High Speed Rail: Phase 2b Preferred Route

Sustainability Statement including Post Consultation Update

Appendix C7 – Socio-Economics

A report by Temple-RSK for HS2 Ltd

TEMPLE

LEADERS IN ENVIRONMENT, PLANNING & SUSTAINABILITY.

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1.0 INTRODUCTION

1.1 Background

1.1.1 This report has been prepared to support the HS2 Phase 2b Sustainability Statement including Post Consultation Update report, which describes the extent to which the Government's preferred route for HS2 Phase 2b supports objectives for sustainable development. This document is a technical appendix which summarises the methodology for appraising socio-economics, and the key findings and conclusions that inform the Sustainability Statement main report. The Sustainability Statement places emphasis on the known key impacts only at this stage in the design, prior to commencing the Environmental Impact Assessment.

1.2 Purpose of the socio-economic appraisal

1.2.1 The socio-economic appraisal provides analysis of the potential impacts of HS2 on economic development around the high speed stations served by the preferred route. The appraisal does not consider those stations served by classic compatible routes, such as Crewe, Liverpool, Sheffield, York and Newcastle.

1.2.2 The introduction of a high speed rail network can drive economic development through the following means:

- increased capacity and improved performance – providing improved access to urban centres, leading to stronger economic performance;
- developments around high speed rail stations – the station is a driver of development within its catchment area, particularly for office and hotel developments;
- increased business to business interaction – reducing journey times leading to more competition and interaction between businesses which leads to improved economic performance;
- releasing capacity on the 'classic' network – leading to agglomeration benefits, larger labour catchments and increased labour force participation in city centre; and
- maximising benefits through feeder services linking to HS2 stations.

1.2.3 Productivity gains from the above drivers would be translated into higher wages and profits, leading to more opportunities for attracting employment and investment.

1.2.4 This report examines the predicted changes in land use patterns and resulting development opportunities. It assesses the potential for localised development impacts around the HS2 stations, which are not captured in the main business case modelling and appraisal framework.

1.3 Appraisal methodology

1.3.1 This report follows the same approach that was used for the socio-economic appraisal[1] of Phase One of HS2 and Phase Two as reported in the 2013 Sustainability Statement[2]. It is an update of the 2013 socio-economic appraisal published as an appendix to the 2013 Sustainability Statement. The appraisal has been updated where necessary for new

[1] Booz & Co, Temple and Colin Buchanan (February 2011). HS2 London to the West Midlands Appraisal of Sustainability Appendix 3 – Socio-economic Report

[2] Temple-ERM (July 2013). Sustainability Statement Appendix C Socio Economic Appraisal

socio-economic data and for the revised station locations, alongside policy updates where there have been developments since 2013.

1.3.2 In undertaking the appraisal, account has been taken of the socio-economic impact of transport schemes including other high speed rail schemes. The main impact on land use of new stations or improved services, occurs within a 10-15 minutes walking distance of the station, which equates to a catchment area of 1km. For this appraisal, a 1km catchment area has been considered for high population and employment density areas (Manchester Piccadilly and Leeds) while a 2km catchment area has been analysed for areas with lower density (Manchester Airport station and East Midlands Hub) to take into account that in a lower density area the station serves a wider catchment partially taking on a park and ride function. The catchment areas have been adjusted to correspond to the nearest ward or output area boundary for which socio-economic statistics are published by the Office for National Statistics (ONS).

1.3.3 The socio-economic baseline examines existing demographic characteristics of the areas around the proposed stations: the density of employment and people, skill levels, economic activity, levels of deprivation, sectoral breakdown of the economy and the labour catchment area as shown by travel to work patterns.

1.3.4 The baseline also considers the existing and projected transport and land use characteristics: accessibility of the catchment area, the existing nature of the area in terms of land use and density, the health of the local economy and property market. Existing and aspirational planning policies have also been taken into account, through reviews of policies and discussions with local planning authorities, as well as competing sites in the area and the underlying demand for development.

1.3.5 The potential future level of development activity is also outlined, with employment estimates made by applying employment densities calculated for the Homes & Communities Agency (HCA). This enables an assessment of the scale, density and type of development that is likely to be attracted within the station catchment area and the potential impact on the local population in terms of jobs and housing.

1.3.6 The analysis provides an estimate of the scale and type of additional development that may be supported in the next 25 years and how much of this may reasonably be attributable to HS2.

1.3.7 The methodology for establishing the amount of floor space, both currently in existence and to be supported in the future, has varied according to the level of information available in each of the proposed station locations but includes local area knowledge, published policy and guidance, retail and employment reviews, extant planning permissions (over a threshold of 10,000m^2 commercial or 100 residential units) and regeneration and Development Frameworks / Masterplans.

1.3.8 Using the information gathered, a pipeline of developments were listed for the short to medium term (5-10 years), as well as development aspirations in the longer term – to around 2030-2035. We have used our judgement to broadly estimate the long term development potential attributable to HS2, particularly where information is limited, or where the longer term vision for development is not yet reflected in local planning policy or in the development pipeline.

1.3.9 The assumptions that underpin the uplift that is anticipated to be supported by the arrival of HS2 are based on a number of factors, which are dependent on site location, existing use and perceived development potential. These include:

- the potential for HS2 to 'unlock' and support sites that would not otherwise be assumed to come forward during the next 25 year period. For example, this may include sites that would benefit from being at the new 'front door' of a HS2 station;
- the potential for higher density and tall building development – particularly around new HS2 hubs; and
- the potential for uplift in capacity / density of existing proposal(s) due to the potential arrival of HS2 in a particular location.

1.3.10 The figures presented are the net impact of HS2 Phase 2b. Development that is anticipated to take place without HS2 and that is lost due to construction works (based on the design at this stage of development) is deducted from that which is facilitated by the preferred route.

1.4 Structure of the report

1.4.1 The remainder of the report presents the analysis and key findings for the anticipated socio economic impacts of the proposed HS2 Phase 2b stations, and is structured as follows:

- Chapter 2 states the HS2 objectives, outlines the design concept and presents the HS2 demand forecasts;
- Chapters 3 to 6 establish the socio-economic baseline for each of the four station areas, providing a qualitative and quantitative socio-economic appraisal of the impacts of HS2, including potential development and employment opportunities around the HS2 stations; and
- Chapter 7 summarises the main findings.

2.0 HS2 OBJECTIVES AND PREFERRED ROUTE DESCRIPTION

2.1 The HS2 Phase 2b preferred route

2.1.1 The preferred route of HS2 Phase 2b is shown in **Figure 2-1** and **Figure 2-2**, which present the western and eastern legs respectively.

Figure 2-1 – HS2 Phase 2b preferred route: Crewe to Manchester (western leg)

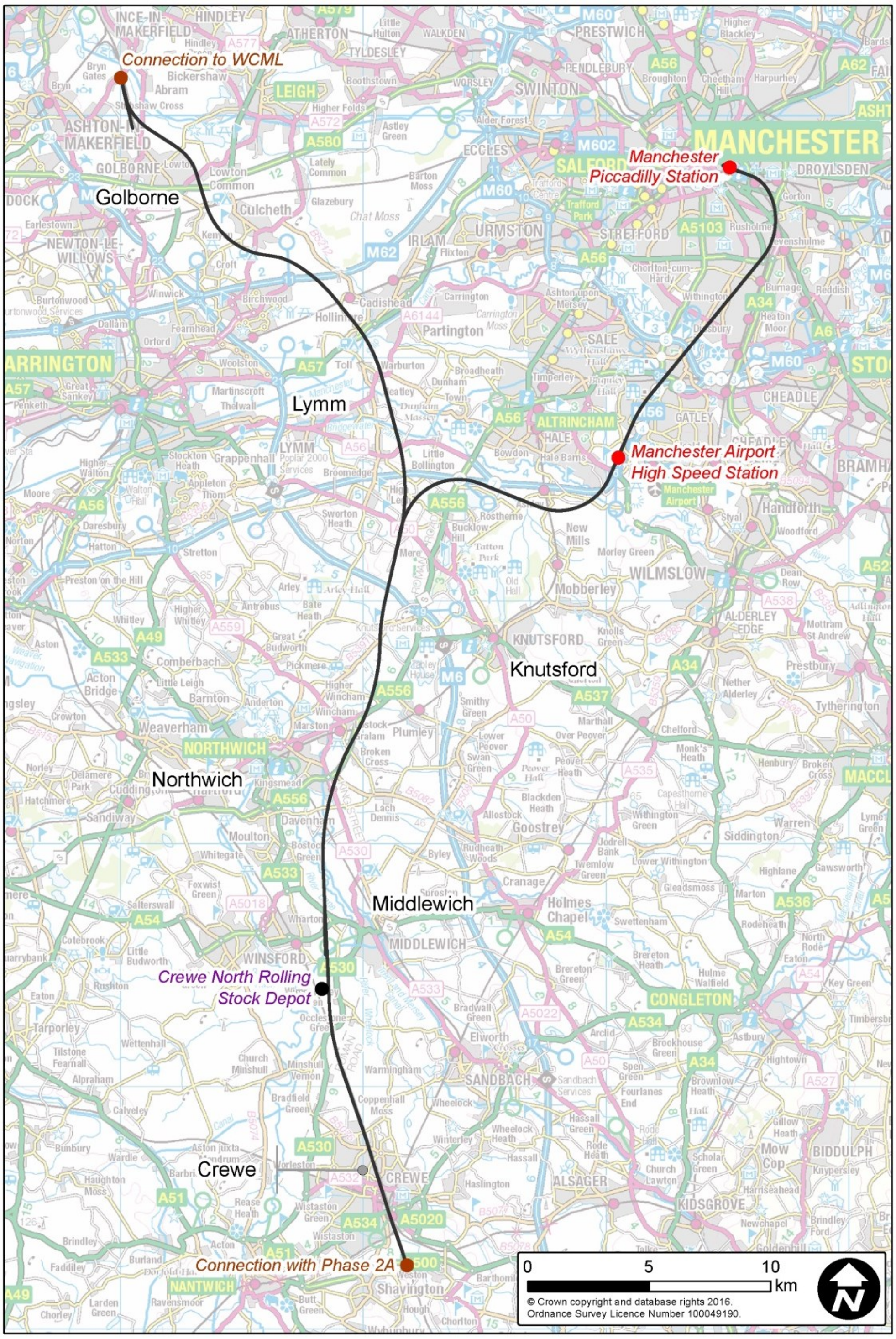
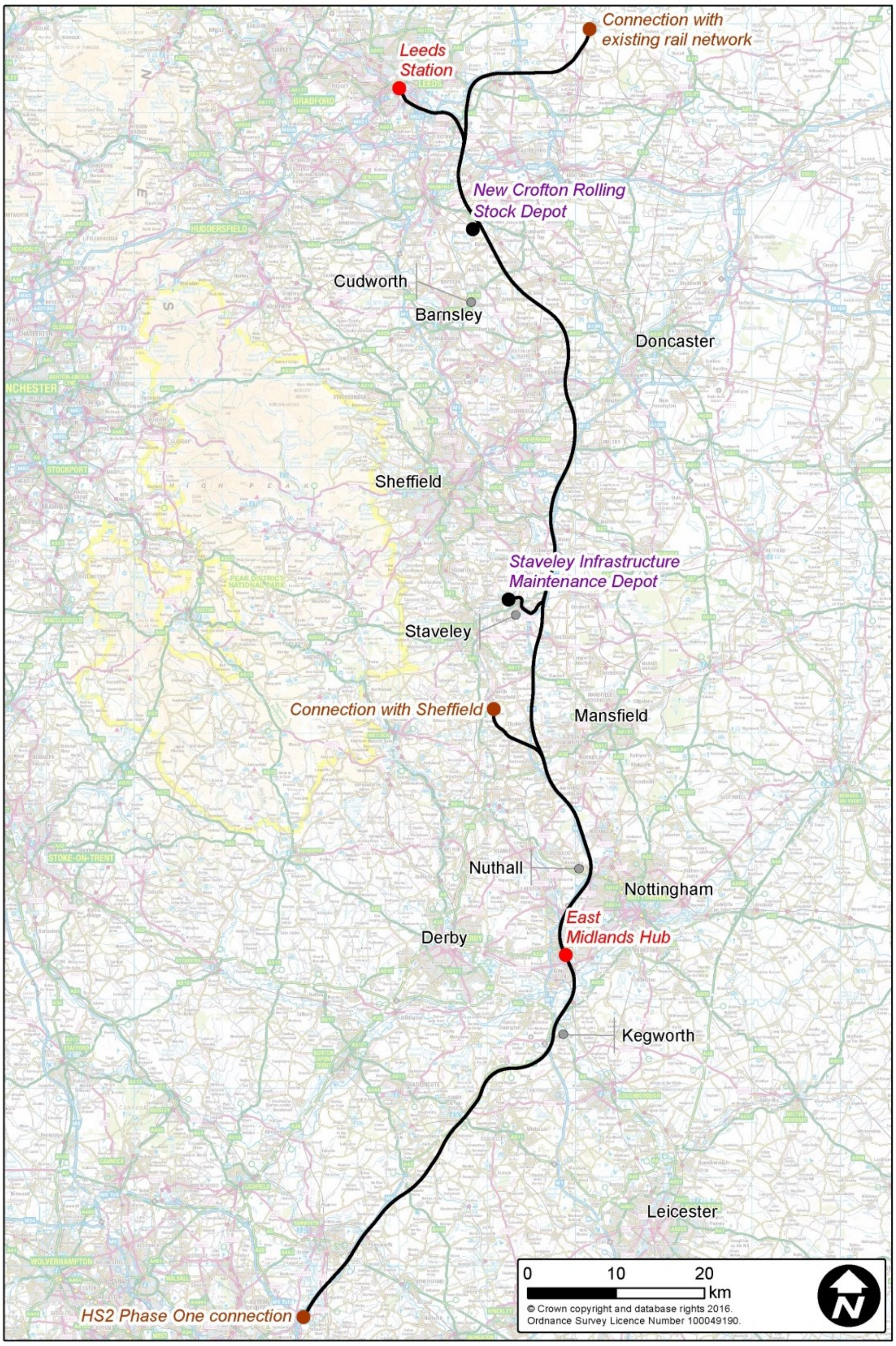


Figure 2-2 – HS2 Phase 2b preferred route: West Midlands to Leeds (eastern leg)



2.1.2 The infrastructure assumptions underpinning the preferred HS2 Phase 2b route include:

- a new station at Manchester Piccadilly, built alongside the existing station that is used for classic rail services, allowing easy connections with regional rail services and the Manchester public transport network;

- a new interchange station providing direct links to Manchester Airport, located between Junctions 5 and 6 of the M56;
- a new East Midlands Hub station at Toton, located between Nottingham and Derby and readily accessible to both by public transport, with the possibility to connect to much of the wider East Midlands region;
- a new station in central Leeds, integrated with the existing station in a 'T' shape that is used for classic rail;
- a connection with the West Coast Main Line at Crewe, enabling direct services to destinations such as Liverpool and Runcorn;
- a connection with the East Coast Main Line and a connection to existing railway onto Sheffield;
- further connections would be built at the northern end of each leg. On the western leg high speed trains would be able to provide direct services to destinations including Wigan, Preston, Carlisle, Glasgow and Edinburgh. On the eastern leg, the high speed line would continue almost as far as York, thus high speed trains would be able to continue directly to destinations such as Newcastle, Darlington and Durham;
- two rolling stock maintenance depots – Crewe North (western leg) and New Crofton, near Wakefield (eastern leg); and
- one infrastructure maintenance depot at Staveley, near Chesterfield (eastern leg).

2.2 Direct employment as a result of HS2

2.2.1 Estimates by HS2 Ltd of direct employment have been prepared for HS2 as a whole (Phases One, 2a and 2b). The operational scheme is expected to require an estimated 3,000 permanent jobs[3]. A total of 25,000 private sector jobs are expected to be required to build HS2, with over 1,000 people each year being trained at the new National College for High Speed Rail in Birmingham and Doncaster from 2017[4].

[3] We are not able to estimate how many of these jobs may be additional; there may be some displacement of services and staff from existing classic services to HS2.

[4] The figure excludes jobs created in the supply chain and off site (e.g. prefabrication of construction materials or building rolling stock).

3.0 MANCHESTER AIRPORT STATION

3.1 Introduction

3.1.1 A new interchange station will provide direct links to Manchester Airport in Greater Manchester. This station will also give the wider Cheshire area access to the high speed rail network, both by public transport and by car.

3.1.2 The socio-economic characteristics of the 2km catchment area around the Manchester Airport station location have been analysed and compared with Greater Manchester[5] and England.

3.2 The regional context: Greater Manchester

Economic activity and employment

3.2.1 The largest industry sector in the Greater Manchester economy is the health sector, which, with approximately 165,000 workers, accounts for over 13% of employment and is in line with the rest of England. This is followed by retail (10.1%), business administration and support services (9.4%), professional, scientific and technical (9.1%) and education (9.1%). Employment by industry in Greater Manchester closely mirrors employment in England. The results for all major industries at a regional level are shown in **Table 3-1**.

Table 3-1– Employment by industry – Greater Manchester

Industry category[6] (% of people in employment in area) (Business Register and Employment Survey 2014)	Total employment	Percentage	Percentage (England)
Agriculture, forestry & fishing	500	0.0%	1.3%
Mining, quarrying & utilities	13,300	1.1%	1.1%
Manufacturing	106,100	8.7%	8.1%
Construction	52,500	4.3%	4.5%
Motor trades	19,200	1.6%	1.9%
Wholesale	53,200	4.3%	4.1%
Retail	123,800	10.1%	10.0%
Transport & storage	58,800	4.8%	4.5%
Accommodation & food services	76,800	6.3%	7.0%
Information & communications	38,200	3.1%	4.3%
Financial & insurance	44,300	3.6%	3.7%
Property	28,900	2.4%	1.9%
Professional, scientific & technical	112,000	9.1%	8.6%
Business administration & support services	115,700	9.4%	8.7%
Public administration & defence	52,800	4.3%	4.2%
Education	111,300	9.1%	9.0%
Health	165,000	13.5%	12.7%

[5] Greater Manchester comprises the following areas: Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan.

[6] Percentages do not add up exactly to 100% due to rounding up or down.

Industry category[6] (% of people in employment in area) (Business Register and Employment Survey 2014)	Total employment	Percentage	Percentage (England)
Arts, entertainment, & other services	53,900	4.4%	4.5%
TOTAL	**1,226,300**		

3.2.2 The February 2016 claimant rate[7] for Greater Manchester at 2.7% of residents aged 16-64 is above average for the metropolitan counties (2.4%)[8].

3.2.3 In terms of Gross Value Added (GVA), Greater Manchester contributes £20,476 per head according to the Office of National Statistics (ONS)[9], which is 16.3% lower than the England average but around the median for English NUTS level 2 geographical areas[10].

Deprivation

3.2.4 The Index of Multiple Deprivation 2015 is the official measure of relative deprivation for small areas (or neighbourhoods), ranking every small area in England from 1 (most deprived area) to 32,844 (least deprived area). It combines information from seven domain indices (which measure different dimensions of deprivation), namely income; employment; education, skills and training; health deprivation and disability; crime; barriers to housing and services; and living environment.

3.2.5 The Index of Multiple Deprivation shows that Greater Manchester has significant levels of deprivation, with a very high proportion of Lower Super Output Areas (LSOAs)[11] positioned at the top of the deprivation rank, as shown in **Figure 3-1**.

[7] The proportion of residents aged 16-64 claiming Jobseeker's Allowance plus those who claim Universal Credit who are out of work. Office of National Statistics (ONS), 2016, *Claimant count by sex and age*.

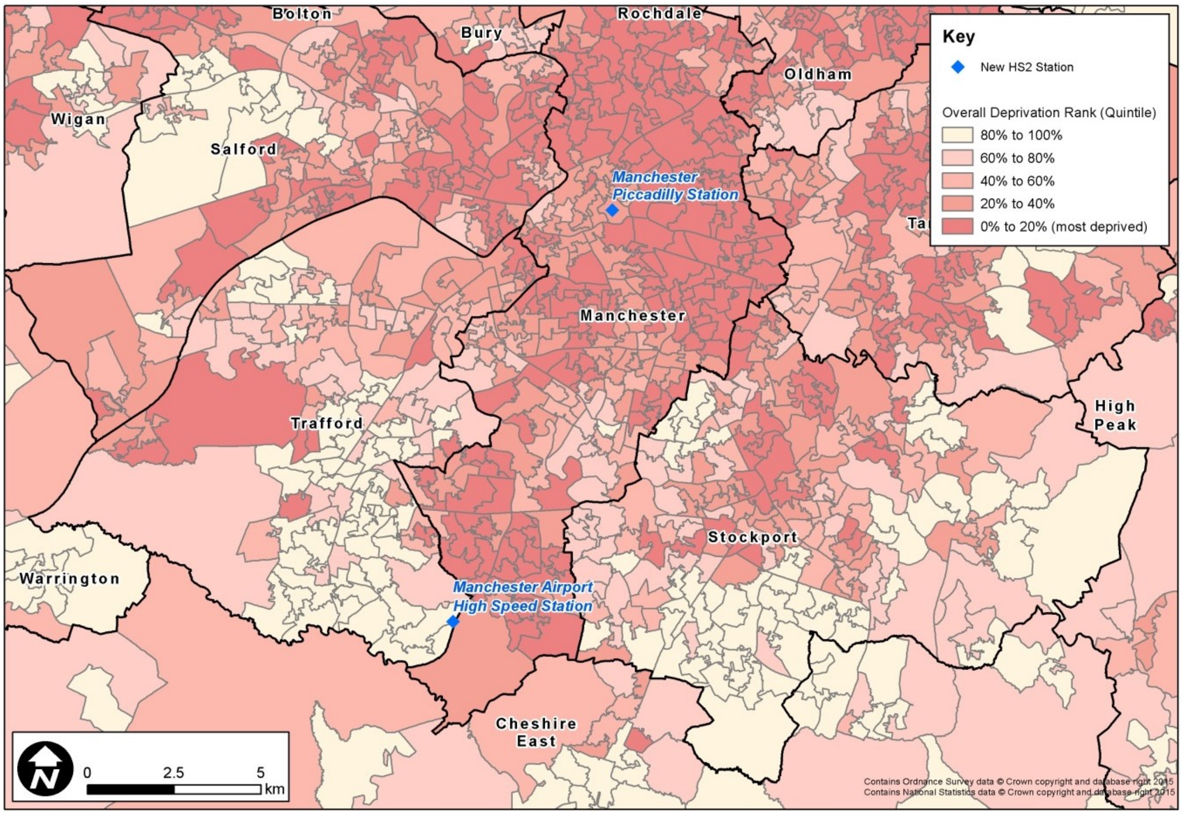
[8] The metropolitan counties as defined by ONS are Greater Manchester, Merseyside, Inner London, Outer London, South Yorkshire, Tyne and Wear, West Midlands and West Yorkshire.

[9] ONS, (December 2015). Regional Gross Value Added (Income Approach)

[10] NUTS or the Nomenclature of Units for Territorial Statistics is a standard for referencing subdivisions of countries for statistical purposes in the European Union. NUTS level 2 areas in England are generally counties, although some are grouped together.

[11] Lower Super Output Areas (LSOAs) are a definition of area boundaries which improve the reporting of small area statistics. Further details can be found on the Office for National Statistics website (www.ons.gov.uk).

Figure 3-1 – Overall deprivation – Greater Manchester



3.2.6 This picture coincides with the income, employment and education deprivation results for Greater Manchester, showing that all variables are very closely related. More detailed information on these variables is included in **Annex A**.

3.3 The local context: Manchester Airport catchment area

Summary

The socio-economic statistics for the Manchester Airport station catchment area present a mixed picture. While there are relatively high levels of deprivation, a high proportion of social renting and a high proportion of residents with no qualifications in the area, there is also a significant proportion of residents employed in senior positions and a high proportion with degree level qualifications. The unemployment rate is also similar to that of England.

