

The East Midlands in 2010: Transport and Infrastructure

A report prepared by *emda*

2010

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6. Transport and Infrastructure

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6.1 Introduction

This section of The East Midlands in 2010 uses current data to explain the issues in the areas of transport, infrastructure and physical development in the East Midlands.

Transport and infrastructure are key elements in the economy of the East Midlands for both the resident population and businesses alike. Efficient public transport, combined with a well planned and developed infrastructure can increase the attractiveness of a region as a place to live and work. The accessibility and connectivity provided by transport and other communications infrastructure is also an important factor businesses consider when evaluating where to locate as they require access to a strong supply of labour, as well as being able to transport intermediate and finished goods from suppliers to customers. In this way transport and infrastructure are enablers of economic performance.

In conjunction with transport and infrastructure, land use makes a key contribution to delivering sustainable economic development. The adequate provision of quality employment land supporting the specific demands from industry allows regional economies to prosper. Without adequate provision of employment land, levels of output and employment can be constrained. It is, therefore, important for the provision and type of employment land to remain responsive to industrial demands.

Section 2 examines construction activity in the region. It shows that construction output peaked in 2006 and fell back in 2007 and 2008. As a result of the recession, a further fall is likely to be reported when data for 2009 becomes available.

Section 3 assesses the region's transport infrastructure. Key transport infrastructure in the region includes East Midlands Airport (one of the most important freight hubs in the country), the M1 and the Midland Main Line. It also sets out analyses of road, rail and air transport use in the region. Levels of public transport patronage in the region are lower than average. Private car is the most common mode of transport to work and people tend to travel greater distances to work than they do elsewhere. Congestion is an issue in some parts of the region, most notably around the three cities.

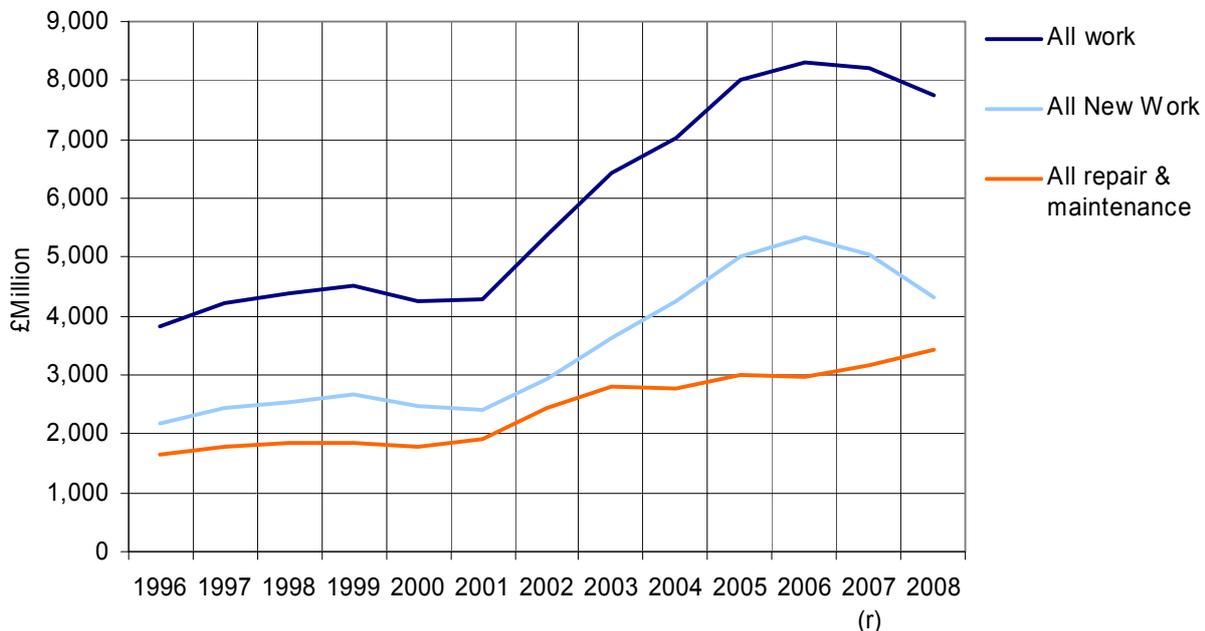
Section 4 highlights the availability and use of broadband in the East Midlands. It shows the availability of and extent to which businesses in the region use broadband. It also shows that the proportion of people in the region who can work at home if required is in line with the national average.

Sections 5 and 6 examine information on land and property in the East Midlands. It shows that typical land values and rentals are highest in the region's larger urban centres. The East Midlands accounts for a relatively large share of the industrial and warehouse space in England, reflecting its industrial structure and location at the heart of the transport network.

6.2 Construction

Construction activity in the East Midlands is a good proxy measure of the value of investment in transport and infrastructure as it is through construction activity that infrastructure networks are developed and maintained. The level of construction activity is also closely related to economic performance as 'new work' can only be driven by demand, although this demand can come from both the public and private sector. The chart below shows the value of all construction work in the East Midlands broken down into 'all new work' and 'all repair and maintenance' for the period 1996-2008 and shows the first stages of the impact of the recent recession on output in the sector.

Chart 1: Construction contractors output in the East Midlands (£Million), 1996-2008



Source: Construction Statistics Annual, Office for National Statistics, 2009. Data for 2007 has been revised since the 'Construction Statistics Annual 2008' publication.

Chart 1 shows that the construction sector in the region has experienced both periods of stagnation and high growth over the past decade. The end of the 1990s saw the sector continuing to struggle to recover from the recession of the early 1990s with the total value of all construction work fluctuating between £4.0 billion and £4.5 billion. The sector then entered a sustained period of growth between 2001 and 2006 with the total value of all construction work peaking in 2006 at £8.3 billion, more than double that in 1996. Since 2006, however, the total value of construction work in the East Midlands has fallen, having been negatively affected by a lack of availability of finance in 2007 and the onset of recession in 2008.

The data shows that:

- In 2008, the total value of construction work undertaken in the East Midlands was £7.8 billion, of which £4.3 billion (56%) was new work and £3.4 billion (44%) was repair and maintenance;
- The overall level of construction activity fell by £457 million (-6%) between 2007 and 2008, the largest annual fall in output for more than a decade. This fall can be largely attributed to a fall in private investment brought about by the recession causing a marked decrease in the level of new work being generated. Repair and maintenance output has, however, continued to grow steadily due to the largely non-discretionary nature of spending; and
- In 1996 output generated by all work in the East Midlands accounted for 8.6% of the total value of contractors' output in England. Data for 2008 show that this has fallen by 1.3 percentage points to 7.3%.

The data also shows how the recession has impacted on the sub-sectors of construction. This shows that there is a significant gulf between the impact on construction from public and private sector work:

- In terms of size, repair and maintenance of housing is the largest sub sector of construction accounting for 22% of the value of all work, followed by new private housing (at 18%) and the repair and maintenance of private housing (at 16%);
- Output generated from new private housing was £1.4 billion in 2008, a decrease of around 30% of the value of output in 2007. In contrast output from new public housing decreased by just 1% over the same period. The contraction experienced in the housing market has reduced the returns developers can expect from developments. This has reduced their ability to access finance and invest in future projects; and
- The effect of the recession is further highlighted by data for private industrial and private commercial developments when compared to public developments. Output from private industrial developments decreased by 29% between 2007 and 2008 whilst private commercial output fell by 7%. In contrast output from public developments increased by 6% over the same period.

Spending on infrastructure projects increased by 16% between 2007 and 2008, to £527 million, representing over 12% of all new work in the construction sector.

Infrastructure projects are often used as a method of boosting an economy in an economic downturn. Infrastructure projects can be brought forward, stimulating demand and boosting output and employment, this has been the case in the recent recession.

- Output generated from spending related to public buildings – such as schools and hospitals – increased by 6% between 2007 and 2008 to £739 million.

- Output from new public housing fell by just -0.7%, compared to the fall of -30% in new private housing.

Recent major infrastructure projects either planned or underway in the region include the widening of the M1 between junctions 21-25 and 28-30 and the duelling of the A46. There are also expectations that the Midland Main Line may be electrified in the relatively near future.

More analysis of the effects of the recession on the construction sector can be found in the Economy and Productivity chapter.

Key Points: Construction

- Construction output in the East Midlands peaked at £8.3bn in 2006, twice its level in 1996.
- Construction activity fell by around -6% between 2007 and 2008. Private investment in both housing and commercial developments has been responsible for a significant proportion of the fall. Public sector activity, which tends to be less affected by the economic cycle, has held up well.

6.3 Transport

The quality and availability of infrastructure and transport are key factors which influence economic growth. Individuals and firms alike make economic decisions based on the accessibility provided by existing and planned infrastructure. For this reason, good local, national and international transport connectivity is considered a prerequisite for economic competitiveness and sustainable economic growth.

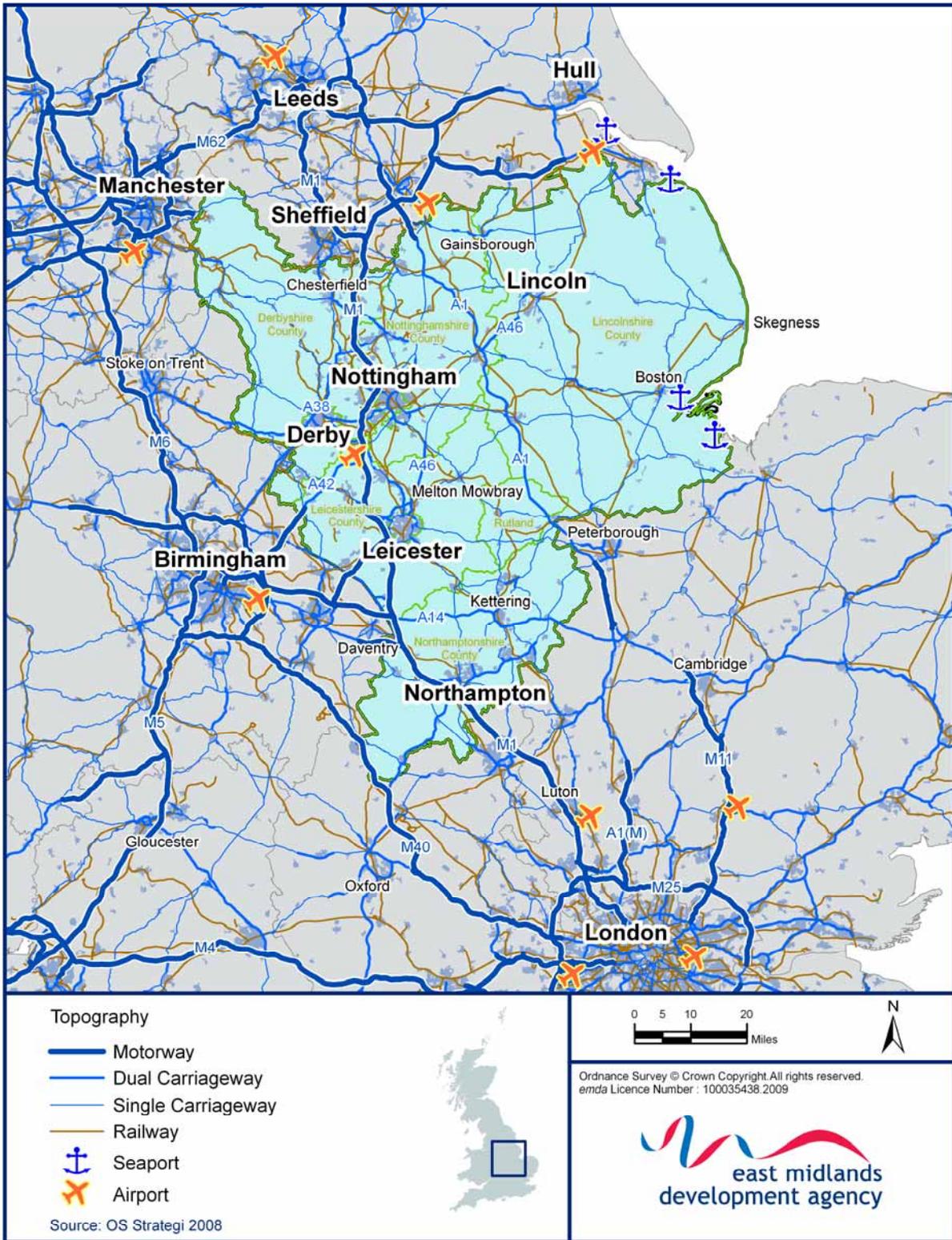
High quality transport and communications infrastructure can contribute to the region and its economy in a number of ways:

- Facilitating the movement of goods, people and information both within the region, and to markets outside the region;
- Increasing the attractiveness of the region for investment opportunities to both domestic investment as well as Foreign Direct Investment (FDI);
- Maintaining an active and productive population, key for the future success of the region; and
- Increasing the status and image of the East Midlands as a place to live, work and pursue leisure activities.

The East Midlands benefits from a number of strategic transport sites and networks, as shown in Map 1.

- East Midlands Airport, in close proximity to Nottingham, Leicester and Derby.
- The M1 motorway which runs through the East Midlands from Chesterfield in the north to Northampton in the south, and connects the region to London and the South East, and to Yorkshire and the North East.
- The A1 road to the east of the M1, which runs through Rutland, Lincolnshire and Nottinghamshire and provides strategic inter-regional links.
- The A14 running from east to west through Northamptonshire, providing links to the international Haven Ports.
- The A46 which runs from the M1 into Lincolnshire. Plans have been agreed to widen the A46 into a dual carriageway between Farndon and Widmerpool. This is due to start in 2009 and be completed in 2012.
- West Coast, Midland and East Coast Main Lines – the principal rail routes across the region. The West Coast Main Line connects Northampton to London, Birmingham and the North West. The Midland Main Line links Derby, Leicester and Nottingham to London St Pancras International (as well as Sheffield), whilst the East Coast Main Line links Grantham and Newark to London, West Yorkshire and Scotland.

Map 1: Major transport infrastructure in the East Midlands



6.3.1 Transport and the economy

Effective transport networks are a key feature of any successful economy. The ability to move goods and people at the lowest cost contributes to economic performance. These movements can be significant. For example it is estimated that 108,000 people commute into the East Midlands to work and 198,000 people commute out of the East Midlands to work, on a daily basis, in nearby employment centres including Peterborough, Sheffield, Milton Keynes and East Staffordshire, as well as Birmingham, Coventry, Manchester, East Lincolnshire, Rotherham and London¹. (See the Spatial Economy chapter for more detail.)

The Eddington study², published in 2006 analysed the long-term links between transport and the performance of the UK economy. The report highlighted, that in well developed economies under-performing transport infrastructure can constrain a nation's productivity and competitiveness. However, investment in transport does not have the ability to create economic potential in isolation. An example of the constraints transport can place on an economy is that of congestion. It is estimated that congestion costs the UK economy between £7-8 billion per annum³. A recent *emda*-commissioned study estimated the cost of congestion to the East Midlands economy to be around £935 million per annum⁴. One of the key conclusions of the Eddington study is that an emphasis should be put on improving the performance of the existing transport networks. It notes that investment should be focused on areas of unreliability and congestion that are important for the UK's economic success. It should be noted that this key conclusion has been broadly followed in plans for expenditure on infrastructure in the East Midlands. Examples of this include improvement of the current road infrastructure through the widening of the A46 and improvements to the M1 J21 to 30.

