

Volterra

**Westfield Stratford City**

**The Inheritance before the Games**

**Volterra Consulting**

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## Westfield Stratford City: The Inheritance before the Games

### Summary of impacts

- Volterra is an economic consultancy that specialises in estimating the economic impacts of large and often unusual schemes. This study considers the economic impact of Westfield's Stratford City development.
- Stratford City is a mixed use development in Newham, East London which is being developed by Westfield. It will include retail and leisure space, several hotels and a significant commercial district, along with housing and community facilities. Construction began in 2007 and the whole project is planned for completion in 2020.
- The public sector investment in infrastructure underpinning the Olympic Games enabled Westfield to bring forward their development of Stratford City around 5-7 years earlier than would otherwise have occurred.
- We estimate that bringing forward the benefits of this significant scheme by 5-7 years is worth £1.1-£2.2 billion to the London economy. Evaluating this against the level of public sector investment generates a Benefit Cost Ratio (BCR) of 1.9 to 3.6 which represents extremely good value for money on the public sector investment.
- We estimate that Zone 1 of Stratford City will create the equivalent of over 15,000 permanent jobs, 10,000 in Phase 1 and a further 5,460 in Phase 2. Once part time working is taking into consideration, this results in a headcount of almost 20,000, up to 14,100 in Phase 1 and 5,700 in Phase 2.
- The total estimated value of this employment to the London economy is £4.3-£5.6 billion for Phase 1 and £3.0-£4.5 billion for Phase 2, generating taxation revenues to central government of up to £140m per annum by 2020.
- Furthermore, the construction of Phase 1 has already employed a temporary workforce of over 20,000, and we estimate that this will have risen to up to 27,000 by the time construction is completed in September 2011, with a maximum number of contractors on site of around 4,000. We estimate that the construction of Phase 2 will employ a further workforce of around 13,000.
- Alongside other investments in the area, we believe that Stratford City will create the step change in image and perception that Newham has been striving for.

## *Introduction*

- Volterra has been commissioned by Westfield to consider the economic benefits which will be created by Stratford City. Stratford City is a mixed use development in Newham, East London, which is being developed by Westfield. The whole mixed use scheme will include retail and leisure space, two hotels and a significant commercial district, along with housing and community facilities. Construction began in 2007 and the whole project is planned for completion in 2020. The retail element of Stratford City is due to open in September 2011. Comprising 1.9 million square feet of retail and leisure space, it will be the largest urban shopping centre in Europe<sup>1</sup>.
- In order to estimate the economic benefits of the development, we have had to make a variety of assumptions. Throughout this study we set out clearly what all of these assumptions are and wherever judgment has been required, we have deliberately been conservative. As a result we are satisfied that the figures set out in this study represent a robust and reliable set of estimates of the economic impact of the Stratford City.
- This study concentrates on Zone 1 of the Stratford City development. The Zone 1 development is separated into two phases. Phase 1 will open in September 2011 and comprises mainly of the retail development along with some leisure and other uses. Phase 2 is planned to be fully completed by 2020, and comprises a significant amount of commercial space, as well as some further leisure.
- The development at Stratford City has been made possible by the infrastructure investments underpinning the Olympic Games in 2012. We estimate that the cost of this to the UK taxpayer is of the order of £500-£600 million<sup>2</sup>. In addition to this, the private sector investment from Westfield has been around £1.43bn for the retail elements of Phase 1, plus subsequent further investments of around £180m associated with the hotels and office elements in Phase 1. An estimated further £600 million will be spent by Westfield on developing Phase 2.

## *Construction*

- We estimate that by September 2011 a temporary workforce of around 25,000-27,000 will have been required during the construction of Phase 1 of Westfield Stratford City, of which almost 20,000 have already been created.
- This workforce has been made up of a combination of types of workers, some of whom will have been on site to deliver very specific parts of the construction and may have been employed for only a week or two, and others will have been employed for several months or longer. The maximum likely number of contractors on site at any one time is estimated to be around 4,000.

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<sup>1</sup> <http://uk.westfield.com/stratfordcity/news/press-toolkit/>

<sup>2</sup> This is based on historical estimates of both infrastructure items required to deliver the site and Section 106 obligations across Zones 1 to 7 of the Stratford City outline planning permission.

- Latest monitoring data shows that around 9 per cent of these jobs are workers living in the London Borough of Newham, or 28 per cent are workers living in the wider East London area.
- Based on estimates of the average length of contracts for construction and fit-out workers<sup>3</sup>, this total workforce is equivalent to around 10,400-10,900 'job years' and generates total construction earnings of £370-£390 million.
- Construction earnings in Newham alone will be £35-37 million, and in wider East London will be £105-110 million<sup>4</sup>.
- Furthermore, we estimate that the construction of Phase 2 will require a further construction workforce 13,000-13,700, equivalent to around 5,300-5,600 job years.
- The workforce for Phase 2 would generate total construction earnings of £190-£200 million, of which an estimated £17.5-£18.5 million would be for workers living in Newham, and £53.5-£56 million in the wider East London area.

#### *Operational impacts*

- We estimate that Phase 1 of the Westfield Stratford City development will create the equivalent of 10,000 permanent jobs through its retail, leisure and commercial occupiers once fully operational from September 2011 onwards, of which Westfield are aiming to secure at least 2,000 will be for the local unemployed.
- In reality a significant number of positions in retail and leisure are taken by part time employees. We estimate that the actual headcount of employment created in Phase 1 of Westfield Stratford City will be up to 14,100, allowing for both full and part time workers.
- The employment created in Phase 1 of Stratford City will generate £165-£215 million in annual earnings from 2011 onwards, contributing £38-£59m per annum in tax revenues for central government<sup>5</sup>.
- Evaluating the benefits over a 60 year horizon, the Net Present Value (NPV) of the jobs created in Phase 1 represents a contribution of £4.3-£5.6 billion to the London economy<sup>6</sup>.
- We estimate that a further 5,460 permanent jobs will be created by the leisure and commercial occupiers of Phase 2 once it is fully operational in 2020. Allowing for part time workers, we estimate that the actual headcount of employment created in Phase 2 of Westfield Stratford City will be up to 5,700.

<sup>3</sup> Based on Westfield's experience we estimate that the average length of contract for a construction worker is 6 months, and 3 months for a fit-out contractor.

<sup>4</sup> Assuming the proportion of workers who are resident in Newham and East London stays constant for the rest for the construction period and is representative across worker contract lengths.