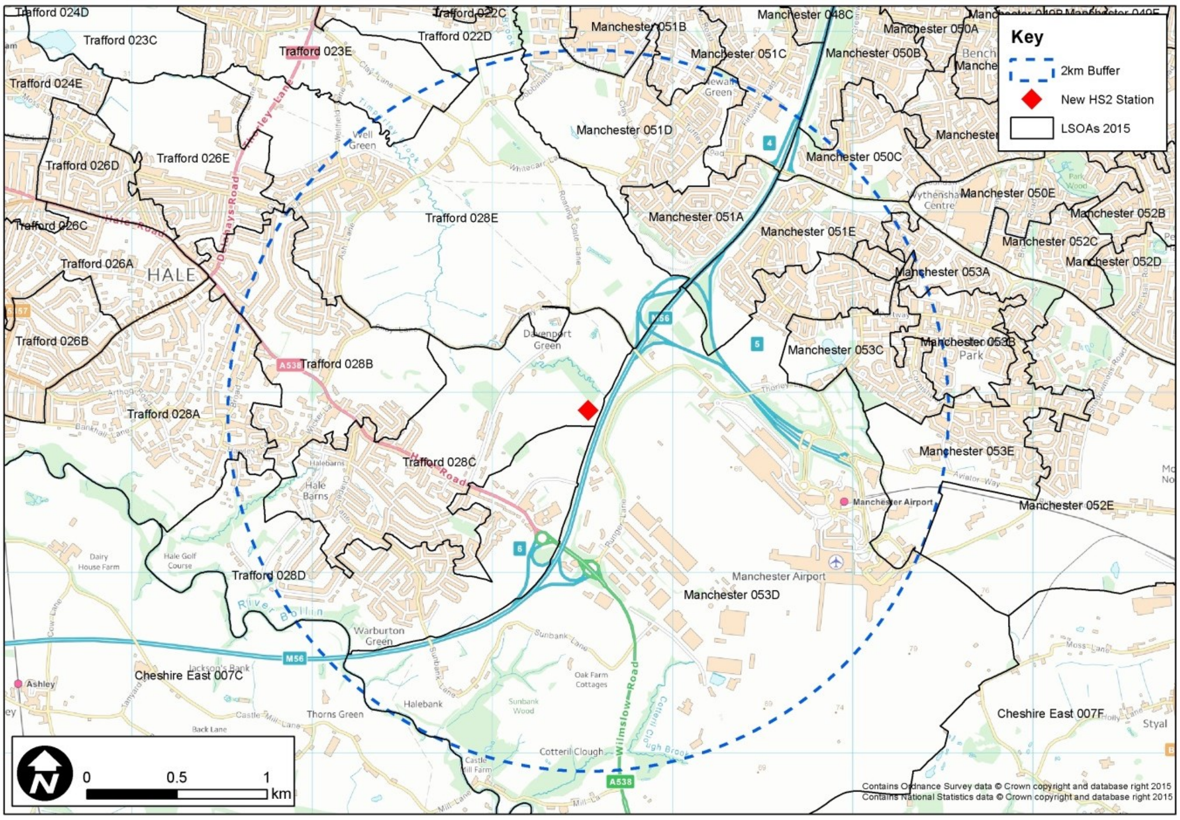
Manchester Airport and associated facilities are the main land uses within the catchment area, with other uses being residential in the Wythenshawe area to the north, and agricultural land in the Green Belt to the south. Substantial expansion of the airport is already being sought through local planning policy with large areas of land earmarked for airport facilities and other ancillary development. Manchester Airport station would increase development, resulting in a net commercial floorspace of between 5,000 and 10,000m^2, equivalent to between approximately 300 and 700 jobs.

Historically, travel-to-work patterns have been very local in their nature, but the good existing transport links could provide benefits for the Greater Manchester city region. As such, the wider socio-economic benefits of this option are likely to be far-reaching in terms of the additional jobs and commuter trips that would be generated as a result of introducing a station in this location adjacent to Manchester Airport, as a key regional transport hub. However, the additional local development impacts of HS2 at the airport are likely to be relatively limited since much of the potential development in proximity to the site is likely to come forward irrespective of an HS2 station in this location.

The area

3.3.1 A 2km catchment has been chosen owing to the relatively low population and employment density of this area and the fact that this station will serve a wider catchment area than the city centre stations. The 2km catchment area is shown in **Figure 3-2** and contains approximately nine LSOAs[12]. Statistics for different socio-economic aspects have been evaluated against statistics for Greater Manchester and England.

Figure 3-2 – Manchester Airport station catchment area

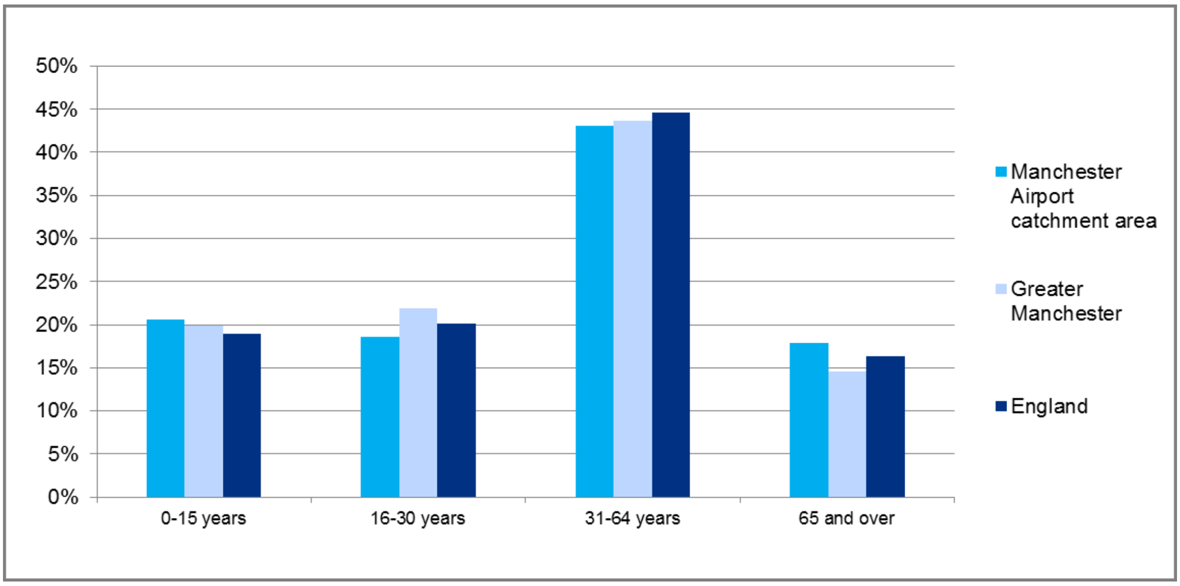


Population

3.3.2 Approximately 15,000 people live in the 2km catchment area of the Manchester Airport station according to the 2011 Census. The age profile shows that it is roughly in line with the population in the whole of Greater Manchester and England (**Figure 3-3**).

[12] LSOAs are considered to be within the catchment if most or all or their population is within a 2km radius of the centre of the proposed station location.

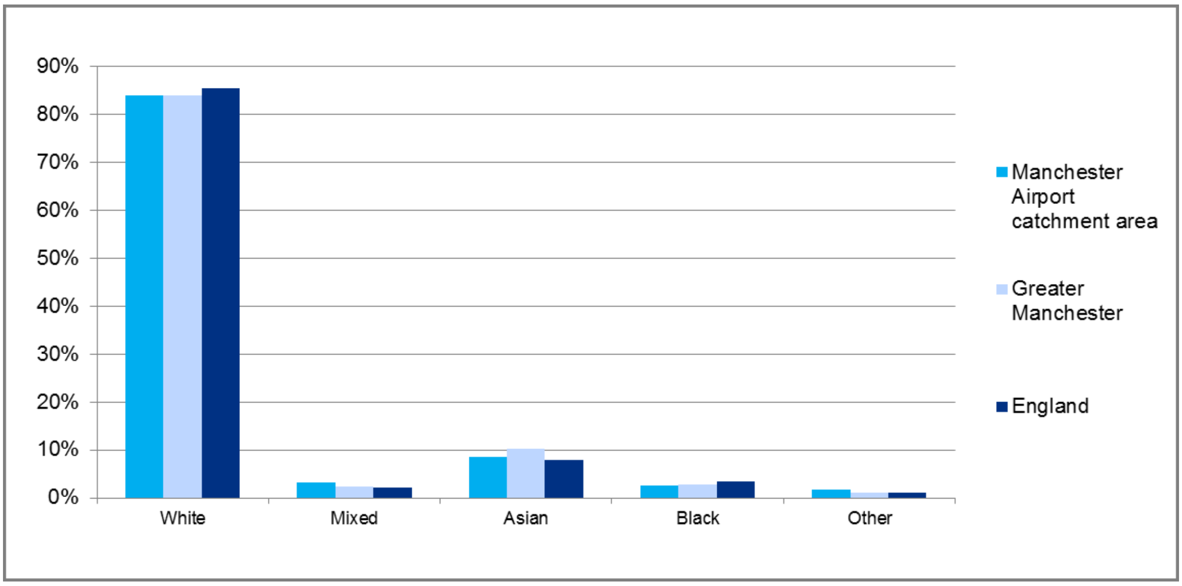
Figure 3-3 – Age structure – Manchester Airport station catchment area



Ethnicity

3.3.3 The ethnic mix of residents in the catchment area reflects that of Greater Manchester as a whole as shown in **Figure 3-4**. There is slightly more diversity than is found generally in England, with a slightly higher proportion of residents classifying themselves as mixed or Asian ethnicity in the 2011 Census.

Figure 3-4 – Ethnicity – Manchester Airport station catchment area



Economic activity and employment

3.3.4 The area around Manchester Airport has a slightly lower economic activity rate than England, as shown in **Table 3-2** (only 2 percentage points lower than England). Unemployment rates are very similar i.e. 4.9% in the Manchester Airport catchment area compared to 4.4% in England.

Table 3-2 – Economic activity rates – Manchester Airport station catchment area

Economic activity rates[13] (% of population aged 16 to 74 years) (Census 2011)	Manchester Airport catchment area	Greater Manchester	England
Economically active – total	67.6%	67.8%	69.9%
Econ. active – employed	60.2%	59.1%	62.1%
Econ. active – unemployed	4.9%	5.0%	4.4%
Econ. active – full time student	2.5%	3.8%	3.4%
Economically inactive – total	32.4%	32.2%	30.1%
Econ. inactive – looking after family	5.1%	4.3%	4.4%
Econ. inactive – permanently sick or disabled	5.7%	5.8%	4.0%
Econ. inactive – other (including retired)	21.6%	22.0%	21.7%

3.3.5 **Table 3-3** shows that compared to the rest of Greater Manchester, there is a higher proportion of resident managers and workers employed in senior positions in the Manchester Airport station catchment area. There is also a higher proportion of elementary occupations (i.e. construction, agricultural occupations). Proportions for other occupations are relatively similar to both Greater Manchester and England.

Table 3-3 – Occupations – Manchester Airport station catchment area

Occupations[14] (% of total residents in employment aged 16 to 74 years) (Census 2011)	Manchester Airport catchment area	Greater Manchester	England
Managers, directors and senior officials	12.8%	9.4%	10.9%
Professional occupations	17.6%	16.6%	17.5%
Associate professional and technical occupations	10.5%	12.0%	12.8%
Administrative and secretarial occupations	11.5%	12.0%	11.5%
Skilled trades occupations	8.6%	10.6%	11.4%
Caring, leisure and other service occupations	10.0%	9.8%	9.3%
Sales and customer service occupations	9.3%	10.0%	8.4%
Process, plant and machine operatives	6.5%	8.0%	7.2%
Elementary occupations	13.3%	11.7%	11.1%

3.3.6 Owing to the presence of the airport, almost half of employment in the area is within transport and storage. At 12% of all employment, accommodation and food services is also an important industry category. This is shown in **Table 3-4**.

[13] Not all percentages add up exactly to 100% due to rounding up or down.

[14] Not all percentages add up exactly to 100% due to rounding up or down.

Table 3-4 – Employment by industry – Manchester Airport station catchment area

Industry category[15] (% of people in employment in area) (Business Register and Employment Survey 2014)	Manchester Airport catchment area	Greater Manchester	England
Agriculture, forestry & fishing	0.0%	0.0%	1.3%
Mining, quarrying & utilities	0.0%	1.1%	1.1%
Manufacturing	4.4%	8.7%	8.1%
Construction	1.5%	4.3%	4.5%
Motor trades	0.1%	1.6%	1.9%
Wholesale	2.0%	4.3%	4.1%
Retail	5.4%	10.1%	10.0%
Transport & storage	48.3%	4.8%	4.5%
Accommodation & food services	12.0%	6.3%	7.0%
Information & communications	*	3.1%	4.3%
Financial & insurance	1.1%	3.6%	3.7%
Property	0.7%	2.4%	1.9%
Professional, scientific & technical	*	9.1%	8.6%
Business administration & support services	8.1%	9.4%	8.7%
Public administration & defence	2.7%	4.3%	4.2%
Education	1.6%	9.1%	9.0%
Health	1.5%	13.5%	12.7%
Arts, entertainment, & other services	1.6%	4.4%	4.5%

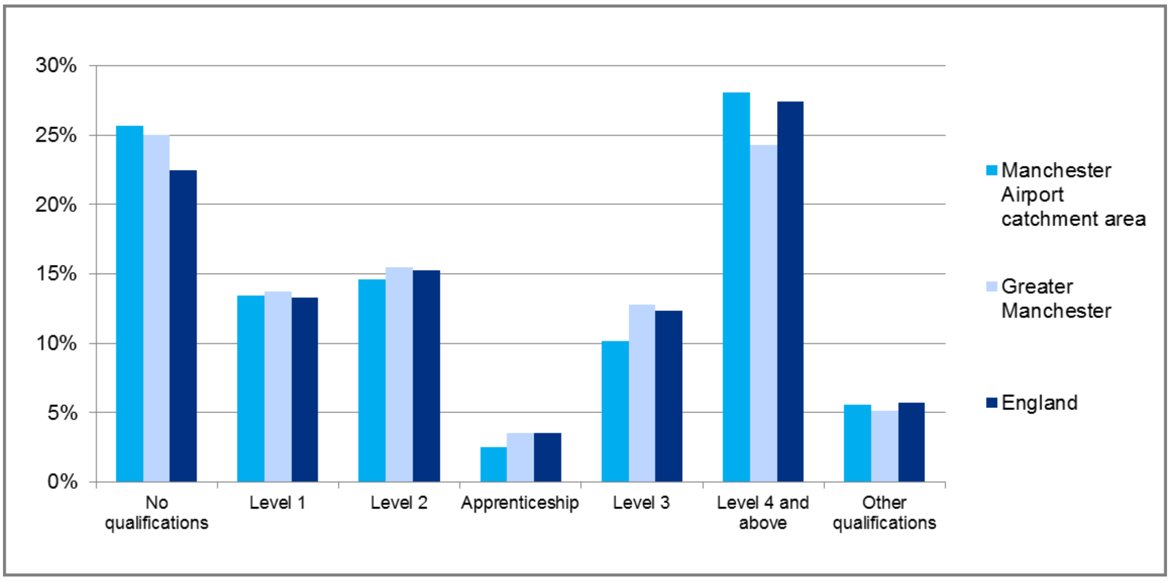
* Figures are potentially disclosive so have not been included here. For this reason, percentages do not add up to 100%.

Education

3.3.7 Statistics on education and skills levels around Manchester Airport present a mixed picture. While there is a greater proportion of residents around Manchester Airport who have obtained level 4 and above qualifications (28.1% compared to 24.3% and 27.4% respectively for Greater Manchester and England), there is also a higher proportion of residents with no qualifications (25.7% compared to 25% and 22.5%). This fits with the occupational data shown in **Table 3-3**. **Figure 3-5** shows qualifications of the population at the time of the 2011 Census.

[15] Ibid.

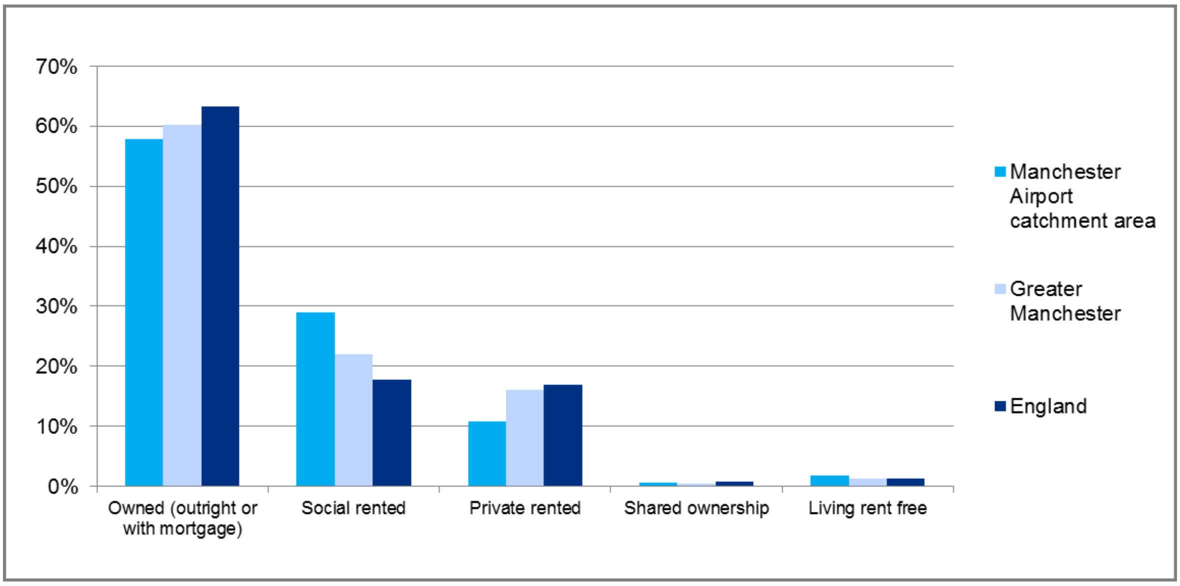
Figure 3-5 – Qualifications – Manchester Airport station catchment area



Household Tenure

3.3.8 The percentage of residents living in rented social housing is relatively high (28.9%), which is generally understood to correlate with a high level of deprivation. In general, the level of renting in the Greater Manchester region is high compared to the rest of England, with the Manchester Airport catchment area having a particularly high proportion of rented social housing and lower levels of private rented and home ownership. This is presented in **Figure 3-6**.

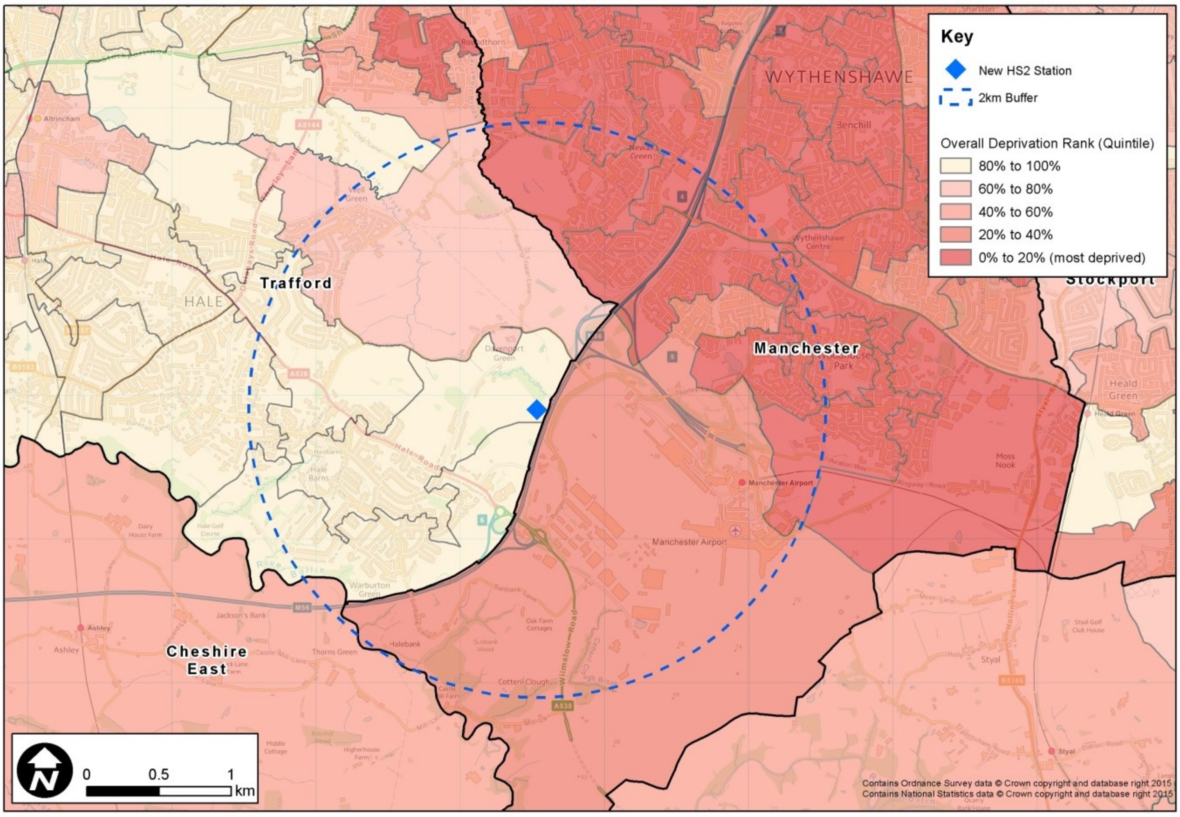
Figure 3-6 – Household tenure – Manchester Airport station catchment area



Deprivation

3.3.9 In terms of deprivation, the area around Manchester Airport shows a mixed picture. In particular, the north-east of the catchment area is in the 20% most deprived areas in England, while the area to the west falls among the 20% least deprived areas. This is shown in **Figure 3-7**, which plots overall deprivation indicators obtained from the Index of Multiple Deprivation (2015).

Figure 3-7 – Overall deprivation – Manchester Airport station catchment area



3.3.10 Deprivation ranks for the Manchester Airport catchment area show that this is an area which contains relatively high deprivation across many domains, except barriers to housing and services. **Table 3-5** shows deprivation indicators based on ranks for a range of domains.

Table 3-5 – Deprivation indicators – Manchester Airport station catchment area

Domains of deprivation (English Indices of Deprivation 2015)	Manchester Airport catchment area (proportion of catchment LSOAs in 20% most deprived areas in England)	England
Overall	44%	20%
Income	44%	20%
Employment	44%	20%
Education, skills and training	56%	20%
Barriers to housing and services	11%	20%

Land use characteristics

3.3.11 The proposed HS2 station sits on the southern edge of the Greater Manchester area at the western end of Manchester Airport, just south of the Woodhouse Park area of Wythenshawe, to the south-east of Davenport Green and north-east of the village of Hale Barns. Manchester Airport itself is the main land use within the catchment area. To the north of the proposed station the Woodhouse Park area is predominantly residential, and incorporates various community infrastructure provisions including a primary school and the Wythenshawe Forum which contains leisure, health and learning facilities. To the south of the airport much of the land comprises fields in agricultural use, which forms part of the Green Belt. In proximity to the proposed station there are a number of hotels, plus other ancillary businesses and the World Freight Terminal. There is also a small trading estate to the north-east of the airport.

Strategic ambitions

3.3.12 There are a number of planning policies and development designations around the Manchester Airport station. These include the “World Logistics Hub” and “Airport City” that are part of the Manchester Enterprise Zones.

3.3.13 The adopted *Manchester Core Strategy Development Plan Document* (July 2012) includes policy support for the growth of Manchester Airport, through designation as a Strategic Site and expanding the Airport area through development of adjacent areas for various operational and commercial uses. The Green Belt boundary in this area has been amended to exclude areas for airport development.

3.3.14 On the west side of the M56 there is also an area policy within Trafford Council's Core Strategy that references the future potential development of the Davenport Green site; the HS2 proposals would be on the eastern boundary of this area. The HS2 proposals would need to take account of any necessary highway modifications.

Transport network

3.3.15 The proposed HS2 station will provide a new interchange station linking directly with Manchester Airport. The existing airport station is located between Terminals 1 and 2, and linked to both with a moving walkway. Present train services connect the airport to Manchester Piccadilly station and major towns and cities across Northern England as well as Glasgow and Edinburgh. A 15 stop extension of the Manchester Metrolink light rail system now connects with the airport.

3.3.16 The proposed station will connect with the existing surface transport interchange, with its large network of bus and coach services. Buses serve many locations throughout the Greater Manchester area, and a network of National Express coach services operate to destinations further afield.

