

Olympic Delivery Authority

The big build: structures
Milestones to 27 July 2010

July 2009



the big build: structures

Over the past two years the Olympic Delivery Authority (ODA) has set out in advance the milestones it has planned to achieve for different phases of the project.

The first 10 – known as ‘demolish, dig, design’ – focused on preparing the site for the main construction of the venues and infrastructure for the London 2012 Olympic and Paralympic Games, and the legacy beyond 2012.

The second 10 were the first phase of the ‘big build’. They focused on putting in place the foundations of the main venues and infrastructure in the Olympic Park.

Both sets of milestones have now been delivered.

This document sets out 10 new milestones that the ODA plans to achieve by 27 July 2010 – a date two years from the Opening Ceremony of the London 2012 Olympic Games.

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The structure of the first half of the wave-like roof of the Aquatics Centre was completed in June 2009

foreword

27 July 2009 marks three years to go until the Opening Ceremony of the London 2012 Olympic Games. A lot has been achieved over the past four years and I believe the foundations for successful delivery are now in place. Over the next year we will really see the Olympic Park transform as the main venues and infrastructure take shape.

The Olympic Delivery Authority is again setting out 10 milestones for the coming year, which we plan to achieve by 27 July 2010. They are challenging as we are working to a very tight schedule, but it is important that we are transparent and accountable for the significant public investment in the project. In this way the public can judge progress for themselves.

We have met all our milestones to date. Over the past year the Olympic Stadium has gone up and the pylons have come down. The site is being cleaned of decades of contaminants as we create a new park for the capital.

We are doing all this in what is obviously a difficult economic environment. Our programme is helping to create thousands of jobs up and down the country as well as filling order books for UK plc.

So, it is an exciting year ahead. Progress should become much more visible and people will be able to see for themselves the theatre for the London 2012 Games and the lasting legacy we will leave as a result.



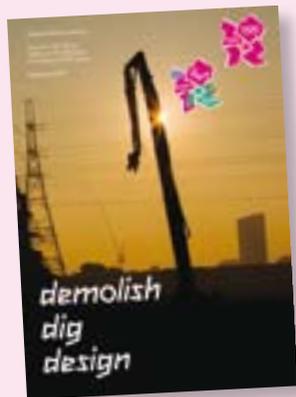
A handwritten signature in black ink, appearing to read 'John Armitt'.

John Armitt
Chairman
Olympic Delivery Authority

The construction of the venues and infrastructure for the London 2012 Games is funded by the National Lottery through the Olympic Lottery Distributor, the Department for Culture, Media and Sport, the Mayor of London and the London Development Agency.

previous milestones

Milestones to the Beijing 2008 Games demolish, dig, design



Read more about the 10 milestones to the Beijing 2008 Games in 'demolish, dig, design'. This can be downloaded from the London 2012 website at:
www.london2012.com/milestones



Milestone 01
The majority of the Olympic Park will be cleared and cleaned. ✓



Milestone 02
With the tunnels and cabling complete, the power for the Olympic Park will be set to switch underground. ✓



Milestone 03
The main temporary roads and bridges will have been built, giving access to a safe and secure construction site for the 'big build'. ✓



Milestone 04
The installation of new water and energy systems that will serve the Olympic Park during and after the London 2012 Games will have started. ✓

Milestones to 27 July 2009 the big build: foundations



Read more about the 10 milestones to 27 July 2009 in 'the big build: foundations'. This can be downloaded from the London 2012 website at:
www.london2012.com/milestones



Milestone 01
Almost all of the Olympic Park will have been cleared and cleaned. The overhead pylons will have been removed and the erection of the new perimeter security fence will be underway. ✓



Milestone 02
Seven bridges will be structurally complete, 10 further bridges and underpasses will be under construction and the building of the permanent roads will have started. The refurbishment of the waterways in the Olympic Park will be complete. ✓



Milestone 03
The new Primary Substation at Kings Yard will be substantially complete, with the new equipment also in place to transmit permanent power to the Olympic Park from the wider national network. The construction of the new Energy Centre will be well underway. ✓



Milestone 04
The foundations of the Olympic Stadium will be complete. Work on the upper seating structure and roof will be underway. ✓



Milestone 05
The regeneration of the waterways will have started, improving the environment and access for the 'big build'.



Milestone 06
The transport enhancements that will open up east London and support the London 2012 Games will have started, with many complete.



Milestone 07
Construction will have started on the bridge that will take people over the Aquatics Centre to the Olympic Stadium. Building work on the Stadium will be about to begin.



Milestone 08
Construction on the Olympic Village will have started.



Milestone 09
Contracts will have been let and designs agreed for the 'big four' venues in the Olympic Park – and at venues outside London work on site will have started.



Milestone 10
The development of the Legacy Masterplan Framework (LMF) for the Olympic Park will be well advanced.



Milestone 05
The foundations of the Aquatics Centre will have been completed with work on the building's structure well underway.



Milestone 06
Work will have started on the foundations of the Velodrome and International Broadcast Centre/Main Press Centre.



Milestone 07
Contracts will have been let, designs agreed and work will be about to start on the Handball Arena. The design of the Basketball Arena will have been agreed, and the process of appointing construction contractors will be underway.



Milestone 08
Building work will be underway on the majority of the Olympic Village plots.



Milestone 09
Significant progress will have been made on the transport projects that are increasing capacity to support the Games. Of the 25 underway, 13 will be nearing completion.



Milestone 10
Outside of London the ODA works at Weymouth and Portland will have been completed and ready for use. Construction work will have also started on the Broxbourne White Water Canoe Centre.





A new bridge is being constructed linking the Olympic Village to the new Stratford City development. It spans the new Docklands Light Railway extension from Canning Town to Stratford International Station

milestones to 27 July 2010

raising the bar

By 27 July 2010: The structure of the Olympic Stadium including the roof will be complete. The first seats will be fitted and work on the field of play about to start.

During the Games the 80,000-capacity Olympic Stadium will be the venue for the Olympic and Paralympic Athletics competitions. It will also host the Opening and Closing Ceremonies.

Construction of the Stadium's foundations began three months ahead of schedule in May 2008. The installation of the 4,000 concrete piles that form the venue's foundations was finished in October 2008.