Whilst it has been noted that transport plays a key role in the economy there are also a number of disbenefits associated with its use and growth. The Government has identified five broad goals related to the future development of the transport network of the UK.⁵ As well as supporting economic growth (outlined above) the paper identified a further four goals:

- Tackling climate change has been highlighted as a key issue for the UK by the Stern Review.⁶ In response to this review the Government has committed to achieving an 80% reduction in greenhouse gas emissions from 1990 levels by 2050. The transport sector, accounting for around 40% of the UK's total greenhouse gas emissions, will play a pivotal role in helping to achieve this target;
- Transport policy can contribute to improved health and longer life expectancy by reducing the risk of death, serious injury or illnesses arising from transport and by

¹ Commuting Flows in the East Midlands, Experian/*emda*, April 2007.

² The Eddington Transport Study – The case for action: Sir Rod Eddington's advice to Government, HM Treasury, Department for Transport, December 2006.

³ *Ibid.*

⁴ Economic Costs of Congestion in the East Midlands, Atkins, May 2007.

⁵ Delivering a Sustainable Transport System: Main Report, Department for Transport, November 2008.

⁶ Stern Review: The Economics of Climate Change, October 2006.

increasing the awareness and use of methods of travelling which are beneficial to health e.g. walking and cycling;

- Transport can play a fundamental role in promoting equality of opportunity. The transport system needs to be able to provide everyone with access to goods and services, employment opportunities and social and leisure activities; and
- Transport should be able to allow people to travel in comfort to the destinations they desire without impacting negatively on non-transport users. The benefits of transport need, therefore, to be viewed in terms of net gains, where the benefits outweigh the adverse impacts on the natural environment and non-transport users.

6.3.2 Personal travel

Individual decisions to travel are affected by a range of factors including need, availability, cost and time. Each individual decision to travel has an effect on both the economy and environment of the region.

The National Travel Survey⁷ provides data on many aspects of transport at a regional level. The survey suggests that the average number of trips per person per year in the East Midlands is above the English average. This can be explained, in part, by the geography of the East Midlands, and its rural nature in particular. The following key headline points can be drawn from the data:

- Based on combined travel data from the 2007 and 2008 National Travel Survey, 69% of trips made in the East Midlands were by car⁸ and 6% were made by public transport⁹. This compares to 65% by car and 10% by public transport for England as a whole (Table 1); and
- Looking specifically at the method of travel to work, 77% of East Midlands' residents travel to work by car, whilst 6% use public transport and 11% walk. The East Midlands, along with the North East, West Midlands and South West, has the highest dependency on the car as a method to travel to work of any Government Office Region (GOR). The East Midlands, along with the South West, has the lowest use of public transport as a means of getting to work (Table 2).

⁷ Department for Transport, National Travel Survey 2008.

⁸ Trips by car includes trips by car as a passenger.

⁹ The majority of trips made by public transport are by bus. 5% of all trips in the East Midlands.

Table 1: Trips made by main mode of travel, by region of residence (trips per person per year), 2007-2008

| Region | Percentage of total number of trips (%) | | | | | | Total number of trips |
|--------------------------|---|------------|---------------|------------------------|-----------|------------------------|-----------------------|
| | Walk | Car driver | Car passenger | Other private vehicles | Local bus | Other public transport | All modes |
| North East | 24 | 39 | 23 | 2 | 8 | 3 | 996 |
| North West | 22 | 43 | 23 | 2 | 7 | 3 | 976 |
| Yorkshire and The Humber | 23 | 41 | 23 | 3 | 7 | 3 | 964 |
| East Midlands | 22 | 45 | 24 | 3 | 4 | 2 | 1,005 |
| West Midlands | 20 | 45 | 24 | 2 | 6 | 2 | 1,014 |
| East of England | 20 | 46 | 25 | 3 | 3 | 3 | 1,015 |
| London | 25 | 26 | 16 | 3 | 16 | 15 | 844 |
| South East | 21 | 45 | 23 | 3 | 4 | 3 | 1,033 |
| South West | 24 | 43 | 24 | 4 | 3 | 2 | 1,060 |
| England | 22 | 42 | 23 | 3 | 6 | 4 | 985 |

Source: Combined survey years, published in, Department for Transport, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

Table 2: Usual method of travel to work by region of residence (%), October to December 2008

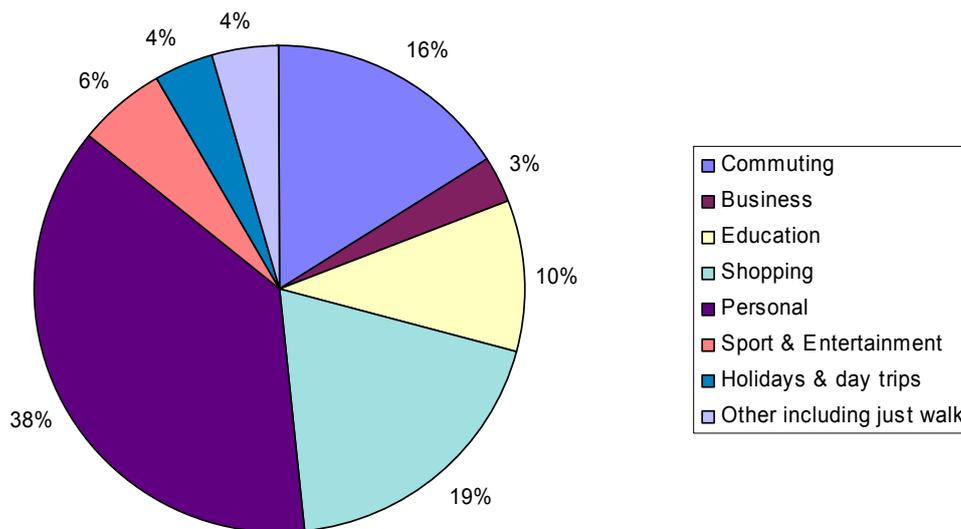
| Region | Car | Motorcycle | Bicycle | Bus/coach | National rail | Other rail | All rail | Walk | Other modes |
|--------------------------|-----|------------|---------|-----------|---------------|------------|----------|------|-------------|
| North East | 76 | * | 1 | 9 1 | | 2 | 3 | 10 | * |
| North West | 75 | 1 | 2 | 7 3 | | - | 3 | 11 | 1 |
| Yorkshire and The Humber | 75 | 1 | 3 | 8 2 | | * | 2 | 11 | 1 |
| East Midlands | 77 | * | 3 | 5 1 | | * | 1 | 11 | * |
| West Midlands | 76 | 1 | 2 | 8 3 | | * | 3 | 10 | - |
| East of England | 72 | 1 | 4 | 4 8 | | 1 | 9 | 10 | 1 |
| London | 35 | 2 | 4 | 16 | 14 | 20 34 | | 9 | 1 |
| South East | 73 | 1 | 4 | 4 7 | | * | 7 | 11 | 1 |
| South West | 76 | 1 | 4 | 4 2 | | * | 2 | 13 | * |
| England | 69 | 1 | 3 | 7 5 | | 3 | 8 | 11 | 1 |

Source: Labour Force Survey, Office for National Statistics, published in, Department for Transport, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

6.3.2.1 Trips by purpose

Chart 2 shows that the most significant purpose of travel in the East Midlands is personal travel (38%), followed by shopping (19%). Arguably, commuting is amongst the most significant purposes of travel in terms of its importance to the economy, allowing the population to access employment thereby adding value to the regional economy. Constraints on travel for this purpose, like congestion, can therefore have sizeable impacts on the regional economy. It is interesting to note that commuting accounts for only 16% of total trips made. It is, however, the concentration of these trips at particular times that creates many of the negative effects associated with commuter travel, namely peak period congestion and delays. Whilst it is not always economically viable to eliminate congestion where it exists only in specific time periods there may be a case for intervention where congestion is a more persistent problem. The issue of congestion and its economic impact in the East Midlands are explored later in this chapter. Since 2003-2004 there have been no significant changes to trips by purpose in the East Midlands.

Chart 2: Trips by purpose in the East Midlands (%), 2007-2008



Source: Combined survey years, published in, Department for Transport, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

6.3.2.2 Time taken to travel to work

The time taken to travel to work is an important consideration for many employees and, along with the reliability of journey times, can have a significant effect on their quality of life. Reducing the time taken to travel to work can help increase economic efficiency and productivity. Table 3 shows the average time taken to travel to work for the time period

October-December 2008. The table shows that 49% of the population travelling to work in the East Midlands do so in less than 20 minutes, placing the region third out of all the English regions, behind the North East (50%) and the South West (50%). Eighty five percent of the population of the East Midlands have an average travel to work time of less than 40 minutes, slightly lower than the North East with 86%, but significantly greater than London where only 46% of the population are able to travel to work in under 40 minutes.

Table 3: Cumulative percentage of time taken to travel to work, October-December 2008

| | Cumulative percentage | | | | | | | |
|--------------------------|-----------------------|------|-------------|------|-------------|-------|-------------|------|
| | <20 minutes | | <40 minutes | | <60 minutes | | <90 minutes | |
| Area of workplace | 2001 | 2008 | 2001 | 2008 | 2001 | 2008 | 2001 | 2008 |
| North East | 52 | 50 | 88 | 86.9 | 6 | 95.99 | | 99 |
| North West | 46 | 46 | 83 | 82.9 | 3 | 91.99 | | 98 |
| Yorkshire and The Humber | 49 | 45 | 84 | 81.9 | 4 | 92.98 | | 98 |
| East Midlands | 53 | 49 | 89 | 85.9 | 6 | 95.99 | | 99 |
| West Midlands | 49 | 46 | 83 | 81.9 | 3 | 92.98 | | 98 |
| East of England | 53 | 49 | 85 | 83.9 | 3 | 92.98 | | 98 |
| London | 22 | 17 | 50 | 46.6 | 8 | 67.90 | | 90 |
| South East | 49 | 47 | 83 | 81.9 | 2 | 91.97 | | 97 |
| South West | 54 | 50 | 87 | 85.9 | 5 | 94.99 | | 98 |
| England | 46 | 42 | 79 | 76.9 | 0 | 88.97 | | 96 |

Source: Labour Force Survey, Office for National Statistics, published in Department for Transport, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

Table 3 shows that the time taken to travel to work has increased between 2001 and 2008:

- In 2001, 53% of the workforce of the East Midlands were able to travel to work in less than 20 minutes, significantly higher than in 2008; and
- In 2001, 96% of the workforce were able to travel to work in less than 60 minutes, comparable with 2008 levels.

The decrease in the proportion able to travel to work in less than 20 minutes can be largely attributed to the rapid increase in traffic levels on the East Midlands roads over this period. (For more information on this see section 3.3 on road vehicles and traffic.)

6.3.2.3 Average distance travelled by mode of transport

The average distance travelled by mode of transport gives an indication of the population's reliability on particular modes of transport. This is a function of the availability, cost and efficiency of the methods of transport available for any given journey, as well as lifestyle choices and patterns. The population of the East Midlands travels an average of 7,318 miles per person per year, above the average for England.

Table 4: Average distance travelled by mode of travel by region of residence, 2007-2008, miles per person per year.

| Region | Percentage (%) | | | Distance (miles) |
|--------------------------|----------------|------------------|------------------|---|
| | Walk | Private vehicles | Public transport | All modes – total miles per person per year |
| North East | 3 | 83 | 14 | 6,399 |
| North West | 3 | 85 | 13 | 6,399 |
| Yorkshire and The Humber | 3 | 84 | 14 | 6,707 |
| East Midlands | 3 | 88 | 9 | 7,318 |
| West Midlands | 2 | 86 | 11 | 6,811 |
| East of England | 2 | 84 | 13 | 8,280 |
| London | 4 | 58 | 38 | 5,305 |
| South East | 2 | 83 | 14 | 8,121 |
| South West | 3 | 87 | 10 | 7,736 |
| England | 3 | 82 | 15 | 7,010 |

Source: National Travel Survey, published in Department for Transport, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

As demonstrated in Table 4, private vehicles¹⁰ are used for the majority of the total distance travelled per person, per year in all regions. In the East Midlands around 88% of the total distance travelled per person was by private vehicle in 2007-2008. This is a function of the spatial nature of the region with a number of large, sparsely populated rural areas. Conversely, the East Midlands has one of the lowest levels of distance travelled by public transport of the English regions, at 9% of total distance travelled.

There have also been substantial changes in the distance travelled by mode of transport between 1998-2000 and 2007-2008.¹¹

- The data suggests that the East Midlands has experienced a significant increase in the distance travelled by public transport over this period.
- The data also suggests that the number of people travelling by private vehicle has increased over the same time period.
- London has experienced the largest increase in distance travelled by public transport and the largest fall in distance travelled by car. This is likely to be a

¹⁰ Private vehicles include car, car passenger and other private vehicles.

¹¹ There have been significant changes to the methodology of the National Travel Survey between 1998-2000 and 2007-2008. These changes have caused a discontinuity in the time series meaning comparisons over this period should be made with caution. For more information see <http://www.dft.gov.uk/pgr/statistics/datatablespublications/personal/methodology/weightingnts/>

function of an improvement in the public transport offer combined with the effects of the London congestion charge, introduced in 2003.

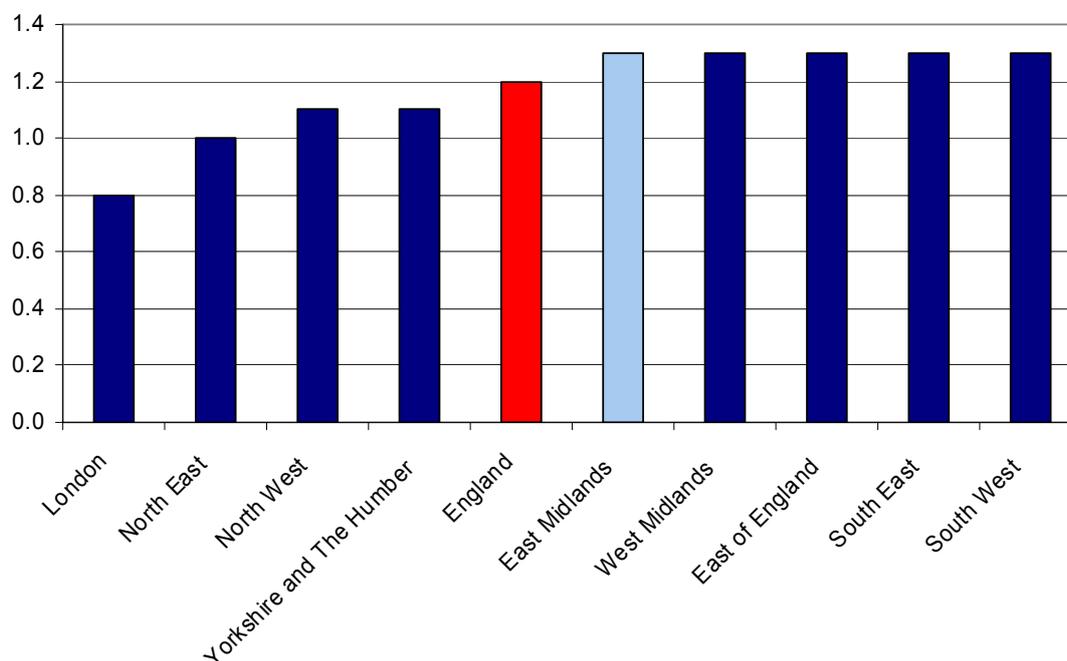
- The East Midlands has experienced a large increase in the total miles walked per person per year.

