

Knowledge Economy Audit for the Thames Gateway Directorate of the Learning and Skills Council

Local Futures Research

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March 2005

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1 Introduction

1.1 Background

The Government has made the knowledge economy its vision of Britain's future in the 21st century global economy. It has committed to delivering a world-class knowledge economy across Europe at the Lisbon Summit in 2000 and progress will be measured at the forthcoming mid-term review.

The knowledge economy can be defined as one that is 'increasingly dependent on the effective creation, acquisition, distribution and use of knowledge' (OECD). Knowledge and skills based aspects of human capital are now central to economic development. The effective use of knowledge has become the single most important factor for international competitiveness, wealth creation and social inclusion.

For a broader discussion on knowledge economy theory and policy implications, see Local Futures' *Knowledge Economy Audit* for Thames Gateway London Partnership (2004).

1.2 The Knowledge Economy in the Thames Gateway

National and regional government have earmarked the Thames Gateway as the single biggest regeneration project in Britain at present. The London Economic Development Strategy has highlighted the need for London to increase participation in the knowledge economy in order to remain a powerful global city and the draft London Plan has firmly placed the direction of this growth to the East. In addition the ODPM Sustainable Communities Plan has ambitious plans for new development, regeneration and investment in the Thames Gateway, including 30% of Greater London's new homes and 180,000 new jobs up to 2016.

The Thames Gateway Learning and Skills Council has been set up to co-ordinate post-16 skills policy and delivery in the area. It has the challenge of ensuring that local people have the skills needed to access the employment opportunities that exist now and in the future, which are likely to be in more knowledge-driven sectors that require higher skill levels.

This is an enormous challenge. Historically the Gateway has been the industrial centre for the South East, but as the heavy industries moved away, legacies remained of manufacturing skills that are inappropriate for service sectors, poor quality environment and contaminated land. Low quality social housing developments and inaccessible public transport have created multiple problems of social exclusion in many areas – poverty, lack of services and few accessible jobs.

Much of the regeneration emphasis in the Thames Gateway has been on developing the physical infrastructure – the office space around Canary Wharf, new apartments, gentrified living spaces and the rail, road and other transport infrastructure. The Docklands development was certainly successful in terms of establishing London's second financial centre in Canary Wharf and in attracting high-skilled people to the area, but arguably less so

in terms of the benefits to local people. The knowledge economy introduces an added dimension to regeneration, emphasising how knowledge can be a driver of economic development in all sectors of the economy, based on human capital, social capital, relationships and networks.

1.3 This Report

The aim of this report is to provide a benchmark assessment of the Thames Gateway knowledge economy. The report needs to be considered alongside the TGLP Knowledge Economy Audit to fully appreciate the theory and policy of the knowledge economy. The indicators used are described in the Annex.

The report is organised as follows:

- Chapter 2 explains the benchmarking methodology of the Economic Architecture and Competitiveness Analysis
- Chapter 3 presents the results of the Economic Architecture
- Chapter 4 highlights the main findings from the Competitiveness Analysis
- Chapter 5 is a brief summary of strengths and weaknesses and some suggested issues for further research
- The Annex includes definitions of the indicators used.

1.4 Geographies of the Thames Gateway

The LSC definition of the Thames Gateway includes areas in three separate LSC regions – London, the South East and East of England. We have used three separate geographies to benchmark the performance of the Thames Gateway knowledge economy:

- **Thames Gateway London** – 10 local authority areas within Greater London – Hackney, Tower Hamlets, Waltham Forest, Lewisham, Greenwich, Newham, Redbridge, Barking & Dagenham, Havering and Bexley¹. We have not included the City of London due to its very small size that makes the data unreliable.
- **Thames Gateway Kent** – Dartford, Gravesham, Medway and Swale (4 areas)
- **Thames Gateway Essex** – Thurrock, Basildon, Castle Point, Rochford and Southend-on-Sea (5 areas).

¹ Please note that the definition of Thames Gateway London differs from that in the TGLP report. We have not included Thurrock or Dartford in 'Thames Gateway London' as they are part of Essex and Kent. In contrast, the TGLP report includes these two areas within 'Thames Gateway London'.

2. Benchmarking the knowledge economy

2.1 Introduction

This chapter describes our methodology for assessing the robustness of local development from a knowledge economy perspective. Local Futures has developed this methodology – including an original set of benchmark indicators for mapping and measuring the knowledge economy – in the course of the ERKE research programme and consultancy projects.

The foundations of this approach were built in the context of a research collaboration with all of the Regional Development Agencies, where Local Futures developed a regional model of the knowledge economy called “regional economic architecture”. The results of this work were published by the DTI in a report entitled “*A Regional Perspective on the Knowledge Economy in Britain*”. The report influenced the *Innovation Report* (2003) and the *21st Century Skills White Paper*, and we have subsequently refined and extended the analysis in a major project for the DTI on skills, economic development and the knowledge economy, “*Regional Employment and Skills in the Knowledge Economy*” (2005 – forthcoming).

The main elements of our benchmarking approach are as follows:

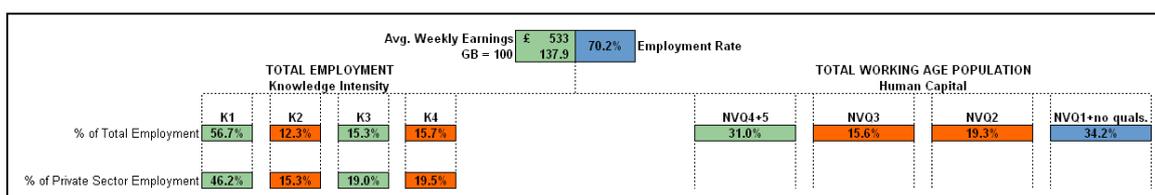
- The **Regional Economic Architecture** model applied to the Thames Gateway
- A ‘**Competitiveness Analysis**’ of the factors that can encourage the growth of the knowledge economy – enterprise, the business base, skills and environment and amenities.

The ‘architecture’ and competitiveness analysis generate discrete sets of ‘knowledge economy’ benchmark indicators that we use to measure the relative performance of the local economy at the national, regional and local levels. The analysis enables us to examine the economic geography of competitiveness across Great Britain, and identify the place of the sub-regional knowledge economy within that geography.

2.2 The Economic Architecture Analysis

The ‘economic architecture’ (EA) is a descriptive and static model of the knowledge economy using employment and skills building blocks. Chart 2.1 shows the results of applying a reduced form of the economic architecture (the level of analysis used here) for London.

Chart 2.1: Economic Architecture for Greater London, 2001



The 'architecture' is basically a theorised layout of three sets of benchmark indicators covering the overall economic performance of the region, the knowledge-intensity of its industries and the skills or qualifications profile of its workforce. How well the region performs is assessed against the national average: a blue box indicates that the region's score for that particular indicator falls within 10% of the national average, while the green and red boxes indicate that the region is performing 10% above and 10% below the average. The ideal way to read the EA model is to look at the overall colour pattern and compare and contrast the employment and skills profiles (left versus right hand side) of the knowledge economy.

- The twin aims of economic strategies are assumed to be a high level of *average earnings* and a high *employment rate* – how the area performs on these headline indicators is shown in the top two boxes of the EA
- The knowledge intensity of economic activity is indicated by the proportion of graduates in the workforce as a proxy indicator – the boxes show the *proportion of total employment in high knowledge-intensity sectors* (K1 industries) to low knowledge-intensity sectors (K4 industries), the second row focusing on the private sector or business knowledge economy - please see Chart 2.2 below
- The skills profile of the working age population is represented by the four boxes on the right hand side of the EA, the boxes respectively showing the *proportion of this population that possesses NVQ 4/5 to NVQ1/0 qualifications* – please see Chart 2.3 for a detailed breakdown of qualifications and the broad types of occupations that correspond to these qualifications levels

Chart 2.2 Industrial Classification of the Knowledge Economy in the Economic Architecture

The EA uses the 'high education sector' system of classifying industries and employment, as a basis for analysing the development of the knowledge economy – see EC publication *Employment in Europe 2000*. The main benchmark indicator is the proportion of graduates in the workforce as a proxy measure of the knowledge intensity of sectors and economies.

In applying the EA analysis to the UK regions, we used regional 'K classifications' and changed the thresholds to allow for differences in economic specialisation. Thus the K classification varies for each of the 11 British regions.

The South East classification of K1 to K4 sectors (SIC 1992 classification; industry codes are shown in brackets) is as follows:

- **K1 sectors**, where at least 40% of the workforce has a degree or equivalent: 02 : Forestry, logging, etc; 11 : Extraction crude petroleum/natural gas;14 : Other mining and quarrying; 24 : Manuf chemicals and chemical products; 30 : Manuf office machinery and computers; 62 : Air transport; 72 : Computing and related activities; 73 : Research and development; 74 : Other business activities; 80 : Education; 85 : Health and social work; 91 : Activities membership organisations nec
- **K2 sectors**, where between 25% and 40% of the workforce has a degree or equivalent: 15 : Manuf food products and beverages; 18 : Manuf apparel;dressing/dyeing fur; 22 : Publishing,printing, repro recorded media; 23 : Manuf coke, refined petroleum products; 29 : Manuf machinery and equipment nec; 32 : Manuf radio, tv/communications equipment; 33 : Manuf medical,precision instruments,etc; 35 : Manuf other transport equipment; 40 : Electricity,gas,steam/hot water supply; 41 : Collection,purification/distri of water; 65 : Financial intermediation, etc; 66 : Insurance and pension funding, etc; 67 : Act auxilliary financial intermediation; 70 : Real estate activities; 75 : Public admin/defence; compulsory soc. svc.; 92 : Recreational, cultural and sporting; 99 : Extra-territorial organisations/bodies
- **K3 sectors**, where between 15% and 25% of the workforce has a degree or equivalent: 26 : Manuf other non-metallic products; 28 : Manuf fabricated metal products, etc; 31 : Manuf electrical machinery/apparatus nec; 34 : Manuf motor vehicles,trailers,etc; 36 : Manuf furniture; manufacturing nec; 51 : Wholesale trade/commission trade, etc; 63 : Supporting/auxilliary transport,etc; 71 : Renting machinery/equipment, etc; 90 : Sewage/refuse disposal, sanitation, etc
- **K4 sectors**, where less than 15% of the workforce has a degree or equivalent: 01: Agriculture, hunting, etc; 05: Fishing, operation fish hatcheries/farms; 10: Mining coal/lignite; extraction of peat; 12: Mining of uranium and thorium ores; 13: Mining of metal ores;16: Manuf tobacco products; 17: Manuf textiles; 19: Tanning/dressing of leather, etc; 20: Manuf wood/products/cork, etc; 21: Manuf pulp, paper and paper products; 25: Manuf rubber and plastic goods; 27: Manuf basic metals; 37: Recycling; 45: Construction; 50: Sale and maintenance/repair motor vehicles; 52: Retail trade, except of motor vehicles; 55: Hotels and restaurants; 60: Land transport; transport via pipelines; 61: Water transport; 64: Post and telecommunications; 93: Other service activities; 95: Private households with employed persons

Chart 2.3 Definitions of NVQ Qualifications in the Economic Architecture

EA Category	Qualifications	Occupations (by SOC 2000 major groups)
NVQ 1 and below	<ul style="list-style-type: none"> ▪ NVQ 1 ▪ City and Guilds Foundation / Part 1 ▪ RSA other ▪ BTEC First or general certificate ▪ GNVQ foundation ----- ▪ No qualifications 	<ul style="list-style-type: none"> ▪ 91 Elementary trades, plant and storage related occupations ▪ 92 Elementary administrative and service occupations
NVQ 2	<ul style="list-style-type: none"> ▪ NVQ 2 ▪ City and Guilds Craft ▪ RSA diploma ▪ BTEC first or general diploma ▪ GNVQ intermediate ▪ 5 or more GCSEs at grade A*-C ▪ Foundation apprenticeships 	<ul style="list-style-type: none"> ▪ 41 Administrative occupations ▪ 42 Secretarial and related occupations ▪ 61 Caring personal service occupations ▪ 62 Leisure and other personal service occupations ▪ 71 Sales Occupations ▪ 72 Customer service occupations ▪ 81 Process, plant and machine operatives ▪ 82 Transport and mobile machine drivers and operatives
NVQ 3	<ul style="list-style-type: none"> ▪ NVQ 3 ▪ City and Guilds Advanced Craft/Part 2 ▪ RSA Advanced Diploma ▪ BTEC National ▪ OND/C ▪ GNVQ Advanced ▪ 2 or more A levels ▪ Advanced apprenticeships 	<ul style="list-style-type: none"> ▪ 12 Managers and proprietors in agriculture and services ▪ 31 Science and technology associate professionals ▪ 32 Health and associate professionals ▪ 33 protective service professionals ▪ 34 Culture, media and sports occupations ▪ 35 Business and public service associate professionals ▪ 51 Skilled agricultural trades ▪ 52 Skilled metals and electrical trades ▪ 53 Skilled construction and building trades ▪ 54 Textiles, printing and other skilled trades
NVQ 4 and 5	<ul style="list-style-type: none"> ▪ NVQ 4 ▪ RSA Higher Diploma ▪ BTEC Higher ▪ HND/C ▪ First degree ----- ▪ <u>Teaching and nursing qualifications</u> ▪ NVQ 5 and higher degrees 	<ul style="list-style-type: none"> ▪ 11 corporate managers ▪ 21 Science and technology professionals ▪ 22 Health professionals ▪ 23 Teaching and research professionals ▪ 24 Business and public service professionals
<p>'Trade apprenticeships' are divided 50% to level 2 (NVQ 2) and 50% to level 3 (NVQ 3). 'Other qualifications' are divided 55% to level 1 (NVQ 1 and below), 35% to level 2 (NVQ 2) and 10% to level 3 (NVQ 3). Source: DfES 2003: <i>Developing a National Skills Strategy and Delivery Plan: Underlying Evidence</i>; ONS 2000: <i>Standard Occupational Classification 2000, Volume 1</i></p>		

2.3 The Competitiveness Analysis

In the TGLP Knowledge Economy Audit we outlined the scope of the knowledge economy in terms of policy domains – see Chapter 2 in that report on the ‘building blocks of innovation’ that define the Government’s present approach.

These policy domains include skills, enterprise and innovation and there are clearly roles for decision-makers at different levels. For example on skills, the Government’s PSA targets drive much of local delivery on level 2 and basic skills. There is an increasingly important role for regions, with the new Regional Skills Partnerships developing Skills Strategies including possible priority funding for level 3 skills in key sectors, working across LSC, RDA, Sector Skills Council, JobCentre Plus and Business Link policy domains.

The competitiveness analysis is an attempt to map the ‘drivers’ that influence the patterns of economic growth, specialisation and the knowledge economy at the local and sub-regional levels. We examine economic diversity, skills, enterprise and quality of life indicators.

Data constraints, particularly for local and sub-regional analysis, impose limits on what competitiveness indicators we can choose. For example, it is particularly hard to measure innovation trends or export-import movements below the national level as there is no acceptable standardised definition of these complex concepts (e.g. innovation is much more than just expenditure on R&D, number of business-university partnerships or number of new

products launched – it is often incremental and process-based). Having said this, we believe we have assembled a coherent and valuable set of indicators for benchmarking some of the main assets for a knowledge economy at the local, sub-regional and regional levels.

