

Olympics legacy: The London Olympics 2012

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Abstract:

The reasons for proposing a London 2012 bid are outlined in the light of London city planning over the past sixty years. The processes influencing the bid for the London 2012 Olympics are investigated in respect of the lessons from Barcelona and Sydney. The role of environmental and landscape improvement is examined and the importance of legacy is described and analysed. The cost of Olympiads since Sydney 2000 are described and compared. Then progress of the London 2012 Olympics development is described relative to regeneration of East London. Finally the effects of current proposals to cut back the costs of the 2012 Olympics are considered. Olympic Games play significant roles in host city's economy as well as other outcomes such as tourism, culture, unemployment, infrastructure. However the economy can never describe the whole picture of Olympic Games' gainings, it is one of the most significant sign before, during and after the event. All of the expenditures have different values at different legacy levels. Although post election budget cut-backs in the United Kingdom have placed a question mark on the costs; the proposed urban legacy make the city beautiful and London East End livable.

Keywords: Olympics, London, Olympic Park, Legacy, Regeneration.

London planning for renewal: The last fifty years

In 1960 Sir Hubert Bennett, chief architect of the London County Council, wrote of London that

"Surrounding the centre is that large belt of obsolete property. The problems of transforming these decaying areas can only be met by comprehensive replanning on a great scale" [1].

Fifty years later, despite many such plans, problems of inner city decline and dereliction continue in inner London and there are still areas of "obsolete property". This is especially so in the East End of London where the upriver, enclosed docks with their associated warehousing progressively closed between 1968 and 1981, and where manufacturing has declined ⁽¹⁾.

Since Sir Hubert Bennett wrote in 1960, there have been a series of planning agencies and their plans covering of London's East End. These

(¹) Surveys of land available for redevelopment is categorized as "Previously developed land" and embraces "vacant or derelict land and also land that is currently in use and has the potential for redevelopment". In London in 2008 there was c.3250ha or such "Previously developed land" of which c.400ha was derelict land [2].

include the Lee Valley Regional Park Authority set up in 1967 (relatively successful and continuing), the London Docklands Joint Committee of 1974-1986 (completely ineffective), and the London Docklands Development Corporation (LDDC) of 1981 to 1998 (with mixed achievements) ⁽²⁾. It was in the LDDC area that the successful Canary Wharf US style high rise business district was developed from 1982 and linked with the Docklands Light Railway and from 1997 with the high capacity Jubilee tube line. More recently there has been establishment of the Greater London Authority in 2000 with a US style executive Mayor in charge (rather effectively) which has revitalized strategic planning in London.

The 21st century (thanks in part to the lobbying efforts of the Mayor) has seen a number of major transport improvements, which are fundamental to the re-planning of the East End (and to the successful Olympic bid in 2005). They include the extension in 2007 of the High Speed railway line from Paris through Stratford in the East End then to St Pancras station in central London. In 2012 there will be a ten minute shuttle service from St Pancras, in central London, to Stratford.

The Mayor can also be thanked for the East London railway line linking north-south which opened in 2010, (it is also planned to form part of a new orbital "Overground" railway service run by Transport for London). Thames link is an improved north-south railway line through the centre of London. Then construction has begun for Crossrail which is a new Paris RER type express underground line east-west through central London (with a scheduled opening of 2017). Crossrail will link Heathrow Airport, the West End, the City of London and Canary Wharf with Stratford. At a more local level there have been extensions to the Docklands Light Railway also linking it to Stratford.

At a large scale the Thames Gateway redevelopment area straddles both banks of the downriver and estuarine Thames and extends from the Lee Valley eastwards to the edge of Greater London and beyond. This was a central government initiative dating back to 1991 and acting through London Boroughs, Essex and Kent County Councils and since 2000 the Greater London Authority. One of the key Thames Gateway policies is the establishment of a "Green Grid" through eastern London along both banks of the Thames and thereby use environmental improvement to initiate economic rejuvenation. Finally the Mayor of London has given all the rivers and canals of London, including the Thames and the River Lee, "Blue Ribbon" status a new planning category potentially equivalent to "green" belt ⁽³⁾.

⁽²⁾ For a history of the London Docklands Development Corporation and its predecessor the London Docklands Joint Committee refer to [3].

⁽³⁾ Blue Ribbon policy is set out in the London Plan Spatial Development Policy of 2004 [4].

The choice of the Lee Valley for the Olympics Park

In consequence, the Lee Valley is at a crossing point of a whole series of transport and environmental planning policies and initiatives. The Olympics gives a focus for immediate action. Especially significant now is that the country is committed to delivering the Olympics despite the economic turn down since 2008. Undoubtedly such plans would never have been so ambitious, and would have faltered, without the Olympics commitment.

However, Green Belt policy and a national policy of urban densification has intensified development in favoured areas of western London. Downwind, in the less favoured East End, many inner city areas suffer continuing

problems of dereliction. Four of the eight poorest or most deprived boroughs in England are in London's East End (Hackney, Tower Hamlets, Newham and Islington) ⁽⁴⁾.