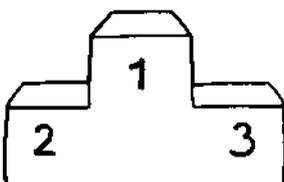
Work on the structure began with the installation of the concrete 'rakers', which will support the 25,000 permanent seats in the lower 'bowl' of the Stadium. This was followed by the installation of the temporary steel structure and concrete terracing that form the upper tiers of the venue, which hold the remaining 55,000 demountable seats. The seat fixings will begin to be installed at the beginning of 2010 with the seats themselves installed from summer 2010.

The construction of the venue's roof began in January 2009 with the erection of the first of the 28 white roof supports – all 28 have now been installed. The cable-net roof will be lifted into place early in 2010, ready for its white fabric covering.

The venue is being built on an 'island' surrounded by water on three sides. The first of five bridges connecting this 'island' with the rest of the Park has already been lifted into place and by 27 July 2010 the other four will be structurally complete. Inside the venue, work on the first layers of the track and field of play will be about to start.



A latest image of the Olympic Stadium from one of the London 2012 webcams (london2012.com/webcams)



338km

length of power cable contained within the Olympic Stadium

700

rooms within the Olympic Stadium, including eight changing rooms and four prayer rooms

The installation of the 28 white roof supports around the top of the Olympic Stadium has been completed

starting blocks

By 27 July 2010: The Aquatics Centre's permanent structure and roof will be complete and all three swimming pools will be dug out.

The Aquatics Centre comprises a permanent central structure with two temporary seating 'wings' during the Games. These combine to give it a capacity of 17,500 during the Games. The Centre will host Swimming, Synchronised Swimming, Diving and the Aquatics discipline of the Modern Pentathlon during the Olympic Games. It will also be the venue for Paralympic swimming. Water Polo is due to be held next to it in a temporary 5,000-capacity venue with competition and warm-up pools.

After the Games the Centre will be transformed into a facility for use by the local community and elite swimmers. The temporary stands will be removed, leaving a capacity of 2,500, although it will be possible to increase this for major events.

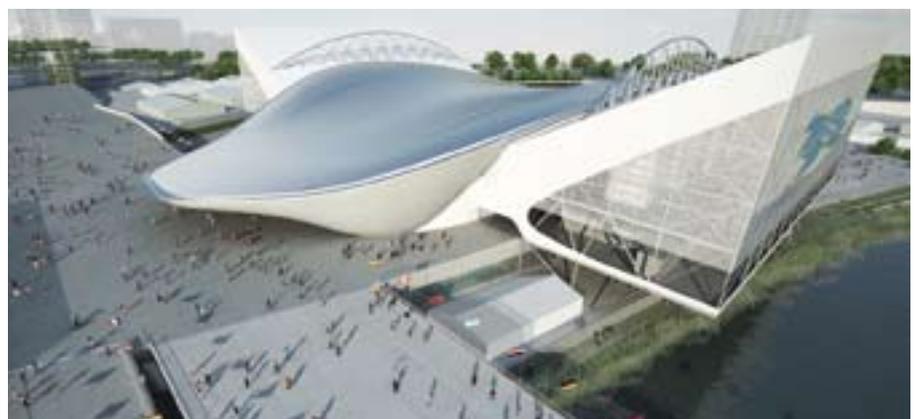
Construction of the venue started ahead of schedule in July 2008, beginning with the installation of approximately 2,400 concrete columns in the ground to create the foundations for the permanent and temporary elements of the building. These were completed in April 2009.

Three concrete roof support walls have been completed, enabling the

construction of the venue's signature wave-like roof to begin early in 2009. When finished, the roof will be 160m long and up to 80m wide. The roof structure will rest on just two concrete supports at the northern end of the building and a supporting 'wall' at its southern end – giving it a longer single span than Heathrow Terminal 5. This steel structure will be covered with 11,000 sq m of aluminium panels by spring 2010.

As soon as sections of the roof are complete, work can begin underneath on the interior. By 27 July 2010 the venue's two 50m swimming pools and 25m diving pool will be dug out and the concrete diving board structures cast. Work will also begin on constructing the two temporary stands.

The majority of spectators will enter the Olympic Park over a 40m-wide bridge that spans the North London Line, the Waterworks River and part of the Aquatics Centre. By September 2009 all six bridge abutments (supports on land) and piers (supports in water) will be complete. The bridge is due to be structurally complete by spring 2010.



An artist's impression of the Aquatics Centre during the Games, showing the temporary stands on either side of the permanent structure





43m

height of temporary stands

80m

width of the Aquatics Centre roof
at its widest point

The steel structure of the Aquatics Centre signature roof was half completed by July 2009

bespoke venue

By 27 July 2010: The Velodrome structure and roof will be complete, with work about to start on installing the timber track.

The permanent 6,000-capacity Velodrome will host the Track Cycling events at the London 2012 Games. A BMX Circuit with 6,000 temporary seats will be built alongside to host the BMX events during the Olympic Games.

After the Games the BMX Circuit will be reconfigured: a new mountain bike course and road cycle circuit will be added to create a VeloPark for the local community, local clubs and elite athletes. This new cycling 'hub' will be owned, managed and funded by the Lee Valley Regional Park Authority.

Construction work started on site in March 2009 with initial work focusing on the foundations. The contractors faced challenging ground conditions because the venue is being built on top of a former landfill site. This meant the 900 piles forming the building's foundations were driven up to 26m into the ground – deeper than usual for a building of this size. Despite this the foundations were completed by the end of May 2009.

Work has already started on the structure of the building above ground, and this will progress over the next year, with the external structure of the building complete by 27 July 2010.

The venue's terracing will also be complete. The concrete lower bowl with a capacity of 3,500 will be located around the track. Two upper tiers with a capacity of 2,500 will be suspended within the two curves of the cable-net roof, which complements the curves of the track underneath. The lower tier structure is due to be completed by autumn 2009 and the upper tiers finished by the end of 2009.

The roof supports will start to be installed in autumn 2009, followed by the cable-net roof in 2010. The roof will begin to be covered in spring 2010 and is due to be fully complete by 27 July 2010.

In between the lower concrete bowl and upper tiers there will be a glass wall, giving spectators a 360-degree view across the Olympic Park and out to the London skyline, and allowing people outside the venue to see the sporting action taking place inside. This will be installed at the same time as the roof.

The contractors will be in a position to install the Velodrome's track by late summer 2010.



An artist's impression of the new BMX Circuit during the Games

900

piles forming the building's foundations that were driven up to 26m into the ground



The foundations for the Velodrome were completed by the end of May 2009

lights, camera, action

By 27 July 2010: The structure of the International Broadcast Centre and multi-storey car park will be finished, with roof and wall cladding well underway. The Main Press Centre's structure will be nearing completion.