1) 'Knowledge-driven' industries

We begin with the presence of 'knowledge-driven industries' in the local, sub-regional or regional economy. The OECD and EC define these sectors as being market/brand-driven and/or technology-driven – they match closely with the K1 and K2 sectors used in the REA, which rest on 'higher education' definitions. We also distinguish between production and services in our examination of these 'knowledge-intensive sectors':

- Knowledge-based production sectors: aerospace, electrical machinery and optical equipment, printing, publishing and recorded media, chemicals and energy
- Knowledge-based services sectors: telecommunications, computer and related services, R&D, finance and business services, air transport services and recreational and cultural services

Basically, local and regional economies are interpreted as being more or less competitive according to the shares of employment in these 'knowledge-intensive sectors', how these shares compare against regional and national averages and also how they increase or decrease over time.

Reflecting their need for high level of professional, managerial and technical expertise, a large part of public service activity is highly knowledge-intensive – education, health, public administration and so on employ large numbers of graduates, and appear consistently as K1 and K2 sectors in the REA schema for all regions. Importantly, in areas where business knowledge economy drivers are relatively weak, we find that the public sector is the major driver of the local knowledge economy. Therefore, we highlight the public sector separately. We also do the same for creative industries – which span production and service sectors – because of their special role in the shaping of a new economic culture which impacts on consumption patterns (more sophisticated products).

The Knowledge-Intensity of the Economy
• % Share of total employment in knowledge-driven services (private sector)
• % Share of total employment in knowledge-driven production (private sector)
• % Share of total employment in both types of knowledge-driven sectors
• % Share of total employment in the public sector
• % Share of total employment in creative industries
• %Change in employment in knowledge-driven sectors (private sector)
• Presence of university research departments
• Presence of 'clusters' in the economy (using DTI definitions and regional location quotients)

2) A highly skilled and educated workforce

It is widely recognised that a highly skilled and educated workforce is essential to local, regional and national competitiveness in a modern knowledge economy, particularly in the context of globalisation and the challenges presented by China and India. Thus, the quality of the education, lifelong learning and workplace-based training infrastructure is a major driver of the knowledge economy – in business and public services. Further, access to learning and training opportunities – and how well individuals perform – is a driver behind social exclusion or inclusion in a modern knowledge economy.

Thus, the Government's skills strategy addresses wider access to HE, lifelong learning, raising schools standards and staying-on rates, etc – alongside schemes for improving basic skills in more deprived 'learning communities'. For the Competitiveness Analysis, we have created a varied set of skills and learning benchmark indicators as shown in the box below:

Skills and Learning Indicators
<ul style="list-style-type: none"> • Human capital index for the working age population • Ability to attract the mobile and economically active (in-migration of 20-44 year olds) • Presence of entrepreneurs • Employment in occupations for talented (as opposed to simply qualified) individuals * • GCSE achievement • Successful applicants to universities • Quality of the local education system

3) A Dynamic Enterprise Culture that fosters small business to start, grow and innovate

Championed by the Treasury, the Government has made enterprise a cornerstone of its economic policies and the knowledge economy agenda. Entrepreneurship is heavily promoted in all sectors and parts of Britain, with local authorities and regional development agencies being given new incentives to drive start-ups and improve the quality and development of the local small business stock more generally.

Improving the knowledge base of enterprise – particularly in low-value services and production sectors – is now an important focus of business support services and also supply chain and cluster strategies. Building knowledge bases across the local and regional economy involves management development, marketing and logistics services and product and process innovation, including migrating small firms up the skills ladder. Promoting entrepreneurship is emerging as a major theme in schools. Thus, we include enterprise and business support infrastructure here.

The third set of knowledge economy drivers, therefore, covers business and entrepreneurship, with the following indicators being used to measure local, sub-regional and regional performance.

Enterprise
<ul style="list-style-type: none"> • Size of the business base

- Business start-up rates
- Business survival rates
- Average business size
- Public sector support to grow and develop businesses
- Presence of business services and communications firms
- Employment in industries that generate new knowledge

4) Quality of Life

A successful knowledge economy will, through its impacts on productivity and job quality, deliver a high standard of living and material prosperity. However, the geography of knowledge economy activity – employment and business centres – tends not to coincide with the geography of where its principal beneficiaries or ‘knowledge workers’ actually live. Local Futures has drawn attention to the fact that ‘knowledge workers’ make up the bulk of today’s commuter population. Metropolitan sprawl around the big cities, especially London, is a feature of the modern knowledge economy. (Knowledge workers refer to people working in managerial, professional and scientific and technical occupations.)

There are a number of profound implications of these patterns of ‘sprawl’ in the knowledge economy. First, accessible rural areas are developing business knowledge economies in their own right. Second, there are high levels of skills poverty – or ‘social exclusion in the knowledge economy’ – in all of Britain’s cities (as much as 40% of the urban working age population in Nottingham, Birmingham and Glasgow, for example, lacks basic qualifications). Thus, the quality of life in urban and rural areas is changing, this being reflected in house price affordability, migration, services and amenities and so on.

Research shows that ‘knowledge workers’ are attracted to the main centres of the knowledge economy because of their relative abundance of career and business opportunities and their exceptional cultural and environmental assets. Thus, cities offering global knowledge industries and a rich cultural environment – and urban and rural areas connected closely with these cities – are seen by researchers as the most competitive areas of the modern economy. They are magnets for ‘talent’ in the knowledge economy.

Quality of Life

- Availability of basic services (derived from the IMD)
- Housing affordability
- Quality of the housing stock
- Quality of local schools * (average LEA score for primary schools)
- Quality of the physical environment
- Access to cultural amenities
- Availability of child care

The results of the competitiveness analysis are presented in the form of tables and maps showing how local and sub-regional area perform as knowledge economies measured by their relative scores on the groups of indicators we have listed above. Performance is assessed against national and regional averages.

2.4 Conclusion

The Local Futures approach to benchmarking local and regional development in the knowledge economy is based upon a considerable body of case study research accumulated in the ERKE programme, as well as our spatial economic modelling (the ‘architectures’) and national policy work.

The methodology can be used to assess:

- The knowledge-intensity of the economy
- The skills capacity of local people to access knowledge-intensive jobs
- The balance of public and private sector jobs in the knowledge economy
- Important differences between local areas, e.g. in earnings, employment and the knowledge-intensity of jobs
- The relationship between successful enterprise and small firms and the quality of those businesses, i.e. the knowledge-intensity
- The concentration of low levels of skills within local areas
- How quality of life indicators such as housing affordability, the physical environment, cultural amenities and access to services could stimulate or limit the growth of the knowledge economy

In Chapters 3 and 4, we present the results of applying the benchmarking, following the same steps in the analysis as we have outlined here.

3 Economic Architecture Analysis

3.1 Introduction

This chapter presents the results of our Economic Architecture Analysis of the knowledge economy in the Thames Gateway. We initially compare the Thames Gateway LSC area with national and regional benchmarks, then analyse the constituent parts of the area in terms of:

- The 3 sub-regions – London, Kent and Essex
- The 19 local authority areas

3.2 The national and regional context

The Thames Gateway has a striking knowledge economy profile (Charts 3.1 and 3.2). The left-hand employment profile representing the knowledge-intensity of jobs is much stronger than the national average, but the right-hand skills profile shows that residents have very low skills. The sub-region lacks the earnings power of London and the South East, but suffers from the same polarised employment profile as much of Greater London.

- Average earnings in the Thames Gateway are below the national average (97% of GB), despite its location close to the London and South East powerhouses of Britain's knowledge economy. Average earnings in the Thames Gateway are significantly lower than Greater London and the South East (Charts 3.3 – 3.5).
- The employment rate of 69.6% is very low – 5 points beneath the GB average, significantly lower than the South East and East of England and similar to London.

Chart 3.1: Thames Gateway Knowledge Economy, 2002

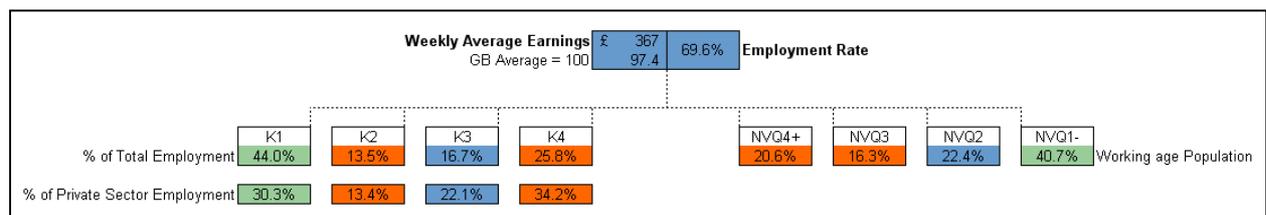
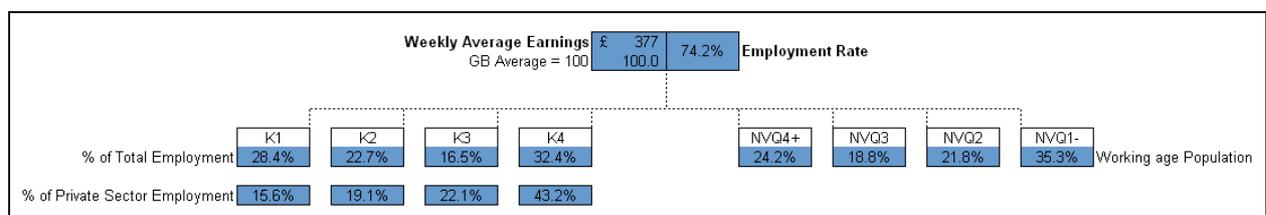


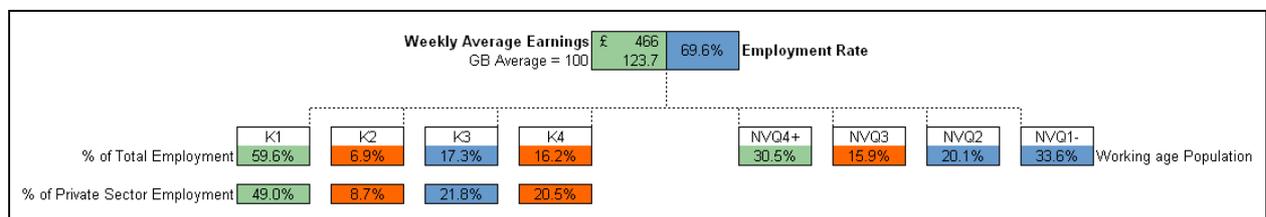
Chart 3.2: Great Britain Knowledge Economy, 2002



The Thames Gateway has a strong knowledge economy in terms of K1 and K2 jobs in the national context, but less so in comparison with London and the South East:

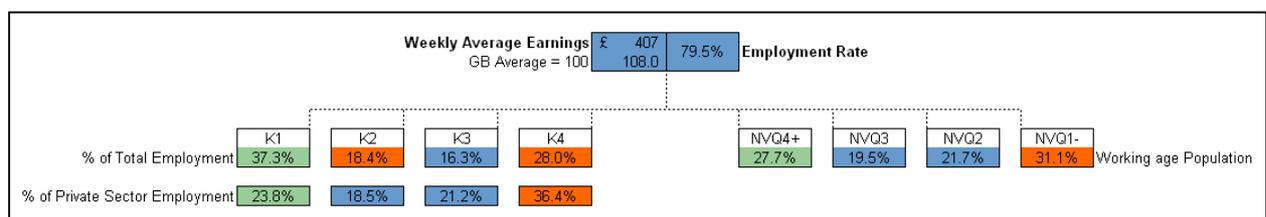
- Almost 60% of all London jobs are in K1 sectors, including almost 50% of private sector jobs (Chart 3.3). The Thames Gateway includes many of the same local areas, but has only 44% of all jobs in K1 sectors and 30% of private sector jobs. The gap with London is greatest in terms of private sector jobs, indicating that the business drivers of the knowledge economy are fairly weak in the Thames Gateway and that the public sector is a more significant player in the knowledge economy.
- London has a divided skills profile with roughly one-third graduates, one-third of the workforce having intermediate and level 2 qualifications, and one-third below the Government's employability benchmark of level 2. The Thames Gateway has an extremely skewed skills profile, with more than 40% of the workforce below level 2 and only 20% graduates – which is 50% lower than Greater London.

Chart 3.3: Knowledge Economy of Greater London, 2002



- The Thames Gateway has a fairly similar business knowledge economy profile to the South East in terms of K1 and K2 sector employment (Chart 3.4). About 40% of private sector jobs are in K1 and K2 sectors and just over one in three (35%) are in the lowest-knowledge K4 sectors.
- But skills in the Thames Gateway are much lower than the South East, particularly at the lowest end of the labour market. The Thames Gateway has far more people below the level 2 threshold (41% compared to 31%). Low skills severely limit local people's access to employment opportunities, which could be one reason why the employment rate is so much lower than the South East (69% versus 79%).

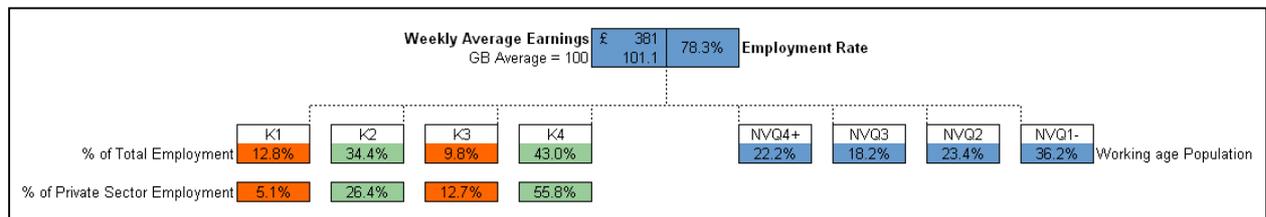
Chart 3.4: Knowledge Economy of the South East, 2002



- On a more positive note, the Thames Gateway compares very well with the East of England in terms of K1 and K2 sector employment (Chart 3.5). This is unsurprising given the extensive rural areas of the Eastern region and the Thames Gateway including Canary Wharf, Stratford and the City Fringe. However, as we will see later, some of the local areas in TG Essex have very weak knowledge economy profiles.

- The low skills in the Thames Gateway are again apparent when compared to the East of England – the NVQ4 and NVQ3 boxes both move from ‘red’ to ‘blue’ while the NVQ1- box moves from ‘green’ to ‘blue’. The East of England skills profile is similar to the national average while the TG struggles at both the high and low end.

Chart 3.5: Knowledge Economy of the East of England, 2002



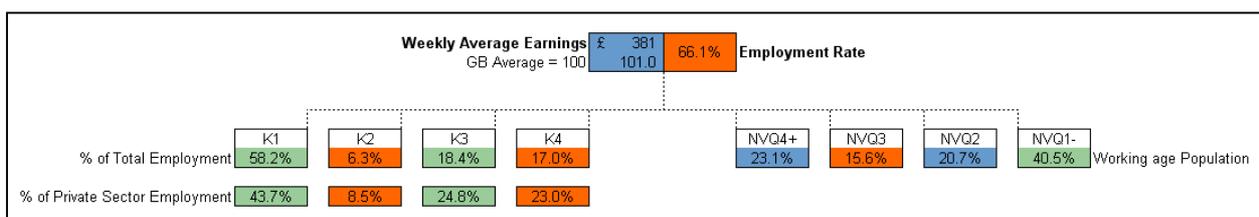
3.3 Thames Gateway London

In this section we present the economic architectures for Thames Gateway London, to compare it with the London average (Chart 3.6). We then analyse the position of the 10 TG London Boroughs in the capital’s knowledge economy, in terms of employment and skills (see Charts 3.7 – 3.16).