It was these considerations, which led to the choice of an area in Newham (one of the eight most deprived boroughs in England) for the main site for the London Olympics in 2012. The site is in the middle of the East End and includes Stratford International station on the High Speed Line into London. It links with the Lee Valley Regional Park Authority to form a river based park system reaching from the edge of London to the Thames and is at the western extremity of the Thames Gateway. Stratford International station as noted will also be on Crossrail. And Stratford already is a growing commercial centre.

The Olympics as a catalyst for regeneration

Since the Barcelona Olympics of 1992, hosting the Olympic Games has been seen as a means of promoting regeneration for a city and as a way of leading development ⁽⁵⁾. The Sydney Olympics of 2000 led to development of the Homebush area. The Sydney Olympic Park ten years after the Olympics now attracts over eight million visitors each year with 1800 sporting and other events held there each year in a variety of stadia in a series of parks and open spaces within the 640 ha site ⁽⁶⁾. Associated with it is housing and commercial development. Like London, Sydney was built on former contaminated land. The area was mainly landfill from the 1950s to 80s, including domestic and industrial material. The London Olympics has some similarities to Sydney: the site is also 600ha of brownfield land, both had problems of contamination and toxicity, and some of the consultancies who worked at Sydney also have advised on the London site, notably the landscape architects EDAW and George Hargreaves (Figure 1).

In consequence cities now see hosting the Olympic Games as a way of promoting their city and this is evidenced by the increase in the number of initial bids for hosting the Games, these grew from over twenty for 1992 (won by Barcelona) to over fifty for 2004 (won by Athens) [8].

The British bid for 2012

The British bid for the 2012 Olympics began in 1997 with the British Olympics Association feasibility study into a London's failures to win an Olympics in the 1990s. The failure of earlier Birmingham and Manchester bids for the 1992, 1996 and 2000 Olympic Games led to the conclusion that only a capital city based proposal from Britain would interest the International Olympic Committee (IOC). In 2002 the feasibility study by Insignia Richard Ellis and Arup convinced both the government of Tony Blair and the new Mayor of London, Ken Livingstone, to support the bid [9]. And it was the Mayor who pushed for the choice of the East End site as the main location for the Olympics site ⁽⁷⁾

Before the final IOC voting process began In 2005 London was generally seen as third behind Paris and Madrid in their bids. Indeed it is noteworthy that the Paris bid also proposed redevelopment of north-eastern Paris as key to their bid. However, the final bids in July 2005 reportedly narrowly convinced the IOC because of London's emphasis on city regeneration and regeneration as well as the sporting legacy for young people. The then

⁽⁴⁾ *The English indices of deprivation are published on a three yearly cycle. The most recent is that from 2007 and is based on a measure of*

- income,
- employment,
- health deprivation and disability,
- education, skills and training
- barriers to housing and services
- crime, and
- living environment [5].

⁽⁵⁾ *For the website of the Sydney Olympics Park refer to [6].*

⁽⁶⁾ *For example of a general introduction to the environmental improvements to Barcelona leading to the 1992 Games refer to [7].*

⁽⁷⁾ *The British Olympics Association version of this process is available on [10].*

Foreign Secretary Jack Straw stated in Parliament on the day of the announcement of the IOC decision that:

“London’s bid was built on a special Olympic vision. That vision is of an Olympic games that will be not only a celebration of sport but a force for regeneration. The games will transform one of the poorest and most deprived areas of London. They will create thousands of new jobs and homes. They will offer new opportunities for business in the immediate area and throughout London.” [11]



Figure 1. Olympics site view looking south over the River Lee Navigation with the subsoil formation taking place and beyond the main stadium and in the distance the Canary Wharf business district (photographer Tom Last from ODA, free copyright).

The 2012 Olympics Park

The Olympics Park in Stratford will house the main 80,000 seat stadium, tennis and archery, velodrome, hockey, handball and the swimming centre as well as the Olympic Village (Figure 2). Sports to be housed elsewhere include use of Wembley, Newcastle-upon-Tyne, Coventry and Glasgow for football, Greenwich Park is to be for Equestrian sports, Eton Dorney west of London will be for rowing, and Weymouth and Portland for sailing. The Olympic Village will house 17,000 athletes. It is being designed to also provide for permanent 2,800 homes of which nearly half will be social housing (Figure 3).