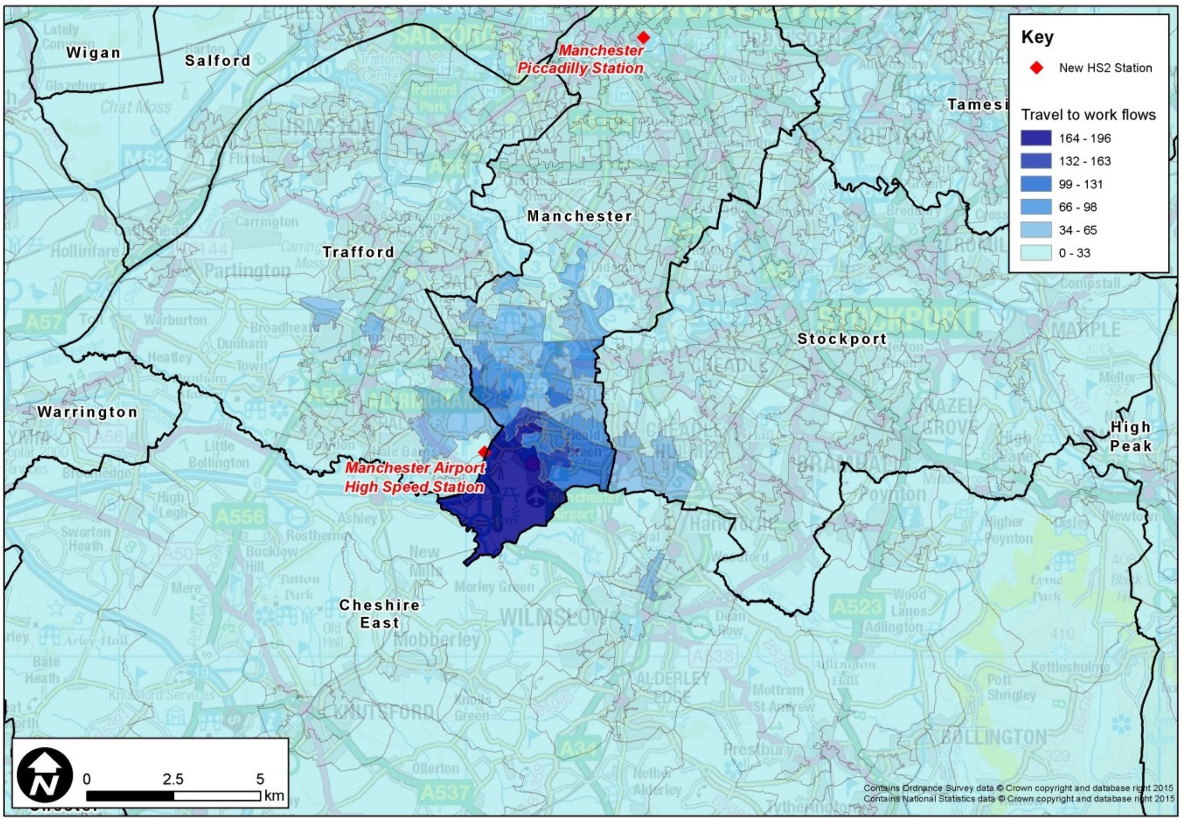
3.3.17 The primary highway access to the station is via a dedicated approach road from the M56, Junction 5. The M56 provides connections north, into central Manchester (a 20 minute drive), and west, towards Liverpool. The A538 Wilmslow Road provides an east-west connection from the M56 serving local towns of Altrincham and Wilmslow.

3.3.18 The airport has over 22,000 parking spaces in a total of 16 car parks across the airport site. These are for use by passengers, staff and service providers.

Travel to work

3.3.19 Travel to work patterns (Census 2011) show that people working in the Manchester Airport catchment area live in areas situated in the near surroundings. This is shown in **Figure 3-8**.

Figure 3-8 – Travel to work patterns to Manchester Airport station catchment area



3.4 Impacts of HS2 Phase 2b

Key factors

3.4.1 Key factors affecting development potential are:

- this site has been identified as a potential location for development of an exemplar, very high quality, sustainable B1 business/office employment related development associated with approved development proposals at Airport City or the University Hospital South Manchester;
- the proposed floorspace associated with Davenport Green would be in the region of 46,000m^2. It has been assumed that this floorspace would be delivered irrespective an HS2 station in this location; and
- it has been assumed that further intensified development associated with Davenport Green would come forward as a result of HS2 and in an aspirational policy environment; however, this would be minimal and would be as a result of the intensification of office uses at the site.

Employment

3.4.2 The amount of development supported by HS2 is estimated to be between 5,000 and 10,000m^2 (**Table 3-6**), equivalent to between approximately 300 and 700 jobs[16]. No impact on residential floorspace is envisaged and no material impacts on existing jobs are anticipated.

[16] Net jobs, accounting for any demolitions as a result of the construction of the HS2 station but not accounting for the demolition of existing floorspace to be replaced by new development that may come forward.

Table 3-6 – Potential development impact around Manchester Airport station

Use	Additional floorspace supported by HS2 (m^2)	Additional floorspace supported by HS2 in an aspirational policy environment (m^2)
Non-residential	5,000	10,000

3.4.3 All of the development is anticipated to be office space.

Opportunities

3.4.4 The wider socio-economic benefits of this option are likely to be far-reaching in terms of the additional jobs and commuter trips that would be generated as a result of introducing a station adjacent to Manchester Airport, as a key regional transport hub. The additional local development impacts of HS2 in the 2km catchment area around the airport, however, are likely to be relatively limited.

4.0 MANCHESTER PICCADILLY STATION

4.1 Introduction

4.1.1 A new station would be built alongside the existing station at Manchester Piccadilly in the heart of Manchester city centre. This would allow better connections with regional rail services to places such as Salford, Stockport and Bolton. It would also allow access to the wider Manchester public transport network, such as destinations along the Metrolink, along with local and regional bus services. Connections will improve further as a result of the Northern Hub scheme.

4.2 The regional context: Greater Manchester

4.2.1 The Greater Manchester regional economy has been examined in the preceding chapter on Manchester Airport. In summary, Greater Manchester is a region that is socio-economically deprived with relatively high unemployment and low GVA. See Chapter 3 for more detailed information.

4.3 The local context: Manchester Piccadilly catchment area

Summary

In socio-economic terms, the catchment area of the HS2 station at Manchester Piccadilly has a young population (including a high proportion of full-time students) which is ethnically diverse, with high levels of private renting and relatively high levels of qualifications and professional occupations. Despite relatively good economic indicators compared to the Greater Manchester region, this area shows high deprivation according to the Index of Multiple Deprivation 2015 relative to England.

The land use in the catchment is a varied mixture typical of a large city centre and its fringe, including retail, office, leisure and hotel uses, plus large university campuses, residential and light industrial. Manchester city centre is already designated for development in the city's Core Strategy. HS2 could increase net non-residential floorspace by between 605,000 and 871,000m^2, equivalent to between approximately 29,700 and 42,900 jobs. Residential floorspace is estimated to increase by at least 184,000m^2 and potentially up to 246,000m^2. This equates to between 3,100 and 4,100 residential units.

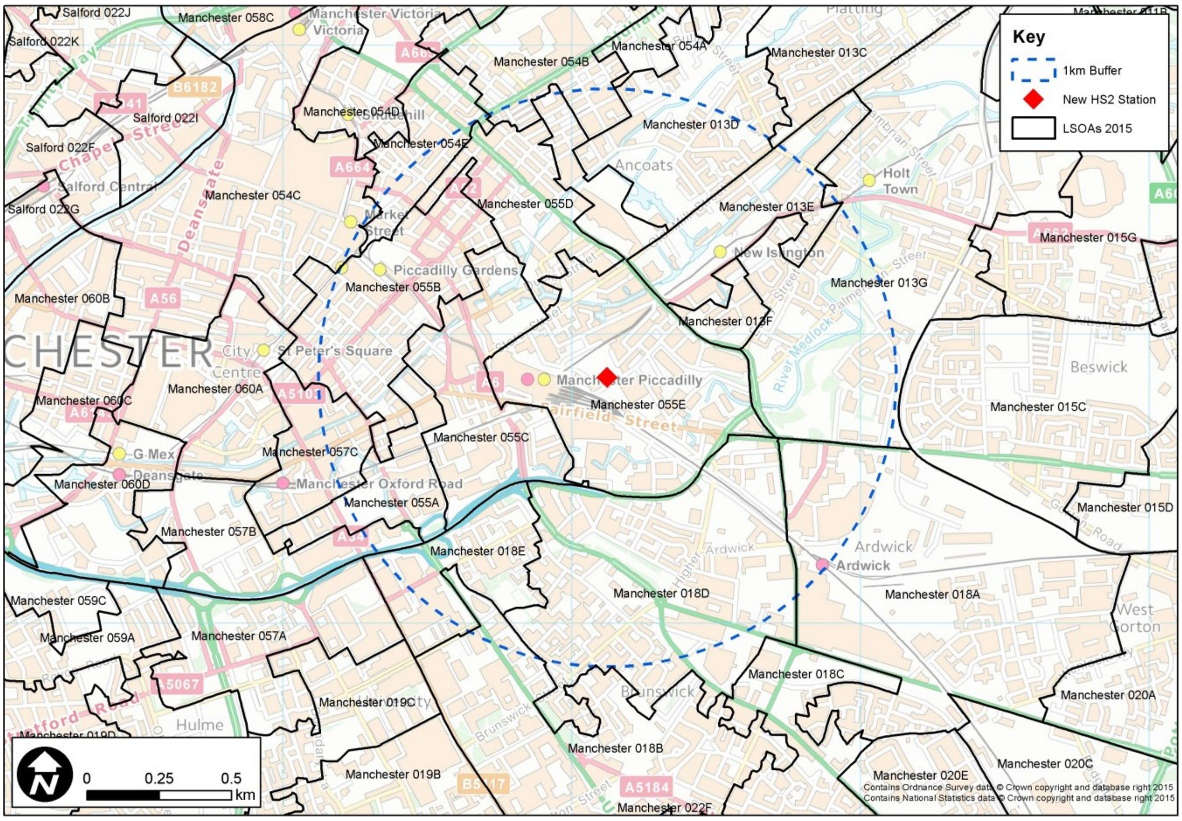
A station in this area would be expected to support a very significant amount of development and consequently jobs, of significant benefit to the catchment area and the wider region, given the current higher than average levels of deprivation.

The area

4.3.1 Due to a relatively high population and employment density, baseline information has been collected for areas within 1km of the high speed station. The 1km catchment area for Manchester Piccadilly station is shown in **Figure 4-1**, containing approximately 11 LSOAs[17]. Statistics for different socio-economic aspects have been evaluated against statistics for Greater Manchester and England.

[17] LSOAs are considered to be within the catchment if most or all or their population is within a 2km radius of the centre of the proposed station location.

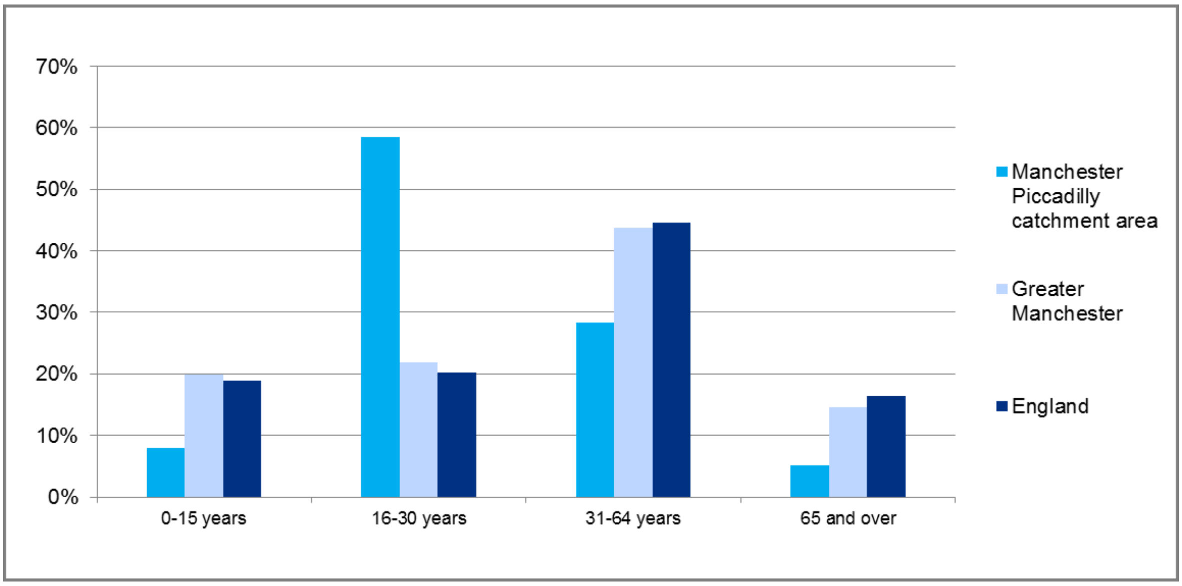
Figure 4-1 – Manchester Piccadilly station catchment area



Population

4.3.2 A snapshot of the age of the population in the catchment area is presented in **Figure 4-2** (Census 2011). It shows that the population is heavily skewed, with 58.5% of residents in the 16-30 years age group, compared to 21.9% for Greater Manchester and 20.2% for England reflecting the presence of major university campuses in the locality.

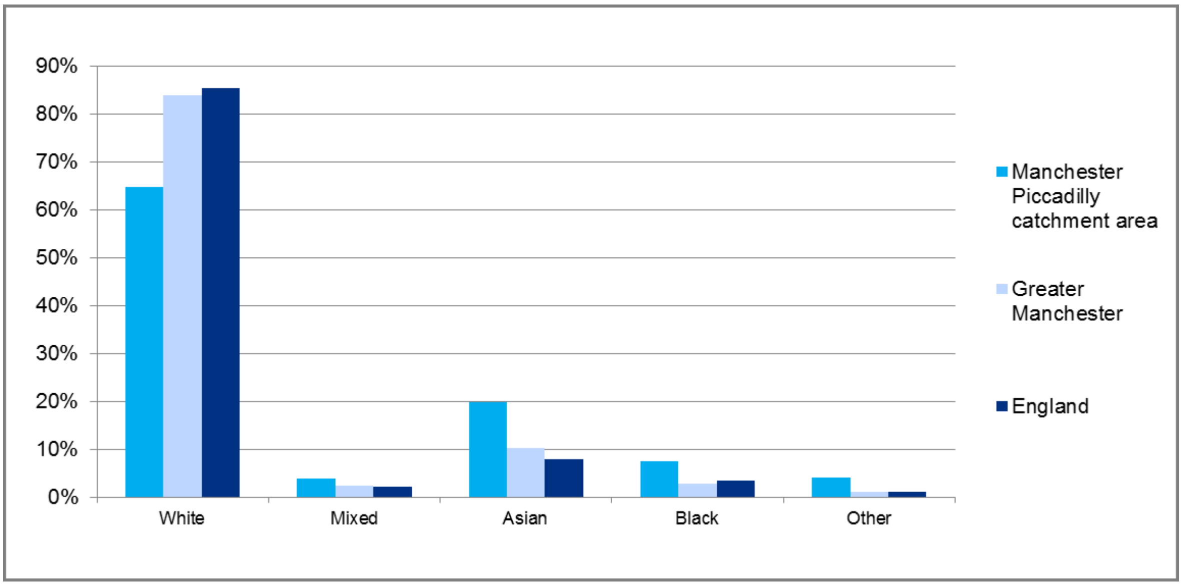
Figure 4-2 – Age structure – Manchester Piccadilly station catchment area



Ethnicity

4.3.3 The breakdown of the population by ethnic group based on the 2011 Census is shown in **Figure 4-3**. It indicates a relatively diverse population with 35.3% of the residents in the catchment area belonging to a non-white ethnic group, compared to 16.2% in Greater Manchester and 14.6% in England as a whole. The largest ethnic group is Asian, at just under 20% of the resident population.

Figure 4-3 – Ethnicity – Manchester Piccadilly station catchment area



Economic activity and employment

4.3.4 Economic activity data show that the Manchester Piccadilly catchment area contains a lower proportion of economically active residents than England and of these a high proportion (11.1% of the population aged 26 to 74) are full time students. Unemployment rates are low compared to Greater Manchester and England. The statistics are presented in **Table 4-1**.

Table 4-1 – Economic activity rates – Manchester Piccadilly station catchment area

Economic activity rates[18] (% of population aged 16 to 74 years) (Census 2011)	Manchester Piccadilly catchment area	Greater Manchester	England
Economically active – total	61.6%	67.8%	69.9%
Econ. active – employed	46.8%	59.1%	62.1%
Econ. active – unemployed	3.7%	5.0%	4.4%
Econ. active – full time student	11.1%	3.8%	3.4%
Economically inactive – total	38.4%	32.2%	30.1%
Econ. inactive – looking after family	2.1%	4.3%	4.4%
Econ. inactive – permanently sick or disabled	4.1%	5.8%	4.0%
Econ. inactive – other (including retired)	32.3%	22.0%	21.7%

[18] Not all percentages add up exactly to 100% due to rounding up or down.

4.3.5 **Table 4-2** shows the distribution of occupations for the residents in the Manchester Piccadilly catchment area. The data in this table shows that there are a very high proportion of residents in professional occupations, as well as associate professionals and technical occupations, again reflecting the presence of universities in the area.

Table 4-2 – Occupations – Manchester Piccadilly station catchment area

Occupations (% of total residents in employment aged 16 to 74 years) (Census 2011)	Manchester Piccadilly catchment area	Greater Manchester	England
Managers, directors and senior officials	8.8%	9.4%	10.9%
Professional occupations	27.1%	16.6%	17.5%
Associate professional and technical occupations	18.0%	12.0%	12.8%
Administrative and secretarial occupations	9.8%	12.0%	11.5%
Skilled trades occupations	4.2%	10.6%	11.4%
Caring, leisure and other service occupations	5.6%	9.8%	9.3%
Sales and customer service occupations	12.0%	10.0%	8.4%
Process, plant and machine operatives	2.5%	8.0%	7.2%
Elementary occupations	11.9%	11.7%	11.1%

4.3.6 **Table 4-3** shows the distribution of employment in the Manchester Piccadilly catchment area. The predominant sectors of employment are professional, scientific and technical sectors (17.5%), business administration and support services (14%), finance and insurance (12.4%), retail (12.2%) and accommodation and food services (11.1%). All these sectors are likely to benefit from improved connectivity that HS2 will provide.

Table 4-3 – Employment by industry – Manchester Piccadilly station catchment area

Industry category (% of people in employment in area) (Business Register and Employment Survey 2014)	Manchester Piccadilly catchment area	Greater Manchester	England
Agriculture, forestry & fishing	*	0.0%	1.3%
Mining, quarrying & utilities	*	1.1%	1.1%
Manufacturing	1.9%	8.7%	8.1%
Construction	1.1%	4.3%	4.5%
Motor trades	0.2%	1.6%	1.9%
Wholesale	1.8%	4.3%	4.1%
Retail	12.2%	10.1%	10.0%
Transport & storage	4.5%	4.8%	4.5%
Accommodation & food services	11.1%	6.3%	7.0%
Information & communications	2.6%	3.1%	4.3%
Financial & insurance	12.4%	3.6%	3.7%
Property	3.5%	2.4%	1.9%
Professional, scientific & technical	17.5%	9.1%	1.3%
Business administration & support services	14.0%	9.4%	1.1%
Public administration & defence	5.2%	4.3%	8.1%

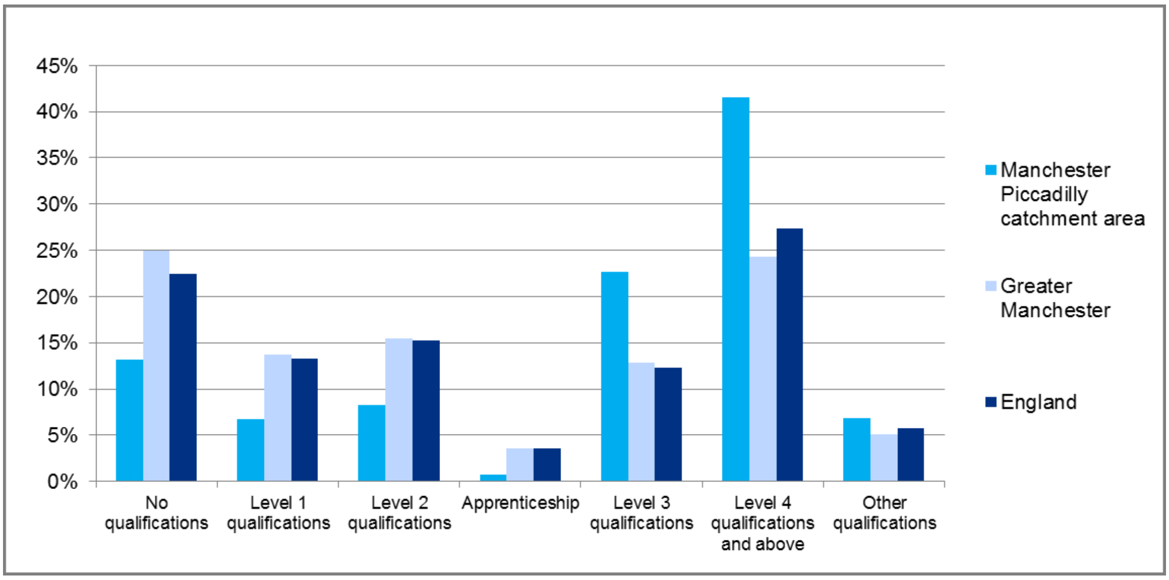
Industry category (% of people in employment in area) (Business Register and Employment Survey 2014)	Manchester Piccadilly catchment area	Greater Manchester	England
Education	4.9%	9.1%	4.5%
Health	2.7%	13.5%	1.9%
Arts, entertainment, & other services	4.3%	4.4%	4.1%

* Figures are potentially disclosive so have not been included here. For this reason, percentages do not add up to 100%.

Education

4.3.7 The Manchester Piccadilly catchment area benefits from high levels of qualifications achieved by its residents, which corresponds with the high proportion of students and young professionals (Census 2011). Approximately 41.6% of the residents in this area have attained level 4 or above qualifications compared to only 24.3% in Greater Manchester and 27.4% in England as a whole. The proportions of residents by level of qualifications are shown in **Figure 4-4**.

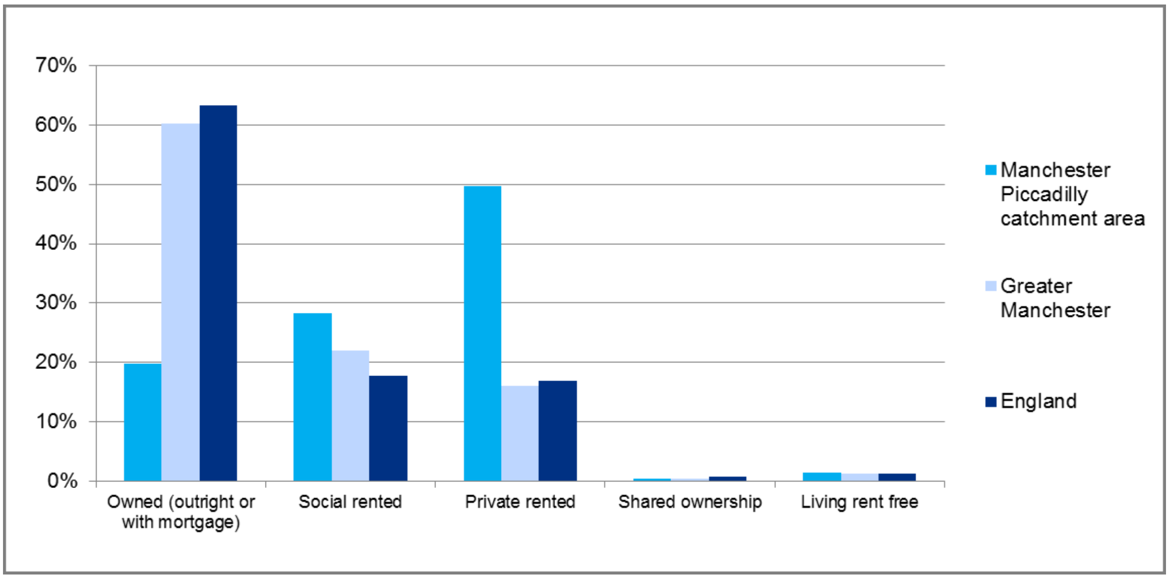
Figure 4-4 – Qualifications – Manchester Piccadilly station catchment area



Household Tenure

4.3.8 Household tenure figures are presented in **Figure 4-5** (Census 2011). They show a low percentage of home ownership and a high percentage of private renting, which corresponds with the high proportion of students and young professionals residing in the area. The proportion of residents in rented social housing is also higher than both Greater Manchester and England. This contrasts with some positive economic indicators (such as high levels of young professionals) demonstrated in the previous sections.