<sup>5</sup> Ranges depend upon the assumptions made about earnings and part time workers – see section 3.1 for further detail

<sup>6</sup> It is standard to evaluate transport proposals over a 60 year horizon. The NPV has been evaluated using a 3.5% discount rate, in line with the Treasury Green Book

- The additional employment created in Phase 2 will generate a further £140-£220 million per annum to the economy from 2020 onwards, contributing £48-£81m each year in tax revenues and giving a net present value of £3.0-£4.5 billion to the UK economy<sup>7</sup>.
- Combining these estimates of the benefits of Phase 1 and Phase 2 together, this results in a total benefit to the London economy of the whole of Zone 1 of the Stratford City development of £7.2-10.1bn, through the delivery of over 15,000 full time equivalent jobs, or a workforce of up to 20,000.
- In order to make this happen, Westfield has invested £1.43bn for the retail elements of Phase 1, plus subsequent further investments of around £180m associated with the hotels and office elements in Phase 1, and will invest an estimated further £600 million in Phase 2 – providing a total private sector investment of £2.2bn. Alongside this, the public sector infrastructure investments associated with the Olympic Games of circa £500-£600m have enabled this site to be brought forward at this time for development. Based on the benefits estimated, this results in a benefit cost ratio (BCR) of the whole of Zone 1 of Stratford City of 2.6-3.6 which represents very good value for money.
- Finally we consider the additional value that the public sector investment has enabled. Westfield estimates that the public sector infrastructure investments have enabled them to bring forward this development around 5-7 years earlier than would otherwise have occurred. This means that these jobs and economic activity are being delivered 5-7 years earlier than would otherwise have been the case without the public sector investment. We can put a value on delivering these benefits earlier, and we estimate that bringing forward the benefits by 5 years is worth £1.1-£1.6 billion to the London economy. Evaluating this against the public sector spend of £0.6bn, would generate a BCR of 1.9 to 2.7 which represents very good value for money on the public sector investment.
- Were these jobs to have been delayed by 7 years, rather than 5 years, the value of these benefits would be worth an additional £1.5-£2.2bn to the London economy, generating a BCR on the public investment of 2.6 to 3.6 which represents extremely good value for money.

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<sup>7</sup> The 60yr NPV is based on half of Phase 2 being operational from 2015, and the remainder from 2020 – see section 3.2 for further detail

Summary of impacts

| <b>Construction (temporary)</b>               | <b>Phase 1</b> | <b>Phase 2</b> | <b>Zone 1 total</b> |
|---|----------------|----------------|---------------------|
| Workforce                                     | 25,000-27,000  | 13,000-13,700  | 38,000-40,700       |
| 'Job years'                                   | 10,400-10,900  | 5,300-5,600    | 15,700-16,500       |
| Value to London Economy                       | £370-390m      | £190-200m      | £560-590m           |
| Earnings of Newham residents                  | £35-37m        | £17.5-18.5m    | £52.5-55.5m         |
| Earnings of East London residents             | £105-110m      | £53.5-56m      | £158.5-166m         |
| <b>Operational (permanent)</b>                | <b>Phase 1</b> | <b>Phase 2</b> | <b>Zone 1 total</b> |
| Jobs (FTE)                                    | 10,060         | 5,460          | 15,520              |
| Jobs (workforce)                              | up to 14,100   | up to 5,700    | up to 19,800        |
| Annual earnings                               | £165-215m      | £140-220m      | £305-435m           |
| Annual tax revenues                           | £38-59m        | £48-81m        | £86-139m            |
| Value to London Economy (60 year NPV)         | £4.2-5.6bn     | £3.0-4.5bn     | £7.2-10.1bn         |
| Investment by Westfield                       | £1.43bn+£180m  | £600m          | £2.2bn              |
| Public sector investment                      |                |                | £600m               |
| Total Investment (private & public)           |                |                | £2.8bn              |
| Benefit Cost Ratio (BCR)                      |                |                | 2.6-3.6             |
| <b>Value of realising the scheme earlier</b>  | <b>Phase 1</b> | <b>Phase 2</b> | <b>Zone 1 total</b> |
| Value of delivery of scheme from 2011 onwards | £4.2-5.6bn     | £3.0-4.5bn     | £7.2-10.1bn         |
| Value of 5yr advancement                      |                |                | £1.1-1.6bn          |
| BCR of 5yr advancement                        |                |                | 1.9-2.7             |
| Value of 7yr advancement                      |                |                | £1.5-2.2bn          |
| BCR of 7yr advancement                        |                |                | 2.6-3.6             |

## 1 Introduction & Background

1. Volterra has been commissioned by Westfield to consider the economic benefits which will be created by Stratford City. Stratford City is a mixed use development in Newham, East London which is being developed by Westfield. The whole mixed use scheme will include retail and leisure space, two hotels and a significant commercial district, along with housing and community facilities. Construction began in 2007 and the whole project is planned for completion in 2020. The retail element of Stratford City is due to open in September 2011. Comprising 1.9 million square feet of retail and leisure space, it will be the largest urban shopping centre in Europe<sup>8</sup>.
2. The site sits alongside the Olympic stadium and between Stratford International Station and the Stratford Underground Station with the Olympic village on its fourth side. It is poised to make a distinctive difference to this part of East London and will be an integral part of the Olympic experience for visitors.
3. The site is located in a highly accessible location both by public transport and highways. It is located at the interchange of several tube lines (Jubilee, Central), overland services, and the DLR as well as the only UK international high speed rail line, High Speed One. Liverpool Street and Canary Wharf are only ten minutes away and 4.1 million people can reach Stratford within 45 minutes<sup>9</sup>.
4. Over the past twenty years a range of regeneration initiatives have been implemented in the Stratford area. Despite this, problems of deprivation, unemployment and various social problems still exist. It is the intention of the Stratford City development to provide the step change required to help combat these issues.
5. The original Stratford City outline planning permission was masterplanned over seven zones intended to be developed over twenty years or more. This document focuses on Zone 1 of the Stratford City development, of which Westfield is the developer and operator. The Zone 1 development is separated into two phases – Phase 1 will open in September 2011 and Phase 2 is planned to be fully open by 2020. Throughout this document we consider these two phases of development and present the benefits of the scheme separately for each phase as well as together for the whole of Zone 1. The table below summarises the floorspace within Zone 1 that we use as the basis for our calculations.

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<sup>8</sup> <http://uk.westfield.com/stratfordcity/news/press-toolkit/>

<sup>9</sup> <http://uk.westfield.com/stratfordcity/news/press-toolkit/>

Table 1 Floorspace in Zone 1 of Stratford City

| Zone One floorspace (sqm) | Phase One          | Phase Two      |
|---------------------------|--------------------|----------------|
| Catering                  | 11,719             | -              |
| Retail                    | 150,412            | -              |
| Cinema                    | 6,670              | -              |
| Casino                    | 6,300              | -              |
| Other Leisure             | 2,030              | 20,000         |
| Hotel                     | 34,794 (600 rooms) | -              |
| Commercial                | 12,000             | 94,263         |
| <b>Total</b>              | <b>223,925</b>     | <b>114,263</b> |

6. The development at Stratford City has been made possible by the infrastructure investments underpinning the Olympic Games in 2012. We estimate that the cost of this to the UK taxpayer is of the order of £500-600 million. In addition to this, the private sector investment from Westfield has been around £1.43bn for the retail elements of Phase 1, plus subsequent further investments of around £180m associated with the hotels and office elements in Phase 1. An estimated further £600 million will be spent by Westfield on delivering Phase 2.
  
7. This report aims to investigate the impact on the Stratford, London and the UK economies of this major investment. We focus primarily on the direct effects of the scheme. An investment of this scale has the potential to make a step change to the economy and we consider this dynamic impact.