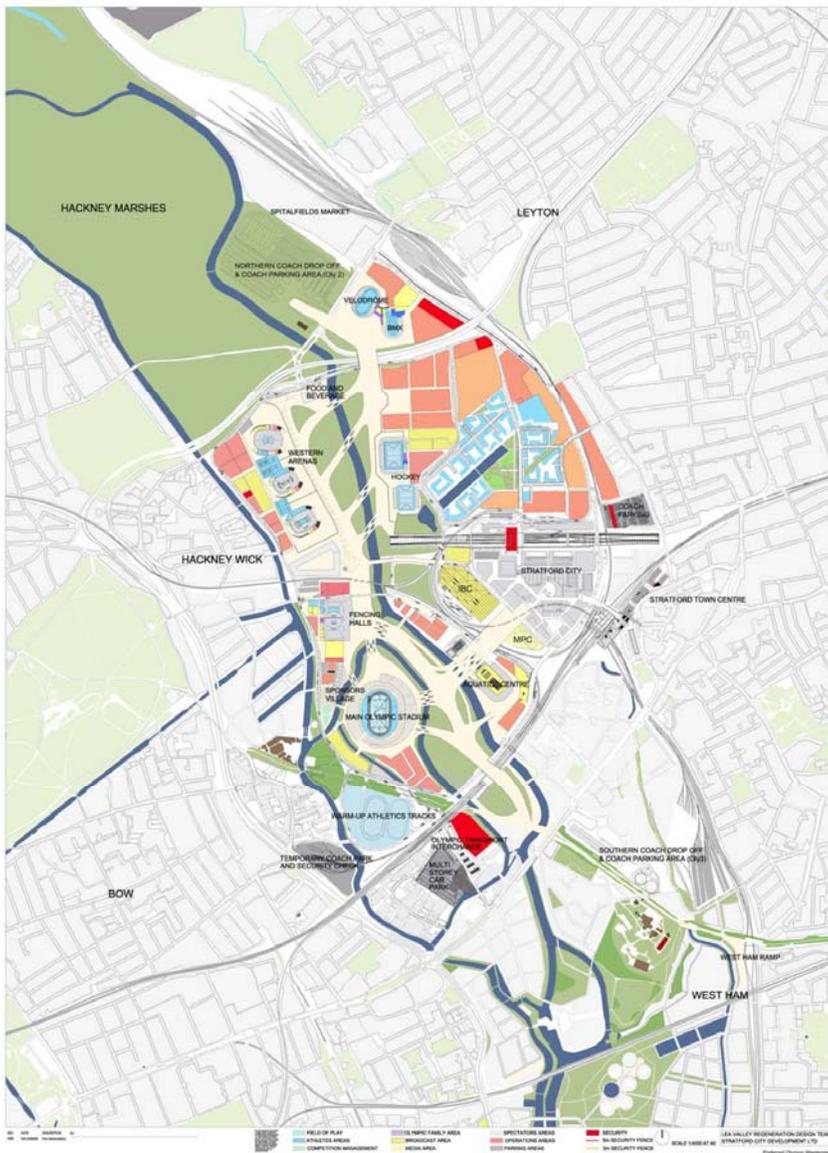


Figure 2. Olympic Park masterplan (http://www.ribajournal.com/index.php/feature/article/root_and_branch_rethink_APRIL/)



Figure 3. Olympics site looking west with the “box” of the Stratford International railway station in the foreground, the domestic railway station to the left, the Olympic Village to the right, with the white rectangular basketball venue beyond. To the left mid-distance is the curved boomerang of the Aquatic Centre and the Main Stadium. In the distance on the skyline is the City of London (photographer Tom Last, from ODA, free copyright).

Delivery of the Olympic site is managed by the Olympic Delivery Authority (ODA), which is a public body, state owned and set up by Act of Parliament. It reports to The Department of Culture, Media and Sport. The ODA is responsible for planning and building the Park for 2012 (and also the other sites), and also for enabling conversion of the Park for long-term use after the Games [12].

2010 cut backs to the London Olympics

The new British government of May 2010 is proposing a cut-back generally across government of 25% with Departments (i.e. ministries) being asked to propose savings of both 25% and 40%. Currently the budget for the Olympics is £9.3 billion (equivalent to 11.3 billion €) within which there is a contingency budget of £2.7 billion/ 3.3 billion €⁽⁸⁾. The fear is that the savings will be in the contingency fund, and that the “Legacy Park” will be cut back. The current budget for the Legacy Park is £350 million /426 million €. A token cut back of £26 million/ 31.7 million € was made immediately after the May election [14], but that was just a token. Final decisions of such cut-backs will be made in autumn 2010 [15]. There is a financial question mark over the whole Olympic Legacy.

The costs of Olympic Games

Budgeting for the total costs of Olympic Games are critical if a Games are to be properly planned. And if they are to have a long term benefit for the future of a city the costs of reconstructing the facilities for long-term or legacy use has also to be budgeted. Sydney is an example of how to do this well. Athens is an example of how to limit the benefits of an Olympics by not planning from the beginning for the long-term. In Sydney the Olympics Park

⁽⁸⁾ A review of the budget costs for the 2012 Olympics is on BBC [13].

has transformed waste land into an asset for the city which continues of benefit for the city ten years after. In Athens many of the stadia lie under-used or unused. Though the transport improvements in Athens remain; the only justification for the number of permanent sports facilities provided was the vain bid of Athens to become a fixed long-term venue for the Olympics ⁽⁹⁾.

