Residential & labour market connections of deprived neighbourhoods in Greater Manchester & Leeds City Region

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Note: this paper was revised to update the residential mobility results following identification of a labelling error in the original data

Contents

1. Introduction

This report draws together information from a national research project on disconnection and deprivation in the UK's cities (Rae et al. 2016) funded by the Joseph Rowntree Foundation.[1] The national study describes the characteristics of deprived neighbourhoods in terms of residential mobility and interactions with the wider labour market. In this report, the Inclusive Growth Analysis Unit at the University of Manchester turns the focus on to deprived neighbourhoods in Greater Manchester and in the Leeds City region, considering the extent to which residents in these neighbourhoods have access to jobs and housing elsewhere in the city region.

Whilst the pattern, and persistence, of deprivation in cities is clear, the evidence on ways to intervene and change these patterns is relatively limited. One reason for this is that the causes of disadvantage vary across local areas – some will have proportionately more lower skilled residents who struggle to compete for employment opportunities; others may be situated on the periphery of the city economy where limited transport links may mean that residents struggle to access opportunities; still others may be experiencing significant population churn or the reverse, seeing few residents move on or in to the area.

By looking at the flows of people into and out of deprived neighbourhoods, both in terms of residential mobility and labour market interactions, it is argued that we can better understand the role that these neighbourhoods play in the city region and begin to identify the challenges faced by different neighbourhoods. The analysis illuminates the different circumstances of neighbourhoods that score highly on indicators of deprivation and suggests policy approaches bespoke to these varying conditions.

Policies aimed at addressing neighbourhood deprivation had, until very recently, largely fallen off the policy agenda in England.[2] The estate regeneration panel set up by the previous prime minister and due to report in Autumn 2016 marks a muted return to neighbourhood regeneration and a recognition of the challenges facing some communities.[3] But the focus on physical regeneration, the scale – targeting 100 estates – and limited resources mean it is unlikely to have a significant impact on the overall picture of neighbourhood deprivation. For progress to be made in tackling deprivation, policies must take account of the particular challenges faced by residents in deprived neighbourhoods.

1.1   Overview of the report

This report draws on two neighbourhood typologies to describe the characteristics of the most deprived neighbourhoods in Greater Manchester and Leeds City Region. The typology is based on data from the 2011 Census and the 2015 Index of Multiple Deprivation. The intention of the report is not to compare the two city regions, but to provide more detailed analysis of what the typologies have to say about the kinds of deprived neighbourhoods in

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[1] Rae, A., Hamilton, R., Powell, R. & Crisp, R. (2016) Overcoming deprivation and disconnection in UK cities, Joseph Rowntree Foundation
[2] Lupton et al. (2013)
[3] DCLG (2016) Estate regeneration – statement,
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/520977/Estate_Regeneration_statement.pdf

each of the two places than is contained in Rae et al's report. The choice of Greater Manchester and Leeds City Region reflects the Joseph Rowntree Foundation's involvement in both areas. Nevertheless, some points of similarity and difference are noted. It is worth observing at the outset that the two city regions are not bounded in the same way and therefore differ in terms of their composition. For example 13% of LSOAs in LCR are classified as rural compared to 1% in Manchester.[4]

Sections 2 and 3 describe the characteristics of deprived neighbourhoods in each of the city regions. Each section outlines the number of deprived neighbourhoods in different areas, how many fall into each of the categories and the characteristics of these neighbourhoods. The national report focusses on the Lower Super Output Areas that were among the 20 per cent most deprived neighbourhoods in England, according to the Index of Multiple Deprivation in 2015. This paper extends this analysis, to enable a sharper focus on the most deprived neighbourhoods (the 10% and 1% most deprived neighbourhoods).

Section 4 draws together the findings and considers how the typologies might be used to identify appropriate policy responses for tackling deprivation in the most deprived neighbourhoods of each city region. It also considers other factors that would need to be taken into account when it comes to understanding neighbourhood deprivation at city-level.

Annex A contains a description of the neighbourhoods in each city region that rank among the 1% most deprived nationally according to the 2015 IMD.

Throughout this report Greater Manchester is defined in terms of the ten local authorities that make up the combined authority. These are Salford, Trafford, Manchester, Stockport, Wigan, Tameside, Oldham, Rochdale, Bolton and Bury. The analysis of neighbourhoods in Leeds city region covers ten local authority districts which are in West Yorkshire and parts of North and South Yorkshire.[5] Bradford, Calderdale, Kirklees, Leeds, Wakefield, Barnsley, Craven, Harrogate, Selby and York together make up the Leeds City Region.

1.2   Describing neighbourhoods

What constitutes a neighbourhood is not always clear. This research draws on data that has been collected for Lower Super Output Areas in England, areas that contain around 1500 people (or 650 households). These may not always map directly on to local conceptions of a neighbourhood but where we discuss specific LSOA areas we attempt to identify them in relation to the local area.

Neighbourhood deprivation can also be measured in a number of ways. Here the assessment of deprivation is derived from the Index of Multiple Deprivation 2015, which brings together a range of indicators covering employment, income, health and disability, education, barriers to housing and other services, crime and the environment. A set of indicators is associated with each of these domains and scores are weighted and combined to form a composite measure of deprivation for each neighbourhood. This measure is then

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[4] As defined by the ONS's rural urban classification (2011)
[5] This is the Leeds City Region LEP area, the broader characteristics of this geography are also the focus of recent analysis of inclusive growth, see Beatty, C., Crisp, R. & Gore, T. (2016) An inclusive growth monitor for measuring the relationship between growth and poverty, The Joseph Rowntree Foundation.

used to rank each neighbourhood in England, making it possible to identify which of the 32,844 neighbourhoods in England are more deprived. The indices are a continuous scale of deprivation and there is not a set threshold for measuring deprivation.[6] Many analyses focus on the 20% and 10% most deprived neighbourhoods. But it is also possible to narrow the focus down to those neighbourhoods that fall within the 1% most deprived neighbourhoods across England.

Once we have an idea of how neighbourhoods can be defined, the next step is to determine which characteristics of a neighbourhood should be prioritised for discussion in analysis at city-level. An element of selection is necessary: not all of the characteristics that we might be interested in are measured, or measurable, at neighbourhood-level, and yet the volume of data that is available at neighbourhood-level is too great for it all to be referenced in a short report such as this. This paper draws on analysis undertaken by Rae et al. to describe deprived neighbourhoods in terms of residential and travel-to-work flows, drawing on relevant data from the 2011 Census. This necessarily means that the analysis is more focussed on understanding and explaining some of the economic and physical aspects of disadvantage experienced by these neighbourhoods than the social or institutional disconnect that can also be a feature of neighbourhood deprivation.[7]

1.3   The residential mobility typology

The residential mobility typology[8] draws on the Index of Multiple Deprivation and Census migration data to describe the characteristics of people moving in to and out of deprived areas. The typology identifies four basic types of neighbourhood – escalators and gentrifiers, and transit and isolate areas. It should be noted that the typology describes the predominant flows of households into and out of particular areas and moving households will generally account for a small proportion of the population of an area.

It is argued that these four types of neighbourhood play different functional roles in a given area.[9] Clearly the nature of the housing stock and its tenure, are key factors in determining who can move where, as well as who wants to.

Escalator areas may support progression within the housing market because people tend to move in to these areas from areas of similar or greater deprivation and those who move on go to less deprived areas.[10]

In **gentrifier** areas, on the other hand, positive change at neighbourhood-level may not benefit all residents as residential flows show a trend for people moving into the area from

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[6] DCLG (2015) The English Indices of Multiple Deprivation, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/465791/English_Indices_of_Deprivation_2015_-_Statistical_Release.pdf (accessed 25/07/2016)

[7] For a discussion of some different forms of disconnection in deprived neighbourhoods see Rae et al. (2016)

[8] Initially developed by Robson, B., Lymperopoulou, K. & Rae, A. (2009) A typology of the functional roles of deprived areas, Centre for Urban Policy Studies, University of Manchester, DCLG et al. (2009) and updated by Rae et al. (2016)

[9] Robson et al. (2009)

[10] Origin/destination neighbourhoods are defined as 'similarly' deprived if they lie within a specified range either side of a neighbourhood's rank. The standard value is 3248 (equivalent to 10% of the 32,482 neighbourhoods in England), so for a neighbourhood ranked at 4,000 on the Index of Multiple Deprivation, all neighbourhoods within the range 752 to 7248 would be classed as similarly deprived. See Robson et al. (2009).

less deprived areas, and for people to move on to more or similarly deprived areas. The difference in the characteristics of origin and destination neighbourhoods suggests an area that might be experiencing some form of gentrification.

Transit areas are deprived neighbourhoods where households tend to flow in from and out to less deprived areas. In this case the implication is that households whose housing choices are more constrained – young and newly formed households – are using these areas as transit areas, perhaps attracted by lower house prices.

Finally **isolate** neighbourhoods tend to see people moving in from similarly or more deprived areas and those who move on go on to areas with the same profile, indicating limited scope for change through residential mobility. This indicates that these neighbourhoods are not attractive to people from less deprived neighbourhoods, and, relatedly, that residents do not tend to 'upgrade' to a less deprived area when they leave.

