Chapter 10

Design of Contemporary Mega-Events

Graeme Evans

Abstract
Contemporary mega-events are a design and political phenomenon, encompassing all scales of design practice and serving as an exemplar of a global imaginary realised in local space. They combine placemaking with national and city branding, manifested through extravagant buildings, facilities, transport infrastructure, logos, uniforms and slogans – all of which present design challenges given their high profile and cost. This chapter considers the contemporary mega-event, specifically Olympics and EXPOs, from their historical evolution (World Fairs, Biennales) to the expansive and controversial events that punctuate the international calendar and tourist itinerary. The design of mega-events is reflected through the iconic buildings and components that make up the visual feast that these events seek to engender – from costumes, mascots and signs, to the masterplans and computer-generated visions that are employed to project the mega-event and site into the future.

Keywords: Mega-events, Olympics, EXPOs, London 2012

10.1. Introduction

This chapter will discuss the phenomenon of contemporary mega-events and their design and spatial context. Drawing on their historic evolution, this chapter first considers the definitions and distinctions attached to large-scale events, and then introduces their most high-profile aspect, the iconic buildings and sites that these major events occupy, and in some respects create, through grand place-making schemes. The practice of master planning is then discussed, as a new hybrid spatial and communication design process which locates these special events as urban imaginaries (Çınar and Bender 2007) through a convergence of visual and virtual culture. While icons and landscape design themes provide the prime physical experience and impact, a host of design practices are engaged in these major projects – from product design and branding, communication and "experience" design to fashion design – as well as inclusive and sustainable design, in response to the imperatives of accessibility and environmental sustainability. These design practices combine to represent a global phenomenon situated in a local context and this will be critically assessed through examples from recent EXPOs and Olympics, including a more in-depth case of design elements of the London 2012 Olympic Games.

10.2. Defining Mega-Events

Writing over 25 years ago, Hall located the rationale for hosting what until then had been termed hallmark events within the fourth era of World's Fairs running from the early 1960s –

namely "the city of renewal" (1992, p. 29). Today's mega-events are no exception to this now 50 year trajectory, which has hardened in recent years toward major cities hosting and bidding for the "greatest show on earth." National capitals such as Madrid, Paris, and Tokyo and cultural capitals Amsterdam, Los Angeles, Sydney, Rio, Istanbul, and New York vie for hosting major international events such as EXPOs and Olympics, despite their escalating cost and perennial controversies and dubious legacy effects (Evans 2011). Re-presenting and re-imaging major cities through these mega-events is therefore both a competitive city strategy and a reflection of the "festivalisation of the city" (Richards and Palmer 2010). These once-in-a-lifetime events also present a dualistic challenge to their hosts and commissioned designers – between the temporal/ephemeral nature of the event and the permanent legacy and between the "host" audience and the outside world. The latter includes visitors/tourists, global media, commercial sponsors, and institutional "brand" holders who also impose their design controls on the event organizers.

Large-scale festivals and sporting competitions make up the majority of what are considered contemporary hallmark or mega-events. Early studies into the phenomenon tended to view them as simply "special" (i.e. not regular/annual) large-scale events. However, subsequent studies (Hall 1989) identified short-term staged events, such as carnivals and festivals. Such events can be of significant economic and social importance, which may not only serve to attract visitors but also assist in the development or maintenance of community or regional identity (Getz 2012). The term "hallmark event" is not therefore confined to the large-scale events that generally occur within cities and major towns. Community festivals and local celebrations can be described as hallmark events in relation to their regional and local significance. Such an observation highlights the importance of the economic, social, and spatial context within which hallmark events take place. However, the term "mega-event" has far more specific application. Mega-events, such as World's Fairs – or "EXPOs" (Olds 1988) and the Olympic Games (Ritchie and Yangzhou 1987), are events which are expressly targeted at the international market – global media, tourists, and investors, as well as local and national participants. They also entail major capital investment in venues, facilities, and transport and drive a number of design imperatives.

More recently, Müller (2015) has revisited the definitional ambiguity of the mega-event concept which brings together the key factors which distinguish them from other hallmark or special events. In his analysis, in order to be considered as mega-events, they:

1. attract a large number of visitors
2. have a large mediated reach
3. come with large costs, and
4. have large impacts on the built environment and the local–regional population.

Although, in the past, visitor numbers were an indication of the size of the event, in order to experience a mega-event today it is no longer essential to travel and watch it in situ. In fact, the widespread broadcasting of events since the 1980s has meant that the vast majority of those who watch an event do so on TV or other media (Horne 2007; Sugden and Tomlinson 2012). From Montréal 1976 to the London 2012 Olympics, the value of broadcasting rights for the Summer Games has risen from $34.9 to $2569 million – almost 23 times in real terms. This is an indication of the evolution of the global media economy, but also of the commercialization of large events. According to the International Olympic Committee (IOC), about half of the world's population, 3.64 billion, saw at least one minute of coverage of the 2012 Summer Games (IOC 2014). From Barcelona 1992 to London 2012, the number of accredited media personnel almost doubled to more than 24 000 – more than two media representatives per athlete (Chappelet 2014). This growth underscores the extent to which large events are nowadays mediated rather than directly experienced. This has also meant that their design focus has widened from the facilities and site itself to branding and communication design, merchandising, and sponsorship. This is not an entirely new aspect, however. In the 1851 Great Exhibition the drinks company Schweppes paid £5500 for the franchise and sold over 1 million bottles of its soft drinks. Coca Cola, which, since 1999 has owned the Schweppes brand, is one of the main franchisees of the modern Olympics, contributing £64 million to the IOC every four years. During the 17 days of the London 2012 Games, Coca-Cola sold 18 million of its drinks at Olympic sites.

10.3. Historical Precedents

The modern history of these special events therefore predates the postindustrial urban renewal and competitive city eras. Seminal points occurred within a year of one another – the inauguration of the International Art Exhibition, or Venice Biennale, in 1895, and the revived "modern Olympics" in 1896. Although a biannual art exhibition would not in itself be considered a mega-event as such, as the event has grown in size and importance – cultural, symbolic, economic – it has expansively evolved into a permanent spectacle, with the national pavilions of the Giardini sitting alongside the temporary exhibitions in the Arsenale dockside complex, and now spread across other venues and sites in Venice. This is not unlike the Edinburgh International Festival, established in 1947, which spawned the now larger Fringe and associated festivals (Literature, Jazz, etc.), and the Milan Design Feira, again with a larger off-site fringe exhibition program. The Cities/Capitals of Culture under the European Union's program first launched in 1984 in Athens provide another example of major competitive events used to promote, celebrate, and upgrade a city's and region's cultural assets and image (Evans 2010). Under UNESCO's Creative Cities Network, Cities of Design have also been designated: first, Berlin in 2006, which built on its Design Mai (May) festival,

and today a curious mix of cities – Dundee, Bilbao, Curitiba, Helsinki, and Turin – hold this status. Dundee is benefitting from £1 billion in investment in its waterfront development, a 30 year project of which a key part is the V&A Museum, which will be housed in a custom-made building designed by the Japanese architect Kengo Kuma.