During the Games the International Broadcast Centre/Main Press Centre (IBC/MPC) will be a 24-hour hub with state-of-the-art facilities for the 20,000 broadcasters, photographers and journalists who will bring the Games to a worldwide audience of four billion people.

After the Games the buildings will offer more than 80,000 sq m of business space with the potential to generate thousands of new jobs. The facilities have been designed to be as flexible as possible, so that they can be adapted for a wide range of potential tenants after the Games.

During the Games the four-storey MPC will have 29,000 sq m of office space by the River Lee Navigation for journalists and photographers. After the Games the building can be adapted for either a single tenant in the whole building, a tenant on each floor, or multiple tenants on each floor.

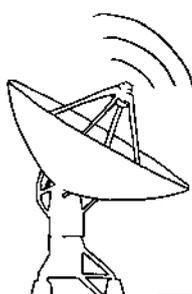
The adjacent IBC has around 52,000 sq m of studio space and 8,000 sq m of offices. It has the flexibility to be separated into a number of units after the Games. There will also be a multi-storey car park (MSCP), which will remain after the Games.

Temporary elements that will be removed after the Games include a catering village, a 'high street' with outlets such as banks, newsagents and travel agents, and an 800-capacity media conference room. A Media Transport Mall providing a coach drop-off, car parking, accreditation and security screening during the Games will provide car parking spaces to tenants after 2012, alongside walking, cycling and public transport connections.

Planning applications for the foundations and detailed design of the permanent structures were approved in the first half of 2009 and construction work started on site a month ahead of schedule in April 2009.

The foundations of the IBC are due to be complete in autumn 2009 with those for the MPC finishing by the end of 2009. The construction of the main structures of the IBC and MSCP has started, with the MPC starting in early 2010.

The main structure, walls and roof of the IBC are due to be completed in spring 2010, when work on the walls and roofs is due to start. By 27 July 2010 the MSCP's structure will also be finished, with the MPC's structure nearing completion.



An artist's impression of the International Broadcast Centre during the Games



5

number of jumbo jets that could fit, wing-to-wing, inside the International Broadcast Centre

2,100

piles forming the foundations of the IBC/MPC buildings

net gains

By 27 July 2010: The Handball Arena and Basketball Arena structures will be in place with internal works underway. Building work will have begun on the new Eton Manor sporting facilities.

Handball Arena

During the Olympic Games the Handball Arena will host the early rounds and quarter-finals of the Handball competition, as well as the Fencing discipline of the Modern Pentathlon. During the Paralympic Games it will be the venue for Goalball.

After the Games the Handball Arena will be adapted to become a multi-use indoor sports centre for community use, athlete training and small- to medium-sized events. Retractable seating will mean the seating capacity can be flexible, allowing the Arena to be used for different activities ranging from community sport to international competition. Space will be retained around the venue after the Games for temporary warm-up and broadcasting areas.

Planning permission was granted in February 2009 and a contractor appointed in March 2009. Work started on the venue's foundations in July 2009 and is due to be complete in autumn 2009. Construction of the roof and wall structure is due to start at the beginning of 2010, followed by work inside the venue by late spring. By 27 July 2010 the main structure is due to be in place.

Basketball Arena

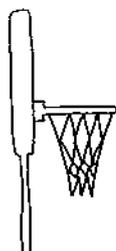
The Basketball Arena will be a temporary venue in the north of the Olympic Park.

The Arena will have 12,000 seats for the Basketball preliminaries and quarter-finals, as well as the Handball semi-finals and finals. During the Paralympic Games it will have a capacity of 10,000 and host Wheelchair Basketball and Wheelchair Rugby. After the Games it is anticipated that elements of the Arena will be taken down and reused or relocated elsewhere.

The design of the venue was agreed and planning permission granted in March 2009.

Instead of appointing a single construction contractor, packages of work are being offered for a number of venues across the Park, including the Basketball Arena. Each package will be a contract for a different stage of the construction process at each venue, such as the foundations, main structure, seating, and mechanical and electrical work.

Contractors for the earthworks are due to start on site for the Basketball Arena in autumn 2009, followed by the contractors building the main structure in April 2010. ►



An artist's impression of the Handball Arena



100

light pipes in the ceiling of the Handball Arena that draw sunlight into the venue, reducing the demand for electric lights

35

height in metres of the Basketball Arena – the same as Tate Modern

► The procurement of all the managed packages is expected to be complete by September 2009.

The Basketball Arena's foundations are due to be completed in spring 2010, when work on the main structure will begin. This structure will be made up of 20 steel trusses and occupy an area similar in size to two football pitches. By 27 July 2010 the structure is due to be completed and work will have begun on erecting the temporary seating structures inside.

Eton Manor

During the first year of the 'big build', the site of the Eton Manor sporting 'hub' was the home of the Construction College of East London, also known as 'digger school'. Almost 470 people have already graduated from the practical construction training courses offered by the centre, 228 of whom have gone on to get jobs working on the Olympic Park. In July 2009 the facility moved to a permanent base near Royal Docks in east London to enable the site to be prepared for construction.

During the Olympic Games, Eton Manor will have temporary training pools for participants in Aquatics events. It will have three 50m pools

for swimmers, a 30m pool for synchronised swimmers and a 33m pool for Water Polo players. It will then host Wheelchair Tennis during the Paralympic Games.

After the Games, it is intended to be transformed into sporting facilities for the local community, including a tennis centre with four indoor and six outdoor courts, a hockey centre with two competition pitches and five-a-side football pitches.

A planning application for the sporting hub will be submitted in summer 2009, with a decision expected by the end of 2009. Work to prepare the ground levels and form the foundations of the temporary swimming pools will begin in spring 2010. By 27 July 2010, all contracts will have been let and the foundations for the temporary pools will be complete.

A new wind turbine is also planned to be located at Eton Manor. This will help the Olympic Delivery Authority meet its target for 20 per cent of electricity requirements for the Olympic Park's development after the Games to be from local, renewable sources. The base for the 130m-high turbine is due to be in place by 27 July 2010.



An artist's impression of the Basketball Arena



469

graduates from the Construction College of East London – also known as ‘digger school’ – since February 2008, 228 of whom found employment on the Olympic Park

Students training at the Construction College of East London learn how to control a digger by picking up a golf ball. The college was located at Eton Manor before the site was prepared for construction

beds for athletes, homes for Londoners

By 27 July 2010: The majority of the Olympic Village homes will be structurally finished and internal works will have started. All the major infrastructure needed to support the development will be complete.

