Report 1: Summary of the Evidence

Prepared by:

The Economic Strategy Research Bureau

NOTTINGHAM BUSINESS SCHOOL
Nottingham Trent University

This report briefly summarises the socio-economic evidence collected as part of the D2N2 LEP Capacity Fund Project, including Key Statistics for the D2N2 area and a description of Key Sectors identified in the analysis – which is covered in more detail in Evidence Reports 3, 4 and 5.

Funded by the Local Enterprise Partnership (LEP) Capacity Fund, Department for Business, Innovation & Skills.

December 2011.

Acknowledgements

The LEP Capacity Fund Project team at the Economic Strategy Research Bureau, Nottingham Business School, are:

Will Rossiter, Reader and Head of the ESRB

Craig Bickerton, Senior Research Fellow

Chris Lawton, Senior Research Fellow

The team would like to thank the members of the Project Steering Group and the D2N2 LEP Officers Group for their advice and feedback.

ESRB

Nottingham Business School

Nottingham Trent University, Burton Street, Nottingham, NG1 4BU

www.ntu.ac.uk/nbs

http://economicstrategyresearchbureau.blogspot.com/

December 2011.

D2N2 Local Enterprise Partnership Capacity Fund Project: Evidence Reports

1. Summary of the Evidence

1.1 Key Statistics

Area	Indicator		Source
Total Resident Population (and % in working age group, 16-64), 2010			
Nottingham City	306,700 (72.3%)		ONS Crown Copyright, Mid-Year Population Estimates, 2010.
Derby City	246,900 (65.3%)		
Derbyshire County	763,700 (63.5%)		
Nottinghamshire County	779,900 (64%)		
D2N2	2,097,200 (65.2%)		
Great Britain	60,462,600 (64.8%)		
Employment Rate (% resident population aged 16-64), and Unemployment Rate (% economically active population aged 16-64), 2010			
Nottingham City	54.9%	14.8%*	ONS Crown Copyright, Annual Population Survey, January 2010-December 2010. *Note 'economically active' population excludes full-time students, increasing unemployment rate in case of Nottingham.
Derby City	68.6%	9.3%	
Derbyshire County	72.4%	7.8%	
Nottinghamshire County	72.6%	6.5%	
D2N2	69.3%	8.4%	
Great Britain	70.3%	7.8%	
Business Birth Rate, 2009			
Nottingham City	10.4		ONS Crown Copyright, Business Demography 2009.
Derby City	10.5		
Derbyshire County	8.8		
Nottinghamshire County	9.4		
UK	10.1		
Gross Value Added per head (UK=100), 2008			
Nottingham NUTS3	125.8		ONS Crown Copyright, Regional, Sub-Regional and Local Gross Value Added, December 2010.
Derby NUTS3	110		
East Derbyshire NUTS3	68.6		
South and West Derbyshire NUTS3	73.6		
North Nottinghamshire NUTS3	78		
South Nottinghamshire NUTS3	67.2		
Derbyshire and Nottinghamshire NUTS2	84.6		
UK	100		
Employment in Manufacturing (% Full Time Equivalent employees), 2010			
Nottingham City	6.2%		Experian, Regional Planning Service Summer 2011.
Derby City	16.6%		
Derbyshire County	19.3%		
Nottinghamshire County	14.2%		
D2N2	16.7%		
UK	10.5%		

Area	Indicator	Source
Workforce qualified to Level 4+ (% residents in employment), 2010		
Nottingham City	34.4%	ONS Crown Copyright, Annual Population Survey, January 2010-December 2010.
Derby City	35.8%	
Derbyshire County	34.5%	
Nottinghamshire County	33.8%	
D2N2	34.4%	
UK	37.2%	
Workforce qualified to below Level 2 (% residents in employment), 2010		
Nottingham City	28.2%	ONS Crown Copyright, Annual Population Survey, January 2010-December 2010.
Derby City	29.5%	
Derbyshire County	24.9%	
Nottinghamshire County	25.9%	
D2N2	26.2%	
UK	26.5%	
Earnings (Workplace Based), 2010		
Nottingham City	£466.40	ONS Crown Copyright, Annual Survey of Hours and Earnings, median gross weekly pay (Full Time Workers), 2010.
Derby City	£624.90	
Derbyshire County	£450.50	
Nottinghamshire County	£450.20	
UK	£498.80	

1.2 Key Messages from the Evidence

The D2N2 area accounts for a substantial proportion of the East Midlands regional economy- around 45% of total GVA and business stock. Nottingham and Derby generate the largest shares of GVA in the D2N2 area, but incomes tend to be highest in the surrounding districts. Higher earners tend to live outside the cities and commute in.

Entrepreneurial activity in the D2N2 area overall appears to be relatively low - business birth and death rates are below the national average so that there are low levels of churn. Birth rates are just above the national average in Nottingham and Derby Cities, but significantly lower than average in the Counties.