Because many moves are local, the classification of an area will be affected by the characteristics of surrounding areas. Isolate areas, for example, tend to be in areas were neighbouring LSOAs are also highly deprived, while transits may be 'pockets' of deprivation surrounded by less deprived neighbourhoods.

The moves assessed through the residential mobility typology do not take into account moves across national borders. This is because it would not be possible to compare the relative levels of deprivation in the origin neighbourhood.[11] Flows directly from abroad, or from Wales or Scotland, are therefore not factored in to the analysis. This might be an issue in areas that are experiencing more significant immigration flows, including those where temporary housing is situated. Housing demand from recent international migrants may also affect the mobility patterns of internal migrants or would-be migrants, but we are not able to observe these dynamics here.

1.4   The travel-to-work typology

Complementing the analysis of residential mobility, Rae et al. offer a means of analysing the labour market connections of residents in deprived areas.[12] This travel-to-work typology assesses:

- The extent to which residents in deprived neighbourhoods live in close proximity to jobs;
- The distance travelled by residents to work; and
- The diversity of the employment sites accessed by residents.

Together these measures can be used to identify five travel-to-work types at neighbourhood level. The first kind of area – **the primary employment zone** – is employment rich, having more jobs than residents. Within this group it is also possible to identify 'low local worker' areas where less than half of the employed residents work locally despite the number of jobs that are available. In residential areas – where there are more people than jobs – it is

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[11] Rae et al. 2016 p. 128
[12] Rae, A., Hamilton, R., Powell, R. & Crisp, R. (2016) Overcoming deprivation and disconnection in UK cities, Joseph Rowntree Foundation

possible to distinguish between **core and suburban areas**. In the latter workers tend to commute more than 5km to work. Residential areas can be further categorised according to the diversity of commuting flows. This describes whether they are **connected or disconnected**; in the latter residents work in a limited set of employment sites. Table 1 provides a summary of the two neighbourhood typologies.

Table 1: Defining deprived neighbourhoods

Typology	Neighbourhood type	Definition
Residential mobility	Gentrifiers	People moving into the area are mainly from less deprived areas; out-movers go to similarly deprived areas
	Escalators	People moving in tend to come from more deprived areas; out movers move on to less deprived areas
	Transits	People moving in from less deprived areas, and people moving on to less deprived areas
	Isolates	People moving in from and on to similarly deprived areas
Travel-to-work	Primary Employment Zones	An area where the number of jobs, measured in terms of travel-to-work flows, is greater than the number of workers Within this group it is possible to identify areas where less than 50% of residents work locally (within 5km)
	Connected Core	Areas where workers tend to work within 5km and they travel to a wide variety of job destinations;
	Disconnected Core	Areas where workers tend to work within 5km but there is low diversity in terms of job destinations
	Connected suburbs	Areas where workers tend to work more than 5km away and they work in a wide variety of destinations
	Disconnected suburbs	Areas where workers tend to work more than 5km away and they work in a limited set of destinations

These typologies provide a means of assessing the extent to which deprived neighbourhoods have links with the wider city region across two key dimensions, residential mobility and travel-to-work flows. The residential mobility typology can identify neighbourhoods where there is little scope for change in neighbourhood deprivation through residential flows (isolate areas); areas where people from more deprived areas appear to be able to access housing, and where people move on to less deprived areas ('escalator' neighbourhoods); but also areas where people are moving in from better off areas and others are moving on to more deprived areas (termed 'gentrifers'). Meanwhile, the travel-to-

work typology offers a means of identifying neighbourhoods with few jobs and/or little interaction with the wider labour market. In all cases, the frameworks offer a starting point for a discussion of the challenges facing local areas and will need to be tested and refined by local policymakers.

2. Deprived neighbourhoods in Greater Manchester

Over a third of people in Greater Manchester (36%) live in a neighbourhood that ranks among the bottom 20% nationally according to the Index of Multiple Deprivation 2015. There are particular concentrations of these neighbourhoods in Manchester, Bolton and Salford. Focussing on those neighbourhoods that appear among the 10% most deprived neighbourhoods nationally, Rochdale also has particularly large concentrations. Across these local authority areas, the largest clusters of deprived neighbourhoods were to be found in central areas, including north and central Manchester and East Salford, and in some of the old industrial districts of the city.[13]

The scale of deprivation in some areas becomes clear when we consider the number of people living in these neighbourhoods. 36% of the population of Greater Manchester live in a neighbourhood that ranked among the 20% most deprived nationally, and one in five people (22%) live in a neighbourhood that was in the 10% most deprived. In Manchester the majority of people live in a deprived neighbourhood (59%) whereas in Trafford just one in ten people are in these neighbourhoods. See Table 2.1 for the full breakdown across local authority areas and deprivation thresholds. These are the neighbourhoods and, to some extent, the people that are described in the sections that follow.[14]

Table 2.1 Neighbourhoods in Greater Manchester that rank among the most deprived in England, by local authority area

	Number of LSOAs in the bottom 20% nationally	People living in those areas	Proportion of the overall population	Number of LSOAs in the bottom 10% nationally	People living in those areas	Proportion of the overall population
Bolton	67	107,600	39%	36	58,300	21%
Bury	24	37,600	20%	12	17,900	10%
Manchester	165	301,600	59%	115	208,500	41%
Oldham	58	97,300	43%	32	50,200	22%
Rochdale	56	93,800	44%	38	64,400	30%
Salford	66	103,700	44%	43	68,300	29%
Stockport	25	39,300	14%	17	27,000	9%
Tameside	50	80,300	36%	24	39,000	18%
Trafford	13	22,000	10%	4	7,100	3%
Wigan	57	90,600	28%	27	44,400	14%
Greater Manchester	581	973,700	36%	348	585,000	22%

Source: Index of Multiple Deprivation 2015. Note that population estimates are for mid-2012, reflecting the period which most of the indicators in the index refer to. Estimates are rounded to the nearest 100.

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[13] Lupton, R., Rafferty, A. & Hughes, C. (2016) Inclusive Growth: opportunities and challenges for Greater Manchester, Inclusive Growth Analysis Unit; also shown in the 2007 IMD data, see Manchester Independent Economic Review (2016) Sustainable Communities

[14] Of course not everyone who lives in a deprived neighbourhood will be experiencing deprivation

2.1 Residential mobility in Manchester's deprived neighbourhoods

One way in which neighbourhoods change is through the movement of people into and out of the area. The most common types of deprived neighbourhoods in Greater Manchester were 'transit' or 'isolate' areas. In the former, people are moving in from less deprived areas and those who move on go to less deprived areas, whilst in the latter people come from and move on to similarly or more deprived areas. Three quarters of the 581 deprived neighbourhoods fell into one of these categories (34% were isolate and 41% were transit).

This pattern is reflected in the overall picture of deprived neighbourhoods in England, although the balance between isolate and transit areas is skewed slightly more towards the latter in Greater Manchester (isolates and transit areas made up 26% and 53% of deprived neighbourhoods in England overall). The types of residential flows within these neighbourhoods would appear to limit the scope for neighbourhood change through residential mobility. In isolate areas this is because people move in from and on to similarly or more deprived areas, suggesting that the people living in the neighbourhood do not experience an improvement in their housing market position. Meanwhile, in transit areas people are moving in from and on to less deprived areas, which seems to imply that these movers have little impact on the relative deprivation of the neighbourhood. Of course the size of flows into and out of these neighbourhoods will also be important.

A smaller subset of neighbourhoods appeared to be experiencing neighbourhood change through residential mobility, either through people moving in from deprived areas and others moving on to less deprived areas (escalator areas) or through people moving in to an area from less deprived areas and others moving on to more deprived areas (gentrifiers). Overall, there were 80 deprived escalator neighbourhoods across Greater Manchester. More than half of these areas were in three local authorities – Oldham (20%), Rochdale (19%) and Manchester (18%). Although these areas are defined as deprived they are thought to play an important role in supporting upward progression in the housing market, perhaps by offering people from more deprived neighbourhoods the chance to upgrade their housing, assuming that the quality of rented housing is better or that property is more affordable in the escalator neighbourhood.

There were fewer gentrifier areas – just 54 across GM (3% of all LSOAs) – where people were moving in from similarly or less deprived areas and the people who were moving on were going to more deprived areas. Manchester and Salford accounted for more than two fifths of the total number of gentrifier areas in Greater Manchester (24% and 20% respectively).