## 2 Construction Impacts

### 2.1 Construction workforce to March 2011

8. Westfield's employment records show that by the end March 2011 a total workforce of just under 20,000 had been employed in the construction supply chain. This represents the total workforce which has been involved in the construction of Westfield Stratford City over the 39 months since construction began in January 2008. This workforce has been made up of a combination of types of workers, some of whom will have been on site to deliver very specific parts of the construction and may have been employed for only a week or two, and others will have been employed for several months or longer.
9. Westfield has been committed to providing as many of these opportunities to Newham residents and previously workless people as possible. To achieve this, Westfield works in partnership with Newham Workplace to secure as many of these jobs for local people as possible. Westfield completes quarterly surveys which detail the total workforce along with where the workers live. The table below shows the proportion of the workforce who have been resident in Newham as well as the wider local East London area.

Table 2 Workforce employed in the construction of Stratford City up to March 2011

|  | Workforce number | Percentage of workforce |
|--|------------------|-------------------------|
| Total employed (Jan 08 – Mar 11)                     | 19,939           | 100%                    |
| Resident in Newham                                   | 1,866            | 9%                      |
| Resident in Hackney, Tower Hamlets or Waltham Forest | 1,416            | 7%                      |
| Resident in remaining East London boroughs           | 2,354            | 12%                     |
| Total Resident in the local East London area         | 5,636            | 28%                     |
| Total employed Apprentices/trainees                  | 160              |                         |
| Apprentices/trainees in Newham                       | 43               |                         |
| Total employed Improvers                             | 165              |                         |
| Improvers in Newham                                  | 66               |                         |

10. The table above summarises the latest quarterly report (March 2011) which showed that the total workforce employed to date was just under 20,000. Of these, 9 per cent are living in Newham, a further 7 per cent are living in the neighbouring boroughs of Hackney, Tower Hamlets and Waltham Forest and a further 12 per cent of the construction workforce live

elsewhere in East London. This means a total of just under 30 per cent of the construction workforce to date have been resident in East London.

11. A total of 160 apprentices and trainees have been employed on the project to date, with over a quarter of these being resident in Newham. Apprentices and trainees are employed people with little or no experience of undertaking any previous apprenticeship or any formal technical qualifications.
12. There have been 165 employed 'Improvers', who are people who had some previous experience but are now taking a recognised qualification on site. Of these 40 per cent are living in Newham.

## **2.2 Construction workforce to September 2011**

### **2.2.1 Workforce**

13. As detailed previously, the construction of Stratford City to date has employed a workforce of just under 20,000 people. We estimate that the construction of Phase 1 will create between 25,000 and 27,000 construction jobs by the time it is completed in September 2011. This is an estimate of the total headcount of the workforce involved in constructing the development, and will have been made up of a mixture of contract lengths.
14. This estimate is based on several of Westfield's quarterly reporting schedules which show that the number of new employees per month has increased significantly over the course of the construction period. We believe this is a conservative estimate of the likely total construction workforce. The tables below shows the calculations on which this is based.

*Table 3 Workforce employed in the construction of Stratford City*

| January 2008 to...                 | March 2011 | December 2010 | June 2010 |
|------------------------------------|------------|---------------|-----------|
| Total workforce employed to date   | 19,939     | 15,517        | 10,507    |
| Months of construction to date     | 39         | 36            | 30        |
| Months of construction remaining   | 6          | 9             | 15        |
| Workforce per month                | 511        | 431           | 350       |
| Jobs per month from Jun-Dec 2010   |            | 835           |           |
| Jobs per month from Dec '10-Mar'11 | 1,474      |               |           |

Table 4 Estimated workforce employed to September 2011

|  | Scenario 1 | Scenario 2 | Scenario 3 |
|--|------------|------------|------------|
| Workforce to date                      | 19,939     | 19,939     | 19,939     |
| Estimated jobs per month Apr-Sept 2011 | 835        | 1,155      | 1,474      |
| Total estimated workforce to Sept 2011 | 24,949     | 26,866     | 28,783     |

15. If the number of jobs created per month for the final 6 months of the construction period is equal to the number that were created each month in the final half of 2010, then the total construction workforce will be just under 25,000. If the number of jobs created per month is higher than this, equal to the number of jobs created each month so far in 2011, then the total construction workforce will be just under 29,000. If the number of jobs created each month is halfway in between these two estimates, then the total construction workforce will be 27,000.
16. Based on these estimates, and in order to be conservative, we therefore conclude that it is likely that the total construction workforce employed in the construction of Phase 1 of Stratford City by September 2011 is likely to be between 25,000 and 27,000.

#### 2.2.2 Job years

17. In order to quantify the earnings of these construction workers, we must estimate how many years of employment (or 'job years') this total workforce is equivalent to. The total workforce will be made up of construction workers and fit-out workers. We estimate that the majority of workers up until December 2010 will have been employed on construction; between January 2011 and March 2011 the workforce will have been approximately evenly split between construction and fit-out workers; and from March 2011 onwards the majority of workers will be involved in fit-out and not construction work.
18. Based on Westfield's experience, we estimate that the average length of contract for construction workers is approximately 6 months, and the average length of contract for fit-out workers is 3 months. In reality both of these will be averages across much wider ranges. For example the fit out workers for John Lewis and Marks & Spencer, which equate to around 40,000 sqm (just over a quarter) of the retail space, have been fitting out for around 12 months. The Vue cinema began fit out in January 2011, and the casino and Primark began to fit out around March/April 2011. Finally, there will be several smaller units which may only spend around a week or two on fit out.
19. Using the combination of these assumptions, we estimate that the workforce is equivalent to between 10,400 and 10,900 'job years'. Our calculations to arrive at these estimates are set out in the table below.

Table 5 Estimated 'job years' to September 2011

|                                  |              | Construction | Fit-out     | Total         |
|----------------------------------|--------------|--------------|-------------|---------------|
| Workforce to Dec'10              |              | 13,965 (90%) | 1,552 (10%) | 15,517        |
| Workforce Jan-Mar'11             |              | 2,211 (50%)  | 2,211 (50%) | 4,422         |
| Apr-Sept'11 workforce            | Scenario One | 501 (10%)    | 4,509 (90%) | 5,010         |
|                                  | Scenario Two | 693 (10%)    | 6,234 (90%) | 6,927         |
| Total workforce                  | Scenario One | 16,677       | 8,272       | 24,949        |
|                                  | Scenario Two | 16,869       | 9,997       | 26,866        |
| Average contract length (months) |              | 6            | 3           | -             |
| Job years                        | Scenario One | 8,339        | 2,068       | <b>10,407</b> |
|                                  | Scenario Two | 8,435        | 2,499       | <b>10,934</b> |

### 2.2.3 Quantifying the value

20. In 2010 construction workers in London earned on average £35,650<sup>10</sup>. This means that the total earnings of construction workers as a result of the development of Stratford City will total £370-390 million, of which £320 million has already been earned by existing workers. Of the total earned by September 2011 we estimate that £34.5-36.5 million will have been earned by workers living in Newham or £105-110 million within East London more widely.