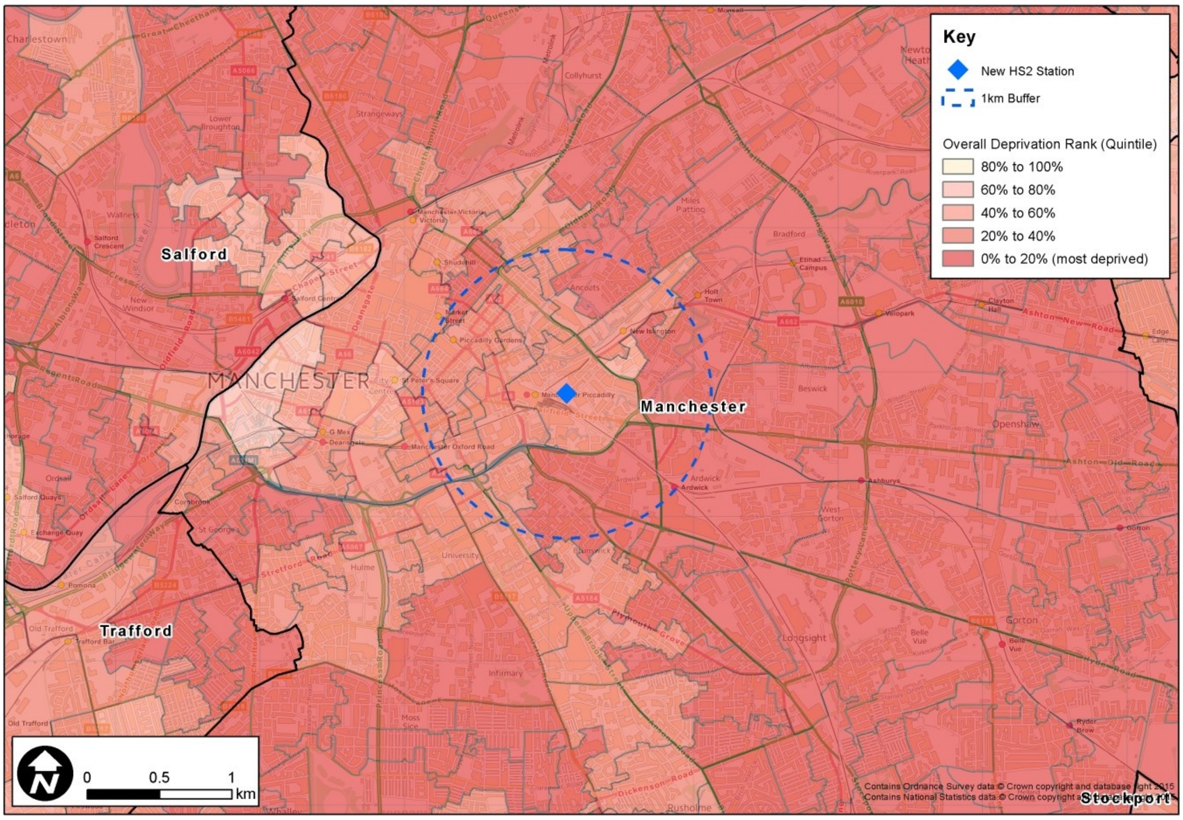
Figure 4-5 – Household tenure – Manchester Piccadilly station catchment area



Deprivation

4.3.9 Overall, the deprivation indicators (Index of Multiple Deprivation, 2015) show a strongly negative picture for the Manchester Piccadilly area, illustrated in **Figure 4-6**. Nearly all of the catchment area falls within either the 20% most deprived or 40% most deprived areas of England. This contrasts with some positive economic indicators (such as high levels of young professionals) demonstrated in the previous sections.

Figure 4-6 – Overall deprivation in Manchester Piccadilly station catchment area



4.3.10 Manchester Piccadilly catchment area has a relatively high proportion of LSOAs in the 20% most deprived areas in England for a number of domains, in particular, for barriers to housing and services. Deprivation indicators based on LSOA ranks are shown in **Table 4-4** below.

Table 4-4 – Deprivation indicators – Manchester Piccadilly station catchment area

Domains of deprivation (English Indices of Deprivation 2015)	Manchester Piccadilly catchment area (proportion of catchment LSOAs in 20% most deprived areas in England)	England
Overall	27%	20%
Income	27%	20%
Employment	27%	20%
Education, skills and training	27%	20%
Barriers to housing and services	36%	20%

Land use characteristics

4.3.11 The area immediately around Manchester Piccadilly station contains a varied mixture of land uses typical of a large city centre. To the north-east of the station is the heart of the city, with a dense mix of retail, office, leisure and hotel uses. The areas to the south-west of the station are largely given over to education with University of Manchester campuses located here, and residential uses. South-east and north-east of the station site are typical of city centre fringe, with larger lower density sites given over to light industrial uses, warehousing, retail parks, and some residential. Significant local destinations within the 1km walking catchment include the University of Manchester, Manchester Metropolitan University, large department stores and various civic facilities.

Strategic ambitions

4.3.12 The Manchester Piccadilly station catchment area is located within the city centre and city centre fringe areas as described in the adopted *Manchester Core Strategy Development Plan Document* (July 2012), and also includes some of the east Manchester and central Manchester areas. The Core Strategy identifies Manchester city centre as the established commercial core and economic driver of the wider City Region, and therefore a key location for major employment growth. The city centre is also the primary retail location across the Manchester City Region, to the extent that its catchment extends beyond these boundaries. It is a focus for visitors to the region, with various cultural and leisure activities available, and also provides core civic functions.

4.3.13 The Core Strategy provides an indicative figure of 33 hectares of employment land to be delivered in Manchester city centre (with priority to development around Manchester Piccadilly and in Mayfield amongst other areas). A further 25 hectares is anticipated to be provided in the city centre fringe (including significant development in Ancoats as well as other areas) and 14 hectares of employment land across the Central Manchester area including at Princess Parkway and along Stockport Road and Hyde Road.

4.3.14 Approximately 70,000m^2 of new retail floorspace is to be provided in the city centre by 2027, concentrated within the primary shopping area, the southern fringe of which is within the station catchment. The description above highlights that the area is expected to support extensive development which can as discussed below be further enhanced by the arrival of HS2.

4.3.15 Manchester City Council published a draft *HS2 Manchester Piccadilly Strategic Regeneration Framework* in January 2014, which was endorsed by the Manchester City Council Executive. It provides figures for the maximum appropriate new development in the areas directly surrounding Manchester Piccadilly station. Up to approximately 720,000m^2 of commercial floorspace (including a hotel) could be provided according to the framework, mainly just north of Manchester Piccadilly station[19].

4.3.16 The Core Strategy sets out requirements for around 16,500 new residential units to be provided from 2010 to 2027 in the city centre in various key locations including around Manchester Piccadilly station. A further 18,280 units will be provided in East Manchester, of which some will be through high density development within the station catchment, in Ancoats and New Islington. The Central Manchester area is allocated 8,200 units, some of which will be in the higher education precinct to the south-west of the catchment. Up to 4,500 new homes could be provided in the immediate areas surrounding Manchester Piccadilly station, in Mayfield, Piccadilly North and East Village, according to Manchester City Council's *HS2 Manchester Piccadilly Strategic Regeneration Framework*.

Transport network

4.3.17 Manchester Piccadilly station would be built alongside the existing station at Manchester Piccadilly in the heart of the city. Manchester Piccadilly station offers existing rail connections to various key destinations across the city and region including Manchester Airport, Salford, Stockport and Bolton as well as destinations further afield including London Euston, Birmingham New Street, South Wales, the south coast of England, Edinburgh and Glasgow.

4.3.18 Connections to local bus services are provided outside the Fairfield Street entrance. The Manchester Central Coach station is a short walk away, and provides numerous regional coach services.

4.3.19 Platforms for the Manchester Metrolink light rail network are located within the existing station, providing connections to places across the city region including Bury, Altrincham, Droylsden, Eccles, Salford Quays, Chorlton, Didsbury and Manchester Airport.

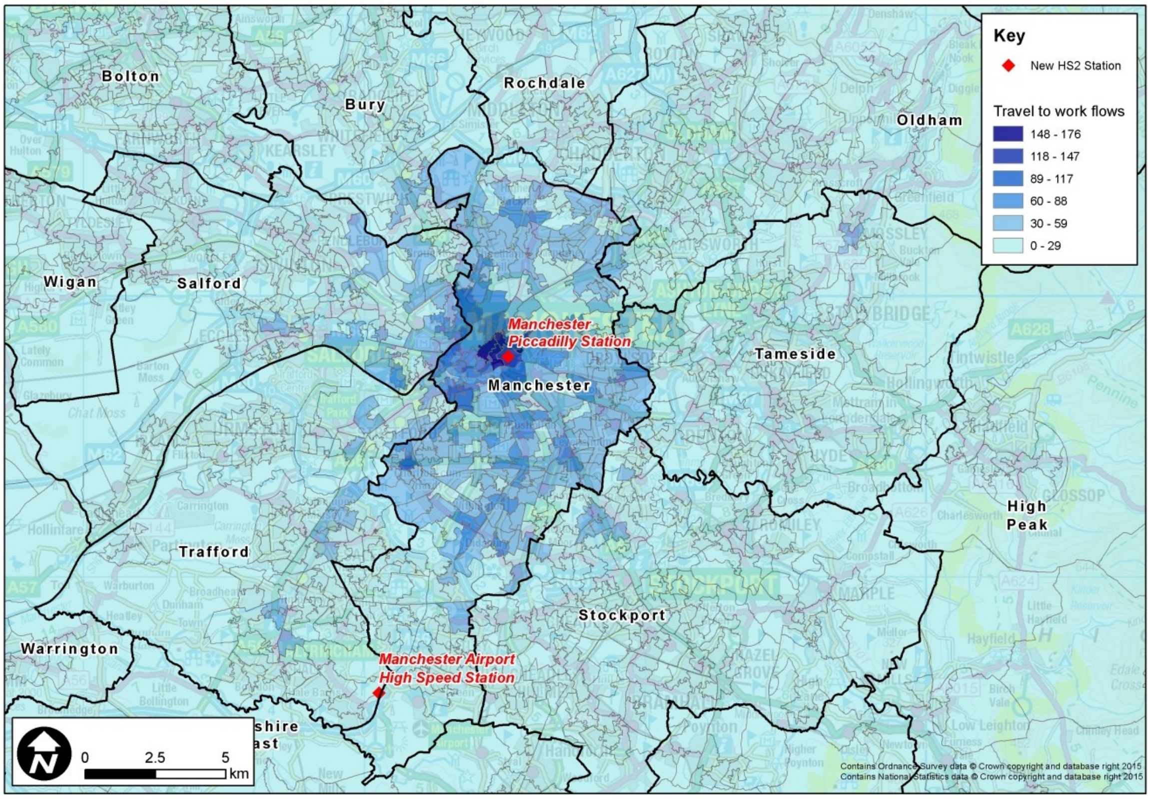
4.3.20 Traffic circulation within central Manchester is based around the Inner Ring Road, which carries through traffic around the city centre, and provides access from the wider Manchester area into the city centre street grid. The Inner Ring Road will provide the main route connecting the HS2 station to radial and regional routes, specifically via the A635 and A635(M) (Mancunian Way).

Travel to work

4.3.21 Travel to work flows (Census 2011) have been analysed in order to see where people are commuting from to the Manchester Piccadilly catchment area. **Figure 4-7** shows that the area attracts commuters from a wide area of Greater Manchester.

[19] Figures differ here from the development potential figures within Section 4.4 due to a different set of assumptions used, a different geographical area being analysed and the fact that these include all potential new development floorspace, not just the additional development floorspace as a result of HS2.

Figure 4-7 - Travel to work patterns to Manchester Piccadilly station catchment area



4.4 Impacts of HS2 Phase 2b

Key factors

4.4.1 Manchester Piccadilly is a location which will support considerable additional development as a result of HS2. Reasons for this include:

- Manchester Piccadilly's current position as the main transport hub within the regional centre;
- proximity to the heart of the city centre, commercial core and the Oxford Road Corridor/ First Street Regeneration Area, forming part of a strategic economic growth and investment location;
- an absence of major development constraints / accessibility problems on key sites within the immediate vicinity of the HS2 station; indeed the introduction of HS2 would provide an opportunity to improve connectivity and address underused development sites in this area;
- the availability of a large area of sites to the north and east of the existing station, and around the Piccadilly Basin, which have the potential to be 'unlocked' and supported by the arrival of HS2. These sites would be much less attractive in a 'without HS2' scenario; and
- there is both the potential and precedent for high density city centre development.

Employment

4.4.2 **Table 4-5** below shows how HS2 could increase net non-residential floorspace by between 605,000 and 871,000m^2, equivalent to between approximately 29,700 and

42,900 jobs[20]. These job numbers take into account some 1,900 jobs that are estimated to be displaced. Residential floorspace is estimated to increase by at least 184,000m^2 and potentially up to 246,000m^2. This equates to between 3,100 and 4,100 residential units.

Table 4-5 – Potential development impact around Manchester Piccadilly station[21]

Use	Additional floorspace supported by HS2 (m^2)	Additional floorspace supported by HS2 in an aspirational policy environment (m^2)
Non-residential uses	605,000	871,000
Residential	184,000	246,000

4.4.3 An indicative assessment of the make-up of the commercial space under both scenarios is given in **Table 4-6**. Whilst office space takes up over half the expected increase in floorspace, leisure and education are also expected to be significant reflecting the nature of the local area.

Table 4-6 – Potential development impact around Manchester Piccadilly station by land use

Use	Additional floorspace supported by HS2 (m^2)	Additional floorspace supported by HS2 in an aspirational policy environment (m^2)
Office	312,000	451,000
Retail	42,000	56,000
Leisure	109,000	151,000
Education	92,000	128,000
Other uses[22]	50,000	85,000
Total	**605,000**	**871,000**

Opportunities

4.4.4 A station in this area would be expected to support a very significant amount of development and consequently jobs. Given the present commuting pattern to this area this would be of significant benefit to the wider catchment area as well as the local area.

[20] Net jobs, accounting for any demolitions as a result of the construction of the HS2 station but not accounting for the demolition of existing floorspace to be replaced by new development that may come forward.

[21] The figures in this section have not changed since the previous analysis because the proposed station location has remained the same and a review of local policies did not reveal any major changes to Manchester City Council's strategic ambition for development. Manchester City Council's *HS2 Manchester Piccadilly Strategic Regeneration Framework* provides more up to date figures of development potential (outlined in Section 4.3, 'Strategic ambition'); however, these are not directly comparable with the figures provided here and for the other stations due to different scope and calculation methodologies.

[22] Other uses include industrial and distribution, cultural, community, service, car parking, health uses, libraries, crèches, play centres, youth centres, meeting halls, places of worship, church halls, hospitals, clinics, dental practices.

5.0 EAST MIDLANDS HUB STATION

5.1 Introduction

5.1.1 The East Midlands Hub station proposed at Toton is located between Nottingham and Derby, and is planned to be readily accessible from both cities as well as the wider East Midlands region.

5.2 The regional context: East Midlands

Economic activity and employment

5.2.1 The economic structure in the East Midlands is characterised by having a large proportion of residents employed in the health sector (12.5%), retail (10.1%), business administration and support services (9.6%) and education (9.5%). This structure is similar to the other regions analysed for Phase 2b stations, as well as to England generally. Levels of manufacturing in the East Midlands are the highest across Phase 2b regions with 12.5% of people employed. The results for all major industries at a regional level are shown in **Table 5-1.**

Table 5-1 – Employment by industry – East Midlands

Industry category[23] (% of people in employment in area) (Business Register and Employment Survey 2014)	Total employment	Percentage	Percentage (England)
Agriculture, forestry & fishing	36,100	1.8%	1.3%
Mining, quarrying & utilities	30,600	1.5%	1.1%
Manufacturing	252,600	12.5%	8.1%
Construction	93,200	4.6%	4.5%
Motor trades	50,500	2.5%	1.9%
Wholesale	90,700	4.5%	4.1%
Retail	204,500	10.1%	10.0%
Transport & storage	100,400	5.0%	4.5%
Accommodation & food services	117,200	5.8%	7.0%
Information & communications	46,000	2.3%	4.3%
Financial & insurance	33,900	1.7%	3.7%
Property	27,500	1.4%	1.9%
Professional, scientific & technical	136,600	6.8%	8.6%
Business administration & support services	195,000	9.6%	8.7%
Public administration & defence	77,400	3.8%	4.2%
Education	192,000	9.5%	9.0%
Health	253,800	12.5%	12.7%
Arts, entertainment, & other services	85,300	4.2%	4.5%
TOTAL	**2,023,300**		

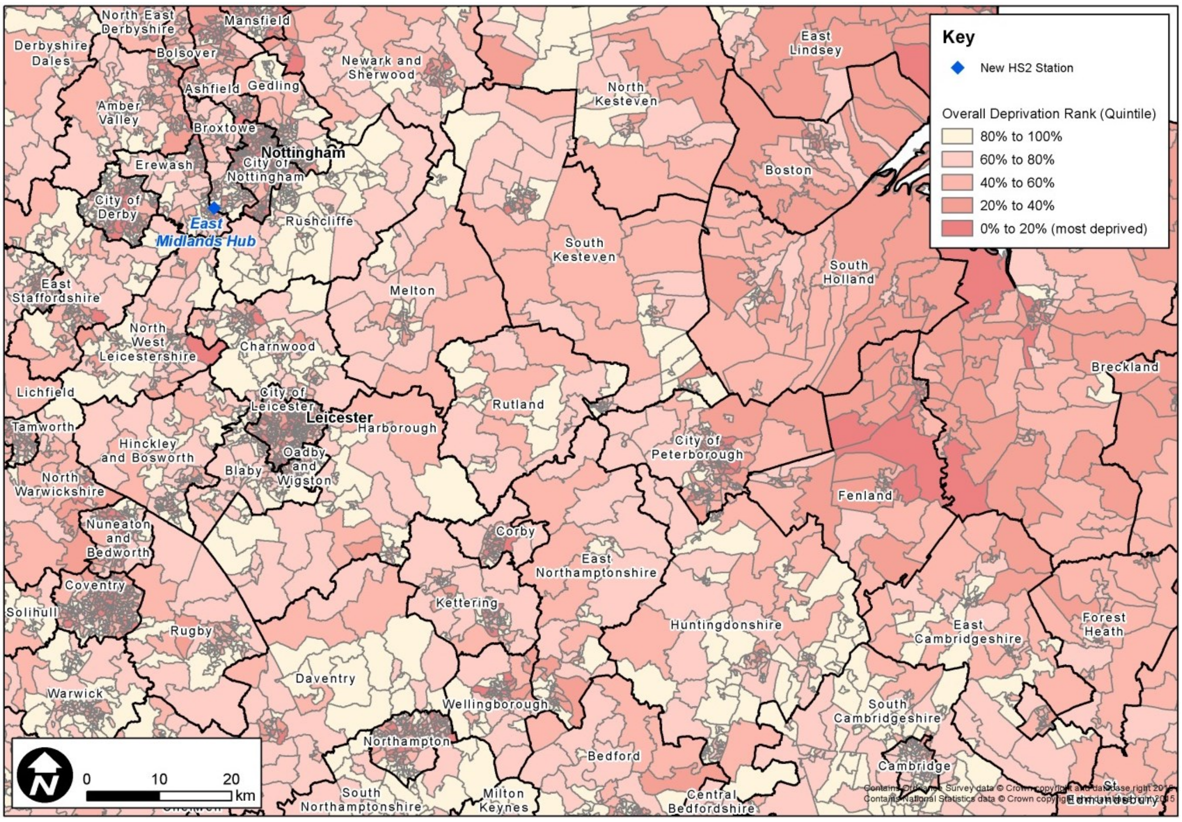
[23] Percentages do not add up exactly to 100% due to rounding up or down.

5.2.2 The February 2016 claimant rate[24] for the East Midlands was 1.6%, one of the lowest rates for the English regions. Conversely, the East Midlands has a relatively low GVA per head at £19,902[25], which is 18.6% lower than the England average.

Deprivation

5.2.3 **Figure 5-1** portrays the level of overall deprivation in the East Midlands according to the Index of Deprivation (2015). Since deprivation is often concentrated in urban areas, a high proportion of this region scores relatively well in terms of deprivation. However, this does not apply to the east of the region, which is significantly deprived.

Figure 5-1 – Overall deprivation – East Midlands



5.3 The local context: East Midlands Hub catchment area

Summary

Overall, the catchment area has a stable set of socio-economic characteristics similar to the average national statistics: low deprivation, low mix of ethnic groups, a significant proportion of people with no or lower level qualifications, high levels of home ownership and commuting is very local. The catchment is mostly residential but also includes Long Eaton Town Centre, an employment area, and some agricultural land. Broxtowe Borough Council’s Core Strategy does not identify any areas of land within the HS2

[24] The proportion of residents aged 16-64 claiming Jobseeker's Allowance plus those who claim Universal Credit who are out of work. ONS, (2016). Claimant count by sex and age

[25] ONS, (December 2015). Regional Gross Value Added (Income Approach)

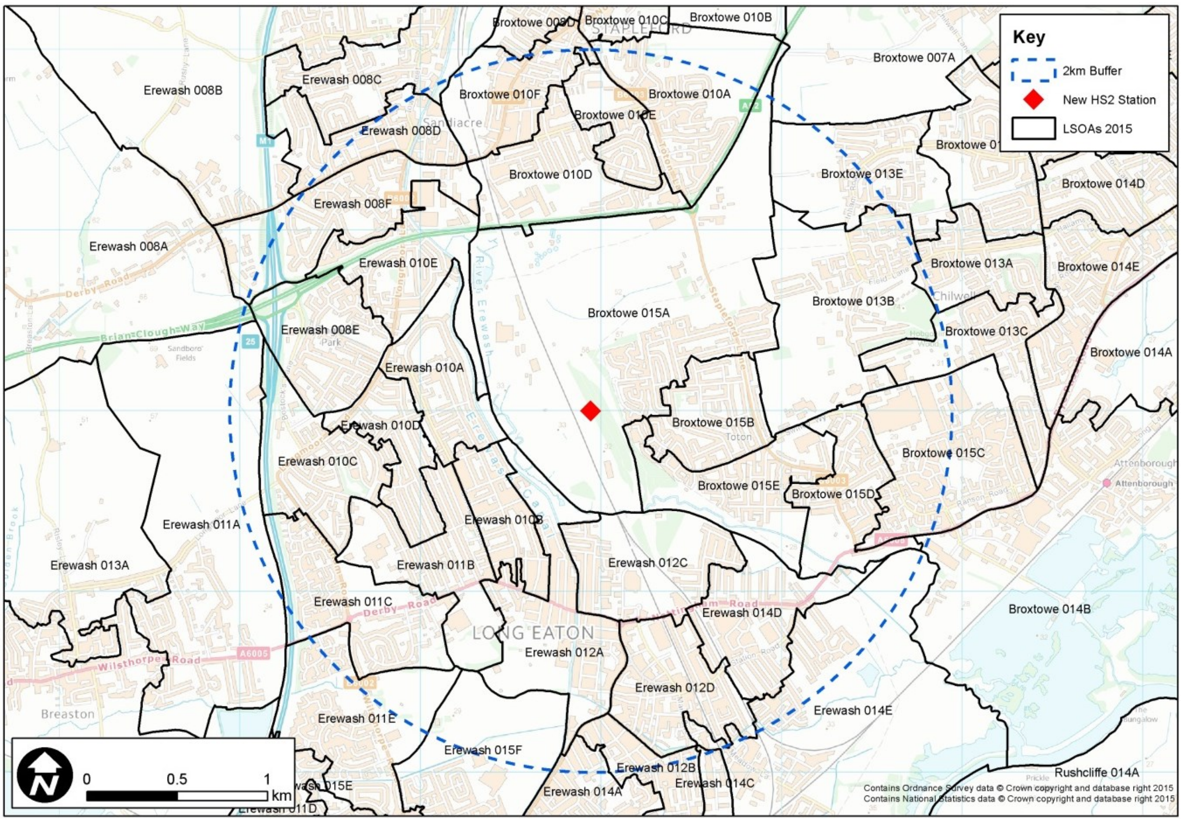
East Midlands Hub station catchment area for promotion for development. At the time of writing, planning consent had been granted for the Lime Rise development site for up to 500 dwelling and other mixed uses.

The benefits to local residents will mainly be through the additional jobs accommodated through local development. HS2 could increase net non-residential floorspace by up to 151,000m^2, and support between 8,800 and 9,900 jobs. Residential floorspace is estimated to increase by at least 14,000m^2, and potentially up to 35,000m^2. This equates to between 140 and 350 residential units. While these numbers are relatively low compared to Leeds or Manchester Piccadilly, these figures may seem more significant for local residents and workers, given the context of the area (the lower population and employment densities).

The area

5.3.1 Due to a relatively low population and employment density, baseline information has been collected for areas within 2km of the high speed station. Within the 2km catchment area of the East Midlands Hub station are 23 LSOAs[26], as shown in **Figure 5-2**. The area covers sections of the settlements of Toton, Long Eaton, Sandiacre and Stapleford. Statistics for different socio-economic aspects have been evaluated against statistics for the East Midlands and England.

