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HSE's Preparation for the 2012 Olympic and Paralympic Games			

Purpose of the paper

1. To provide the Board with an update on the progress of preparations for the London Olympic and Paralympic Games in 2012 and to provide a briefing on construction activities ahead of the Board's visit to the Olympic Park on 25 August 2009.

Background

2. The HSE approach to the Olympics was set out in papers to the Health and Safety Commission (HSC 06/79) and to the HSE's Executive Board HSE/07/125.

3. The HSE Olympic Games Coordinating Group (OGCG), comprised of representatives from key divisions in HSE and from the Local Authority (LA) sector continues to meet to provide a unified approach to HSE's regulation of the Olympic project. It is chaired by Stephen Williams, Director of Field Operations Division London and the Olympics. **Annex 1** sets out the aims and objectives for the Group and lists its current membership and roles.

4. A number of objectives have been identified for HSE's Olympic work

- to work with and through others on this project to drive up standards of health and safety.
- to be a best practice regulator, thereby enhancing the reputation of HSE.
- to capture lessons learned for future application.

These are being delivered through inspection, work with other regulators, stakeholder engagement and communication activities. A summary of key stakeholder activities is given in **Annex 2**

5. In addition to the work at the venues listed in **Annex 3**, the Olympics project has resulted in considerable activity in upgrading railway transport and infrastructure. The Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) (Amendment) Regulations 2008 (the EARR amendment regulations) have resulted in some changes of enforcement responsibility for construction activity on the railways summarised in **Annex 4**.

Argument

6. The health and safety regulation of the London Olympic and Paralympic Games is complex. Work with the Joint Local Authority Regulatory Services (JLARS) and other key local authorities will continue to ensure we have a comprehensive view of regulatory demarcation at different phases of the Olympics project and that there is a consistent approach between regulators. **Annex 5** summarises HSE's regulatory responsibilities through the various phases of the project.

Construction Phase

7. Construction work at the Olympic park is progressing well, enabling works, including remediation and routing of power cables into new tunnels dug beneath the site are almost complete and you will see at your visit of August 25, venues, infrastructure and other facilities under construction. The Olympics Park site consists of a number of separate sites and "packages". Each of these packages has a separate Principal Contractor. Brief descriptions of the main venues within the Olympic Park and a map are attached at **Annexes 6 and 7**.

8. Under the London Olympics and Paralympics Games Act 2006, the Olympic Delivery Authority (ODA) has been tasked with constructing the infrastructure on the Olympics Park site. The ODA appointed CLM, a joint venture of CH2MHill, Laing O'Rourke and Mace as its delivery partner to provide assurance for the project. During early interventions with the ODA, HSE requested that they draw up a clear statement of their overall procurement strategy, taking account of their duties as a client under the Construction (Design and Management) Regulations 2007 (CDM 2007); public procurement guidelines from the Office of Government Commerce and the industry agreed Common Minimum Standards. Their now published strategy is a model of its kind, with clear health and safety goals and targets and a clear public commitment to exemplary standards in the work that they do.

9. HSE Construction Division has developed an Intervention Strategy (extract in **Annex 8**) based on early intervention with designers and Principal Contractors. The aim of this is to ensure that the requirements of CDM 2007 are integrated into all stages of the project and throughout the supply chain. The HSE Strategy is supported by intervention plans for each project or package which ensures targeted, structured interventions at key stages and in support of the Core Agenda. Inspection Resource is drawn from across the London, South and South East Construction Unit.

10. HSE's work on the Olympic project provides an excellent opportunity to demonstrate in practice the improvements that can be made if some of the key elements of the new health and safety strategy for the UK, such as leadership and worker involvement, are enforced in practice and we are engaging with contractors accordingly.

11. This approach has been welcomed by ODA. The ODA are seeking to contribute to HSE's strategy particularly through

- their leadership programme that extends from Board level to each individual project
- Building competence – training programmes include apprenticeships, supervisor leadership, the plant school and the drive for a fully carded workforce
- Involving the workforce – engagement includes TUs, health and safety consultative arrangements and a clear thrust to ensure the involvement of every worker
- Creating healthier safer workplaces – through their occupational health provision

12. HSE has now delivered its 'early intervention' visits to the delivery teams for each of the main venues, and tailored intervention plans for each venue are now in place with visits targeting high risk activities well underway. For each venue, at least one early site inspection has been carried to check that the initial site arrangements are robust. Inspectors have also carried out unannounced inspections of common parts of the Olympic Park and other projects such as roads and bridge packages to check the management of interfaces between projects and the adequacy of traffic management arrangements and other key risks.

Performance

13. So far the accident incidence rate is well below the industry norm. Occupational health performance is less susceptible of measurement other than by observed behavioural indicators but in its philosophy and scope the provision by Park Health exceeds the requirements of legal compliance.

14. Construction of the venues remains ahead of schedule.

15. The Diversity Steering Group has suggested that you may wish to ask questions about progress on the Race Equality Scheme Action when you visit the Olympics:

to ensure that all contractors working on Olympic projects have systems in place for checking competence of and providing appropriate health and safety induction for all workers and that the Olympic Delivery Authority and its delivery partner's continue to monitor these systems to ensure equality of health and safety outcomes for all workers regardless of race, ethnicity or cultural background.

Beyond the Construction Phase

16. Looking at the project more broadly, beyond the construction phase responsibility for staging the 2012 Games rests with the London Organising Committee for the Olympic Games (LOCOG) which is a private liability company.

