



London 2012 Olympic Parklands and Public Realm

Legacy Public Landscape

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1. Fantasticolgy Meadows formed by annual seeding laid out as an abstract image and memory of former land uses of the site.

The Park in numbers is 6,200 trees, 9,500 shrubs, 63,000 bulbs, 250,000 wetland plants, 766,000 grasses and ferns, together with 650 bird and bat boxes! Altogether they represent over 48 hectares of new habitat.

Touted as Europe's most significant landscape for the next 150 years, the London 2012 Olympic Park and 2.5-square-kilometre Paralympic Park formed the centre piece for the world's most sustainable Olympic Games to date. It created a dramatic setting for the Olympic Games' venues that enriched all visitors' experience.

As the largest new urban park in the capital since the Victorian era, at 102 hectares large, it has acted as a catalyst for regeneration in East London. This project demonstrates that landscape architects in their key roles as clients, master planners, designers, and engineering team leaders can champion the process and how green infrastructure in a world city like London could be the principal driver for place-creation, value-creation, and addressing climate change.

Landscape Design from Concept to Details

After planning approvals were secured and earthworks had commenced, the Olympic Delivery Authority (ODA) sought a fresh approach and appointed LDA Design and Hargreaves Associates in 2008 to take the parklands and public realm from a good design to great design. The collaboration brought together the best talents of the UK in LDA Design and with Hargreaves Associate's experience of the Sydney 2000 Olympic Park that was markedly the first "Green Games".

Underpinning the early design concept was a vision not only to stage the Olympic Games and Paralympic Games in London, but also of the lasting legacy that this prestige will deliver. Many challenges had to be overcome before the master plan for the park could begin

construction in March 2012, partly because of its sheer scale, it being the largest urban park development in the UK in the last 100 years. The heavily contaminated and derelict site had been previously occupied by battery and match-making factories, and had been both a post-war munitions dump and municipal rubbish dump, which required substantial cleansing and a restorative programme in order to be fit for its purpose.

Over the past four years, some 250 acres of new park space had been created from this former heavily industrialised landscape. The Park in numbers is 6,200 trees, 9,500 shrubs, 63,000 bulbs, 250,000 wetland plants, 766,000 grasses and ferns, together with 650 bird and bat boxes! Altogether they represent over 48 hectares of new habitat.

The hour-glass shape of the site naturally divides the park into a strongly ecological and green northern half and a more urban, entertainment-focused southern half, intended to grow into a "South Bank" in the east of the capital. The two halves are connected by over five kilometres of improved riverbanks including the previously canalised River Lea.

The Parkland emphasised and resulted in a reduction of the concourse and increase in park land, without adversely affecting crowd movement, safety, or comfort. With the shallower river valley profile, the park becomes more accessible, both visually and physically. The shallower gradient enabled a graded route to be created that is accessible to all. This made the park more usable and offered greater opportunities for biodiversity.



2. View of the North Park looking towards the temporary Basketball venue and with the Athlete's the Village beyond.

3. View of the Spectator Lawn and Temperate Americas section of 2012 Gardens from the entrance bridge looking towards the Orbit.

4. View from the Orbit down to Western Europe and Mediterranean section of 2012 Gardens and bespoke seating units.

5. View south west from the Orbit over the Concourse to Fantasticolgy Meadows.

6. Visitors enjoying the Spectator Lawns in 2012 Gardens Park.

Sustainability

The Park formed the backdrop to the most sustainable Games to date and has seen one of the most contaminated brownfield sites in London transformed to sustainable green space.

Sustainability has been integral to create venues, facilities, and infrastructure for the Games that would leave a lasting social, economic, and environmental legacy for London and the UK.

To achieve its sustainability goals, the ODA set itself and its contractors working on a comprehensive range of targets that were embedded in systems, processes, tools, and the culture of the project. The key achievements included:

- 63 percent (by weight) of the construction materials were transported to the Olympic Park by rail or water.
- 98 percent of the material from the Olympic Park's demolition work was reclaimed for reuse and recycling.
- More than 650 bird and bat boxes were installed across the Olympic Park, including within bridge structures and on the "brown roof" of the Main Press Centre.

Six key areas of objectives included:

- Energy
- Water
- Waste
- Materials
- Biodiversity
- Environmental Impact

The determination to make 2012 the greenest-ever Olympic Games meant that energy consumption was to be an important part of the sustainability strategy to reduce carbon emissions. Every aspect



from the shower systems used in the Olympic Village to the use of renewable energy and lighting optimised the opportunities for efficient water and energy use.

Approximately 100 hectares of open space was designed to reduce the risk of flooding in the river valley and enrich the biodiversity of the area. Some 5,500 homes have since been removed from the “At Risk” Register for potential flooding as a consequence of these sustainable actions.