10.3.1. Fun at the Fair

The early twentieth century Olympics were treated as a sideshow to the fairground, employing them as additional but subsidiary attractions to the already established World's Fairs. For instance, Paris 1900 treated its Olympics as an indistinguishable component of the "Exposition Universelle," whereas St. Louis in 1904 followed the same formula (Gold and Gold 2010). The International EXPOs can therefore be seen as the originators of today's mega-events, perhaps harking back to the 1851 Great Exhibition in London. However, even this seminal event drew heavily from the earlier imperial Great Exhibitions that had cemented the dual cultural hegemony that had been reinforced as the nineteenth century progressed, with English and French cultural production starting to dominate publishing, theater, and crafts, as early cultural globalization was fueled by expanding Empires and industrialization. The World's Fairs had in fact originated in the French tradition of national exhibitions, which had culminated in the French imperial Industrial Exposition of 1844 held in Paris, following on from a series of great exhibitions that had begun in the seventeenth century with exhibitions of works of art (Greenhalgh 1988) – and therefore predating the first Venice Biennale by 50 years. Along with the art exhibitions were exhibitions of French-manufactured goods, which although not international in scope were the more direct ancestors of the universal exhibitions. As Greenhalgh observed: "the importance of these for Government at the time was evident; they were no mere trade fairs or festival celebrations, they were outward manifestations of a nation attempting to flex economic, national, military, and cultural muscles" (Greenhalgh 1988, p. 6). The Great Exhibition in London had also been preceded by two smaller exhibitions that were staged by the Royal Society of Arts in 1844 and 1849: "wedding high art with mechanical skill." The 1851 Great Exhibition was also an explicit advert for the British export industry, with the majority of exhibits coming from the Empire and predominantly Britain's manufacturing cities; for example, Sheffield had 300 exhibits, from railway springs, vices, and anvils to newly designed fenders and kettles. As Herbert Read observed in *Art and Industry* (Read 1932): "those splendid institutions in Trafalgar Square and South Kensington, now treasure-houses which attract pilgrims of beauty from every corner in the world, were first conceived as aids to the manufacturer in his struggle with foreign competitors. The National Gallery and the Victoria & Albert Museum in London, prototypes of similar institutions all over the world, were not founded as Temples of Beauty but as cheap and accessible schools of design."

By the 1930s host nations had also started to use the Olympics as a stand-alone opportunity to advertise their country and regimes, notably Berlin's "Third Reich" 1936 Games. By 1964 Tokyo was promoting its Games as an important medium for conveying Japan's credentials as a modern country and for signifying its reemergence onto the international stage after World War II, a strategy later adopted in Seoul, Beijing, Rio, and most recently in Sochi, Russia. Versions of this international cultural diplomacy and branding exercise can also be seen in the football World Cup and other competitions hosted by developing regions such as in the Middle East (e.g. Qatar) and South Africa.

10.4. Design Icons

The physical structures and infrastructures that mega-events now demand, offer the most explicit design challenge and impact – notably the new sports stadia, festival sites, pavilions, and associated accommodation (e.g. Olympic Village) – as well as vital transport facilities and associated design and public art installations. Earlier "great exhibitions" had also produced permanent legacies of festival sites, providing examples of that much over-used tag: "icons." Prime examples include the Eiffel Tower in Paris, named after the engineer Gustave Eiffel, whose company designed and built the tower. Constructed as the entrance to the 1889 World's Fair, it was initially criticized by some of France's leading artists and intellectuals for its design, but it has become a global cultural icon of France and one of the most recognizable structures in the world. The Eiffel Tower is the most visited paid monument in the world, attracting over 7 million people each year. Other legacies from World's Fairs include Glasgow's Kelvingrove (1901), national stadia, and the more prosaic convention centers such as in Knoxville, USA, Brisbane and Vancouver.

In London, the Festival of Britain of 1951, conceived as "a tonic for the nation," was a self-consciously forward-looking event that sought to offer a break from rationing, austerity, and the landscape of a bomb-scarred country. It sought to present a picture of the future, a mini-expo of the esthetics people had to look forward to. It was one of the first examples of culture-led urban regeneration (Evans 2005). The Skylon – a symbolic if non-functional rocket-shaped structure – was the icon for the festival, a dynamic symbol with a name derived from a blend of "nylon," "pylon," and "skyhook." It was demolished on the orders of Winston Churchill (the Labour government-commissioned Skylon was seen as a symbol of socialism). The Festival of Britain also produced its own kind of branded furniture: anatomical-shaped tables, chairs, and plant stands: "these minimalist masterpieces were made from cheap plywood and vinyl: Britain's effete but endearing contribution to modernism perhaps" (Heathcote 2011). The South Bank is the physical legacy of the Festival of Britain, occupying the stretch of former industrial riverside near Waterloo. It has since grown to embrace the

giant Ferris wheel of the London Eye in the west all the way to the Globe Theatre and Tate Modern – now the most visited modern art museum in the world – in the east. At its heart is the Royal Festival Hall, arguably the first modernist structure to be truly adopted by a city that once seemed hyperconservative but is now apparently in love with the contemporary, and designed by the London County Council's chief architect, Robert Matthew, who assembled a team of young architects (Heathcote 2011). Ernest Race and Robin and Lucienne Day also came to prominence during the Festival. Race created furniture, including the iconic Antelope chair and the Days were integral to the design of the interiors of the Festival Hall, with Lucienne's textiles and wallpapers displayed alongside Robin's steel and plywood furniture. In contrast to today's mega-event symbols, the Festival's logo, designed by Abram Games – featuring Britannia adorned with red, white, and blue bunting – also became evocative of the period.

Since the 1960s, contemporary mega-events have been dominated by the permanent sports stadia, associated housing and transport, and often dubious "public art" erected to inject a sense of fun and play into these functional and impervious buildings. More temporary structures are designed for pavilions such as those that make up the national promotion at EXPOs, although host country pavilions are often the more extravagant and expensive and therefore remain as permanent legacies of the EXPO site, anchoring the subsequent site redevelopment. As questions of sustainability intensify around these hugely costly projects, the use of novel temporary structures is seen as one solution to the after-use conundrum (with many sports facilities seriously under-used after the event) and sustainability question. So as well as tents, toilets, and warehousing, the basketball arena for the London 2012 Olympics was designed to be fully recyclable, and was dismantled in 2013. Mooted to be sold to the 2016 Rio Olympics – it is however still pending sale for £2.5 million five years later.