17. HSE has established contact with a range of stakeholders, including regular keep in touch meetings between Stephen Williams and Jeremy Beeton of the Government Olympic Executive (GOE). Work will continue with other government

departments including the Home Office and Cabinet office to ensure clarity of HSE's role, particularly with regard to the interface between safety and security issues.

18. Ministerial interest continues with Lord McKenzie paying visits to the Olympics Park site in February 2008 and July 2009. The Department of Work and Pensions Parliamentary Select Committee visited the site on 9 June 2009 and Judith Hackitt and Geoffrey Podger visited site on 28 May. In addition, the Minister is planning to hold a more formal reception in the House of Lords for parliamentarians interested in the Olympics project at which Stephen Williams will give a presentation.

19. Other Local Authority Regulatory Services (OLARS) has recently been established. So far HSE has had no interaction with OLARS but will establish links through LACORS. The members of OLARS are those local authorities which will host Olympics events, other than at the Olympic Park.

20. Other challenges will be presented by opportunistic ventures, particularly in London. For HSE this will range from hotel and guest house refurbishment work to people renting out their own homes for the duration of the Games, thereby incurring landlords' responsibilities for gas safety.

21. HSE continues to work with LA and other regulators, in London and elsewhere to resolve regulatory complexities, and to promote consistent standards.

22. HSE and ODA are jointly funding research to evaluate the occupational health provision at the Olympic Park, and further money from HSE's research budget has been allocated for capturing lessons learnt and good practice.

Action

23. The Board is invited to note the success of HSE's approach that is underpinned by the HSE strategy and is facilitating high standards across the Olympics Park site.

Paper Clearance

24. This paper was cleared by the SMT on 5 August 2009.

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HSE Olympic Games Coordinating Group

Terms of reference and membership.

The HSE Olympic Games Coordinating Group will oversee and coordinate HSE's contribution to delivering safe and successful games. Its principal aims are to:

- identify and coordinate HSE's total contribution and any resource or other implications;
- ensure that HSE's approach is coherent and consistent and in accordance with best regulatory practice;
- identify and maintain links with appropriate stakeholders;
- map other regulators then ensure a collaborative and coordinated approach, in particular with local authorities;
- identify and optimise opportunities for cross-government working;
- keep under review the relevance of our policy and expertise on public safety issues;
- review the relevance of key extant guidance and make proposals for change as appropriate;
- keep the Board and Senior Management Team informed of progress, risks to delivery and reputation and the need for internal and external communications.

The Group is comprised of representatives from:

2012 Games team
FOD London
Construction London and South East
HID
ORR
Communications Directorate
Civil Contingencies team
Services, Transportation and Safety Unit (STSU)
Joint Local Authority Regulatory Services

Any other HSE staff whose attendance might from time to time be relevant.

Current membership of HSE Olympic Games Coordinating Group

Name	Role
Stephen Williams HM Director, FOD London and 2012 Games	Chair
Louise Brearey Head of 2012 and External Relations Unit	Representing 2012 team
Ron Wright Acting Head of Operations FOD London	Representing FOD London
Adrian Hodkinson Principal Inspector HID/Chemical Industries	Representing HID
Richard Boland Head of Construction Operations London and South East Unit	Representing L&SE CD
Mike Williams Principal Inspector Construction London North and East	Operations CD London
Sarah Chaker 2012 Games Coordinator	Co-ordinates HSE's input to the 2012 Games
Adrian Tinson Policy Group STSU	Observer
Geoff Baker Head of Operations ESE Division	Observer
Richard Church Civil Contingencies	Representing HSE's approach to civil contingency issues
Karl Turner Communications Directorate	Assisting with development of communications strategy
Jillian Barratt Office of the Rail Regulator	To advise on ORR's regulatory responsibilities
Steve Miller Head of Public Protection, London Borough of Newham	London Olympics 5 Boroughs Project liaison (Joint Local Authority Regulatory Services)

Key Stakeholder activity

HSE meets regularly with the Government Olympic Executive (GOE) of the Department for Media, Culture and Sport (DCMS) with particular emphasis on encouraging GOE to set clear standards for the Olympic Delivery Authority (ODA) and the London Organising Committee for the Olympic Games (LOCOG). Work is in hand with GOE in development of their strategy for health and safety and for holding the ODA and LOCOG accountable. Jeremy Beeton (Director General of GOE) presents a quarterly health and safety report to the Olympics Board and HSE has offered to provide an independent view on this from a regulatory standpoint. Stephen Williams has suggested to the Government Olympic Executive that they take a lead in establishing a high-level forum where issues of common concern can be discussed.

Contact has been established with the Home Office to discuss the safety and security architecture and to clarify HSE's regulatory remit.

Regular meetings take place with the ODA and CLM as part of HSE's intervention strategy to identify potential problems before they arise on site. Key themes have been to encourage strong leadership on and off site, worker involvement and empowerment, and competence at all levels.

Several meetings have taken place with LOCOG with the aim of identifying their strategy for complying with the Construction (Design and Management) Regulations 2007 and the interface with the ODA.

HSE also meets regularly the Head of Public Services at London Borough of Newham who represents the Joint Local Authority Regulatory Services (JLARS) on the Olympic Games Coordinating Committee, and with the interim Head of JLARS. Common interests include consistency, proportionality and targeting. This approach extends beyond the Olympics Park and the JLARS remit to other London boroughs with Olympics-related activities (not only Games venues but cultural or big-screen events) and country-wide. HSE is also working with the Chartered Institute for Environmental Health (CIEH) to establish a strategy for influencing their members to take forward a common approach.