Further, birds, bats, lizards and other species were relocated, demolished materials re-used, over a million cubic metres of soil cleaned on site in “soil hospitals”, over 90,000 truck movements saved off-site, and state-of-the-art, sustainable technologies ensured and embedded in venues.

Designing for Biodiversity

The landscape architects worked closely with the ecologists, planners, and landscape engineers to create designs for habitat and species that would deliver the Biodiversity Action Plan objectives, whilst also meeting the varying wider objectives for the Park. This meant creating a park that would have the visual delight and meet the expectations of a Games display, supplemented by its Post-Games Transformation to meet the varying objectives of a public park.

Ecological experience and expertise assisted in designing, creating, and then managing habitats. The architects’ knowledge of the ecological requirements of the key species has been vital to achieving workable and effective design solutions in a challenging and high-profile setting.

New habitats comprise wet and dry woodland, species-rich grasslands and meadows, brownfield habitats that reflect the urban past, ponds, reedbeds, and marsh. Specific habitat features or wildlife installations have also been designed into the Park to support the key species identified within the Olympic Park Biodiversity Action Plan. These include, among others, otters, kingfishers, water voles, bats, swifts, sand martins, amphibians, reptiles, and a range of invertebrates. Over 4,000 semi-mature trees and 250,000 wetland plants have been added, as well as the wildflower meadows—resulting in 45 hectares of new habitat created so supporting a broad range of insects, mammals, and birds.

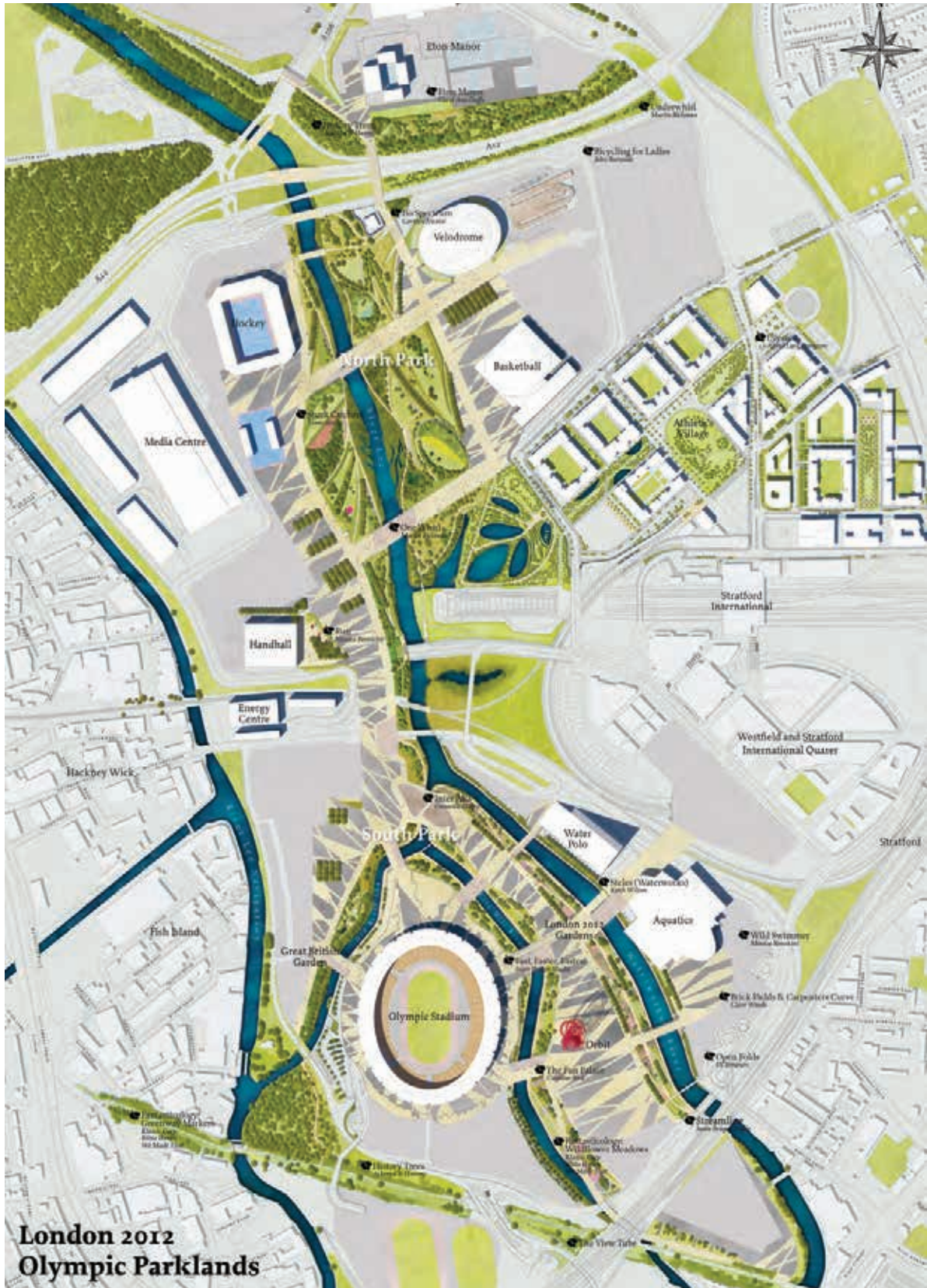
The previously canalised River Lea has also been transformed into a three-dimensional mosaic of wetland, swales, wet woodland, dry woodland, and meadow, together forming an absorbent flood-control measure and ensuring that no spoil has had to be removed.