There is a greater representation of manufacturing in Derby and Derbyshire whilst Nottingham has a stronger representation in business services and finance. The productivity of the transport equipment manufacturing sector in and around Derby considerably exceeds the national average (related to a number of globally important firms), but the productivity of business services and finance in Nottingham is estimated to be below average – which may be a result of there being less head office and other high-value activities in Nottingham compared to other cities (such as London, Leeds and Birmingham), but may also be a affected by a lower workforce skills profile in Nottingham.

The recession has affected employment across the D2N2 area differently. Nottingham City has experienced a significant increase in unemployment, whilst Derby City and the two Counties have not experienced as great an increase. The increase in youth unemployment in Nottingham has been particularly marked.

There are very different skills profiles across the D2N2 area, and Derby/Derbyshire and Nottingham have particular contrasts. Across Derby and Derbyshire, there is evidence of a strong demand for 'technician level skills' (e.g. Level 3 and above, including Apprenticeships). As a result of high skill job opportunities, Derby has one of the highest work-place based earnings of any area in the UK outside London. The relative importance of the construction sector in Nottinghamshire is also associated with a demand for intermediate technician skills. However, the current environment is challenging for people seeking employment. Young people particularly need to make good decisions to compete in this environment.

In Nottingham City there is a strong demand for lower skilled jobs (e.g. Level 2), in retail and health for example. However, employers in Nottingham City are more likely to report skill deficiencies amongst existing staff than anywhere else in the D2N2 area and there are relatively high proportions of residents with very low levels of qualifications. This suggests that general, transferable skills and skills for employability are particular challenges for Nottingham City. In Nottinghamshire, the public services are an important source of skilled employment, across the health, education and public administration sectors, meaning that the County may be relatively exposed to the impact of public sector spending cuts.

There a significant differences in the employment outcomes of young people depending on the subject they study in Further and Higher Education, with more vocationally relevant courses most likely to result in higher paid employment. There is also evidence that employers find that a large proportion of young school and FE leavers are not well prepared for work. This suggests the need to improve advice, guidance and relationships with employers at schools and colleges, in order to ensure that young people are better informed when choosing courses and have a greater opportunity to develop work-relevant skills.

1.3 Key Sectors

Advanced Transport Equipment Manufacturing

This sector describes the production of aerospace, automotive and rail transport vehicles. It is highly concentrated in the D2N2 area – especially around Derby City and South Derbyshire – and is significantly (40%) more productive than elsewhere in the UK. Output in the sector is forecast to grow strongly in the future in the UK, with the D2N2 area outperforming the national average. The sector includes a number of large, globally significant employers, such as **Rolls Royce, Toyota and Bombardier**. These companies have significant supply chains which overlap other industrial sectors (such as metals) where there are also local strengths.

Products and processes associated with this sector often have high value, and utilise technologies that can have multiple commercial applications – such as printed plastic circuit boards, fuel cell technology, or lightweight composite materials. **Composite materials**, for example, are important in automotive and aerospace manufacture, but are also applicable to wind and tidal energy generation, oil and gas extraction, and sustainable construction.

Innovation activity undertaken by employers in the sector is complemented by a number of university research strengths, such as expertise in fuel storage, composites and structures at the Advanced Materials Research Group (School of Mechanical Materials, University of Nottingham).

Transport Equipment Manufacturing generates high skill employment opportunities, both for graduates and for vocational learners such as Apprentices. Derby City has one of the highest work-based earning levels in the country, which is closely associated with highly paid professional and technical jobs in the sector.

There is also anecdotal evidence suggesting that R&D projects within the sector's large employers can result in spin out enterprises, with technicians starting businesses related to a new technology or process and then becoming an SME within the supply chain of the wider sector.

Medical/Bio-Science

This sector is also a key driver of innovation activity in the D2N2 area, and is particularly important in Nottingham City, contributing to Nottingham's designation as one of the UK's six Science Cities in 2005. This sector encompasses a number of interrelated sub-sectors where, in each case, there are distinct strengths in Nottingham, Derby and across the D2N2 area.

Healthcare, much of which is delivered through the NHS, is the service element of the sector which also accounts for a far larger volume of employment as well as being the principal customer for the other elements of the sector. This sector accounts for 7.6% of GVA in the D2N2 area. The **QMC/Nottingham University Hospital Trust** is a significant employer and one of the largest teaching hospitals in the UK.

The manufacture of medical devices is a relatively small, high value sub-sector of manufacturing with a high level of R&D activity. Disposable equipment and supplies (syringes, bandages, etc.) account for the largest market share, at 46% of the total UK medical devices market.