Other regulators include the Office of the Rail Regulator (represented on the Olympics Coordinating Group) and the Environment Agency. Other stakeholders include the London Development Agency, Transport for London and the Greater London Authority. HSE keeps in regular contact with the Emergency Services through various fora including the Olympic Emergency Planning Group, the Safety Advisory Group for the Olympic Park which deals with building control and licensing issues and the London Resilience fora for civil contingencies matters. HSE also meets with the Olympic Security Directorate which is a multi-agency organisation under the auspices of the Home Office and the British Transport police.

HSE has also met with Regional Coordinators of the main trades union on site to discuss areas of mutual interest.

Olympics Venues

London

Olympics Park
Excel Centre
Earls Court
Greenwich Arena 1
Greenwich Arena 2
Royal Artillery Barracks
Horseguards Parade
Lord's Cricket Ground
Hyde Park
The Regent's Park
Greenwich Park
Wimbledon
Wembley

Country

Eton Dorney
Broxbourne
Hadleigh Castle
Weymouth and Portland
St James Park, Newcastle
Hampden Park, Glasgow
Old Trafford, Manchester
Millenium Stadium, Cardiff

Please note that there may be some changes to this list.

The EARR amendment regulations – a simple guide

The amendments in the Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) (Amendment) Regulations 2008 (the EARR amendment regulations) which relate to Olympics work are as follows:

The provision of bus substitution services

The original EARR 2006 regulations provided for ORR to be the enforcing authority for the 'operation of a railway'. However, it was unclear whether this included making ORR the enforcing authority for the whole of the journey made by a bus substitution service, including the parts of the journey where the bus was travelling on the road.

The EARR amendment regulations make clear that ORR is the enforcing authority for such bus substitution services only when they are on 'operational premises' (for example, within station car parks). At other times enforcement is the responsibility of either the police (if they are on the road) or HSE (if the bus is in the garage or at a bus depot). (n.b. this may be relevant if a proposal by South East Trains to bus passengers across a construction site between stations is taken up).

Construction activities relating to the extension of the railway

The original EARR 2006 provided that HSE would be the enforcing authority for the 'extension' of a transport system. Uncertainty emerged over whether 'extension' (the building of a new railway where one did not previously exist) included 'enlargement' (adding additional tracks on new ground adjacent to the existing railway).

The EARR amendment regulations make clear that such extension or enlargement will be the responsibility of HSE except where the work is:

'in such close proximity to the operation of a railway, tramway or other system of guided transport ... that such operation creates a risk to the health, safety or welfare of those engaged in that work'.

In such circumstances ORR will be the enforcing authority.

Construction activities specifically at operational premises

The original EARR 2006 regulations provided for HSE to be the enforcing authority for construction work at operational premises that was notifiable under the Construction Design and Management Regulations (CDM) and was 'physically segregated' from other activities. Practical application of the regulations showed this to be an unwieldy, awkward and often impractical enforcement demarcation to apply on the ground, both for duty holders and the enforcing authorities.

The EARR amendment regulations make clear that ORR is responsible for enforcement in respect of construction work at operational premises (primarily stations and depots), including work that is notifiable under CDM.

Enforcement in respect of construction work at 'operational premises' will in future fall to HSE only when the premises are closed to railway operations (except for trains passing through and not stopping) and the work is physically segregated from the railway infrastructure, or when the construction work is arranged in such a manner that access to the areas in which it is being undertaken is separate from public or worker access to areas on the 'operational premises'. The second case would apply where the construction site at the station or depot has its own independent access to the street.

Draft Position Paper setting out HSE's regulatory responsibilities during the various phases of the London 2012 Olympics project

Issue

To set out HSE's enforcement responsibilities during the various phases of the Olympics project from enabling works through to the post Games legacy operation. This will be complemented by similar documents from our regulatory partners so as to produce a coherent picture of the overall regulatory regime.

Timing

Immediate

Background

The 2012 Olympics presents challenges to the various regulatory bodies which at different stages have regulatory responsibility for various activities. The purpose of this paper is to identify, in the light of current knowledge, the extent of HSE's enforcement responsibilities and to identify the interfaces with other regulators, particularly the LA sector, ORR and the Environment Agency.

Health and safety enforcement for the 2012 Olympics and Paralympic Games can be separated out in several ways: firstly by venue and phase, and then by client (Olympic Delivery Authority, whose responsibility is delivery of the main venues and supporting infrastructure, or LOCOG – the London Organising Committee for the Olympic Games and Paralympic Games Ltd., who will stage the Games themselves as well as facilitating training venues and organising cultural events).

Project phases have been identified as follows:

- Enabling
- Design and Build
- Design and installation of Games overlay including Fit-out of main venues
- Test events
- Post-Test/Pre-Games
- Build temporary venues
- Olympic Games
- Install overlay for Paralympic Games
- Paralympic Games
- Removal of overlay
- Legacy Transformation
- Legacy Operation

All the phases apply across all venues with the proviso that the extent, timing, responsibility and preparation for the Olympics Park as differentiated from other venues such as Greenwich Park and Hyde Park will be different, with shorter time spans for the non-Olympics Park venues. Post Games these sites will be restored to original use with no preparation for legacy.