6.3.2.4 Car ownership

Need and affordability are the two principal factors faced by households when considering car ownership. Car sales have been particularly hard hit during the recession and this has yet to appear in the data used in this section. In the decade prior to the recession car ownership has increased. Chart 3 shows that:

- Car ownership per household in the East Midlands was 1.3 in the period 2007-2008, similar to the South West, South East, East of England and the West Midlands. This is almost 20% higher than the England average and can be linked to the rural nature of much of the region; and
- London has the lowest level of car ownership per household reflecting the widely developed public transport infrastructure.

Chart 3: Car ownership per household, 2007-2008



Source: National Travel Survey, published in, Department for Transport, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

The cost of motoring has increased steadily in recent years:

- Between 2001 and 2007 the cost of motoring¹² increased by around 0.6% per year; and
- In 2008 the cost of motoring increased by 3.1%. This increase can be almost entirely attributed to the rising cost of petrol and oil (rising by 15.1% in 2008). The price of petrol and oil has since fallen back from their respective peaks.

In recent times the cost of public transport has increased at a faster rate than that of motoring. This is likely to have contributed to increased car ownership despite the increased cost of motoring.

- Between 2001 and 2007, rail fares rose by an average of 3.5% per annum. Over the same period bus and coach fares increased by 4.3% per annum.
- In 2008 the cost of rail fares and bus and coach fares increased by 4.3% and 6.2% respectively.

These increases are generally greater than the wider cost of living increases as measured by the CPI indicating that public transport is becoming relatively more expensive compared to the private car.

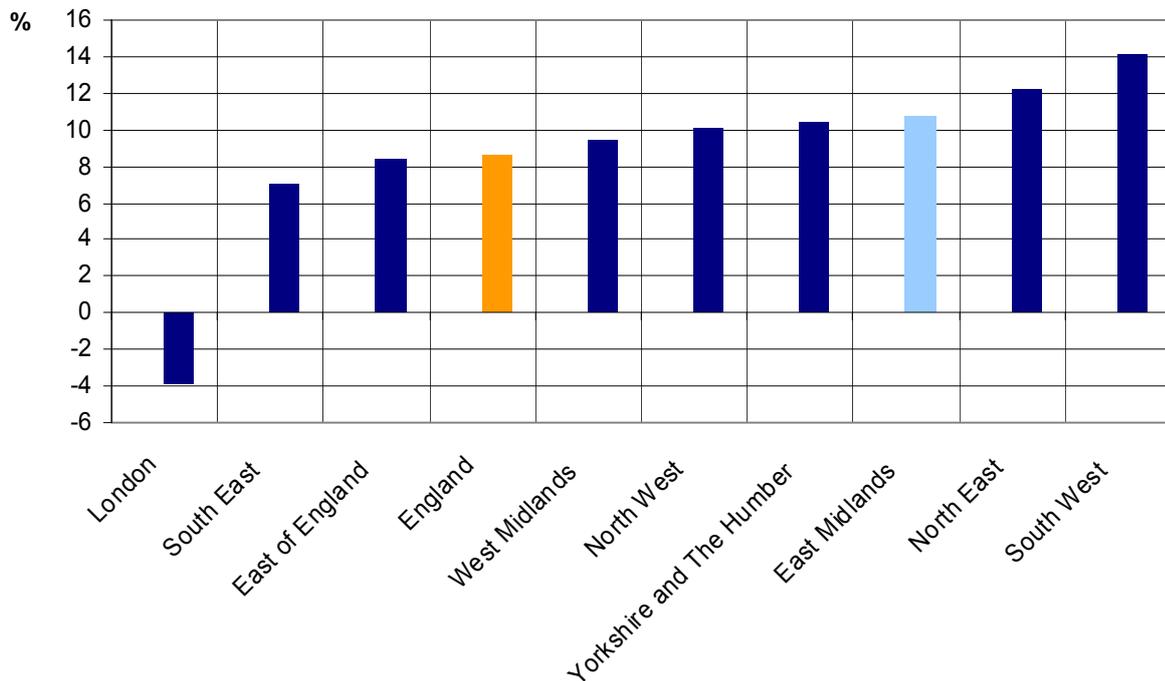
Due to the substantial fixed costs associated with motoring (including road tax, insurance, maintenance, servicing and depreciation) the rise in the cost of petrol and oil is unlikely to have a significant impact on the number of people using cars. The rising price of petrol and oil could, however, make people consider increasing their use of public transport, especially if the higher costs persisted for a prolonged period of time. However, the impacts this would be likely to have would be dependant on a number of factors including the relative cost compared to the public transport alternative, as well as the convenience, reliability and efficiency of these alternatives.

6.3.3 Road vehicles and traffic

The latest data suggests that the East Midlands has experienced higher than average road traffic growth over the last decade. Chart 4 shows that the region has experienced the third highest growth of the nine Government Office Regions (behind the South West and North East) on this measure. Between 1998 and 2008 the level of road traffic on motorways and A-roads increased by almost 11% in the East Midlands.

¹² Motoring expenditure as measured by the Consumer Price Indices (CPI), accessed January 2010.

Chart 4: Traffic increase on major roads (% change in vehicle kilometres), 1998-2008



Source: National Road Traffic Survey, Department for Transport, Regional Transport Statistics: Current live tables, November 2009, accessed January 2010.

Increasing levels of traffic combined with demographic factors such as an increasing population will likely increase the capacity required on the transport infrastructure of the East Midlands.

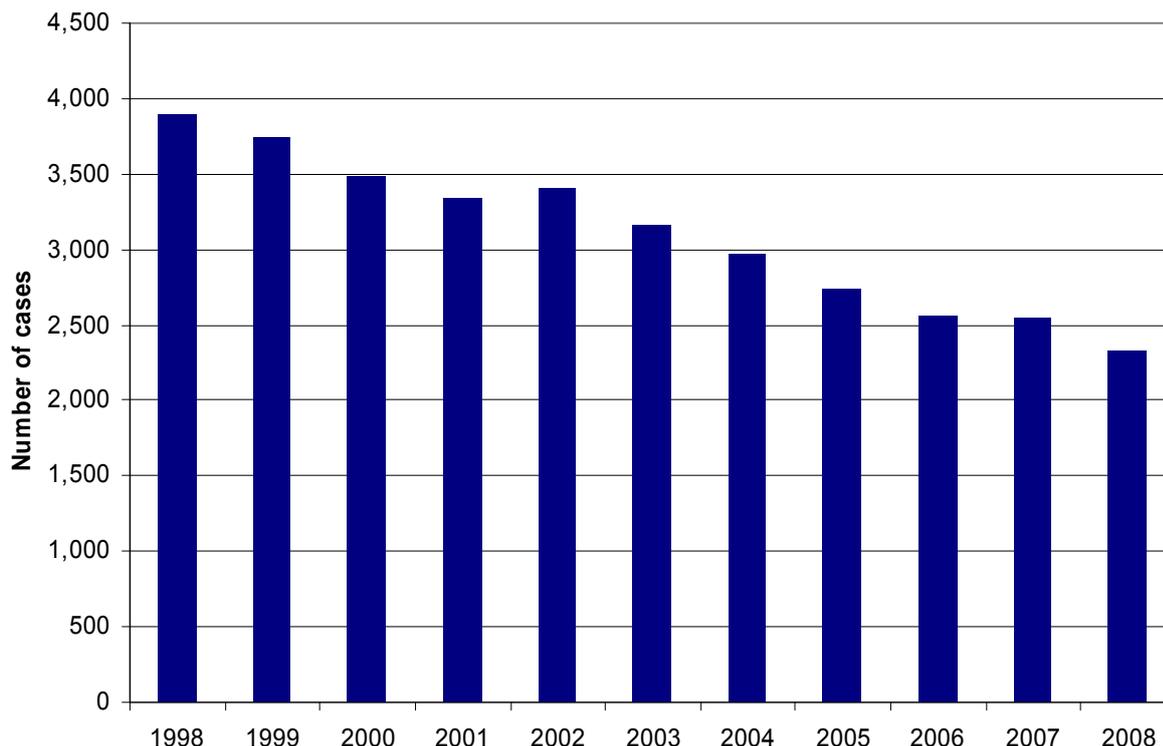
The negative effects associated with increasing traffic levels include congestion, and air pollution, both of which are discussed in more detail later in this chapter and in the Environment chapter. As well as this levels of traffic are also a determinant of the number of accidents that occur on the regions roads.

Accidents are one of the largest disbenefits associated with road transport alongside pollution. There are a number of costs associated with road accidents. In economic terms, there are costs incurred through the congestion caused by accidents, costs associated with the emergency services and National Health Service (NHS) and the loss of output during the time it takes to recover. The loss of life, serious injury and suffering that is experienced as a result of accidents on the regions roads also has an adverse impact on economic wellbeing.

There were over 17,500 casualties on the region's roads in 2008 (6% lower than in 2007 and accounting for 8.7% of the total number of casualties in England). The number of casualties has been steadily decreasing from a peak of around 24,000 in 1998 to their current levels.

Chart 5 shows how the number of people killed or seriously injured has also decreased in the last decade from 3,900 in 1998 to 2,300 in 2008, a fall of 40%. This is greater than the fall in England of around 35% over the same period. This reduction has been experienced despite the significant increase in the levels of traffic on the regions roads compared to the averages for England and Great Britain. The Regional Transport Strategy¹³ (RTS) highlights improvements in safety as a key objective of road investments.

Chart 5: Killed or seriously injured casualties on roads in the East Midlands, 1998-2008



Source: Department for Transport, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

6.3.4 Personal road transport energy consumption

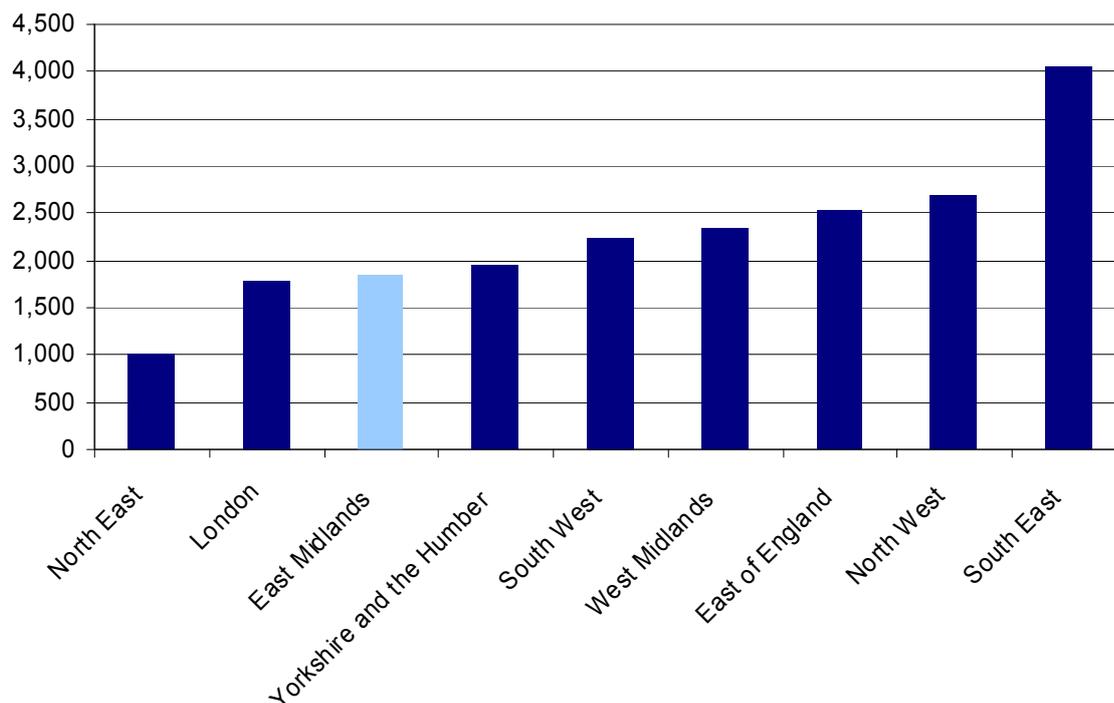
The East Midlands has relatively low personal road transport energy consumption¹⁴ despite having a higher than average dependence on the use of private transport and a high level

¹³ Regional Transport Strategy, published in the Regional Spatial Strategy for the East Midlands, Government Office for the East Midlands, March 2005.

¹⁴ Personal road transport energy consumption is the measure of fuel consumption and CO₂ emissions for personal vehicles including buses, diesel cars, petrol cars and motorcycles produced by Netcen, an operating division of AEA Technology. Netcen uses fuel consumption factors combined with traffic data on six major classes of vehicles to estimate national fuel consumption and CO₂ emissions from the road transport sector. Source: Development of regional estimates of fuel consumption by the road transport sector – Stage 2, a report produced for DTI, March 2005.

of freight movement (Chart 6). The relatively small size of the East Midlands population can partly explain this analysis as the data is a regional total, and not produced on a per capita basis. With the projected strong growth in population, it is likely that road transport energy consumption will increase in the long term.

Chart 6: Personal road transport energy consumption by Government Office Region, 2007, thousands of tonnes of fuel



Source: Regional and Local Authority road transport consumption statistics 2007, Department of Energy and Climate Change, June 2009.

Note: Personal includes personal travel (buses, diesel cars, petrol cars and motorcycles).

Data is also available at a sub-regional level for CO₂ generated from road transport giving a more direct measure of road transport's effect on the environment. The data shows that the Housing Market Areas (HMAs) of Leicester and Leicestershire, Northern, Nottingham Core, Nottingham Outer and West Northamptonshire all have over 10% CO₂ emissions generated from road transport.¹⁵ This is a product of the level of commuting in these HMAs and major road transport infrastructure – principally the M1.

6.3.5 Public expenditure and public transport

The road infrastructure of the UK is an integral part of the UK economy. As such a significant amount of public infrastructure expenditure is allocated to the construction and maintenance of the road network. The size of these infrastructure projects often means

¹⁵ East Midlands RSS Partial Review: A Statement of Conditions & Issues, East Midlands Regional Assembly/Atkins, October 2008. For more information on HMA's see Demography Chapter.

they have a direct impact on output and employment in regions. In this way they can be used to stimulate demand in times of an economic downturn. Table 5 shows that in 2006-2007 there was a total of £636.1 million spent on the road infrastructure of the East Midlands, just over 9% of the total spent on England's roads.

- Around 70% of all expenditure on the road network (motorways, trunk roads and local roads) in the East Midlands was on new construction or improvement.
- As a proportion of total spend there is significantly more expenditure on motorways and major trunk roads in the East Midlands (31.4%) than in England as a whole (23.1%).
- Just over 20% of expenditure was on routine maintenance of the road network in the East Midlands, similar to the level in England.
- The East Midlands has a lower proportion of spending on other items such as road safety and lighting than in England as a whole.