A comparison of Chart 3.6 with Chart 3.3 on page 11 shows that the Thames Gateway part of London is competitive in terms of jobs, but has much lower earnings than the rest of London and has particular problems of low skills and low employment:

- The knowledge economy profile of TG London is very similar to London as a whole. The private sector does have a slightly larger gap in terms of demand for high-level skills, with 44% of private sector jobs in K1 sectors compared to 49% across London. The public sector has a significant role in that the overall proportion of K1 jobs is very similar to the London score (58.2% and 59.6%).
- Average earnings are extremely low for London – almost £100 a week lower in 2002 and only just reaching the national average – 101% of the GB figure compared to 124% across London.
- The scale of low skills in TG London is similar to the overall Thames Gateway problem, with 41% of the workforce not having a first level 2 qualification. The proportion of graduates is relatively better (23% versus TG score of 21%), but still far below the London figure of 31%. The low employment rate of 66% is striking – even within the context of the low employment rate of 70% in the ‘divided capital’ of Britain’s knowledge economy.

Chart 3.6: Thames Gateway London Knowledge Economy, 2002



The local economic architectures in Charts 3.7 – 3.16 highlight many of the important differences within Thames Gateway London. Boroughs on the fringe of the City of London and in Canary Wharf such as Hackney and Tower Hamlets have very high average earnings of around £700 per week (almost double the national average). But earnings drop off steeply in the outer areas of the Thames Gateway to about 100% of the national average – compared to 124% across London – and just 67% in Havering (£245).

There is the opposite East / West divide in the Gateway in terms of employment. Outer districts such as Havering and Bexley have very high employment of over 75% but have fewer well-paid knowledge-intensive jobs.

There are clearly massive divides within local areas of the Thames Gateway. The architectures illustrate the vast gulf between knowledge workers and ‘the rest’ within inner urban areas such as Tower Hamlets, Hackney and Newham. Here there are many jobs in knowledge-intensive sectors and high average earnings, but the market for these jobs takes in high-skilled commuters from most of London, South East and the East of England. Low skills among local residents severely limit their ability to compete for these jobs and the result is that around 45% of the working age population is not employed.

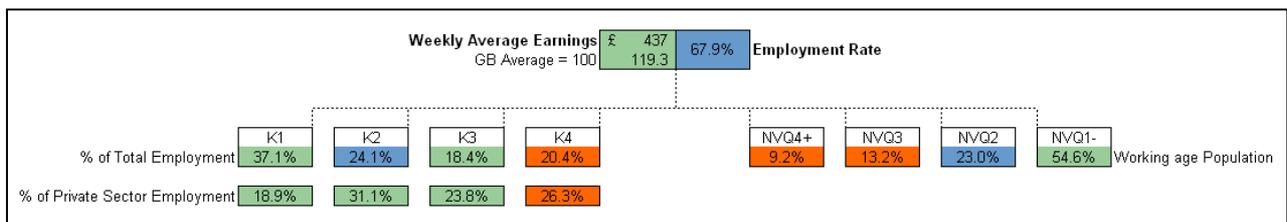
Some of the differences between the boroughs include:

- Low-skilled individuals have particular difficulty accessing jobs. Extreme examples include Newham, where just 15% has a degree but 52% has low or no qualifications. People from outside the borough clearly take many of the K1 jobs that represent 50% of employment in Newham.
- Just 9% of Barking & Dagenham’s working age population has a degree and 55% have low or no qualifications. More than a third of jobs are in K1 but business drivers are weak – only 19% of private sector jobs are in K1.
- The strongest local economies are in Hackney, Tower Hamlets, Lewisham, Greenwich, Redbridge and Waltham Forest. More than half of the jobs in these boroughs are in K1 sectors. The leading local area in terms of the business knowledge economy is Hackney, with 57% of private sectors jobs in K1 sectors. But here there is also a great problem of access to these job opportunities – 41% of residents have no or low qualifications and therefore have little chance of accessing the many knowledge-intensive jobs that have been created.
- The Outer districts in the Thames Gateway area generally have weaker knowledge economies. Havering, Bexley and Barking & Dagenham all have fewer than 30% of private sector jobs in K1 sectors.

Barking & Dagenham (Chart 3.7):

- Earnings are fairly high (20% higher than national average) but the area suffers from a low employment rate (68%)
- The knowledge economy profile is weaker than most of TG London – 37% of all jobs are in K1 sectors and just 19% of private sector jobs – and far weaker than the Greater London profile.
- The skills profile is extremely poor – just 9% have an NVQ 4 level qualification and 55% have no or low qualifications (below NVQ level 2)

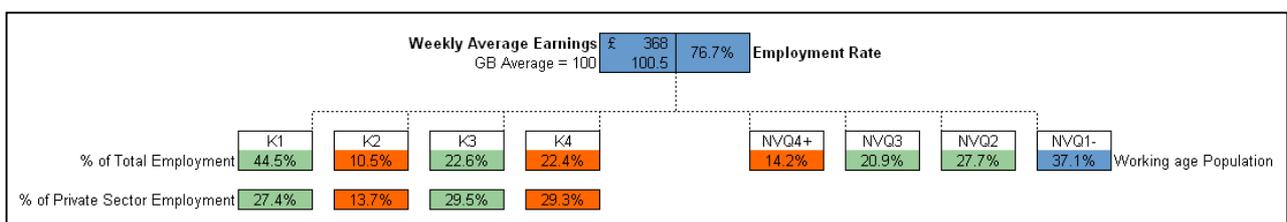
Chart 3.7: Knowledge Economy of Barking & Dagenham, 2002



Bexley (Chart 3.8):

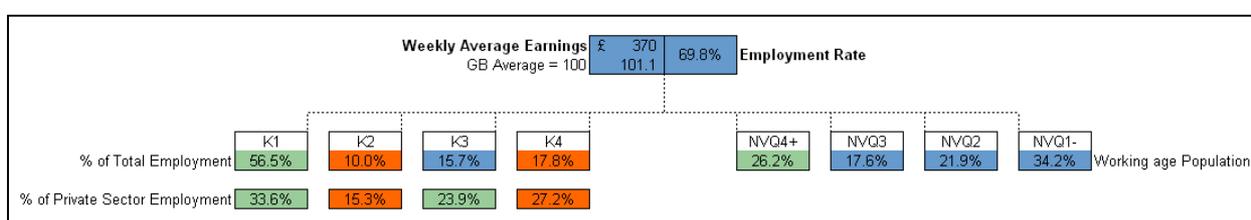
- Despite a high employment rate of 77%, earnings are lower (101% of GB average) than most of the Thames Gateway and the Greater London average.
- The business knowledge economy profile is low in the regional context – 27% of private sector jobs are in K1 sectors compared to 44% across Thames Gateway London and 49% in Greater London. Almost 60% of private sector jobs are in K3 or K4 sectors
- There are few high-skilled residents – just 14% has a degree or equivalent compared to 23% in TG London and 31% across Greater London

Chart 3.8: Knowledge Economy of Bexley, 2002

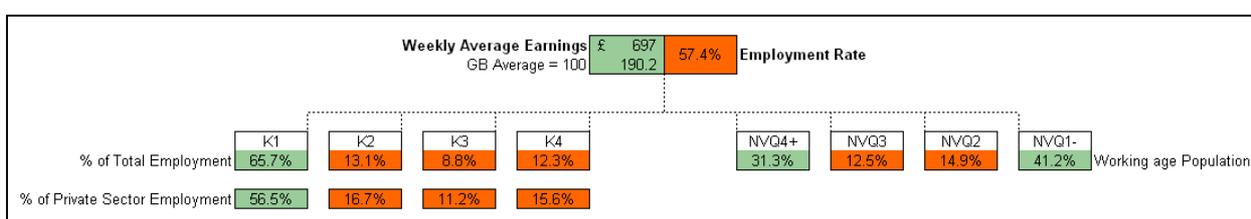


Greenwich (Chart 3.9):

- Average earnings are low (101% of national average) relative to London (138%), but similar to the TGL London score. Although the employment rate is above the TGL average (70% versus 66%) and about average for London it is still well below the national average
- 57% of all jobs are in K1, which is more than most of the TGL boroughs and the TGL average. Many of these jobs are in the public sector – although the overall proportion of K1 jobs is similar to the TGL average, the proportion of private sector K1 jobs is just 34% compared to 44% across TGL.
- The skills profile is very good in the TGL context – 26% of the workforce has a degree-level qualification (this is 3% more than the TGL average but 5% less than Greater London) and just 34% have below level 2 qualifications.

Chart 3.9: Knowledge Economy of Greenwich, 2002**Hackney (Chart 3.10):**

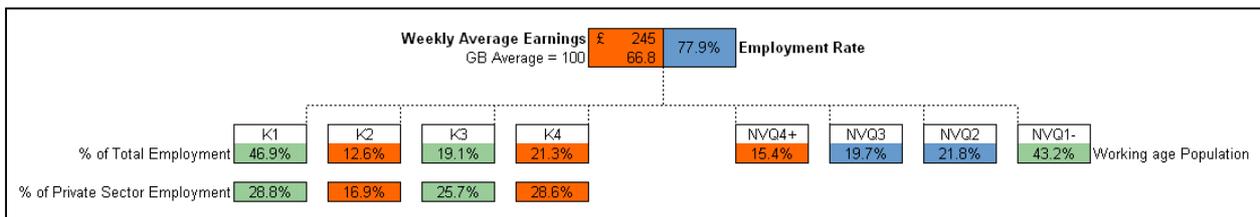
- Hackney is an extremely divided borough in terms of the distribution of its prosperity. Average earnings are extremely high – 190% of the national average compared to TGL average of 101% and London average of 138%. However the employment rate is among the lowest in the country – just 57%
- The knowledge-sector profile is excellent, with 66% of all jobs in K1 and also very strong business drivers, with 57% of private sector jobs in K1
- The skills profile is divided – the green boxes show that there are many graduates (31% of the workforce) and many low skilled individuals (41% lack a first level 2 qualification). The ways in which low skills limit access to job opportunities is clearly a central issue

Chart 3.10: Knowledge Economy of Hackney, 2002

Havering (Chart 3.11):

- Havering stands out as having one of the lowest average earnings rates in the country – just 67% of the national average, compared to 120% next door in Barking & Dagenham. Conversely the employment rate is high at 78%
- The business knowledge economy profile is very low for TGL, with just 29% of jobs in K1 sectors, compared to a TGL average of 44%
- Havering's skills mix is weak with 43% of the workforce not having a level 2 qualification and just 15% qualified to degree level. The skills side of the architecture is much weaker than the left-hand 'demand'-side of sector-based employment (relative to other parts of the UK with similar K1-K4 profiles). The skills side is residence-based and the demand-side is workplace based, so the weakness on skills suggests that people from outside the local area occupy many of the knowledge-intensive jobs that have been created in the K1 sectors.

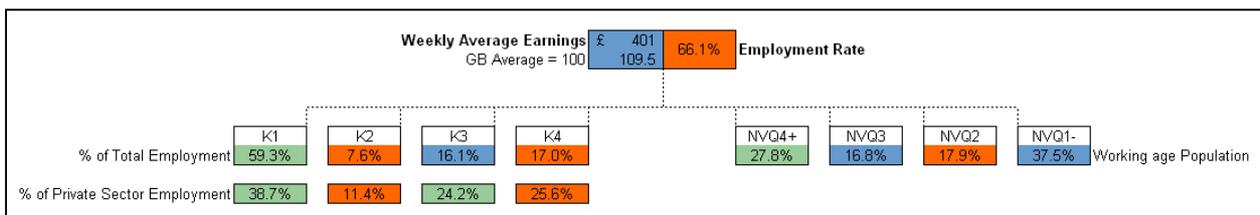
Chart 3.11: Knowledge Economy of Havering, 2002



Lewisham (Chart 3.12):

- Lewisham has higher average earnings than TGL (110% versus 101%). The employment rate is also close to the average (66%), but low by national standards (74%)
- The profile of jobs in Lewisham in the K1-K4 sectors is quite strong. Almost 60% of all jobs are in K1 sectors, similar to the TGL average. But the private sector score is 5% below the TGL average (39% versus 44%, indicating that the strength of Lewisham's knowledge economy is its public sector employment)
- Lewisham has one of the highest proportions of graduates (28% of the workforce) in the sub-region but does not suffer from the massive divides of Hackney and Tower Hamlets – 38% have low or no qualifications but this is close to the national average.

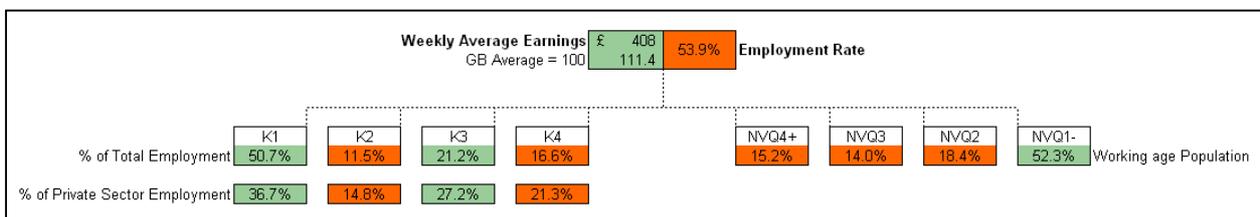
Chart 3.12: Knowledge Economy of Lewisham, 2002



Newham (Chart 3.13):

- Newham has a uniquely low employment rate of just 54%. While this is similar to the ‘divided’ boroughs of Hackney and Tower Hamlets, Newham does not have the same earnings strength – earnings of those who work in Newham (111% of GB average) are only just above the TGL average of 101%
- The profile of K1-K4 jobs is quite strong but about 5-10% below the TGL average and significantly lower than the London average
- Low skills are a huge problem – 53% of the workforce does not have a level 2 qualification. As in Hackney and Tower Hamlets, K1 sectors dominate but local people do not have the skills for these jobs – hence the very low employment rate. Just 15% of the workforce has a degree-level qualification.

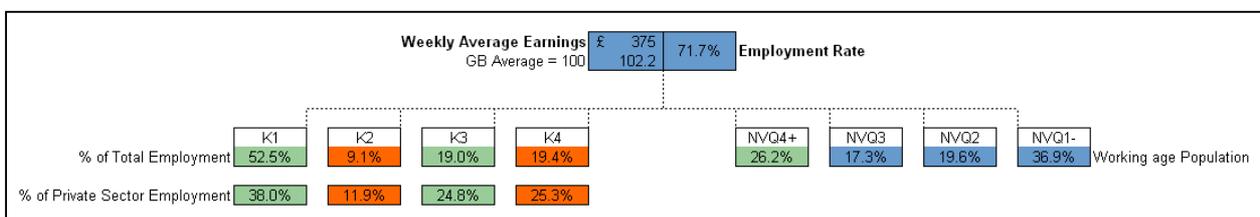
Chart 3.13: Knowledge Economy of Newham, 2002



Redbridge (Chart 3.14):

- Redbridge has a higher employment rate than the TGL average (72%, which is close to the national average, versus 66%) and a similar average earnings score (102%)
- The profile of K1-K4 sectors is slightly weaker than the TG average
- Redbridge’s main strength within the sub-regional context is its skills profile – 26% of the workforce has a degree or equivalent and ‘just’ 37% have below-level 2 qualifications.