Enabling

This phase is now almost complete and is applicable at the Olympics Park. It comprises site preparation, such as demolition of the pre-existing structures, remediation of contaminated soil and re-profiling the site for venue and infrastructure development (as well as the now complete tunnelling for power lines and removal of pylons). HSE's enforcement remit covers the Health and Safety at Work etc Act sections 2 and 3 responsibility for worker and public safety particularly from ground pollutants and possible radiation emissions.

There have been clear interfaces with other regulators during this phase with the Environment Agency having an almost permanent presence on site. The local authority noise and pollution officers have also had a major role. The significant issues concerned land contamination (heavy metals and radioactive sources) which involved all three regulators. Several meetings were held in which clarity of roles and lines to take were agreed. As statutory consultee HSE (FOD London) was consulted over the granting of a waste disposal licence by the Environment Agency to the Olympic Delivery Authority.

HSE (FOD London) has enforcement responsibility in relation to the activities of other regulators on site as well as for Police, Fire and Ambulance services. The Emergency Services all produced risk assessments for access to the Park: any intervention on the part of HSE would only have been on a reactive basis.

Design and Build

HSE is the enforcing authority and will intervene in accordance with construction division's intervention strategy i.e. early discussion with design and build team, with emphasis on integrated team working. This applies to all of the main 'venue' projects on the Olympics Park (Main Stadium, Aquatics Centre, Velodrome, International Broadcast Centre/Media Press Centre, Basketball Arena, Handball Arena, and Hockey Arena. Full interventions will not necessarily be done for Utilities, Bridges and Highways packages, and Landscape and Public Realm, but interventions will follow a risk-based approach. A full list of competition venues and their status i.e. whether permanent, modification of existing venue, or temporary, is attached.

HSE will have enforcement responsibility for the construction (and later deconstruction) of the temporary facilities.

HSE also has regulatory responsibility for the construction of the Olympic Village for which involves both Bovis Lendlease and the ODA as client. In addition Stratford City retail development is adjacent to the Olympics Park and there is a very large footbridge over the lines at Stratford Regional stations. The latter project is not an Olympic project but it is regulated by HSE and is closely associated in time and space and subject to similar intervention arrangements. There are several transport projects being undertaken variously for Network Rail and the Docklands Light

Railway for which the ODA is not the client but for which it is providing some funding. The Office of the Rail regulator will play a key regulatory role.

Field Operations Division will have enforcement responsibility for other activities during this phase, including:

Police, fire and ambulance services
British Transport Police
Environment Agency

Operation of Energy centres
Concrete batching plants
Road haulage
Docks and water-based activities (possible interface with MCA)

Games overlay including Fit-out

This refers both to the post-build overlay and to earlier overlay design (for which LOCOG will imminently be planning) for minor overlay in hotels, facilities in temporary stadia, the wrap for the main stadium etc. The extent to which the ODA will be involved in the overlay work is currently being clarified. LOCOG will be responsible for Games overlay (from installing temporary hired facilities at existing premises to fit out of stadiums etc and construction of temporary venues such as Greenwich Equestrian centre). Design work is underway and discussions have taken place about their arrangements to meet their CDM responsibilities.

On the Olympics Park there are likely to be multiple handovers between ODA and LOCOG throughout the project depending on the nature of the activity; it is possible that other clients may operate some venues before Games time. These handovers will fall within phases rather than be identifiable as distinct and separate phases in themselves. The ODA has undertaken to produce an Options Analysis Review which will highlight the issues and complexity of the different venues in terms of allocation of responsibilities. HSE will have enforcement responsibility for any building work including refit work required by LOCOG during the overlay period i.e. post-build. There is unlikely to be any "handing over the keys" between ODA and LOCOG as it is anticipated that there will be some last minute additions/changes (though these will be minimised to mitigate risk). It is probable that LOCOG will retain the ODA as client for this work.

Test events

This involves assessing whether venues meet the terms of their licences and is a local authority responsibility under Safety in Sports Grounds Act and the Licensing Act. HSE regulatory responsibility during this phase will be for construction work in parts of the Park which are not yet completed, and for the common haul roads and for Health and Safety at Work etc Act S3 regulation for temporary roads and utilities and for any minor refurbishment works being undertaken consequential to the test events.

Post test-pre-Games

The main responsibility falls to LAs concerning action taken to comply with licence conditions but any further construction work will be under HSE's jurisdiction (as stated in previous para).

Games and Paralympic Games

Enforcement will fall in the main to the LA sector during Games time and post-Games where facilities such as the Velodrome continue to operate as a sporting venue. HSE (FOD) will retain responsibility for the following:

- Broadcasting (and associated support activities including pre and post production, scenery-moving, satellite link-ups etc) – not only in London but at all venues country-wide. (The broadcasting sector and relevant FMU London teams are involved at the design stage). This is also a national consideration for FOD.
- Royal Parks – there will be interfaces between the local authority-enforced Olympics events which are separate from the HSE-enforced Royal Parks (Hyde, Regents and Greenwich). Agreement will be needed as to assessment of the risk at the interface e.g. transport activities. An understanding should be reached with the LAs as to possible scenarios and criteria by which to determine duty holder and enforcing authority. Royal Artillery Barracks (MOD).
- Gas Safety (in respect of landlords renting out premises).
- Bus transport (additional provision will require access to already over-stretched depots for maintenance, repair, overnight lay-up).
- Possible overlay modification/additions work to adapt to Paralympic requirements (Construction).
- Maintenance or repair of utilities.
- Local Authority activities

Post-Games Removal of Overlay

This is a LOCOG responsibility over a shorter timescale for the Transformation phase (see below).