During the Games, the Village will comprise residential apartments for around 17,000 athletes and officials, along with shops, restaurants, medical and leisure facilities and large areas of open space. There will be 11 residential plots, each with five to seven buildings constructed around a courtyard.

After the Games it will be transformed into 2,800 new homes, with a mix of affordable tenures, and housing for sale and rent. The development will become part of the overall Stratford City regeneration scheme.

The long-term funding of the Olympic Village was secured in May 2009, with the Village now publicly funded. The agreement now reached will see Triathlon Homes – a consortium of approved affordable housing providers – purchase 1,379 of the homes to become available as affordable housing.

Following planning approval for the first blocks, construction began in May 2008. A year on, the majority of the planning applications for the development have been approved.

Construction is already underway on seven of the eleven residential plots that make up the Village. By 27 July 2010, all the foundations and the structural frames of the majority of residential accommodation blocks are due to be complete.

In June 2009 preparatory work started on the site of the education campus being built within the Olympic Village site. Chobham Academy will provide 1,800 spaces for students aged 3–19 in nursery, primary and secondary schools, and a sixth-form college with adult-learning facilities. It will specialise in performing arts and English. The Academy is scheduled to open after the Games in September 2013 but will be used as an operations centre for the Village during the Games.

All the major infrastructure needed to support the Village development will be complete by 27 July 2010. Planning consent for the layout of the roads and pedestrian areas – known as the 'streetscape' – and public spaces is expected in autumn 2009. Construction of these elements, including two road bridges, will start in spring 2010.



An artist's impression of Chobham Academy, an educational campus being built within the Olympic Village site



11

residential blocks within the Olympic Village, each around the size of a football pitch

76

lifts in the Olympic Village to ensure the buildings are fully accessible

Construction is already underway on 28 buildings across four of the eleven residential plots that make up the Olympic Village

WAVES OF PROGRESS

By 27 July 2010: All works will be complete at the Eton Dorney Rowing venue. The new lake and competition courses at Broxbourne White Water Canoe Centre will be finished with the facilities building almost complete. A planning application will have been submitted for the Shooting facilities at the Royal Artillery Barracks.

Broxbourne

Construction of the new Broxbourne White Water Canoe Centre began in June 2009. Two canoe slalom courses are being built from scratch: a 300m competition course and a 160m intermediate/training course. The courses will be entirely man-made with a new water body constructed and the white water created through a system of pumps and obstacles placed in the course.

Both courses will remain after the Games, leaving behind a world-class facility for people of all abilities.

Excavation of the new lake will begin in autumn 2009 and of the two water courses by the end of the year. These will be complete early in 2010, with the lake due to be filled in spring 2010.

The structure of the facilities building will be finished by spring 2010 and by 27 July 2010 the pumping equipment will be complete and the courses running.

Eton Dorney

The Olympic Rowing and Canoe Sprint, and Paralympic Rowing events will take place at Dorney Lake in Windsor, Berkshire. The venue currently consists of a 2,200m, eight-lane rowing course, warm-up lanes and competition facilities. The venue will be enhanced to provide improved facilities for athlete warm-up and Canoe Sprint events during the Games.

The construction contract was awarded in April 2009 and work is due to start on site at Eton Dorney in autumn 2009. The enhancement works are due to be completed by spring 2010.

Weymouth and Portland

The enhancements to the Weymouth and Portland National Sailing Academy (WPNSA) were completed in November 2008 – the first London 2012 sporting venue to be finished. The works included the construction of a new slipway and 70 moorings, boat parking and crane piers.

The works are already benefiting the sailing community: the Windsurfing and Sailing World Championships will use the new facilities at WPNSA in August 2009. The facilities will also be used by the community and to help athletes to prepare for the Games, thereby delivering an early legacy to the area.

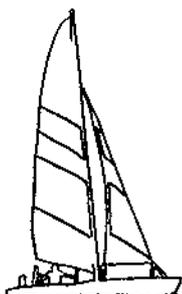
Royal Artillery Barracks

The Royal Artillery Barracks is due to be the venue for the Shooting competitions during the Olympic and Paralympic Games. After the Games, the indoor 10m Shooting range will be taken down and relocated to provide Shooting facilities elsewhere in the UK.

Planning consent for the venue is expected by 27 July 2010, although the necessary construction work will take place closer to the Games.



An artist's impression of the new Broxbourne White Water Canoe Centre





10,000 sq m

size of the new lake at Broxbourne White Water Canoe Centre – larger than the area of a football pitch

70

new moorings at Weymouth and Portland

The first London 2012 sporting venue to be finished was Weymouth and Portland, where the necessary enhancements were completed in November 2008

changing the face of the earth

By 27 July 2010: More than half of the new bridges and underpasses will be complete and parts of the Olympic Park Loop Road in operation. Planting will have begun across the Park.

A new landscape

The London 2012 Games are the catalyst for transforming 2.5 sq km of land in east London. What was industrial contaminated land has been rapidly transformed over the past three years.

The electricity pylons that dominated the landscape were removed by the end of 2008, with the power moved into two new 6km tunnels that have been constructed underneath the Olympic Park.

'Enabling works' – preparing the land for construction – were completed in July 2009, although the washing of soil excavated from the area will continue on site over the coming months. Once decontaminated, this soil is being reused across the Park to create a new landscape.

This will ensure that gradients of paths in the new Park will be accessible to everyone and that views are maintained of the new venues and landmarks in the surrounding area. 'Henman Hills' will be created so visitors to the Park during the Games will be able to watch the live action on large screens.