Table 5: Expenditure on roads in the East Midlands and England, 2006-2007

| | | East Midlands | | England | |
|----------------------------------|--|---------------|------------|----------------|------------|
| | | £ million | % | £ million | % |
| Motorways and trunk roads | New construction / improvement and structural maintenance | 199.9 | 31.4 | 1,620.8 | 23.1 |
| | Current maintenance including routine and winter maintenance | 54.8 | 8.6 | 482.0 | 6.9 |
| | DBFO shadow tolls ¹ | 16.3 | 2.6 | 242.1 | 3.5 |
| Local roads² | New construction/improvement for highways, lighting, road safety and structural maintenance ³ | 236.0 | 37.1 | 2,730.0 | 38.9 |
| | Revenue expenditure on bridge structural maintenance and strengthening | 2.8 | 0.4 | 58.3 | 0.8 |
| | Routine and winter maintenance | 78.8 | 12.4 | 1,068.9 | 15.2 |
| | Revenue expenditure on road safety | 16.2 | 2.5 | 399.6 | 5.7 |
| | Revenue expenditure on public lighting | 31.3 | 4.9 | 407.5 | 5.8 |
| | All road expenditure | 636.1 | 100 | 7,009.2 | 100 |

¹ Payments to contractors under design, build, finance and operate schemes (DBFO).

² Local Authority expenditure excludes car parks.

³ Includes expenditure on patching.

Source: Highways Agency Financial Accounts and Local Authority returns to Communities and Local Government, published in Department for Transport, Regional Transport Statistics 2008, January 2009.

6.3.5.1 Bus and light rail

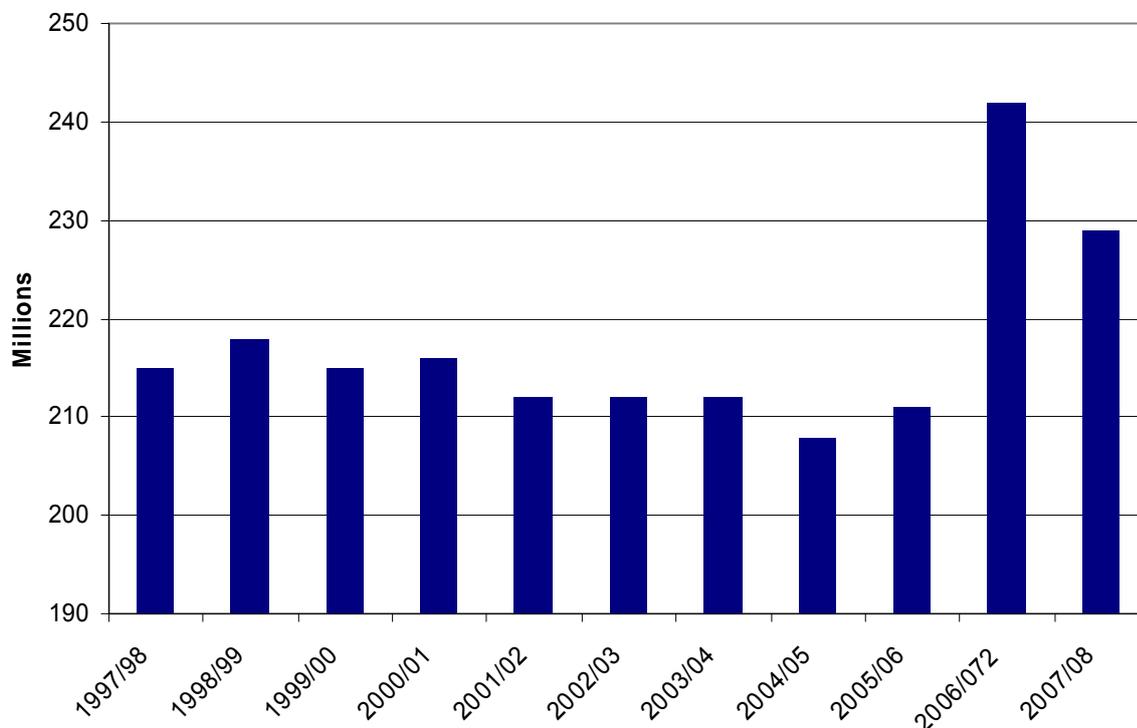
Buses are the most widely used method of public transport for local journeys across the country, offering a more flexible, and in some instances more convenient, method of transport than fixed rail lines. Nationally, more than three quarters of buses are provided commercially. As such, services are usually provided where there is a business case to do so. Local government can, and does, use subsidies to ensure provision where local needs are not being met.

- Journeys taken by bus and light rail have been relatively volatile over the past decade. Between 1997-1998 and 2004-2005 the number of journeys taken by bus and light rail decreased from 215 million to 208 million, a fall of 3.3%. However, Chart 7 shows that in 2006-2007 the number of journeys had increased to 242 million before falling to 229 million in 2007-2008. The level of bus and light rail journeys experienced since 2006-2007 is a significant departure from the preceding trend. This is likely, in part, due to an increase in the number of travel schemes for residents of the region between 2006 and 2008.
- The North West has the largest number of bus and light rail journeys outside of London, accounting for 21% of all journeys made in England (excluding London). The East of England has the lowest number of bus and light rail journeys accounting for 7% of all journeys made in England (excluding London).
- Research into bus journeys by Housing Market Area (HMA)¹⁶ shows that the highest percentage of total bus journeys are made in the regions urban centres – Nottingham Core (31%), Leicester and Leicestershire (27%) and Derby (10%).
- Part of the increase in journeys recorded between 2004-2005 and 2007-2008 can be attributed to Nottingham Express Transit (Nottingham Tram) – the only light railway service in the East Midlands. Since opening in 2004, Line One¹⁷ has experienced significant growth in passenger numbers, peaking at 10.2 million journeys on the network during 2007-2008. The success of the Line One network has led to plans for two more lines to be put forward (Phase Two). Funding options for Phase Two are currently being explored by local and regional partners.

¹⁶ East Midlands RSS Partial Review: A Statement of Conditions and Issues, East Midlands Regional Assembly/Atkins, October 2008.

¹⁷ Line One was the first stage of the tram network connecting Hucknall and Phoenix Park to Nottingham Railway Station. <http://www.nottinghamexpressstransit.com/>

Chart 7: Bus and light rail journeys, East Midlands (millions), 1997-1998 to 2007-2008, millions



Source: Department for Transport, Survey of Public Service Vehicle and Tram Operators, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

Use of the bus network is affected by the efficiency and availability of the service, although some non-car-owning households in the region are captive to the bus network regardless of these factors. The National Travel Survey offers a measure of availability based on the percentage of households within 13 minutes walk of their nearest bus stop. On this measure the East Midlands performs relatively badly as 87% of households were within 13 minutes walk of their nearest bus stop in 2006-2007. Although this represents a significant improvement on the level reported in 1995-1996 (of 81%) it remains one of the lowest of the English regions. The geography of the region is likely to be a contributing factor. On this measure the North East is the best performing region outside of London where 95% of households are within a 13 minute walk of a bus stop. The South West and East of England perform the worst on this measure where 82% and 84% of the population are within the specified distance respectively.

6.3.5.2 Rail

Rail is the second most used method of public transport behind bus and light rail with over 26 million passenger trips taking place every year.¹⁸

¹⁸ Office of Rail Regulation, National Rail Trends Yearbook April 2008- March 2009, September 2009.

Rail patronage in the East Midlands has increased by almost 80% between 1995-1996 and 2007-2008. As Chart 8 shows, until 2004-2005 the increase was significantly higher than the increase in England as a whole. However, between 2004-2005 and 2007-2008 rail patronage in England increased significantly (by 45%) compared to the increase experienced in the East Midlands (18%). The East Midlands is now ranked 6th, in front of the South East, South West and North East using the rail patronage index. Further analysis of data from the Office of Rail Regulation¹⁹ indicates that:

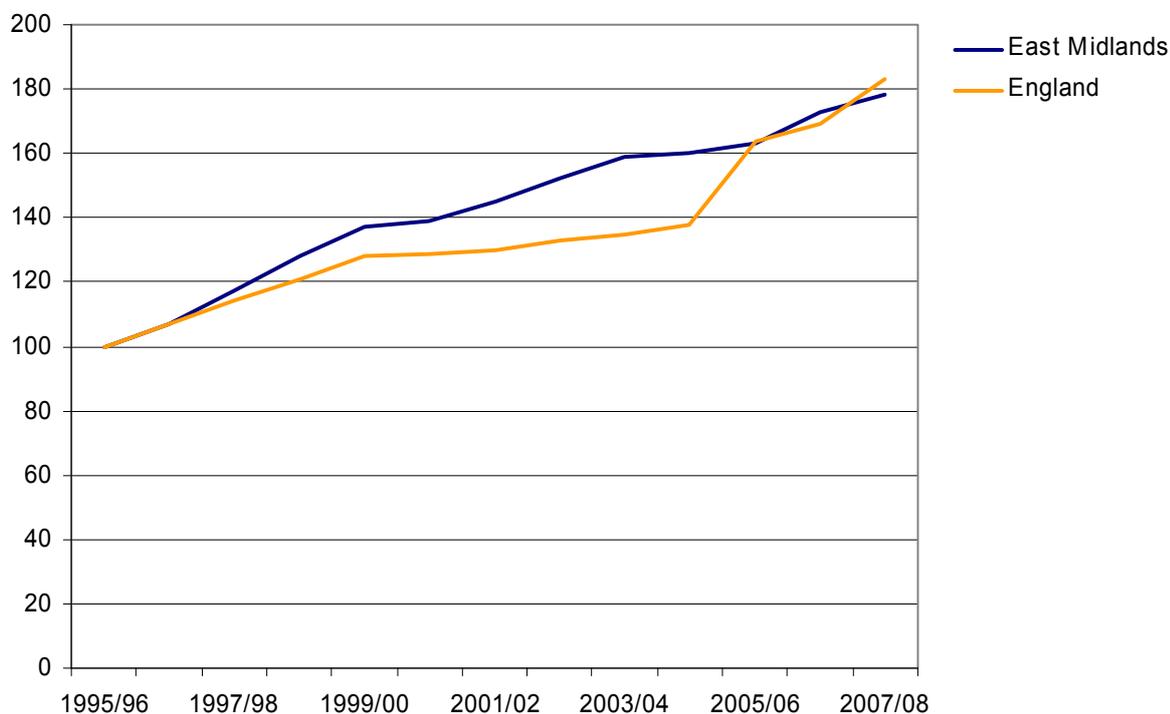
- The largest flow of passengers on the rail network of the East Midlands is between Nottingham and Leicester;
- Forty five percent of all journeys originating from the East Midlands were to destinations within the region in 2006-2007. Other main destinations include London (23%) and the West Midlands (9%);
- Of the passengers travelling to London, almost a third originated from Nottingham, Leicester and Derby²⁰; and
- The percentage of journeys within the region is significantly lower than other regions such as the North West (81%), Yorkshire and the Humber (74%) and London (70%). This can be explained, in part, by the lack of a single major metropolitan area in the region serviced by local rail networks.

The increase in the use of the rail network over the past decade can be attributed, in part, to a large improvement in the network infrastructure, increasing capacity and improving punctuality and reliability.

¹⁹ National Rail Trends 2007-2008 Yearbook, Office of Rail Regulation and Regional Transport Statistics: Current live tables, accessed in January 2010.

²⁰ East Midlands RSS Partial Review: A Statement of Conditions and Issues, East Midlands Regional Assembly/Atkins, October 2008

Chart 8: Regional rail patronage growth, East Midlands and England, 1995-1996 to 2007-2008 (1995-1996 = 100)



Source: Office of Rail Regulation published in Department for Transport, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

6.3.6 Congestion

Many of the disbenefits associated with travel occur when transport systems become congested. This happens when high demand is placed on them in certain time periods. As previously noted in this chapter (section 3.1.1 'Trips by purpose'), although only 15% of total trips made in the region are classed as 'commuting', it is the concentration of these trips at certain periods which causes congestion. This point is further emphasised by the fact that over 60% of journeys are classed as 'personal' or 'shopping' but these journeys are not seen as a major cause of congestion due to the trips being spread more evenly over different time periods.

Aside from the personal costs (delays, aggravation) and environmental impacts of congestion, there is also substantial evidence that there are significant economic costs to national and regional economies. Estimating the real cost of congestion is subject to a degree of uncertainty. For this reason studies into the area have offered a range of estimates of the cost of congestion to the UK economy. The Confederation of British Industry (CBI) has estimated that congestion costs employers £20 billion per year, equivalent to around £1,000 per household.²¹ Other estimates put the annual cost of

²¹ The Economic Costs of Road Traffic Congestion, ESRC Transport Studies Unit, University College London, Goodwin, P., May 2004.

congestion between £7 billion²² and £15 billion.²³ These studies, although differing in methodology and output, suggest that the costs of congestion to the UK economy are substantial and with the number of vehicles on the UK roads increasing by 15% over the last decade and expected to increase further, these associated costs may also increase.

There is no official data at regional level on the costs of congestion but recently commissioned research shows that in the East Midlands:²⁴

- The total cost of congestion to the economy of the East Midlands is around £935 million per annum, comprising £825 million in direct costs²⁵ and £110 million in wider economic impacts.²⁶ This total cost equates to 0.7% of regional GVA; and
- The highest costs of congestion are centred around the regions major urban centres, such as the Three Cities sub-area²⁷ and lowest in more rural areas, such as the Northern²⁸, Eastern²⁹ and Peak sub-areas.³⁰

These findings corroborate the evidence put forward in the Eddington Study that congestion is an increasingly important issue for the UK and that impacts and disbenefits are centred around the UK's major urban areas.

There are a range of policy measures available to help ease road congestion affecting both the supply and demand of personal transport. A number of these measures have been used to ease congestion in the East Midlands. These can be broken down into measures on both the supply and demand side.

On the supply side:

- Widening of key road networks, including the M1 and A46;
- Investment in public transport services, such as the Nottingham Tram and new rail services;

²² The Costs of Road Congestion in Great Britain, National Economic Research Associates, Dodgson, J., Lane, B., July 1997.

²³ PROPOLIS: Planning and research of policies for land-use and transport for increasing urban sustainability, Consortium research project funded by the European Commission, Kari Lautso et al, February 2004.

²⁴ Economic costs of Congestion in the East Midlands, Atkins, May 2007.

²⁵ Direct costs are those costs that are directly associated with congestion affecting users (business and other users). Examples of direct costs include the value of labour lost due to congestion and the increased pollution.

²⁶ Wider impacts include competition, and labour market effects.

²⁷ The Three Cities sub-area includes Nottingham, Leicester and Derby and the Hucknall part of Ashfield District.

²⁸ The Northern sub-area is comprised of Nottingham Outer and Northern HMAs (see HMA map in Demography chapter).

²⁹ The Eastern sub-area comprises of Lincolnshire and Rutland.

³⁰ The Peak sub-area includes Leicester, Derby and Nottingham Core HMA and the Hucknall part of the Ashfield District.

- Improving the management of the existing road network, including the provision of new or extended bus lanes and safe routes to promote walking and cycling;
- Policies and infrastructural improvements to promote walking and cycling, especially for shorter journeys³¹; and
- Encouragement of patterns of new development that reduce the need to travel, especially by car.³²

Influencing demand is less direct by its nature and is achieved through attempts to persuade travellers to change their behaviour. Policies outlined in the Regional Transport Strategy (RTS) to influence demand have been termed 'soft measures'. These include³³ demand side measures such as:

- Travel plans in workplaces and schools;
- Creation of transport partnerships to market and promote different travel options;
- Projects promoting innovations in remote working and personalised travel plans; and
- Restraining the supply, or increasing the cost, of car parking to encourage other methods of travel.

Whilst congestion poses a large problem for the region's urban centres, a far larger problem for the region's rural areas is that of accessibility. Accessibility is examined in the Economic Inclusion and Deprivation chapter of The East Midlands in 2010.