Legacy Transformation

Construction division will have enforcement responsibility for deconstruction of temporary facilities at venues including Olympics Park and other construction work e.g. new builds and reconfiguring of Olympic Village accommodation, new roads. Details will be provided in Legacy Masterplan to be published in spring/summer 2009.

Legacy Operation

Dependent on the contents of the Legacy Masterplan, the Olympics Park (and Stratford City Retail) will be the enforcement responsibility of local authorities until further construction work is planned.

Other considerations

There is a range of other matters to be considered. These include:

- Opening and closing ceremonies (LA enforced except for broadcasting).
- Cultural events (mainly LA enforced).
- In-Games Training venues. LOCOG is responsible for these (located in London and South-east) but not for training camps (located nationally). Venues might be either HSE or LA regulated depending on main activity with any CDM construction or refurbishment work the responsibility of HSE.
- Volunteering. Enforcement responsibility depends on their deployment but it can be presumed that the majority will be within the venues – hence LA enforcement. Some may be employed at training venues so their health and safety will be the responsibility at least in part of the host venue – could be either LA or HSE.
- Public safety issues. Involvement should be on the basis of the principles set out in HSC's paper "Public Safety in the Sensible Risk Management Campaign". This could be summarised as recognising HSE's section 3 enforcement role with regard to public safety risks arising from work activity, while recognising that other regulators and authorities have a greater role and expertise in other aspects.
- Transport – road haulage, deliveries etc at all stages and across all venues, on-site and off-site (including distribution hubs). Clear demarcation is needed with LAs.
- Effective communication with our regulatory partners about matters of evident concern in the construction of venues etc both in the Park and elsewhere and other areas where HSE or the LA/EA has the regulatory lead so that the appropriate regulator can ensure prompt action. Need for engagement with LAs outside JLARS framework.
- Regulation of our regulatory partners (LAs and Environment Agency). Discussion has already taken place with EA concerning risk assessments for working on the site and the intersecting waterways.
- Flexible warranting between HSE and the LA Sector for specific purposes.
- Storage of fireworks

Argument

HSE will intervene during the design and build at all venues on the basis of CD's Intervention Strategy. As indicated above and in the covering paper there are a number of unknowns at present and clarification of these issues will occur over time and with continued prompting from HSE. DCMS/GOE may wish to take a lead in facilitating discussion between regulators to ensure there are no gaps.

Consultation

There is continuous discussion with our partners in the LA sector as well as with DCMS, LOCOG, and ODA.

Presentation

In the interests of being an exemplary regulator and in pursuit of sensible risk management it is important that HSE has certainty as to the extent of its role at all stages and can clearly communicate this to others. Failure to achieve clarity is a significant risk.

Costs and Benefits

There is no anticipated extra cost to HSE from establishing clarity of roles and responsibilities and a number of benefits: in particular the perception of HSE as an exemplary regulator in anticipating and fulfilling its role.

Main Venues within the Olympic Park and Olympic Village

Olympic Stadium, Aquatics Centre, Velodrome, IBC/MPC and Olympic Village

Main stadium – Principal contractor Sir Robert MacAlpine

Construction of the 80,000 seat, 53m high Olympics Athletics stadium, which is located on a 40 acre island site, started in April 2008. The basic stadium consists of the stadium bowl (with lower tier seating etc that will remain in legacy), a steel frame structure (with pre-cast concrete platforms and 55,000 seat upper tier) and a partial roof with cable net fabric membrane. The first of the 15m high, 85-tonne steel sections of the roof, which support the fabric roof, was lifted into place at the end of January this year, and by mid-July all 28 sections were in place over a month earlier than originally planned.

Aquatics Centre - Principal Contractor Balfour Beatty.

The wave-shaped roof of the London 2012 Aquatics Centre is two-thirds complete. The lift of the 160m long 2800 tonne roof started just three months ago and is considered one of the most complex engineering and construction challenges of the Olympic Park 'big build'. The roof frame, built with steel fabricated in Newport, assembled on site on just three concrete supports and bolted together from several mobile elevating work platforms, is on track to be completed by September. Safety netting is being erected and the roof will be clad with an aluminium finish and insulated in small sections over several months. The roof supports will be removed by the end of September. After that the main work will comprise the pool tanks, superstructure concrete works and the bridge. A redesign of the temporary seating wings is underway.

IBC/MPC (media centre), - Principal Contractor Carillion.

Work on the foundations is already well underway, with piling now more than 90 per cent complete, and the building work has already started. The IBC/MPC will support 20,000 broadcasters, photographers and journalists communicating the London 2012 Olympic and Paralympic Games to an audience of approximately four billion people worldwide. In legacy the facilities will create just under 900,000 square feet of business space with the potential to generate thousands of new jobs. The 4500 tonnes of steel for the IBC frame is being fabricated by Severfield-Reeve in Dalton, North Yorkshire and produced and rolled by Corus in Scunthorpe and Teesside.

Velopark – Principal Contractor ISG InteriorExterior Plc

Construction work on the 6,000 seat Velodrome began on schedule in March. Much of the site is on the former West Ham landfill site that closed 60 years ago. By the end of May, more than 900 piles had been driven up to 26 metres beneath the ground to complete the foundations of the venue and work was well underway to construct the concrete base structure of the Velodrome. The first above-ground columns started to appear in June. Some of the concrete works are complex rising many meters above formation level and many degrees out of vertical. The steelwork structure should start to be erected by September. Later in the year, the 'Pringle-shaped' roof will be formed from a tensioned cable net supporting framework by a German specialist company at ground level raised on computer controlled jacks in a couple of days - eliminating much of the work at high level.