Figure 2.1 describes how many neighbourhoods fall into each category across Greater Manchester and its constituent local authorities. Local authorities with large concentrations of deprived neighbourhoods tend to be dominated by Isolate areas, where movers tend to come from and move to similarly, or more deprived, areas. A third (33%) of the neighbourhoods in Manchester were of this type, and one in five (21%) areas in Oldham. An exception is Salford, the local authority with the third largest number of deprived neighbourhoods, where transit areas are more common and there are relatively few isolate

neighbourhoods. Transit areas are often associated with high student populations and young households moving into home ownership for the first time.[15]

Figure 2.1: Types of residential mobility in the Lower Super Output Areas that fall in to the 20% most deprived in England


Proportion of all LSOAs in the area
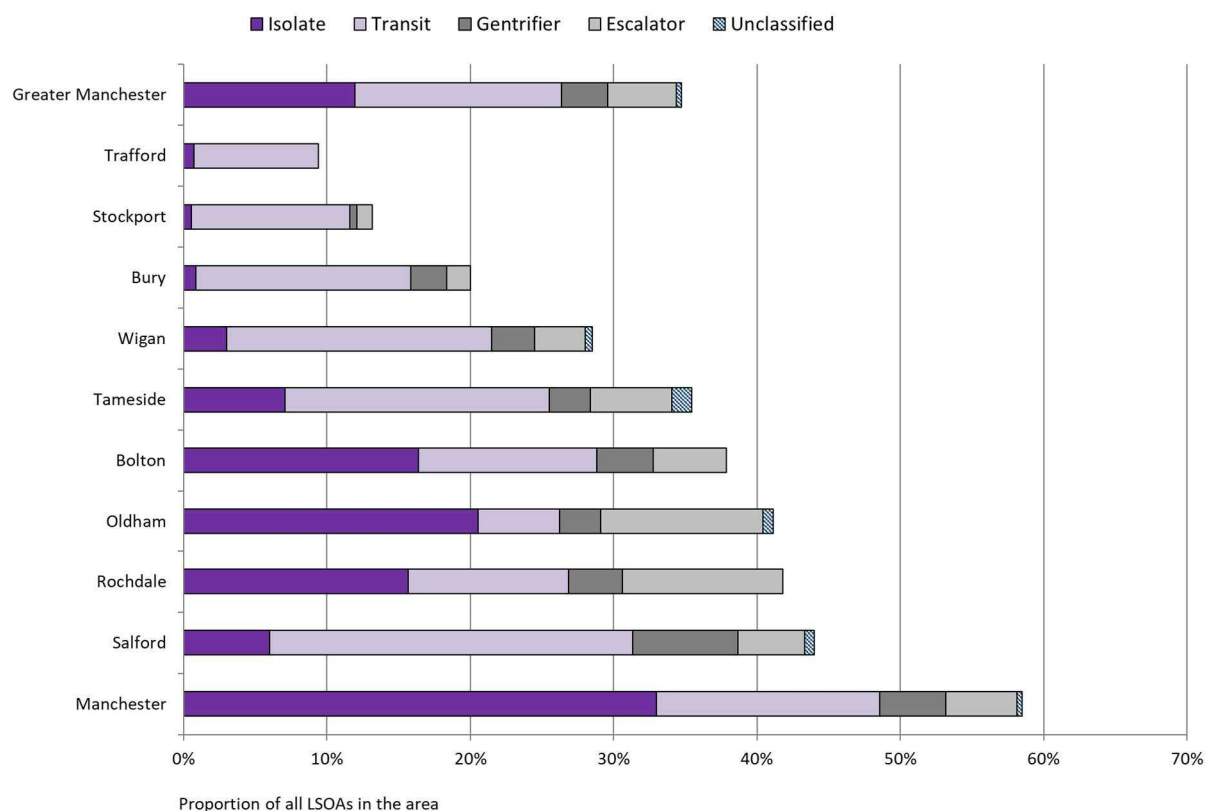
In Trafford, Stockport and Bury transit neighbourhoods dominate, in part reflecting the fact that there are relatively few deprived neighbourhoods in these areas and so flows in of residents from other deprived neighbourhoods are less common. The isolate neighbourhoods in Greater Manchester are particularly concentrated to the north and east of the city centre. Figure 2.2 shows the distribution of deprived neighbourhood types across the city.

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[15] Rae et al. 2016

Figure 2.2: Residential mobility type of neighbourhoods in the 20% most deprived nationally across Greater Manchester

Legend:
- ESCALATOR
- GENTRIFIER
- ISOLATE
- TRANSIT
- UNCLASSIFIED
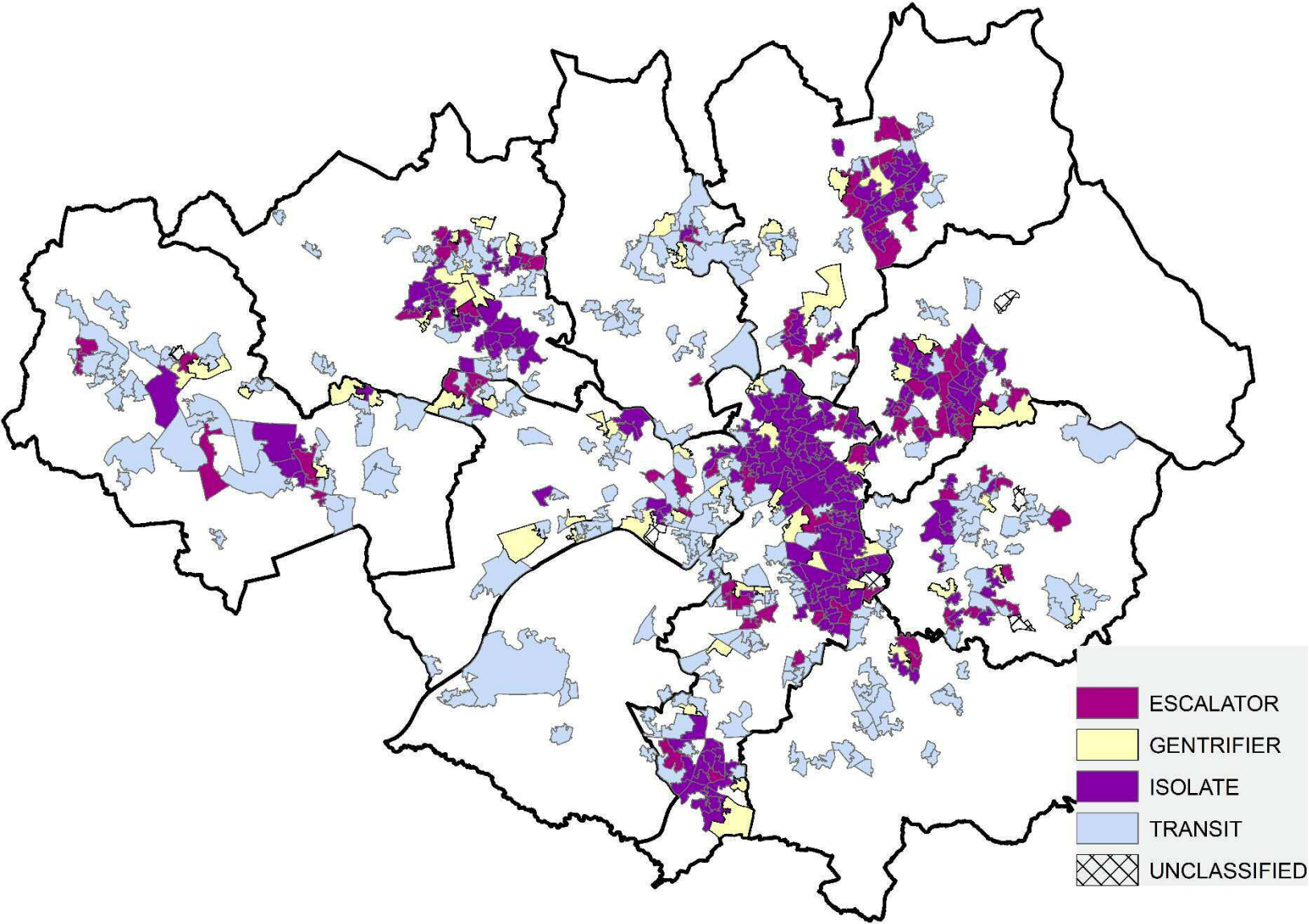
2.2   Travel-to-work patterns in Greater Manchester's deprived neighbourhoods

Many deprived neighbourhoods lie in close proximity to employment demonstrating that the task of bringing people closer to jobs extends beyond physical access to jobs. This section describes the labour market interactions of working residents in the most deprived 20% of LSOAs in Greater Manchester. By looking at the travel-to-work patterns of people in deprived neighbourhoods across Greater Manchester we can show that an inclusive growth strategy must extend beyond a focus on locating people close to jobs, or jobs close to people. Wider barriers must be addressed, including the issue of accessibility, travel costs and low skills in order to improve outcomes for residents.

Just under a third (32%) of deprived areas in Greater Manchester are home to a greater number of jobs than resident workers, and so are classified as primary employment zones. Overall, the majority of deprived neighbourhoods in Greater Manchester (73%) appear to be well connected to employment opportunities, whether because they have more jobs than residents or because working residents are employed in a wide range of destinations in surrounding areas ('connected suburbs' and 'connected core' neighbourhoods).