The formula adopted for successful host cities, since the hosting of these events is the outcome of intense competitive bidding over several years, typically focuses on the design of the main venues - in the case of the Olympics, this includes the main athletic stadium and also some of the specialist stadia such as the Aquatics Centre and Velodrome, and in the case of EXPOs the host city pavilion. In both cases the themed "village" and "park" surrounding the main venues make up the rest of the mega-event site, served by new or upgraded transport stations and systems (e.g. light rail, metro). It is here that architectural design is used to create the prime image of the event through keynote buildings and landscapes. Although highly functional buildings, designers have sought to create signature buildings that provide a "wow factor" and a degree of excitement that these new sports stadia otherwise lack until actually in use. Examples include Herzog de Meuron's "birdsnest" stadium for the 2008 Beijing

Olympics and Zaha Hadid's Aquatic Centre for the London 2012 Olympics. The use of starchitects (Ponzini and Nastasi 2011) therefore parallels the earlier *grands projets* and cultural icons built to rebrand and market a place, or an entire city (Evans 2003), as part of longer term regeneration, such as the Guggenheim Bilbao, where Frank Gehry's art museum franchise is synonymous with the revival of this industrial port city (Plaza 2006). Over-reliance on a single brand can also risk image decay as the brand dilutes, so as Bilbao's Provincial president Josu Bergara said, with no hint of irony: "Other cities will have to find their own projects, not copies of the Guggenheim" (Crawford 2001, p. 2). Giddens reinforces this view: "Money and originality of design are not enough … You need many ingredients for big, emblematic projects to work, and one of the keys is the active support of local communities" (in Crawford 2001). In practice, however, the political and financial imperatives that drive these mega-events produce a top-down approach with local communities "consulted" (informed), but ignored in terms of location decisions, design, and after use of facilities (Evans 2015).

It is no coincidence, therefore, that the same roll call of international architects feature in these mega-event schemes, with often similar issues arising, i.e. copycat architecture, high cost and cost/time overruns, problems in building, and design faults. This is exacerbated in the case of structures whose original use is subject to change after the event. For example, the lack of a legacy plan for the London Aquatic Centre, designed by Zaha Hadid, has meant that its internal design and operation is less than ideal (and no substitute for traditional municipal pools, several of which have closed in the local area). User access to this center – best viewed from a distance – is also awkward and illegible. A blue film has had to be retrofitted to the exterior windows in order to reduce the glare that meant that lifeguards could not see swimmers underwater. The conversion of the main stadium to a football ground for the incoming West Ham FC cost the public purse an additional £272 million (after construction and design faults), as a result of a protracted adaptation not foreseen when first designed and built. Designed by stadium specialists Populous this 54 000 seat stadium will have cost over £700 million, far more than if it had been designed for this purpose. Further public money has also had to be spent at the ArcelorMittal Orbit tower, designed by artist Anish Kapoor, with a giant slide retrofitted in an attempt to make this attraction more popular – reportedly it lost £540 000 in 2014/15 from 120 000 visitors against a business plan forecast of £1.2 million profit from 350 000 visitors. The high risk associated with the overambitious stadia designs is evident in cost overruns and construction delays, leading to acrimonious disputes. For example, the late Zaha Hadid again, whose design for the Tokyo 2020 Olympic stadium saw the original budget of £707 million rise to £1.37 billion, which led to her replacement and the appointment of a Japanese design firm working with a revised budget of £843 million.

10.5. EXPO Pavilions

As Sudjic observed: "the expo is to the city what fast food is to the restaurant. It is an instant rush of sugar that delivers a massive dose of the culture of congestion and spectacle, but leaves you hungry for more" (Sudjic 1993, p. 213). In contrast to the functional and highly engineered sports stadia and infrastructure required to support sporting mega-events, which apply façadist and wavy roof lines to mask their box-like interiors, the international exhibitions and festivals have generated a temporary and national pavilion design which begs the question, what is their purpose? The long-established example of this is the Venice Biennale Giardini. In a luxuriant 43 000 m^2 garden facing the Venice lagoon – commissioned by the Emperor Napoleon I and designed in the typical English garden style by the Italian landscape architect Giannantonio Selva in 1807, to be completed five years later – 30 national pavilions have been built over time, with the aim of showcasing the best of each country's art and architecture during the Biennale events. The Central building, originally the Italian pavilion, was converted into a 3500 m^2 venue in 2009, and accommodates one of the two curators' exhibitions, the other being located at the Arsenale, a disused naval base, while each national pavilion features its own art or architecture exhibition. Since 1980 Venice has held the Architecture Biennale alternating with the Art event, joining the already established Contemporary Music, Film, Theater, and now Dance festivals.

The pavilions are a novel architecture exhibition in themselves, with constructions built after designs by celebrated architects, such as Josef Hoffmann (pavilion of Austria, 1934), Gerrit Rietveld (Dutch pavilion, 1953), Carlo Scarpa (sculpture garden of the Central pavilion, 1952, and pavilion of Venezuela, 1954), Alvar Aalto (pavilion of Finland, 1956), and Sverre Fehn (Nordic countries pavilion, 1962) among others. The latest pavilion built at the Giardini is that of Australia; it was completed in 2015 and converted into a swimming pool for the 2016 Biennale.

International EXPOs, on the other hand, provide the opportunity for temporary national pavilions and installations which attempt to capture the essence of a country's culture and both cultural traditions and contemporary goods, but which can degenerate into miniature tourist board theme parks. The exhibitions themselves adopt high-minded themes and subthemes, with a strong environmental sentiment. This is ironic given their land-hungry and unsustainable nature. For example, Aichi in Japan themed its 2005 EXPO around an eco-city concept and a "rediscovery of Nature's Wisdom." Japanese attendance at these EXPO events indicates their popularity, which is not matched elsewhere – 64 million visits were made to the 1970 Osaka EXPO and 20 million to Tsukuba in 1985. Although over 70 million visits were made to the Shanghai EXPO in 2010 with the strapline of *Better City, Better Life*, the

EXPO in Milan (2015) took a more explicit human theme: *Feeding the Planet, Energy for Life*, with nine themed zones: *Bio-Mediterranean, Arid Zones*, including food chains: *Fruit and Legumes, Spices, Cereals and Tubers, Coffee, Cacao, Rice*. "The idea of EXPO Milano 2015 is to create an Exposition in which every project, every piece of content, every part of the program has been developed with the goal of making visitor experience the central focus. The approach also makes the themes clearly perceptible" (Vercelloni 2014, p. 5). This thematic design allowed smaller countries to be clustered by theme, rather than be marginalized by the major country pavilions.