Village – Principal Contractor Bovis Lend Lease

The Athletes' Village, which lies adjacent to the Olympic Park and the Westfield Stratford City shopping centre currently under construction. It will accommodate athletes during the Olympic and Paralympic Games and leave the legacy of thousands of new homes after 2012. Essentially, the site is a large housing/10 storey tower block development. The Village will comprise 11 residential blocks each made up of approximately five to seven buildings and roughly the same size as a football pitch. Construction work started on the Olympic Village in June 2008. Work on the tower blocks is well underway. Piling works to form foundations on 28 buildings – over 2000 concrete piles installed more than 20 metres deep – is complete, seven out of the eleven residential blocks are well above ground level and up to 22 tower cranes will be erected on site by summer 2009. An education campus, Chobham Academy, is also planned and earthworks have started. However, in view of ODA needing to take over client role because of funding difficulties, there is no fixed programme at present.

Various roads, bridges and utilities packages are also in progress as well as energy centres and work to revitalise waterways. Work will be starting shortly on the handball, temporary basketball and hockey centres.

**Olympics 2012
HSE Construction Division
Intervention Strategy
During the Construction of the Olympic
Venues.**

INTRODUCTION

1. The main venue for the London Olympics will be at the Olympic Park in Stratford, East London. The site extends over 500 acres of formerly mixed use land- both industrial, residential and 'brown field' sites. The land is in the lower Lea Valley and the park contains a number of natural and artificial waterways which will be opened up to become a prominent feature of the park itself. Much of the land is contaminated from its former industrial uses, and the first challenge is to gain full vacant possession and then clear and decontaminate the area ready for the main construction phase.

2. Work to prepare and construct the park has already begun. Speaking in March 2006, the ODA Chairman Jack Lemmley said 'This is a 2:4:1 programme- there are 2 yrs to gather the land and clean it up; 4 years to finish the designs; build the venues and do the supporting regeneration and one year to Commission it all'. On this timetable we are now approaching the end of the first two year period; the ODA has full possession of the site and the clean-up and decontamination work is well underway.

3. There are other venues outside the Olympic Park which will need significant construction work to get them ready for the games- notably at the O₂ Arena; Greenwich Park; The Royal Artillery Barracks; Horseguards Parade; Regents Park; Broxbourne; Eton Dorney; the Weald Country Park in Essex and Weymouth and Portland.

4. In addition to the main venues at the Olympic Park, there are two other substantial urban regeneration projects adjoining the main Park site whose delivery is integral to the successful staging of the 2012 Olympics. These are the construction of the Olympic village immediately to the north of Stratford Station, and the construction of Stratford City, a major shopping/housing/business development immediately to the south of Stratford Station; these two sites form part of a major development that will not be completed until 2020.

5. All the venues; the Olympic village and Stratford City have legacy uses which will involve further construction work after the games have been staged. Some of the venues will be dismantled and erected elsewhere in the country, and venues such as the Olympic Stadium and the Aquatic Centre are designed so that they can be converted to smaller facilities which are better suited to legacy use.

6. This paper sets out the Construction Divisions strategy for the inspection and regulation of the construction phase of the Olympics 2012.

CONSTRUCTION DIVISION INTERVENTION STRATEGY

19. HSE's Construction Division's goal for the work with ODA and its delivery partner CLM is to ensure that high standards of health and safety are maintained throughout the planning, design and construction of the games venues. Our interventions should be front-end loaded to ensure that risks are identified and eliminated during the design and planning stages, or reduced to an acceptable level before the work starts. Interventions during the construction phase should be

targeted at identified high risk work and should where possible involve the principal contractor demonstrating how these risks will be controlled before that work begins.

Proactive Interventions:

20. Construction inspectors drawn from among the seven teams in the London and East and South East Operational Unit (and supported by SG) will undertake early interventions and site inspections for the Olympic projects. Mike Williams' team will have lead responsibility for dealing with the ODA and CLM. Therefore, his team will oversee:

- any work in the 'white spaces' between the zones in the Olympic Park
- construction work related to the Stratford City development
- logistics including the movement of people and materials into and away from the area; and
- any issues concerning coordination and cooperation between ODA, CLM and the principal contractors in the various zones and adjacent construction sites.

Mike Williams' team will be responsible for preparing an intervention programme covering this work.

21. A principal inspector and a team of two inspectors will be allocated for each of the main projects. These teams will be responsible for preparing an intervention plan (incorporating a targeted inspection plan) for the project which has been allocated to them. Early contact will need to be made with the CDM-C/project team so that interventions during the planning phase can be scheduled in. If the need arises, inspections initiatives involving a larger group of inspectors (or those with particular skills or knowledge) could be incorporated into the site inspection plan.

22. To ensure a consistent approach, intervention plans should follow the guidance given, and should be agreed by the Principal Inspector allocated to the project. A copy of the intervention plan should be placed in EDRM folder 4.6.218; do not save it as 'final' in order that it can be updated through the project.