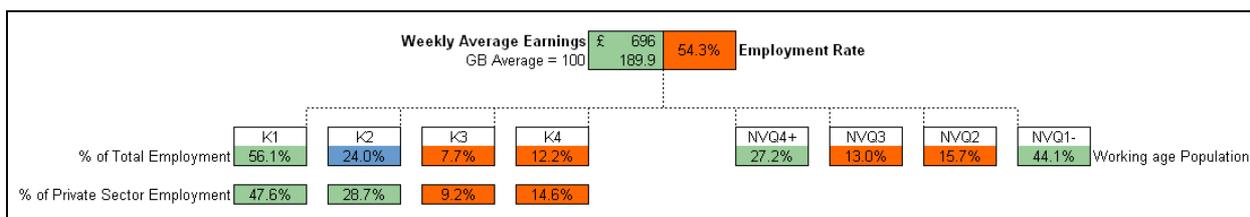
Chart 3.14: Knowledge Economy of Redbridge, 2002



Tower Hamlets (Chart 3.15):

- The Tower Hamlets architecture illustrates the importance of the ‘Canary Wharf effect’ in London’s docklands. The borough has some of the greatest socio-economic divides in the country. The architecture shows that while earnings by workplace are very high – 190% of the national average, compared to a London average of 124% and a TGL average of 101% – the employment rate is extremely low at just 54%.
- The skills profile shows that there are quite a lot of graduates in Tower Hamlets, attracted by the recent explosion in ‘knowledge jobs’ and high quality gentrified homes in the borough – 27% of the workforce has a degree compared to 23% across the TG. But there are also a large number of people with low or no qualifications (44% versus London average of 34%). What is also remarkable is how few people there are intermediate-level qualifications – just 28% has an NVQ level 2 or 3 equivalent qualification.
- Tower Hamlets is one of the clearest examples of dynamism side by side with deprivation – high earnings next to low skills and low employment. The K1-K4 sector profile is clearly very strong –77% of private sector jobs are in K1 and K2 sectors (with at least 25% graduates), compared to a TGL average of 58%.

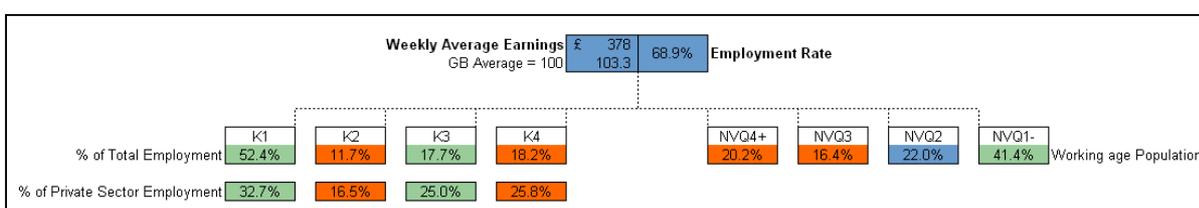
Chart 3.15: Knowledge Economy of Tower Hamlets, 2002



Waltham Forest (Chart 3.16):

- The employment rate of 69% and average weekly earnings of £378 are both close to the TG average. The earnings rate is significantly lower than the London average but the employment rate is quite similar.
- Waltham Forest’s K1-K4 profile is good, with 52% of all jobs in K1 sectors and just 18% in K4 sectors. The public sector has a central role in the knowledge economy – the gap between total K1 employment and private sector K1 employment is 20%, compared to 14% in TGL and 11% in London.
- The skills profile is relatively weak, with 41% of the workforce having no or low qualifications and just 20% qualified to degree-level. This profile is similar to the TGL average and significantly weaker than the Greater London profile.

Chart 3.16: Knowledge Economy of Waltham Forest, 2002



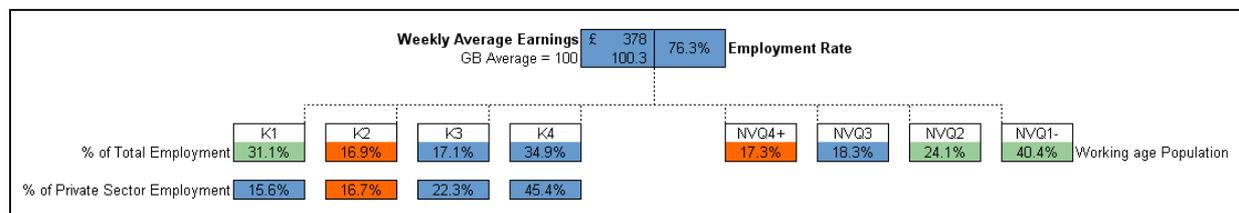
3.4 Thames Gateway Kent

In this section we examine the economic architectures of Thames Gateway Kent and compare these to the South East architecture. We then analyse the employment, skills and knowledge economy of all four TG Kent boroughs.

The Thames Gateway Kent architecture is presented in Chart 3.17. The area has significant weaknesses relative to the South East average (Chart 3.4 on page 11) on all fronts – earnings, employment, knowledge economy and skills:

- Earnings are about 8% lower than the SE average – 100% of GB compared to 108%
- The employment rate is 3% lower – 76% compared to 79%
- The largest gap is in the business knowledge economy. Just 16% of private sector jobs are in K1 sectors compared to 24% across the South East. The public sector props up the overall employment score, but this is still 6% lower than the SE (31% compared to 37% of jobs in K1).
- Residents' skills are very low in TG Kent. Just 17% have a degree compared to 28% in the South East. This is even lower than the 21% in TG London. A large proportion of people is qualified to NVQ2 (24%) and over 40% have no or low qualifications, compared to just 31% in the South East.

Chart 3.17: Knowledge Economy of Thames Gateway Kent, 2002



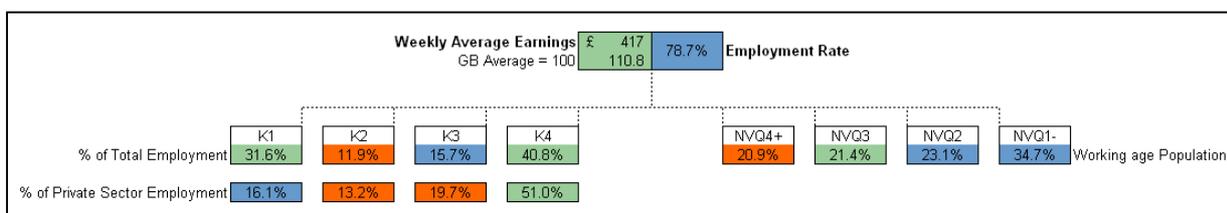
The local economic architectures in Charts 3.18 – 3.21 show that the TG Kent boroughs have fairly similar knowledge economy 'scores'. The general picture is that earnings are lower everywhere than the South East regional average, but Dartford has a significant lead over the other local areas and actually has higher earnings than many of the TG London boroughs. The employment rate is also highest in Dartford.

TG Kent is one of the areas in the South East with a concentration of low skills. Dartford again has a much stronger skills profile than the rest of TG Kent both in terms of high skills and low skills. Swale and Gravesham have particularly stark concentrations of low skills.

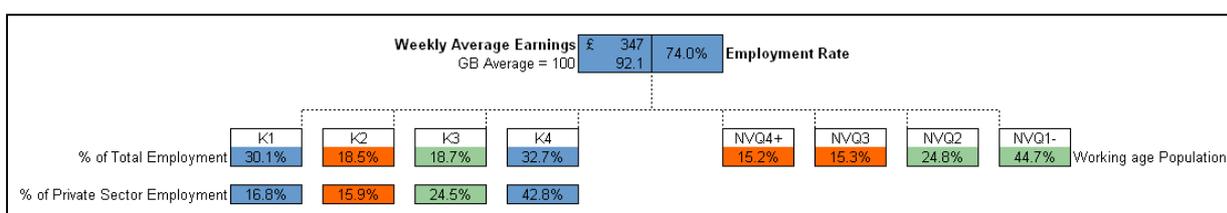
The main issue is generating a knowledge-intensive business economy in TG Kent, given that SEEDA is looking for the South East to compete as a top 15 world-region. The public sector fills in the private sector's gaps in terms of recruiting talent. Dartford has a particularly high concentration of K4 sector employers including retail, wholesale and distribution – while these sectors may have generated jobs in the area, they are unlikely to have the sort of innovative business strategies that will drive demand for skills in the area.

Dartford (Chart 3.18):

- Average earnings are high – more than in TG Kent and even above the South East average
- The employment rate is also very good – 79% compared to 76% in TG Kent
- Dartford has a similar proportion of knowledge-intensive private and public sectors to the TG Kent average, but has a larger share of low-knowledge K4 private sectors, comprising 51% of the private sector workforce. These include large employment sectors locally like retail, wholesale and distribution.
- The proportion of graduates is slightly below the national average, but the overall skills profile is good – 42% of the workforce have a level 3 or higher qualification compared to just 36% in TG Kent overall. Low skills are less of a problem, with 35% of the workforce not having a level 2 qualification, compared to 40% in TG Kent. However, as with all the other local areas of TG Kent, Dartford has much weaker skills than the South East region at the high and low end.

Chart 3.18: Knowledge Economy in Dartford, 2002**Gravesham (Chart 3.19):**

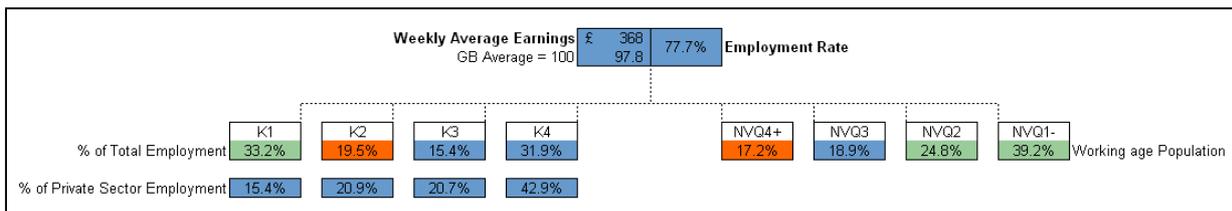
- Average earnings in Gravesham are much lower than Dartford (92% compared to 110%) and the SE average. The employment rate is also low.
- But the K1 to K4 profile is stronger than Dartford, particularly in the private sector where there are fewer jobs in the lowest-knowledge K4 sectors
- The Gravesham skills profile is extremely low. Just 30% of the workforce has a level 3 or higher qualification compared to 47% in the SE region. There is a large glut of low skills with 45% of the workforce not having a level 2 qualification, compared to 40% in TG Kent and 35% in Dartford.

Chart 3.19: Knowledge Economy in Gravesham, 2002

Medway (Chart 3.20):

- Medway has a balanced K1-K4 profile that is similar to both the national average and the TG Kent average. There is not the same concentration of jobs in low-knowledge sectors that Dartford has.
- But average earnings are low compared to the TG and SE levels. The employment rate is high at 78%.
- The skills profile is similar to the TG Kent average – Medway suffers from the same problem of low skills as the sub-region does overall, compared to the very high skills of the South East region.

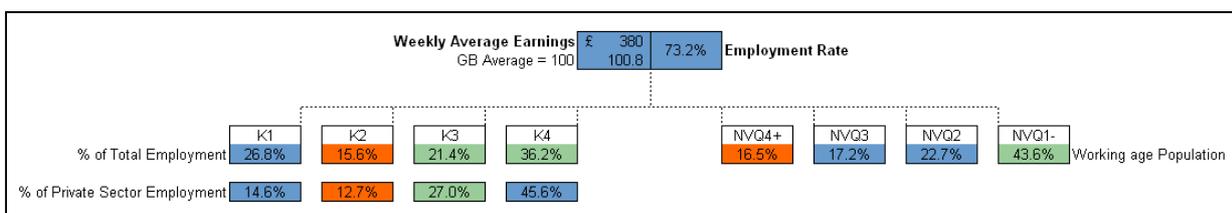
Chart 3.20: The Knowledge Economy in Medway, 2002



Swale (Chart 3.21):

- Swale has a weak profile of K1-K4 sectors. Although the private sector scores are similar to the TG Kent average, the public sector is less knowledge-intensive. Only 27% of all jobs are in K1 sectors compared to the TG Kent average of 31%.
- The earnings and employment rates are both similar to the TG Kent average – i.e. lower than most of the South East but similar to the British average
- Swale suffers from a large number of low-skilled adults. Almost half of the workforce does not have a first level 2 qualification (44%), compared to 31% in the South East.

Chart 3.21: Knowledge Economy of Swale, 2002



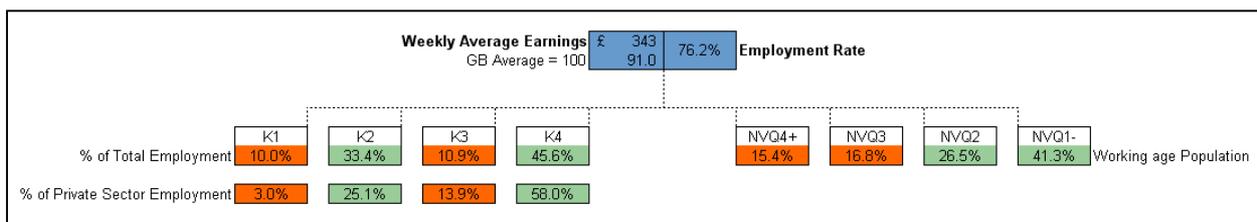
3.5 Thames Gateway Essex

Finally, we present the economic architecture of Thames Gateway Essex and compare these with the East of England region as a whole. We then analyse the local area profiles to look at some of the geographical differences in the knowledge economy, employment and skills.

Chart 3.22 shows the architecture of TG Essex. The area is much more on the fringes of the London-centric knowledge economy than the Kent and London parts of the Thames Gateway. The economy looks to be heading on a 'low skills trajectory', with both weak demand for skills and a low supply of skills among local residents, even when compared with the overall East of England scores (see Chart 3.5 on page 12), which includes many isolated rural areas. In TG Essex both graduate and intermediate level skills are in short supply, while the K1 sectors represent very small proportions of jobs in the area – instead the large K4 sectors dominate such as construction, hospitality, retail and wholesale.

Average earnings are significantly lower than both TG Kent and TG London. However, the employment rate holds up well and is significantly above the national average of 74%.

Chart 3.22: Knowledge Economy of Thames Gateway Essex, 2002



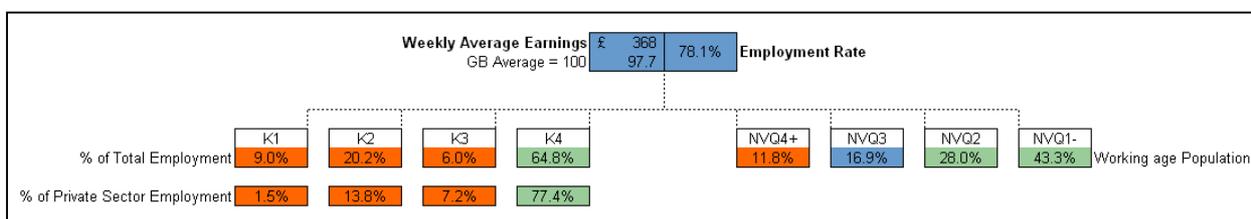
The TG Essex boroughs have a wide spectrum of success in terms of the knowledge economy, employment and skills

- Average earnings vary widely from 119% of the national average in Basildon to just 73% in Castle Point. The employment rate is fairly steady at around 75-78%.
- The 'outer' part of TG Essex including Rochford, Castle Point and Southend has much lower average earnings than the rest of the Thames Gateway.
- There is the opposite geography in terms of low skills. Rochford and Southend have much less of a low skills problem than the rest of TG Essex. All of the area has very few graduates in the workforce – just 10% of the Castle Point workforce and 12% of the Thurrock workforce – which is less than half of the national average.
- But there is little motivation for talent to come to TG Essex or for local people to get higher qualifications as the business drivers of the knowledge economy are weak throughout the area. Thurrock has particularly low K1 employment and is completely dominated by K4 sectors. In the other local areas, the K2 business sectors account for 20-30% of private sector jobs.