Like other mega-events such as the Olympics and Capitals of Culture, host cities and nations foot the bill for the honor of holding these costly events, so variations are seen in the relative wealth and money spent in each case. Over 240 countries participated in the 2010 Shanghai EXPO but only 145 five years later in Milan – geopolitics is therefore a factor with presence in China more important (trade and cultural relations) than that in Italy. Countries therefore choose to be included in EXPO events, although the absence of a national pavilion signifies a lack of recognition and participation within the international milieu (Figure 10.1). Better to be seen in a minimal or low-cost installation than not at all.
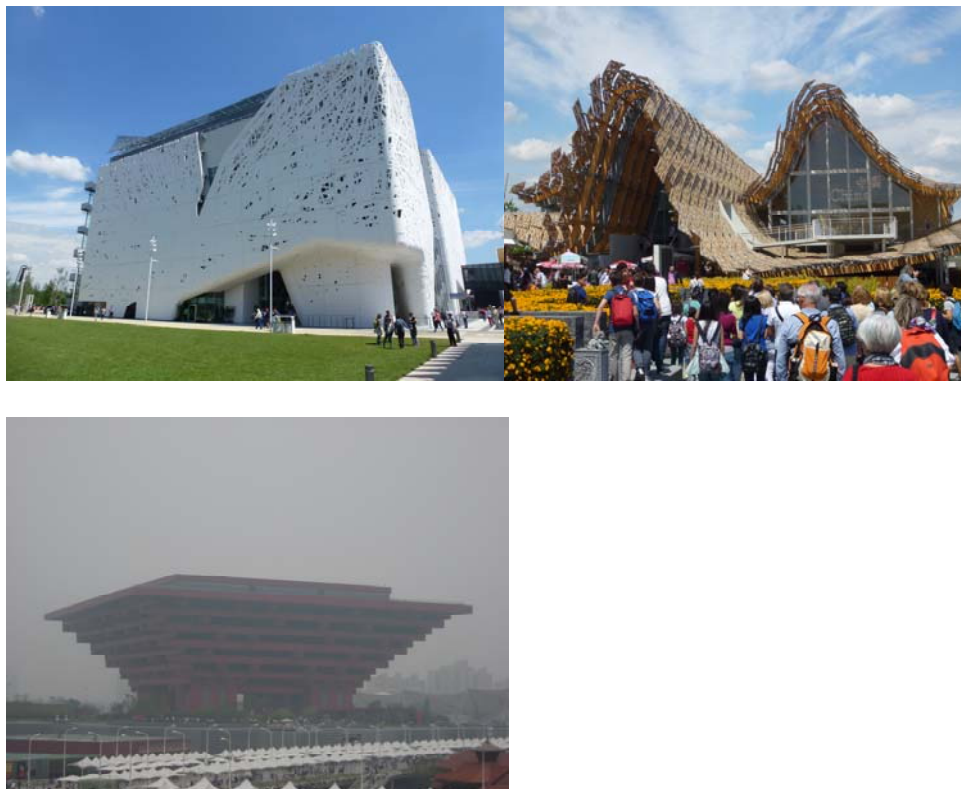

Fig 10.1 National Pavilions – Italy (Milan), China (Milan), China (Shanghai)

In a departure from the norm, the UK opted to commission Thomas Heatherwick for the 2010 Shanghai EXPO to design not a building, but a dandelion-shaped "seed cathedral" covered in 60 000 crystalline spines which were tipped with tiny lights to illuminate the structure. The sculpture won the Bureau International des Exposition's (BIE) gold award for best pavilion design. Each spine contained a different seed from Kew Garden's Millennium Seed collection in London, an initiative that seeks to collect and conserve 25% of the world's seeds by 2020. The seed cathedral was dismantled and the rods donated to various charities, schools, and the World EXPO Museum, which opened in 2017, another legacy from the 2010 Shanghai EXPO.

EXPO site design therefore tries to respond, often too literally, to these aspirational themes, while national pavilions seek to promote their own cultural identities within these thematic priorities. The UK's entry for the Milan 2015 EXPO was The Hive, another departure from the standard national pavilion. Reaching 17 m into the air, designed by Nottingham-based artist Wolfgang Buttress in collaboration with engineer Tristan Simmonds and architectural practice BDP, the immersive Pavilion was manufactured and constructed by York-based firm Stage One (Figure 10.2).

Fig. 10.2 The Hive, Milan EXPO

The Hive was an immersive, multisensory experience inspired by research into the health of bees. This aluminum structure draws visitors into the space via a wildflower meadow, as though they were worker bees returning to the hive. The wildflower meadow sought to build understanding and appreciation of these habitats, and their significance for insect pollinators. Hundreds of glowing LED lights brought this 40 tonne lattice structure to life, while a symphony of orchestral sounds filled the air with an atmospheric undercurrent of buzzes and pulses. Triggered by vibration sensors within a real beehive back in the UK, the sound and

light intensity within the pavilion increased as the energy levels in the living hive surged, giving visitors an insight into the ever-moving life of a bee colony. The Hive was subsequently relocated to Kew Gardens in London.

10.6. Size Matters: Master Planning

A feature of contemporary mega-events is their growing scale. As noted already, established festivals have spread their footprint and reach in their respective cities, but it is the expansive regeneration plans and aspirations that now drive host cities and regions to use the once-in-a-lifetime opportunity to create new urban villages, districts, and extensions to the city. The mega-event thus provides a political and financial incentive to accelerate urban development as part of grand place-making schemes to achieve growth for rising populations and for new education, cultural, and play zones for the postindustrial city (Evans 2014). This is seen in the case of Barcelona following the 1992 Olympics and the regeneration of the former industrial (textiles production) area of Poblenou into a high-technology zone. This houses a relocated Pobra Fabra University of Art & Design, connecting the new high-rise Extension area of commercial offices, retail malls, and apartments, in the last piece of the post-Olympics jigsaw. London's Olympic Park likewise will contain the Olympicopolis development, which comprises satellites of University College London and, nearby, Loughborough University London (housed in the former Press and Broadcast Centre), as well as the London College of Fashion; the V&A Museum and Sadler's Wells Dance Theatre are also opening satellite facilities between 2020 and 2022. EXPO sites, with a curious legacy of abandoned sites and permanent pavilions, can also take decades before they are fully redeveloped, such as in Lisbon (1998) and the UK Garden Festival sites (e.g. Gateshead and Liverpool), while others struggle to reinvent themselves, e.g. Seville (1992) and Hanover (2000). This German EXPO presented a confused theme that resulted in a little over a half of the forecast 40 million visitors and a deficit of over $600 million. The site continues in its original form as an exhibition site although a new center of information technology, design, media, and arts has been located there. Several national pavilions were retained, but are in a state of disrepair.

In design terms, the emerging practice of master planning now leads this spatial design process, within which architecture, landscape, and other design activity is situated and subservient. So while, in the past, architecture would have been the prime design profession providing the design concepts, iconic images, and reputations, it is urban design and master-planning firms that visualize the mega-event and major regeneration schemes worldwide. Gonzales refers to "scalar narratives" of regeneration, and the tension between the need for a "spatial fix," on the one hand, and the reality that scales are socially constructed and therefore not fixed but "perpetually redefined, contested and restructured" (Gonzales 2006, p. 836), on

the other. Master planning therefore seeks to capture spatial design and land use configurations at larger scale than traditional architectural design or even town planning. This hybrid practice –attempting to integrate architecture with planning through urban design – thus follows a hierarchical design iteration: master plan–urban design–quarterization–zoning[1] and, only then, individual sites, buildings, and structures which populate the futuristic graphics and fly-throughs used to envision and promote mega-event sites (Evans 2015). Batty et al. (1998) consider urban design, rather than urban planning and architecture, to be more suitable for designing at scale, particularly with the advent of computer graphics and Geographic Information Systems (GIS), because, as they argue: "urban design is small-scale enough for many users of urban environments to feel its impact. It is sufficiently broad-based in its influence on those affected that the wider public always have some view of how it might best be carried out. It is less abstract than city planning which exists at larger scales and more populist than architectural design which is remote from those with no formal artistic and engineering training. As such, urban design has the greatest potential of any technologies or practices for involving experts and lay-people" (Batty et al. 1998, p. 3). Cuthbert also reminds us that "urban design is not merely the art of designing cities, but the knowledge of how cities grow and change […] we must go beyond abstract social science into the realm of human experience and the creative process" (Cuthbert 2006, p. 1). The argument here is that the master-planning and graphic visualizations used in major regeneration and mega-event projects provide a better communication and design platform within which complex options, trade-offs, esthetics, and juxtapositions of space, buildings, routes, and their inter-relationships can be presented to the public and worked through in order to achieve an optimum, or at least most acceptable, outcome. This "virtual" design practice, relying as it does heavily on computer-generated imagery (CGI), digital models, and futuristic imagery, also underpins the process of place-making that now drives the urban design and branding imperatives that accompany mega-events. These large-scale, expansive, and expensive projects can therefore be seen as the "stormtroopers of gentrification," accelerating "new" housing and city extensions and the displacement of residual industry and incumbent communities.