Pharmaceuticals is a more significant sub-sector, in both employment and output terms, manufacturing products both for the NHS and other health care providers and for the commercial 'over-the-counter' market. **Alliance Boots plc.**, which has headquarters just outside Nottingham, is a globally significant firm that accounts for a large number of jobs around Nottingham.

Life and bio-sciences describes research and development, manufacturing and marketing of products based on advanced biotechnology research. This sub-sector is dominated by small, niche producers, including university spin-outs. **Bio-city**, in Nottingham, is a nationally significant centre. **ClinPhone**, also based in Nottingham and now part of Perceptive Informatics Group, is a clinical technology company that supplies some of the leading global pharmaceutical and biotechnology organisations. ClinPhone employs 750 staff, and has an R&D investment of £7,800 per employee, compared to £3,800 in the UK.[1]

Food & Drink Manufacturing

The manufacturing of food and drink products is important across the LEP area, and to a number of local areas in particular – such as Newark & Sherwood, Bassetlaw, and Amber Valley. The sector is especially important in the more rural parts of Nottinghamshire and Derbyshire, because of its close connection to agriculture, and is also important to the LEP area more widely because of its good connectivity, enabling the rapid distribution of food and drink products nationally and internationally.

Food and drink is the largest sub-sector of manufacturing, accounting for 3.8% of GVA in D2N2 area, and employment in the area is significantly more concentrated than nationally. Moreover, above average output growth is projected for the sector in the future. Food and Drink Manufacturing is also relatively productive in the D2N2 area, with output per full-time employee estimated to be 5.5% higher than in the sector in the UK overall.

Although the sector presents a number of opportunities for the D2N2 LEP, intervention needs to be carefully targeted. For example, niche high-skill areas do exist (such as **food technologies** – where business activity is closely related to international Higher Education research strengths in the **Sutton Bonington** campus of the University of Nottingham), but, in general, the sector is characterised by generally low-skilled employment with limited progression routes.

Parts of the food and drink sector are closely related to the Visitor Economy in terms of 'food tourism', where local produce can be presented as an attraction in restaurants, food & drink festivals, etc., and can be used to market the LEP area to domestic and international visitors.

Construction

This sector describes activity relating to the preparation of land and the construction, alteration and repair of domestic and commercial buildings and infrastructure. It is relatively important for employment across Derbyshire and north Nottinghamshire, with examples of large employers including Bowmer and Kirkland in Belper. Construction in the D2N2 area is relatively productive, with output per worker estimated to be 9% higher than in the UK overall. Construction accounts for 8.7% of GVA in the D2N2 area.

The sector has been badly affected by the recession, with steep reduction in demand across house building, commercial development, and public works (including infrastructure). However, population growth and latent demand for housing (plus policy priorities to increase house building), as well as possible plans for any infrastructure investment stimulus, represent opportunities for future growth. Local companies have been relatively successful in winning Olympics 2012 contracts.

[1] The Department for Business, Innovation and Skills, '*2008 R&D Scoreboard*', 2008.

Opportunities for innovation in this sector are connected to the Low Carbon agenda (i.e. '**sustainable construction'**). There are particular opportunities related to the need to **retrofit** commercial and domestic properties, which have skill requirements to update training and product knowledge amongst workers in the construction trades (e.g. plumbers, electricians, etc.). The nature of employment in the construction sector also presents opportunities for entry level employment with clear progression routes into the skilled trades. Apprenticeships are a well-established route for intermediate skills in the construction trades.

The construction sector has close links to important service sub-sectors in the D2N2 area, such as **planning and architecture consultancies**. There are also Higher Education strengths, with Derby, Nottingham and Nottingham Trent Universities all having Schools of Architecture, Design and the Built Environment.

Given the importance of public sector investment in construction activity, the sector is particularly amenable to policy intervention. As Local Authority D2N2 partners are also major procurers of construction activities, they could consider collectively identifying skills and environmental outcomes that can be built into contracts for future construction projects (e.g. requiring a successful contractor to support a certain number of young people in the local area as Apprentices).

Visitor Economy

The visitor economy covers those activities directly associated with tourism, principally **hotels and restaurants**. It also expresses a wider field of assets and activity that includes **the management and promotion of visitor attractions**, which can be natural or heritage sites as well as other attractions (such as theme parks), and those elements of an area's **sports, leisure, retail and cultural offer** which attract and service domestic and international visitors.