Table 6 Estimated construction earnings

|  | Scenario One | Scenario Two |
|--|--------------|--------------|
| London Earnings per construction worker          | £35,650      | £35,650      |
| Estimated job years to Sept 2011                 | 10,407       | 10,934       |
| Estimated job years to March 2011                | 9,029        | 9,029        |
| Total Earnings through construction to Sept 2011 | £371,015,200 | £389,810,100 |
| In Newham  | £34,721,600  | £36,480,500  |
| In East London                                   | £104,871,900 | £110,184,500 |
| Earnings through construction to March 2011      | £321,895,700 | £321,895,700 |
| In Newham  | £30,124,700  | £30,124,700  |
| In East London                                   | £90,987,700  | £90,987,700  |

<sup>10</sup> Annual Survey of Hours and Earnings (ASHE), Table 5.7a. Full time median value quoted.

### 2.3 Construction workforce after September 2011

21. The total floorspace in Phase 1 of Zone 1 is 223,925sqm, and a further 114,263sqm will be delivered in Phase 2. In order to estimate the construction workforce that will be required to deliver Phase 2 of Zone 1, we assume that the workforce required is directly proportionate to the amount of floorspace delivered. In discussions with Westfield we believe this is an appropriate approximation. We therefore estimate that the construction of Phase 2 will require a workforce of 13,000-13,700, equivalent to around 5,300-5,600 job years. On the same basis as above, this would generate £190-200 million of earnings through construction, of which around £17-19 million would be earned by workers living in Newham and £53-56 million more widely by residents of East London<sup>11</sup>.

Table 7 Estimated construction workforce, job years and earnings for phase 2

|  | Scenario One | Scenario Two |
|--|--------------|--------------|
| Floorspace in Phase 1                          | 223,925      | 223,935      |
| Floorspace in Phase 2                          | 114,263      | 114,263      |
| Workforce for Phase 1                          | 24,949       | 26,866       |
| Job years for Phase 1                          | 10,407       | 10,934       |
| Workforce for Phase 2                          | 13,048       | 13,709       |
| Job years for Phase 2                          | 5,310        | 5,579        |
| Total Earnings through construction of Phase 2 | £189,319,200 | £198,909,752 |
| In Newham                                      | £17,717,500  | £18,615,100  |
| In East London                                 | £53,513,400  | £56,224,300  |

<sup>11</sup> Assuming that the proportion of workers who are living in Newham and East London is the same for Phase 2 as the evidence to March 2011 for Phase 1 and is representative across worker contract lengths.

### 3 Operational Impacts

#### 3.1 Operational employment impacts of Phase 1

##### 3.1.1 Employment created

22. The construction of Phase 1 of Westfield Stratford City is planned to be completed later this year. From its opening in September 2011, Westfield Stratford City will provide an estimated 10,000 full time equivalent (FTE) jobs across the retail, leisure and commercial sectors. We have estimated these job figures using floorspaces provided to us by Westfield and standard English Partnerships assumptions about the density of employment across different sectors.
23. For the casino, we have taken the actual estimated number of employees from the Aspers' casino application as a standard density assumption does not exist for casinos and the Aspers' application figure is based on their actual business plan and therefore represents the most accurate assumption to make.
24. In addition to the jobs created by elements of the scheme, Westfield will also create some jobs themselves which are directly related to Stratford City. They have provided us with their estimates of these, split between full time recruitment and contractors in positions such as security and maintenance. The calculations of total job impacts on this basis are set out in the table below.

*Table 8 Estimated job creation in phase 1 in terms of full time equivalents*

| Phase 1 uses           | Floorspace (sqm)   | Employment Density (sqm per FTE)               | Estimated FTEs |
|------------------------|--------------------|--|----------------|
| Catering               | 11,719             | 13   | 901            |
| Retail                 | 150,412            | 20   | 7,521          |
| Cinema                 | 6,670              | 90   | 74             |
| Casino                 | 6,300              | -  | 300            |
| Other Leisure          | 2,030              | 40   | 51             |
| Hotel                  | 34,794 (600 rooms) | 3* 1 FTE per 2 rooms<br>4-5*0.8 FTE per 1 room | 414            |
| Commercial             | 12,000             | 19   | 632            |
| Total                  |                    |  | 9,893          |
| Westfield employment   |                    |  |                |
| Recruitment            |                    |  | 70             |
| Contractors            |                    |  | 100            |
| Total (incl Westfield) |                    |  | 10,063         |

25. The job impacts summarised above are full time equivalent positions. In reality a significant number of positions in retail and leisure are taken by part time employees. Skillsmart estimate that around half of retail employees are part time, and English Partnerships guidance states that 2-2.5 part time (PT) jobs are equivalent to 1 full time (FT) position. We have therefore translated our full time equivalent permanent job estimates into an estimate of the actual headcount of employees, based upon these assumptions about part time working. The calculations are set out in the table below. On this basis, we estimate that the actual headcount of employment created in Phase 1 of Westfield Stratford City will be between 13,200 and 14,100.

*Table 9 Estimated headcount in phase 1*

| Phase 1 use             | FTEs          | Scenario A (2PT=1FT) |              |               | Scenario B(2.5PT=1FT) |              |               |
|-------------------------|---------------|----------------------|--------------|---------------|-----------------------|--------------|---------------|
|                         |               | FT                   | PT           | Headcount     | FT                    | PT           | Headcount     |
| Catering                | 901           | 601                  | 601          | 1,202         | 644                   | 644          | 1,288         |
| Retail                  | 7,521         | 5,014                | 5,014        | 10,027        | 5,372                 | 5,372        | 10,744        |
| Cinema                  | 74            | 49                   | 49           | 99            | 53                    | 53           | 106           |
| Casino                  | 300           | 200                  | 200          | 400           | 214                   | 214          | 429           |
| Other Leisure           | 51            | 34                   | 34           | 68            | 36                    | 36           | 73            |
| Hotel                   | 414           | 276                  | 276          | 552           | 296                   | 296          | 591           |
| Commercial              | 632           | 632                  | 0            | 632           | 632                   | 0            | 632           |
| Westfield – recruitment | 70            | 70                   | 0            | 70            | 70                    | 0            | 70            |
| Westfield – contractors | 100           | 67                   | 67           | 133           | 71                    | 71           | 143           |
| <b>Total</b>            | <b>10,063</b> | <b>6,942</b>         | <b>6,241</b> | <b>13,183</b> | <b>7,388</b>          | <b>6,686</b> | <b>14,074</b> |

NB Totals may not sum due to rounding

### 3.1.2 Value of the employment created

26. In order to estimate the value of the employment created, we consider the average salaries across the various sectors in which employment is created. Based on average London salaries we estimate that the Phase 1 jobs will contribute £200-215 million<sup>12</sup> per annum to the economy from September 2011 onwards. If we evaluate the benefits to the London

<sup>12</sup> Based on average earnings in 2010, in 2010 prices

economy over a 60 year horizon<sup>13</sup>, and discount by 3.5 per cent<sup>14</sup> per annum, the Phase 1 jobs generate £5.3-5.6 billion to the UK economy. Even if the earnings of the employees are closer to the UK average, rather than the London average, we estimate that the employment created in Phase 1 will generate at least £4.3 billion to the UK economy. The basis of these estimates is set out in the tables below.