Thurrock (Chart 3.23):

- Thurrock has one of the weakest knowledge economy profiles in the entire country. Just 9% of jobs are in K1 sectors and 65% are in K4 – this includes the public sector. The business knowledge economy is even smaller – with just 1.5% of jobs in K1 and almost 80% in K4 sectors. Despite being so close to London, the economy is absolutely dominated by low-knowledge sectors such as distribution, wholesale and retail.
- While these sectors have created jobs for local people – the employment rate is high at 78% - average earnings are low even by the standards of the Thames Gateway.
- The skills profile is also extremely low. Just 12% of the workforce has a degree. As in Basildon and Castle Point, more than 40% of the workforce does not have a level 2 qualification.

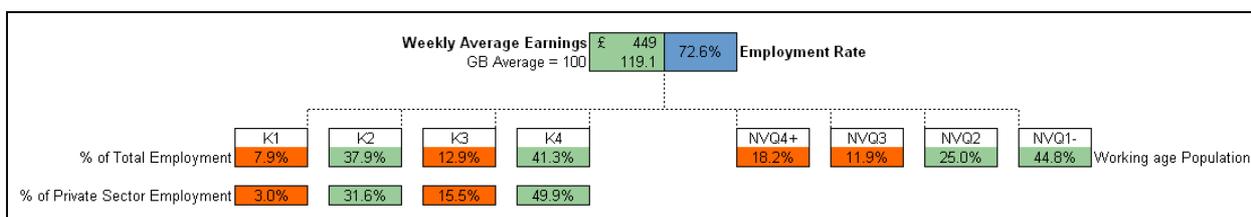
Chart 3.23: Knowledge Economy of Thurrock, 2002



Basildon (Chart 3.24):

- Basildon has much higher average earnings than Thurrock and the rest of TG Essex. At 119% of the national average, earnings are higher than most of the local areas in TG London and TG Kent. The employment rate is fairly low at just 73%.
- The K1 sectors again employ few people, but Basildon does have much stronger K2 sectors than Thurrock. Taken together, 35% of private sector employment is in K1 or K2 sectors, which is actually higher than TG Kent. The public sector has a lesser role in the area's knowledge economy, with just 8% of all jobs (public and private sectors) in K1 compared to 31% in TG Kent.
- Basildon has a fairly high proportion of graduates relative to other areas in the 'outer Thames Gateway' (Essex and Kent), but has an almost uniquely low proportion of level 3, intermediate qualifications (just 12% of the workforce). This layer of associate professionals, technical and middle management can be an important source of innovation in products and processes in the knowledge economy.
- Low skills are a major issue with 45% of the workforce not qualified to level 2.

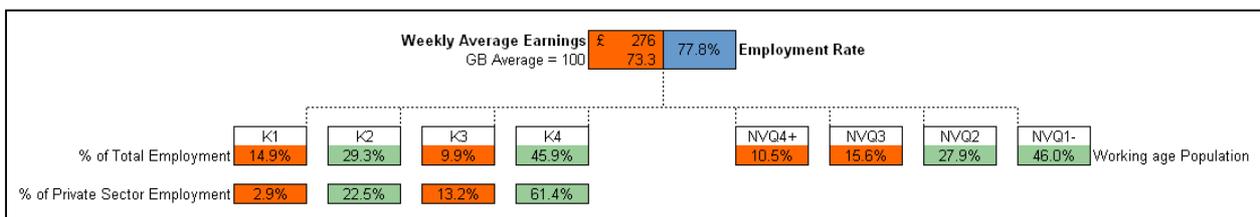
Chart 3.24: Knowledge Economy of Basildon, 2002



Castle Point (Chart 3.25):

- Castle Point has extremely low average earnings – just 73% of the national average. This is far lower than the level of Basildon and the TG Essex average. But the employment rate is 78%, which indicates that the economy is relatively stable if low-paid.
- There are very few jobs in the knowledge-intensive sectors. The public sector is more important than in Basildon and Thurrock, but the private sector K1 jobs form just 3% of overall business employment. Nearly two in three private sector jobs are in the lowest-knowledge K4 sectors.
- Almost half the workforce does not have a level 2 qualification (46%). Only 10% of the workforce has a degree compared to the national average of 24% and there are also few level 3 qualifications. In effect, three-quarters of the workforce is severely limited in their job opportunities to routine or semi-skilled occupations at level 2 or below.

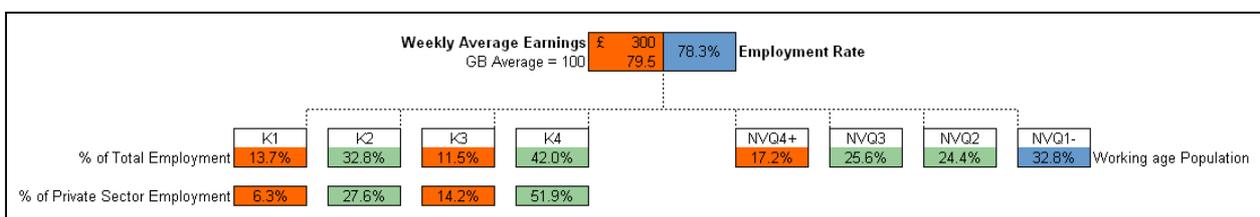
Chart 3.25: Knowledge Economy of Castle Point, 2002



Rochford (Chart 3.26):

- Rochford also has very low average earnings and a high employment rate, but it has a stronger knowledge economy than Castle Point
- K1 sectors represent 6% of private sector jobs and a further 28% are in K2. There is not the same dependence on K4 sector jobs of Thurrock or Castle Point.
- The skills profile is good relative to much of the Thames Gateway. Low skills are much less of a problem with 'just' 33% of the workforce qualified below level 2. Seventeen percent of the workforce are graduates.

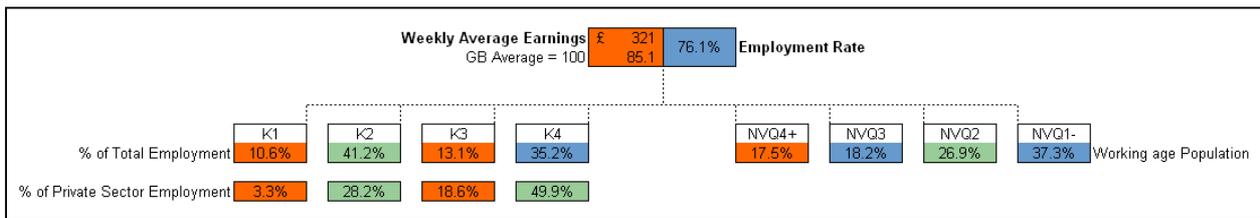
Chart 3.26: Knowledge Economy of Rochford, 2002



Southend-on-Sea (Chart 3.27):

- Southend has a slightly stronger earnings profile than the rest of the outer part of TG Essex, but is still far below the national average. The employment rate of 76% is good.
- The K1 business sectors only include 3% of jobs, but again the K2 sectors make up for some of this gap. Half of private sector jobs are in the K4 sectors. The public sector has a fairly knowledge-intensive employment profile with over 40% of all jobs in K2.
- Low skills are also less of a problem than in much of the Thames Gateway. The lack of graduates is a common thread in Thames Gateway Essex.

Chart 3.27: Knowledge economy of Southend-on-Sea, 2002



4 Competitiveness Analysis

4.1 Introduction

The competitiveness analysis benchmarks the performance of the three Thames Gateway areas in terms of some of the factors that can encourage knowledge-based economic development. From this we suggest some reasons why the knowledge economy may be weakly developed in the Thames Gateway.

We look at four domains:

- Economic diversity
- Skills and education
- Enterprise
- Quality of life

Each chart has **blue** boxes to represent areas with strong performance and **orange** boxes to highlight those areas with weak performance.

4.2 Economic diversity

The first section looks at the strength of services and manufacturing in the economy, focussing on creative sectors and the 'knowledge-driven' sectors. This is a different definition to the Economic Architectures in Chapter 3 – instead of using human capital as a proxy for knowledge-intensity, we use OECD and EC definitions of sectors that are 'technology-driven' or 'brand-driven':

- *Knowledge-based production*: aerospace, electrical machinery and optical equipment, printing, publishing and recorded media, chemicals and energy
- *Knowledge-based services*: telecommunications, computer and related services, R&D, finance and business services, air transport services and cultural sectors

We highlight the public sector in order to evaluate the economic dependence of an area on the public sector. But as we have already seen, much of the public sector is actually highly knowledge-intensive in terms of employing professional, managerial and technical expertise – the challenge for policy-makers will be in enabling the public sector to drive the knowledge economy, for example through its recruitment and procurement functions.

4.2.1. Knowledge-driven production (see first column of Chart 4.1)

The Thames Gateway has a slightly smaller share of employment in knowledge-driven production sectors than the British average. The Kent and Essex parts of the Thames Gateway have higher shares, particularly in Rochford, the Medway Towns and Basildon. The

knowledge-based production in Thames Gateway London is principally the printing and publishing activities in Tower Hamlets – all other boroughs are below the national average.

4.2.2. Knowledge-driven services (see second column of Chart 4.1)

The Thames Gateway has a slightly larger share of jobs in knowledge-driven services than the national average, but this is dominated by Thames Gateway London. Again we can see that Canary Wharf and the City fringe dominate the knowledge economy in the Thames Gateway. Tower Hamlets has by far the highest share of these jobs due to the finance and business services centre of Canary Wharf – 41% compared to the TG average of 20%. Hackney is the second strongest London borough with 28% of all its jobs, due to the business services and creative industries around the City fringe. Southend-on-Sea has the third highest proportion of knowledge-driven service jobs.

In contrast, Thurrock has one of the lowest shares of knowledge-driven service jobs in Britain – less than 8%. Barking & Dagenham and Dartford are also struggling to gain advanced service sectors. Thames Gateway Kent has the lowest overall score of the three areas.

Chart 4.1: Economic diversity indicators

	K-production, % of employment, 2003	K-services, % of employment, 2003	Total K-sectors, % employment, 2003	Public Services % employment, 2003	Creative sectors, % employment, 2003	% Change K-sector employment, 98-03	Research dept's proximity, 2001	Business Services % empt, 2003	R&D, consulting % of empt, 2003
Thames Gateway	3.68	20.38	24.06	25.60	7.04	15.94	53.93	16.01	0.96
Great Britain	3.86	19.54	23.40	25.99	7.49	12.01	n/a	16.71	1.49
TG London	3.32	22.91	26.23	27.57	7.94	12.07	84.18	18.27	1.00
Tower Hamlets	7.19	41.83	49.02	16.91	13.17	42.54	99.50	20.31	1.53
Bexley	3.34	16.68	20.02	24.58	6.01	-2.98	89.50	15.99	0.39
Hackney	3.08	27.51	30.59	30.74	12.44	-10.31	89.25	27.96	2.90
Waltham Forest	2.46	13.64	16.11	33.71	6.66	-0.03	15.00	14.62	0.69
Barking and Dagenham	2.23	11.39	13.62	25.34	3.86	-5.37	93.00	11.77	0.51
Havering	2.15	18.09	20.23	23.53	5.84	19.54	89.25	17.35	0.46
Lewisham	2.14	16.38	18.52	36.84	6.07	5.57	93.75	17.13	0.60
Newham	1.96	16.27	18.23	30.28	4.62	6.34	89.25	15.49	0.32
Redbridge	1.73	20.92	22.65	30.32	5.37	2.84	89.25	20.94	0.69
Greenwich	1.71	16.52	18.22	37.83	6.45	-13.80	94.00	13.53	0.68
TG Kent	4.31	13.82	18.13	24.67	4.75	10.42	23.25	11.88	1.02
Medway Towns	5.53	15.77	21.30	27.49	5.22	12.04	23.25	13.86	1.45
Dartford	4.01	11.65	15.66	21.87	3.64	-12.60	23.25	9.64	0.53
Gravesham	3.60	12.07	15.67	24.15	5.05	24.89	23.25	9.86	0.36
Swale	2.57	13.42	15.99	22.42	4.89	35.88	23.25	11.68	1.15
TG Essex	4.21	18.22	22.43	20.65	6.25	36.01	18.00	12.72	0.79
Rochford	8.07	15.08	23.15	19.56	6.89	7.09	22.50	13.52	1.91
Basilidon	4.52	19.13	23.65	16.80	9.94	14.87	22.50	15.26	0.63
Thurrock	3.78	7.64	11.42	17.60	3.52	0.78	22.50	7.79	0.29
Southend-on-Sea	3.70	26.54	30.24	25.58	4.64	91.74	22.50	13.78	0.98
Castle Point	2.47	12.26	14.73	23.69	6.64	7.28	22.50	11.92	0.85

Source: Local Futures Group, derived from ONS data

4.2.3 *Public Services (see fourth column of Chart 4.1)*

The Thames Gateway has a similar overall share of public service jobs to the national average, but there is a significantly lower proportion in TG Essex. The big public service economies in TG London are Greenwich, Lewisham and Waltham Forest – this supports the Architectures in Chapter 3. The public sector forms a lower proportion of employment in the dynamic Tower Hamlets economy and also in Thurrock and Basildon, where low-end business sectors dominate such as retail and wholesale.

4.2.4 *Creative Industries (see fifth column of Chart 4.1)*

The creative industries are seen as a key sector of the knowledge economy due to their dynamism and emphasis on talent, innovation and 'new' products – around which other businesses and other sectors can follow (e.g. digital media, ICT services). But the Thames Gateway has a lower share of jobs in these sectors than the national average, despite its proximity to the hubs of Central London in advertising, public relations, marketing, ICT and consultancy. Tower Hamlets and Hackney stand out as clear leaders on the creative sectors, having more than twice the proportion of such jobs than the rest of TG London.

Only Basildon scores above the national average in the other two areas of the Thames Gateway and the creative industries are particularly small in Thurrock and Dartford.

4.2.5 *Growth in the Knowledge Economy (see sixth column of Chart 4.1)*

Recent growth in the knowledge-driven sectors of the economy has been impressive in the Thames Gateway, being significantly greater than the national average. Two areas stand out as the hubs of this growth – Tower Hamlets, with the upsurge in jobs around Canary Wharf over the last five years (since the Jubilee Line extension was opened and the large US banks and business service functions moved in) – and Southend-on-Sea, which has had fantastic growth in knowledge-intensive sectors, almost doubling its proportion of job in five years.

Other areas of the Thames Gateway have gone backward – Hackney (but from a fairly high base), Greenwich, Dartford and Barking and Dagenham (from a low base).

4.2.6 *Business Services (see eight and final columns of Chart 4.1)*

Business services are key growth sectors in the knowledge economy and also indicate that an area has a strong business base, which encourages service businesses to locate nearby. The Thames Gateway has a lower proportion of employment in business services than the national average. As expected, the London areas have most people with business service jobs – Hackney stands out as the centre of services, e.g. marketing, public relations, digital media, consultancy (note the final column) around the City fringe. Tower Hamlets and Redbridge also have large proportions of business services jobs, but the TH figure is much lower than would be expected given the presence of Canary Wharf – clearly it is mostly non-local people employed here.

The final column shows that there are few people employed in research & development and consultancy in the Thames Gateway – only Rochford, Hackney and Tower Hamlets have more than the national average, despite the proximity to central London's powerful business base.

