with contributions from ODA, Institute of Civil Engineers and Institution of Occupational Safety and Health.

7. The research revealed that many initiatives adopted during the Big Build were not costly or complicated, and the lessons are transferable to all parts of the construction industry. Information regarding the specific health and safety research projects is set out in the Annex to this paper.

### **Recommendation**

8. CONIAC members are invited to note the information in this paper with a view to further discussions at the March 2013 CONIAC. Members will be encouraged to assist in promulgating the successes and lessons learned to benefit the wider construction industry.

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### Learning Legacy Health and Safety Research

1. There are seven health and safety research reports within the ODA Learning Legacy programme. The following table provides detail of each of the research projects:

Title	<b>1. Leadership and worker involvement on the Olympic Park</b>
Funded by	HSE
Researcher	Institute for Employment Studies
Published	October 2011
Summary	This research considered leadership and worker involvement practice across selected projects on the Olympic Park. The aim was to understand the degree to which the various approaches impacted positively or negatively on worker involvement in health and safety matters, and identify what could potentially be transferable both to other construction projects and to industry more widely. More specifically, the research sought to explore in more detail the range of initiatives and approaches used. Findings include:
Findings	<p><u>Leadership</u></p> <ul style="list-style-type: none"> <li>• The ODA made a strong commitment to the health and safety of workers from the outset and made a safe working environment one of their priority themes.</li> <li>• The genuine commitment, clear vision and focus shown by the leadership team led to the development of a strong safety culture throughout the supply chain.</li> <li>• The ODA engaged contractors and empowered them to develop their own good practice and drive their own health and safety performance.</li> </ul> <p><u>Worker involvement</u></p> <ul style="list-style-type: none"> <li>• A 'fair blame' culture helped create an environment where workers felt comfortable raising health and safety issues and could participate in solving problems.</li> <li>• Effective communication up and down the chain of command was achieved via a number of means, including: induction, pre-task briefings, meetings, posters, safety alerts and anonymous near-miss reporting.</li> <li>• There was mandatory training for supervisors, to assist them in leading and engaging the workforce.</li> <li>• There was reward and recognition for positive health and safety behaviour.</li> </ul>

Title	<b>2. Occupational health provision on the Olympic Park and Athletes' Village</b>
Funded by	HSE and ODA
Researcher	Institute for Employment Studies
Published	April 2012
Summary	This research examined the work of the free comprehensive, preventative occupational health service offered to all contractors on the Olympic Park and Athletes' Village. The service provides an example of what good practice can look like in assisting contractors to both meet their legal obligations and also take a more informed and involved approach to workplace health management. The report details examples of how the service worked, and what contractors and workers valued about it.
Findings	<ul style="list-style-type: none"> <li>• The occupational health provision has been recognised by the construction industry and beyond as one of the best implemented on any major construction project in the UK.</li> <li>• The inclusion of occupational hygienists in an integrated team with clinical staff enabled a co-ordinated approach across the preventative and clinical aspects of the service.</li> <li>• The OH team adopted a 'health like safety' approach, encouraging contractors to see health risk management as part of their day-to-day activities, and something that was simple to integrate with existing safety management.</li> </ul>
Title	<b>3. London 2012: The Construction (Design and Management) Regulations 2007 – Dutyholder roles and impact</b>
Funded by	HSE and Institution of Civil Engineers (ICE)
Researcher	Frontline Consultants
Published	July 2012
Summary	This project researched the extent to which CDM helped or hindered the construction of London 2012 by reviewing how those with duties under CDM put them into practice.
Findings	<ul style="list-style-type: none"> <li>• CDM 2007 was implemented successfully on the London 2012 construction programme.</li> <li>• The Client (ODA/DP) had a significant impact on health and safety.</li> <li>• Early and on-going planning, coordination and contractor involvement were crucial.</li> <li>• Principal contractors shared ideas and lessons learned.</li> <li>• Worker engagement helped to motivate the workforce and get key messages across.</li> </ul>
Title	<b>4. Safety culture on the Olympic Park</b>
Funded by	HSE
Researcher	Health and Safety Laboratory (HSL)
Published	July 2012
Summary	This research explored the 'safety climate' during the