However, establishing how much an Olympic Games might cost is challenging. For instance, in 2002 Arup with Insignia Richard Ellis did a cost estimate for the London Olympics as part of the feasibility study and this was presented to the House of Commons committee in 2003 with a report of the costs of various previous Olympiads as follows:

Table 1. Host city, date and cost - £m 2002 prices

Host city	Date	Cost - £m 2002 prices	Host city	Date	Cost - £m 2002 prices
Munich	1972	1,430	Atlanta	1996	1,481
Montreal	1976	2,436	Sydney	2000	2,534
Moscow	1980	2,436	Athens	2004	3,937
Los Angeles	1984	567	Beijing	2008	9,775
Seoul	1988	3,746	London	2012	2,614
Barcelona	1992	8,057			

However, the footnote to the table is the rub:

“The comparisons are approximate. Some cities have incorporated infrastructure costs in their Olympic expenditure and others have not. For Barcelona and Beijing (planned the figure include substantial associated development and redevelopment across the cities concerned. Exchange rates and purchasing power price parity issues also apply – at London prices the Sydney Games would have costs about £3,248 million.” [17]

To these caveats one would add they also do not spell out whether land acquisition costs or tax has been included. By 2010 the above figures are of little use because of inflation and exchange rates changes since 2002. Therefore this section has looked at first the costs of the Barcelona 1992 Olympics (because the details have been published) and of Olympiads since Sydney 2000.

Barcelona 1992

This has been studied in detail by the *Centre d’Estudis Olímpics* of the *Universitat Autònoma de Barcelona* and at 1995 prices the construction costs were :

Table 2. Investment projected and initiated between 1985 and 1993.

Investment projected and initiated between 1985 and 1993	Accumulated values in current pesetas (rounded to nearest million)
Road construction projects	343.804 billion
Construction at the Poble Nou Olympic Area	212.682 billion
Construction in other Olympic areas of Barcelona	117.974 billion
Other projects in Barcelona	182.450 billion
Projects in Olympic sub-sites	29.804 billion
Other sports infrastructures	15.054 billion
Total	965.630 billion pesetas

⁽⁹⁾ *The proposal to have a permanent location for the Games in Athens is raised from time to time e.g. [16].*

So one can say Barcelona cost 965.630 billion pesetas or 621.835 billion pesetas if one excludes city infrastructure (the road construction projects) [18].

Sydney 2000

The costs of the Sydney Olympics is analysed in the New South Wales government's Auditor-General's Report to the NSW Parliament of 2002 [19]. This is a useful and straightforward document, which identifies the Sydney costs as:

- Cost of venues and infrastructure (capital costs) A\$ 3.0252 billion
 - Event related costs A\$ 3.4590 billion
- Total A\$ 6.4842 billion

In detail these the NSW Auditor-General gives the cost of venues thus [20]:

Table 3. The Venues and Infrastructure of the Sydney Olympics.

The Venues and Infrastructure (of the Sydney Olympics)		
Costs of construction of the venues and infrastructure were:		
	A\$m	A\$m
GOVERNMENT EXPENDITURE		
Venues		
Stadium Australia	131.6	
SuperDome	142.4	
State Hockey Centre	16.0	
Dune Gray Velodrome 4	2.1	
Sydney International Equestrian Centre	44.3	
Sydney International Shooting Centre	29.9	
Athletes Village – Newington	127.9	
Newington (Village) site - acquisition and redemption	81.3	
Media and technical officials' villages	129.1	
Olympic Softball Centre - Blacktown facilities	31.4	
Sydney International Regatta Centre	36.0	
Sydney Aquatic and Athletic Centres	218.8	
Other Olympic and Paralympic facilities and venues including public domain at Homebush Bay	215.1	
Total Venues		1,245.9
Infrastructure		
Transport infrastructure including roads, bridges, parking, ferry wharf and pedestrian access	312.1	
Homebush Bay rail line and Olympic Park Station	7.5	
Infrastructure services including electrical, water and gas	90.4	
Remediation works	58.5	
Infrastructure works including site co-ordination, siteworks, landscaping	90.4	
planning and design and estate assets	113.8	
Total Infrastructure		<u>672.0</u>
TOTAL GOVERNMENT EXPENDITURE		1,918.2
PRIVATE SECTOR EXPENDITURE (ESTIMATE)		
Athletes Village	378.0	
Stadium Australia	584.0	
Other	145.0	
TOTAL PRIVATE SECTOR EXPENDITURE	1,107.0	1,107.0
TOTAL COST OF VENUES AND FACILITIES		3,025.2

The venue and infrastructure costs of A\$3.0252 billion included significant transport improvements such as the Homebush railway line at a relatively small A\$ 7.5 million, as well as roads, bridges, services such as electrical, water and gas, and remediation of derelict land and these totalled A\$672.3 million while the capital costs of building the venues and stadia was A\$ 1.2459 billion.

These costs exclude A\$ 101.8 million costs of public sector employees allocated to Games duties, these include transport staff wages and New South Wales Police costs of A€ 66 million (the security costs for London will be far more than that pre 7/11/2001 world). Significantly for London these costs also exclude ongoing public sector maintenance costs, which are currently A\$ 11.0 million per annum (nb. some venues have been passed to the private sector).