The key business services sector has not taken off in the Kent and Essex areas of the Thames Gateway - all nine local areas have lower proportions of such jobs than the national average. Thurrock, Dartford and Gravesham only have around half as many residents with business services jobs and very few in consultancy and R&D.

4.2.7 Research departments (see seventh column of Chart 4.1)

This column is a crude measure of the proximity of university research departments in an area – Thames Gateway London has the advantage of five universities, but TG Kent and TG Essex have few nearby departments. It is obviously the quality of the processes of knowledge generation, knowledge transfer and knowledge spillovers that really drive product and process innovation in the knowledge economy. This in turn drives employers' demands for new skills, so we recommend a more thorough appraisal of these processes in the Thames Gateway, perhaps using interviews with key individuals in universities, businesses and business support agencies.

4.3 Skills and education

4.3.1 Human Capital Index (see first and second columns of Chart 4.2)

Local Futures' Human Capital Index represents the average skills of an area's resident workforce based on the equivalent NVQ level of their highest qualification (e.g. a degree scores a 4, five good GCSEs scores a 2, no qualifications scores 0 and so on). We have then ranked the Index scores of the 408 local authorities in Great Britain. The scores give an idea of the distribution of skills in an area by taking the highest qualification of the average person – for example Tower Hamlets has a fairly average score as it has many people with low qualifications as well as many with good qualifications.

The Index emphasises the scale of the skills challenge in the Thames Gateway. The sub-region has a significantly lower overall score than the national average. Only 3 of the 19 TG local areas have index scores above the national average – Lewisham, Hackney and Greenwich. Only Lewisham is ranked in the top 100 local authorities. The Essex and Kent areas have particularly low scores. Even Thames Gateway London has a lower score than the national average, despite having areas with many jobs in 'knowledge-driven' sectors such as Tower Hamlets and Hackney.

Chart 4.2: Skills and education indicators

	Human Capital Index 02/03	Rank: Human Capital Index	20-44 migration as % of 01 pop'n	K-workers, % of workforce, 02/03	% 15YO with 5+ GCSEs at A*-C, 03/04	Univ entrants % in 15-24YO pop'n, 98	Skills and education deprivation, 04 IMD	Rank: Skills and education deprivation
Thames Gateway	2.15	<i>n/a</i>	0.00	39.40	52.39	3.08	24.54	<i>n/a</i>
Great Britain	2.32	<i>n/a</i>	<i>n/a</i>	39.62	53.70*	3.22	<i>n/a</i>	<i>n/a</i>
TG London	2.21	<i>n/a</i>	-0.16	41.30	50.93	3.18	23.01	<i>n/a</i>
Tower Hamlets	2.23	267	0.10	51.71	47.80	2.23	28.58	290
Bexley	2.18	300	0.09	36.62	56.60	3.21	20.78	215
Hackney	2.37	156	-0.30	47.69	45.10	3.08	24.87	255
Waltham Forest	2.20	291	-0.60	41.21	47.10	3.78	17.26	171
Barking and Dagenham	1.77	406	-0.06	22.16	46.30	1.98	38.23	341
Havering	2.10	341	0.04	37.96	62.50	2.79	21.46	221
Lewisham	2.49	78	0.20	51.14	46.20	3.27	19.64	199
Newham	1.96	393	-1.03	30.44	49.40	4.10	22.47	230
Redbridge	2.41	125	-0.04	46.36	68.10	4.93	9.66	45
Greenwich	2.35	175	0.09	42.11	40.20	2.47	27.18	275
TG Kent	2.13	<i>n/a</i>	0.25	37.32	54.38	3.15	26.93	<i>n/a</i>
Medway Towns	2.14	324	0.20	36.34	50.10	2.84	26.14	267
Dartford	2.28	219	0.47	40.58	55.80	2.96	23.41	238
Gravesham	2.01	379	-0.10	36.78	55.80	3.96	25.93	265
Swale	2.07	365	0.49	37.41	55.80	2.82	32.25	315
TG Essex	2.07	<i>n/a</i>	0.30	35.33	53.74	2.81	25.69	<i>n/a</i>
Rochford	2.27	230	0.51	39.71	55.40	3.44	14.09	110
Basildon	2.03	375	0.30	34.23	55.40	2.79	31.81	310
Thurrock	1.97	391	0.49	28.82	45.30	2.07	35.17	329
Southend-on-Sea	2.16	314	0.19	40.22	57.20	2.97	23.57	239
Castle Point	1.91	399	0.00	36.07	55.40	2.78	23.79	243

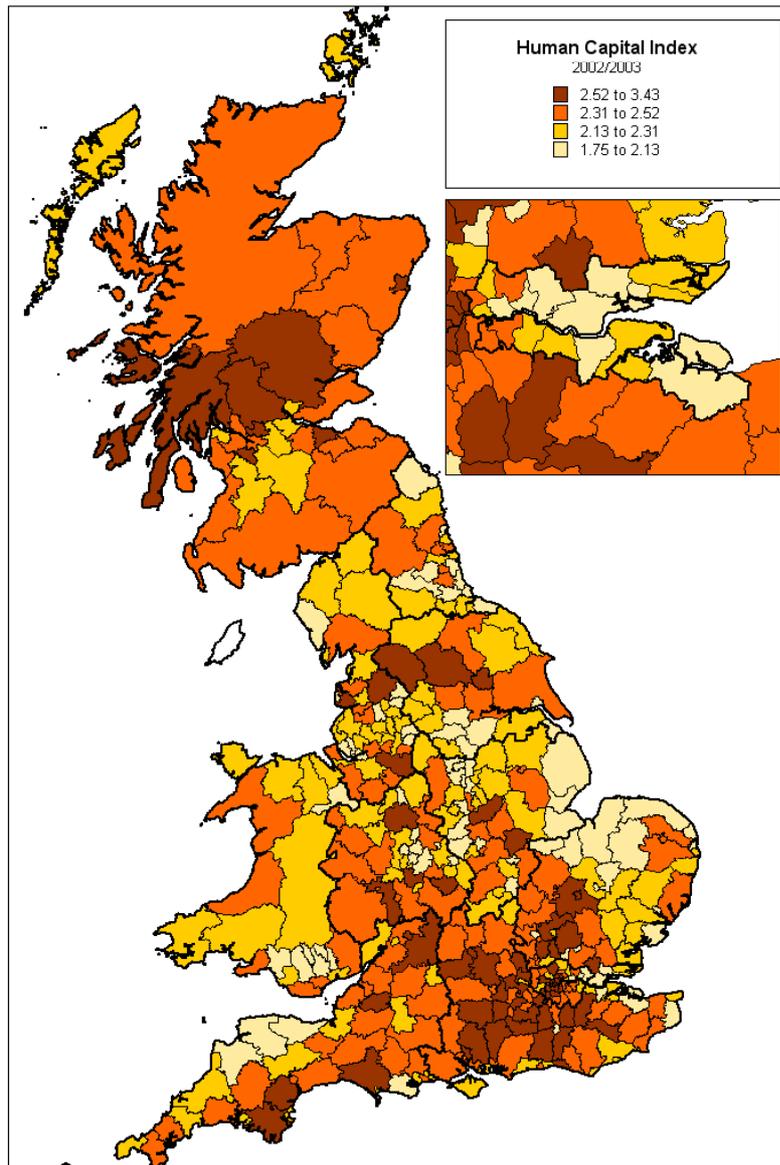
Source: Local Futures Group, derived from ONS data

* - England only

The local areas with the most entrenched low skills problems are Barking & Dagenham (which is ranked third-lowest in Britain), Castle Point, Newham, Thurrock and Gravesham.

The map in Chart 4.3 illustrates the low skills in most of the Thames Gateway relative to the rest of London and the South East. All the TG districts east of Newham and Bexley form the most significant, continuous corridor of low human capital in the South East – whereas every district beyond the Thames Gateway area has higher levels of human capital.

Chart 4.3: The geography of human capital (average qualifications by area), 2002/3



Source: Local Futures Group, derived from ONS data

4.3.2 *Migration to and from the Thames Gateway (see third column of Chart 4.2)*

The Thames Gateway has an overall net balance of migration from the key working age group of 20-44 year olds. The London areas have tended to lose residents of this age while Kent and Essex have steadily gained population. The areas with the most significant losses of population are Newham and Waltham Forest. However, Rochford, Thurrock, Swale and Dartford all gained fairly large numbers of working age people in the course of 2000/01, when this Census data was compiled.

4.3.3 *Knowledge workers (see fourth column of Chart 4.2)*

The Thames Gateway has a similar proportion of 'knowledge workers' in its resident workforce as the national average. These 'knowledge workers' are people with managerial, professional and technical occupations. London and the South East both have significantly higher proportions of knowledge workers than the national average, so the Thames Gateway again under-performs in the regional context.

There are great divides within the Thames Gateway on the knowledge workers measure. The dynamic business-led local economies of Tower Hamlets and Hackney have around 50% knowledge workers, as does the public sector-dominated local economy of Lewisham. But the depressed economies of Barking & Dagenham and Thurrock only have around half this figure – 22% and 28% of the resident workforce respectively.

4.3.4 *Education and young people's opportunities (see fifth and sixth columns of Chart 4.2)*

Here we look at education performance at 16, measured by the Government's key indicators of whether young people gain 5 or more good GCSEs at grades A*-C (equivalent to a level 2 qualification). This is one skills indicator where the Thames Gateway actually performs well. The overall score is close to the national average and it is particularly high in Kent and Essex. Kent has good scores across the board – all local authority areas have at least 50% of 16 year olds reaching the expected level for their age. Secondary education also scores well in the Thames Gateway Essex areas of Rochford, Basildon, Castle Point and Southend (at least 55% in these four areas). Only Thurrock is below the national average.

Thames Gateway London has a much wider range of education performance, ranging from an excellent 68% in Redbridge and 62% in Havering to just 40% in Greenwich. Hackney and Barking & Dagenham are just below the national average. But what is significant is that skills in the Thames Gateway look like improving in the long-term. Moreover, good schools tend to attract 'knowledge workers' with young families. The key challenge for the local economies will be retaining talented young people – and this will not happen without the high-end jobs in the local areas, particularly with the 'talent magnet' of Central London so nearby.

The university access score is now seven years old so should not be heavily relied upon. However, it does suggest that young people in the Thames Gateway find it difficult to access university, particularly in Thurrock, Barking & Dagenham and Tower Hamlets. Is this because of certain difficulties between age 16 and age 18, or has the access rate now

improved given the very good performance at age 16? We recommend a more detailed assessment of education in the Thames Gateway, including the A level choices of young people, the quality of sixth forms and colleges and the types of universities that young people are able to access in terms of quality as well as subject choice.

4.3.5 Skills and education deprivation (see seventh and eight columns of Chart 4.2)

The skills and education deprivation score is a composite indicator of young people's education performance at several ages together with the qualifications of the adult workforce. It reinforces the geography highlighted in this section with a very good score in Redbridge and very low scores in Barking & Dagenham, Thurrock and Tower Hamlets. But it also highlights some skills issues in Thurrock and Swale that merit a deeper investigation. In contrast, it also suggests that skills and education are generally good in Waltham Forest and Rochford.

4.4 Enterprise

Strong, dynamic local businesses are likely to be the principal route to knowledge-driven development in most of Britain, given the lack of large-scale inward investment projects. The challenge for policy-makers will be to ensure that local businesses have the support they need to survive and grow – through innovating, developing new markets and using human capital effectively.

Chart 4.4: Enterprise indicators

	Businesses per 1000 pop 'n, 2004	New business formation rate, 2003	Business survival (36 months), 99-02	Self employed with employees, 2001	Self employed no employees, 2001	K-sector businesses %, 2003	Average business size, 2003	Change in VAT-reg. business %, 94-03
Thames Gateway	30.60	12.92	64.92	3.63%	7.42%	<i>n/a</i>	10.75	19.14
Great Britain	37.33	10.72	67.53	<i>n/a</i>	<i>n/a</i>	30.83	11.55	8.02
TG London	29.36	13.92	62.76	3.65%	7.71%	<i>n/a</i>	10.67	22.48
Tower Hamlets	45.65	15.56	62.76	3.20%	6.99%	41.83	14.96	33.99
Bexley	29.40	11.15	62.76	3.94%	8.20%	25.74	9.53	11.76
Hackney	44.69	15.22	62.76	3.79%	9.51%	42.79	8.99	34.68
Waltham Forest	27.17	14.17	62.76	3.18%	7.80%	28.58	8.69	9.52
Barking and Dagenham	19.70	14.74	62.76	2.85%	6.22%	21.27	13.29	19.81
Havering	32.11	10.53	62.76	4.26%	8.62%	24.40	10.27	5.70
Lewisham	22.98	13.31	62.76	3.26%	7.99%	35.39	10.11	19.66
Newham	19.94	17.53	62.76	3.26%	5.20%	27.13	11.13	19.66
Redbridge	30.27	14.01	62.76	5.23%	9.22%	33.31	8.92	8.31
Greenwich	23.01	13.37	62.76	3.49%	7.34%	32.88	10.71	18.10
TG Kent	30.79	11.19	68.26	3.94%	7.66%	<i>n/a</i>	11.01	16.02
Medway Towns	27.76	11.01	68.26	3.47%	7.35%	25.40	11.31	15.04
Dartford	33.38	13.00	68.26	3.63%	7.36%	24.74	14.42	18.47
Gravesham	30.25	10.77	68.26	4.23%	7.45%	23.64	8.58	10.80
Swale	35.41	10.59	68.26	4.44%	8.48%	22.94	9.57	10.28
TG Essex	34.68	11.36	66.57	3.35%	6.66%	<i>n/a</i>	10.79	12.42
Rochford	39.27	11.45	66.57	4.94%	9.41%	28.24	6.94	10.57
Basildon	35.25	11.35	66.57	3.95%	8.07%	27.45	12.13	14.81
Thurrock	26.97	13.01	66.57	3.49%	6.53%	19.15	13.09	20.04
Southend-on-Sea	38.69	11.04	66.57	4.48%	8.86%	27.68	11.56	1.56
Castle Point	34.61	9.84	66.57	4.85%	9.85%	24.12	6.52	5.62

Source: Local Futures Group, derived from ONS data

4.4.1 Business density (see first column of Chart 4.4)

The Thames Gateway has a significantly lower density of businesses than the British average, particularly in Kent and some of the TG London local areas. All four local areas in Kent have a lower density than the national average. TG Essex has a generally higher business density rate, with both Southend and Rochford above the national average. Thurrock has a much lower density than the rest of the area.

There are extremes of business density within TG London. Tower Hamlets and Hackney stand out as having many more businesses per person than the rest of TG London. Four

districts – Barking & Dagenham, Newham, Lewisham and Greenwich – have a very low density of businesses that is around half the national average.

4.4.2 Business formation and survival (second and third columns of Chart 4.4)

Despite the relative lack of businesses at present, there are signs of many new businesses in the Thames Gateway – the issue appears to be survival. The sub-region has a significantly higher business formation rate than the national average but a lower rate of business survival. This is particularly true in TG London, which has a formation rate of 14 (GB = 11) but a survival rate of only 63 (GB = 68). The hotspots of business growth appear to be those areas with a strong existing business base – Tower Hamlets and Hackney. But Newham actually has the highest formation rate. Only Havering has a lower formation rate than the British average.

The outer parts of the Thames Gateway – Kent and Essex – appear to have a more stable business base with a lower formation rate but better survival rate. The two boroughs closest to London, Thurrock and Dartford, have the highest formation rates, while Castle Point and Swale have the lowest rates in the Thames Gateway.