23. Intervention plans (especially associated site inspection plans) should take account of the resource which the team can dedicate to the project, and should be targeted at the **high risk** work within the project. Usually, the principal contractor should be required to demonstrate how they will control key risks before the work begins. The intervention plan should be regularly reviewed and revised in light of progress with the job so that if the relevant staff are absent, those dealing with any incidents can gain a good understanding of known progress (e.g. in the event of a serious incident or CEO case). The Principal Inspector will be responsible for ensuring that the plan is delivered. Inspectors should ensure that safety reps are seen at all inspections or where these have not been appointed that use is made of the site worker engagement arrangements to explain the purpose and outcome of visits – and we listen to any worker concerns.

24. Interventions will take account of the project team's arrangements for managing the issues set out in the core agenda given in. As the project develops, the responsible inspectors may wish to take account of the KPI monthly scorecards

being submitted to CLM on behalf of the contractor to indicate aspects of its performance.

25. Cross-cutting issues (and matters of evident concern seen on adjacent sites) should be raised with Mike Williams' team. There is a table in TRIM Folder **4.6.218** for capturing and sharing issues that need to be resolved with ODA/CLM or across interfaces with other projects including Stratford City and the Olympic village.

26. Arrangements are being made for inspectors to receive a Park 'briefing' by ODA/CLM to enable them to enter the Park and use Park transport arrangements to access particular projects (an additional site induction will be needed at that venue). Inspectors should also be mindful that protective gloves and eye protection will be mandatory in addition to Hi-Vis, hard hat and safety boots (not rigger). There may also be special training requirements for some inspecting some projects (eg work over water and possibly media training).

Reactive Work:

Complaints

27. Complaints will be taken by construction Admin. in Rose Court or Compliance officers in Mike Williams' team. If appropriate, notifiers will be asked to contact ODA's 24/7 telephone hotline [Tel 08000 722110]. If the matter is serious or the notifier is not satisfied with the ODA hotline it will be referred to the HSE team responsible for work in the project. That team will either refer the complaint to the relevant principal contractor contact (this should be set out in the Intervention Plan for that project) or if necessary the ODA Head of Health and Safety [Tel 0 203 2012 740] and record it on COIN. Our aim should be to resolve complaints without a site visit where possible, using CD's established complaints handling procedures. The relevant HSE team will subsequently advise the notifier of the outcome.

Accidents

28. The principal inspector responsible for a project will be responsible for deciding how any mandatory investigation of a **notifiable incident** will be pursued; Mike Williams' team will forward any F2508s (which we will expect to identify the relevant project by keyword). Help may be sought from inspectors not directly involved in the proactive work for that project. If adequate resources are not available for an investigation the incident will be referred to Head of Unit as a DRF in the usual way. Non-mandatory investigations are unlikely to be appropriate on resource grounds. However, the responsible principal inspector will want to be satisfied that a thorough internal investigation has been undertaken and relevant lessons learnt and applied (ODA H&S standard).

29. Teams based outside London are unlikely to be able to make a timely 'first response' to serious incidents requiring an urgent site presence in the Olympic Park (e.g. to capture key evidence, ensure effective action to control risk and where appropriate to work with the Police under the 'work-related death' protocol). Where an immediate response is necessary and this cannot be provided by the allocated inspection team, the London-based teams will provide a 'first response'; thereafter responsibility for taking investigations forward will rest with the appropriate team and their Principal Inspector. CLM/ODA will be advised of the allocated principal

inspector (and office 'phone number) for the projects. For 'out-of-hours' emergencies the HSE Duty Officer system will apply.

30. An HSE decision log should be maintained for each such investigation started by CD London and ESE Unit. We expect to liaise with the Metropolitan Police about the HSE response to incidents in the margins of a meetings attended by the Olympic Co-ordinator.

Enforcement Action:

31. Any enforcement action which is taken will be in line with HSE's published enforcement policies and procedures. For each project, enforcement decisions within that project's boundaries will be the responsibility of the allocated Principal Inspector and inspection team. If enforcement action is needed in relation to issues which extend beyond the project boundaries this should be discussed with Mike Williams or a member of his team. Enforcement action is likely to attract media attention, and it is important that information about enforcement action should be passed promptly to Mike Williams; Richard Boland; or Sue Brandrick- whoever is available at the time.

COMMUNICATION

32. Good communication between the teams carrying out inspection work will be essential. In particular, it is important that any issues arising from a particular project are reported promptly to Mike Williams or a member of his team if:

- they affect work in the 'white space' or
- involve the relationship between the principal contractor and the ODA or CLM

Mike's team will be responsible for resolving these issues with ODA and CLM but arrangements can be made for joint interventions as the need arises.

33. Any matters which may attract media attention, including any enforcement action should be promptly brought to the attention of Sue Brandrick in the communications team in the Sector. Construction Sector/Policy may also need to be involved as the Olympic construction projects will (or should be) be an opportunity for showcasing good practice, developing case studies, providing communication events venues and other opportunities.

34. Mike Williams' team will circulate a quarterly Unit electronic 'newsletter' to update those engaged with Olympic projects on developments. Inspectors involved with the Olympic projects and their managers will meet together at six month intervals to discuss progress and resolve any difficulties which may arise. The first of these meetings took place at Rose Court on 7th December at which a draft of this intervention strategy was discussed.