As it is a recurrent theme it is worth comparing the original 1998 cost estimates with actual reported costs. The 1998 estimates were a NSW Treasury estimate of A\$ 1.2875 billion and an Olympic Co-ordination Committee (OCA) estimate of A\$ 1.6505 billion: the difference being the cost of Sydney Showground (actual cost A\$ 362.7 million) which the OCA included while the NSW Treasury excluded this. The above A\$ 6.4842 billion costs exclude this as well so it is reasonable to compare the 1998 estimate of A\$.1.2875 with the actual cost of A\$ 6.4842 billion. The actual costs were over five times the initial estimate.

Athens 2004 Costs

In 2004 Greek government figures for the Olympics including security were stated to be €8.954 billion [21] as follows:

state funded costs

• Infrastructure (capital costs)	€ 2.861 billion
• Sports venues	€ 2.153 billion
• Greek culture, environmental improvements	€ 1.108 billion
• Security & compensation	€ 1.080 billion
Sub-total	€ 7.202 billion

ATHOC funding from ticket receipts, sponsorship,

TV rights & product deals	€ 1.752 billion
Total	€ 8.954 billion

ATHOC was the Athens 2004 Organising Committee. These costs exclude transport infrastructure costs such as the new international airport, the Attiki Highway, the tramway and suburban railway. Noteworthy for London is that these costs had risen from the initial estimate for the Games of €4.5 billion. Immediately after the Athens Games the Greek Finance Minister stated the cost to the state was much more, "approaching €11.6 billion" compared with the €7.202 billion given above, with security having risen to €1.39 billion [22].

Later (2008) reports state the overall costs for Athens to be \$US 15,000 million. Excluded from the above figures are the subsequent annual costs of maintaining the facilities in Athens, these were reported in 2004 as being €113.3 million in 2005 [23].

Beijing 2008 Costs

Beijing is a very different precedent from the other post 2000 Olympic Games. Reports of the overall costs of Beijing range from \$US 34 billion, Reuters quoting CLSA in 2008, [24] to \$US 44 billion, RIA Novosti reporting later in August 2008, [25]. However, these figures *include* transport and other infrastructure improvements which are *excluded* from the Athens

figures, and Beijing is a far bigger city (population 22 million compared with Athens 4 million and London's 7.5million). The Novosti report for Beijing includes for 280 billion yuan (€40.9 billion) invested between 2001 and 2008 in "the transport system and the ecology" leaving €1.9 billion for "the construction and reconstruction of sports facilities" and \$2 billion for "operations conducted by the Olympic Committee". This gives a total of \$2.9 billion, which, while low, is far more comparable with the Athens and Sydney figures than the \$44 billion.

London 2010 Costs

Like Athens and Sydney the original budget estimates for London were gross under-estimates: the original estimate for London 2012 was £2.4 billion which had risen by 2007 to £9.35 billion (BBC London quote Tessa Jowell, 15 March 2007). The funding in London is made up of a central government providing £6 billion, £2.2 billion coming from the National Lottery and over one billion coming from the Greater London Authority.

Overall current estimates are therefore made up in the table following which summarizes the figure in the ministerial announcement of 15 March 2007.

Table 4. The budget for the Games as announced on 15 March 2007 - Source: National Audit Office The budget for the London 2012 Olympic and Paralympics Games HC 612 Session 2006-2007, 20 July 2007 [26].

The budget for the Games as announced on 15 March 2007 – costs and provisions			
Costs and provisions	March 2007 budget	Change from the cost estimates at the time of the bid (2002)	
	£ million	+£ million	
Olympic Delivery Authority Core Olympic costs			
Venues (including legacy conversion)	1,063	3	
	3		
Transport infrastructure and operating costs	794	94	
	94		
Additional inflation allowance, contribution to the Olympic Village and Insurance	386	386	
Programme Management	570	554	
Site security	268	78	
Sub-total	3,081		1,115
infrastructure and regeneration costs associated with the Olympic Park and other venues (to be incurred by the Olympic Delivery Authority)	1,673	(11)	(11)
Contingency (excluding tax)	500	500	500
Olympic Delivery Authority budget (net of tax & general programme contingency)			5,254
Other Olympic (Non ODA) costs (to be met from public funding)			
Support for elite and community sport	290	(10)	
Paralympics ⁴	66	12	
'Look of London' costs	32	0	
Sub-Total	388		2
Other Provisions			
Tax (on ODA costs) ⁵	836	836	
General programme contingency (including tax)	2,247	2,247	
Sub-Total	3,083		3,083
Wider costs			
Policing and wider security	600	600	
Total	9,325		+5,289

Cost comparisons Olympics 2000 to 2016

The above figures are from different dates and different currencies therefore we have prepared a comparative table of overall costs allowing first for inflation changes to 2010 and then for conversion into euro, as follows:

Table 5. 2010 Costs in Euro [27] Nb estimates in italics.