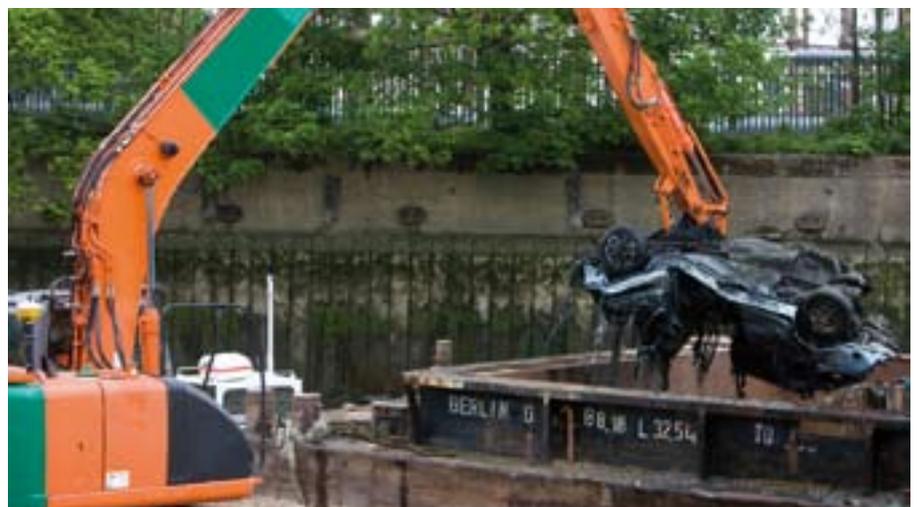
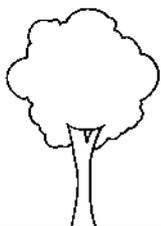
Revitalised waterways

The waterways in and adjacent to the Park have been revitalised to improve the physical environment for visitors and wildlife.

The dredging of a stretch of the Waterworks River from the newly opened Three Mills (formerly Prescott) Lock into the heart of the Park has been completed, and will have a significant impact on water quality. Around 20,000 tonnes of silt, gravel and rubble have been removed. Once it has been cleaned the gravel will be reused on the Park.

The dredging, together with the opening of Three Mills Lock and the construction of a new wharf on the river opposite the site of the Aquatics Centre, means contractors have started to transport materials to and from the construction site using 350-tonne barges. This will make a significant contribution to London 2012's aim to transport 50 per cent of materials (by weight) by rail or water during construction.

Now the repairs of the river walls have been completed, work will begin to create sloping banks and new riverside environments for ►



A car, tyres and shopping trolleys have been removed during the clean-up of the waterways



500,000

plants being planted in the
Olympic Park's wetland areas

Around 2,000 semi-mature trees have been bought to be planted across the Olympic Park



Work has started on a major footbridge in the centre of the Olympic Park, which forms part of the main walkway through the Park. Like many of the bridges in the Park, it has been designed so that a temporary section to carry increased numbers of spectators during the Games (see artist's impression, above) can be taken away after the Games (below) and recycled for alternative uses



► wetland vegetation and wildlife. In spring 2010 around half a million wetland plants will begin to be planted along the newly created riverbanks in the north of the Park along the River Lea.

New green spaces

Now the area has been cleared and cleaned, work is starting to create the new parklands – a new green space for east London the size of St James's Park.

The management contractor for the north of the Park has already started work on site and it will in turn appoint two landscape contractors in autumn 2009. The procurement of a contractor for the south of the Park has begun and it is due to start work on site during winter 2009/2010. Around 2,000 semi-mature trees have been bought, and will start to be planted in late 2009.

Connecting communities

More than 30 bridges are being built to span the numerous rivers and railways that run through the Olympic Park. They will create links across the Park during the Games, and connect the communities that will surround the Park after the Games with the new area of parklands.

Ten bridges are already structurally complete with a further 12 bridges and three underpasses under construction. Initially the bridges are being used for construction traffic and to carry utilities over the waterways and railway lines. The completed bridges include the first of five bridges linking the Olympic Stadium 'island' site with

the rest of the Park; the other four will be structurally complete by 27 July 2010.

Two permanent bridges in the centre of the Park have also been constructed. These span the North London Line and Carpenters Road to create an essential link between the north and south of the site for construction traffic. The bridges will then form an important part of the main pedestrian walkway through the middle of the Park during and after the Games.

By 27 July 2010, more than half of the new bridges and underpasses will be complete, and work will have started on four more structures.

Work has already started on the Olympic Park Loop Road. By 27 July 2010 the southern section and parts of the northern section are also due to be in use for construction traffic.



20,000

weight in tonnes of silt, gravel and rubble that have been dredged from a stretch of the Waterworks River in the Olympic Park

The first of five bridges linking the Olympic Stadium 'island' site with the rest of the Olympic Park being lifted into place

making connections

By 27 July 2010: The Energy Centre, Primary Substation, main sewer and deep sewer pumping station will all be operational.

An entirely new utilities infrastructure has been commissioned and is being installed in the Olympic Park to meet the long-term needs of the Lower Lea Valley communities and the demands of the London 2012 Games.

A new Energy Centre is being constructed in the west of the Park to support London 2012's commitment to use renewable and energy-efficient technology. The Centre will include a biomass boiler that uses woodchip as fuel to generate heat, and a natural gas powered Combined Cooling, Heat and Power plant (CCHP). During the Games the Centre will provide heating, cooling (for air conditioning) and power for the venues across the Park. After the Games it will contribute power and provide heating and cooling for the local area.

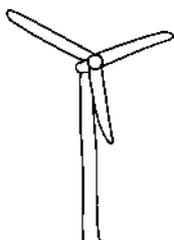
The steel frame and concrete floors of the Energy Centre are complete and ready for the delivery of the first mechanical and electrical equipment for the CCHP. More steelwork and the building's cladding will follow the installation of the main equipment. The Centre will be available to serve the venues in the Park before the Games, with the VeloPark scheduled to receive heating in the spring of 2010.

A Primary Substation is being built alongside the Energy Centre to

distribute electricity efficiently from the wider national network to the venues around the Park and the developments in the area after 2012. However, in autumn 2009 – almost three years before the Games – it will begin supplying power to the Stratford City development. As the new utility networks within the Park are completed it will start to support contractors building the venues within the Park, beginning with the Olympic Stadium in spring 2010. This will reduce the need for temporary generators on site.

The original utility networks underneath the Park have been diverted, removed or disconnected. By 27 July 2010 the infrastructure for an entirely new network of utilities (gas, water, electricity, telecommunications and sewage) will have been installed to provide a 'backbone' for the long-term development of the area.

A new 130m-high wind turbine is planned at Eton Manor in the north of the Park. Over an average year this will produce energy to supply 1,000 homes and help the ODA meet its aim to use on-site renewable energy infrastructure to supply 20 per cent of energy requirements after the Games. By 27 July 2010 the base for the turbine is due to be in place.



An artist's impression of the Primary Substation



265km

length of ducts for the new utilities
being installed in the Olympic Park

2km

length of new sewers being installed
in the Olympic Park

A new Primary Substation has been built to help distribute electricity around the Olympic Park

green light ahead

By 27 July 2010: All major transport improvements will be in progress or complete, and the next level of detailed planning for transport operations during the Games will have been completed.