6.4 Freight transported by land

The transport of goods is essential for the efficient and productive operation of both regional and national economies. Materials and parts for processing (inputs), as well as finished goods (outputs) need to be transported efficiently to reach customers. The central location of the East Midlands increases the attractiveness of the region for distribution activity and as a location for 'distribution hubs'. Indeed, there is an above average number of key national and regional distribution centres in the East Midlands.³⁴ Whilst this is seen as one of the region's strengths, it has a number of implications for both land-use and transport infrastructure. Increasing the capacity of the region's freight network will play a key role in the future of this industry. To increase capacity in an efficient and sustainable way, approaches such as increasing the use of inland waterways and coastal navigation are being explored in addition to promoting a modal shift from road to rail transportation.

³¹ Regional Spatial Strategy for the East Midlands (RSS8) – Regional Transport Strategy, Government Office for the East Midlands, March 2005.

³² Ibid.

³³ Ibid.

³⁴ The Eddington Transport Study, HM Treasury, Department for Transport, December 2006.

6.4.1 Freight transported by road

Table 6 shows the transport by road of goods originating in the East Midlands and England between 2004 and 2008.³⁵

Table 6: Freight transport by road – goods lifted by origin (million tonnes), 2004-2008

| Origin | 2004 | 2005 | 2006 | 2007 | 2008 |
|--|-------|-------|-------|-------|-------|
| East Midlands | 172 | 180 | 197 | 204 | 190 |
| England | 1,483 | 1,490 | 1,553 | 1,592 | 1,479 |
| East Midlands as a percentage of England | 11.6 | 12.1 | 12.7 | 12.8 | 12.8 |

Source: Department for Transport, Continuing Survey of Road Goods Transport, published in Department for Transport, Regional Transport Statistics: Current live tables, October 2009, accessed January 2010.

As demonstrated in Table 6, the proportion of freight being moved from the East Midlands has increased relative to the level reported in England between 2004 and 2008. Goods 'lifted' from the East Midlands account for 12.8% of the total in England, a significant increase of 1.2 percentage points from the level in 2004.

In 2008, 190 million tonnes of freight was lifted in the East Midlands, an increase of 10.5% from 2004. Of all the freight lifted in the East Midlands in 2008, 95 million tonnes (50%) was to destinations within the region. The greatest proportion of freight to be transported outside of the region is to Yorkshire and the Humber (10%), the West Midlands (10%) and the East of England (9%).

The East Midlands has the lowest percentage of internal freight movements (i.e. freight lifted to destinations within the region), of any English region. This demonstrates the importance of the East Midlands to its neighbouring regions. The South West has the highest percentage of internal freight movements, at 76% of all freight lifted, followed by the North East (70%) and the North West (68%). The data highlights that regions lift the majority of freight either within their region or to directly adjacent regions. The relative scale of inter-regional freight movement in the East Midlands reflects both its geography, located centrally in the middle of the UK, and the fact it also borders five other Government Office Regions.³⁶

The data also highlights a reduction in total goods lifted between 2007 and 2008 in both the East Midlands and England. This is likely picking up the early stages of the recession when businesses were reluctant to expand growth during an increasingly turbulent economic climate.

It is accepted that freight transported by road has a substantial environmental impact. To combat this impact, haulage firms are increasingly purchasing more environmentally

³⁵ Data prior to 2004 is no longer comparable with current data due to methodological changes.

³⁶ The East Midlands shares a border with the East of England, South East, West Midlands, North West and Yorkshire and the Humber.

friendly vehicles which meet with ever more stringent EURO standards³⁷ and contribute to emissions reductions.

6.4.2 Freight transported by rail

Compared to road transport, rail represents a more environmentally friendly and sustainable method of transport. Rail is primarily used as an efficient method of transporting bulk commodities such as coal, construction materials and oil and petroleum. The Government is keen to expand the use of rail for freight transportation.

With 19 freight terminals primarily handling aggregates and heavy commodities, and the UK's most advanced multimodal railport (Davenport International Rail Freight Terminal, DIRFT), the East Midlands plays a national role in rail freight movements. The Northamptonshire Strategic Employment Land Assessment³⁸ noted that DIRFT provides "significant, sustainable opportunities for future growth" which could be utilised to prevent "latent market demand.... being 'pushed' away from the county".

Between 2003-2004 and 2008-2009,³⁹ freight transported by rail increased steadily in Great Britain, with an average annual growth rate of 1.9%. In 2007-2008 and 2008-2009, however, the level of freight transported by rail in the East Midlands fell by 3.2% and 2.6% respectively, to their current levels of 20.6 billion tonne kilometres. In terms of total freight moved by all modes of transport, rail has become relatively more important. In 2002, rail accounted for 7.4% of all freight moved in Great Britain. By 2007 this had increased to 8.3%. It is also interesting to note that this increase in total freight has occurred despite a falling trend in the total number of freight train movements (a fall of 4.7% between 2007-2008 and 2008-2009). This indicates considerable efficiency gains in the system.

It has been noted in recent reports⁴⁰ that, along with aggregate materials,⁴¹ the construction sector is responsible for much of the freight movement between the East Midlands and London (a key market for the East Midlands). Freight movements from the aggregate and construction sector between the East Midlands and London are expected to increase steadily over the medium term to service demand generated from major construction projects in the capital, including the 2012 Olympics and Thameslink.

6.4.3 Freight moved by air

Freight movement by road and rail has historically been the most cost efficient method of transporting freight domestically. Developments in the air transport industry have led to increased capacity and reduced costs, meaning air transport has become increasingly affordable for domestic as well as international freight transport. East Midlands Airport

³⁷ http://www.transportenvironment.org/tag/euro_standards

³⁸ Northamptonshire Strategic Employment Land Assessment (SELA), Atkins, November 2009, page 19.

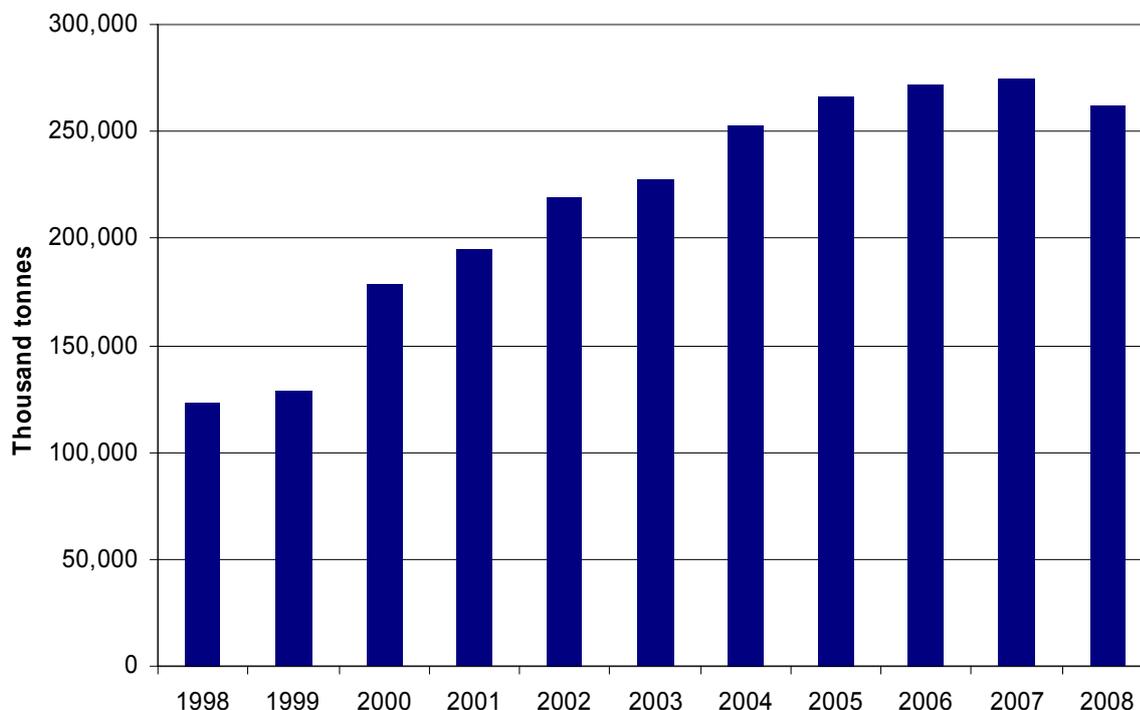
³⁹ Office of Rail Regulation, National Rail Trends 2008-2009 Yearbook.

⁴⁰ Delivering a Sustainable Railway, Department for Transport, July 2007.

⁴¹ The East Midlands is a key exporter of aggregate materials. For more information please see the Environment Chapter.

(EMA) is the UK's primary pure freight regional airport.⁴² In 2008, 262,000 tonnes of freight was lifted through East Midlands Airport, the largest amount of freight lifted in any region outside London. The tonnage of freight lifted has increased by 112% over the past decade, from 123,000 tonnes in 1998 to its current level, as shown in Chart 9.

Chart 9: Tonnage of freight lifted in the East Midlands, 1998-2008



Source: Civil Aviation Authority, published in Department for Transport, Regional Transport Statistics: Current live tables, November 2009, accessed January 2010.

The tonnage of air freight lifted in the East Midlands as a proportion of total air freight lifted in England has increased from 6.2% in 1998 to 11.9% in 2007. This increase has been driven primarily by developments and capacity improvements at EMA.

The small decline in freight lifted in 2008 compared with 2007 levels can be in part attributed to the early stages of the recession. Future data releases will demonstrate how the recession has affected levels of freight transported by air.

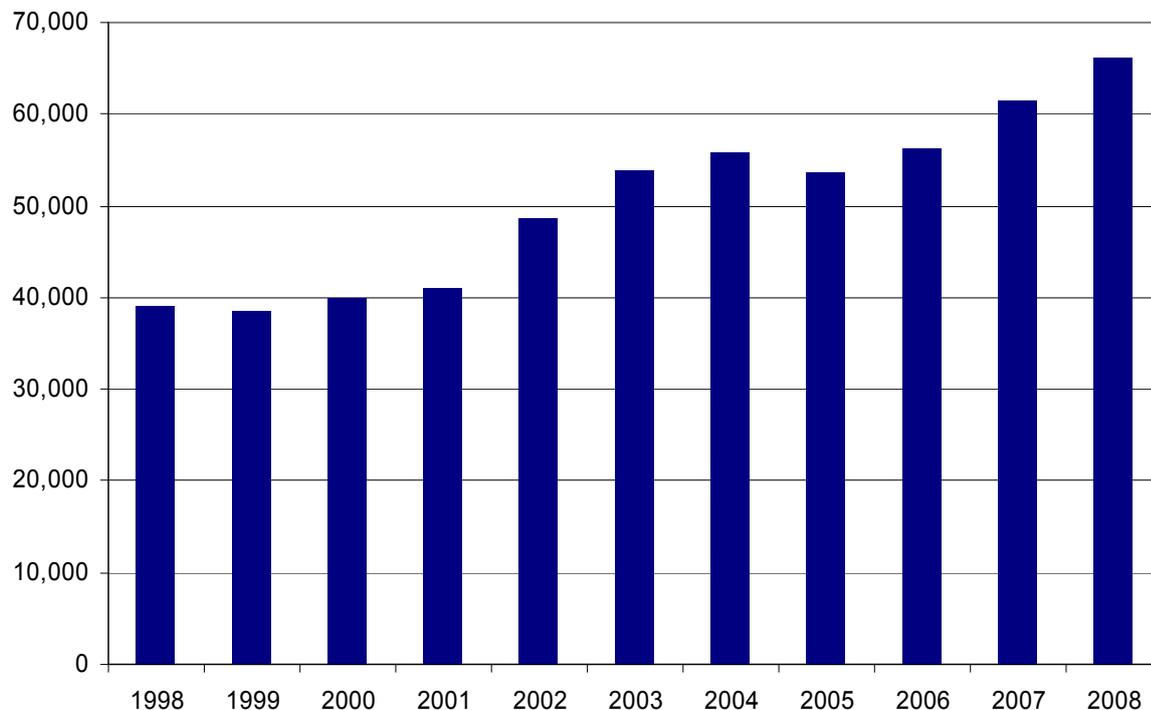
6.4.4 Air transport

As well as increases in freight movements, the East Midlands has also experienced a significant increase in the number of passengers passing through its terminals. With a catchment area of around 10.6 million people within a 90 minute drive, East Midlands

⁴² East Midlands Airport <http://www.eastmidlandsairport.com>

Airport (EMA) services one of the largest populations of any UK airport.⁴³ Chart 10 shows the increases in air transport movements in the East Midlands over the last decade.

Chart 10: Air transport movements (aircraft landings or take-offs) in the East Midlands, 1998-2008



Source: Civil Aviation Authority, published in Department for Transport, Regional Transport Statistics: Current live tables, November 2009, accessed January 2010.

- Air transport movements in the East Midlands have increased by around 70% between 1998 and 2008, the third largest increase in percentage terms of the nine Government Office Regions (GOR). Only the South West and East of England have experienced higher growth rates over the same time period.
- Despite the high level of growth in air transport movements over the last decade, in absolute terms the East Midlands still has a relatively small number of total transport movements. Only the North East and Yorkshire and the Humber experience lower levels of total transport movements.

Terminal passenger numbers are another measure used to indicate the demand for air transport at a regional level, shown in Table 7.

⁴³ East Midlands RSS Partial Review: A Statement of Conditions and Issues, East Midlands Regional Assembly/Atkins, October 2008.

Table 7: Terminal passengers (arrivals or departures) at UK airports, 1998-2008, millions

| Region | 1998 | 2000 | 2002 | 2004 | 2006 | 2008 |
|--------------------------|-------|-------|-------|-------|-------|-------|
| North East | 3.6 | 3.9 | 4.1 | 5.5 | 6.3 | 5.7 |
| North West | 18.2 | 20.4 | 21.5 | 24.6 | 27.6 | 26.8 |
| Yorkshire and The Humber | 1.8 | 2.1 | 2.0 | 2.9 | 4.2 | 4.3 |
| East Midlands | 2.1 | 2.2 | 3.2 | 4.4 | 4.7 | 5.6 |
| West Midlands | 6.6 | 7.5 | 7.9 | 9.3 | 9.7 | 9.9 |
| East of England | 11.3 | 18.4 | 23.0 | 28.9 | 33.9 | 33.1 |
| London | 61.7 | 65.9 | 64.6 | 68.8 | 69.7 | 70.2 |
| South East | 29.8 | 32.8 | 30.3 | 33.0 | 36.0 | 36.1 |
| South West | 2.8 | 3.1 | 4.5 | 6.4 | 8.3 | 9.1 |
| England | 137.8 | 156.3 | 161.2 | 183.7 | 200.5 | 200.8 |
| Great Britain | 154.2 | 174.6 | 182.4 | 208.2 | 226.9 | 227.1 |

Source: Civil Aviation Authority, published in Department for Transport, Regional Transport Statistics: Current live tables, November 2009, accessed January 2010.

Table 7 indicates that:

- Terminal passenger numbers have increased from 2.1 million in 1998 to 5.6 million in 2008 in the East Midlands;
- The East Midlands has experienced the third largest increase in passenger numbers of any GOR, behind the East of England and the South West; and
- Despite the increase in recent years, the East Midlands currently experiences the second lowest level of terminal passengers of any English region. Only Yorkshire and the Humber experiences a lower level, at 4.4 million passengers.