Olympiad	Capital Costs/ estimate (with year)	Costs (year)	2010 inflation update, for the currency quoted	2010 costs in euro
	including infrastructure i.e. citywide roads or railways	excluding infrastructure		
Barcelona 1992	965.630 billion pesetas (1995)	621.835 billion pesetas (1995)	1059.243 billion pesetas	€ 6.3656 billion
Sydney 2000	-	\$Aus 6.4842 billion (2002)	A\$8.440637 billion	€ 6.1405 billion
Athens 2004	-	€11.6 billion (2004)	€14.4181 billion	€14.4181 billion
Beijing 2008	\$44.0 billion (2008)	\$2.9 billion (2008)	\$ 3.3426 billion	€ 2.6323 billion
<i>London 2012</i>		<i>£9.35 billion (2007)</i>	<i>n/a as lump sum is fixed</i>	<i>€11.3761 billion</i>

Only the figures for London itemises tax; Sydney do include one railway line at A\$7.5 million, the others exclude railway and tramway improvements, etc., the two figures for Beijing include the direct capital costs and excludes the much bigger total bill including general transport improvements to Beijing so the comparisons are approximate.

One might say that these figures are inexact, however, initial cost estimates for these Olympics have been gross under-estimates, The first estimate for Sydney was A\$1.6505 billion which is about one quarter of the final price. In Athens the initial cost estimate was €4.5 billion which is 50% of the actual cost of €8.954 billion or 30% of the higher reports of €15 billion. In London Arup initially estimated the costs as £2.4 billion and this is 25% of the current budget of £9.35 billion. The figures begin to suggest a comparable order of costs which a candidate city should considered to be between six and fifteen billion euro on the basis that the Beijing figures above can be discounted as being low due to different purchasing power of the yuan (meaning lower labour and land acquisition costs).

The environmental legacy?

The Olympic Committee *Manual for Candidate Cities* for the 2012 Olympic stated that the environment was a significant consideration for judging bids [28]. Legacy and the permanent inheritance of the Olympics was certainly a feature of the London bid. An Olympic Park Legacy Company was therefore been set up in 2009 by the Mayor of London, the Government Olympic Executive and the Department of Communities and Local Government as a public sector, not-for-profit organisation, in other words as a state body. It has a timescale of three decades to achieve its aims and appears modelled

on the precedent of Sydney. It produced its Legacy Masterplanning Framework in 2009

This has two immediate phases:

2012 to 2013

"Reinstating and transforming the Park after the Games, working with the Olympic Delivery Authority and other partners to develop venues and infrastructure, beginning to open up the Park to everyone and staging attractions" and events."

2013 to 2018

"Settling into the long term development phase of the Park - this will see communities established within the Village and around new housing developments, with new businesses providing opportunities and venues offering world-class facilities for all. During this period the Park will become a new and vibrant metropolitan area of the capital - a 'must see, must return' destination for London's visitors".

Olympic Park Legacy Company (29)

This language is a little loose and vague and indicates that the process is in flux. Once the area has been development then responsibility for the parkland itself will have to be handed over to a park authority. This may be the Lee Valley Regional Park Authority.

However, the 2010 post election budget cut-backs in the United Kingdom have placed a question mark on the timescale as well as costs. Currently, the sort of negotiations underway are those for the main stadium, where reports are that it will be reduced in size from 80,000 to 50,000. In mid 2010 talks were being conducted with West Ham Football Club to occupy the stadium, but with the facility for a running track and for cricket to be played as well (30). The huge areas of paving for the crowds on the Olympic Games will be cut down to size. The security fittings of the Olympic Games with its fences and barriers will of course be removed.

The new Legacy Park (it hasn't a name yet, we guess Olympic Park): has been designed by Californian landscape architect, George Hargreaves with a British executive landscape architecture firm, LDA Design. The permanent parkland will be 102ha, with two open air event spaces in the north and south. 102ha is just over half the size of Regent's Park (196ha) and one quarter the size of Sydney's 425ha of parkland, it is not that big, but it is twice the size of Paris's Parc de la Villette.

The design ethic is typical Hargreaves: flowing landform (which means gentle 15m high hills) and the riversides and channels of the River Lee areas enriched by smaller areas such as the 2012 Gardens along the river designed by Sarah Price which are almost a kilometre long and represent four different climate zones. There will also be temporary treatment of development sites prior to their development, and that may well be wildflower meadows.

This sounds like every cliché in the landscape architect's (or rather George Hargreaves' rather successful) pattern book. The concern is that much has been thrown away. The East End is a place of generations of immigrants contributing to the history of culture of London from Huguenots in the 17th century, Irish in the 18th century and ever since, then Germans post 1848 and Russian Jews from the pogroms of Tsarist times, followed by post-War Afro-Caribbeans, Indian subcontinent and Hong Kong Chinese and 21st century Poles, Balts and Rumanians. Special places such as the 64 garden plots of Manor Garden Allotments were destroyed in 2007 because it was in the Olympic Park area: these 1.8ha of communal vegetable gardens had been established in 1900 (Figure 4). While Drapers Field in Leyton is to become a temporary VIP coach park for 2012.