Figure 5-2 – East Midlands Hub station catchment area

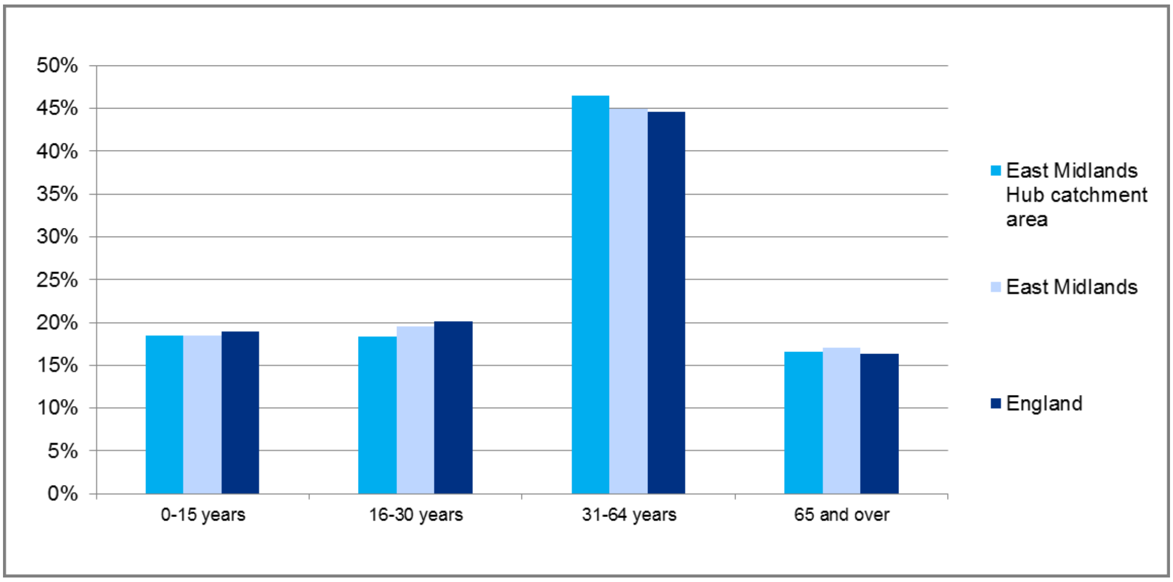


[26] LSOAs are considered to be within the catchment if most or all or their population is within a 2km radius of the centre of the proposed station location.

Population

5.3.2 Approximately 35,000 people live in the 2km catchment area. **Figure 5-3** shows the breakdown of the population by age, which is broadly in line with that for the region and England.

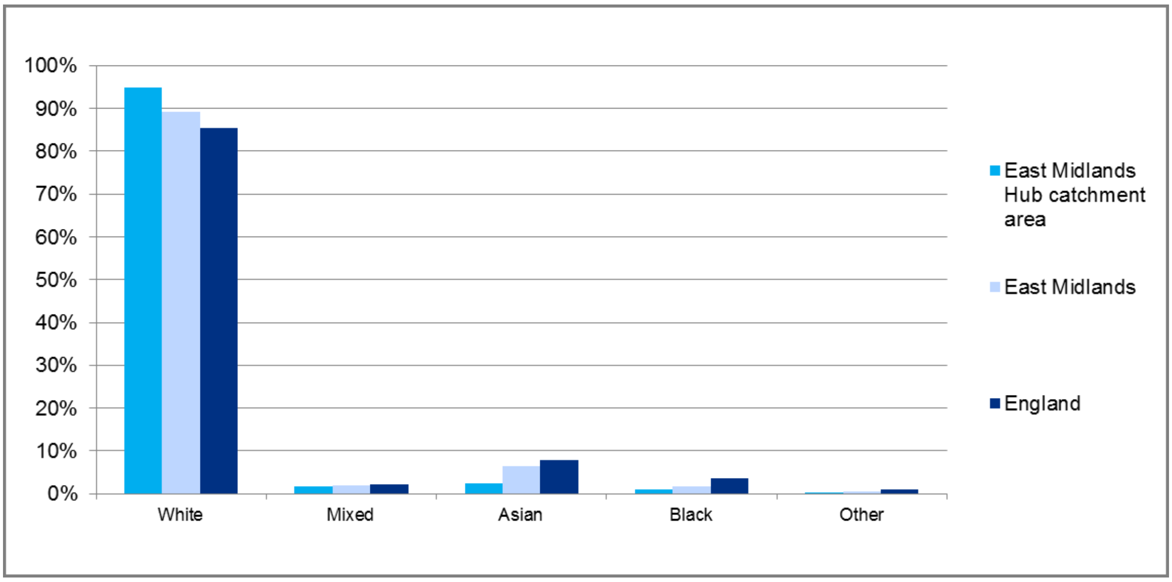
Figure 5-3 – Age structure – East Midlands Hub station catchment area



Ethnicity

5.3.3 The ethnicity of the population is presented in **Figure 5-4**. It shows limited ethnic diversity in the East Midlands Hub catchment area with non-white ethnic groups comprising approximately 5% of the resident population.

Figure 5-4 – Ethnicity – East Midlands Hub station catchment area



Economic activity and employment

5.3.4 The rate of economic activity in the East Midlands Hub station catchment area is higher than for England (see **Table 5-2**). Overall, the economic activity statistics show a similar picture to the national and the East Midlands region averages, but four percentage points higher in terms of employed people compared to the latter.

Table 5-2 – Economic activity rates – East Midlands Hub station catchment area

Economic activity rates[27] (% of population aged 16 to 74 years) (Census 2011)	East Midlands Hub catchment area	East Midlands	England
Economically active – total	73.1%	69.3%	69.9%
Econ. active – employed	66.0%	61.8%	62.1%
Econ. active – unemployed	4.4%	4.2%	4.4%
Econ. active – full time student	2.6%	3.3%	3.4%
Economically inactive – total	26.9%	30.7%	30.1%
Econ. inactive – looking after family	3.6%	4.0%	4.4%
Econ. inactive – permanently sick or disabled	3.4%	4.1%	4.0%
Econ. inactive – other (including retired)	19.9%	22.6%	21.7%

5.3.5 Occupational data, shown in **Table 5-3**, indicate similar proportions of employees in all the different occupation categories. Again, this is fairly consistent with the regional and national data.

Table 5-3 – Occupations – East Midlands Hub station catchment area

Occupations (% of total residents in employment aged 16 to 74 years) (Census 2011)	East Midlands Hub catchment area	East Midlands	England
Managers, directors and senior officials	9.7%	10.6%	10.9%
Professional occupations	15.7%	15.2%	17.5%
Associate professional and technical occupations	12.1%	11.3%	12.8%
Administrative and secretarial occupations	11.9%	10.9%	11.5%
Skilled trades occupations	12.3%	12.1%	11.4%
Caring, leisure and other service occupations	9.0%	9.5%	9.3%
Sales and customer service occupations	9.1%	8.4%	8.4%
Process, plant and machine operatives	8.3%	9.3%	7.2%
Elementary occupations	11.9%	12.7%	11.1%

5.3.6 In line with this, the statistics for employment by industry are similar to the region and England with the exception of retail, which are approximately nine percentage points higher that both comparison areas. Other categories which are relatively well represented include manufacturing, retail and education, while business administration and support services are poorly represented in comparison with the region and nationally. This data is presented in **Table 5-4**.

[27] Not all percentages add up exactly to 100% due to rounding up or down.

Table 5-4 – Employment by industry – East Midlands Hub station catchment area

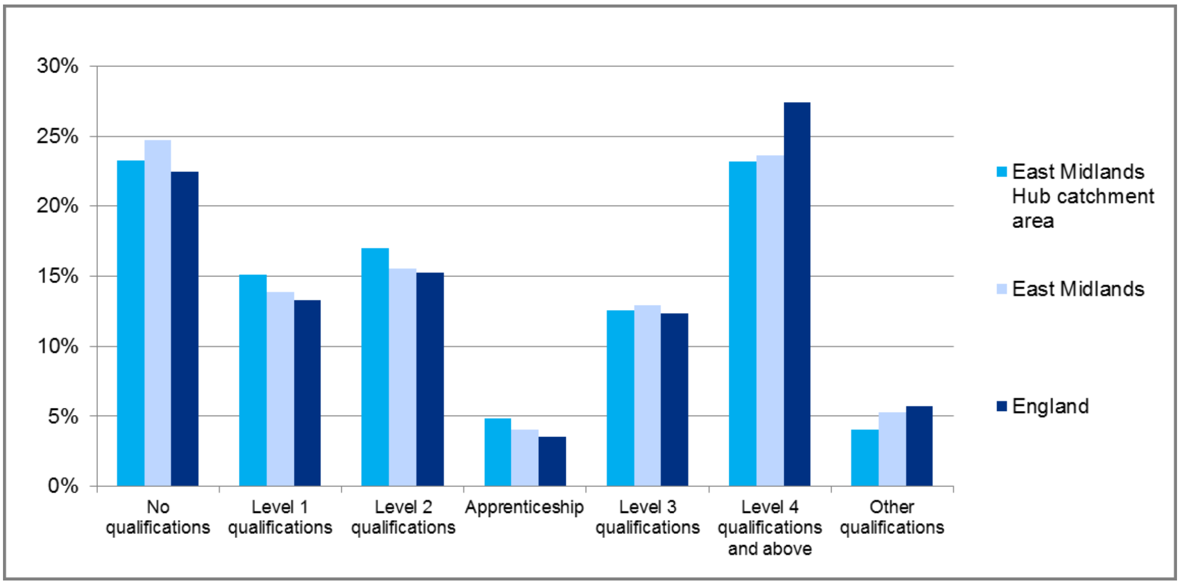
Industry category (% of people in employment in area) (Business Register and Employment Survey 2014)	East Midlands Hub catchment area	East Midlands	England
Agriculture, forestry & fishing	0.0%	1.8%	1.3%
Mining, quarrying & utilities	0.0%	1.5%	1.1%
Manufacturing	13.5%	12.5%	8.1%
Construction	6.2%	4.6%	4.5%
Motor trades	2.2%	2.5%	1.9%
Wholesale	2.3%	4.5%	4.1%
Retail	18.9%	10.1%	10.0%
Transport & storage	*	5.0%	4.5%
Accommodation & food services	5.7%	5.8%	7.0%
Information & communications	4.5%	2.3%	4.3%
Financial & insurance	2.6%	1.7%	3.7%
Property	3.3%	1.4%	1.9%
Professional, scientific & technical	7.0%	6.8%	8.6%
Business administration & support services	3.1%	9.6%	8.7%
Public administration & defence	*	3.8%	4.2%
Education	11.0%	9.5%	9.0%
Health	10.1%	12.5%	12.7%
Arts, entertainment, & other services	3.9%	4.2%	4.5%

* Figures are potentially disclosive so have not been included here. For this reason, percentages do not add up to 100%.

Education

5.3.7 Data on the level of qualifications attained by the residents in **Figure 5-5** shows they are roughly in line with the level of qualifications for England, though there are higher proportions who have achieved level 1 and 2 qualifications and a correspondently lower proportion with level 4 and above.

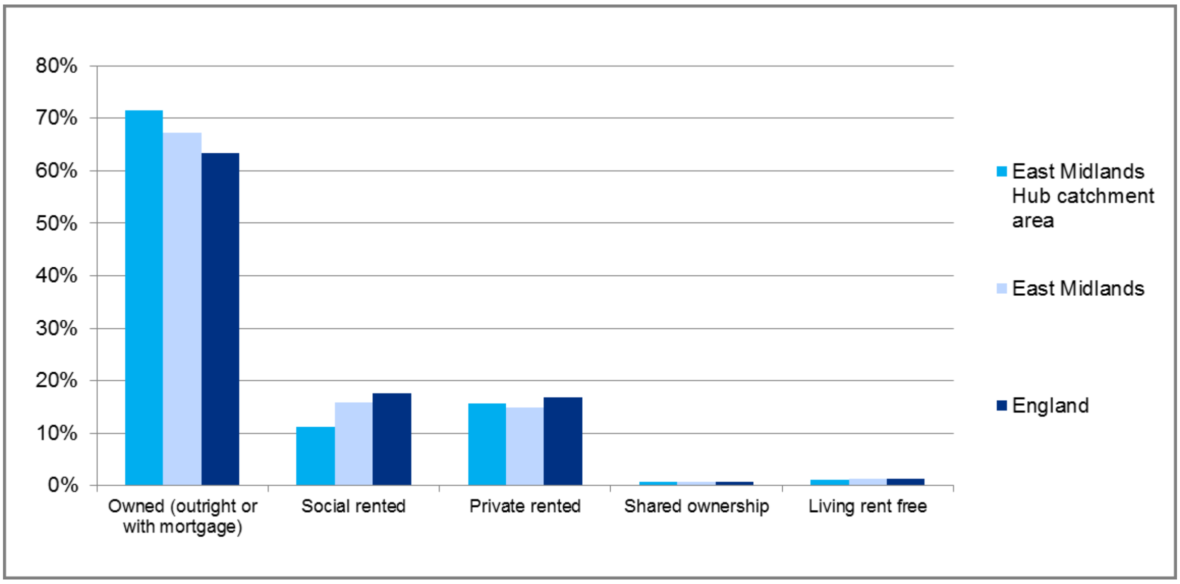
Figure 5-5 – Qualifications – East Midlands Hub station catchment area



Household Tenure

5.3.8 Household tenure in the East Midlands Hub catchment area is characterised by very high home ownership (71.5%), almost ten percentage points higher than the national proportion of home ownership. The level of social renting is seven percentage points lower than England. This is shown in **Figure 5-6**.

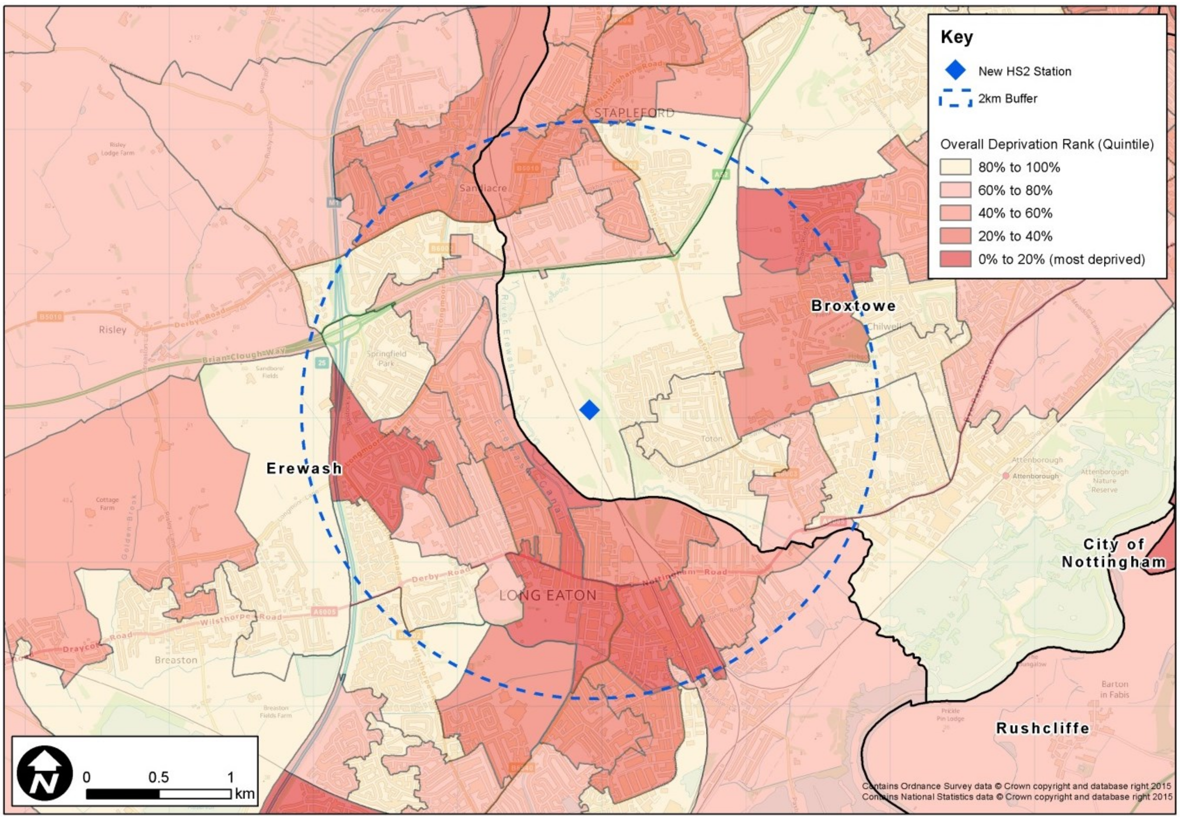
Figure 5-6 – Household tenure – East Midlands Hub station catchment area



Deprivation

5.3.9 Deprivation indicators at LSOA level show relatively low levels overall of deprivation but with pockets of high deprivation, especially to the south of the station (including areas within the 20% most deprived small areas in England), as shown in **Figure 5-7**.

Figure 5-7 – Overall deprivation in East Midlands Hub station catchment area



5.3.10 The deprivation ranks across different categories confirm that the East Midlands Hub catchment area experiences relatively low levels of deprivation compared to England as a whole. This area ranks particularly well in terms of accessing housing and services. Deprivation indicators based on ranks are presented in **Table 5-5**.

Table 5-5 – Deprivation indicators – East Midlands Hub station catchment area

Domains of deprivation (English Indices of Deprivation 2015)	East Midlands Hub catchment area (proportion of catchment LSOAs in 20% most deprived areas in England)	England
Overall	13%	20%
Income	9%	20%
Employment	9%	20%
Education, skills and training	9%	20%
Barriers to housing and services	0%	20%

Land use characteristics

5.3.11 The predominant land use in the 2km catchment is residential, with associated community infrastructure such as schools, places of worship, local medical centres, parks and recreation areas. Long Eaton town centre is located to the south of the proposed station location, and includes a typical town centre mix of high street uses and civic functions. Large Tesco and Asda superstores are located here. The residential area of Toton is to the east of the proposed station, also containing a large Tesco. There is an employment area to the north of the proposed station, on the A52, and Chetwynd Barracks, Chilwell, is also located in the catchment area. There is also some land in agricultural use within the catchment area, although some of this land is proposed for development.

Strategic ambitions

5.3.12 The station is located in Nottinghamshire County, on the boundary with Derbyshire County. At a local level it sits in Broxtowe Borough in Nottinghamshire, on the boundary with Erewash Borough in Derbyshire.

5.3.13 Broxtowe Borough Council adopted its Core Strategy 2014 to guide development in the Borough for the next 15 years as part of the Greater Nottingham Aligned Core Strategies. This does not identify any areas of land within the station catchment for promotion for development. Broxtowe Borough Council, however, undertook a consultation in 2015 on the appropriate mix, amount and location of new development in the vicinity of the HS2 station and the station location is being taken forward as a site specific allocation to be progressed as part of the *Broxtowe Part 2 Local Plan*. The allocation, which has already been published as an interim policy framework, entails a long term Green Belt boundary change, with proposals for three zones: a station zone with economic development at the sidings, a mixed use zone with 500 homes and community facilities and an eastern zone (east of Toton/Stapleford Lane) available for economic development.

5.3.14 Immediately east of the East Midlands Hub station is the Lime Rise development site, consisting of up to 500 dwellings and other mixed uses, which has planning consent. This is proposed to include a maximum of 500 dwellings, retail outlets, education floor space (maximum 2,300m^2), a day nursery, an 80 bed residential care facility and open space.

5.3.15 Erewash Borough Council has also prepared its Core Strategy (adopted in 2014). Within this, Long Eaton is identified for the provision of approximately 1,450 homes in or adjoining the Long Eaton urban area, including in Sandiacre, which falls within the HS2 station catchment. This number is set to be provided as a minimum by 2028. A minimum of 42,900m^2 of new offices and research development space is also being sought across Erewash, some of which will be delivered by promoting complimentary office development in and adjoining Long Eaton. How much is likely to fall within the station catchment is unclear.

5.3.16 Erewash Borough Council's *Toton HS2 Hub Station Area Plan* (August 2015) contains a number of proposals for strategic employment sites including a Rail Park, an industrial park at Sandiacre and industrial areas along the proposed HS2 route through Long Eaton.

Transport network

5.3.17 The new East Midlands Hub station is planned to be readily accessible by public transport from both Derby and Nottingham. Rail lines could be connected to serve Derby, Leicester, Nottingham and the wider East Midlands region.

5.3.18 There are no other rail stations in the immediate vicinity; the nearest stations are Attenborough to the east, on the line to Nottingham, and Long Eaton to the south, on the line to Derby. Both of these fall outside of the 2km buffer. The area is currently well served by an extensive network of regular bus services.

5.3.19 The Nottingham Express Transit (NET), Nottingham's tram network, has recently been expanded to serve a number of destinations. Opened in 2015, it includes a new Park and Ride facility at Toton Lane, just less than 1km from the East Midlands Hub station location. There is an aspiration to extend the tram network to the HS2 station. The station has provision to accommodate a tram stop should it be required.

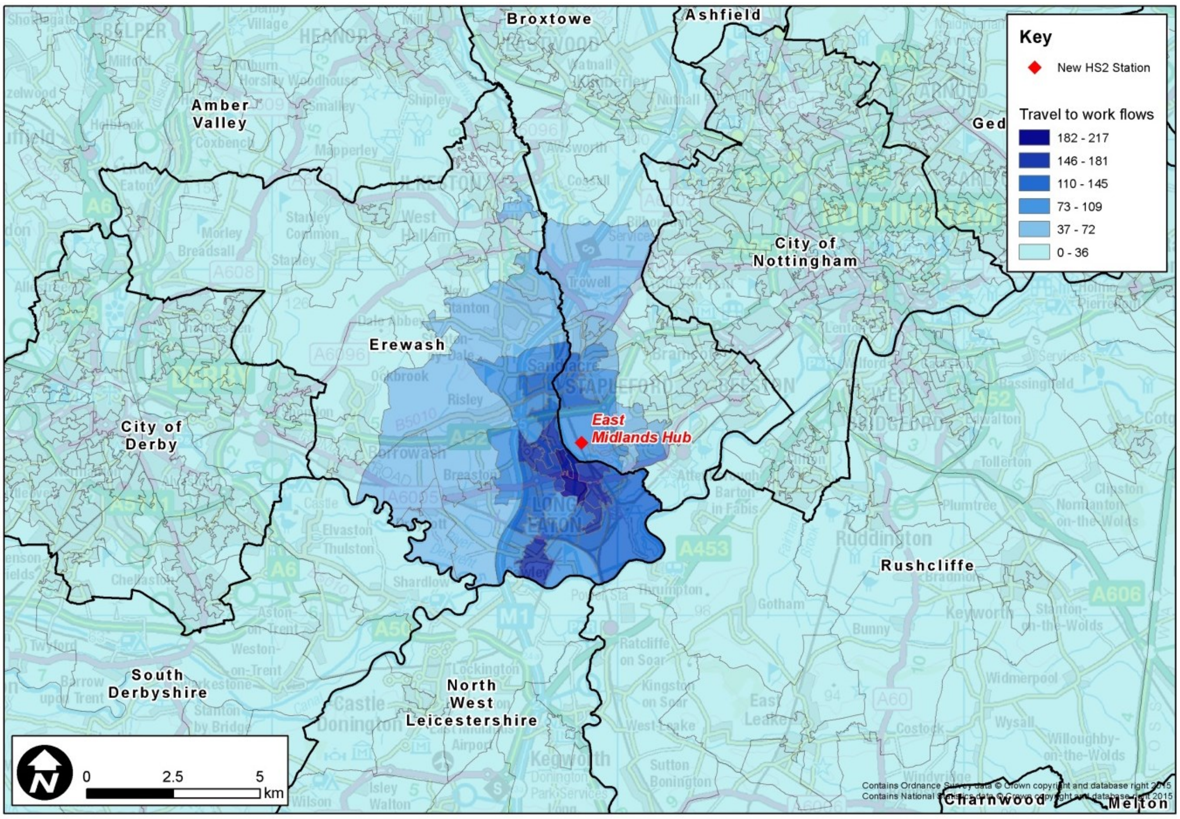
5.3.20 The HS2 station will be connected to the strategic road network via the A52 running east and west between Derby and Nottingham, and to the M1 via Junction 25.

5.3.21 East Midlands Airport is approximately a 20 minute drive south along the M1.

Travel to work

5.3.22 Travel-to-work patterns to East Midlands Hub catchment area are presented in **Figure 5-8** (Census 2011). They show very local commuting patterns and with most workers coming from Toton, Long Eaton, Sandiacre and Stapleford.