	construction phase of London 2012 using the HSL Safety Climate Tool to collect data in the period 2008 - 2010.
Findings	<ul style="list-style-type: none"> <li>• Evidence that it is possible, through engagement, worker involvement and organisational commitment, to develop a strong safety culture in the construction industry.</li> <li>• A number of elements contributed to the development of an effective safety culture, including: <ul style="list-style-type: none"> <li>○ The strategic role of the ODA across the Park, with safety being set as a priority and integrated into the business from the outset through standards and requirements.</li> <li>○ The clarity throughout the supply chain of the organisational standards and requirements, including the desire for cultural alignment.</li> <li>○ The empowerment of Tier 1 contractors to develop their own processes and systems to deliver the ODA's objectives. The ODA focused on engaging contractors, enabling them to develop their own good practice and drive their own performance.</li> <li>○ Recognition of the prestige of working on the Olympic Park and striving for excellence in all activities, including health and safety.</li> <li>○ The scale of the project and the length of the construction phase, which meant that initiatives had time to 'bed in', and could be tailored to ensure their efficacy and success.</li> <li>○ Belief by workers in the genuine commitment within organisations, as the message was consistent and reiterated across the Olympic Park.</li> </ul> </li> </ul>
Title	<b>5. Talk the talk – walk the walk: An evaluation of Olympic Park safety initiatives and communication</b>
Funded by	IOSH and HSE
Researcher	Loughborough University
Published	July 2012
Summary	This project evaluated the effectiveness of health and safety communication and the impact on workers' awareness attitudes and behaviour. It also reviewed the transfer of knowledge into and out of the Olympic Park.
Findings	<ul style="list-style-type: none"> <li>• The process of communication, both formal and informal, was efficient. Communication was multi-directional and contractors communicated with each other frequently.</li> <li>• The ODA and the delivery partner facilitated the communication process by encouraging workforce engagement and the development of informal networks.</li> <li>• Formal systems were in place (e.g. multi-contractor meetings, cross-Park visits) to enable contractors to learn from each other and there was evidence that contractors were adopting good practice from other sites.</li> </ul>

	<ul style="list-style-type: none"> <li>Information was passed to contractors, clients and HSE, among others. There was clear evidence that good practice stemming from the Olympic Park was being implemented at non-Olympic sites.</li> </ul>
<b>Title</b>	<b>6. Pre-conditioning for success</b>
<b>Funded by</b>	HSE
<b>Researcher</b>	Loughborough University
<b>Published</b>	Planned for 30 November 2012
<b>Summary</b>	<p>This research set out to identify, understand and document the human and organisational aspects that underpinned the success of the ODA construction programme. Understanding <i>why</i> things were done, the underpinning thought processes and the way the factors interacted would determine any enabling or “pre-conditioning” factors. The ultimate objective was to suggest approaches that could be implemented “up-front” to “pre-condition” future projects for success. Things that did not work well and could undermine success would also inform.</p>
<b>Findings</b>	<ul style="list-style-type: none"> <li>The way in which individuals and organisations interacted had a significant influence on construction project outcomes.</li> <li>A number of characteristics were identified as being key to pre-conditioning, some fundamental (respect), some which affected the course of projects (clarity), some impacting on ways of working (collaborative).</li> <li>The following mechanisms were in place for these characteristics to have practical impact: <ul style="list-style-type: none"> <li>Leadership;</li> <li>worker involvement;</li> <li>culture change;</li> <li>communications systems;</li> <li>contracts and procurement;</li> <li>risk management, monitoring and assurance.</li> </ul> <p>Critically these mirror the principal subjects examined in the health and safety legacy research.</p> <p>This approach may require a change in mindset and an investment in time taken to think and to engage with others but does not require capital investment or significant expenditure.</p> </li> </ul>
<b>Title</b>	<b>7. Supply chain management for health and safety</b>
<b>Funded by</b>	IOSH
<b>Researcher</b>	Cardiff University
<b>Published</b>	Date tbc
<b>Summary</b>	<p>This research project assessed supply chain strategies on the Olympic Park and the driving factors behind them. It also considered their transferability.</p>
<b>Findings</b>	Not yet published

2. Complementing all seven research reports is the report *Delivering health and safety on the ODA construction programme*, providing an overview of health and safety on the London 2012 construction programme. Its aim was to provide the health and safety research projects with a consistent story of the health and safety management on the Olympic Park and Village and to contribute to publications.

3. Full reports and summaries of each of the research reports can be found on HSE's website at [www.hse.gov.uk/aboutus/london-2012-games/research-reports.htm](http://www.hse.gov.uk/aboutus/london-2012-games/research-reports.htm).