For example, Figure 10.3 shows the CGI vision projected for the year 2030 looking south toward the River Thames with the current Hopkins Architects-designed Velodrome bottom left, the main stadium near the middle, and to the left of which is Anish Kapoor's ArcelorMittal structure, foregrounded by a strip of high-rise buildings making up the Stratford Waterfront ("Olympicopolis") cultural and education complex. In the far distance is the legacy of an earlier mega-event, the Millennium Dome – or the O2 Arena as it has been rebranded, designed by Richard Rogers. The new housing blocks, yet to be built, represent the

12

private urban villages planned to literally populate this new Park, designed alongside the River Lee and canal, along with new primary schools and health centers.

Fig. 10.3 Olympic Park Masterplan 2030

The primacy of the master plan thus invites some comment, since this visualizes the regeneration and legacy concepts and rationales for both the location decisions and the subsequent public investment in these mega-projects. In the view of the professional Urban Design Group (UDG) the importance of the "new" master-plan model is made clear:

> The conventional masterplanning model is dead, long live the masterplan!
> Reinvented as an adaptive multidisciplinary instrument closely related to the wide-ranging complexities of contemporary life, the masterplan, with its precise deliberations and processes, has gained a fresh significance.[2]

Its role as a "change agent" was also seen to be of pivotal importance – the master plan as a hands-on cultural framework which does not alienate people, responding to urban environments as organisms in continual evolution with the power to foster potentials, and a better sense of ownership, along with a new resilience in the face of multiple challenges (Evans 2015).

The initial visioning process for the London 2012 Olympics relied heavily on master plans at key stages of its iteration. This commenced with the pre-award consultations with local residents and "stakeholders." This task had been contracted not to an architectural practice but to the planning firm EDAW (to become part of the US AECOM conglomerate). These early plans were simplified graphic schemata to be followed by more sophisticated GIS-based maps, CGI visions and "artist's impressions," showing two- and three-dimensional Olympic and legacy modes. Following the award of the Olympics to London in July 2005, the same

13

team was selected to devise a master plan for the Olympic Park, with a remit to "design" the infrastructure, including utilities, waterways, landscape, platforms for venues, roads, and bridges. The EDAW-led consortium included engineers Buro Happold and architects Allies and Morrison, Foreign Office, and Populous. This initial master plan identified the scheme as a major catalyst for change and regeneration in east London, especially the Lea Valley, leveraging resources, spurring timely completion of already programmed infrastructure investment, and leaving a legacy to be valued by future generations, thus confirming the Olympics as the acceleration of an already-targeted area regeneration program. In January 2008 the then lead body, the Mayor's London Development Agency (LDA), awarded a new 17-member consortium led again by EDAW with the addition of architecture/landscape design firms including Caruso St John, KCAP, Vogt Landscape, McDowell+Benedetti, and Haworth Tompkins to "design" the Olympic legacy master-plan framework. This included new housing, schools, health facilities, and workspaces within the wider legacy site.

By 2010, however, criticism of this master plan's housing strategy led to the further commissioning of a nine-strong team of practices, including Maccreanor Lavington, Panter Hudspith with Witherford Watson Mann, and landscape architects West 8, to draw up a revised legacy plan. The master plan for the Olympic site had provided for 10 000 homes – mainly one-/two-bedroom apartments – but in the revised 2010 plan this had been reduced to 8000, with family housing "at the center of the plan, inspired by London's great estates such as Grosvenor and Portland."[3] However, the bland and highly cost-engineered housing emerging in and around the Olympic Park, including the converted Athlete's Village housing, "which looks like something thrown up for workers at a mobile phone factory in Guangzhou" (Bevan 2016), owes little to the Georgian and Regency styles of the eighteenth and nineteenth century estates in Belgravia and Soho that the master planners envisaged.

10.7. Product and Inclusive Design

While the permanent white elephants of mega-events attract both media and public attention, owing to their very high cost and unplanned after use, it is clear that these extravaganzas encompass a wide range of design disciplines and practice. In addition to architecture, urban, and landscape design, they include:

- product design, e.g. medals, souvenirs, mascots, merchandise
- communication design, e.g. logos, maps/programs, signage/wayfinding, media
- design branding, e.g. national pavilions, banners, logos, sponsors
- fashion design, e.g. costumes, uniforms, athletes' and officials'/volunteers' outfits
- inclusive design, e.g. disability access, facilities.

Several of these design elements of the London Summer Olympics are elaborated below.

Although in the past the uniforms used by Olympic athletes and officials had followed standard functional design, for London 2012 Stella McCartney was commissioned to design the athletes' uniforms, using abstract patterns of the Union Jack. For the 2016 Rio Games she adopted a similarly traditional Coat of Arms motif: "a hotch potch of British symbolism: three lions hold three fiery Olympic batons; our nations' flowers (leek, rose, flax, thistle) appear in the center shield; and a crown composed of medals sits up top (symbolising continuity, teamwork and shared responsibility)". At the bottom, Latin script reads: "Conjoined in one" (Pithers 2016). On the other hand, the launch of the controversial London 2012 logo and the mascots for the Games, Wenlock and Mandeville, led to Stephen Bayley, founder of the Design Museum, to describe the two alien mascots as ridiculous and infantile and the logo a "puerile mess, an artistic flop and a commercial scandal." International mega-event mascots and logos struggle to avoid both any cross-cultural insults or encroaching on existing designs, reducing them to amoebic cuddly toys, blobs and squiggles (Figure 10.4).

Fig. 10.4 EXPO mascots and logo – Shanghai (2010) and Milan (2015)

10.7.1. Inclusive and Sustainable Design

The London 2012 Summer Olympics and Paralympics sought to create a legacy of inclusive design and accessibility. For the first time, both the Olympic Games and the Paralympic Games were planned together from the outset. The highest standards of accessible and inclusive design were adopted in the London Plan 2011, and inclusivity was embedded in the building of the Olympic Park to create "the most accessible piece of city in the UK" (Firth 2012). Specifically, the legacy of inclusivity encompassed:

- "the most accessible Games ever"
- a Park and venues designed and built specifically for both Olympic and Paralympic sport equally
- a Park and venues designed and built for people from 205 nations.