*Table 10a Estimated value of the job creation in phase 1 – London earnings based*

| Sector                  | Scenario A jobs |       | Scenario B jobs |       | London earnings |        | Total earnings (£m) |         |
|-------------------------|-----------------|-------|-----------------|-------|-----------------|--------|---------------------|---------|
|                         | FT              | PT    | FT              | PT    | FT              | PT     | Scen A              | Scen B  |
| Catering                | 601             | 601   | 644             | 644   | 19,510          | 6,234  | 15.5                | 16.6    |
| Retail                  | 5,014           | 5,014 | 5,372           | 5,372 | 21,334          | 6,956  | 141.8               | 152.0   |
| Cinema                  | 49              | 49    | 53              | 53    | 23,465          | 8,315  | 1.6                 | 1.7     |
| Casino                  | 200             | 200   | 214             | 214   | 24,992          | 8,652  | 6.7                 | 7.2     |
| Other Leisure           | 34              | 34    | 36              | 36    | 23,465          | 8,315  | 1.1                 | 1.2     |
| Hotel                   | 276             | 276   | 296             | 296   | 18,462          | 6,408  | 6.9                 | 7.4     |
| Commercial              | 632             | 0     | 632             | 0     | 41,688          | 13,450 | 26.3                | 26.3    |
| Westfield – recruitment | 70              | 0     | 70              | 0     | 41,688          | 13,450 | 2.9                 | 2.9     |
| Westfield – contractors | 67              | 67    | 71              | 71    | 22,000          | 5,475  | 1.8                 | 2.0     |
| Total                   | 6,942           | 6,241 | 7,388           | 6,686 |                 |        | £205m               | £217m   |
| 60 year NPV             |                 |       |                 |       |                 |        | £5,285m             | £5,606m |

NB Totals may not sum due to rounding

<sup>13</sup> Standard for Public sector appraisals

<sup>14</sup> Treasury Green Book discount rate



Table 10b Estimated value of the job creation in phase 1 – UK earnings based

| Sector                  | Scenario A jobs |       | Scenario B jobs |       | UK earnings |       | Total earnings (£m) |         |
|-------------------------|-----------------|-------|-----------------|-------|-------------|-------|---------------------|---------|
|                         | FT              | PT    | FT              | PT    | FT          | PT    | Scen A              | Scen B  |
| Catering                | 601             | 601   | 644             | 644   | 15,600      | 5,462 | 12.7                | 13.6    |
| Retail                  | 5,014           | 5,014 | 5,372           | 5,372 | 17,140      | 6,503 | 118.5               | 127.0   |
| Cinema                  | 49              | 49    | 53              | 53    | 19,503      | 4,150 | 1.2                 | 1.3     |
| Casino                  | 200             | 200   | 214             | 214   | 18,606      | 7,925 | 5.3                 | 5.7     |
| Other Leisure           | 34              | 34    | 36              | 36    | 19,503      | 4,150 | 0.8                 | 0.9     |
| Hotel                   | 276             | 276   | 296             | 296   | 16,256      | 6,289 | 6.2                 | 6.7     |
| Commercial              | 632             | 0     | 632             | 0     | 27,406      | 9,406 | 17.3                | 17.3    |
| Westfield – recruitment | 70              | 0     | 70              | 0     | 27,406      | 9,406 | 1.9                 | 1.9     |
| Westfield – contractors | 67              | 67    | 71              | 71    | 19,974      | 4,813 | 1.7                 | 1.8     |
| Total                   | 6,942           | 6,241 | 7,388           | 6,686 |             |       | £166m               | £176m   |
| 60 year NPV             |                 |       |                 |       |             |       | £4,275m             | £4,545m |

NB Totals may not sum due to rounding

27. Based on standard income tax and national insurance rates and allowing for both full and part time workers, we estimate that the earnings of £165-215m from employment in Phase 1 will generate taxation revenues to central government of £38-59m. In addition to this, there would be further indirect taxation revenues which would accrue to government through VAT and other indirect taxes.
28. Typically wages rise faster than inflation. In keeping with our intention to be conservative within our analysis, we have not allowed for any productivity improvements in our calculations. Were we to include a productivity increase of 2% per annum within our calculations (which is the figure typically used in transport appraisals), this would increase the NPV of the benefits of Phase 1 from £4.3-£5.6bn to £6.7-£8.7bn.
29. The analysis set out in this study only values the earnings associated with the employment created as a result of the Stratford City development, it does not value the profits earned by

the companies which employ those workers. This is a further element of conservatism contained within our analysis.

### 3.2 Operational employment impacts of Phase 2

#### 3.2.1 Employment created

30. Phase 2 of Westfield Stratford City is estimated to be completed around 2020. Westfield estimate that around half of Phase 2 will be occupied from 2015 onwards and the rest will be occupied by 2020. Once fully occupied, we estimate that it will provide an additional 5,460 full time equivalent positions in the leisure and commercial sectors. We have estimated these job figures on the same basis as for Phase 1 and the calculations are set out in the table below.

Table 11 Estimated job creation in Phase 2 in terms of full time equivalents

| Phase 2 uses | Floorspace (sqm) | Employment Density (sqm per FTE) | Estimated FTEs |
|--------------|------------------|----------------------------------|----------------|
| Leisure      | 20,000           | 40                               | 500            |
| Commercial   | 94,263           | 19                               | 4,961          |
| Total        |                  |                                  | 5,461          |

31. The majority of commercial employment opportunities will be full time, but again, we estimate that around half of the leisure workforce will be part time workers. The table below therefore estimates the total headcount of positions created by Phase 2. We estimate that the actual headcount of employment created in Phase 2 of Westfield Stratford City will be between 5,600 and 5,700.

Table 12 Estimated headcount in phase 2

| Phase 1 use | FTEs  | Scenario A (2PT=1FT) |      |           | Scenario B(2.5PT=1FT) |     |           |
|-------------|-------|----------------------|------|-----------|-----------------------|-----|-----------|
|             |       | FT                   | PT   | Headcount | FT                    | PT  | Headcount |
| Leisure     | 500   | 333                  | 333  | 667       | 357                   | 357 | 714       |
| Commercial  | 4,961 | 4,961                | 0    | 4,961     | 4,961                 | 0   | 4,961     |
| Total       | 5,461 | 5,295                | 3333 | 5,628     | 5,318                 | 357 | 5,675     |

### 3.2.2 Value of the employment created

32. We estimate the value of this employment in the same way as for Phase 1. Based on average London salaries we estimate that the Phase 2 jobs will contribute around £220 million per annum to the economy from 2020 onwards. If we evaluate the benefits to the UK economy over a 60 year horizon, and discount by 3.5 per cent per annum, the Phase 2 jobs generate around £4.2-£4.5 billion to the UK economy. Even if the earnings of the employees are closer to the UK average, rather than the London average, we estimate that the employment created in Phase 2 will generate around £3.0 billion to the UK economy. The basis of these estimates is set out in the tables below.
33. Again, based on standard income tax and national insurance rates and allowing for both full and part time workers, we estimate that the earnings of £145-220m from employment in Phase 2 will generate taxation revenues to central government of £48-81m.
34. As detailed previously, we have not included any productivity improvements in our analysis. Were we to include a productivity increase of 2% per annum within our calculations, this would increase the NPV of the benefits of Phase 2 from £3.0-£4.5bn to £5.8-£8.8bn.