Figure 4. Manor Garden Allotments were established in 1900 by Major Arthur Villiers, a banker director and philanthropist, to provide vegetable gardens for East Enders, they were destroyed to make way for the Olympics in 2007 (<http://www.peterhoare.co.uk/photography/allotments/allots01.html>)

The place will no longer appear like the East End of London, it will no longer be revealing of the *genius loci*. Elsewhere in London, from Covent Garden, to Camden Lock to St James's Park, developments have been palimpsests, overlaying the past with change rather than obliterating the past (Figure 5). The Emscher Park IBA in the *Ruhrgebiet* is an celebrated example of how an area can be renewed while its inheritance and history is celebrated. There the pit heaps remain and its industrial history has been celebrated. In London transport links in the East End have been radically improved (but that happened prior to the Olympic bid of 2012) and certainly toxic land in the Lee Valley has been treated and made safe.

But the bigger question mark is how much can be afforded? The current budget for the permanent park of £350million/426 million € is small compared with the £9.3 billion/ 11.3 billion € total budget. The answer to that will be part of wider government cutbacks to be announced this autumn. The Olympic Games may well be a success (subject to concerns about terrorism): whether the London 2012 Olympics Legacy will be a success is the question? If it is not, then that undermines the basic rationale for the Games being held in East London (Figure 6).



Figure 5: Old Ford Lock, Lee Navigation typifies the industrial heritage of the site which has been lost: photo Robert Holden



Figure 6. During the Games the park will be dominated by the wide footways

Cities can not generate legacies from Olympic Games without paying effort. They have to invest. Investment in Olympic related infrastructure such as transportation, telecommunication and environmental protection will happen in pre-Games period, although there may be some investment that occurs after the Games, such as converting venues for long-term use (31). It means about 10 years period. Paper have been analyzed the legacy aspects of Olympic cities which hosts after 1990. Barcelona, Sydney, Athens, Beijing have been chosen as cases while it was focusing on London. While doing this, it has reviewed especially economical aspects. Olympic related investments and expenditures have been investigated related to the outcomes. Thereby, 2012 Games claim to address, with the legacy of the Games being linked to challenging the underlying social, physical and economic problems of East London.

References

- [1] Sir Hubert Bennett *RIBA Journal* July 1960 quoted in *RIBA Journal*, no.117, July/August 2010, p.16.
- [2] Environment Agency, *Land use change in London*. <http://www.environment-agency.gov.uk/research/library/publications/115809.aspx> (accessed 12 August 2010)
- [3] <http://www.lddc-history.org.uk/transport/index.html> (accessed 12 August 2010)
- [4]. www.london.gov.uk/thelondonplan/blue-ribbon/ (accessed 12 August 2010)
- [5] <http://www.londoncouncils.gov.uk/economicdevelopment/briefings/IndexofMultipleDeprivationIMD2007.htm> (accessed 12 August 2010)
- [6] http://www.sydneyolympicpark.com.au/Visiting/venues_and_parks (accessed 12 August 2010)
- [7] A&V monografias *Special issue. Barcelona Olimpica* [Barcelona Olympics] no. 37, 1992 Sept./Oct., p. 2-96.

- [8] Stephen Essex and Brian Chalkley *The Olympic Games: catalyst of urban change* University of Plymouth, no date, p.2 <http://www.plymouth.ac.uk/files/extranet/docs/SSB/euroolympicgames.pdf> (accessed 12 August 2010)
- [9] House of Commons Culture Media and Sports Committee *An London Olympic Bid for 2012* HC268 23 January 2003 House of Commons, The Stationery Office, London p.15 <http://www.publications.parliament.uk/pa/cm200203/cmselect/cmcumeds/268/268.pdf> and Arup in association with Insignia Richard Ellis *London Olympics Summary 2012* May 2002 <http://www.culture.gov.uk/NR/rdonlyres/9F4FBC0F-2A88-43E5-A5D6-B7C87D71DB36/0/OlympicNewExecutiveSummary.pdf>
- [10] <http://www.olympics.org.uk/contentpage.aspx?no=268> (accessed 12 August 2010)
- [11] *House of Commons Hansard Debates* 6 July 2005 http://www.publications.parliament.uk/pa/cm200506/cmhansrd/vo050706/debtext/50706-33.htm#50706-33_sprmin0 (accessed 12 August 2010)
- [12] Olympic Delivery Authority website: <http://www.london2012.com/about-us/the-people-delivering-the-games/the-olympic-delivery-authority/index.php> (accessed 13 August 2010)
- [13] *London plan at-a-glance, An overview of the plan for the 2012 Olympics in London* 6 July 2005 http://news.bbc.co.uk/sport1/hi/olympics/london_2012/4025027.stm (accessed 13 August 2010)
- [14] BBC *London 2012 Olympic Games budget cut by £27m* 27 May 2010 <http://news.bbc.co.uk/1/hi/england/london/8701126.stm> (accessed 13 August 2010)
- [15] Paul Kelso "London 2012 Olympics: Hugh Robertson vows to deliver legacy despite cutbacks", *The Daily Telegraph* 23 July 2010 <http://www.telegraph.co.uk/sport/othersports/olympics/7907313/London-2012-Olympics-Hugh-Robertson-vows-to-deliver-legacy-despite-cutbacks.html> (accessed 13 August 2010)
- [16] Charles Banks-Altekruse "Give the Olympics a Home" *New York Times* 1 March 2010 p.A27, <http://www.nytimes.com/2010/03/01/opinion/01altekruse.html>
- [17] House of Commons Culture Media and Sports Committee op cit p.8
- [18] Brunet, Ferran, "An economic analysis of the Barcelona'92 Olympic Games: resources, financing and impacts". *The Keys to Success: the social, sporting, economic and communications impacts of Barcelona'92* Barcelona, Centre d'Estudis Olímpics .Universitat Autònoma de Barcelona: 1995 p.7 http://olympicstudies.uab.es/pdf/wp030_eng.pdf
- [19] New South Wales Audit Office, Auditor-General's Report to Parliament *Cost of the Olympic and Paralympic Games* vol.2, 2002 ADD WEBSITE AND CLARIFY SOURCE AS NSW http://www.audit.nsw.gov.au/publications/reports/financial/2002/vol2/cos_tofolympicgames.pdf
- [20] *ibid* p. 6
- [21] Embassy of Greece press release. "Cost of Athens 2004 Olympics" 13 November 2004, Washington <http://www.greekembassy.org/Embassy/content/en/Article.aspx?office=3&folder=200&article=14269> (accessed 18 August 2010)
- [22] "Cost of Athens Olympics: \$11.6 billion", *Amusement Business* 12 November 2004 www.albusiness.com/services/amusement-services/4559407-htmil (accessed 9 August 2010)