One in ten deprived neighbourhoods in Greater Manchester (11%) are considered to be at risk of labour market disconnection, comprising 54 'disconnected core' LSOAs (9%) where workers are based close to home but are reliant on a limited number of sites for employment and 11 disconnected suburban LSOAs (2%) where working residents tend to travel longer distances to work, but only to a limited set of employment sites. More than half of the 11 disconnected suburbs are in Trafford (parts of Partington and Ashton Upon Mersey) and Manchester (including parts of Blackley and an area between Wythenshawe and the airport). 16% of deprived neighbourhoods in GM are not classified under the TTW typology. These areas have very diverse commuter flows, which do not fit into any single category.
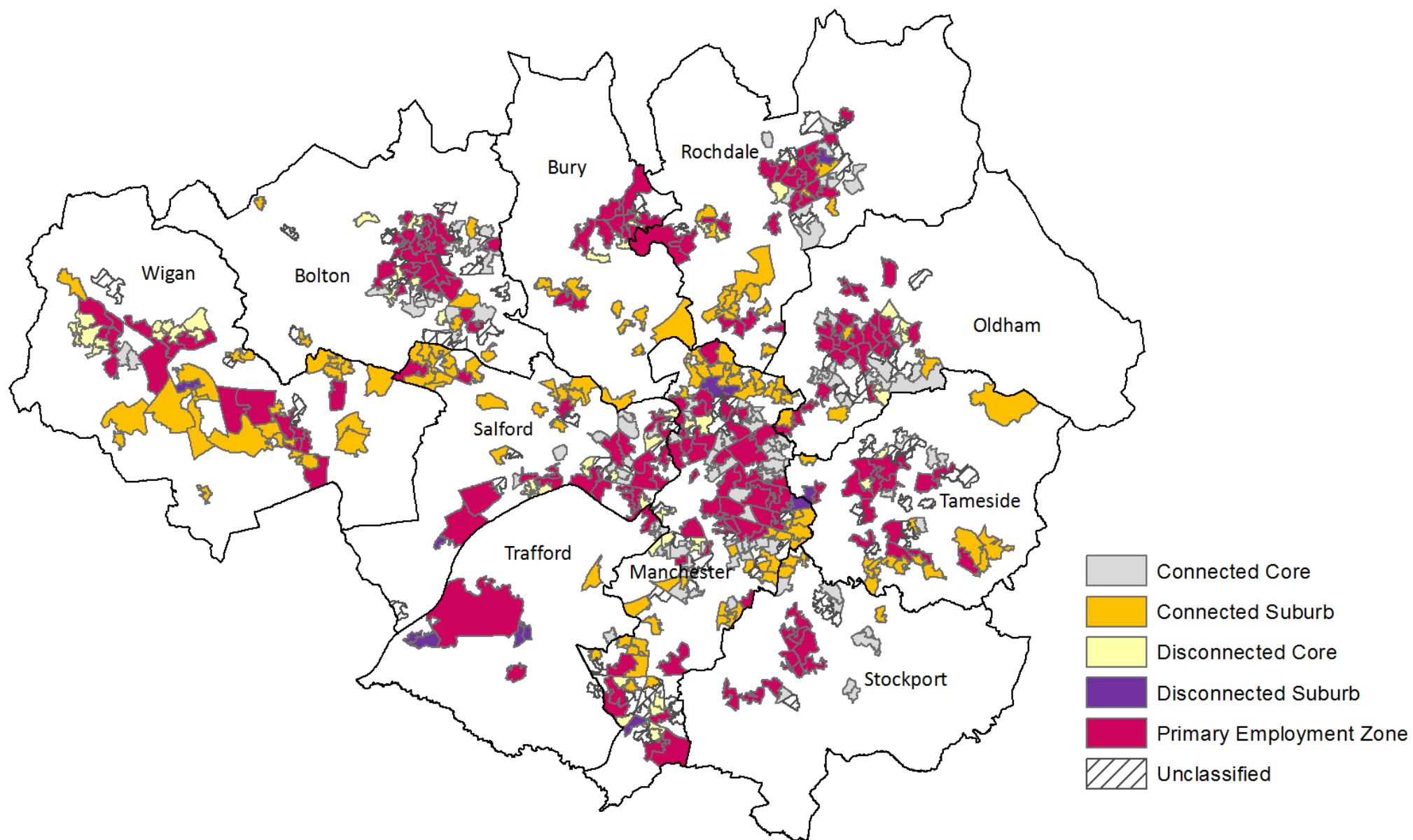
Figure 2.3 shows the proportion of neighbourhoods that are deprived across the local authorities of Greater Manchester and shows the travel-to-work profile of these neighbourhoods. Meanwhile, Figure 2.4 shows the overall distribution of deprived neighbourhood types across Greater Manchester.

Figure 2.3: Travel to work patterns in the Lower Super Output Areas in Greater Manchester that fall in to the 20% most deprived in England
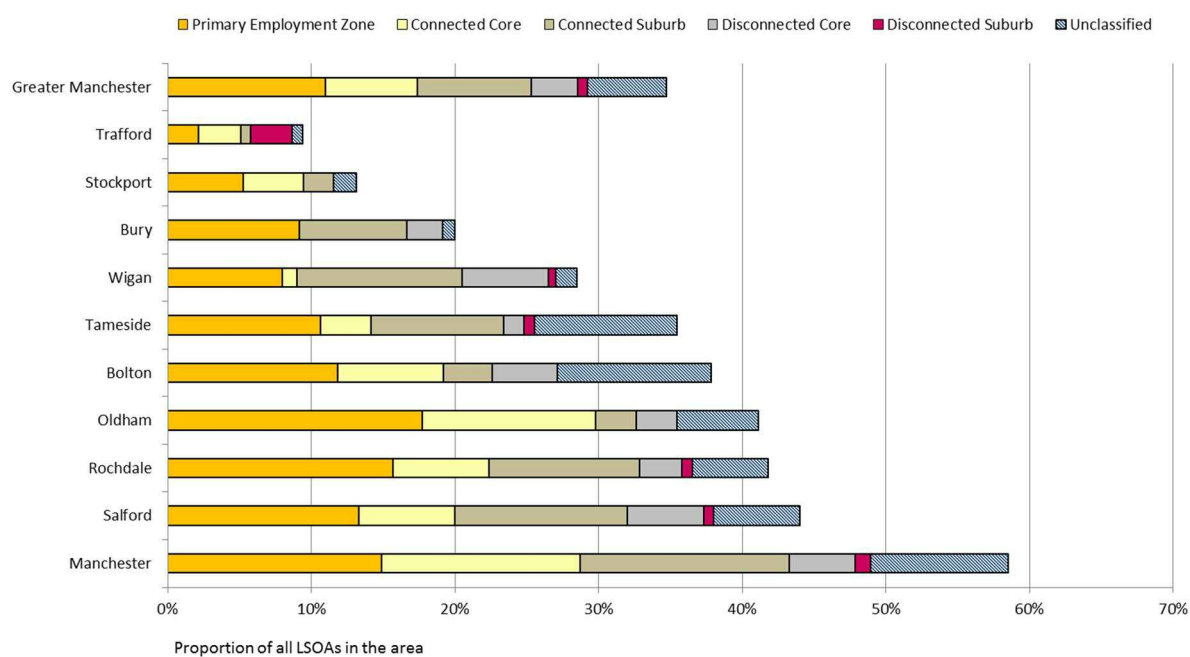
Source: Analysis of data supplied by Rae et al. 2016

Figure 2.4: Travel to work type of neighbourhoods in the 20% most deprived nationally across Greater Manchester

Legend:
- Connected Core
- Connected Suburb
- Disconnected Core
- Disconnected Suburb
- Primary Employment Zone
- Unclassified

2.3   Identifying residential and labour market links

In addition to thinking about the characteristics of the most deprived neighbourhoods, Rae et al. argue that the two typologies should be considered alongside one another, as a means of identifying areas that appear both unlikely to see positive change through residential mobility and where working residents have relatively weak links in to labour market opportunities. Their suggested policy matrix is included in Annex B.

Targeting policies in GM's deprived neighbourhoods

Table 2.2 describes the proportion of deprived LSOAs that are in each category, combining the residential mobility and travel-to-work typology to create a matrix for identifying some of the housing and labour market challenges facing deprived neighbourhoods in the city.

Table 2.2 Proportion of deprived LSOAs in each residential and travel-to-work category

	Connected Core	Connected Suburb	Disconnected Core	Disconnected Suburb	Primary Employment Zone	Unclassified	Total
Gentrifier	1%	2%	1%	0%	4%	1%	9%
Escalator	3%	3%	1%	0%	4%	2%	14%
Isolate	**8%**	**7%**	3%	1%	**9%**	7%	34%
Transit	**6%**	**10%**	4%	1%	**15%**	5%	41%
Total	18%	23%	9%	2%	32%	16%	100%

Note: 1% of all deprived areas are not classified within the residential mobility typology and are not shown.

There are 20 categories that a deprived neighbourhood might fall into once the two typologies are combined. The most common is the transit area in primary employment zones; 15% of deprived neighbourhoods fall into this category. The different characteristics of these areas might suggest very different policy prescriptions for tackling deprivation.

The distribution of neighbourhoods across these types was similar to that across England save for two key differences. There were far fewer neighbourhoods that were in transit where working residents were dependent on a small number of employment sites (transit and disconnected core neighbourhoods) and slightly more isolate neighbourhoods where working residents were commuting to a range of employment sites.

On the basis of this analysis local policymakers may want to consider the following policy options for neighbourhoods falling into the following categories:

- Across the deprived neighbourhoods situated in primary employment zones, closer attention may need to be paid to the way that the labour market functions and to consider whether skills support, training advice, and in-work support might support better employment outcomes. 32% of deprived neighbourhoods were in this category.
- In neighbourhoods where working residents access a range of employment sites, but where housing moves are dominated by people moving in from and on to less

deprived areas (i.e. transit areas), assessing housing availability and options for long-term residents may be a priority. 16% of deprived neighbourhoods were in this category.