Table 12 Estimated value of the job creation in phase 2

| Sector      | Scenario A jobs |     | Scenario B jobs |     | London earnings |        | Total earnings (£m) |         |
|-------------|-----------------|-----|-----------------|-----|-----------------|--------|---------------------|---------|
|             | FT              | PT  | FT              | PT  | FT              | PT     | Scen A              | Scen B  |
| Leisure     | 333             | 333 | 357             | 357 | 23,465          | 8,315  | 10.6                | 11.4    |
| Commercial  | 4,961           | 0   | 4,961           | 0   | 41,688          | 13,450 | 206.8               | 206.8   |
| Total       | 5,295           | 333 | 5,318           | 357 |                 |        | £217m               | £218m   |
| 60 year NPV |                 |     |                 |     |                 |        | £4,505m             | £4,520m |
| Sector      | Scenario A jobs |     | Scenario B jobs |     | UK earnings     |        | Total earnings (£m) |         |
|             | FT              | PT  | FT              | PT  | FT              | PT     | Scen A              | Scen B  |
| Leisure     | 333             | 333 | 357             | 357 | 19,503          | 4,150  | 7.9                 | 8.4     |
| Commercial  | 4,961           | 0   | 4,961           | 0   | 27,406          | 9,406  | 136.0               | 136.0   |
| Total       | 5,295           | 333 | 5,318           | 357 |                 |        | £144m               | £144m   |
| 60 year NPV |                 |     |                 |     |                 |        | £2,980m             | £2,990m |

### **3.3 Value for money of the Operational impacts**

35. Westfield has invested £1.43bn in the retail elements of Phase 1, plus subsequent further investments of around £180m associated with the hotels and office elements in Phase 1. An estimated further £600 million will be spent by Westfield on developing Phase 2. The development at Stratford City has been made possible by the infrastructure investments underpinning the Olympic Games in 2012. We estimate that the cost of this to the UK taxpayer is of the order of £500-600 million.
36. Based on the benefits estimated in the previous sections, this results in a benefit cost ratio (BCR) of the whole of Zone 1 of Stratford City of 2.6-3.6. A BCR of greater than 2 is generally considered to represent high value for money. By way of comparison, the latest case for High Speed Rail, which was released by DfT in February 2011, states that High Speed Two, the line to the West Midlands, will have a BCR of just over 2, which is also similar in magnitude to the BCR for High Speed One.
37. Westfield estimates that the public sector investment has enabled the development to be brought forward by around 5-7 years. We can value the benefit of bringing forward this investment by considering our 60 year NPV starting from different years of operation.
38. As presented previously, we estimate that the 60 year NPV of the benefits is £4.3-£5.6bn for Phase 1 and £3.0-£4.5bn for Phase 2, based on these parts of the development being fully operational from 2011 and 2020 respectively.
39. Were these jobs to have been delayed by 5 years, these benefits would reduce to £3.6-4.7bn and £2.5-3.8bn respectively. This means that the advancement of 5 years is worth an additional £1.1-1.6bn to the UK economy. Based on an estimated public sector spend of £600m, this generates a BCR of 1.9 to 2.7 which represents very good value for money on the public sector investment.
40. Were these jobs to have been delayed by 7 years, the benefits would reduce to £3.3-4.4bn and £2.3-3.6bn respectively. This means that an advancement of 7 years would be worth an additional £1.5-2.2bn to the UK economy. Based on the estimated public sector spend of £600m, this would generate a BCR of 2.6 to 3.6 which represents extremely good value for money on the public sector investment.

### **3.4 Tackling worklessness in Newham**

41. Of the 10,000 jobs created by Phase 1, Westfield's ambition is that 2,000 will go to local unemployed people. If the same proportion of the Phase 2 employment opportunities also go to local unemployed people, this would be a further 1,090 people. This will help to decrease the level of worklessness in the Borough.
42. At present Newham has one of the highest rates of unemployment and economic inactivity in London and the UK. Latest data shows that approximately 12.4% of the working age

population of Newham are unemployed. This compares to an average of 8% in London and 7% across the UK as a whole.

43. In Newham 32.5% of the working age population are economically inactive (compared to 25.2% of London and 23.6% of the UK) with 27.5% 'not wanting a job'<sup>15</sup>. This suggests a culture of worklessness in the Borough, a problem identified by the Department for Work and Pensions (2009): *"Evidence suggests that there are many reasons that residents cannot engage with or do not want to engage with the formal labour market. Reasons include: low levels of qualifications, lack of basic skills for life, lack of affordable/accessible childcare, sickness and disability..., engrained culture of worklessness and opportunities presented by the informal economy. 19.1% of 16-64 [year olds] have no qualifications ([the] London average is 11.8%)."*

44. This 'culture of worklessness' in Newham was the subject of a recent study by the Institute of Employment Studies. This study highlighted the "crucial" role of effective employer engagement in alleviating worklessness<sup>16</sup>:

*"Employer engagement is fundamental to tackling worklessness and should be a matter of priority. An attractive offer which has employer buy-in can provide access to more vacancies and work placements for workless individuals.*

*There are very significant current and upcoming opportunities in the borough to move people from worklessness into employment, including the Olympics and the new Westfield development. It is critical that all is done to maximise the impact of these opportunities. Given the time constraints around these it may make sense to target support here towards those who are closer to the labour market."*

45. The commitment from Westfield Stratford City and its major retail anchors (John Lewis, Waitrose, Marks and Spencers and Vue cinema) to guaranteed interview places for local unemployed people living in Newham is an example of much needed effective employer engagement.

46. Breaking the generational cycle of entrenched worklessness will help to lift Newham from its current position as one of the most deprived areas in London and the UK. One way of quantifying the impact of reducing worklessness is to estimate the reduction in local authority welfare expenditure.

47. A recent study<sup>17</sup> estimated that the direct financial benefit to national and local Government of moving a jobseeker into work is £78.84 or £104.34 per week, depending on whether they move to working 16 hours or 35 hours. If we assume that the 2,000 Phase 1 employees work 35 hours per week, this represents an annual welfare saving of almost £11 million. If the Phase 2 employment opportunities manage to attract the same proportion of

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<sup>15</sup> ONS annual population survey 2010

<sup>16</sup> Institute of Employment Studies, 2010: ix/x

<sup>17</sup> Counting the Cost – a Worklessness Costs Audit for London (2010)

unemployed people into work, then this would represent a further saving of £6 million per annum.

48. Evaluating the welfare savings over a 60 year horizon, the Net Present Value (NPV) of getting these currently unemployed people into work represents a contribution of £0.4bn to the London economy.
49. These calculations are likely to underestimate the beneficial impact of getting unemployed people into work, as they only capture the direct benefits of reducing the cost of welfare payments but do not capture the knock benefits such as reduced crime, better health and education outcomes for the next generation, and so on, but nevertheless this gives us an indication of the significant direct financial savings resulting from getting unemployed people into work.