The majority of spectators visiting the Olympic Park will use three 'gateway' stations: Stratford Regional, Stratford International and West Ham. The Olympic Delivery Authority (ODA) is funding or contributing funding to a series of improvements to transport infrastructure to create a safe, reliable and accessible transport system for the increased numbers of passengers during the Games.

The improvements – many of which are already complete – will also leave lasting benefits after the Games and transform this part of east London into one of the best connected areas of the capital.

Docklands Light Railway

The first 20 of 55 new railcars for the Docklands Light Railway (DLR) are in service, with the others due to be delivered by summer 2010. The ODA is co-funding 22 of these new railcars, which will enable the DLR to run three-car trains on most of its network. Platform extensions to accommodate these longer trains are underway with many already complete.

The 2.6km extension of the DLR under the River Thames from King George V to Woolwich Arsenal Station opened seven weeks early in January 2009. This will provide an important north-south link for Games spectators and provide better long-term connections to the Woolwich area.

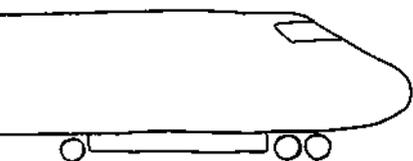
A second DLR extension – from Canning Town to Stratford International Station (SIS), along with four new stations – is due to be open by 27 July 2010. This will provide an accessible link from Stratford Regional Station (SRS) to SIS. Two new North London Line (NLL) platforms opened at SRS in April 2009. The former NLL platforms at the station are being modified, so they can be used as a stop on the new DLR extension.

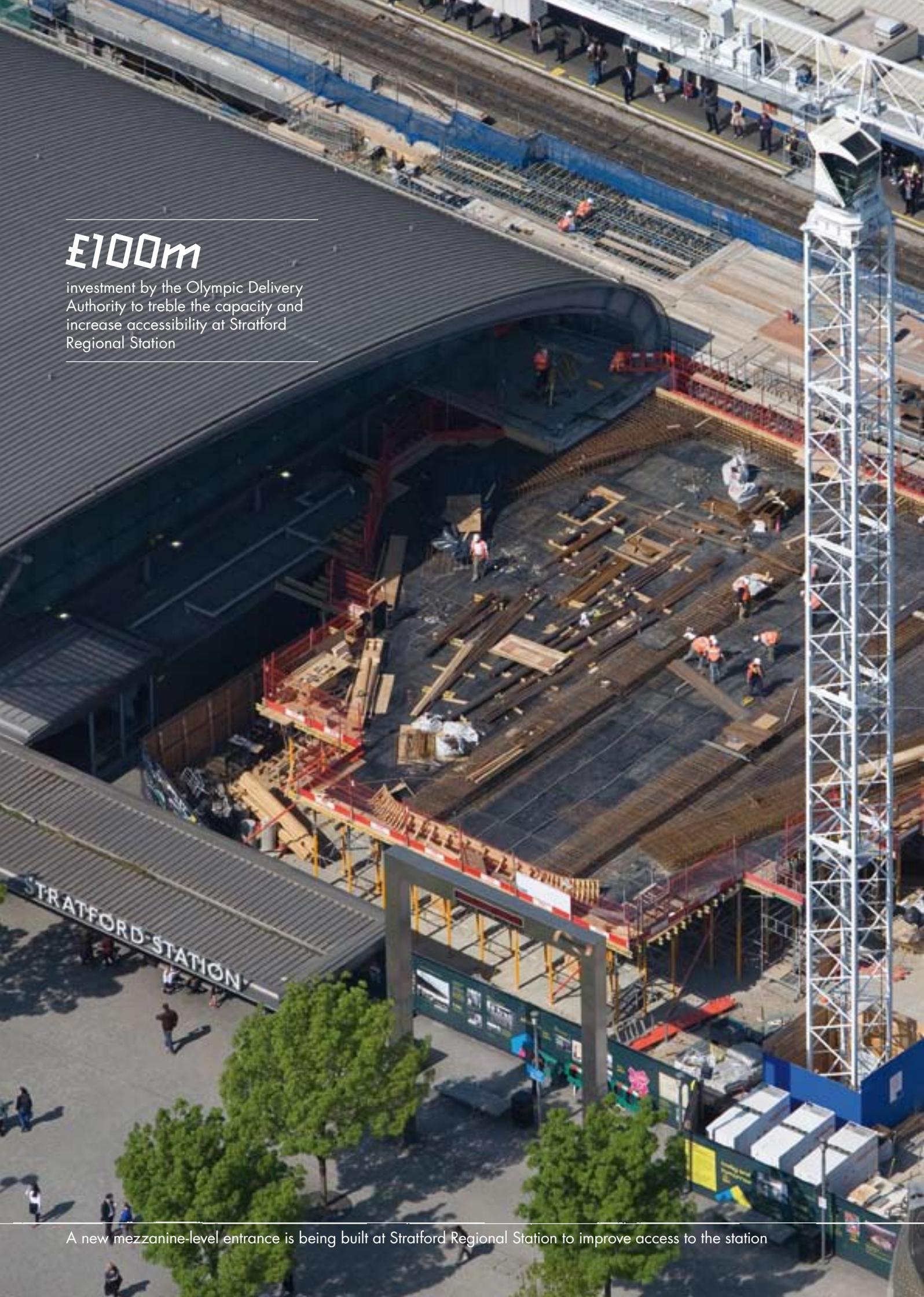
Stratford International Station

The ODA has contributed funding to a new entrance and exit at the eastern end of SIS. The development includes a lift, two escalators and a fixed staircase to improve passenger flow. ▶



A new entrance/exit has been lifted into place at Stratford International Station. It will enable passengers to get to the new Stratford City development and then on to the Olympic Park from the station's platforms





£100m

investment by the Olympic Delivery Authority to treble the capacity and increase accessibility at Stratford Regional Station

A new mezzanine-level entrance is being built at Stratford Regional Station to improve access to the station

► This new entrance has been installed and is due to open before the High Speed 1 domestic services start using the station in December 2009. During the Games this line will be used by the Javelin® service, which will be able to transport up to 25,000 passengers an hour to and from St. Pancras International and the Olympic Park in just seven minutes.



