

Sensitivity tests on forecasting for employment in London
February 2003



Introduction

The draft London Plan (DLP) was launched on 21 June 2002. This is the Mayor's Spatial Development Strategy that sets guidelines to achieve development in London over the next 15–20 years. For planning purposes, DLP considered projections for employment for the period 2000–2016, based on assumptions about future economic growth. DLP uses the assumption that the UK economy growth is 2.5 per cent. This is the assumption used by the Treasury for the UK for planning purposes.

Sensitivity tests have been prepared in response to the consultation on the draft London Plan. This report outlines in more detail the different scenarios considered to assess how robust the projections for employment in London are.

Volterra Consulting prepared projections for employment in London for the period 2001–2016. These are based on the assumption that London's economy grows at 2.5 per cent. Forecasts of total employment and also employment by sector were published in the London Plan. Three different sensitivity tests were considered; 1) London's economic growth, 2) employment growth in the business services sector and 3) geographical variations in employment in London.

Varying economic growth in London

To calibrate these results, Volterra has carried out sensitivity tests considering that the London's economic growth could be below 2.25 per cent from the initial assumption of 2.5 per cent, and above at 2.75 per cent. Table 1 presents the results of the two different scenarios departing from the base projection.

Table 1. Forecasts for employment in London, varying economic growth

Assumption	Year	Total employment
Growth of 2.25 per cent	2001	4,469,000
	2016	4,843,000
	Change 2001–2016	448,000
Growth of 2.5 per cent London Plan (base)	2001	4,483,583
	2016	5,120,000
	Change 2001–2016	636,000
Growth of 2.75 per cent	2001	4,492,000
	2016	5,276,000
	Change 2001–2016	831,000

Source: Volterra Consulting

Sensitivity tests indicate that total employment rises with increases in the economic growth rate. There are differences in the absolute change in employment for these two scenarios. The change in employment during the period 2001–2016 almost doubles

when the London economy is assumed to grow at 2.75 per cent compared to the change in employment assuming an economic growth of 2.25 per cent. This indicates that forecasts for employment are very sensitive to how the London's economy grows.

Business services sector reduces by 25 per cent from base projection

Additionally, forecasts for employment by sector were calculated, assuming that first a) business services employment growth is as in the London Plan and b) business services employment growth is reduced by 25 per cent from this base projection, but with a higher growth (increase by 25 per cent) in hotels and restaurants and other services sectors.

Table 2 summarises projections for employment in the business services sector at different years ahead, allowing also for variations in the economic growth in London. When a lower growth in employment within the business services sector is considered, the change in employment in this sector from 2001-2016 is slightly lower compared to the base case scenario, independently of the assumption of economic growth.

Table 2. Forecasts for employment in the business services sector

Business services sector growth as in London Plan	Growth = 2.25 per cent	Growth = 2.5 per cent (Base)	Growth = 2.75 per cent
2001	1,146,000	1,149,000	1,152,000
2016	1,522,000	1,583,000	1,646,000
Change 2001-2016	376,000	434,000	494,000
Reduction by 25 per cent in business services sector growth from base			
2001	1,140,000	1,142,000	1,145,000
2016	1,422,000	1,467,500	1,515,000
Change 2001-2016	282,000	325,500	370,500

Source: Volterra Consulting

Geographic variations in the distribution of employment in London

Roger Tym & Partners (RTP) consultants prepared forecasts for employment by borough in London for the period 2001-2016. Based on Volterra's forecasts for employment at sectoral level, RTP considered both structural and development opportunities to be allowed for different weights to be attached to these. These weights account for combinations in development of infrastructure (capacity) and local economic structure in different boroughs.

The following five scenarios were considered, varying these weights, to calculate projections for employment at borough level:

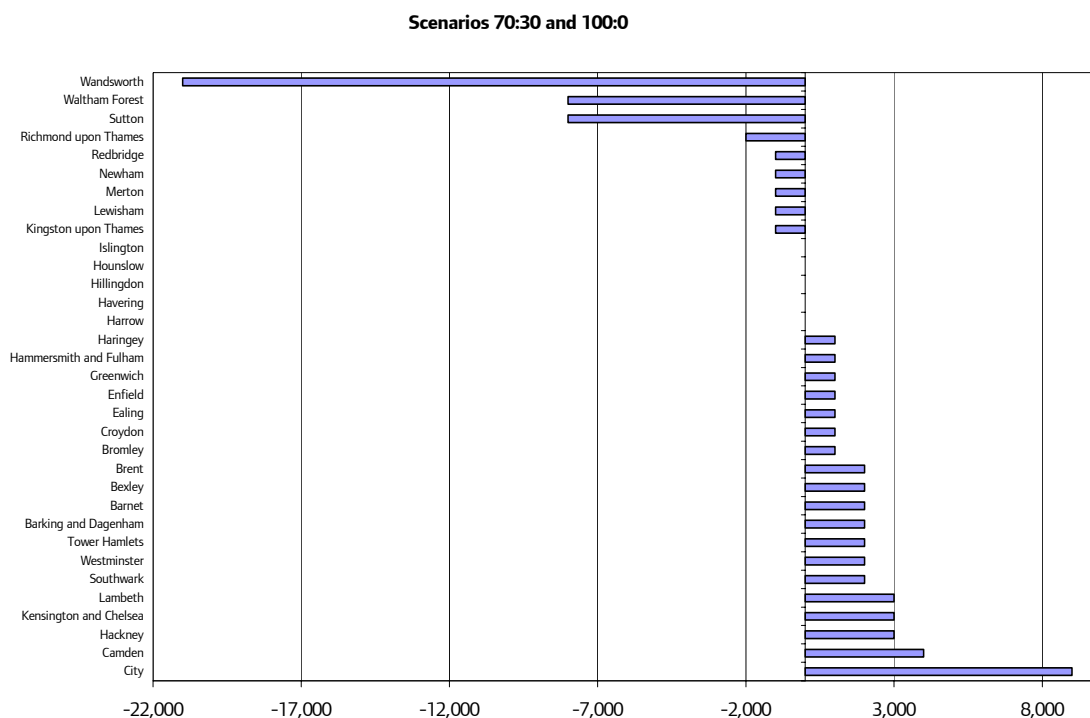
- 1) 100 per cent development and 0 per cent structure
- 2) 70 per cent development and 30 per cent structure
- 3) 50 per cent development and 50 per cent structure
- 4) 30 per cent development and 70 per cent structure
- 5) 0 per cent development and 100 per cent structure.

The London Plan presents forecasts for employment only based on scenario 70:30.

Differences in projections on employment between the 70:30 scenario in relation to each of the other scenarios were considered. That is, forecast for employment in 70:30 scenario minus forecast for employment in 100:0 scenario was calculated. Similarly, the scenario 50:50 forecast for employment was subtracted from the 70:30 scenario, the 30:70 scenario subtracted from 70:30 and the 0:100 scenario subtracted from 70:30.

Charts are displayed only for differences in forecasts for employment for the 70:30 case in relation to the first and fifth scenarios respectively. This is because, the other comparisons provide relatively similar results as the 70:30 and 0:100 case. Chart 1 indicates that generally there are no differences in employment change across boroughs (whether considering 70 per cent weight of development or 100 per cent weight). However, there are significant differences in boroughs such as Wandsworth, Waltham Forest and Sutton, where job losses are generated as a result of 70 per cent in development compared with 100 per cent. In contrast, a higher weight in structure creates more jobs in the City.

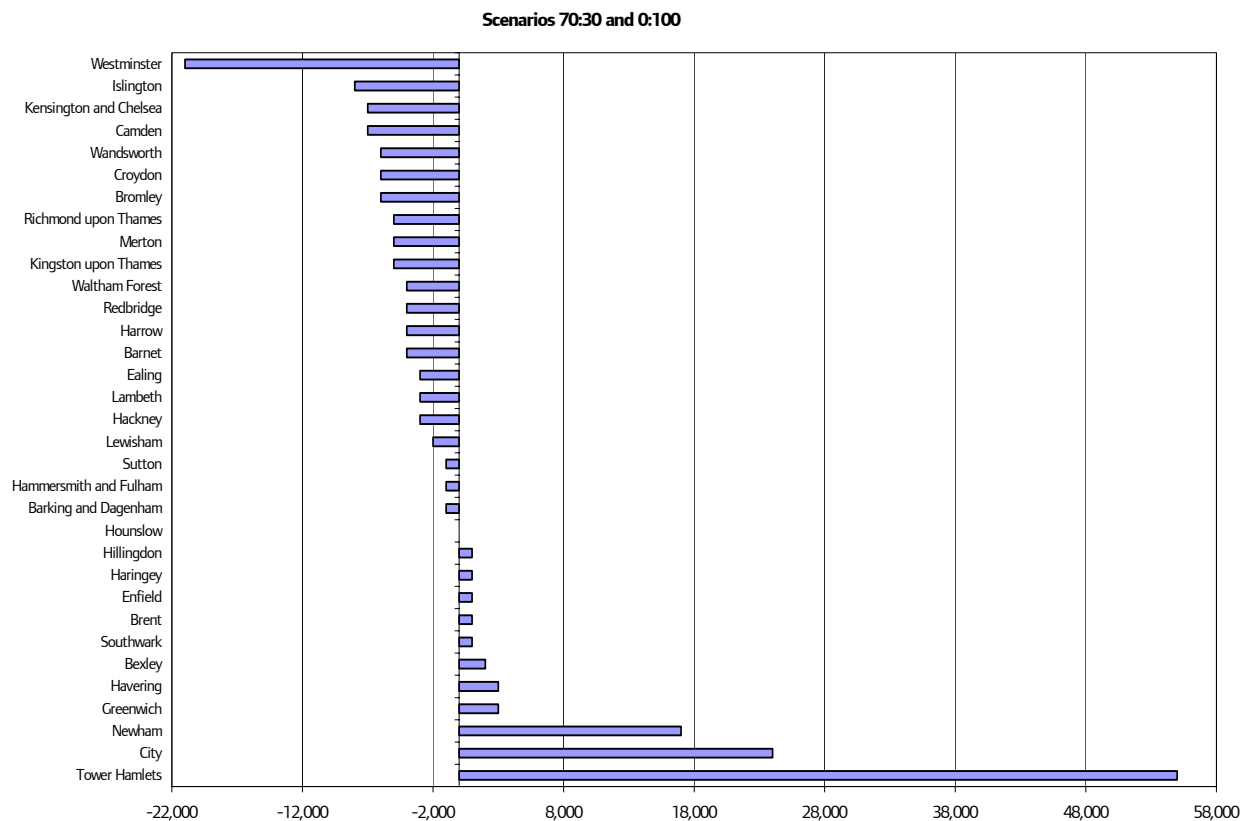
Chart 1. Differences in forecasts for employment change 2001-2016 by borough