4.4.3 Long-term business growth (final column of Chart 4.4)

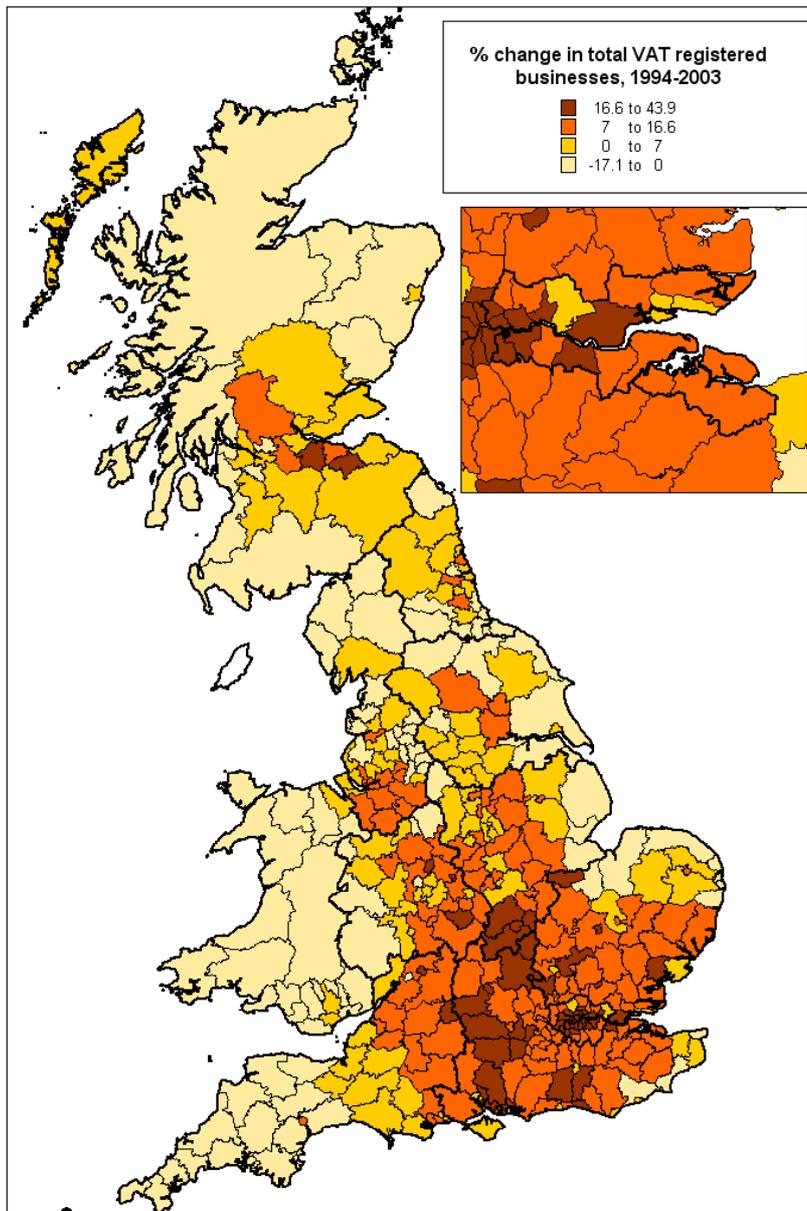
The Thames Gateway scores very well in terms of the net growth in VAT-registered businesses over the period 1994-2003. All three areas outpaced the national average. TG London was the star performer with almost three times the national average rate of business growth. Again we can see that Tower Hamlets and Hackney have the highest rates of growth, but Newham, Lewisham, Barking & Dagenham and Greenwich have also caught some of the business growth – it has not all been in Canary Wharf and the City fringe.

Kent and Essex have also experienced good growth over the long-term, particularly the areas of Thurrock and Dartford that are closest to London and have seen significant expansions in logistics and retailing (Bluewater and Lakeside) in recent times – the key will be innovation and business growth in these sectors.

Only 3 of the 19 districts grew less than the GB average – Southend, Castle Point and Havering – and none experienced a net decline in the business base.

The map in Chart 4.5 on the next page illustrates the consistently good rate of business growth across most of the Thames Gateway, particularly in the more central areas of Thames Gateway London. The South East has dominated recent business growth, where more new businesses compete on the basis of knowledge and quality than on cost, and more businesses will benefit from the supply chain purchases and ‘knowledge spillovers’ from locating close to successful companies.

Chart 4.5: The geography of business growth, 1994-2003



Source: Local Futures Group, derived from ONS data

4.4.4 Knowledge-driven businesses (see sixth column of Chart 4.4)

There is generally a good correlation between areas with strong business growth and those with a concentration of 'knowledge-driven businesses' (using the same definition as in section 4.2). Knowledge-driven businesses rely on talent and human capital and are much more likely to survive and grow, particularly in the face of steepening global competition for low-end manufacturing and services. Almost half the businesses in Hackney and Tower Hamlets are in these sectors, compared to around one in five in Thurrock, Barking & Dagenham and Swale.

4.4.5 Self-employment and business size (fourth, fifth and seventh columns of Chart 4.4)

More rural areas of Britain tend to have the highest rates of self-employment, particularly in sectors such as leisure, tourism, hospitality and agriculture. But self-employment is also a feature of some of the growing business services such as public relations, marketing and consultancy. The latter is likely to explain the high rates of self-employment in Hackney, Redbridge and Rochford. Areas such as Newham, Thurrock, Barking & Dagenham and Tower Hamlets have much lower rates of self-employment, probably due to their economic reliance on large employers (finance and business services, retail and manufacturing). The average business size column shows that these same areas have the largest businesses in terms of the average number of employees.

4.5 Quality of life

A good quality of life can be a powerful draw to attract knowledge workers and knowledge-driven businesses to an area, particularly in the leading growth sectors of business services such as ICT, consultancy, media and marketing & communications. The development of housing, land, transport and business infrastructure in the Thames Gateway is a priority in the ODPM *Sustainable Communities Plan*, the *London Plan* and the regional economic strategy – building the homes to absorb London’s continued economic development, using brownfield sites for industry and developing high quality public spaces. The challenges of knowledge-based economic development and sustainable development are strongly complimentary here. Creating knowledge-based jobs, growing local businesses and attracting external businesses will require high quality sites, affordable housing and an attractive environment.

The quality of life indicators in Chart 4.6 suggest that the Thames Gateway does have the affordable housing that many parts of the South East do not (and this is a central plank of development plans) but the quality of the environment is a major issue that could constrain growth in the knowledge economy.

Chart 4.6: Quality of life indicators

	Affordability Index, 2004	Housing & Services Deprivation, 04 IMD	Rank: Housing & Services Deprivation	Living Environment Deprivation, 04 IMD	Rank: Living Env't Deprivation	Physical Environment, 2002	Cultural Amenities, 2002
Thames Gateway	106	25.22	<i>n/a</i>	24.05	<i>n/a</i>	49.73	206
Great Britain	100	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	108.67	18
TG London	108	31.32	<i>n/a</i>	30.26	<i>n/a</i>	24.88	309
Tower Hamlets	144	46.27	352	34.20	322	39.22	468
Bexley	106	19.45	147	17.92	207	40.99	225
Hackney	138	41.07	346	48.50	350	38.92	569
Waltham Forest	104	35.64	340	37.45	333	38.88	255
Barking and Dagenham	142	29.88	310	26.04	276	41.26	330
Havering	51	12.50	32	14.49	160	51.45	111
Lewisham	104	32.35	328	33.40	319	39.36	280
Newham	109	38.20	343	38.71	336	39.42	320
Redbridge	83	22.04	199	23.29	256	39.97	182
Greenwich	98	35.80	341	28.57	300	39.77	346
TG Kent	115	20.53	<i>n/a</i>	20.30	<i>n/a</i>	100.31	84
Medway Towns	125	16.42	84	22.27	249	71.07	82
Dartford	115	31.02	321	20.70	234	69.22	146
Gravesham	100	13.41	45	21.77	244	74.77	92
Swale	120	21.28	182	16.47	189	97.28	15
TG Essex	97	16.77	<i>n/a</i>	14.63	<i>n/a</i>	58.97	98
Rochford	69	13.80	48	9.72	72	55.29	26
Basilidon	126	21.66	190	8.48	39	44.60	83
Thurrock	118	21.27	181	19.26	222	52.94	77
Southend-on-Sea	98	14.01	49	25.00	268	41.30	217
Castle Point	72	13.12	39	10.68	88	44.14	88

Source: Local Futures Group, derived from ONS data

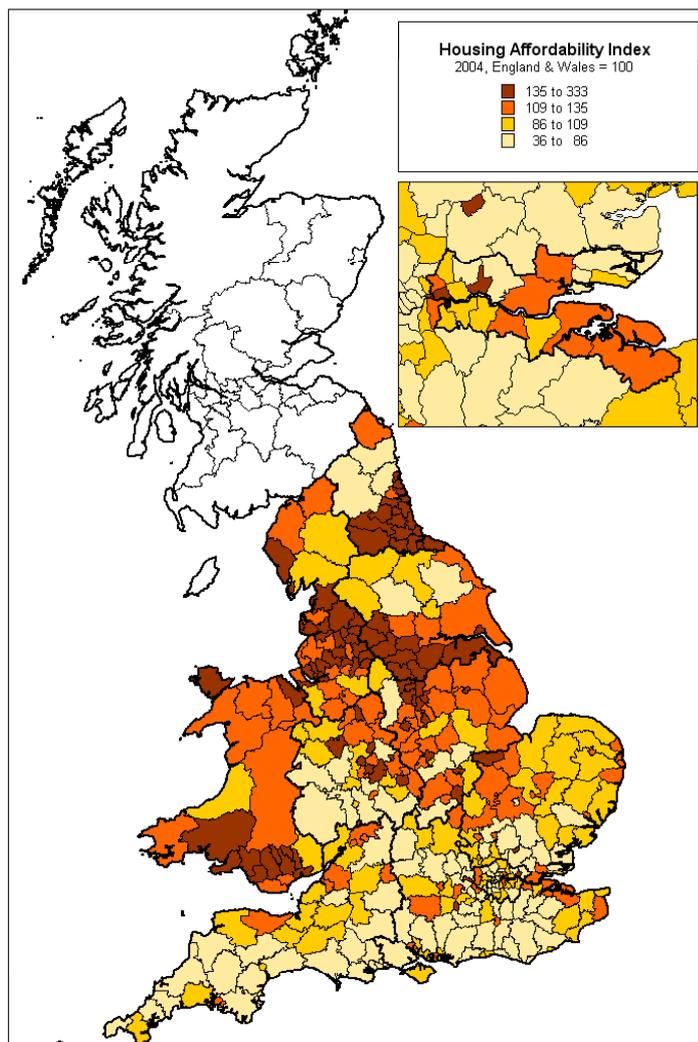
4.6.1 Affordable housing (first column in Chart 4.6)

The Thames Gateway generally has more affordable housing than other parts of the South East. The affordability index is a ratio of average house prices to average earnings by residence. Housing is most affordable in Tower Hamlets, Hackney and Barking & Dagenham. Most of the rest of TG London is near to the national average for affordability (in contrast the London score is just 75). Only Havering (with its very low earnings) and Redbridge are generally less affordable than the national average.

Thames Gateway Kent also has generally affordable housing, particularly in the outer areas of Swale and the Medway Towns. Thames Gateway Essex has affordable housing in Basildon and Thurrock, but less so in the coastal areas of Castle Point and Rochford.

The map in Chart 4.7 shows that housing in the Thames Gateway is generally more affordable than most of London and the South East, particularly in the outer areas, but also in certain inner urban areas.

Chart 4.7: The geography of housing affordability, 2004



Source: Local Futures Group, derived from ONS data

4.6.2 *Housing and services deprivation (second and third columns of Chart 4.6)*

There is a lack of access to services such as doctors, post offices and shops, and poor quality housing in Thames Gateway London – seven of the ten local areas are ranked between 300-408 nationwide in this part of the *Index of Multiple Deprivation*. The inner urban areas of Tower Hamlets, Hackney and Newham have the greatest issues here, reflecting their divided communities where many groups face multiple socio-economic problems while others have high-wage, knowledge-based jobs and live in impressive modern housing developments.

Kent and Essex generally have fewer problems of services and housing deprivation, although Thurrock, Basildon, Swale and Dartford all have high scores on the index.

4.6.3 *Living environment deprivation (fourth and fifth columns of Chart 4.6)*

Thames Gateway London also suffers from a poor quality living environment, as measured by air quality, traffic accidents and housing quality. Only the outer areas of Havering and Bexley are ranked in the top half of local authorities districts in Britain. Kent has similar but less severe environmental issues. Essex is the top performer, with Basildon, Rochford and Castle Point all scoring well in terms of this important knowledge economy 'attractor'.

4.6.4 *Physical environment (sixth column of Chart 4.6)*

Thames Gateway Kent has the highest quality physical environment of the three areas (measured by areas of outstanding natural beauty, 'tranquillity' and average weather – see annex). There are no local areas in Essex or London with particularly high scores.

4.6.5 *Cultural amenities (final column of Chart 4.6)*

The Thames Gateway scores well on cultural amenities. Cultural amenities have had a crucial role in recent urban regeneration in central and waterfront areas of Britain's cities. The indicator measures theatres, libraries and cinema seats – Hackney, Tower Hamlets and Greenwich have the highest scores, while outlying Swale and Rochford score lowest.

5 Conclusions

5.1 Summary of strengths and weaknesses in the Thames Gateway

Strengths

- Strong business knowledge economies in City fringe (Hackney) and Canary Wharf (Tower Hamlets). Both areas have many 'knowledge-driven' business services, creative industries and many knowledge workers.
- Large public sector based knowledge economies in other TG London areas of Lewisham, Greenwich, Redbridge and Waltham Forest. Lewisham has the best skill levels in the TG.
- Very good business growth rate across the Thames Gateway over ten years (1994-2003). Particularly in inner urban areas like Tower Hamlets, Hackney, Newham, Greenwich, Lewisham and also Barking & Dagenham.
- There are some pockets of high earnings in the Outer TG – Basildon and Dartford. Basildon has some creative industries. Knowledge-driven production sectors are strong in Kent and Essex but services less so.
- TG Kent has an attractive physical environment and Essex a high quality living environment. Both areas have experienced an influx of 20-44 year olds. Southend-on-Sea is the star performer in terms of recent growth in knowledge-driven business sectors, particularly services.
- Affordable housing could be an important draw for inward investors and 'key workers', particularly in TG London, which also has good 'cultural amenities'.
- Education outcomes are good in most of the Thames Gateway – skills will probably improve in the long-term as long as young people stay in the area, and this could also attract knowledge workers with young families. Only Greenwich and Thurrock have below-average GCSE A*-C 'pass' rates.

Weaknesses

- Dynamic but divided inner city areas of TG London – local people do not have the skills to access the knowledge-intensive jobs in Tower Hamlets, Hackney and Newham.
- Significant inner / outer divide in TG London knowledge economy – Havering, Bexley and Barking & Dagenham have much smaller K1 business sectors.
- Weak knowledge economy in TG Kent compared to the successful and prosperous South East. TG Essex has small K1 and K2 sectors even by the lesser standards of the East of England region (including rural areas of Norfolk and Suffolk), apart from Rochford.
- Very low earnings in the outer parts of TG Essex - Castle Point, Southend and Rochford

- Large K4 sector businesses in retail, distribution and logistics dominate the local economies of Dartford and Thurrock. Both local areas have very few high-end service sectors and Thurrock has particularly few 'knowledge workers'.
- Low skills are a major problem throughout the Thames Gateway – particularly in Swale, Gravesham, Thurrock, Castle Point, Barking & Dagenham and Bexley.
- Few graduates in the workforce east of Greenwich and Redbridge.
- Survival of new businesses is an issue in TG London. Kent and Essex have low business densities. Barking & Dagenham has had good business growth but not in knowledge-based sectors – will these businesses be sustainable?
- Poor quality environment and lack of access to services / housing in inner urban areas.