- In neighbourhoods which are also well connected on the labour market typology, but where housing moves tend to take place between similarly or more deprived neighbourhoods, targeted employment and skills support may be required to ensure that local residents are able to access and progress in employment. 15% of deprived neighbourhoods were in this category.
- Finally, in neighbourhoods that are more reliant on a limited range of employment sites, targeted skills support may need to be combined with policies to improve transport links. Consideration of the cost of transport and access for people on low incomes will be required. 11% of deprived neighbourhoods were 'disconnected' on the travel-to-work typology.

The map in Annex C summarises the location of the most common neighbourhood types (indicated in bold).

A focus on disconnected neighbourhoods

While 11% of deprived LSOAs are disconnected according to the travel-to-work typology, and 34% are isolate in terms of residential moves, just 4% of LSOAs were disconnected and isolate. The 20 neighbourhoods that this represents are unlikely to see substantial change in neighbourhood structure through residential moves, since most people moving to the area are from similarly or more deprived areas. At the same time, those residents who are in work appear to be reliant on a limited number of employment sites for work, suggesting additional vulnerability to local labour market changes.

Most of these neighbourhoods are to be found in Manchester and Bolton (70%), with many areas clustered beyond the ring road, in the vicinity of Manchester airport and Wythenshawe, or along the Wigan Road. There are also some solitary instances of these neighbourhoods in Oldham, Rochdale, Salford and Tameside. In these areas it may be important to tackle skills barriers and, in the more disconnected suburbs, transport barriers.

Summary

The preceding analysis has shown that some neighbourhoods appear to be experiencing change through residential mobility, but that there remains a large number of deprived neighbourhoods where housing choices are more limited and there appear to be fewer opportunities for residents to upgrade their housing options. Meanwhile, the most deprived neighbourhoods are often to be found in primary employment zones, or connected areas where employed residents travel over short distances to work and many are in close proximity to town centres across the city region.

From this it is clear that connecting people to jobs must extend beyond a focus on the physical distance between deprived areas and employment. The connectivity challenge is more complex than this. It lies in helping those who are out of work to access employment; in helping those who are already in work to progress out of low pay and improve their position in the labour market; and in ensuring that residents are able to access employment sites across the city. Skills and employment programmes may be key, but so are well-

planned transport options and a social security system that provides support to those who are not able to access employment.

2.4   Focussing on the most deprived neighbourhoods

The preceding analysis has focussed on those neighbourhoods that are among the 20% most deprived nationally. As Table 2.1 showed, a large number of neighbourhoods in Greater Manchester are among the 20%, and even 10% most deprived nationally. In terms of the typologies discussed in this report, the profiles of the top 10-20% and 10% are similar (see Figure 2.5). In this section we turn the focus on the most deprived neighbourhoods in Greater Manchester, including those in the top 1% of deprived neighbourhoods nationally, as these are likely to be in most need of support.

There were 41 neighbourhoods in Greater Manchester that were among the 1% most deprived neighbourhoods in England (see Annex A for a full list). This includes central neighbourhoods in the vicinity of the Rochdale canal and New Islington marina, parts of Harpurhey and of St Mary's ward in Oldham. Focussing on those neighbourhoods in the bottom 1% we see that the proportion of deprived neighbourhoods that are isolate increases as neighbourhood deprivation levels increase, as does the proportion of neighbourhoods that are in primary employment zones.

Figure 2.5: Deprived neighbourhood profiles in Greater Manchester at different deprivation rankings
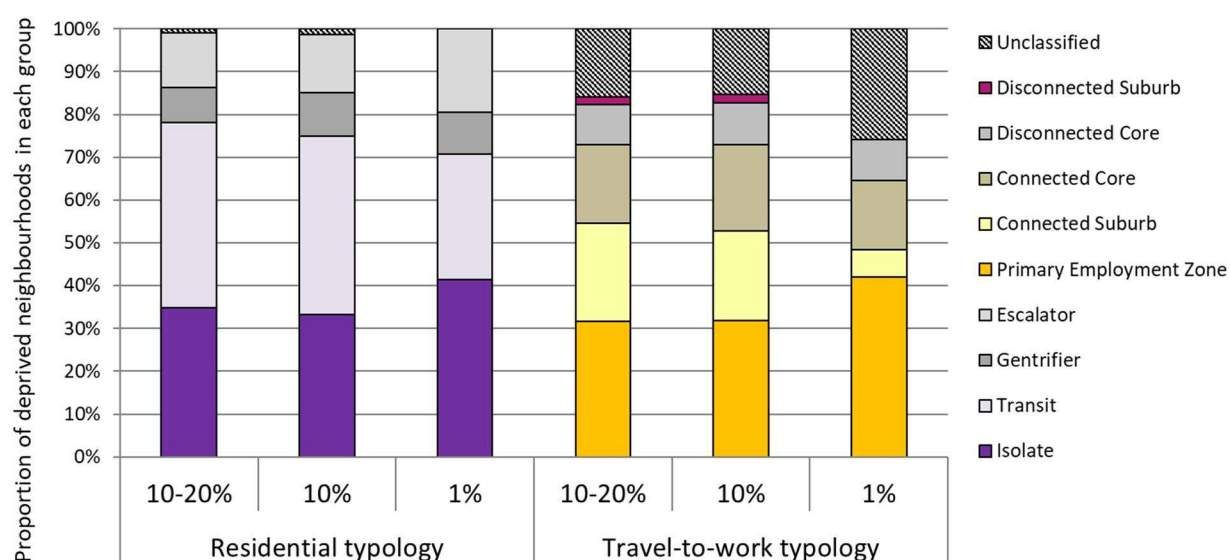
Source: IMD 2015, the deprivation thresholds are defined with reference to all neighbourhoods in England. Deprived neighbourhoods are in discrete categories except in the case of the 1% most deprived, which also appear in the 10% most deprived category.

In contrast, transit areas decrease as the neighbourhood deprivation ranking increases, and proportionately fewer working residents are travelling over longer distances to work (connected suburbs). There were no disconnected suburbs in the bottom 1% of neighbourhoods, which may be partly explained by evidence that people in lower-skilled occupations do not tend to commute over longer distances to work,[16] pay levels being less likely to meet the costs of travel.

Far from being characterised by physical isolation, the most deprived neighbourhoods are often to be found in primary employment zones, or connected areas where employed residents travel over short distances to work. Many are in close proximity to town centres across the city region. It should also be noted that a quarter of the most deprived neighbourhoods are not classified under the travel-to-work typology, possibly reflecting diverse or limited commuter flows. A list of the most deprived neighbourhoods is included in Annex A.

Focussing on the characteristics of these neighbourhoods, the average employment rate across the 1% most deprived neighbourhoods was 47%, lower than the average for the 10% and those in the 10-20% most deprived neighbourhoods (54% and 63% respectively) and far below the overall GM average of 70% in 2011.[17] The implication is that, for many people in these deprived neighbourhoods, the challenge lies in boosting employment overall rather than solely focussing on the 'quality' – the diversity and distance – of commuter flows.

A key challenge lies in supporting residents to access employment. Despite relatively high job density in the local area, the jobs that are available locally may not suit their experience and skill levels and physical barriers may still make it difficult to get to work, even over relatively short distances. Yet low employment rates in employment rich areas would also seem to signal more entrenched challenges around low skills, possibly preventing residents from competing for jobs with others – as well as challenges around ill health and limited capacity for work.

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[16] Green, A. & Owen, D. (2008) The geography of poor skills and access to work, Joseph Rowntree Foundation.
[17] Analysis of 2011 Census data. The employment rate is the proportion of adults (aged 16-64) in employment. The rate for the 10% most deprived neighbourhoods includes those that fall into the 1%. For analysis of some of the employment challenges in Greater Manchester, see Lupton, R., Rafferty, A. & Hughes, C. (2016) Inclusive Growth: opportunities and challenges for Greater Manchester, Inclusive Growth Analysis Unit.

3. Deprived neighbourhoods in Leeds City Region

Overall less than a third of people in the Leeds City Region (28%) live in a neighbourhood that ranks among the bottom 20% nationally according to the Index of Multiple Deprivation 2015. In total there were 505 deprived neighbourhoods across the city, with over half concentrated in two local authority areas (Leeds and Bradford).

In terms of population, these neighbourhoods accounted for 28% of the people living in the city region, rising to over a third of people living in Bradford and Barnsley (44% and 36% respectively) and close to a third of people living in Wakefield and Leeds (31% and 30%). While proportionately more people are living in deprived neighbourhoods in Barnsley and Wakefield, Leeds and Bradford account for the majority of people in these neighbourhoods (around 230,000 each).[18]

Focussing on the neighbourhoods that rank among the 10% most deprived, the concentration of deprivation in particular areas becomes clearer. There are no neighbourhoods in York or Craven in this group, and just one each from Harrogate and Selby. Meanwhile Bradford and Leeds continue to dominate, accounting for two thirds (66%) of these neighbourhoods. See Table 3.1 for the full breakdown across local authority areas and deprivation thresholds.