Key Points: Transport

- It is estimated that 108,000 people commute into, and 198,000 people commute out of, the East Midlands to work.
- The East Midlands experiences a lower use of public transport than in England as a whole.
- The time taken to travel to work has increased in the East Midlands between 2001 and 2008. The projected increases in population and traffic levels are likely to put further pressure on the road network of the East Midlands.
- Over two thirds of public spending on the road network of the East Midlands is on new construction or improvement.
- In 2007-2008, 229 million journeys were made in the East Midlands by bus or the Nottingham Tram, 9% of the England total.
- Congestion is estimated to cost the East Midlands economy £935 million per annum.
- There is an above average number of key national and regional distribution centres in the East Midlands supporting the road freight transport industry.
- The East Midlands is home to the UK's primary pure freight airport – East Midlands Airport (EMA).
- The East Midlands has experienced one of the largest increases in terminal passenger numbers of any Government Office Region, supported by EMA.

6.5 Communications

Information and Communications Technology (ICT) has played an increasingly important role in the growth of the UK economy in the last three decades. The role of technology is now fundamentally linked to the performance and competitiveness of regional economies. For this reason, it is important to track and monitor the use of ICT within regions. The OECD⁴⁴ has highlighted that investment in telecommunications has increased by 9% year on year since 2005 in member countries, driven by strong demand, indicating that many telecoms companies have survived and expanded following the 'dot com' crash observed in 2000.

6.5.1 ICT use and broadband availability

Developments in the field of ICT, in particular the availability of broadband internet, are impacting on homes and businesses alike. ADSL "first generation" Broadband services are now available to 99% of all homes and businesses in the UK,⁴⁵ with the costs of subscription to these services falling significantly in recent years. In the home it has become easier to communicate and bank, as well as shop. Technological advances have also meant that home working is becoming an option for an increasing proportion of the population.⁴⁶ Currently 31% of businesses that use computers in the East Midlands offer some sort of mobile working facility. Businesses are also finding it easier to expand their markets and reach a wider customer base as well as reduce costs.

It has been found that take up of broadband has a direct impact on the ability of a firm to innovate and increase productivity.⁴⁷ Many public bodies rank the importance of national broadband infrastructure alongside the other utilities of gas, electricity and water.

emda has sponsored a series of surveys to analyse ICT usage and eAdoption by small and medium sized enterprises in the East Midlands. The latest report⁴⁸ shows that:

- Almost four fifths (77%) of SMEs in the East Midlands use computers;
- Ninety four percent of businesses in the region who have a computer have an internet connection;
- The majority of these businesses are connected to the internet via broadband (96%);

⁴⁴ Communications Outlook 2009, OECD.

⁴⁵ British Telecom, Broadband Information, <http://www.btbroadbandinformation.com>

⁴⁶ Atypical Working Practices in the East Midlands, Experian, September 2007.

⁴⁷ Department for Culture, Media and Sport, Department for Business, Innovation and Skills, Digital Britain, June 2009.

⁴⁸ The Challenge of E-adoption in the East Midlands: East Midlands Small Business E-Adoption Survey 2009, QA Research, August 2009.

- The financial intermediation sector experiences the highest basic computer usage and internet connectivity (98%) followed closely by real estate, renting and business activities (94%). The hotels & restaurant sector experiences the lowest use of computers and the internet, at 52%;
- Computer and broadband usage increases with the number of employees in a business;
- Over half the computer-using businesses in the region have a website, with around two thirds using their websites to conduct online trading; and
- Around 13% of the business population of the East Midlands cited that online business is essential to the future success of their business.

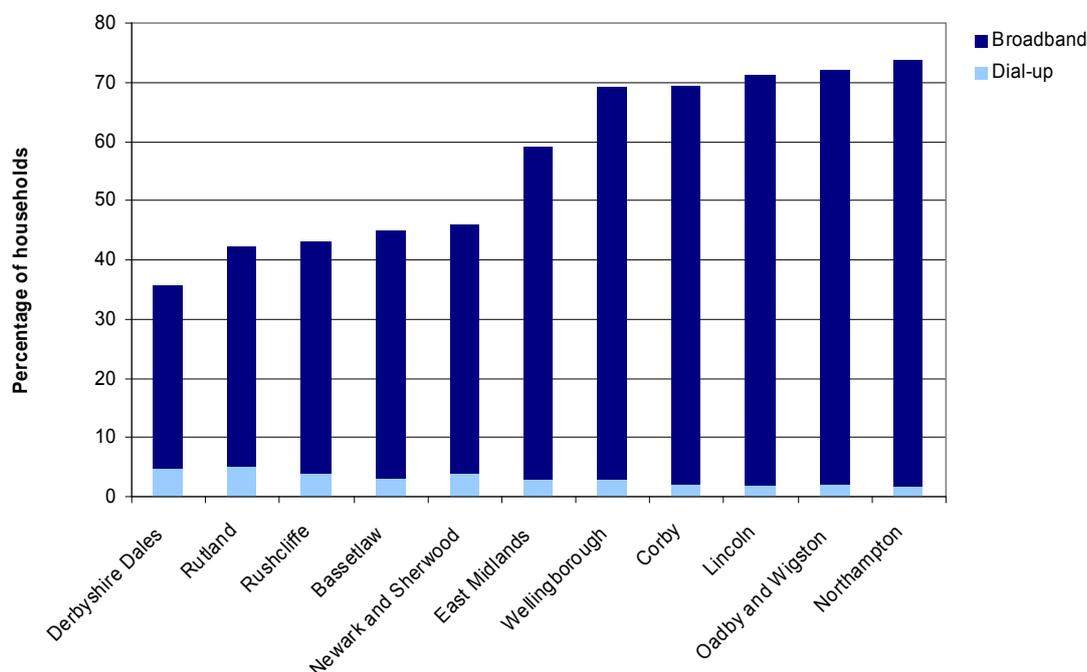
In terms of households, the OECD highlights that an increasing reliance on telecommunications for social and economic interactions has increased the proportion of household budgets dedicated to its provision to around 2.2%. This, together with other factors such as the relatively long contract periods for broadband services (creating a degree of 'stickiness' in the market) has meant that the sector has been able to grow through the recession.

However, despite the fact that an internet connection is available to over 99% of the population not all households are connected. Reasons for not connecting include lack of knowledge, lack of necessity and cost. Although knowledge of the internet and its applications has been increasing and costs have been falling over the last two decades, it is still the case that some sections of the population choose not to have an internet connection at home. ICT usage data is available at district level in the East Midlands⁴⁹ and is shown in Chart 11. The recent PWC report commissioned by Martha Lane Fox indicated that the total potential economic benefit from getting everyone in the UK online is in excess of £22 billion.⁵⁰

⁴⁹ Broadband Geography, Point Topic, August 2009, accessed January 2010.

⁵⁰ The Economic Case for Digital Inclusion, October 2009.

Chart 11: Percentage of households with an internet connection by broadband or dial-up, top and bottom five districts, 2009



Source: UK Broadband Geography, Point Topic, June 2009, accessed January 2010.

This data suggests that 59% of households in the East Midlands have an internet connection, of which 95% is delivered via a broadband connection and 5% via dial-up connections. The highest levels of connection in the region can be found in Northampton (74%), Oadby & Wigston (72%) and Lincoln (71%). These districts also experience amongst the highest levels of broadband access as a percentage of all access methods, at around 97%. Districts such as Derbyshire Dales (36%), Rutland (42%) and Rushcliffe (43%) have the lowest levels of connection. These districts also suffer from relatively low levels of broadband use, at around 89% of all connections. The levels of take-up in these areas are inhibited by relatively low Local Loop Unbundling (LLU)⁵¹ limiting the broadband services available to households in the region, as well as limited cable availability.

A critical factor that affects the potential value to the end user of the internet is the speed of connection. Increasingly many newer applications that consumers and businesses are using are actually hosted on the web – this is in contrast to the early days of the internet where applications sat on the user’s machine. These web-based applications exploit resources located *virtually* on the network itself and use the proliferation of fast broadband connections to access services or data found on the network – this phenomena is generically called ‘cloud computing’. For these applications the consumer’s experience of these applications is determined largely by the speed and quality of their connection.

⁵¹ LLU allows operators to use the copper cable (owned by BT and Kingston in the UK) and make DSL upgrades enhancing the broadband services available to households.

Where the broadband connection is slow or inconsistent consumers will, in practice, struggle to realise the benefits of these innovations.

Ofcom research suggests that in April 2009 average broadband speed in the UK were 4.1Mbit/sec,⁵² equivalent to 57% of the average advertised headline speed that consumers see advertised.⁵³

Currently access to the internet is largely through a DSL (Digital Subscriber Line) connection which 'piggy backs' on the national telephone network. This technology allows households to theoretically receive download speeds up to 24Mbit/sec. However, the copper-based telephone network infrastructure suffers from a number of constraints. Factors such as the distance from the local exchange, the physical condition of the cabling and connections and the number of subscribers using the internet at any one time also affect the quality of service available.

In contrast properties linked by a fibre optic connection have no such physical limitations and offer practically limitless carrying capacity. Were optical fibre to be deployed widely across the network, particularly in the 'last mile' between the local exchange and the end users premises it would increase the ability of the network to cope with rising demand for bandwidth. A network based on fibre that went all the way to the door would fundamentally change the current market and would easily exceed even the highest (50Mbit/sec) speed currently offered. However, the economics of deployment which favours investment into more densely populated locations suggests that even were fibre to be rolled out it would likely to be seen first in urban locations and only later in the more rural, less densely populated areas.

The UK has moved in a very short period of time from practically no broadband to universal provision of 'first generation broadband'. The Digital Britain report published in June 2010 set out the Government's proposals to "secure the UK's position as one of the world's leading digital knowledge economies" and made a series of recommendations including a new Universal Service Commitment for broadband giving everyone in the UK access to 2Mbps by 2012 and discussed the critical importance of securing timely investment in Next Generation Broadband. Although not specifically defined many commentators accept that this would need to be at least 40Mbit/sec with critics suggesting that it should be much higher, the recently published USA Broadband Plan for example cites 100Mbit/sec.

Currently, however, there are only limited plans to invest in Next Generation Broadband infrastructure. With 379 exchanges in the East Midlands, BT have published a programme of upgrading 16 East Midlands exchanges that are due to be completed by March 2011. This investment forms part of their national Fibre to the Cabinet initiative, which seeks to improve broadband speeds to around 40Mbit/sec by replacing, with fibre, the copper connection currently linking existing BT Exchanges to their network of street cabinets.

⁵² Megabits per second.

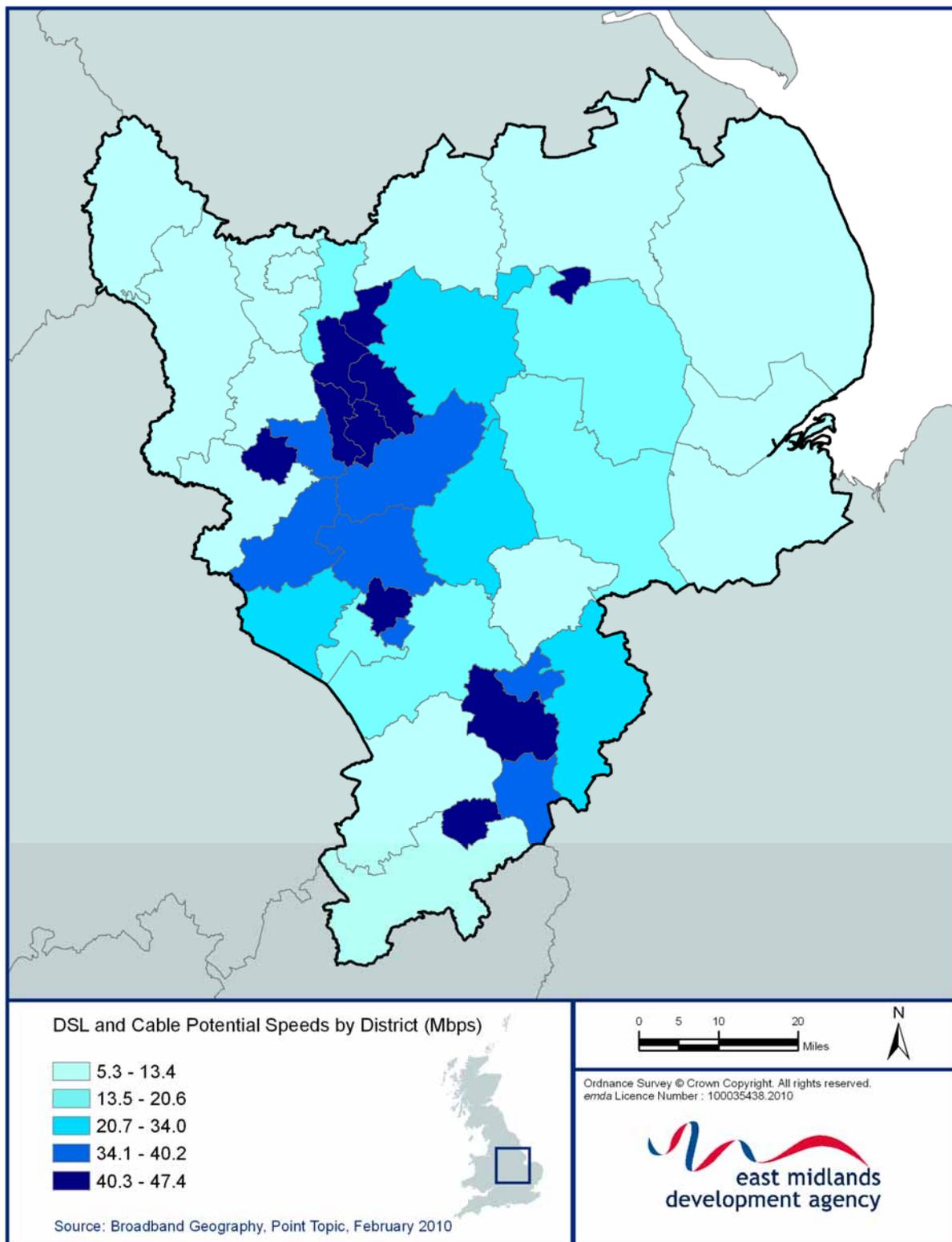
⁵³ Ofcom, UK broadband speeds 2009, Consumers' experience of fixed-line broadband performance, July 2009.

Whilst there is competition between BT and Virgin both providers have largely targeted their investment in faster broadband to broadly the same 40-50% of the population, which is predominantly located in urban locations.

Beyond a limited number of pilots nationally there are no published plans from any of the major telecoms providers to support a widespread roll-out programme of fibre optic point-to-point connections (i.e. a dedicated optical fibre connection that runs all the way to an end user's premises).

Map 2 shows broadband speed across the East Midlands. The data should, however, be treated with some caution given that they reflect 'potential' and not 'actual' speeds experienced by end users. Nevertheless, the analysis does provide a useful guide, highlighting the districts in the East Midlands which appear to suffer from relatively slower broadband provision. Note also that Map 2 does not differentiate the underlying broadband delivery technology and simply shows the average potential speeds derived from data drawn from both the DSL and cable networks.