The D2N2 area has a wide ranging tourism offer, and contains what is possibly the key tourism asset in the East Midlands and one of the most important in the UK - the Peak District National Park. In addition there are a range of contemporary and historical, urban and rural attractions that bring millions of visitors to the area. The 2009 English Visitor Attractions Survey suggests that a number of these buildings, parks and monuments are amongst the most visited attractions in the East Midlands. The list of the top 10 most visited attractions includes: Chatsworth House, Rufford Abbey & Country Park, Sherwood Forest Country Park, Wollaton Hall and Park and Nottingham Castle Museum. A more contemporary attraction, the QUAD in Derby, also appears in the top 10.[2]

Tourism, like other parts of the economy has been hit by the recession. Recent (national)survey evidence suggests that, while conditions were reasonable during the summer[3] (with 1/3 of tourism businesses reporting that business was better than in 2010), there is less optimism looking ahead[4]. Although domestic tourism has been sheltered somewhat by the 'staycation' effect - where people

[2] Note that newly established attractions such as Nottingham Contemporary do not appear in this data but are expected to appear in data for later years.
[3] Visit England, '*Business Confidence Monitor 2011'*, Wave 4 September.
[4] Visit England, *'Domestic Industry Panel'*, Wave 15, July-August 2011.

holiday in Britain rather than abroad, people are taking fewer and shorter holidays as a result of the current difficult economic conditions[5].

Between 2006 and 2009 there were, on average, 3.8 million visits per annum to the D2N2 area (which is 42% of the total for the East Midlands region). Just over 51% of these visits were to Derbyshire. However, 56% of spend occurred in Nottinghamshire. This is a function of the very different profiles of visitors to the two counties. Ninety per cent of visitors to Derbyshire are domestic visitors whilst 10% are inbound visitors. In Nottinghamshire, 83% of visitors are domestic and 17% inbound. Inbound visitors have higher levels of average spend than domestic visitors and both types of visitor tend to spend more in Nottinghamshire than in Derbyshire.

It is also possible to break domestic visitors down into holidaymakers and business visits. In Derbyshire a much higher proportion of domestic visitors are holidaymakers than in Nottinghamshire. Given the significant concentration of monuments, buildings and parks in Derbyshire Dales and the Peak District National Park, it is clear that the tourism offer in Derbyshire is different to the offer in Nottingham and Nottinghamshire.

The ‘Hotels & Catering’ sub-sector, which accounts for just under 3% of GVA and just under 5.5% of FTE employment, has lower productivity than the national average in the D2N2 area. Growth is forecast to be relatively low during the next decade. Tourism nevertheless plays an important, wider role in the D2N2 economy. Having a range of attractions in the area can attract people and businesses and contribute to the quality of life and wellbeing of residents.

Low Carbon Environmental Goods and Services

The low carbon industry is defined within the broad definition of ‘Low Carbon and Environmental Goods and Services’ (LCEGS), which includes traditional **environmental solutions** (such as control of air, noise and water pollution, waste management and recycling) along with **renewable energy technologies** (e.g. wind, tidal, geothermal and biomass) and ‘**emerging low carbon**’ activities (such as road transport emissions reduction, nuclear energy, energy management, carbon capture and storage, etc.).[6] With the exception of energy generation and water/waste, most of these activities occur across many sectors – including Construction and Transport Equipment Manufacturing. **Low carbon is a cross-cutting series of practices, technologies and opportunities .**

The D2N2 area has a number of important strengths. **Power generation** is significant in D2N2, with three large power stations – the coal-fired Ratcliffe-on-Soar station, south of Derby and Nottingham, and the co-firing stations at Cottam and West Burton near Retford in Nottinghamshire. There is less renewable power generation in the area, largely related to topography, although some hydropower is produced locally.

A number of large Transport Equipment Manufacturers in the D2N2 area are international leaders in low carbon technologies, including Toyota and Rolls Royce in the development of low carbon

[5] Visit England, ‘*The Staycation Effect 2011 and Beyond*’, 2011.
[6] Innovas, on behalf of BERR, ‘*Low Carbon and Environmental Goods and Services: an industry analysis*’, March 2009.

vehicles and fuels. Rolls Royce is active in R&D in technologies to reduce aviation emissions and in the production of components for the civil nuclear industry. All three universities in the area have interests in low carbon technologies, whilst the British Geological Survey (BGS), in Keyworth, south Nottinghamshire, is a globally recognised research centre.

Interventions related to low carbon environmental goods and services could build on the following existing strengths in the D2N2 area:

- The Energy Technologies Institute (ETI): an East Midlands/West Midlands collaboration between Nottingham, Birmingham and Loughborough Universities. It also draws input from energy companies like BP, Shell, E-ON, and EDF Energy. Nottingham University has additional specialisms in the Built Environment and Wind Energy and includes the Centre for Innovation in Carbon Capture and Storage;
- Nottinghamshire Energy Partnership (NEP) is an independent body that aligns activities with the ETI to drive forward the climate change agenda in the region. It provides information and advice to developers and the public sector[7]; and
- E-ON engineering at Ratcliffe-on-Soar leads the global E-ON group for R&D.

[7]Pro Enviro, on behalf of *emda, 'Energy Technologies in the East Midlands'*, 2011 .