An artist's impression of the new mezzanine-level entrance that is being built at Stratford Regional Station to help ease congestion

Stratford Regional Station

The ODA is investing around £100 million to treble the capacity and increase accessibility at Stratford Regional Station. Platforms have been widened and lengthened to ease congestion, and the first two of several new lifts are now in service. The majority of the remaining lifts are due to be open by spring 2010, with the rest due to be installed by summer 2010. Work on a new mezzanine-level entrance is well underway. This will ease crowding at the existing entrance and make it easier to access westbound Central Line and DLR services.

Walking and cycling/ West Ham Station

In March 2009, the ODA announced an £11.5 million investment to encourage more people to walk and cycle to the Games.

One of the walking and cycling routes the ODA plans to enhance is 'The Greenway', a 7km off-road pathway that Games spectators – including those walking from West Ham, the third 'gateway' station – can use to access the Park.

The ODA has started to enhance a 2.3km section of The Greenway from Wick Lane to Manor Road (near West Ham Station). Access points, ramps, signage, nearby vegetation and the path itself will be improved, with

resting places provided. Most of these changes will remain after the Games, making The Greenway safer and more appealing to pedestrians and cyclists.

Work on these improvements have begun and will be well underway by 27 July 2010.

Jubilee Line

Schemes that were already being delivered by the ODA's transport delivery partners have been integrated into the transport plan for the Games. For example, London Underground is developing a new signalling system on the Jubilee Line (that serves Stratford Regional and West Ham stations), which will increase capacity by 25 per cent. This is due to be complete during 2010, benefiting London long before the Games and for many years afterwards.

Operational planning

By 27 July 2010 the next phase of planning transport operations that will run during the Games will have been completed. The 'Consultation Draft for the Second Edition of the Transport Plan for the Olympic and Paralympic Games' will be published in autumn 2009 followed, after the necessary consultation period, by the second edition itself in autumn 2010.

Work on the second phase of timetabling railway services during the Games will be complete. Work will have also been completed on leasing the land and hiring the vehicles needed for the park-and-ride facilities that will help get spectators to the Games, particularly those travelling from around the UK.



£11.5m

investment by the Olympic Delivery Authority to improve walking and cycling routes and promote forms of active travel

The Greenway will be an important walking and cycling route between West Ham Station and the Olympic Park during the London 2012 Games

priority themes

The delivery of the venues and infrastructure for the London 2012 Games are underpinned by the Olympic Delivery Authority's six priority themes.

Design and accessibility

We are delivering design for the London 2012 Games that combines excellence with innovation. We are creating exciting, well-designed venues that are an appropriate stage for the greatest sporting and cultural event on Earth.

We are designing for the Games and legacy together. The venue designs must obviously meet the requirements of the Olympic and Paralympic Games, but we are looking beyond 2012. We are only building permanent venues if there is a long-term use. We will not leave 'white elephants' and are being creative in the use of temporary venues and seating.

We also want the design of the venues within the Olympic Park to deliver a striking visual statement that reflects the importance of the Games, while ensuring they are balanced with the urban architecture and landscape that define the area. After the Games the venues must seamlessly connect with the parklands and urban neighbourhoods that surround them.

Inclusive design is at the heart of our design process, and has been since the project began. The Olympic Village, the sporting venues, new transport services, supporting facilities and the Park itself will be accessible to people with a wide

range of disabilities both during and after the Games. We want to set an excellent standard of accessibility for disabled people, older people and families with children, which will set a benchmark and act as an inspiration to others.



Students from Central Saint Martins College of Art and Design took part in a competition to design patterns for the seating in the Basketball Arena, Handball Arena and Water Polo venues. The winners got the chance to work with the architects working on the Handball Arena.

14

architects firms on the Architects Panel for the Olympic Village

500

schools signed up for the chance to be involved with the 'Velodream' design competition

Employment and skills

Building the stage for the London 2012 Games will give people in London and the UK unprecedented access to new jobs and career opportunities. We have the chance to get unemployed people into work and to improve the skills within communities in east London and beyond.

As one of the largest construction projects in the country we will demonstrate our commitment to increasing skills and providing learning opportunities, particularly within the current challenging economic climate.

We anticipate that the three major Stratford-based projects alone – the

Olympic Park, Olympic Village and Stratford City development – will create around 30,000 jobs over the course of the construction period. We want local people not only to experience the excitement of hosting the Games, but to help build them.

In partnership with government, contractors, training organisations, sector skills councils, Jobcentre Plus and job brokerage networks in the five Host Boroughs, we have established an integrated approach to help get local people into jobs, to develop skills and gain new qualifications in construction.

We are establishing a link to skills development, including retraining

and sustainable employment, to equip people with the right skills for future jobs in construction.

These efforts create a positive employment and economic legacy for London and the UK after the Games: the creation of new jobs; opportunities for continuing employment; an improved skills and qualification base among local people; and better links between employers and people looking for work. This will leave a highly skilled workforce that can not only help deliver the Games, but one that will go on to have sustainable and rewarding careers in construction after 2012.



In January 2009 the ODA announced that an additional 250 construction apprenticeships would be created on the Olympic Park and Olympic Village. This brings the total target to 350 apprenticeships and increases the overall target for trainees, apprentices and work placements to 2,250.

Kerri Chambers is an apprentice bricklayer working on the Olympic Stadium. She finished her two-year bricklaying course at college in April 2008 and was looking for work when she was referred by the local jobs brokerage in the London Borough of Waltham Forest. Kerri then applied for her position via the ODA Women's Project and has been working on the Stadium since the start of the year.

10%

percentage of workers on the Olympic Park site who were previously unemployed

10%

percentage of workers on the Olympic Park doing a traineeship, apprenticeship or work placement

469

graduates from the Construction College of East London – also known as 'digger school' – since February 2008, 228 of whom found employment on the Olympic Park

priority themes

Equality and inclusion

The momentum provided by the Games and the substantial investment in the Lower Lea Valley can have a significant impact on reducing historic and long-standing inequalities. We want the economic and social benefits of the regeneration of the area, and the design and build of the Olympic Park and venues, to have a positive impact on local communities and the UK. An example of how we are achieving this is ensuring our procurement process is transparent, fair and open to a wider range of diverse suppliers.

The way that we are recruiting and managing employees is fair, and helps to promote equal opportunities

to all and eliminate discrimination in the workplace. We are working with partner organisations to encourage women, black, Asian and minority ethnic people, and disabled people, to train and apply for jobs in construction and other areas where they have traditionally been under-represented.

What we build for 2012 and beyond will be inclusive for people of all cultures, faiths and ages, and fully accessible to disabled people with a wide range of impairments. We will also provide an accessible transport network that will give everyone the opportunity to enjoy the Games, as well as leave a lasting legacy for equality and inclusion.