Table 3.1 Neighbourhoods in Leeds City Region that rank among the most deprived 20% of neighbourhoods in England, by local authority area

	Number of LSOAs in the bottom 20%	People living in those areas	Proportion of the overall population	Number of LSOAs in the bottom 10%	People living in those areas	Proportion of the overall population
Barnsley	54	84,200	36%	32	48,700	21%
Bradford	131	231,500	44%	101	179,000	34%
Calderdale	32	49,600	24%	19	28,200	14%
Craven	2	2,300	4%	0	-	0%
Harrogate	1	1,500	1%	1	1,500	1%
Kirklees	65	109,600	26%	23	38,400	9%
Leeds	148	229,400	30%	105	164,100	22%
Selby	2	3,400	4%	1	1,400	2%
Wakefield	65	101,800	31%	30	47,200	14%
York	5	7,500	4%	0	-	0%
Leeds City Region	505	820,900	28%	312	508,500	17%

Source: IMD2015; estimates are rounded to the nearest 100.

The next section describes these neighbourhoods in terms of the links that workers in these areas had with the wider labour market and in terms of their links with the wider housing market. Where people moving into a neighbourhood have come from, and where they move

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[18] Note that these figures are for mid-2012 populations, matching the time period referred to by the indicators that make up the IMD 2015

on to can give an indication of the relative attractiveness of a particular area in a city region. In the context of a deprived neighbourhood, an assessment of the kind of residential mobility taking place in an area can also indicate the scope for deprivation levels to change through changes in neighbourhood structure and movement of people.

3.1 Residential mobility in Leeds City region's deprived neighbourhoods

A third of the deprived neighbourhoods in Leeds City Region are 'isolate', seeing people move in from similarly or more deprived areas and then move on to areas with similar, or greater levels of deprivation. In these areas it seems that there is limited scope for residents to upgrade their housing options. Meanwhile an even larger share (42%) of deprived neighbourhoods in Leeds City Region are also in transit when it comes to residential moves, with people moving in from, and on to less deprived areas. The overall pattern is the same as that seen in Greater Manchester, where 41% of deprived neighbourhoods were transit, and 34% were isolate.

Figure 3.1: Types of residential mobility in the Lower Super Output Areas that fall in to the 20% most deprived in England, Leeds City Region
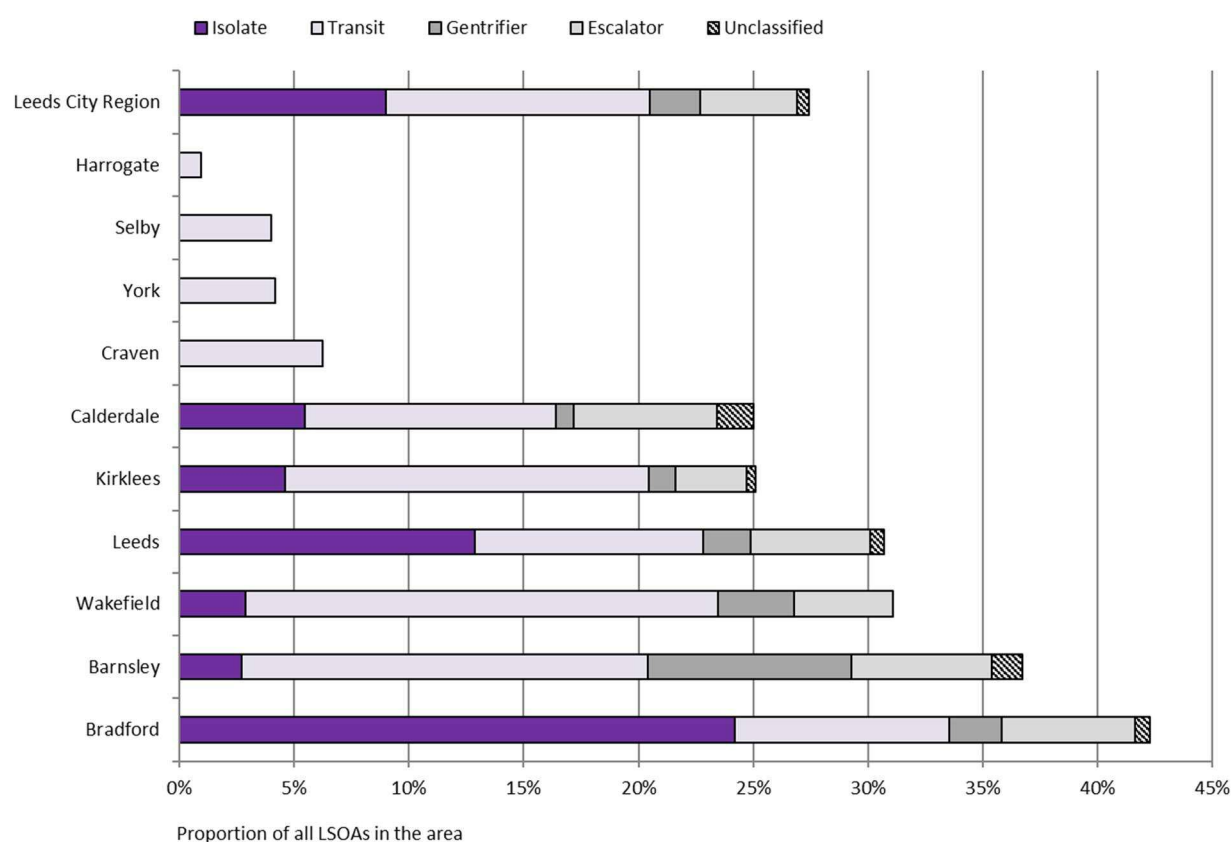

Figure 3.1 shows that the profile of deprived neighbourhoods in local authorities with relatively few deprived neighbourhoods is distinctive. Harrogate, Selby, York and Craven all

have low levels of neighbourhood deprivation (less than 10% of the LSOAs in the area) and in these areas all of the 20% most deprived neighbourhoods were in transit. The lack of diversity across the residential mobility typology is a reflection of the fact that there are relatively few deprived areas for people to move in to or on from in these areas.

Bradford contains the greatest number of deprived neighbourhoods (42%) but in Barnsley, Wakefield and Leeds more than 30% of LSOAs were also in the bottom 20%. Across these local authority areas, Leeds and Bradford are distinguished by the large proportion of isolate neighbourhoods that they contain. Just under a quarter (24%) of the neighbourhoods in Bradford were deprived and isolate, with limited scope for change through residential moves (since people were moving in from and on to similarly or more deprived areas). Leeds has a similar pattern, though with proportionately fewer neighbourhoods. A much greater proportion of LSOAs were in transit across the other local authority areas with particular concentrations of deprived neighbourhoods (Calderdale, Kirklees. Wakefield and Barnsley).

Barnsley stands out as an area with the greatest number of gentrifier neighbourhoods. These are areas that are taking in residents from less or similarly deprived areas, and seeing people move on to more deprived areas. While 2% of LSOAs in the City Region were classed as gentrifier areas, this rises to 9% in Barnsley, accounting for just under a third of the gentrifier areas in deprived neighbourhoods across Leeds City Region. Leeds contained the second greatest number of these areas (10 neighbourhoods, 1% of all LSOAs).

Figure 3.2: Residential mobility type of neighbourhoods in the 20% most deprived nationally across Leeds City Region