Map 2: Potential maximum speeds of DSL and cable broadband in the East Midlands, by district, June 2009

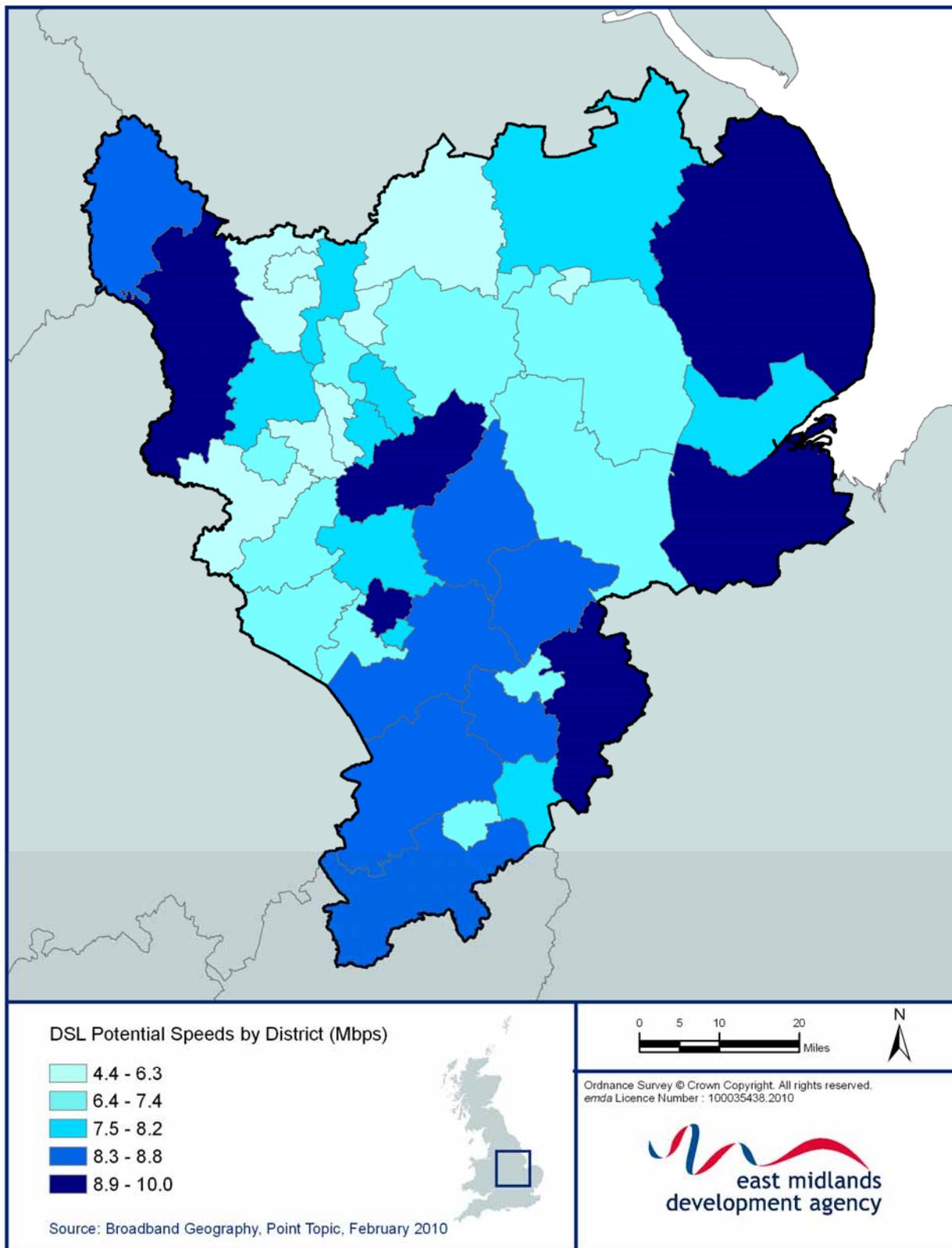


Map 2 shows that there is a clear pattern between the maximum speeds available in the region, which seems to largely reflect the rurality of districts.

- Large urban districts such as Nottingham, Leicester, Derby, Lincoln and Northampton experience the highest potential speeds. This is driven in part by the availability of cable broadband in these areas.
- Rural 80 districts such as East and West Lindsey, Derbyshire Dales, Daventry and South Northamptonshire experience amongst the lowest average potential speeds.

It appears that in locations where an alternative cable infrastructure exists we see significantly higher broadband provision being made available. However, if the cable infrastructure is removed from the analysis a much more complex, nuanced picture of broadband provision emerges.

Map 3: DSL speeds by district, June 2009



By removing the impact of the cable network Map 3 illustrates the state of broadband provided by the DSL network, based on the existing telephone network. A cursory examination of the map suggests that rurality has only a negligible effect on potential DSL speeds available to households. A critical difference in Map 3 is that peak DSL speeds are considerably lower at 8.9-10.00Mbit/sec (contrast this with the 40Mbit/sec in Map 2). Although the map suggests that some rural locations achieve quite high speeds the pattern is highly variable. The reason for this apparent diversity in provision is likely to be explained by the physical distribution of properties around exchanges. Where rural exchanges are located in the centre of small nucleated settlements we might expect to see a high proportion of households physically located relatively close to their exchange and so can achieve relatively high broadband speeds. In other locations the geography of a settlement may not be so benign, i.e. properties are not located concentrically around a nucleated settlement, the exchange is not centrally located, or worse, the exchange is sited at one end of an extended settlement. In both instances the geography of a location will determine the line length of the phone network – between exchange and property – and this will directly influence the quality of broadband available at any one location.

The OECD has also highlighted the growing demand for mobile broadband, accessed via 3G⁵⁴ networks. Mobile internet, available via most modern mobile phones and increasingly through dedicated peripherals for computers, currently accounts for around 40% of all telecommunications revenues in OECD countries. As prices fall and availability increases this figure is likely to rise over the next decade.

6.5.2 Ability to work from home

The option to work from home is becoming increasingly attractive. Research⁵⁵ has shown there are a number of benefits to this practice for both the employer and employee. For the employer benefits include reductions in office space requirements, reduced need for business travel, lower absenteeism as well as productivity gains – flexible workers often work longer hours and with fewer distractions. Individuals can experience benefits that include improved work/life balance, reduced commuting and new opportunities to work for the previously excluded. This research has estimated that income associated with flexible working (of which working from home is a substantial part) contributes between 5% and 12% of GVA in the East Midlands economy.

Developments in ICT have reduced the costs associated with working from home. Working from home is now a realistic possibility for many workers in the service sector. Chart 12 shows that 18% of the workforce resident in the East Midlands had the ability to work from home if required in 2007, slightly below the national average of 19%. The South East is the leading region where 26% of the resident population has the ability to work from home, closely followed by London, with 22%. It should be noted that the South East and London

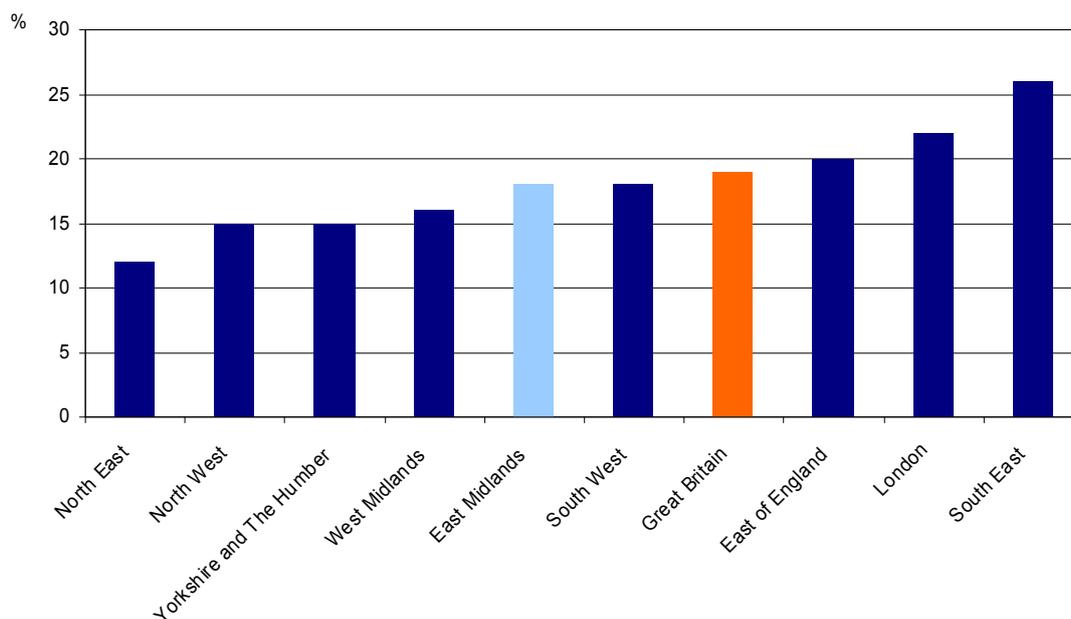
⁵⁴ Third generation telecommunication hardware.

⁵⁵ Atypical Working Practices in the East Midlands, Experian, September 2007.

have higher average travel to work times and have a larger share of service sector industries relative to other regions.

The National Travel Survey indicates that of the 18% of the workforce in the East Midlands that have the ability to work from home, 3% always work at home, 5% worked at home on at least one day in the previous week and 10% did not work at home in the previous week but it is possible for them to work at home.

Chart 12: Possibility of working from home if required by region of residence (%), 2006-2007



Source: Combined National Travel Survey, published in Regional Travel Statistics 2008, Department for Transport, March 2009.

Key Points: Communications

- First generation broadband access to the internet is now available to 99% of all homes and businesses in the UK.
- There are approximately 379 BT exchanges in the East Midlands. BT, as part of a national next generation broadband programme, has announced 16 exchanges where they intend to take fibre to the cabinet to provide faster broadband.
- No telecom provider has announced any plans to provide fibre point-to-point connections in the region.
- In the East Midlands 94% of businesses who have a computer have an internet connection. Of these, 96% are connected to the internet via broadband.
- The region has experienced rapid progress in the roll-out of first generation broadband providing near universal availability. However, there is little evidence that future investment in next generation broadband is being considered beyond the urban cores with more remote and rural communities likely to be disadvantaged the most by delayed investment.
- The highest bandwidth is available in the region's urban centres where competition with a cable alternative significantly increases the potential bandwidth.
- In the East Midlands the proportion of the resident workforce with the ability to work from home is similar to the national average.

6.6 Land

6.6.1 Land use

There is little up to date information providing a comprehensive regional analysis of employment land, an area where there is a clear requirement for further work. In contrast to the absence of recent region-wide studies of employment land quality and provision, there have been a considerable number at sub-regional and district level. *emda* is currently undertaking a study that will map the coverage of these local and sub-regional studies and identify gaps that exist.

In 2006, *emda* commissioned the East Midlands Strategic Distribution Study to consider future land needs of the strategic distribution sector in the region. This found that a total of 386 hectares of land would be required up to 2026, and that 308 hectares of this total would need to be on sites which could be rail linked if the Regional Freight Strategy's target of 30 additional freight trains per day was to be achieved. The Study's findings informed policy development in the East Midlands Regional Spatial Strategy resulting in a new policy which sets out preferred broad locations and site selection criteria.

6.6.1.1 Monitoring of employment land development

According to the Regional Spatial Strategy Monitoring Report 2009, in 2007-2008 the region had committed 2,793 hectares of land for employment purposes. This figure was widely distributed across the region with the largest amounts in Lincolnshire (702 ha) followed by Nottinghamshire (555 ha) and Derbyshire (523 ha).

In 2007-2008, a total of 187 hectares of employment land had been completed (fully developed/re-developed) which is a significant fall from 259 hectares in 2006-2007. In addition, a further 130 hectares were under construction at the time of the survey.

Just 38.1% of employment land completed or under construction in 2007-2008 was on brownfield land, which is a reduction from 45.2% in 2006-2007. The percentages varied widely across the region, from 78.7% in Derby, to just 18.4% in Northamptonshire. The biggest change since 2006-2007 was in Leicestershire where the percentage had fallen from 81.9% in 2006-2007 to just 23.2% in 2007-2008. Only in Derby, Nottinghamshire and the Peak District were the percentages greater in 2007-2008 than in 2006-2007.

The total amount of floorspace completed in 2007-2008 was 732,444 square metres. The majority of this floorspace was new build, which comprised 561,259 square metres. Redevelopment and extensions amounted to 97,760 and 73,424 square metres respectively. Northamptonshire had the largest amount of floorspace completed, at 225,697 square metres, of which 181,288 square metres was new build, 36,098 square metres was redevelopment and 8,311 square metres were extensions. In 2007-2008, there was little or no floorspace completed in Nottingham, Rutland or the Peak District.

6.6.2 Land values

The cost of industrial or commercial sites has a direct impact on a firm's ability to locate to the East Midlands. Whilst the cost of industrial land reflects relative demand, it can also act as a barrier to firms locating in the region. Table 8 shows how industrial land values in the major urban centres of the East Midlands compare to that of the East Midlands and England and Wales averages. The 'minimum' and 'maximum' values shown in the table reflect the difference between particular locations and characteristics of sites within each urban centre. For this reason 'typical' values will be used for comparison. The latest data indicates that the recession has had a significant negative impact on demand for industrial land which has impacted on land values in all English regions:

- Every sub region in the East Midlands has experienced a reduction in land values since the start of the recession. Leicester has experienced a fall of around a third between 2007 and 2009, whilst Northampton, Lincoln and Derby have experienced falls of around a quarter;
- Nottingham has experienced the smallest reduction in land values over the same period, of 18%. This is only marginally less than the regional average of 24%;
- With the exception of Mansfield, every sub-region of the East Midlands has experienced reductions in industrial land values greater than the England and Wales (excluding London) average, of -17%;
- Nottingham has the highest typical land values per hectare of all major urban areas in the East Midlands, at around £450,000. This is higher than the East Midlands average (of £343,000), but remains around a quarter lower than the typical values in England and Wales (excluding London). It should be noted that the England and Wales average is buoyed by relatively strong performance in the South East and East of England; and
- As well as Nottingham, typical land values per hectare in Leicester, Northampton and Derby remain significantly higher than the other urban areas of the East Midlands.

Although there are signs that the economic conditions are stabilising it remains too early to say whether industrial land values have any further to fall before a recovery raises demand for land.

Table 8: Industrial land values per hectare: East Midlands, 2009 (£s)

| | Minimum | Maximum | Typical | Typical in 2007 |
|---|----------------|----------------|----------------|------------------------|
| Lincoln | 225,000 | 275,000 | 250,000 | 325,000 |
| Mansfield | 180,000 | 270,000 | 230,000 | 275,000 |
| Nottingham 385, | 000 | 510,000 | 450,000 | 550,000 |
| Derby 300, | 000 | 400,000 | 350,000 | 450,000 |
| Leicester 330, | 000 | 470,000 | 400,000 | 600,000 |
| Northampton | 300,000 | 450,000 | 375,000 | 500,000 |
| East Midlands | 180,000 | 510,000 | 343,000 | 450,000 |
| England and Wales (excluding London) | 80,000 | 2,475,000 | 600,000 | 720,000 |

Source: Valuation Office Agency (VOA), Property Market Report, July 2009 and July 2007.

Key Points: Land

- There is little up-to-date region wide evidence on employment land. The RSS Annual Monitoring report suggests that there was nearly 2,800 hectares of land committed for employment purposes in 2007-2008.
- The highest land values are to be found in Leicester, Nottingham and Derby.
- The East Midlands has experienced significantly less growth in land values compared to the English average.

6.7 Property

The size, quality and availability of property are all substantial contributing factors to the decision of businesses to invest in a region. The property market is highly responsive to demand and reflects the changing needs of industry. The clearest illustration of this has been the steady decline in demand for manufacturing units in the East Midlands over the last two decades. In contrast, demand has increased for units accommodating the service and distribution sectors.