Figure 5-8 - Travel to work patterns – East Midlands Hub catchment area



5.4 Impacts of HS2 Phase 2b

Key factors

5.4.1 The scale of development supported at East Midlands Hub is influenced by the following factors:

- the site is surrounded by predominantly residential uses, with limited potential for significant commercial or residential development in comparison to a city centre location;
- the orientation of the station, the configuration of the site and significant barriers such as the River Erewash, railway lines and private open land mean that large areas of existing development to the east, south and west of the station will have little exposure to either the face of the station or to the flows of people and traffic serving it;

- a significant current constraint on the development of land in the vicinity of the potential station location is its Green Belt status. Broxtowe Borough Council has consulted on the Green Belt Review and a site 'between Toton and Stapleford' has been identified for Green Belt boundary change with the potential for mainly residential development, though no final decision has yet been reached;
- the Nottingham Express Tram system (NET) now has a station serving Toton, immediately east of Toton Lane and that line is proposed to be extended to the HS2 station. This provides a modern public transport link to the city centre, thereby increasing the attractiveness of Toton as a place to live and work;
- there are two principle development areas within 1km of the proposed station:
  - land between Toton and Stapleford – this is identified as a Strategic Location for Growth in the Broxtowe Borough Aligned Core Strategy[28]. It is assumed that there would be some residential development without HS2 but that the commercial potential of the site is considered to be enhanced with a HS2 station as well as the tram station in Toton. There is also the potential for a mix of uses with HS2 rather than the predominantly residential development that is currently being discussed; and
  - land at Toton Sidings/Banks Road – while the station is now within the development site, there is still the potential for office development and related leisure and retail development serving a sub-regional market, because of the strategic advantages of the location and due to the exposure of the site to the station and the flows of traffic to it.

Employment

5.4.2 The table below (**Table 5-6**) shows how HS2 could increase net non-residential floorspace by between 132,000 m^2 and 151,000 m^2, and support between 8,800 and 9,900 additional jobs[29]. Residential floorspace is estimated to increase by at least 14,000 m^2, and potentially up to 35,000 m^2. This equates to between 140 and 350 residential units.

Table 5-6 – Potential development impact around East Midlands Hub station

Use	Additional floorspace supported by HS2 (m^2)	Additional floorspace supported by HS2 in an aspirational policy environment (m^2)
Non-residential uses	132,000	151,000
Residential	14,000	35,000

5.4.3 The majority of commercial development would be office based, with some retail and leisure supported by HS2 as shown in **Table 5-7**.

[28] Broxtowe Borough Council, (September 2014). Broxtowe Aligned Core Strategy

[29] Net jobs, accounting for any demolitions as a result of the construction of the HS2 station but not accounting for the demolition of existing floorspace to be replaced by new development that may come forward.

Table 5-7 – Potential development impact around East Midlands Hub station by land use

Use	Additional floorspace supported by HS2 (m^2)	Additional floorspace supported by HS2 in an aspirational policy environment (m^2)
Office	98,000	112,000
Retail	9,000	9,000
Leisure	18,000	21,000
Education	6,000	8,000
Other uses[30]	2,000	2,000
Total	**132,000**[31]	**151,000**[32]

Opportunities

5.4.4 The area around East Midlands Hub station predominantly consists of established residential areas, with limited possibilities for comprehensive redevelopment. Local planning policy seeks some additional residential development, plus office and research development space in the general area, although how likely this is to be within the HS2 station catchment area is unclear.

5.4.5 The socio-economic impacts of the station at East Midlands Hub are relatively low, compared with others such as Manchester and Leeds. Overall, the catchment area has a stable set of socio-economic characteristics similar to the average national statistics and commuting is very local. The benefits to local residents (as assessed in this appraisal) would mainly be the relatively small number of additional jobs accommodated through local development.

[30] Other uses include industrial and distribution, cultural, community, service, car parking, health uses, libraries, crèches, play centres, youth centres, meeting halls, places of worship, church halls, hospitals, clinics, dental practices.

[31] Figures do not add up exactly due to rounding to nearest thousand.

[32] Ibid.

6.0 LEEDS STATION

6.1 Introduction

6.1.1 The Leeds station is proposed in the South Bank area of the city centre, and will be integrated with the existing rail station in a 'T' shape design.

6.2 The regional context: West Yorkshire

Economic activity and employment

6.2.1 As shown in the **Table 6-1**, 27.7% of employment in West Yorkshire[33] is in the public administration, health and education sectors, similar to the rest of England at 25.9%. Manufacturing is also an important sector in this area with more than 11% of workers employed in it. The financial and business services sectors are well represented with 14% of the workforce employed which is higher than the England average.

Table 6-1 – Employment by industry – West Yorkshire

Industry category[34] (% of people in employment in area) (Business Register and Employment Survey 2014)	Total employment	Percentage	Percentage (England)
Agriculture, forestry & fishing	400	0.0%	1.3%
Mining, quarrying & utilities	11,800	1.2%	1.1%
Manufacturing	112,600	11.1%	8.1%
Construction	43,200	4.3%	4.5%
Motor trades	19,900	2.0%	1.9%
Wholesale	45,200	4.5%	4.1%
Retail	92,900	9.2%	10.0%
Transport & storage	45,400	4.5%	4.5%
Accommodation & food services	58,600	5.8%	7.0%
Information & communications	31,500	3.1%	4.3%
Financial & insurance	46,200	4.6%	3.7%
Property	17,200	1.7%	1.9%
Professional, scientific & technical	71,300	7.0%	8.6%
Business administration & support services	94,800	9.4%	8.7%
Public administration & defence	45,500	4.5%	4.2%
Education	99,400	9.8%	9.0%
Health	135,700	13.4%	12.7%
Arts, entertainment, & other services	40,300	4.0%	4.5%
TOTAL	**1,011,900**		

6.2.2 The February 2016 claimant rate[35] for West Yorkshire is 2.3% of residents aged 16 to 64. This is slightly below average for the metropolitan counties (2.4%)[36].

[33] West Yorkshire comprises City of Bradford, Calderdale, Kirklees, City of Leeds and City of Wakefield.

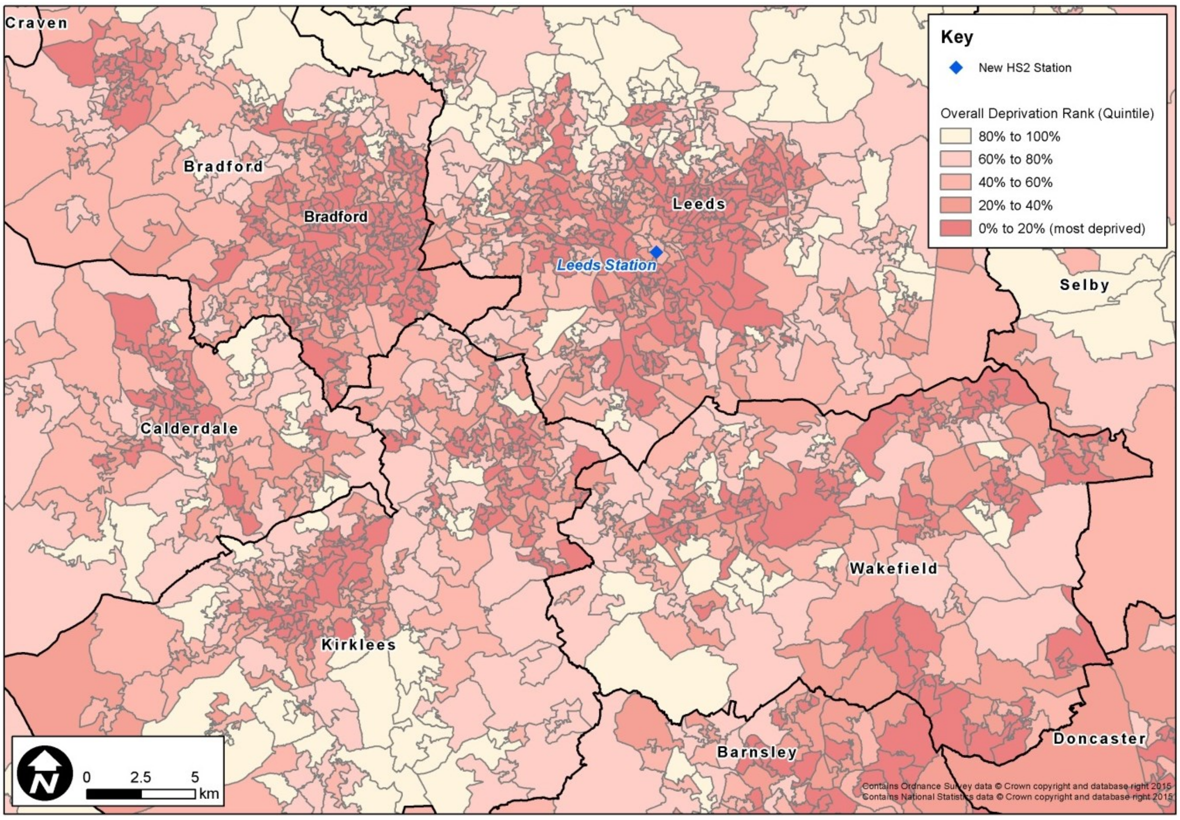
[34] Percentages do not add up exactly to 100% due to rounding up or down.

6.2.3 Gross Value Added statistics also show that the GVA per capita is significantly lower than the England average (just under 17% lower at £20,342), but around the median for English NUTS level 2 areas[37].

Deprivation

6.2.4 The Index of Multiple Deprivation 2015 clearly shows that this region is considerably deprived, especially in urban areas. This is illustrated in **Figure 6-1**.

Figure 6-1 – Overall deprivation – West Yorkshire



6.3 The local context: Leeds station catchment area

Summary

The Leeds station catchment area presents a mixed picture, with high levels of deprivation but positive labour market statistics such as high levels of qualifications and high levels of professional occupations. This coincides with the picture of Manchester Piccadilly catchment area.

The area includes a varied mixture of land uses typical to a city centre and city centre

[35] The proportion of residents aged 16-64 claiming Jobseeker's Allowance plus those who claim Universal Credit who are out of work. ONS, (2016). Claimant count by sex and age

[36] Metropolitan counties as defined by ONS are Greater Manchester, Merseyside, Inner London, Outer London, South Yorkshire, Tyne and Wear, West Midlands and West Yorkshire.

[37] ONS, (December 2015). Regional Gross Value Added (Income Approach)

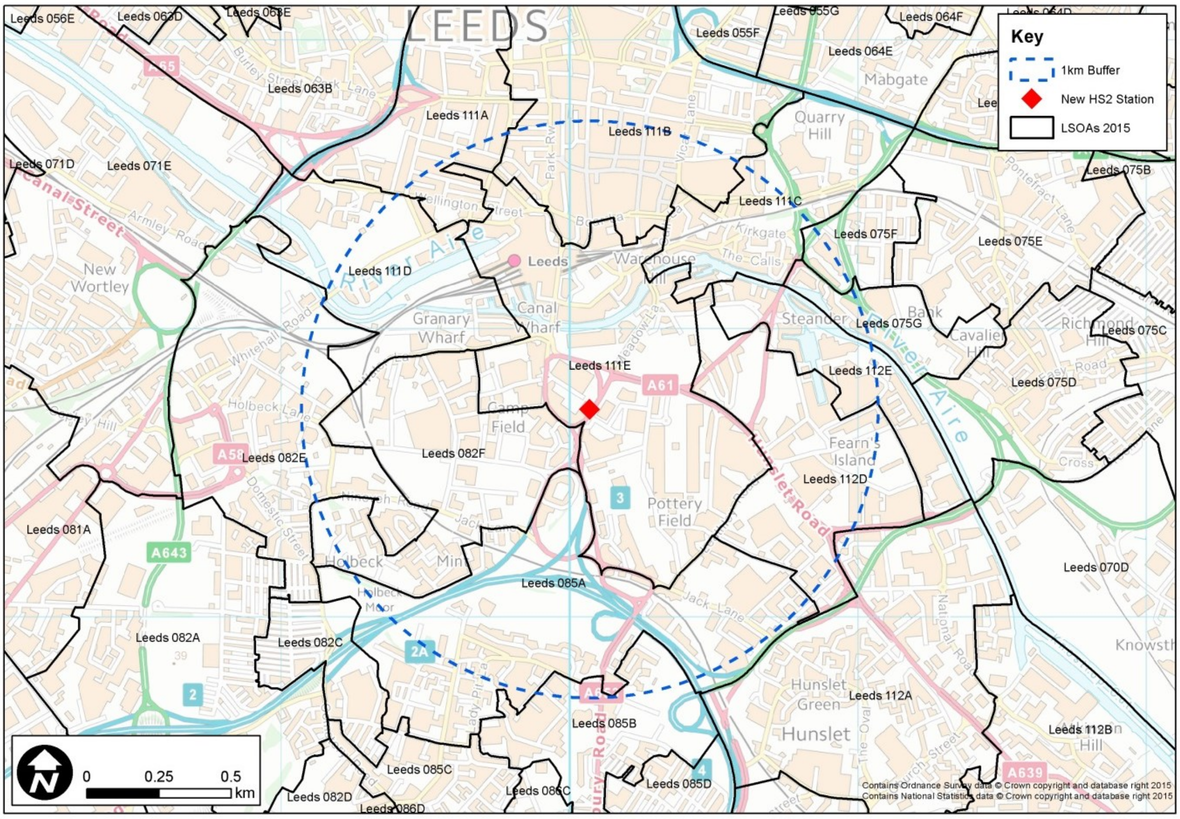
fringe. This includes a dense mix of retail, office, leisure and hotel uses, plus lower density sites given over to office parks, retail parks, light industrial uses, warehousing, and some residential. Local planning policy seeks to promote such areas for comprehensive redevelopment and re-use as major new retail, leisure, hotel, culture and office developments.

The Leeds HS2 station could increase net non-residential floorspace by between 197,000 and 334,000m^2, equivalent to between approximately 12,400 and 19,800 jobs. Residential floorspace is estimated to increase by at least 183,000m^2, and potentially up to 274,000m^2. This equates to between 3,000 and 4,600 residential units.

The area

6.3.1 Due to a relatively high population and employment density, baseline information has been collected for areas within 1km of the proposed high speed station. The 1km catchment area from the proposed Leeds station includes nine LSOAs, as shown in **Figure 6-2**[38]. Statistics for different socio-economic aspects have been evaluated against statistics for West Yorkshire and England.

Figure 6-2 – Leeds station catchment area



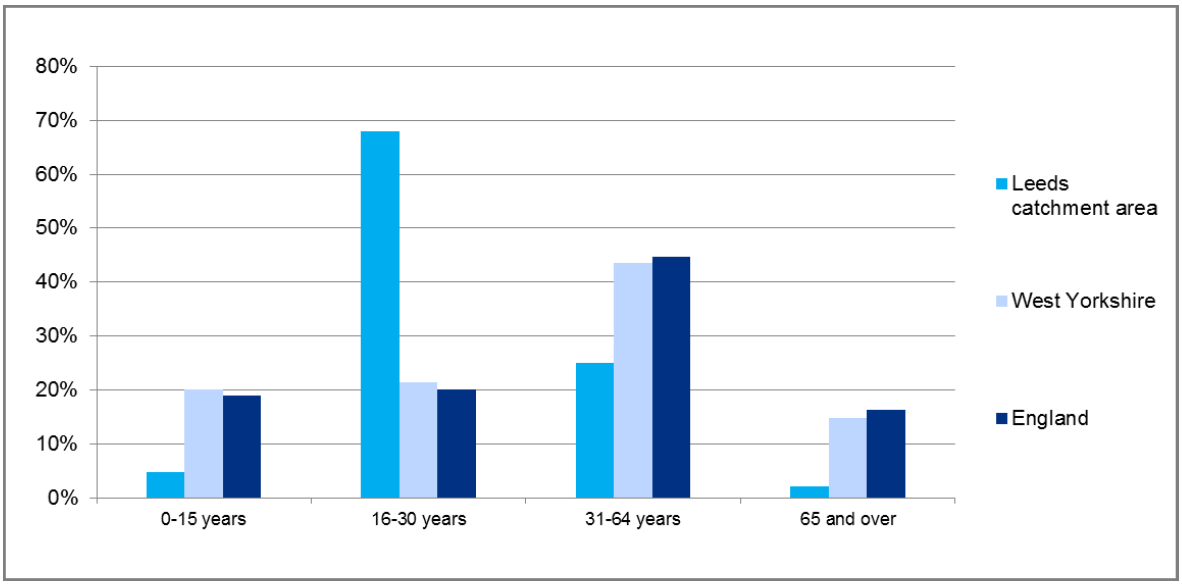
Population

6.3.2 More than 13,000 people currently live within 1km of Leeds station. There is a very high proportion of people aged 16 to 30 years (67.9%), compared to West Yorkshire and

[38] LSOAs are considered to be within the catchment if most or all or their population is within a 1km radius of the centre of the proposed station location.

England (21.5% and 20.2%, respectively). This may indicate a high proportion of students or young professionals living in this area as opposed to families. This is shown in **Figure 6-3**.

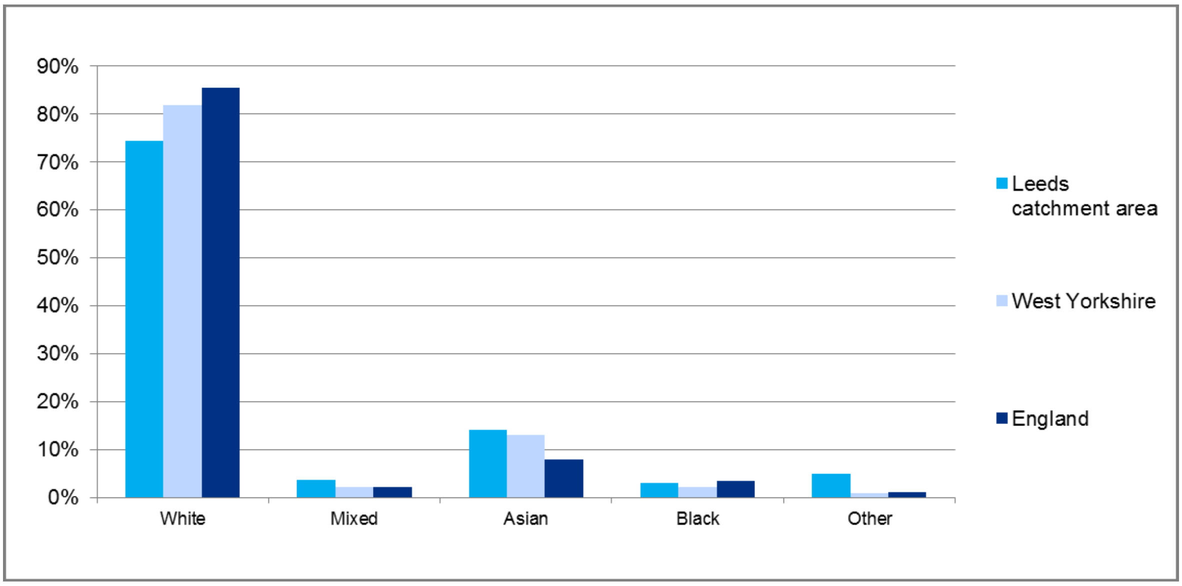
Figure 6-3 – Age structure – Leeds station catchment area



Ethnicity

6.3.3 The ethnicity of the population in the Leeds station catchment area is presented in **Figure 6-4**. It shows a greater level of diversity compared to the averages in West Yorkshire and England.

Figure 6-4 – Ethnicity – Leeds station catchment area



Economic activity and employment

6.3.4 The economic activity rate in the Leeds station catchment area is higher than average, as shown in **Table 6-2**, particularly due to the high proportion of students (10.3% in the catchment area, compared to 3.8% in West Yorkshire and 3.4% in England). Unemployment in the catchment area is lower as a proportion of residents (aged 16-74) than in West Yorkshire and nationally.

Table 6-2 – Economic activity rates – Leeds station catchment area

Economic activity rates[39] (% of population aged 16 to 74 years) (Census 2011)	Leeds catchment area	West Yorkshire	England
Economically active – total	72.8%	68.5%	69.9%
Econ. active – employed	59.5%	59.7%	62.1%
Econ. active – unemployed	3.1%	5.0%	4.4%
Econ. active – full time student	10.3%	3.8%	3.4%
Economically inactive – total	27.2%	31.5%	30.1%
Econ. inactive – looking after family	1.3%	4.7%	4.4%
Econ. inactive – permanently sick or disabled	1.7%	4.6%	4.0%
Econ. inactive – other (including retired)	24.2%	22.2%	21.7%

6.3.5 The percentages of residents in employment by occupation, shown in **Table 6-3**, indicate a very high proportion of professional occupations, as well as associate professionals and technical occupations. This data helps to confirm the aforementioned possibility that it is young professionals who are living in this part of Leeds.

Table 6-3 – Occupations – Leeds station catchment area

Occupations (% of total residents in employment) (Census 2011)	Leeds catchment area	West Yorkshire	England
Managers, directors and senior officials	10.4%	9.8%	10.9%
Professional occupations	32.3%	16.0%	17.5%
Associate professional and technical occupations	20.9%	11.9%	12.8%
Administrative and secretarial occupations	9.8%	11.6%	11.5%
Skilled trades occupations	3.9%	11.4%	11.4%
Caring, leisure and other service occupations	4.5%	9.5%	9.3%
Sales and customer service occupations	9.2%	8.9%	8.4%
Process, plant and machine operatives	1.9%	8.7%	7.2%
Elementary occupations	7.2%	12.2%	11.1%

6.3.6 In line with these data, the statistics for employment by industry in the area confirm that the professional, scientific and technical sector is the primary employment sector in this area (**Table 6-4**), followed by business administration and support services.

[39] Not all percentages add up exactly to 100% due to rounding up or down.

Table 6-4 – Employees by industry – Leeds station catchment area

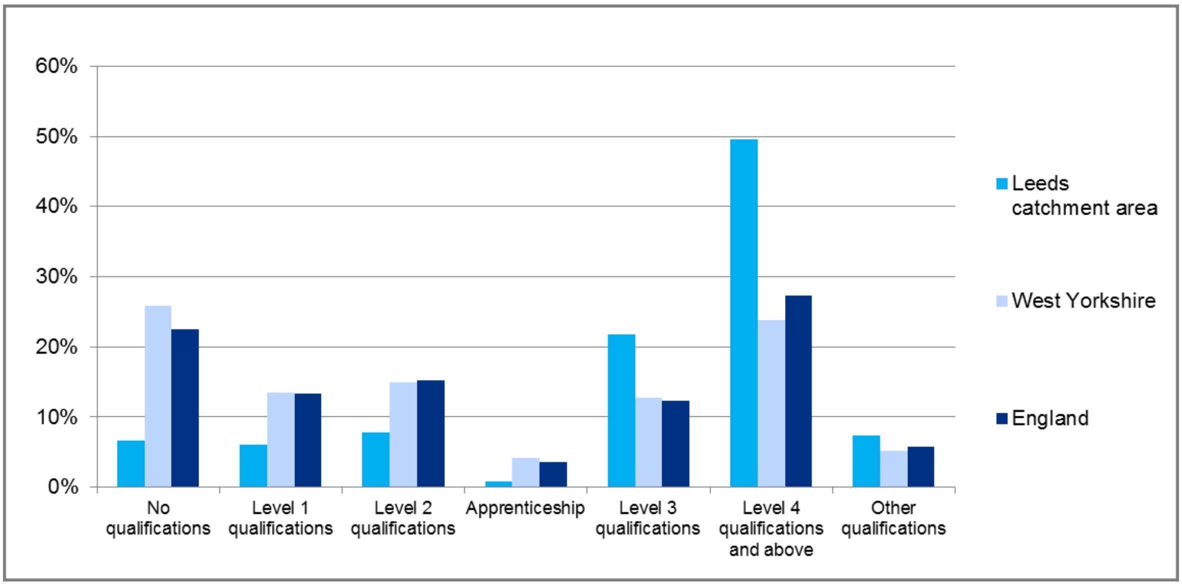
Industry category (% of people in employment in area) (Business Register and Employment Survey 2014)	Leeds catchment area	West Yorkshire	England
Agriculture, forestry & fishing	*	0.0%	1.3%
Mining, quarrying & utilities	*	1.2%	1.1%
Manufacturing	2.2%	11.1%	8.1%
Construction	1.7%	4.3%	4.5%
Motor trades	0.4%	2.0%	1.9%
Wholesale	1.2%	4.5%	4.1%
Retail	8.1%	9.2%	10.0%
Transport & storage	2.0%	4.5%	4.5%
Accommodation & food services	8.0%	5.8%	7.0%
Information & communications	6.1%	3.1%	4.3%
Financial & insurance	9.8%	4.6%	3.7%
Property	2.2%	1.7%	1.9%
Professional, scientific & technical	17.5%	7.0%	8.6%
Business administration & support services	13.2%	9.4%	8.7%
Public administration & defence	7.5%	4.5%	4.2%
Education	3.0%	9.8%	9.0%
Health	11.4%	13.4%	12.7%
Arts, entertainment, & other services	4.6%	4.0%	4.5%

* Figures are potentially disclosive so have not been included here. For this reason, percentages do not add up to 100%.