Planting

Wildflower meadows provided a dramatic backdrop to the parkland landscape.

Extensive trials were carried out to produce special seed mixes to flower on site on a scale not seen before. One of the main challenges was ensuring that the annual flowering of the meadows could be delayed from the usual June to late July to coincide with the timing of the Games.

Not only were these meadow swathes highly attractive to visitors, they also helped to provide variation to the landscape structure, which in turn helped to drive the biodiversity on-site. The aim was not to model meadow stereotypes but to ensure that the result would be





8. Evening view across a stand of agapanthus in the Southern Hemisphere section of the 2012 Gardens to the temporary Water Polo venue and with the Aquatics Centre beyond.

9. View of North Park looking towards Velodrome.

exciting to look at as well as good for diversity. The seed mixes used were all fit for purpose—quality seeds, less than two years old.

Early procurement of trees and plants had to be ensured, in order to create as much time as possible for the landscape to mature by the start of the Games. Alongside the less formal Parkland landscape, the London 2012 Olympic Gardens provide a more structured journey through the discovery and development of cultivated plants over the past 500 years and the roles they play in the biodiversity of cities. Developed into four zones, the Gardens feature structural strips of plants from Western Europe, Temperate Americas, Southern Hemisphere, and Temperate Asia.

Post-Games Transformation

One of the unique selling points of the London Olympic bid was a commitment to deliver regeneration. Thus, temporary venues, structures, and areas of concourse will be removed to make way for permanent parkland, designed to fit with the legacy master plan for the wider area. This will complete the transformation of one of the most contaminated brownfield sites in the capital into a stunning new park for East London.

The Park was designed to provide world-class landscapes and facilities during the Games and, with minimal cost and effort, transform into the post-Games park that will continue to provide valued habitats within a vibrant, attractive, modern, and sustainable park that can be enjoyed by people as a place to relax, play, and exercise.

Post-Games, the two areas of the parkland have different aims with the northern part focusing on the ecology and habitats and the southern park being a focus for events and activities.

Legacy Design


As mentioned, from the outset the vision was to create a sustainable legacy for London and the UK. Social, environmental, and economic legacies will enhance the lives of generations to come as the Park

leaves national benefits in culture, sport, volunteering, business, and tourism. The landscape was fundamental not only for the Olympics but also the long-term future of the area, so that people will enjoy it long after the Olympic Games.

The Park has now become a network of living green that offers links between the communities to the east and west and combines a vibrant mix of recreational and educational activities in an attractive setting. The open space will become even more accessible after the Games via a network of canal towpaths, footpaths, and cycleways.

To be named the Queen Elizabeth Olympic Park from 2013 on, the Parkland will extend outwards to existing green spaces, creating a network that will reach out to the Hackney marshes in the north, to Victoria Park in the west, and to the Greenway in the south. Post-games, the canals and waterways of the River Lea will be cleaned and widened, and the natural floodplains of the area will be restored to provide a new wetland habitat for wildlife for birdwatchers and ecologists to enjoy. All the world-class sports facilities will be adapted for use by sports clubs and the local community as well as elite athletes. New playing fields sitting alongside these facilities will also be adapted for community use.

The stunning transformation of one of the most contaminated brownfield sites in the capital has given local communities better access to high quality green space and recreational facilities. Through high quality and creative design, a clear new green character and identity have been created. East London has been fundamentally transformed from a neglected brownfield into a vibrant, sustainable park, which will have a positive impact on the area for years to come.

Ultimately, for future generations the Park will be an exemplar for future restoration projects—demonstrating that buildings may come and go but green and grey infrastructure can lead and frame the sustainable development of cities. 



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10. View enjoyed by thousands of visitors to the Games from the main Park entrance bridge over the 2012 Gardens.

11. Along the Southern Hemisphere section of the 2012 Gardens with the sculptural Halo Lights punctuating the skyline.

12. Evening view of the floodlit Stadium from Southern Hemisphere section of the 2012 Gardens with Kniphofia (Red Hot Pokers) in full bloom in the foreground.