Outline for intervention plan on 2012 Olympic & Paralympic sites

Our aims for intervening in the project

A2.3. Aim to make visits to the Designers, CDM Co-ordinator (and Tier 1 contractor when appointed) early in the project (by RIBA design stage C) to make it clear what

our priorities are and what we expect of the major players. At least make sure duty holders:

- have management and other arrangements to address their responsibilities under CDM 2007
- have addressed HSE priorities for SAFETY and OCCUPATIONAL HEALTH, the HSE Common Agenda (and the Respect for People Code of Practice and MCG Strategy).
- have H&S management systems for achieving compliance and set appropriate Key Performance Indicators/expected standards including for example developed Red/Amber/Green lists for the design team.

You might be aiming for high standards of public protection, designer engagement and audit, OH provision or planning for traffic movements in and around the site. Explain this to the project team and that you will be developing an intervention Plan on you will consult them.

Specific objective(s) for this intervention

A2.4. Specifically, we may want to, for example:

- decide what are likely to be the **major risks** by discussions with project team
- identify substantial issues which should be addressed by **better design/mitigation**
- ensure that duty holders have identified key '**gateways**' e.g. pre-tender surveys & site restrictions identified; regular CDM co-ordinator meetings with designers; and arrangements for design changes during construction; high risk operation expectations of method statements; standards for trades; competence checks; monitoring arrangements and arrangements for worker engagement.
- identify main phases of the work which could have substantial H&S risks for public/workers and ensure effective arrangements made to manage these
- identify the project's arrangements for addressing The Common Agenda/Respect for People Code of Practice
- identify the arrangements for meeting the **MCG/OGC strategies** where relevant (ODA has signed up to OGC Common Minimum Standards & the Strategic Forum's Respect for People Code of Good Working H&S Practices)
- identify H&S KPIs/objectives set for the project (note CLM KPIs as minimum)

The organisational matters will need to be recorded in general terms in the introduction to the plan e.g. as a series of bullet points or under specific headings (such as CDM Gateways/Competence matters/Worker engagement/KPIs/standards). Site-specific hazards can be addressed as below.

Key hazards/risks, proposed controls and when they are likely to arise

A2.5. Outline of the **major risks** as we see them at the outset, updated as time goes on. You should ask for the client, design team/PS and Principal Contractor as appropriate to give a **presentation** explaining:

- their arrangements for addressing H&S during the project
- Common Agenda issues including integrated team working, setting KPIs and worker engagement
- their assessment of the main hazards /risk issues and
- how they have eliminated /mitigated & communicated/expect to control those risks.

You might raise additional hazards e.g. physical arising from site layout or build sequence and management issues such as training/instructing/supervising/communicating with poor English speakers.

A2.6 Establish a COIN Inspection case for the project if this has not already been established by FMU86 (see separate advice on COI recording for Olympic projects).

Core agenda for interventions

Taking account of HSE Core framework and ODA Health and Safety Standard (including OH provision), the following issues should be considered as appropriate to ensure there is evidence of robust arrangements for:

Safety

Control of Vehicles and Mobile Plant

- traffic management arrangements including pedestrian segregation (traffic plan with one-way system or designated reversing areas/competent operator/records confirming weekly site vehicle/plant checks)
- arrangements for deliveries (safe access to/means to prevent falls from vehicles)
- planned approach to selection and deployment of quick hitch systems on excavators with robust training, systems, and monitoring expected in any case where semi-automatic systems used

Good order and ground conditions

- arrangements for designated lay down areas for storage and waste plus dedicated housekeeping contractor or equivalent to keep work areas clear
- plans for firm, clear and level access routes and adequately compacted areas for plant such as MEWPs and engineered piling mats for piling rigs

Work at height

- planned application of protection hierarchy and selection of appropriate equipment by competent persons - elimination (e.g. prefabrication) and collective protection (e.g. sound edge protection including systems such as advance guardrails during erection and working platforms including MEWPs) over a reliance on personal fall protection (that would require a robust system of training/instruction/checking and rescue procedure)
- adequate provision for work over water

Lifting Operations

- lifting Plans prepared under the authority of an Appointed Person taking account of engineered ground conditions, preventing collisions between cranes and clear roles including competent supervisors

- project requirements for independent thorough examinations and periodic checking and planned maintenance with action records where remedial action identified

Health

Hand/arm vibration/Noise

- positive arrangements for eliminating (eg scabbling, pile head trimming) or restricting hand arm vibration (eg other use of hand breakers) and associated noise based on subcontractor evidence of proper assessments

Manual handling

- arrangements for product selection (weight/size) to reduce handling risks, planned use of mechanical handling equipment to move products to work areas and use of MAC tool or equivalent to help control risks during placing of product

Exposure to hazardous substances including contaminated soils

- meaningful assessments that look at soil data, route of exposure, sensible control measures and monitoring including role of occupational health adviser

Management issues

Worker engagement

- effective arrangements for induction, task briefing (on method statements) and consultation/sharing information with workers including migrant/poor English-speaking workers (PC arrangements to satisfy regulation 24 CDM duties)

Supervision

- clear requirements for subcontractors to provide sufficient competent supervisors with evidence of competence provided to the principal contractor, especially for temporary works

PC system of monitoring and feedback

- active monitoring at an appropriate level with mechanisms for ensuring that action is taken on appropriate timescales e.g. via formal direction, review meetings etc

Design

Active use and development of ODA red/Amber/Green lists

Evidence that there is early integration of M&E needs over time (eg to ensure allowance for future maintenance, avoid general riser openings and encourage sequencing)

Management system for active consideration of H&S and risk communication (risk registers and notes on drawings) during design including temporary works and design changes during construction phase.