Legend:
- ESCALATOR
- GENTRIFIER
- ISOLATE
- TRANSIT
- UNCLASSIFIED
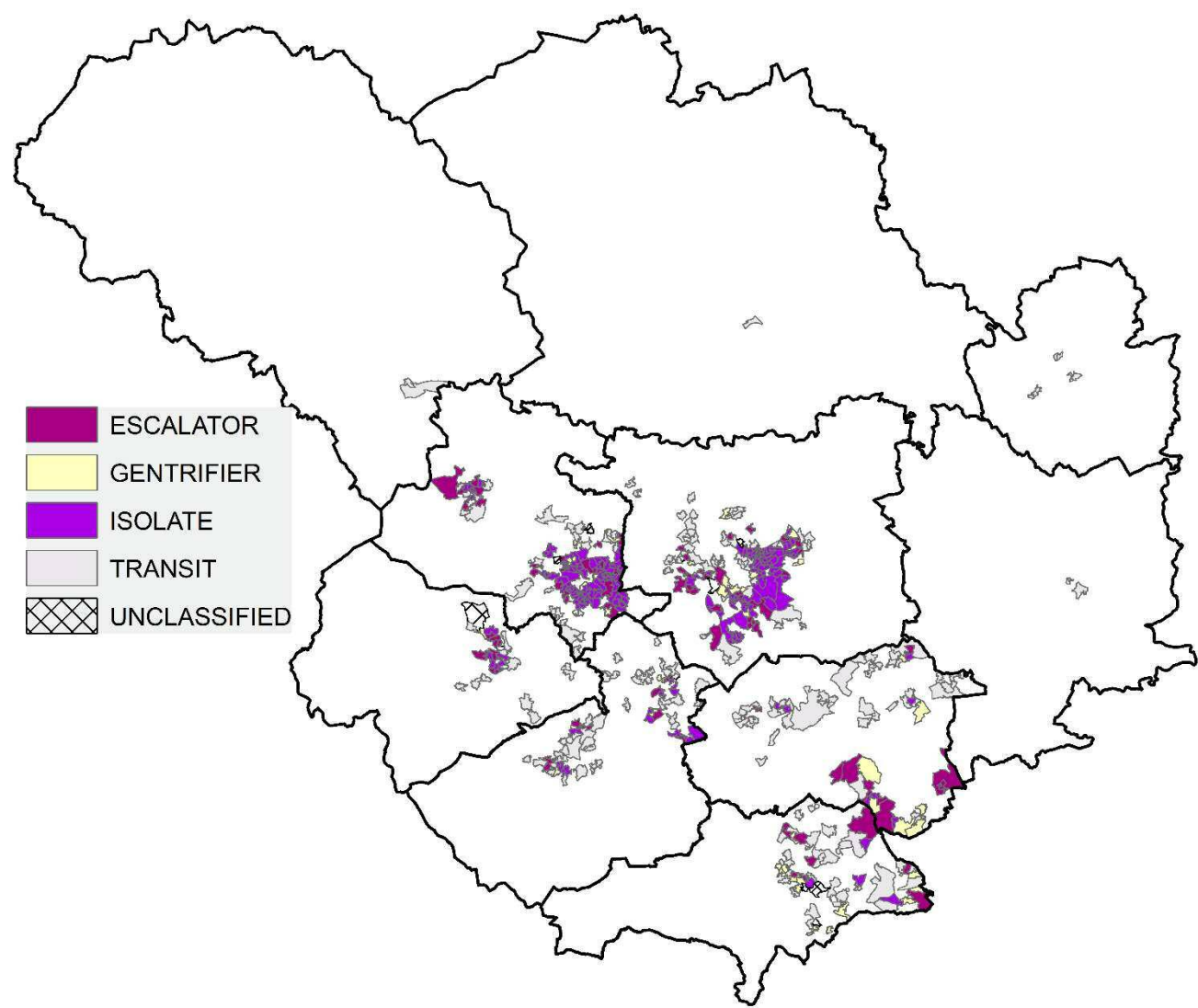
3.2 Travel-to-work patterns in Leeds City Region's deprived neighbourhoods

As in Greater Manchester, many deprived neighbourhoods lie in close proximity to employment. This section describes the labour market interactions of working residents in the most deprived 20% of LSOAs in Leeds City Region.

Less than a third (29%) of deprived areas in the city region are home to a greater number of jobs than resident workers, and so are classified as primary employment zones. But just over half of the deprived neighbourhoods in the region appear to be well connected to employment opportunities, whether because they contain more jobs than residents or because working residents are employed in a wide range of destinations in surrounding areas ('connected suburbs' and 'connected core' neighbourhoods). This is very different from the proportion in Greater Manchester, where 73% of deprived neighbourhoods appear well connected to employment opportunities, suggesting that access to employment for people in deprived neighbourhoods may be more of an issue in Leeds city region.

Meanwhile, 27% of deprived neighbourhoods are considered to be at risk of labour market disconnection,[19] comprising 94 'disconnected core' LSOAs where workers are based close to home but are reliant on a limited number of sites for employment and 43 disconnected suburban LSOAs where working residents tend to travel longer distances to work, but only to a limited set of employment sites. Leeds and Bradford each account for more than a fifth of the disconnected core neighbourhoods in the city region.

Figure 3.3 shows the proportion of neighbourhoods that are deprived across the local authorities of Leeds City Region and the travel-to-work profile of these neighbourhoods. Focussing on the six local authorities where a quarter or more of the neighbourhoods are in the 20% most deprived nationally, Leeds, Bradford and Kirklees have a similar profile in terms of the distribution of different neighbourhood travel-to-work types. Of those neighbourhoods that are classifiable, the largest group in each local authority is made up of neighbourhoods where the number of jobs in the local area exceeds the number of people (primary employment zones).

While primary employment zones feature strongly across the other local authority areas, they are less dominant. Wakefield looks very different from these other neighbourhoods because disconnected suburbs dominate (12% of all LSOAs in the area), a neighbourhood type that is relatively uncommon across the city region (2%). In Calderdale, meanwhile, neighbourhoods where working residents depend on a limited set of (relatively close) employment sites are much more common (12% of LSOAs) relative to the city region as a whole (5%). Finally, in Barnsley, the local authority where deprived neighbourhoods make up two thirds of all LSOAs (the second largest share after Bradford) many neighbourhoods

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[19] More than twice the proportion that fall into this category in Greater Manchester where one in ten deprived neighbourhoods are in this group

appear to be well connected, with working residents commuting relatively short distances to a variety of employment sites.

19% of deprived neighbourhoods in the city region are not classified under the TTW typology. These areas have very diverse commuter flows, which do not fit into any single category.

Figure 3.3: Share of neighbourhoods in the 20% most deprived by travel to work type in Leeds City Region
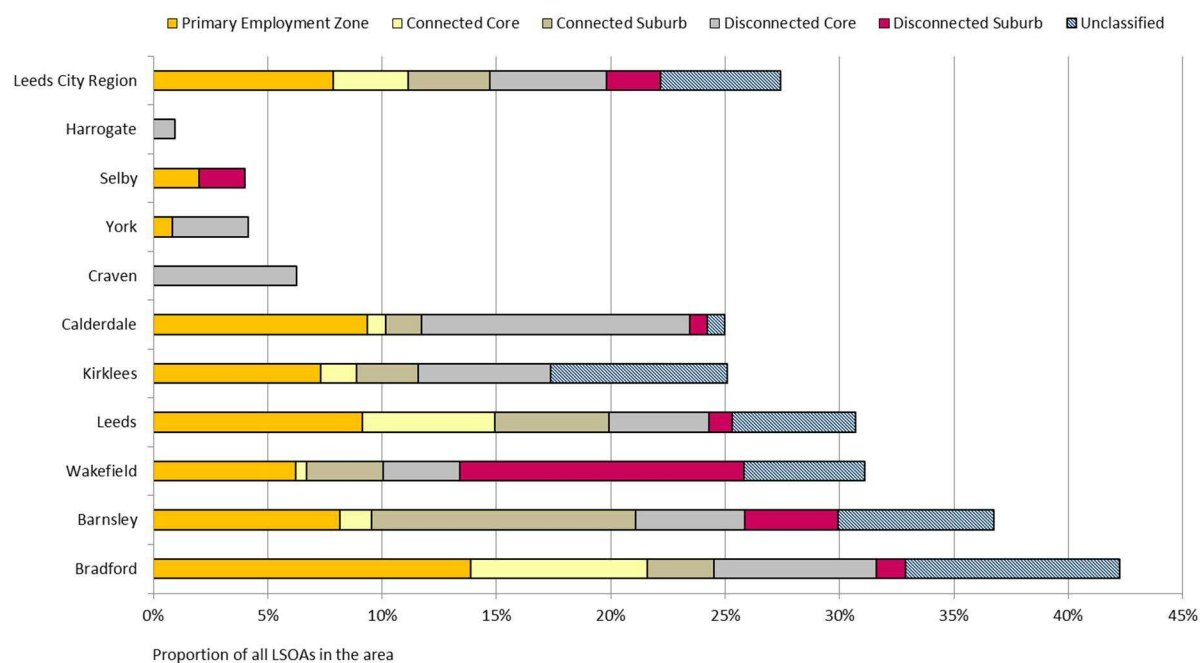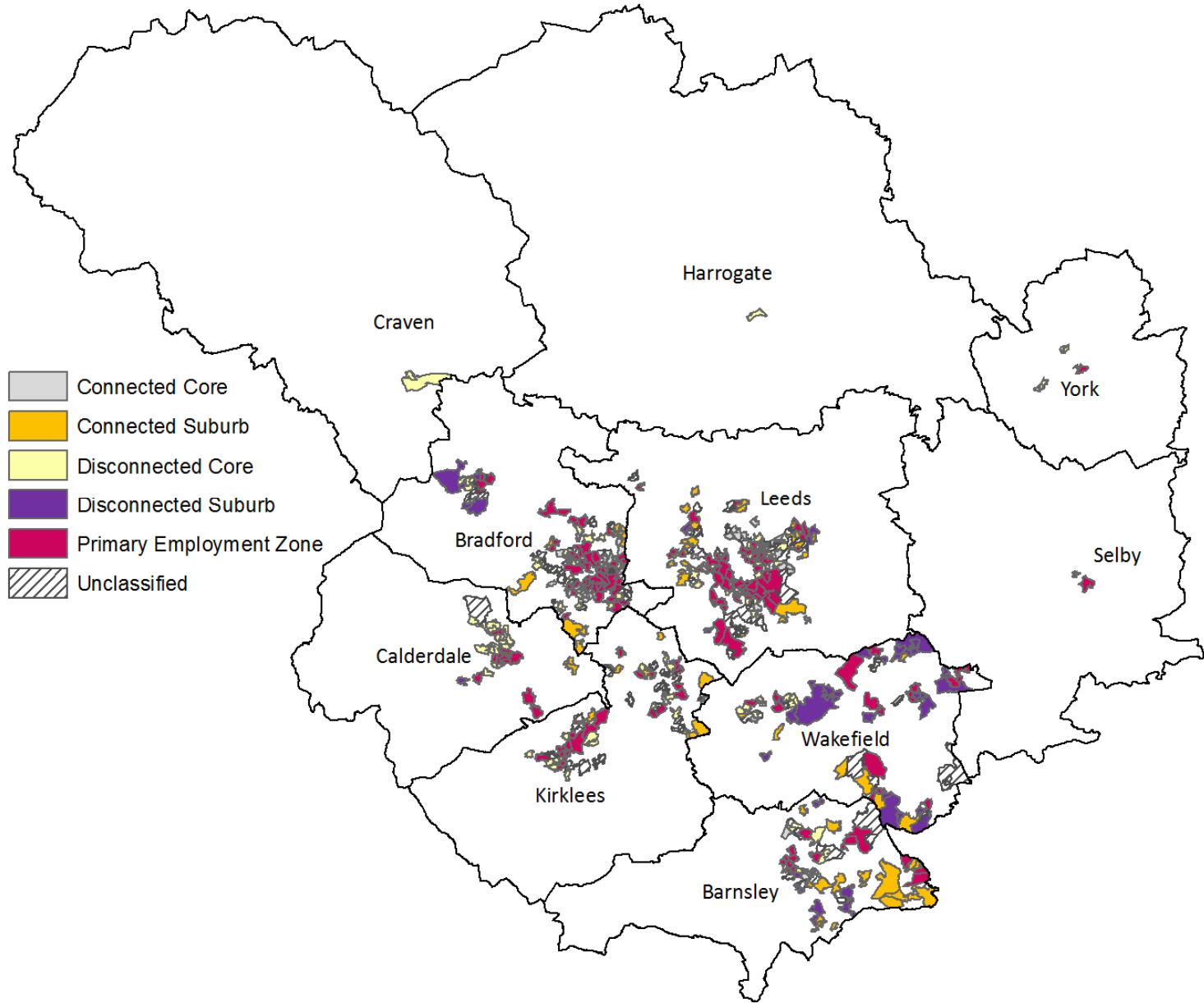
Figure 3.4: Travel to work type of neighbourhoods in the 20% most deprived nationally across Leeds City Region