Inclusive design (and the associated "universal" or "design for all") is a key concept steadily being embraced and culturally accepted, and in a narrower sense promoted in the UK by legislation such as the Disability Discrimination Act (1995) with detailed design and

accessibility guidance and practice increasingly available. In principle, it places people at the heart of the design process. As an approach that considers the widest possible audience, addressing the needs of people who have been traditionally excluded or marginalized by mainstream design practices, inclusive design means designing and building places that everyone – regardless of disability, age, gender, sexual orientation, race, or faith – can enjoy confidently and independently with choice and dignity (LLDC 2012). The following principles of inclusive design were thus promoted in the Games (Hickish 2012):

- people at the heart of the design process
- acknowledgement of diversity and difference
- choice
- flexibility in use
- convenient and enjoyable for all users.

In the bid, London committed that the 2012 Olympic and Paralympic Games would be "the most accessible ever," and that they would be fully integrated as one. The Olympic Delivery Authority (ODA) developed an Inclusive Design Strategy and Inclusive Design Standards (IDS), and also employed a panel of disabled people, and another of inclusive design experts, to offer advice and guidance to ensure compliance with the IDS (LLDC 2012).

As a result, the Games' venues were built to meet the needs of a diverse community and to the highest standards of accessibility with facilities such as: faith rooms, Changing Places toilets (fully accessible toilets that provide more space and adult changing facilities), baby change facilities, and wheelchair user accessible viewing spaces. The parklands and public realm were also designed with disabled and older people in mind, with gradients kept to a minimum, regular resting places, accessible/blue badge parking, and accessible toilet facilities.

In meeting the objectives of re-imaging the city, the success of the Games was not just about the sporting events themselves; it was about the whole visitor experience from arriving at the airport to leaving at the end of the trip – or the "whole journey" (Clarkson et al. 2003). A fundamental part of the London experience during the Olympic and Paralympic Games was how visitors were welcomed. The London Ambassadors were key to this, with over 8000 volunteers located in 35 pods across the city: travel, including London airports, railway stations, and tube stations; visitor hotspots (e.g. Covent Garden, Trafalgar Square); and City Live Sites and London Media Centre. The London Ambassador team was responsible for delivering seamless information and support to the visitor. In addition, specific Web resources were provided to help businesses welcome disabled visitors, and to offer comprehensive virtual guides to over 35 000 accessible touch points around London for all visitors (Fleck 2012). The London Games also created an accessible transport legacy manifested by the

Accessibility Implementation Plan, which covers London underground and overground transport. Features include lifts, induction loops, tactile paving, platform humps, wide aisles, information points, the spectator journey planner, and Access for All program (Fleck 2012). The original bid also referred to the concept of a "One Planet Olympics," and this focused on five sustainability themes: climate change, waste, biodiversity, inclusion, and healthy living. London's Olympic site development included "green" building measures such as water recycling, halving the carbon footprint of all construction projects, and sourcing 25% of each project's materials from recycled sources. However, as the Games drew closer, "officials noticeably distanced themselves from their original targets, focusing on 'reducing' and 'mitigating' the carbon footprint of the Games" (Moore 2012). The government's official Olympic Impact Study pre-Games report using approximately 60 indicator sets had found "below average performance for the environmental outcomes indicators" as well as social outcomes indicators, with gains yet to be measured from Olympic facility life-cycle and energy consumption analysis. While some "green" opportunities such as a wind-powered mill and the use of canals for the transport of supplies and recycling of electricity pylons were not fully realized, steel tubes in the stadium trusses were sourced on the surplus steel market, and the View Tube facility on the Greenway was constructed from recycled shipping containers. Also, the energy center's combined cooling, heat, and power (CCHP) plant provided heating to the Park, reducing carbon emissions by approximately 20%. Ninety percent by weight of demolition material was to be reused or recycled – over 98% was achieved, largely through recycling not reuse, and 80% of the excavated 1.4 m^3 of treated soil was, however, reused on site with several innovative "grey" water recycling schemes installed (Hartman 2012).

10.7.2. Dressing Up London

The design of the Games was not limited to the Olympic Park and facilities however, since, in the build-up, a local street design program sought to raise awareness of the event with local people (Evans et al. 2013). The whole visitor experience and legacy of the Olympic and Paralympic Games are highly important in evaluating the success beyond the staging of the Games themselves. The "Look and Feel" program was designed to maximize the benefits to residents and visitors by providing an exciting environment to the Games and building a celebratory atmosphere throughout London. A budget of £32 million was allocated to deliver this program as part of the Olympic public sector funding package, funded from a rate precept on London residential council tax payers. The main objective of the Look and Feel program was to leverage and build upon the pre-Games brand identity to create a distinct and consistent look that contributed to and enhanced the overall experience for the Olympic and

Paralympic audiences: athletes, spectators, host city residents, visitors, media, and television and new media viewers.

Experience themed areas. These were strategically important visitor areas such as Oxford Street, Regents Park, the Houses of Parliament, and Wimbledon, which had been identified and for which additional dressing and animation was supplied (GLA 2010); £300 000 per zone was provided to deliver the "Look" in these areas at a total cost of £4.8 million (GLA 2011). Each zone was master planned in the form of a journey audit considering location, purpose, environmental assets, and content/graphic images, For example, the Greenwich themed area journey would start with the Cutty Sark as an area or point of interest and performance space, with flags, banners, and official "graffiti" both reinforcing the brand and providing wayfinding, as well as key London "facts" – cultural, historical, and future.

Your London 2012. This part of the program was delivered by the Greater London Authority (GLA) with London boroughs to bring the Games experience to life in local areas for the benefit of residents and tourists. The GLA provided a grant of £50 000 to each borough to enable it to purchase "street dressing" from the London Organising Committee of the Olympic and Paralympic Games (LOCOG). This sought to help boroughs "dress" their town centers, enhance their parks and green spaces, and create focal points for celebrations and local involvement. Fifteen boroughs and provincial towns outside of London also cooperated at their own expense in the general scheme, in most instances these boroughs decorated their public buildings with national flags and bunting. LOCOG, in consultation with local authorities, created the "Look Book" (previously called the "Kit of Parts" catalogue), which included the London 2012 color and planting schemes, bunting, banners, flags, and bespoke Look items. The Look Book had been designed to enable local authorities to work with their communities to select what works best locally, with formal purchasing beginning in autumn 2011.

Transport. This is where the "Look and Feel" for the city was rolled out across the transport network to add to the Games experience. Tube travelers had noticed the Olympic signage going up in stations all around the network. Much of this was planned to be paid by the media and £6.5 million was estimated to be spent on this package (GLA 2011). As well as the major investment in new and upgraded rail/light rail and underground lines and stations, including special Olympics operational facilities, more than 100 walking and cycling schemes on eight routes across London – including some that link the Olympic Park – were upgraded, as well as paths linking to outer London venues. Improvements included wider paths, smoother surfaces, and better entry and access points. Providing the right walking and cycling infrastructure was designed to help London 2012 to meet its aim of 100% of spectators getting to the games by public transport, cycling, or walking. It was,

however, also expected to further encourage cycling in London, which had increased by 83% since 2000 (ODA 2011).

Experiencing the Games. As in previous host cities, LOCOG was responsible for producing a variety of decorative elements, in keeping with the overall "Look and Feel" of the Games. Dressing publicly accessible areas across London and hosting Games-related events were part of spreading the London 2102 experience throughout the capital.