- [23] Nicole Itano, "As Olympic glow fades, Athens questions \$15 billion cost" *The Christian Science Monitor* 21 July 2008 (quoting Andreas Efthimou, a deputy mayor of an Athens district) <http://www.csmonitor.com/World/2008/0721/p04s01-wogn.html> (accessed 18 August 2010) and George Vecsey "Trying Not to Let Games Go to Waste" *The New York Times* 10 December 2004 (quoting as source Fanni Palli-Petralia, the then Greek deputy minister of culture). <http://www.nytimes.com/2004/12/10/sports/othersports/10vecsey.html> (accessed 13 August 2010)
- [24] Simon Rabinovitch "Beijing Games to be costliest, but no debt legacy" Reuters, Beijing 5 August 2008 <http://www.reuters.com/article/idUSPEK25823820080805> (accessed 13 August 2010)
- [25] Pravda 6.8.2008 http://english.pravda.ru/sports/games/06-08-2008/106003-beijing_olympics-0 (accessed 13 August 2010)
- [26] Downloadable on <http://www.officialdocuments.gov.uk/document/hc0607/hc06/0612/0612.pdf> (accessed 9 September 2010)
- [27] International price and Inflation comparisons: inflation over the years has been calculated on a national basis of the state where the project is located. National inflation tables are from: <http://www.theodora.com/wfb/#CURRENT> and the linked <http://www.photius.com/countries/germany/economy/index.html> based on annual consumer price inflation and in turn taken from the annual (US) *Central Intelligence Agency World Factbook* and the invaluable US Census chart of OECD countries' consumer prices inflation (itself based on OECD data) from 1970-1998 which is on <http://www.allcountries.org/usensus/772-annual-percent-changes-from-prior-year.html>. Alternatively International Monetary Fund International Financial Statistics Browser information has been used ref. <http://ifs.apdi.net/imf/about.asp> or for 2008 and 2009 inflation figures <http://www.global-rates.com/economic-indicators/inflation/inflation-information.aspx> has been used (the CIA have not presented figures for those years) and for Australia and the UK <http://www.rateinflation.com/inflation-rate/> Rates then have been converted to euro using the Reuters conversion calculator on http://investing.reuters.co.uk/Investing/Currencies.aspx?WT.mc_id=ext_SEM_Google_sterling%20euro%20exchange%20rate&WT.srch=1 Old national currency to euro exchange rates for the euro area countries have been compiled by using by the University of Sussex calculator on: <http://www.sussex.ac.uk/Units/currency/> 2010 Non euro currencies to euro rates have been converted using business conversion rates on <http://uk.reuters.com/business/currencies>
- [28] International Olympic Committee *Candidacy Acceptance Procedure Games of the XXX Olympiad 2010*, Lausanne, 20 February 2003 section VII General Conditions. no.23 p.32 downloadable on http://multimedia.olympic.org/pdf/en_report_711.pdf (accessed 13 August 2010)
- [29] The two Olympics Park Legacy phases are described on <http://www.legacycompany.co.uk/a-lasting-legacy/bringing-the-park-to-life> (accessed 13 August 2010)
- [30] "West Ham expect to have first option on Olympic Stadium" *The Guardian* 17 July 2010 <http://www.guardian.co.uk/football/2010/jul/27/west-ham-olympic-stadium> (accessed 13 August 2010)
- [31] Li S., Blake A. (2009), 'Estimating Olympic-related Investment and Expenditure', *International Journal of Tourism Research*, Vol.11, 337 – 356.