Source: Roger & Tym Partners Consultants

Chart 2 shows that there are not significant differences in employment change in different London boroughs when more weight is given to development 70 per cent versus 0 per cent. However, marked differences appear in Newham, the City, Tower Hamlets and Westminster.

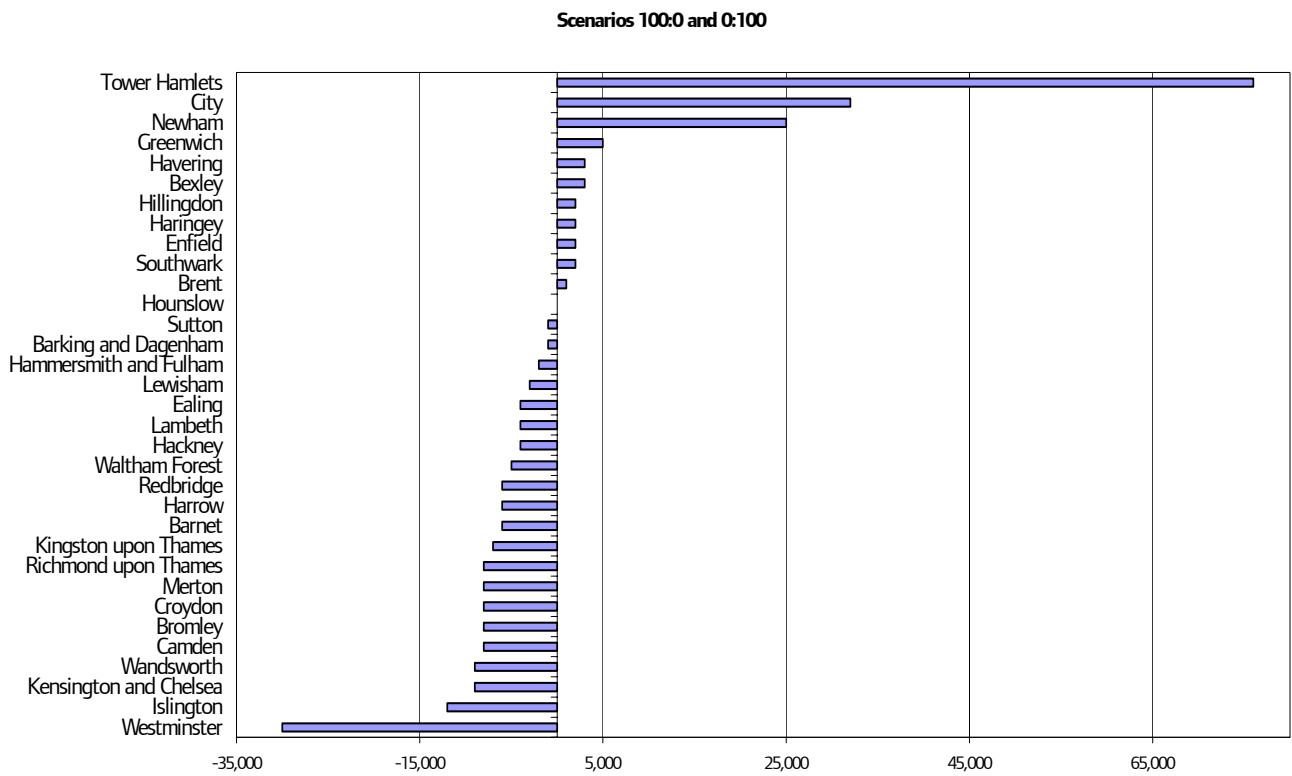
Chart 2. Differences in forecasts for employment change 2001-2016 by borough



Source: Roger & Tym Partners Consultants

The difference in forecasts for employment between the scenario 1 and the scenario 5 displayed in Chart 3. There are similarities within boroughs, with the exception of Tower Hamlets, the City, Newham and Westminster. These boroughs are very sensitive to variations in weights in development and structure. This chart illustrates better how a policy towards promoting investment in infrastructure (development) generates more job creation at least in Tower Hamlets, The City and Newham. However, for Westminster a higher weight towards development in relation to local structure generates greater job losses.

Chart 3. Differences in forecasts for employment change 2001-2016 by borough



Source: Roger & Tym Partners Consultants