#### 4 Residential impacts

50. Zone 1 of the Stratford City development will deliver 1,224 new homes. The housing strategy specifies that this will be split between private sector, intermediate and social housing in the proportions 65%, 25%, 9%, meaning that it will deliver almost 430 affordable homes. The table below shows the split between different sized homes. The dominant unit type is the one or two bedroom flat, reflecting demand in this area. However, around 15% of both the market and social rented housing will also be 3 bedroom homes.

Table 13 Types of housing in Stratford City, Zone 1

| Unit type              | Market Housing | Intermediate | Social rented |
|------------------------|----------------|--------------|---------------|
| 1 Bedroom              | 40%            | 43%          | 14%           |
| 2 Bedroom              | 47%            | 55%          | 71%           |
| 3 Bedroom              | 13%            | 2%           | 16%           |
| % of housing in Zone 1 | 65%            | 25%          | 9%            |

51. Based on average household sizes for the Newham, the 1,224 homes will accommodate an estimated 2,810 residents. The current population of Newham is estimated to be around 240,000. The Zone 1 housing will therefore increase the population of Newham by just over 1%.
52. Newham has challenging housing targets, with a minimum 10 year target of 25,000 new homes, or annual monitoring targets of 2,500 per annum<sup>18</sup>. Zone 1 will therefore help to achieve around 5% of the borough's 2021 housing targets, or half of one year's development target, which represents a significant contribution.
53. If these new residents have demographics and an employment rate similar to those currently existing in Newham, then 1,075 of the residents will be employed, earning on average £32,600 per annum, and spending an estimated total of £4 million per annum in the local economy.
54. If instead these new residents have demographics and an employment rate similar to the London average, then 1,335 of them will be employed, earning on average £34,000 per annum and spending an estimated total of £5 million per annum in the local economy.

<sup>18</sup> London Plan Housing SPG Table 3.1

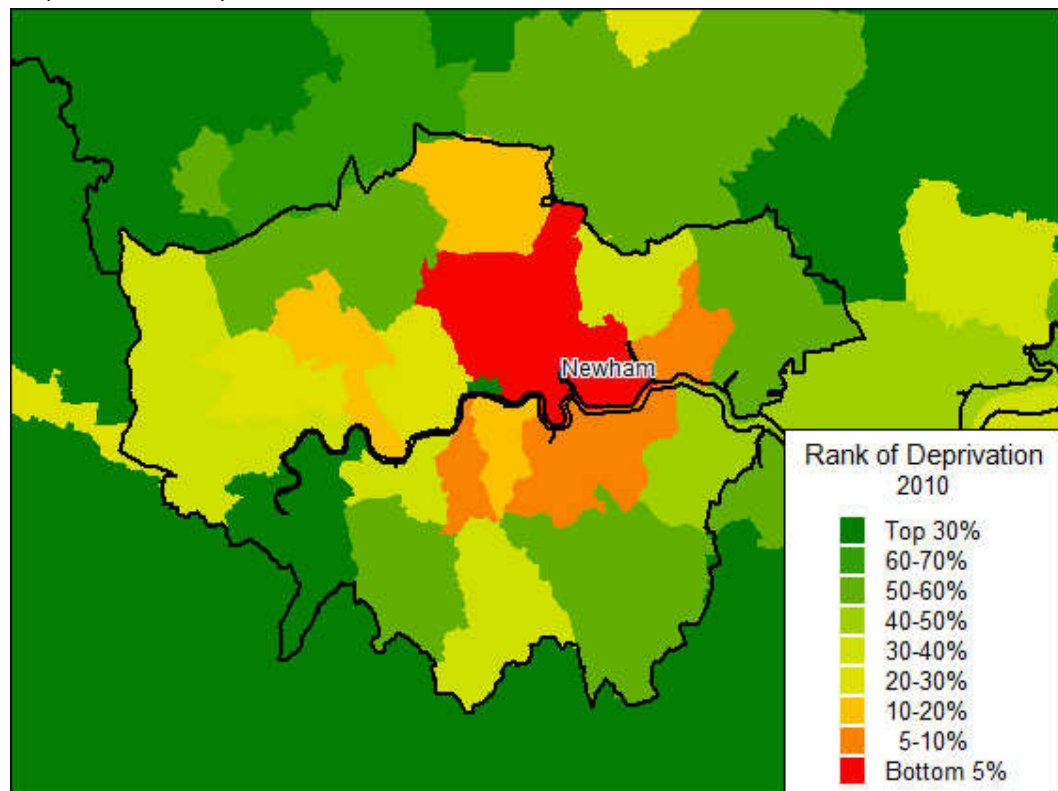
## 5 Transformational impacts

55. Over the past twenty years a range of regeneration initiatives have been implemented in the Stratford area. Despite this, problems of deprivation, unemployment and various social problems still exist.
56. Alongside other investments in the area, we believe the Stratford City development will help to create the step change in image and perception that Newham has been striving for.

### 5.1 Deprivation in Newham

57. The English Indices of Multiple Deprivation measure relative levels of deprivation across the country. They consider a variety of factors including income, employment, health, education, housing & services, crime and living environment. The latest set of indices were released in March 2011 and measure relative deprivation across the country in 2010. The overall measure, by district, is shown in the map below. Newham is the 3<sup>rd</sup> most deprived district in the country, after neighbouring Hackney which is 2<sup>nd</sup> and Liverpool which is the most deprived.