The symbol of the Olympic Games is of course composed of five interlocking rings representing the five continents, colored blue, yellow, black, green, and red. The image, designed in 1912, was adopted in June 1914 and made its debut at the 1920 Antwerp Olympics. During June 2012, Giant Olympic rings (25 m wide and 11.5 m tall) had been installed at key landmark locations in London (Figure 10.5).

Fig. 10.5 London 2012 – Olympic rings
(St Pancras Station, Serpentine bridge, Tower Bridge)

Lighting of the bridges also brought the rings to life at night. After the installation of Olympic rings over the Thames on Tower Bridge, the London 2012 chairman Sebastian Coe said: "With one month to go to the Olympic Games opening ceremony, these spectacular rings on one of London's most famous landmarks will excite and inspire residents and visitors in the capital" (Press Association 2012). The Agitos, the symbol of the Paralympic movement, replaced the rings on these landmark locations for the Paralympic Games. Constructing iconic structures is one of the most commonly used approaches to place the city on the mental map of tourists (Holcomb 1999) and to attract them to visit the location. However, there is always the question of whether this money is worth spending. The Green Party candidate for the Mayor of London, for example, criticized the money spent on dressing up London: "the Mayor has cut programs which would have helped people find jobs and cut their energy bills, but he has found £3.2 million for this display. There were better things to have spent this money on" (Hanna 2012). Opinions therefore differed on the Olympic design imagery:

> I was at Westfield [shopping center] yesterday, spent the whole afternoon and the
> evening there, and obviously it's exciting to go round to that area and see all the

different shops and hotels and things like that. Also there are Olympics banners, logos and stuff everywhere. So actually it is community spirit and everybody's looking forward to the Games.

But all that money spent on Olympic banners, that weird mascot, you know, everywhere! Is it worth the money? Waste, waste of money really. (Evans et al. 2013).

10.7.3. Fun Palace

It is ironic that, on the very site from which the London 2012 Olympics emerged, a more radical architectural and social design alternative was promised for the public: Cedric Price's 1964 concept for Joan Littlewood's "Fun Palace." This was planned to be located on an "island" site at Mill Meads – now the site of the Aquatic Centre – based on a design model that was prescient in many ways: temporary and flexible, with: "no permanent structures … no concrete stadia stained and cracking, no legacy of noble architecture, quickly dating" (Littlewood 1964, p. 423). Price's vision was for a "new kind of active and dynamic architecture which would permit multiple uses and which would constantly adapt to change … thinking of the Fun Palace in terms of process, as events in time rather than objects in space" (Matthews 2005, p. 79). The building would have no single entry point and divide into activity zones. Price and Littlewood had assembled a multidisciplinary team from architecture, art, theater, technology, and even situationists, with cybernetics and game theory driving the facility's day-to-day behavior and performative strategies which would be stimulated through feedback from users. Price's influential Fun Palace design,[4] although adopted at the time by the Civic Trust, was never realized. This marshy site would have been expensive to reclaim – although public funding was of course found for the bottomless finances accessed for the Olympics and ongoing legacy. The Fun Palace idea was also the victim of London's reorganization into 33 boroughs with the London County Council transferring the open spaces to a new benign Lea Valley Park Authority, with a different perspective on fun – and design.

10.8. Conclusion

Contemporary mega-events are creating a new landscape in their respective cities. The practice and primacy of the architect has been overtaken in this field, with the urban designer and master planner creating the canvas within which building, landscape, interior, and product designers compete for attention. Design meta-themes and styles are set at this level, which limits creative scope and individuality, but which nonetheless requires a complex response to these overarching imperatives. There is often no single client, but a range of

stakeholders and hierarchy which on the one hand imposes strict design compliance (e.g. logos, color schemes, branding, naming of venues), but, on the other, demands a distinctive creative interpretation of the cultural identity which the mega-event purports to represent. Festival sites have provided often singular legacies in the past, but the contemporary mega-event is both more expansive and expensive – and, as a result, controversial and contested (Cohen 2013; Powell and Marrero-Guillamon 2012). This is evident in cities that have actively chosen not to bid for these extravaganzas, such as Hamburg, Toronto, and Rome, echoing cities that have resisted the Guggenheim franchise. Notwithstanding this reluctance, cities in developing regions, notably the Middle East, vie for international sporting, cultural, and trade events and satellites of national museums, biennales, and institutions. The design opportunities and challenges are high, not least because of the huge budgets involved and the global reach and coverage they can generate, but also because the legacies they produce – physical, recorded, and in collective memory – can be significant and symbolic. Mega-events can therefore be seen as grand place-making schemes for the twenty-first century, drawing on their boosterist past, and further extending the hard branding of the city, "creating a form of Karaoke architecture where it is not important how well you can sing, but that you do it with verve and gusto" (Evans 2003, p. 417).

References

Batty, M, Dodge, M, Jiang, B, Smith, A. (1998) *GIS and Urban Design*, Paper 3. London: UCL Centre for Advanced Spatial Analysis.

Bevan, R. (2016). Eastern Eden. *Evening Standard* (8 March), p. 31.

Chappelet, J.-L. (2014) "Managing the size of the Olympic Games," Sport in Society, 17: 581–592.

Çınar, A. and Bender, T. (eds) (2007) Urban Imaginaries: Locating the Modern City. Minneapolis: Minneapolis University Press.

Clarkson, J., Coleman, R. and Keates, S. (eds) (2003) Inclusive Design: Design for the Whole Population. London: Springer.

Cohen, P. (2013) On the Wrong Side of the Track? East London and the Post-Olympics, London: Lawrence & Wishart.

Crawford, L. (2001). Bilbao thrives from the "Guggenheim Effect". *Financial Times Weekend* (28 April), p. 2.

Cuthbert, A. (2006) The Form of Cities. Oxford: Blackwell.

Disability Discrimination Act (DDA) 1995 (c 50) http://www.legislation.gov.uk/ukpga/1995/50/data.pdf

Evans, G.L. (2003) "Hard branding the culture city – from Prado to Prada," International Journal of Urban and Regional Research, 27(2): 417–440.

Evans, G.L. (2005) "Measure for measure: evaluating the evidence of culture's contribution to regeneration," Urban Studies, 42(5–6): 959–984

Evans, G.L. (2010) "Cities of culture and the regeneration games," Journal of Tourism, Sport and Creative Industries, 6: 5–18

Evans, G.L. (2011) "Cities of Culture and the Regeneration Game", Journal of Tourism, Sport and Creative Industries, 6: 5-18.

Evans, G.L. (2014) "Rethinking place branding and place making through creative and cultural quarters," in Rethinking Place Branding – Critical Accounts, M. Kavaratzis, G. Warnaby, and G.J. Ashworth (eds). Vienna, Springer: 135–158.

Evans, G.L. (2015) "Designing legacy and the legacy of design: London 2012 and the regeneration games," Architectural Review Quarterly 18(4): 353–366.

Evans, G.L., Dong, H. and Edizel, O. (2013) "Dressing up London." In Girginov, V. (ed) Handbook of the London 2012 Olympic/Paralympic Games, Vol.2. London, Routledge: 19–35

Firth, K. (2012). Inclusive design: ensuring a legacy of accessible environments from London 2012. London Legacy Development Corporation inclusive design seminar presented at the Royal College of Art, London (29 November 2012).