We recognise the diversity of the population of the UK, London and the five east London Host Boroughs and are committed to realising the advantages of this diversity in delivering our programme. We are already engaging with and involving the local communities to help us deliver an accessible and inclusive Games.



The ODA held construction 'taster' sessions for local disabled people and women as part of London 2012's Diversity Week. Participants got a hands-on introduction to construction with basic training on how to use equipment, such as the diggers and 35-tonne dumper trucks. They also discussed construction jobs with other disabled people and women who are already working on the Olympic Park.

5%

percentage of women employed on the Olympic Park site – significantly higher than the average in the construction industry across the UK

Health, safety and security

The health and safety of everyone involved in our work or affected by it is a key concern. We are established as a best-practice organisation, fully compliant with applicable UK and European legislation and standards, and continually improving. We are integrating health and safety considerations into every London 2012 Games planning, design and construction operation.

We are providing a safe and secure environment during construction and decommissioning works. We are designing venues, facilities, infrastructure and transport to help eliminate health and safety hazards during construction, operation, maintenance and decommissioning, and to meet the needs of operational

security during the Games. We want to go as far as possible to prevent illnesses, injuries, business losses and environmental harm due to unplanned events in our premises and on our sites. In 2008 our aims were realised when, with more than 2,000 workers already on site, we logged one period of more than two million hours worked without a reportable accident. We are committed to enhancing the well-being of all involved in the project work, which is why we have established new occupational health facilities for the workforce.

A healthy workforce is a productive workforce and we want to work in partnership with the unions as we move forward. Every project has a clear strategy for worker engagement.

Developing a new health and safety culture survey and forming a Leadership Team involving senior representatives of the Tier 1 contractors are examples of the radical, systematic and comprehensive programme to which we are committed.

The combination of personal leadership and worker involvement in tackling the risks that they face is improving our performance – and is how we can sustain our high standards. We are working with all our staff, partners, suppliers and their workforces to embed this culture and give the highest priority to health, safety and security issues.



Good practice in health, safety and the environment was recognised at the ODA's inaugural Health, Safety and Environment Awards in July 2009. Among the winners was Huw Preece from the Primary Foul Drainage and Pumping Station, pictured, who won the Inspiring Leaders Worker of the Year Award. Other awards were made to teams and individuals in categories such as 'Lessons Learned', 'Training' and 'Workforce engagement'.

700,000

average number of hours worked per reportable accident

7

periods of one million hours worked without a reportable accident – and one period of two million hours

20,174

patients seen by Park Health, the Olympic Park on-site medical service, of whom almost 17,000 had health checks. It makes this one of the biggest health screening programmes in the UK

priority themes

Legacy

The London 2012 Games offer a unique opportunity to revitalise the Lower Lea Valley, transforming one of the most underdeveloped areas of London into a benchmark 21st century urban environment that reflects the diverse and vibrant population of the area.

We are harnessing this potential and creating one of the largest new urban parks in Europe for 150 years. In addition to world-class facilities for sports including athletics, cycling, hockey, swimming and tennis, there will be homes for a new community, and green spaces in and around the Olympic Park.

The work can broadly be split into two phases. The first, led by the Olympic Delivery Authority, is focused on the creation of the Park and the development of the venues.

The second, led by the Olympic Park Legacy Company, is focused on what the Park will be used for after the Games. The two are closely linked, with venues and parklands being designed with their long-term use in mind.

We are transforming the physical environment in and around the Park by clearing and cleaning the site, improving the waterways, burying the overhead powerlines, enhancing

the ecology of the area and creating green, open spaces. Infrastructure in the area will be enhanced, especially public transport networks, utilities and disabled access.

By planning the Games and their legacy together now, we can ensure that they are remembered, not only as a summer of fantastic sport, but also as the catalyst for the regeneration of one of the most underdeveloped areas of the UK.



A new Energy Centre, pictured, and the infrastructure for an entirely new network of utilities (gas, water, electricity, telecommunications and sewage), has been commissioned and is being installed in the Olympic Park to meet the long-term needs of the Lower Lea Valley communities after the London 2012 Games.

75p

in every £1 the Olympic Delivery Authority is spending is going on the long-term regeneration of the area

1,000

new three- and four-bedroom houses from the Olympic Village development

100

area in hectares of new green space being created – equal in size to St James's Park

Sustainability

We are creating venues, facilities and infrastructure for the London 2012 Games that leave a lasting social, economic and environmental legacy for London and the UK, while minimising any other adverse impacts during the design and construction of the Olympic Park, venues, infrastructure and housing.

The remediation of the site will bring existing land back into public use and create significant improvements in the quantity and quality of green space in east London. The creation of new infrastructure, sporting facilities and housing in an area currently experiencing high levels of deprivation will help to create neighbourhoods and vibrant places

after the Games are over, where people will want to live, work and play. We are reconnecting communities by building more than 30 bridges across the waterways, railways and roads that currently divide the Olympic Park area.

Addressing the challenge of climate change through minimising the carbon emissions associated with the development, and optimising the opportunities for efficient water use, is key to our approach. We are creating 100 hectares of green spaces, which are designed to reduce the risk of flooding in the river valley and enrich the biodiversity of the Lower Lea Valley.

We are working with the construction products industry to help source environmentally friendly and ethically produced materials that will help create a low carbon construction. A new waste management contractor has been appointed to sort, compact and transport waste by barge from site, 90 per cent of which will be recycled or reused.

Our approach is unprecedented for a development of this nature. We hope it will raise the bar for industry and provide a challenging step change for urban development in the UK.



Hundreds of Olympic Park workers took part in a Cycle to Work day during London 2012's Sustainability Week in June 2009. They were given free bike checks (pictured) and maintenance advice to encourage them to continue to set the pace on using sustainable transport.

Ten per cent of the workforce already walk or cycle to the Olympic Park, which supports London 2012's aim to get more people walking and cycling during and in the lead up to the Games.

57%

percentage of construction material/waste being delivered to and collected from the Olympic Park by rail or water. This includes 630,000 tonnes of material taken away from site by rail, diverting more than 30,000 trucks from the road network

80%

percentage of aggregates used on the Olympic Park from recycled sources; 420,000 tonnes of the aggregates supplied to venue contractors has been recycled from material on site

90%

percentage of construction waste being diverted from landfill





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MAYOR OF LONDON

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