5.2 Suggestions for further research

This Audit points in the directions of some of the challenges facing the Learning and Skills Council in the Thames Gateway, but does not investigate the policies that could help to tackle some of the major weaknesses outlined above. We suggest that further, in-depth research would be useful for the LSC on a number of issues:

1. Supply chains and skills. The ambitious housing, land, transport and jobs targets for the Thames Gateway provide a major opportunity for policy-makers to help local businesses move in the direction of the knowledge economy. We suggest that the LSC maps the competitiveness of local firms to bid for and win contracts in both services and manufacturing / construction. In-depth research with contractors, large firms (e.g. Canary Wharf) and public sector procurement departments would highlight examples where Thames Gateway firms have innovated, worked as a group and learned from others and hopefully, where publicly-funded initiatives have made a difference. What are the skills implications of this success – have the businesses invested in training their workforce, recruited graduates and worked with local colleges and training providers?

2. University-business partnerships. There are many different initiatives to encourage businesses and universities to work together – on innovation, e.g. Innovate Thames Gateway – and on skills, e.g. employing graduates or offering placements. We could undertake interviews with universities, graduates, businesses and support agencies to investigate what works – what are the success stories in the TG, has this helped individual businesses move from K4 to K1 sectors (particularly outer TG areas), could successes be replicated and other initiatives streamlined, and what are the common 'roadblocks' that need to be overcome?

3. The brain drain. Education outcomes are very good in the Thames Gateway but adults' skills are very low. Where are the young people in the TG likely to get jobs – in what sectors and what areas (London, locally, or elsewhere?) Are talented young people from the rest of the country and abroad being attracted to the TG by the jobs on offer and the availability of affordable housing? We recommend interviews and case studies to explore the dynamics of the 'brain drain' in the TG as part of the new Local Futures research programme on this issue.

Technical Annex

Definitions of the Benchmark Indicators

Title	Description	Source	Publisher	Year
Economic Architecture				
Average gross weekly earnings	The mean average amount earned weekly, gross of tax. The New Earnings Survey (NES) is an annual, workplace-based sample survey conducted by the ONS.	New earnings survey - occupation	Nomis	2003
Employment rate	The proportion of people aged 16-59/64 (men/women) in employment. This data comes from the Annual Local Labour Force Survey which is an annual residence-based sample survey.	Annual Local Area Labour Force Survey	ONS, Sub National Data Service	2002
Employment in K1 – K4 sectors	The proportion of the workforce by K1, K2, K3, K4 sectors. Please see Chapter 3 for a detailed explanation and sector composition of K1 to K4 sectors.	Annual Business Inquiry	Nomis	2002
Employment in K1 – K4 sectors, private sector	The proportion of the workforce employed in the private sector by K1, K2, K3, K4 sectors. Please see Chapter 3 for a detailed explanation and sector composition of K1 to K4 sectors. Public sector industries excluded [the public sector is defined as: public administration and defence (SIC 75), education (SIC 80), health and social work (SIC 85)].	Annual Business Inquiry	Nomis	2002
NVQ qualifications	The proportion of the working age population qualified to level NVQ 4+, NVQ 3, NVQ 2, NVQ 1 and below	Annual Local Area Labour Force Survey	ONS, Sub National Data Service	2002
Knowledge-intensive industries				
Proportion of employment in Knowledge-driven production	The proportion of all employed persons working in the following "Knowledge-driven" sectors: Aerospace (35.3), Electric machinery and optical equipment (30, 32, 33), Printing, publishing, recorded media (22.11-22.22), Chemicals (24), & Energy (11, 23, 40, 41). All figures in brackets are 1992 Standard Industrial Classification (SIC) codes. The ABI produces annual workplace estimates based on the Inter Departmental Business Register (IDBR). This sector definition was derived from OECD and Eurostat definitions for knowledge-driven production/manufacturing.	Annual Business Inquiry	Nomis	2002
Proportion of employment in Knowledge-driven services	The proportion of all employed persons working in the following "Knowledge-driven" services: Telecomms, computer & related services, R&D (72, 73, 64.2, 64.12), Finance, business services (65, 67, 74 (excluding 74.7, 74.82)), Air transport services (82), & Recreational & cultural services (92). All figures in brackets are 1992 Standard Industrial Classification (SIC) codes. The ABI produces annual workplace estimates based on the Inter Departmental Business Register (IDBR). This sector definition was derived from OECD and Eurostat definitions for knowledge-driven services.	Annual Business Inquiry	Nomis	2002
Proportion of employment in Knowledge-driven sectors	The proportion of all employed persons working in the following "Knowledge-driven" sectors: Aerospace (35.3), Electric machinery and optical equipment (30, 32, 33), Printing, publishing, recorded media (22.11-22.22), Chemicals (24), Energy (11, 23, 40, 41), Telecomms, computer & related services, R&D (72, 73, 64.2, 64.12), Finance, business services (65, 67, 74 (excluding 74.7, 74.82)), Air transport services (82), & Recreational & cultural services (92). All figures in brackets are 1992 Standard Industrial Classification (SIC) codes. The ABI produces annual workplace estimates based on the Inter Departmental Business Register (IDBR). This sector definition was derived from OECD and Eurostat definitions for knowledge-	Annual Business Inquiry	Nomis	2002

	driven sectors by bringing together knowledge-driven production and knowledge-driven services.			
Proportion of employment in public services	The proportion of all employed persons working in the following "Public services": Public admin/defence (75); Education (80); Health and social work (85). All figures in brackets are 1992 Standard Industrial Classification (SIC) codes. The ABI produces annual workplace estimates based on the Inter Departmental Business Register (IDBR).	Annual Business Inquiry	Nomis	2002
Creative employment	% of employment in the following creative industry sectors: Publishing of books (22.11), Publishing of newspapers (22.12), Publishing of journals and periodicals (22.13), Publishing of sound recordings (22.14), Other publishing (22.15), Software consultancy and supply (72.20), Architectural/engineering activities(74.20), Advertising (74.40) Photographic activities (74.81), Other business activities nec (74.84), Motion picture and video production (92.11), Radio and television activities (92.20), Artistic and literary creation etc (92.31), News agency activities (92.40), Manufacture of photographic chemicals (24.64), Manufacture of machinery for paper & paperboard production (29.55), Manufacture of electronic valves etc (32.10), Manufacture of TV/radio transmitters etc (32.20), Manufacture of TV/radio receivers etc (32.30), Manufacture of optical instruments etc (33.40), Manufacture of musical instruments (36.30), Printing of newspapers (22.21) Printing nec (22.22), Bookbinding and finishing (22.23) Composition and plate-making (22.24), Other activities related to printing (22.25), Reproduction of sound recording (22.31), Reproduction of video recording (22.32), Reproduction of computer media (22.33), Motion picture and video distribution (92.12), Wholesale of electrical household goods (51.43), Retail sale: electrical household goods (52.45), Retail sale of books/newspapers etc (52.47), Motion picture projection (92.13) Operation of arts facilities (92.32), Library and archives activities (92.51) & Museum activities etc (92.52). All figures in brackets are 1992 Standard Industrial Classification (SIC) codes.	Annual Business Inquiry	Nomis	2002
Change in employment in Knowledge-driven Sectors	Percentage change between 1991 and 2001 in the number of persons working in "Knowledge-driven" sectors as defined above. The ABI produces annual workplace estimates based on the Inter Departmental Business Register (IDBR). The ABI replaced the AES in 1998.	Annual Business Inquiry; Annual Employment Survey	Nomis	1991-2002
Proximity to research departments	This is a weighted measure of the number of research departments in a district. The number is created by counting every recognised research department in the district (weighted by 1) and every other recognised research department in the sub-region (weighted by .75).	HERO Research Assessment Exercise 2001	HERO – Higher Education and Research Opportunities	2001
Skills and Learning				
Human Capital Index	The Human Capital Index (HCI) is a weighted average NVQ for an area. This indicator shows the average qualification of the working age in an area, by first calculating the proportion of people qualified at each NVQ level, and then weighted each proportion as follows; below NVQ2 [unweighted], NVQ2*2, NVQ3*3, NVQ4*4. The regional and national averages are calculated from the district averages (and therefore slightly differ from the REA values)	Annual Local Area Labour Force Survey	ONS, Sub National Data Service	2002
Net migration of 20-44 age group	The net migration of people aged 20-44 into the area as a proportion of the 2001 total population.	NHS registrations data; Census 2001	ONS	2002
Self employed with employees	The number of self-employed persons with employees as a percentage of the economically active population.	2001 Census	ONS	2002

Self-employed without employees	The number of self-employed persons with employees as a percentage of the economically active population.	2001 Census	ONS	2002
% of students gaining 5+ GCSEs (A*-C)	The percentage of 15 years olds achieving 5 or more GCSE's at grades A*-C. As results for England are only available at LEA level, district results are based on the LEA for which they belong to. Figures for Scotland include 15 years olds achieving Standard Grade at 1-3, Intermediate 2 at A-C & Intermediate 1 at A-B.	Key DfES Statistics for Local Education Authorities; GCSE/GNVQ and GCE A, AS, AVCE and Advanced GNVQ Results [Wales]; Scottish GCSE data ordered from Qualifications and School Leavers Statistics unit	DfES; Welsh Assembly; Scottish Executive	2002
% of successful university applicants	The proportion of successful University applicants of all ages, as a proportion of the population aged between 15 and 24.		ONS	1999
Indices of Deprivation, Education, Skills and Training Deprivation Domain Average SOA Score, 2004	The Education domain of the Index of Multiple Deprivation (IMD) is based on the following indicators: it is based on two sub domains one covering children and young people including average points score of children at Key Stage 2; KS3; KS4; proportion of young people not staying on in school; proportion of those aged under 21 not entering HE; secondary school absence rate. The second sub domain covers skills including the proportion of working age adults (aged 25-54) in the area with no or low qualifications. Ward scores are calculated by combining the indicators using factor analysis, and the district level score presented here is an average of these ward scores, after each district is population weighted.	Indices of Deprivation for SOA's in England	ONS, Neighbourhood Statistics	2004
Enterprise				
Businesses per 000 population	The number of enterprises registered for VAT per 000 population. This data is derived from annual workplace estimates based on the Inter Departmental Business Register (IDBR).	Business start-ups and closures: VAT registrations and deregistrations in 2001	Small Business Services	2003
New business formation rate	The percentage of businesses that have registered for VAT within the last year. This data is derived from annual workplace estimates based on the Inter Departmental Business Register (IDBR).	Business start-ups and closures: VAT registrations and deregistrations in 2001	Small Business Services	2002
New business survival rate (36 months from 1998)	The proportion of businesses still registered for VAT 36 months after their initial registration. This is based on registrations and deregistrations of VAT-based enterprises, and is calculated from data collected from the Inter-Departmental Business Register (IDBR).	Survival rates of VAT registered businesses	Small Business Services	1999-2002
% of businesses in knowledge-driven sectors	The proportion of all businesses in "Knowledge-driven" sectors. For detailed SIC definition of the industries included, please see definition for "employment in knowledge-driven sectors". The ABI produces annual workplace estimates based on the Inter Departmental Business Register (IDBR).	Annual Business Inquiry	Nomis	2002
Average business size	The average number of employees per business. The ABI produces annual workplace estimates based on the Inter Departmental Business Register (IDBR).	Annual Business Inquiry	Nomis	2002

Change in total VAT registered business stock	Percentage change between 1994 and 2003, in the number of enterprises registered for VAT at the start of the year. This is an indicator of the change in the number of business start-ups. It excludes most of the very smallest one-person businesses. This data is derived from annual workplace estimates based on the Inter Departmental Business Register (IDBR).	Business start-ups and closures: VAT registrations and deregistrations in 2001	Small Business Services	1994-2003
Number of Business Link customers as % of all businesses	Total number of businesses assisted by Business Link within the financial year 2002/03 as a proportion of the total number of businesses in the area.	Total Business Link business usage - cumulative, quarterly trend	Small Business Service	2002/ 2003
Concentration of Business and Communication services as % of total employment	% of employment in business and communication services as a proportion of total employment.	Annual Business Inquiry	Nomis	2001
% of employment in R&D, polling and market research	% of employment in R&D, polling and market research sectors as a proportion of total employment.	Annual Business Inquiry	Nomis	2002
Quality of life				
Indices of Deprivation, Barriers to Housing and Services Deprivation Domain Average SOA Score, 2004	The Housing domain of the Index of Multiple Deprivation (IMD) is based on the following indicators: this indicator is based on two sub domains, the first "wider barriers" includes, housing overcrowding; households where a decision on their application under the homeless provision have been made; difficulty of Access to owner occupation. The second sub domain "geographical barriers" includes road distance to GP premises; road distance to a supermarket or convenience store; road distance to a primary school; road distance to a post office.	Indices of Deprivation for SOA's in England	ONS, Neighbourhood Statistics	2004
Housing affordability index	This index gives an indication of the affordability of an area and shows the likelihood of someone being able to live where they work.	Property Prices; New Earnings Survey	Land Registry; Nomis	2003
Physical Environment	This composite combines Natural Beauty, per sq km, GB=100 (see below), Tranquillity, GB=100 and Average weather, to present a value of the quality of an areas physical environment. Each one of these 3 indicators was indexed to the GB Average, and then all 3 indices were summed and averaged. Tranquillity is a measure of the tranquillity of an area based on the population density. The number of people per 1000 sq km was calculated and then this figure was inversed and indexed to the GB value. The average weather indicator combines an areas average annual hours per day of sunshine, annual mean temperature (Deg C) and annual precipitation (mm).	Countryside Commission Designated Areas; Census 2001; Regional Trends 2002 edition (No 37); MET Office	Countryside Information System - http://www.cis-web.org.uk/home/ ; ONS - http://www.statistics.gov.uk/ ; MET Office - http://www.met-office.gov.uk/	1999; 2001; 2002
Natural Beauty (access and contiguity)	This indicator consists of the following datasets; Hectares per square kilometre of Areas of Outstanding Natural Beauty & Heritage coasts, and Presence/absence per square kilometre of Forests & National Parks (All designated by the Countryside Commission). These separate datasets were then combined to gain a total figure for natural beauty within the area, and this was indexed to the GB Average. The same formula was then calculated for all the local authorities within a given sub-region (LSC area). The local authority and sub-region scores were then averaged to gain an overall score. This was done to capture both the access to natural beauty within a given local authority (that which is directly within the district boundary) and the contiguity to surrounding natural beauty (that which is within the boundary of the surrounding sub-region).	Countryside Commission Designated Areas	Countryside Information System	1999

Indices of Deprivation, The Living Environment Deprivation Domain Average SOA Score, 2004	The Environment domain of the Index of Multiple Deprivation (IMD) is based on the following indicators: this indicator includes two sub domains, the first " the indoors living environment" includes social and private housing in poor condition; houses without central heating. The second sub domain " the outdoors living environment" includes air quality and road traffic accidents involving injury to pedestrians and cyclists.	Indices of Deprivation for SOA's in England	ONS, Neighbourhood Statistics	2004
Cultural amenities per 1000 sq km, GB=100	Cultural amenities is a count of the number of cinema seats, theatres and libraries in a district.	BFI Film & Television Handbook 2003; UK Theatres Online; DfEE	BFI; UK Theatres Online	2002; 2003; 2001