Fleck, J. (2012). Inclusive design: a legacy of accessible environments from London 2012. London Legacy Development Corporation inclusive design seminar presented at the Royal College of Art, London (29 November 2012).

Getz, D. (2012) Event Studies: Theory, Research and Policy for Planned Events. London: Routledge.

GLA (2010) 2012 Games: City Look & Feel Scoping and Concept Work. London: Greater London Authority.

GLA (2011) Look and Feel – LOCOG Funding Agreement. London: GLA.

Gold, J. and Gold, M. (eds) (2010) Olympic Cities. City Agendas, Planning and the Worlds Games, 1896–2016. London: Routledge.

Gonzales, S. (2006) "Scalar narratives in bilbao: a cultural politics of scales. Approach to the study of urban policy," International Journal of Urban & Regional Research, 30(4): 836–857.

Greenhalgh, P. (1988) Ephemeral Vistas. The Expositions Universelles, Great Exhibitions and World's Fairs, 1851–1939. Manchester: Manchester University Press.

Hall, C.M. (1989) "The definition and analysis of hallmark tourist events," GeoJournal, 19(3): 263–268.

Hall, C.M. (1992) Hallmark Tourist Events: Impacts, Management and Planning. London: Belhaven.

Hanna, L. (2012). London 2012: Giant Olympic rings float down River Thames past Tower Bridge, 02 Arena, Canary Wharf. *Mirror* (28 February), https://www.mirror.co.uk/sport/london-2012-giant-olympic-rings-746559

Hartman, H. (2012) London 2012 Sustainable Design. Delivering a Games Legacy. Chichester: Wiley.

Heathcote, E. (2011). The List: five legacies of the Festival of Britain. *Financial Times* (29 April), https://www.ft.com/content/51e6b8e2-711f-11e0-acf5-00144feabdc0

Hickish, M. (2012). Inclusive design: a legacy of accessible environments from London 2012. London Legacy Development Corporation seminar presented at the Royal College of Art, London (29 November 2012).

Holcomb, B. (1999) "Marketing cities for tourism," in: Judd, D.R., Fainstein, S.S. (eds.) The Tourist City. Yale University Press: 54–70.

Horne, J. (2007) "The four 'knowns' of sports mega-events," Leisure Studies, 26, 81–96.

IOC (2014). Olympic Marketing Fact File. Lausanne: International Olympic Committee.

Littlewood, J. (1964). A laboratory of fun. *New Scientist* (14 May), pp. 432–433.

LLDC (2012) Inclusive Design Strategy. London: London Legacy Development Corporation.

Mathews, S. (2005) "The fun palace: cedric price's experiment in architecture and technology," Technoetic Arts, 3(32), 79.

Moore, R. (2012). Olympic Village review. *Observer* (8 January),https://www.theguardian.com/artanddesign/2012/jan/08/athletes-village-olympics-2012-architecture .

Müller, M. (2015) "What makes an event a mega-event? Definitions and sizes," Leisure Studies 34(6): 627–642.

ODA (2011) Olympic Transport Plan (2). London: Olympic Delivery Authority.

Olds, K. (1988). Planning for the Housing Impacts of a Hallmark Event: A Case Study of Expo 86. Master thesis. School of Community and Regional Planning, University of British Columbia, Vancouver.

Pithers, E. (2016). Rio Olympics: Stella: "I fought for the new Olympic Coat of Arms". *Vogue* (27 April), https://www.vogue.co.uk/gallery/team-gb-kit-2016-stella-mccartney-adidas

Plaza, B. (2006) "The return on investment of the Guggenheim Museum Bilbao," International Journal of Urban and Regional Research 30(1): 452–467.

Ponzini, D. and Nastasi, M. (2011) Starchitecture: Scenes, Actors and Spectacles in Contemporary Cities. Venice: Umberto Allemandi & C.Spa.

Powell, H. & Marrero-Guillamon, I. (eds) (2012) The Art of Dissent. London: Marshgate Press.

Press Association (2011). London 2012: giant Olympic rings installed on Tower Bridge. *The Guardian* (27 June), https://www.theguardian.com/sport/2011/jun/27/olympic-rings-tower-bridge-london-2012

Read, H. (1932) Art and Industry. London: Faber & Faber.

Richards, G. and Palmer, R. (2010) Eventful Cities: Cultural Management and Urban Revitalisation, London: Butterworth.

Ritchie, J.R.B. and Yangzhou, J. (1987). The role and impact of mega-events and attractions on national and regional tourism: a conceptual and methodological overview. *Proceedings of the 37th Annual Congress of the International Association of Scientific Experts in Tourism (AIEST)* (ed. AIEST), Calgary (23–29 August 1987). St. Gallen: AIEST.

Sudjic, D. (1993) The 100 Mile City. London: Flamingo.

Sugden, J., and Tomlinson, A. (eds.) (2012). Watching the Olympics: Politics, Power, and Representation. London: Routledge.

Vercelloni, M. (2014) Cluster Pavilions EXPO Milano 2015. Milan: Internigo.

Figure 10.1 (a) Italy's pavilion at Milan EXPO (2015). (b) China's permanent pavilion at Shanghai EXPO (2010). (c) Temporary pavilion at Milan EXPO. Photos: Graeme Evans.

Figure 10.2 The Hive, UK Pavilion, Milan EXPO 2015. Photo: Graeme Evans.

Figure 10.3 CGI of Olympic Park as visioned for 2030. Source: Evans, G.L. (2015). Photo: Graeme Evans. Reproduced with permission.

Figure 10.4 (a) Shanghai EXPO mascot and (b) logo. (c) Milan EXPO mascot. Photos: Graeme Evans.

Figure 10.5 Olympic rings at (a) St Pancras station (b) Agitos at Tower Bridge and (c) Serpentine Bridge London. Photos: Graeme Evans. Source: Evans, Dong and Edizel (2013). Reproduced with permission.

[1] The process of urban quarterization and zoning was of course evident in the design of new towns and cities in the twentieth century and in the nineteenth century, notably the master plans of Haussmann's Paris and Cerda's Barcelona Example/Extension.

[2] www.udg.org.uk/events/london-and-south-east/rebooting-masterplan-part-2, p. 1.

[3] John Geoghegan, "Shifting legacy: why Olympic Park plans are changing," *Planning Resource*, https://www.google.co.uk/search?safe=off&ei=i3qGW76oN8mQgAaghZS4DQ&q=Shifting+legacy%3A+why+Olympic+Park+plans+are+changing+John+Geoghegan&oq=Shifting+legacy%3A+why+Olympic+Park+plans+are+changing+John+Geoghegan&gs_l=psy-ab.3...4460.4734.0.5042.2.2.0.0.0.0.117.201.1j1.2.0....0...1c.1.64.psy-ab..0.1.115...33i10k1.0.Mm26mqIi6eg

[4] A Fun Palace network still promotes the concept and organizes events around the country, with an art and science focus (http://funpalaces.co.uk).