Education

6.3.7 Data on the level of qualifications attained by the residents in Leeds station catchment area show a high level of education achievement, with almost half of residents having obtained a level 4 qualification (**Figure 6-5**). This contrasts with the statistics for West Yorkshire as well as England, where less a third of residents have achieved level 4 qualifications.

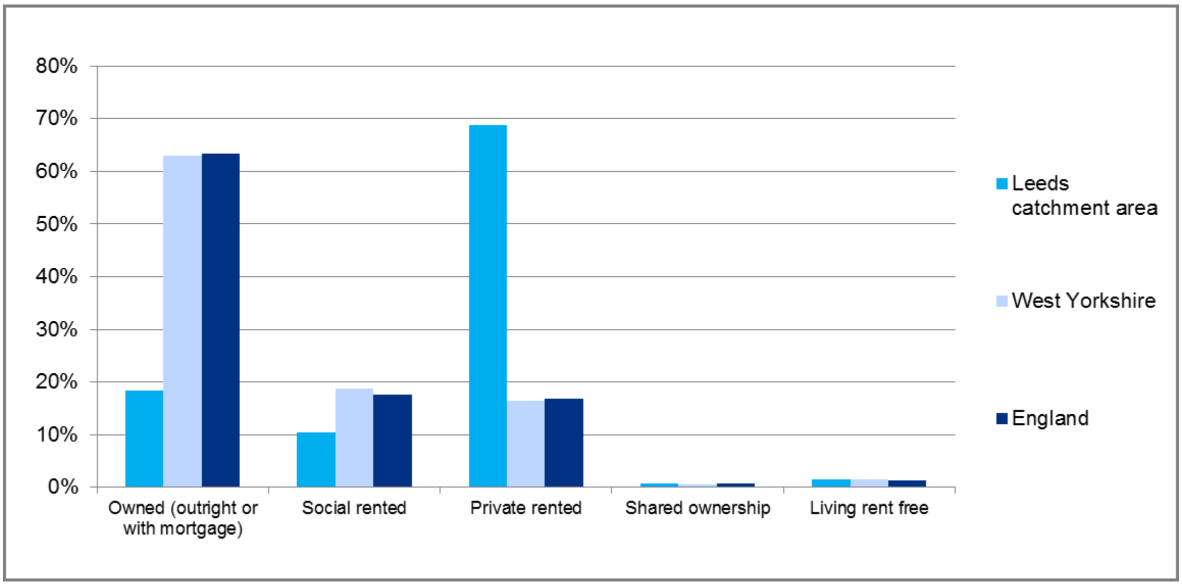
Figure 6-5 – Qualifications – Leeds station catchment area



Household Tenure

6.3.8 As expected for a central urban area, the proportion of people renting is considerably higher than those owning a home (79.3% compared to 18.3%), a very different picture from the average household tenure statistics for the whole of West Yorkshire and England, where home ownership is relatively high. This is shown in **Figure 6-6**.

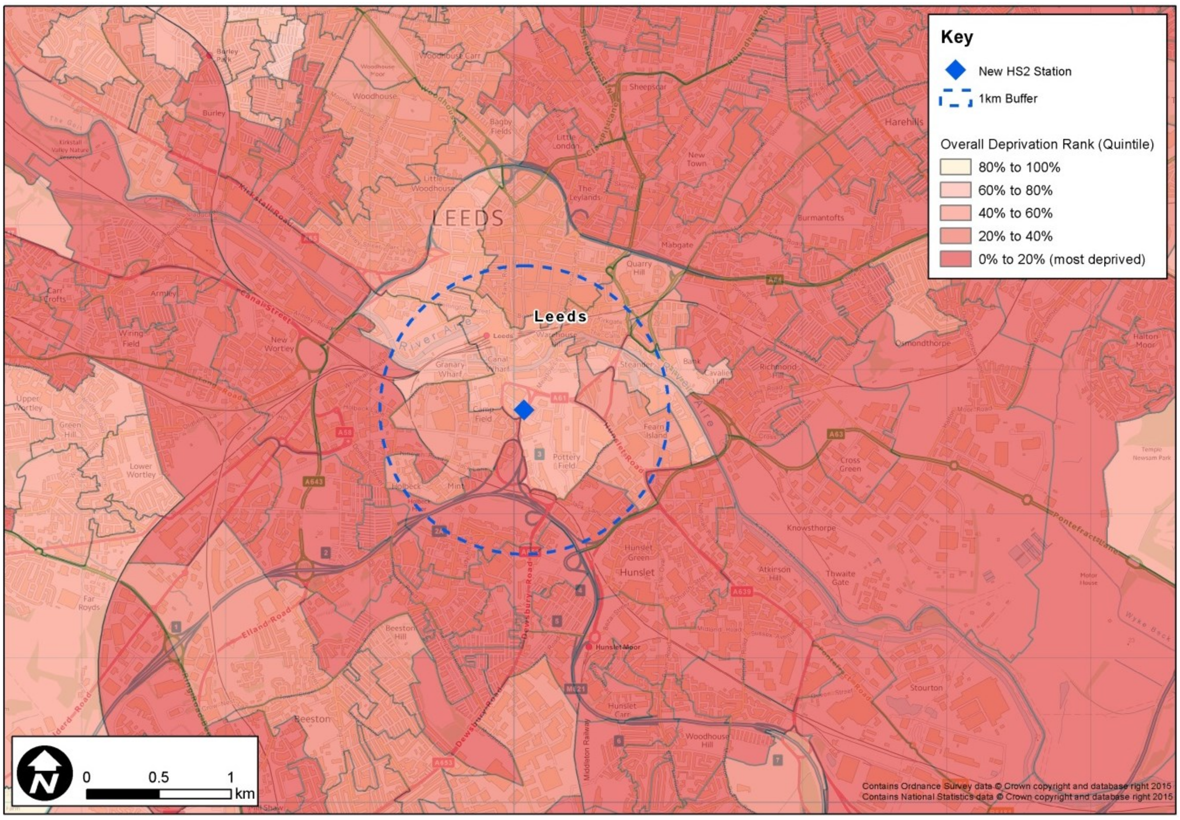
Figure 6-6 – Household tenure – Leeds station catchment area



Deprivation

6.3.9 Deprivation indicators paint a considerably negative picture of Leeds in general, with many parts falling in the 20% most deprived areas in England. However, the actual Leeds station catchment area is in a better position than its surroundings, as shown in **Figure 6-7**.

Figure 6-7 – Overall deprivation – Leeds station catchment area



6.3.10 Looking at different deprivation indicators (based on LSOA rank), shown in **Table 6-5**, this area shows a mixed picture compared to the whole of England. The catchment is deprived in terms of education, skills and training and has significant barriers to housing and services.

Table 6-5 – Deprivation indicators – Leeds station catchment area

Domains of deprivation (English Indices of Deprivation 2015)	Leeds catchment area (proportion of catchment LSOAs in 20% most deprived areas in England)	England
Overall	11%	20%
Income	11%	20%
Employment	11%	20%
Education, skills and training	33%	20%
Barriers to housing and services	89%	20%

Land use characteristics

6.3.11 The area immediately around Leeds station contains a varied mixture of land uses typical to a city centre and city centre fringe. To the north of the station site across the River Aire, is the city's heart, with a dense mix of retail, office, leisure and hotel uses. The areas to the west, east, and south of the station site are typically city centre fringe, with larger lower density sites containing office parks, retail parks, light industrial uses, warehousing, and some residential. Significant local destinations within the 1km walking catchment include Trinity Leeds shopping and leisure centre, Kirkgate Market, Crown Point Shopping Centre, City One Business Park, Holbeck Urban Village, and the Carlsberg Brewery.

Strategic ambitions

6.3.12 The *Leeds City Council Core Strategy* (adopted 2014) identifies Leeds city centre at the top of the Centres Hierarchy and the major financial and commercial centre and 'shop window' for the rest of the city and region. An objective of the Core Strategy is for the city centre to remain a 'successful regional facility', one that offers a sustainable employment, shopping, leisure and cultural location, which can promote development that is less reliant on people travelling by car. The document identifies the Leeds city centre area generally as the location for up to 10,200 new homes, and a strategic location for job growth of over 1,000 full time equivalent (FTE) jobs.

6.3.13 The Core Strategy also notes that significant parcels of vacant and underused brownfield land remain available for development in the city centre, particularly to the south of the river (The South Bank), to the east of Marsh Lane and along the Wellington Street and Whitehall Road corridors to the west. These are all areas that fall within the 1km catchment of the station. These areas have significant development potential for large scale commercial and mixed uses, plus a city centre park.

6.3.14 The Core Strategy specifically states that the city centre will be promoted as the regional capital for major new retail, leisure, hotel, culture and office development, and the main focus for office development (focussed upon the West End, South Bank and Holbeck Urban Village). Vacant and under-used sites will be comprehensively planned for redevelopment and re-use.

6.3.15 A particular focus of major development and regeneration is the Aire Valley Leeds, to the south-east of the city centre, a designated Enterprise Zone and Urban Eco-Settlement. It extends to over 1,300 hectares and contains over 400 hectares of sites, which are available for development in the short to medium term, as well as areas of longer term potential. The area extends from the M1 motorway into the city centre along both banks of the River Aire Corridor; some of this area falls within the HS2 proposed station catchment area. Aire Valley Leeds has an existing employment base of 800 businesses, employing around 30,000 people and also provides a considerable opportunity for local jobs growth with capacity to support an estimated 35,000 new jobs. Aire Valley Leeds is also identified as potentially providing a minimum of 6,500 new homes.

6.3.16 Leeds City Council has also developed a *South Bank Leeds Framework Plan* (draft August 2016) which is being consulted on (until November 2016). The proposals for regeneration of the South Bank area of Leeds would significantly increase the size of the city centre, setting an ambition of providing more than 35,000 jobs and over 4,000 homes. The framework states that the proposals would be strengthened by the HS2 Leeds station being located here.

Transport network

6.3.17 Leeds station would be located in the South Bank area of the city centre, and integrated with the existing Leeds station. Leeds station offers existing connections to a number of regional rail destinations such as Bradford, Halifax and Castleford, as well as destinations further away including Bristol, Plymouth, Newcastle upon Tyne, York, Edinburgh, Manchester, Liverpool, Hull, Scarborough, Selby and Doncaster.

6.3.18 The existing Leeds station includes a bus interchange, providing connections to the city's extensive bus network. The station also includes a cycle hub. A new station entrance on the south side of the River Aire has recently opened (in January 2016), opening up access to South Bank Central, Holbeck Urban Village and Leeds Dock and Hinterland development areas.

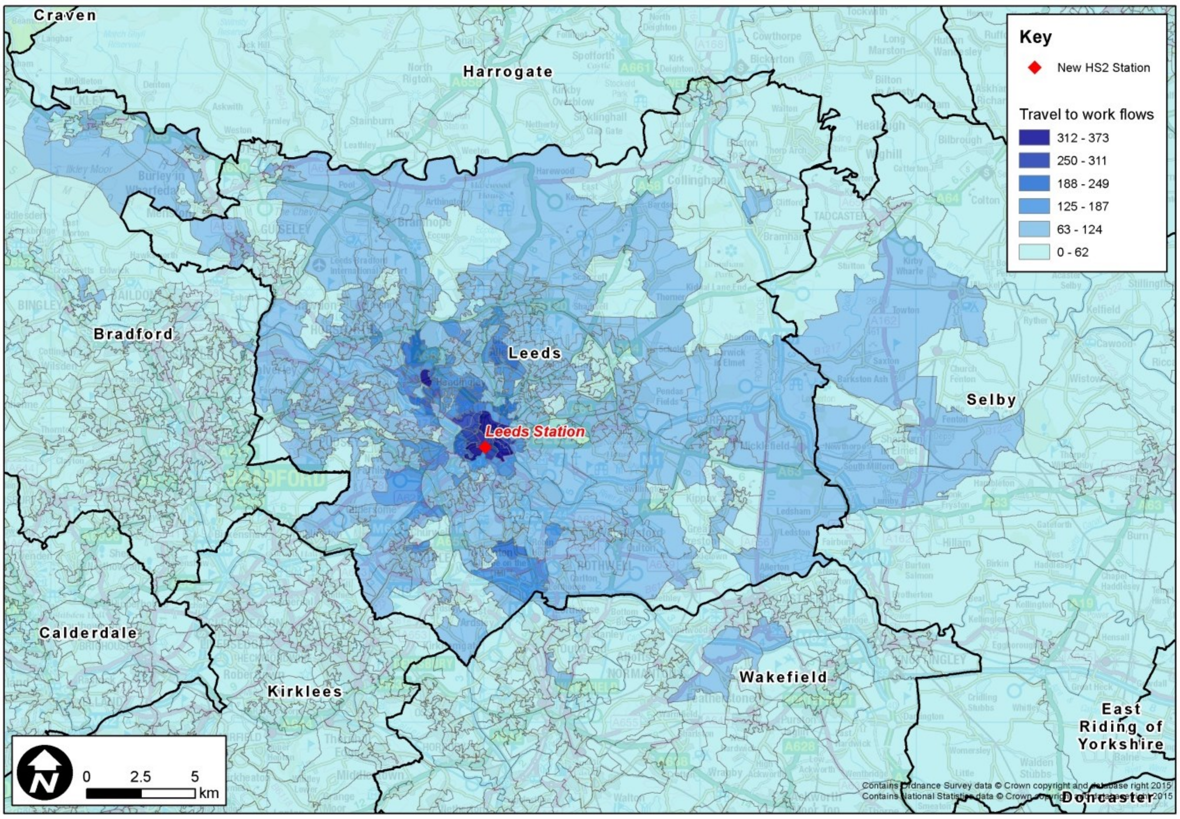
6.3.19 Traffic circulation within central Leeds is based around the Inner Ring Road, which largely carries through traffic around the city, and the city centre Loop, which distributes local traffic around the city centre. The City Centre Loop contains a number of existing streets which together create a one way loop around the city centre to provide local access for city centre traffic, and freeing up the core for pedestrianisation and to ensure it is largely free from traffic. Highway access to the Leeds station would be from the M621 (Junction 3), which connects to the Inner Ring Road and also to regional motorways. Car parking would be provided at the southern entrance.

6.3.20 Leeds Bradford International Airport is located to the north-west of the city and has scheduled flights to destinations within Europe and beyond. There are direct bus services (half-hourly in daytime) to the airport from Leeds and Bradford city centres.

Travel to Work

6.3.21 Travel to work patterns for Leeds (Census 2011) show that a high proportion of workers commute locally and very few of them travel from outside Leeds. This is illustrated in **Figure 6-8**.

Figure 6-8 – Travel to work patterns – Leeds station catchment area



6.4 Impacts of HS2 Phase 2b

Key factors

6.4.1 The following factors influence the level of future development supported by HS2 in the Leeds area:

- there are a large number of sites within the station's catchment area that are available for development. Sites with a particularly significant development potential include a number of sites on the South Bank, Holbeck Urban Village, land off Kidacre Street and Clarence Road area;
- there has already been extensive recent development within the local area, and sites are continuing to be developed without HS2;
- the viability of office development relative to residential has declined due to a combination of local and national policies;
- the area is supported by excellent local transport links; and
- there is strong local planning policy support for the development of land opportunities in the southern half of the city centre, including Beeston Hill and Holbeck and in the Aire Valley Urban Eco-Settlement.

Employment

6.4.2 The potential for development in the Leeds station catchment is high. **Table 6-6** below shows how HS2 could increase net non-residential floorspace by between 197,000 and 334,000m^2, equivalent to between approximately 12,400 and 19,800 jobs. Some 3,100 jobs may be displaced due to construction of the station but are netted of the figures above. Residential floorspace is estimated to increase by at least 183,000m^2, and potentially up to 274,000m^2. This equates to between 3,000 and 4,600 residential units.

Table 6-6 – Potential development impact around Leeds station

Use	Additional floorspace supported by HS2 (m^2)	Additional floorspace supported by HS2 in an aspirational policy environment (m^2)
Non-residential uses	197,000	334,000
Residential	183,000	274,000

6.4.3 An indicative assessment of the make-up of the non-residential space under both scenarios is provided in **Table 6-7**. Whilst office space takes up over half the anticipated increase in floorspace, retail and leisure are also expected to be significant, reflecting the nature of the local area.

Table 6-7 – Potential development impact around Leeds station by land use

Use	Additional floorspace supported by HS2 (m^2)	Additional floorspace supported by HS2 in an aspirational policy environment (m^2)
Office	123,000	194,000
Retail	35,000	52,000
Leisure	48,000	71,000
Education	3,000	4,000
Other uses[40]	-11,000	13,000
Total	**197,000**[41]	**334,000**

Opportunities

6.4.4 The proposed station at Leeds offers considerable development opportunities although the demolitions required for its construction reduces the net impact to a certain extent.

6.4.5 The area around the existing Leeds station includes significant parcels of vacant and underused brownfield land available for development, particularly to the south of the river (The South Bank), to the east of Marsh Lane and along the Wellington Street and Whitehall Road corridors to the west. Local planning policy seeks to promote such areas for comprehensive redevelopment and re-use as major new retail, leisure, hotel, culture and office developments. Currently the land use mix is supportive of the kind of development likely to be nurtured by HS2, with high rise buildings a key element.

6.4.6 This station will serve Leeds city centre and it can be seen that it is likely to produce significant benefits in terms of development and therefore employment. The station catchment area currently presents a mixed picture with a high level of deprivation but positive labour market statistics such as a high level of qualifications and high level of professional occupations. Travel to work patterns for Leeds show that a high proportion of workers commute locally and that fewer travel from outside Leeds. This scenario suggests that development will offer substantial benefits for the local population.

[40] Other uses include industrial and distribution, cultural, community, service, car parking, health uses, libraries, crèches, play centres, youth centres, meeting halls, places of worship, church halls, hospitals, clinics, dental practices.

[41] Not all numbers add up exactly due to rounding to nearest thousand.

7.0 SUMMARY OF FINDINGS

7.1.1 This appraisal has shown the socio-economic baseline for the area around each of the four stations on the HS2 Phase 2b route: Manchester Airport station and Manchester Piccadilly on the western leg; and East Midlands Hub (Toton) and Leeds on the eastern leg.

7.1.2 A 1km catchment area has been considered for high population and employment density areas (Manchester Piccadilly and Leeds) while a 2km catchment area has been analysed for areas with lower density (Manchester Airport station and East Midlands Hub). An assessment has also been made of the level of development and associated jobs that would be supported by each HS2 station. This chapter summarises the findings.

7.2 Summary of findings

7.2.1 **Table 7-1** below sets out the estimated impacts on development floorspace and jobs supported for each of the four stations.

Table 7-1 – Estimated development impact in HS2 Phase 2b stations' catchment areas

Station	Net gain in non-residential floorspace	Net gain in residential floorspace	Net jobs accommodated	Potential development impact of HS2
Manchester Airport station	5,000-10,000m^2	0	300-700	Low
Manchester Piccadilly station	605,000-871,000m^2	184,000-246,000m^2	29,700-42,900	Very high
East Midlands Hub station	132,000-151,000m^2	14,000-35,000m^2	8,800-9,900	Medium
Leeds station	197,000-334,000m^2	183,000-274,000m^2	12,400-19,800	High

7.2.2 **Table 7-2** summarises the full findings of the socio-economic appraisal. In the table, the 'high', 'low' and 'average' ratings are relative to the other HS2 stations and England as a whole and the final column summarises the areas in terms of high or low propensity for new economic development as a result of HS2.

Table 7-2 – Summary of findings of socio-economic appraisal for HS2 Phase 2b stations

Station	Population and employment density	Economic activity	Skills and qualifications	Deprivation	Development opportunity through policy	Travel to work origins	Transport connections	Net jobs supported	Regeneration impact of HS2
Manchester Airport station	Low	Regional: Average Local: Average	Regional: Low Local: Average (mixed)	Regional: High Local: High	High	Low (local catchment)	High	Low	High, local and regional regeneration potential
Manchester Piccadilly station	High	Regional: Average Local: Low, though high level of students but low rate of unemployment	Regional: Low Local: High	Regional: High Local: High	High	High (wide catchment)	High	Very high	High, particularly in terms of development and benefiting the wider region
East Midlands Hub station	Low	Regional: Average Local: High compared to region	Regional: Low Regional: Low	Regional: Low Local: Low	Low	Low (local catchment)	Low	Medium	Low compared to the other stations
Leeds station	High	Regional: Low Local: High, but high level of students	Regional: Low Local: High	Regional: High Local: Average	High	Low (fairly local catchment)	High	High	High, local and regional regeneration potential

Annex A DEPRIVATION VARIABLES

A.1 Greater Manchester deprivation variables

The income, employment and education deprivation results for Greater Manchester show that all these variables are very closely related. These results are plotted in the following figures.