Map 1 Deprivation in and around Newham, 2010



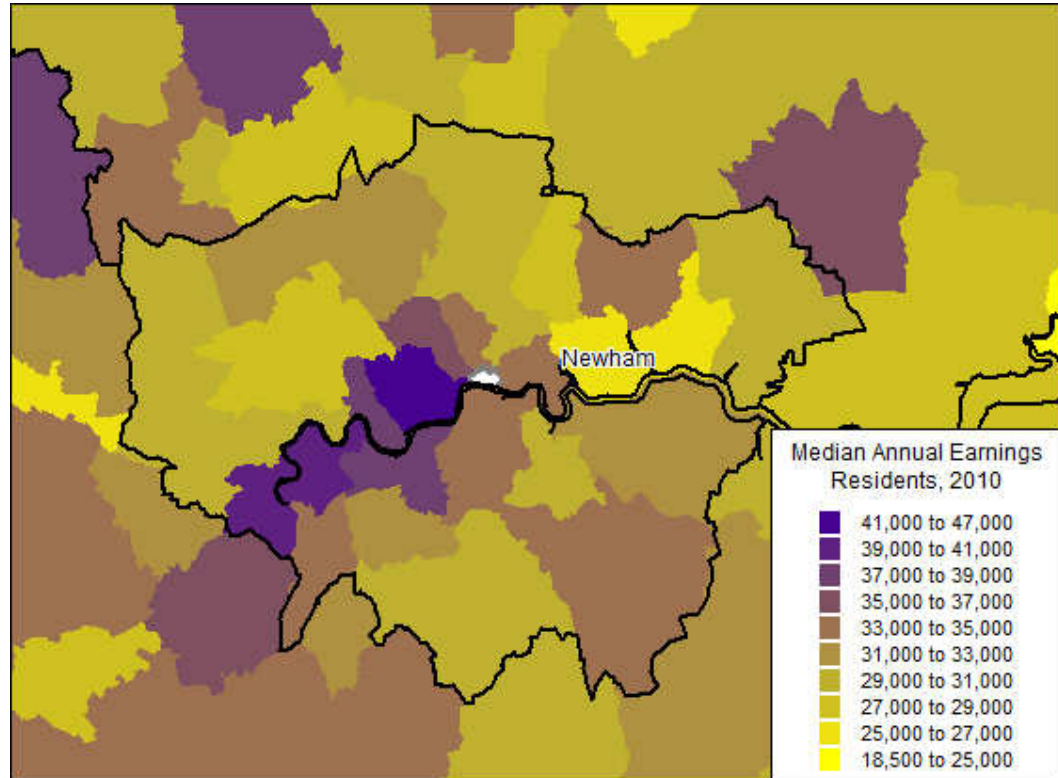
### 5.2 Prosperity in Newham

58. Newham has the second lowest level of residential earnings of all boroughs in London, after neighbouring Barking & Dagenham. In contrast, the residents of other neighbouring



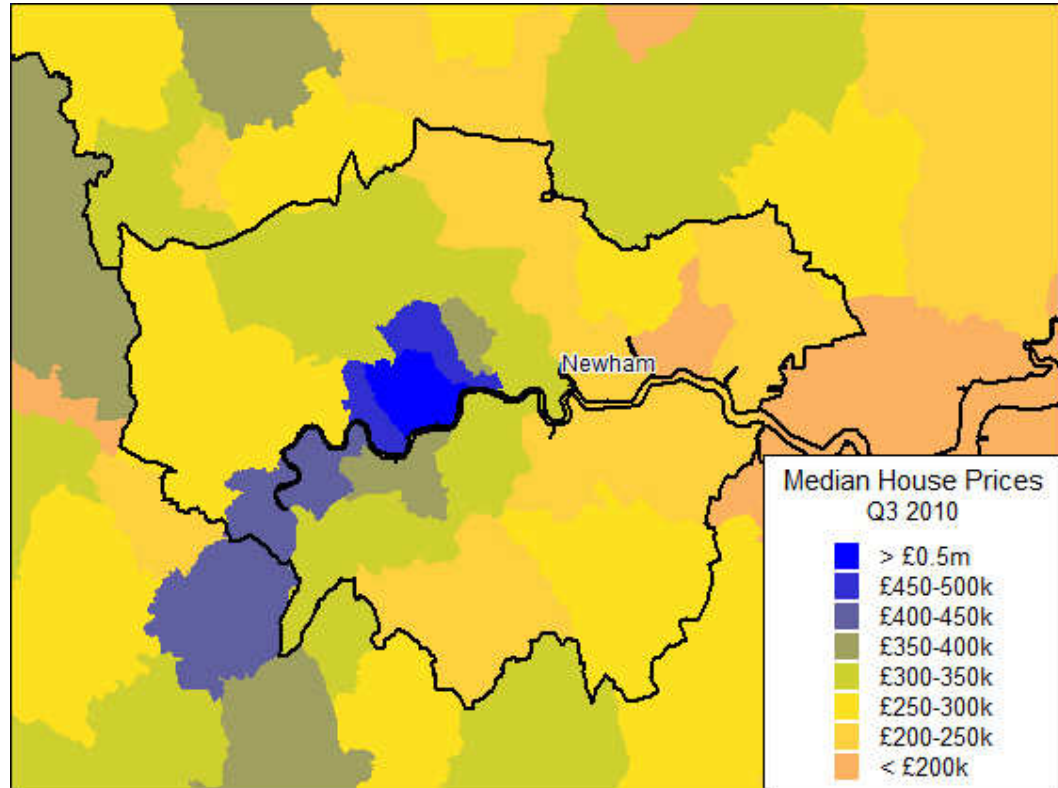
boroughs in East London of Redbridge and Tower Hamlets earn over 25% more than residents in Newham. Residents of the prime central boroughs earn over 70% more, and residents of the prosperous West London boroughs earn around 40% more.

Map 2 Residential earnings in and around Newham, 2010



59. House prices are a good proxy for the prosperity of an area. Newham has some of the lowest house prices in London, ranking 4<sup>th</sup> in terms of median house prices in 2010, after the further eastern boroughs of Barking & Dagenham, Bexley and Havering. Average house prices in parts of prime central London are more than treble the levels in Newham. Parts of West London also have prices which are up to double those in Newham.

Map 3 House prices in and around Newham, Q3 2010



### 5.3 What might a step change look like?

60. Previous work by Volterra evaluating the economic impact of High Speed One<sup>19</sup> revealed that, whilst house prices are complex, a simple model using just two factors – the proportion of people who commute into London and the overall measure of deprivation in an area – can provide a good estimation of house prices in an area. This model finds that, on average, if commuting to London rises and deprivation falls, house prices increase.
61. In order to try to quantify the potential impact on prosperity in Newham as a result of the investment in Stratford City, we consider what increase in house prices in Newham would be predicted by our model if the overall deprivation measure in Newham were to fall.
62. Our model predicts an almost proportional relationship – if deprivation in Newham fell by 10 per cent, house prices would rise by 10 per cent; if deprivation in Newham fell by 20 per cent, house prices would rise by 21 per cent; if deprivation in Newham fell by 30 per cent, house prices would rise by 33 per cent; if deprivation in Newham fell by 40 per cent, house prices would rise by 46 per cent, and so on.
63. These percentage changes in deprivation don't mean much to the average reader so we now put them in context. Newham currently has an Index of Multiple Deprivation (IMD) score of 41.8. The average IMD score across England is 19.2, the lowest is 4.5 and the highest is 43.4.

<sup>19</sup> Economic Impact of High Speed One, January 2009. A report for London & Continental Railways, by Colin Buchanan & Volterra Consulting

A higher score indicates more deprivation. On this measure, Newham is the third most deprived local authority in the country, after Liverpool and Hackney.

64. If deprivation in Newham fell by 10 per cent, this would represent deprivation comparable to Birmingham or Middlesbrough, which are still in the most 5% of districts in the country; if deprivation fell by 20 per cent, the closest London comparator borough would be Barking & Dagenham; and if deprivation in Newham fell by 30 per cent, this would be comparable to Southwark. If deprivation in Newham fell by 40 per cent, this would bring it in line with the average rate across London.
  
65. These comparisons suggest that values in Newham have considerable scope for improvement, if the borough is successfully lifted out of deprivation. If deprivation in Newham fell by 20 per cent, bringing it halfway to the London average and comparable with nearby Barking & Dagenham, we estimate that the total value of housing stock in Newham would rise by £4.3 billion. If deprivation in Newham fell by 40 per cent, bringing it in line with the average level of deprivation in London, we estimate that the total value of housing stock in Newham would rise by £9.6 billion. These are very significant quantifiable impacts which help to give an indication of the potential for wealth generation and improvements in prosperity in this area if a step change in image and perception is achieved.