6.7.1 Premises and floorspace

In 2008, there were 109,525 commercial and industrial premises in the East Midlands. This is lower than any other Government Office Region (GOR) with the exception of the North East. In contrast, the average size of commercial and industrial premises in the East Midlands, as measured by floorspace, was 520m². This is the largest of any GOR. Data shows there has been little change in either the number or average size of property in the region between 2005⁵⁶ and 2008. Analysing data on floorspace broken down by use (office, retail, factory and warehouse⁵⁷) offers a number of further insights:

- Table 9 shows that in 2008, 37% of premises in the East Midlands were designated as retail, the largest of the four sectors. The average floorspace occupied by retail premises was 201m², the smallest average premises size of the three uses; and
- In the same period factories accounted for 26% of premises, whilst offices accounted for 21% of premises. Unsurprisingly, factories have a large average floorspace, at 880m², whilst offices have an average floorspace of 255m². Factories account for a much smaller proportion of the total floorspace in England, at 12.3%.

The previous section highlighted the importance of distribution activity in the East Midlands. In 2008, the number of warehouse premises, as measured as a proportion of all premises, was higher in the East Midlands, at 16.2%, than the national average (15.1%), reflecting the size of the distribution sector in the region. The average size of warehouse premises in the East Midlands, at 1,067m², was higher than any other GOR. Warehouse floorspace in the East Midlands accounts for 11.8% of the total floorspace in England.

6.7.2 Rateable values

This section provides details of the rateable values of floorspace in the East Midlands, compared with those for England as a whole. Annual rateable values are given to all non-domestic properties and are based on a professional assessment of the value of property if it was available to be let to an open market on a specific date. It is used in the calculation of individual business rates bills.

⁵⁶ In 2005 there was a revaluation of this data making comparison with previous years statistically unreliable.

⁵⁷ Data omits the 'other' premises, which is a relatively small proportion of total floorspace.

Table 10 illustrates that the rateable values of retail and office floorspace in the East Midlands are significantly below the England average, at £105m² and £72 m² compared to £130m² and £121m² respectively. The rateable values of factories and warehouses in the East Midlands are comparable with the England average, a reflection of the region's relative strength in industries which demand these premises.

Table 9: Number of premises (with percentage of England total) and floorspace occupation by premises type, England and East Midlands, 2008

| | Retail | | | Office | | | Factories | | | Warehouses | | | | | |
|---------------------------------|---------------|--|---------|---------------|--|---------|---------------|--|---------|---------------|--|---------|---------|-------|-----|
| | East Midlands | East Midlands share of England total (%) | England | East Midlands | East Midlands share of England total (%) | England | East Midlands | East Midlands share of England total (%) | England | East Midlands | East Midlands share of England total (%) | England | | | |
| Premises | 38,887 | 7.5 | 516,809 | 21,860 | 6.5 | 334,713 | 26,837 | 10.9 | 245,263 | 16.9 | 42 | 8.7 | 194,572 | | |
| Floorspace (000m ²) | 7,829 | 7.8 | 100,208 | 5,581 | 5.7 | 97,566 | 23,606 | 2.3 | 192,322 | 18,083 | 11 | .8 | 152,485 | | |
| Average floorspace m(sq) | 201 | 103 | .7 | 194 | 255 | 87.6 | 291 | 88 | 0 | 112.2 | 784 | 1,06 | 7 | 135.4 | 784 |

Source: Department for Communities and Local Government, Live Tables on Commercial and Industrial Floorspace and Rateable Value Statistics, 2008, accessed January 2010.

Note – The table does not contain information on ‘other’ premises.

Table 10: Rateable values of premises in the East Midlands and England, 2008

| | Retail | | | Office | | | Factories | | | Warehouses | | | |
|------------------------------------|---------------|--|------------|---------------|--|------------|---------------|--|-----------|---------------|--|-----------|----|
| | East Midlands | East Midlands share of England total (%) | England | East Midlands | East Midlands share of England total (%) | England | East Midlands | East Midlands share of England total (%) | England | East Midlands | East Midlands share of England total (%) | England | |
| Rateable value (£000s) | 823,952 | 6.3 | 13,021,037 | 399,718 | 3.4 | 11,773,032 | 647,807 | 11.6 | 5,586,670 | 638,356 | 10.6 | 6,037,134 | |
| Rateable value per m(sq) (£/m(SQ)) | 105 | 80.8 | 130 | 72 | 59.5 | 121 | 27 | 93.1 | 29 | 3 | 5 | 87.5 | 40 |

Source: Department for Communities and Local Government, Live Tables on Commercial and Industrial Floorspace and Rateable Value Statistics, 2008, accessed January 2009.

Note – The table does not contain information on ‘other’ premises.

6.7.3 Property types

The type of property available in a region is largely a factor of the demand generated from industry. To complement the previous section on floorspace this sub-section analyses the types of property and associated rentals available in the East Midlands. Data on property rentals is available from the Property Market Reports produced by the Valuation Office Agency. The reports provide a breakdown of rental statistics by industry and use for the major urban centres of the East Midlands.

6.7.3.1 Industrial premises

The Property Market Report provides information on five types of industrial property.⁵⁸

Type 1: Small starter units, 25sq.m-75sq.m.

Type 2: Nursery units, 150sq.m-200sq.m.

Type 3: Industrial/warehouse units, circa 500sq.m.

Type 4: Industrial/warehouse units, circa 1,000sq.m.

Type 5: Converted ex-mill units.

Table 11 shows rental values for these five types of industrial building together with the magnitude of change since July 2004. The data shows that rentals in most types of industrial building have increased during this period. The most notable increases have been in the three cities of Nottingham, Leicester and Derby for type 3 premises, and in Leicester for type 4 premises. It is interesting to note that there has been no change in the rental values for any industrial premises type in Northampton.

Table 11: Rental value for industry in the East Midlands (£ per sq m per annum), July 2008

| East Midlands | Type 1 | | Type 2 | | Type 3 | | Type 4 | | Type 5 | |
|------------------------|--------|-------------------------|--------|-------------------------|--------|-------------------------|--------|-------------------------|--------|-------------------------|
| | Jul-08 | Growth Rate 2004-08 (%) |
| Lincoln | 62 24 | .0 | 52 15 | .6 | 47 17 | .5 | 45 | 28.6 | - | - |
| Ashfield and Mansfield | 55 1 | 0.0 | 50 1 | 3.6 | 45 1 | 2.5 | 40 | 5.3 | - | - |
| Nottingham | 75 1 | 0.3 | 75 2 | 5.0 | 70 4 | 0.0 | 55 | 14.6 | 20 | 0.0 |
| Derby | 75 15 | .4 | 70 20 | .7 | 64 33 | .3 | 48 | 20.0 | - | - |
| Leicester | 66 10 | .0 | 63 26 | .0 | 56 40 | .0 | 54 | 35.0 | - | - |
| Northampton | 85 0. | 0 | 65 0. | 0 | 55 0.0 | | 50 | 0.0 | - | - |

Source: Valuation Office Agency (VOA), Property Market Report, July 2008 and July 2004.

⁵⁸ The latest report which contains detailed data on rental charges by property type is: Valuation Office Agency (VOA), Property Market Report, July 2008. Property type 1-4 are assumed to be located on industrial estates. The July 2009 VOA Property Market Report has been scaled back and no longer includes detailed data for rental charges by property types.

6.7.3.2 Office

High quality office space, which is easily accessible to the workforce and customers, is essential to support the majority of business activities in the service sector. The Valuation Office Agency (VOA) surveys office rentals and gives information on three types of office space.

- **Type 1:** Town centre location. Self contained suite, over 1,000 sq.m, in office block erected in last 10 years.
- **Type 2:** As type 1 but suite size in range of 150 sq.m-400 sq.m.
- **Type 3:** Converted former house usually just off town centre. Good quality conversion of Georgian/Victorian or similar house of character, 50 sq.m-150 sq.m.

Office space rentals vary across the East Midlands although a general preference for town centre locations is reflected in the rental values. Table 12 shows that:

- Nottingham has the highest rentals for all types of office premises whilst Derby has the lowest. Rentals in Derby are approximately two thirds the value of Nottingham;
- Between 2004 and 2008, the highest growth in rental values has been reported for type 2 premises in Leicester and type 3 premises in Nottingham; and
- Northampton has experienced a reduction in rentals for type 2 space and no change in the rentals for type 3 premises.

Table 12: Rental value for offices in the East Midlands (£ per sq m per annum), July 2008

| | Type 1 | | Type 2 | | Type 3 | |
|---|---------|-------------------------|---------|-------------------------|---------|-------------------------|
| | July 08 | Growth Rate 2004-08 (%) | July 08 | Growth Rate 2004-08 (%) | July 08 | Growth Rate 2004-08 (%) |
| Lincoln | 110 | 10.0 | 120 | 33.3 | 85 | 6.3 |
| Mansfield | - | - | 100 | 11.1 | 90 | 20.0 |
| Nottingham | 150 | 7.1 16 | 0 | 6.7 14 | 0 | 40.0 |
| Derby | 95 | 14.5 | 105 | 10.5 | 110 | 4.8 |
| Leicester | 145 | 3.6 | 150 | 50.0 | 115 | 15.0 |
| Northampton (type 1 and 2 edge of town) | 150 | 7.1 | 110 | -21.4 | 135 | 0.0 |

Source: Valuation Office Agency (VOA), Property Market Report, July 2008 and July 2004.

6.7.3.3 Retail

The location and quality of retail premises can have a more direct impact on business turnover than offices or warehouses, due to the direct customer facing role these premises perform. As such, rentals in this market are considerably higher than offices or warehouses. The three types of retail premises surveyed are:

- **Type 1:** Prime position in principal shopping centre;
- **Type 2:** Good secondary off peak position in principal shopping centre; and
- **Type 3:** Modern, purpose built, non-food, warehouse unit, circa 2,500sq.m-5,000sq.m. Edge of town location.

There is much greater disparity between the three types of premises in retail compared with other premises, which reflects the high level of competition amongst businesses for prime sites. Table 13 shows that:

- The highest rentals for all three types of premises are charged in Nottingham, although there has been a slight reduction in the rentals charged for type 1 premises between 2004 and 2008;
- Leicester has experienced the largest growth in rentals for type 1 premises over the same time period. This reflects the completion of a substantial development of retail space in the area, increasing the attractiveness of the areas shopping experience;
- Mansfield has the lowest rental values for the three types of retail premises. This is a product of its lower resident population relative to other urban centres and lack of sizeable retail locations; and
- Rental values for prime locations in Nottingham and Derby have fallen slightly between 2004 and 2008.

Table 13: Rental value for retail in the East Midlands (£ per sq m per annum), July 2008

| | Type 1 | | Type 2 | | Type 3 | |
|-------------|---------|-------------------------|---------|-------------------------|---------|-------------------------|
| | July 08 | Growth Rate 2004-08 (%) | July 08 | Growth Rate 2004-08 (%) | July 08 | Growth Rate 2004-08 (%) |
| Lincoln | 1500 | 11.1 | 600 | 20.0 | 170 | 13.3 |
| Mansfield | 1250 | 13.6 | 375 | 17.2 | 150 | 30.4 |
| Nottingham | 2300 | -4.2 | 1100 | 10.0 | 275 | 10.0 |
| Derby | 1500 | -6.3 | 750 | -3.2 | 175 | 16.7 |
| Leicester | 2300 | 15.0 | 900 | 0.0 | 200 | 42.9 |
| Northampton | 1350 | -3.6 | 800 | 6.7 | 215 | -10.4 |

Source: Valuation Office Agency (VOA), Property Market Report, July 2008 and July 2004.

Key Points: Property

- The East Midlands has the one of the lowest numbers of commercial and industrial premises (109,525) but the largest average size (520m²) of any Government Office Region.
- Retail accounts for the largest percentage of premises in the East Midlands, at 37%, followed by factories (26%), offices (21%) and warehouses (16%).
- The values of retail and office floorspace are lower in the East Midlands than nationally.
- Rental values for prime retail sites are significantly higher in Nottingham and Leicester than other areas of the East Midlands.

6.8 Conclusions

The East Midlands has developed and maintained its transport infrastructure over the last decade, which has helped to support growth in the resident population and business stock. The East Midlands remains well connected to surrounding regions facilitating personal travel as well as trade. Key infrastructure, such as East Midlands Airport and strategic road and rail links, have ensured the East Midlands remains linked to the UK and wider global economy.

The East Midlands experiences net out commuting with around 198,000 people commuting out of the region to work, greater than the estimated 108,000 people who commute into the region. The region continues to experience a relatively low use of public transport compared to other regions and a relatively high dependency on private transport (mainly private car). The dependency on private vehicles, although creating many disbenefits, is largely a function of the region's rural nature.

Although commuting accounts for just 16% of all trips by purpose in the East Midlands, the concentration of these journeys causes many of the disbenefits associated with congestion. It is estimated that congestion costs the East Midlands £935 million per annum.⁵⁹ This research, corroborating national research,⁶⁰ highlights the significant costs that congestion creates in the regional economy. Whilst it is not economical to eliminate congestion there are substantial savings to be made through strategic planning and policy decisions increasing supply and influencing demand.

The East Midlands has amongst the highest levels of car ownership of any Government Office Region. Whilst this, in itself, is not particularly noteworthy it holds more significance when viewed in conjunction with the traffic increase on major roads. The region has experienced the third highest increase in traffic on major roads of any English region.

⁵⁹ Economic costs of Congestion in the East Midlands, Atkins, May 2007.

⁶⁰ The Economic Costs of Road Traffic Congestion, ESRC Transport Studies Unit, University College London, Goodwin, P., May 2004.

This, together with the projected increase in population over the next decade, is likely to increase demand on the road network of the region further.

The freight industry continues to play an increasingly important role in the East Midlands economy, supported by a strong road, rail and air transport network. Whilst this brings many economic benefits, there are significant environmental impacts which arise from the freight industry.

East Midlands Airport (EMA) has developed its capacity in recent years, helping to support the regions freight industry and is now the UK's primary freight hub outside London. Developments at EMA have also supported the business and resident population of the region. EMA will continue to play a key role in the economy of the East Midlands.

Around four fifths of businesses in the East Midlands use computers and 94% of these have a broadband connection. This puts the East Midlands in a strong position to benefit from the economic potential that Information and Communications Technology (ICT) brings to both businesses and individuals. Developments in ICT have increased the opportunity of working from home, which, research⁶¹ has shown, brings a number of economic benefits. Currently, around 18% of the population has the ability to work from home if required, the highest percentage of any northern or midlands region. The region, like the UK, has moved from almost no broadband to near universal availability of first generation broadband in less than five years. However, the situation regarding investment in Next Generation Access (broadband available through fibre optic cables) is much less clear with no firm plan for when this investment will take place.

There is little up-to-date regional data on utilisation of employment land and this is an area where further work is clearly required. There are wide discrepancies in land values and property rents across the region. These values are invariably higher in the region's major urban areas. The region is a key distribution centre, with a significant share of the country's warehouse space. This is a function of the region's location at the heart of the country's transport infrastructure.

Recent economic conditions will inevitably put pressure on funding for transport and infrastructure and it is likely that funding will be reduced and focused on key developments. This issue will affect all regions in the short to medium term.

⁶¹ Atypical working practices in the East Midlands, Experian, September 2007