Figure A1-1 – Income deprivation in Greater Manchester

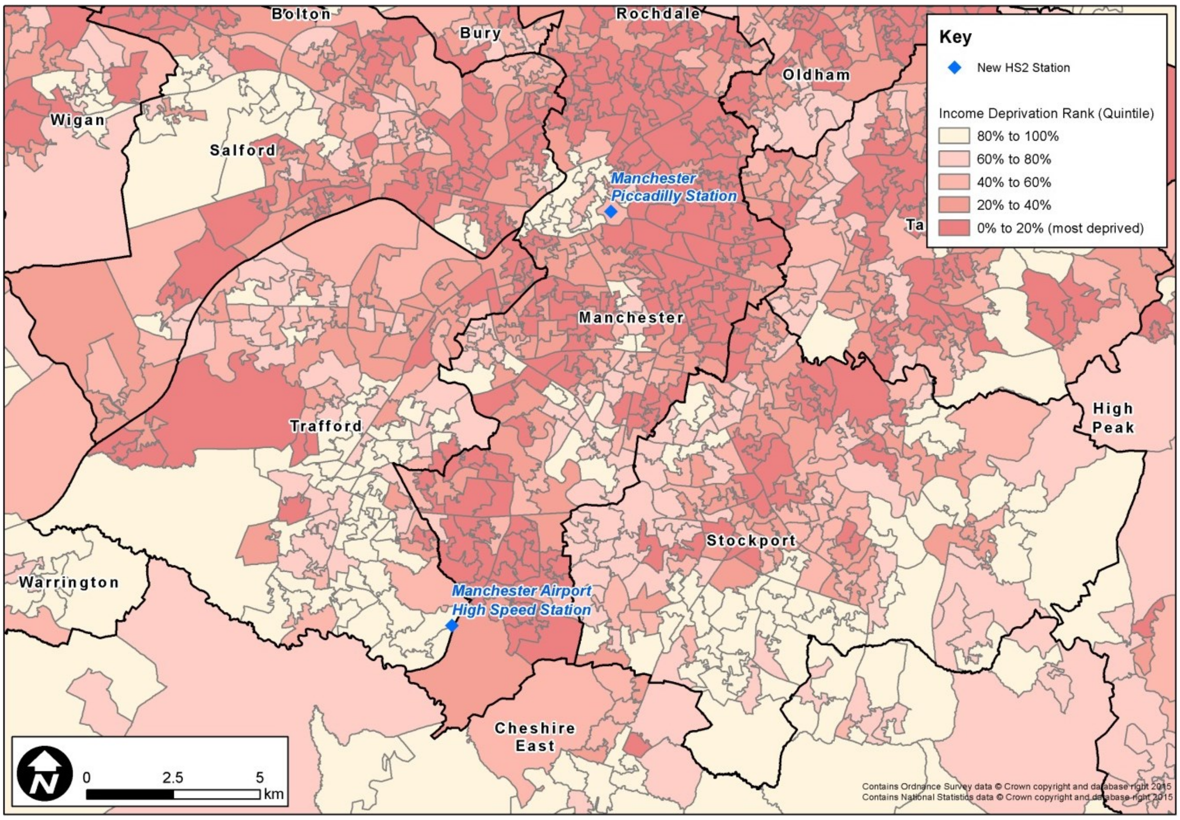


Figure A1-2 – Employment deprivation in Greater Manchester

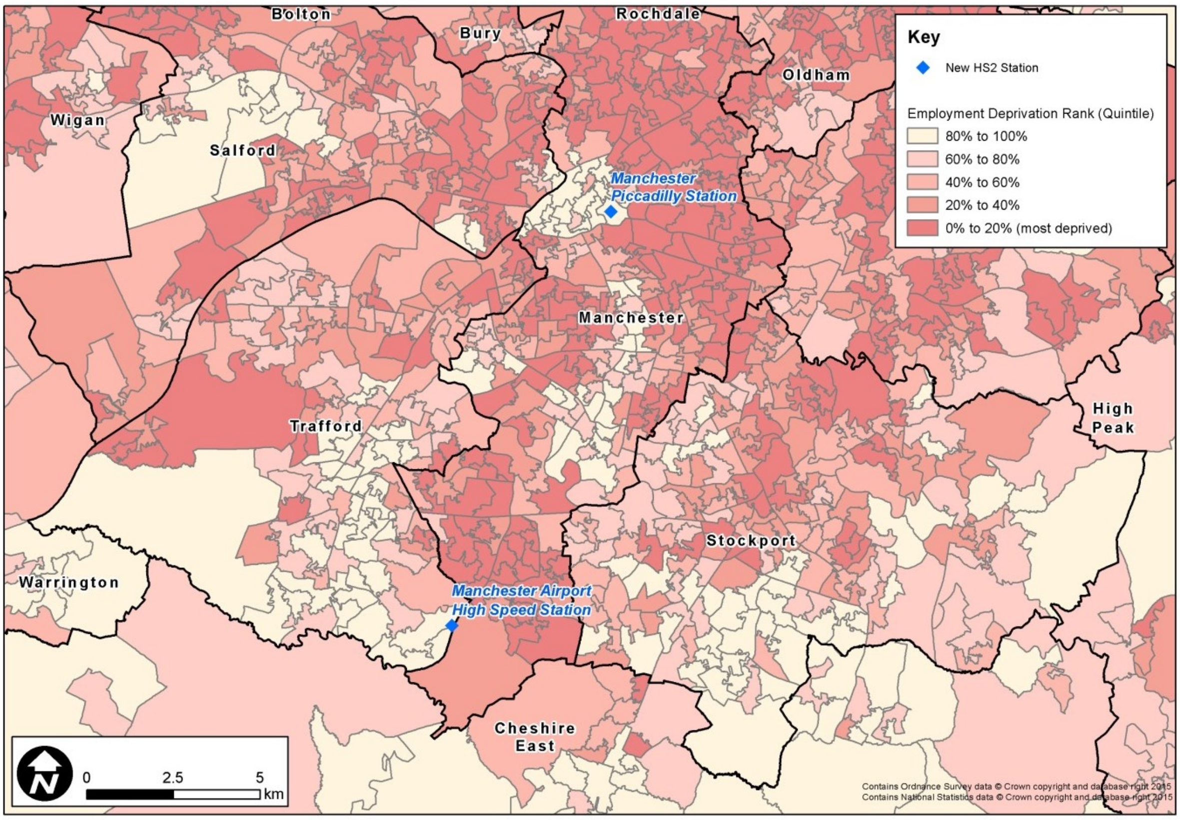
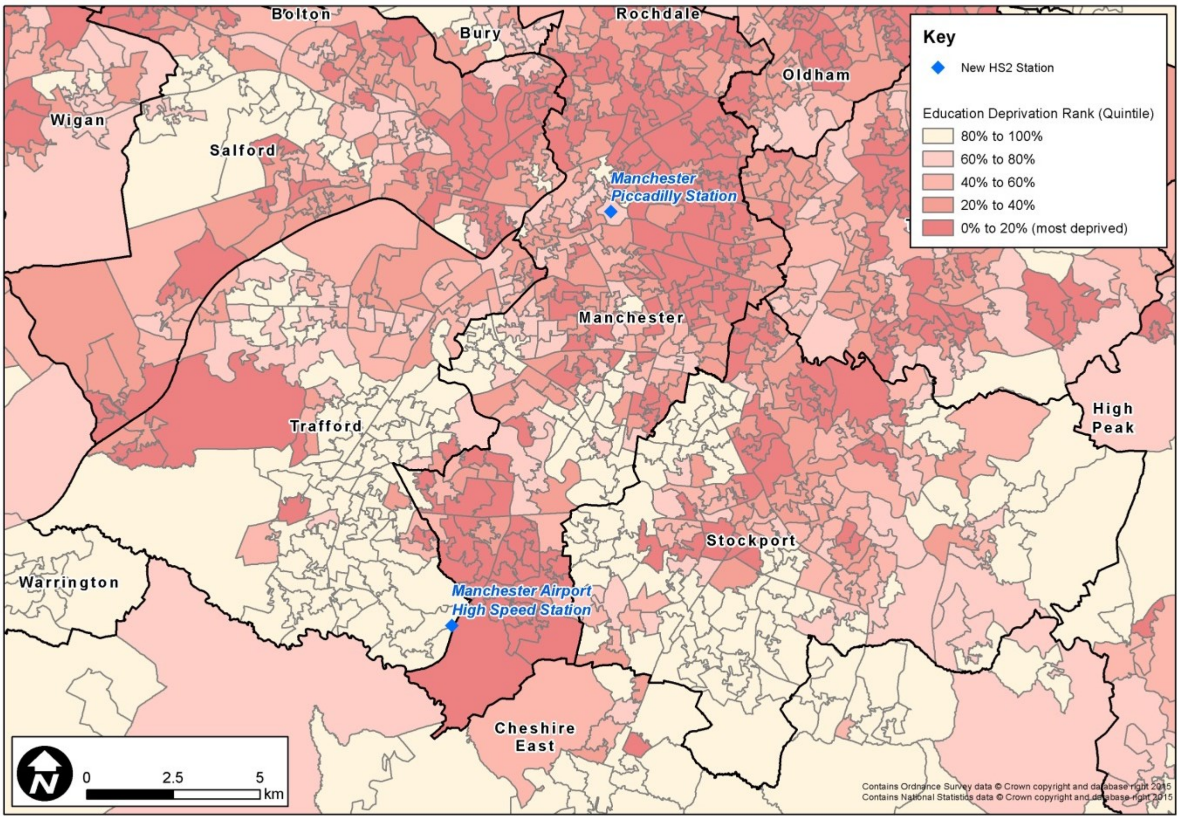


Figure A1-3 – Education deprivation in Greater Manchester



A.2 East Midlands deprivation variables

A high proportion of this region scores relatively well in terms of deprivation, however this does not apply to the east of the region, which is significantly deprived in terms of income, employment and education as presented in the following figures.

Figure A2-1 – Income deprivation in the East Midlands

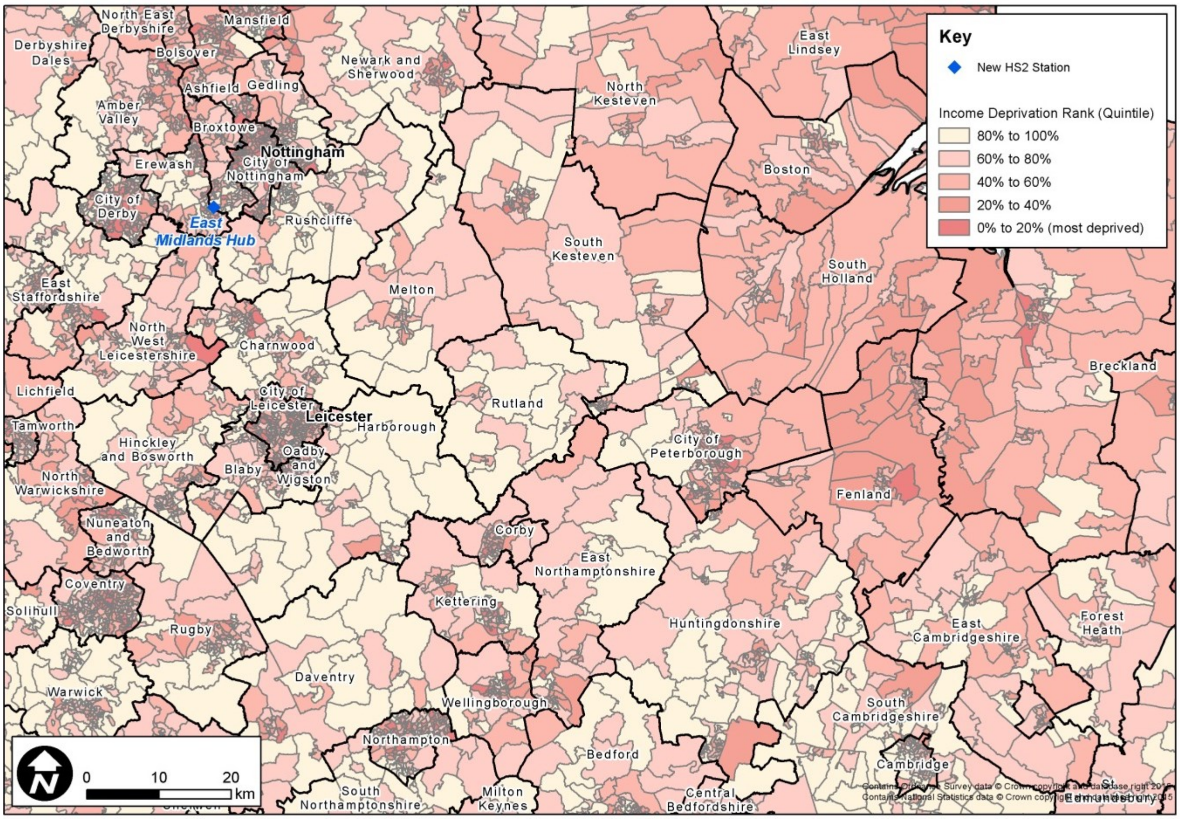


Figure A2-2 – Employment deprivation in the East Midlands

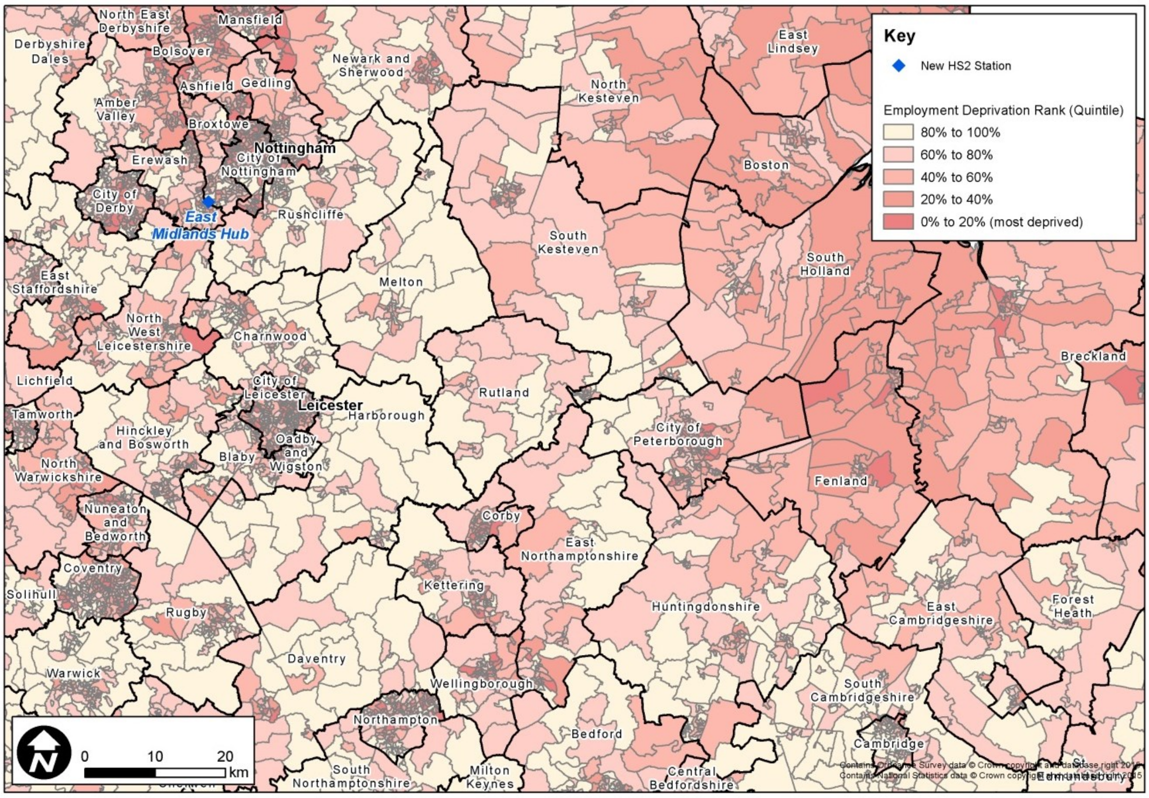
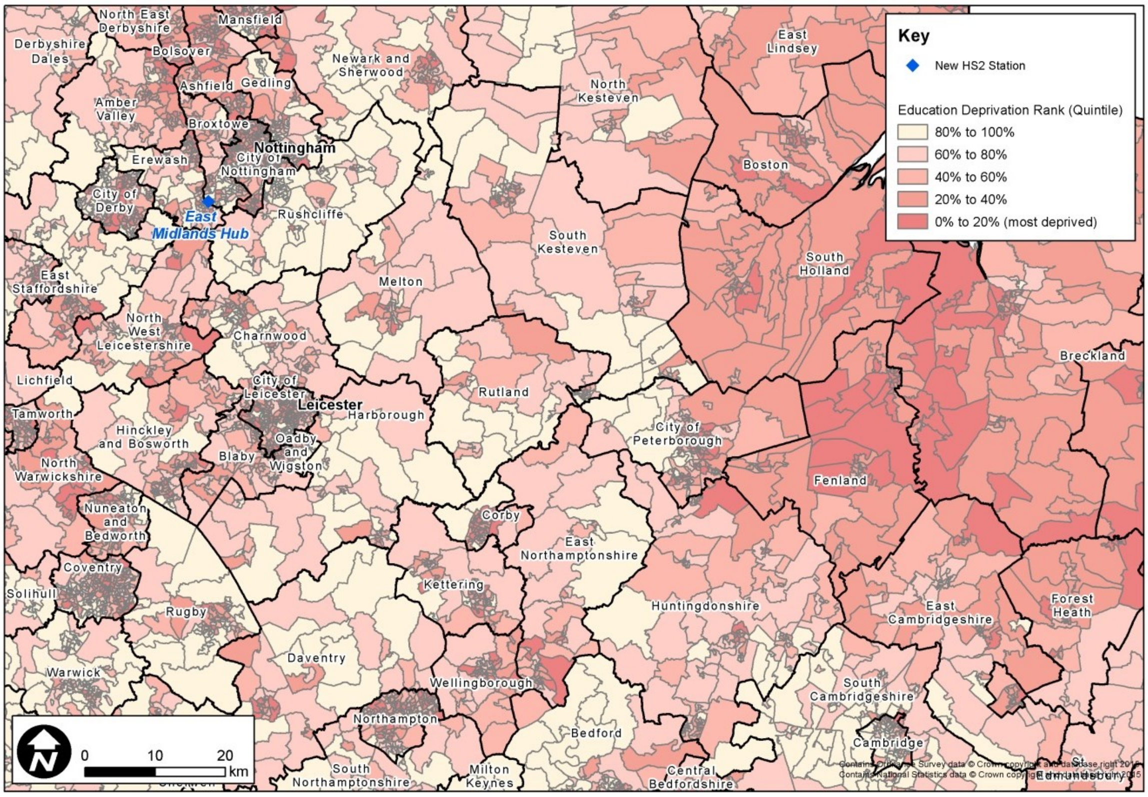


Figure A2-3 – Education deprivation in the East Midlands



A.3 West Yorkshire deprivation variables

The Index of Multiple Deprivation clearly shows that this region is considerably deprived as evidenced in the three variables of income, employment and education illustrated in the following figures.

Figure A3-1 – Income deprivation in West Yorkshire

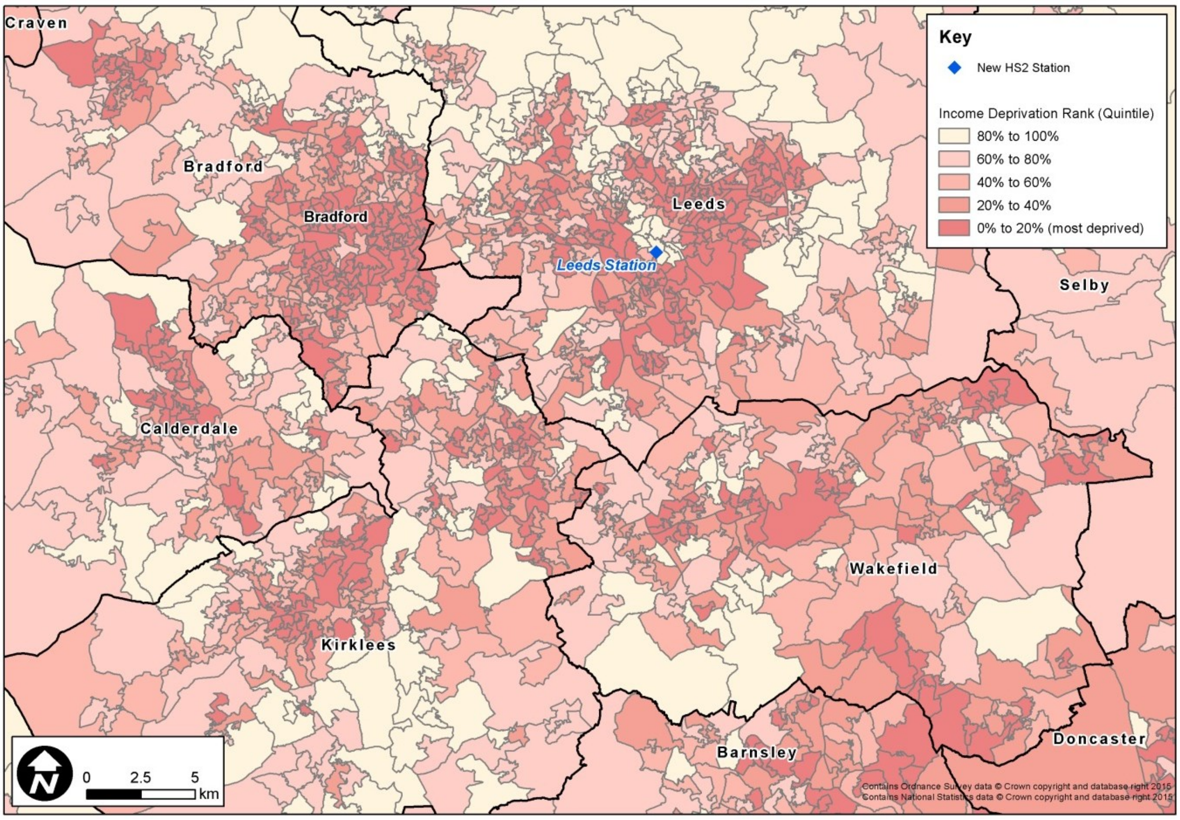


Figure A3-2 – Employment deprivation in West Yorkshire

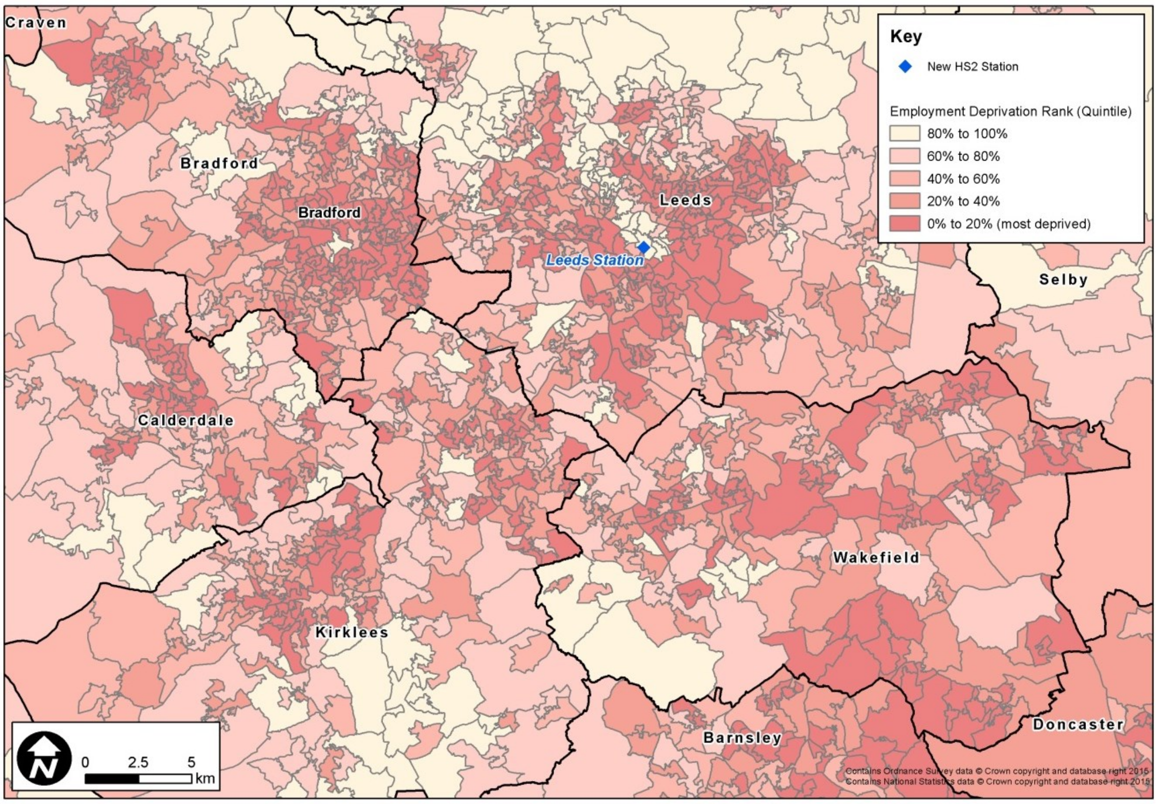
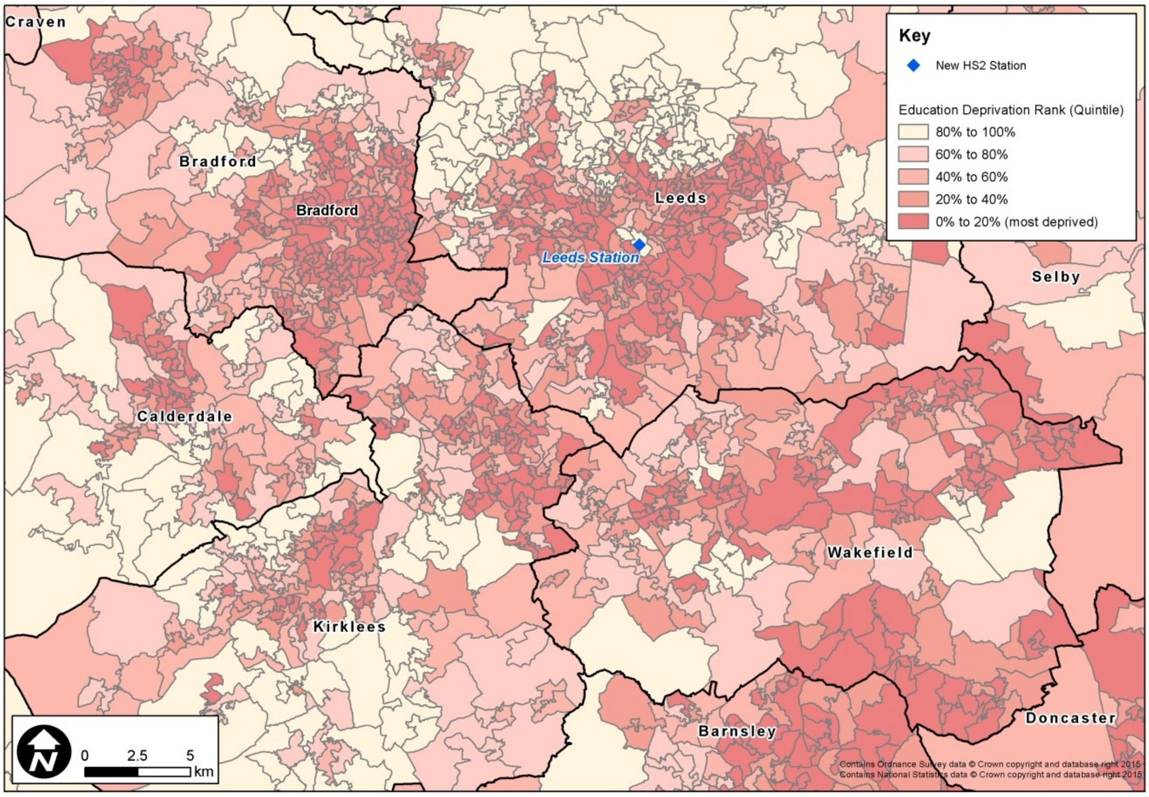


Figure A3-3 – Education deprivation in West Yorkshire



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