3.3   Identifying residential and housing market links

Targeting policies in Leeds city region's deprived neighbourhoods

Combining the two typologies there are 20 categories that a neighbourhood might fall into and the most common one is the transit area with a relatively large share of jobs compared to residents, closely followed by isolate areas that are also employment zones; comprising 12% and 10% of deprived neighbourhoods respectively. The different characteristics of these areas might suggest very different policy prescriptions for tackling deprivation.

The distribution of neighbourhoods across these types was similar to that across England save for two key differences. There were far fewer neighbourhoods that were in transit where working residents were dependent on a small number of employment sites (transit and disconnected core neighbourhoods) and slightly more isolate neighbourhoods where working residents were commuting to a range of employment sites.

Table 3.1 describes the proportion of LSOAs that fall into each category, acting as a matrix for identifying the different challenges facing deprived neighbourhoods in the city.

Table 3.1 Proportion of deprived LSOAs in each residential and travel-to-work category

	Connected Core	Connected Suburb	Disconnected Core	Disconnected Suburb	Primary Employment Zone	Unclassified	Total
Gentrifier	1%	1%	1%	1%	3%	2%	8%
Escalator	2%	2%	3%	1%	3%	4%	15%
Isolate	**7%**	2%	**6%**	1%	**10%**	7%	33%
Transit	2%	**7%**	**8%**	6%	**12%**	6%	42%
Total	12%	13%	19%	9%	29%	19%	100%

Note: 2% of all deprived areas are not classified within the residential mobility typology and are not shown

On the basis of this analysis local policymakers may want to consider the following policy options for neighbourhoods falling into the following categories:

- Despite the relatively high number of disconnected neighbourhoods, primary employment zones still dominate. Here attention should be paid to the way that the labour market functions; skills support, training advice, and in-work support may be needed to support better employment outcomes. 29% of deprived neighbourhoods were in this category.
- In neighbourhoods that are more reliant on a limited range of employment sites, targeted skills support may need to be combined with policies to improve transport links. Consideration of the cost of transport and access for people on low incomes will be required. 28% of deprived neighbourhoods were 'disconnected' on the travel-to-work typology.
- In neighbourhoods where working residents access a range of employment sites, but where housing moves are dominated by people moving in from and on to less deprived areas (i.e. transit areas), assessing housing availability and options for long-

term residents may be a priority. 9% of deprived neighbourhoods were in this category.

- In neighbourhoods which are also well connected on the labour market typology, but where housing moves tend to take place between similarly or more deprived neighbourhoods, targeted employment and skills support may be required to ensure that local residents are able to access and progress in employment. 9% of deprived neighbourhoods were in this category.

A focus on disconnected neighbourhoods

A minority of neighbourhoods in Leeds City Region are at risk of acute disconnection in the sense that working residents depend on a relatively small set of employment sites and the neighbourhood has limited interaction with housing markets in less deprived neighbourhoods (i.e. people move in from and on to similarly or more deprived areas).

While 11% of deprived LSOAs are disconnected according to the travel-to-work typology, and 34% are isolate in terms of residential moves, just 7% of LSOAs were disconnected on both dimensions. The 36 neighbourhoods that this represents are unlikely to see substantial change in neighbourhood structure through residential moves, since most people moving to the area are from similarly or more deprived areas. In Greater Manchester just 11% of deprived neighbourhoods are either disconnected core or suburb areas compared to 28% in Leeds city region.
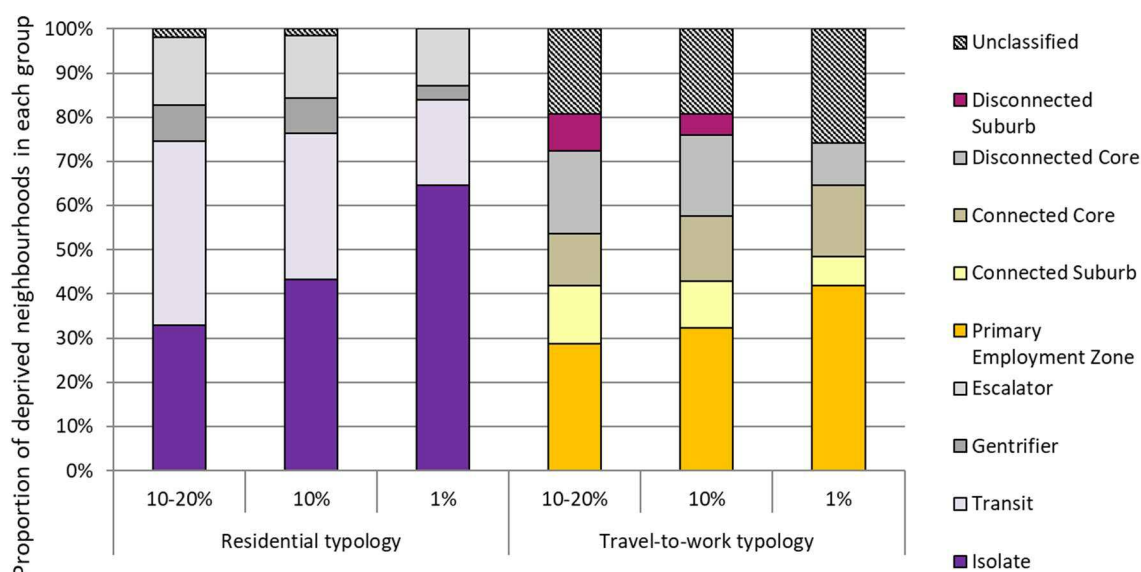
3.4   Focussing on the most deprived neighbourhoods

Here we turn to consider the characteristics of the most deprived neighbourhoods and how they compare to neighbourhood profiles at different deprivation thresholds. There were 31 neighbourhoods in Leeds City Region that were among the 1% most deprived neighbourhoods in England. See Annex C for a list of these neighbourhoods and the wards that they are in.

As Figure 3.5 shows, the profile of deprived neighbourhoods shifts as we move from looking at the 10-20% most deprived, to the bottom 10 and 1% of deprived neighbourhoods. The proportion of deprived neighbourhoods that are isolate increases as neighbourhood deprivation levels increase, as does the proportion of neighbourhoods that are in primary employment zones. The pattern of isolates among the most deprived neighbourhoods is especially pronounced in Leeds City Region compared to Greater Manchester where 41% of deprived neighbourhoods are in this category, compared to 65% in Leeds.

In contrast, transit areas decrease as the neighbourhood deprivation ranking increases, as do the proportion of neighbourhoods where working residents are travelling over longer distances to work. There were no disconnected suburbs in the bottom 1% of neighbourhoods.

Figure 3.5: Deprived neighbourhood profiles across the two typologies at different deprivation rankings

Source: IMD 2015, note that the deprivation thresholds are defined with reference to all neighbourhoods in England. Deprived neighbourhoods are in discrete categories except in the case of the 1% most deprived, which also appear in the 10% most deprived category.

Despite the trend for the most deprived neighbourhoods to be found in primary employment zones, employment rates in the 1% most deprived areas are far below the average. Across the 1% most deprived neighbourhoods, the average employment rate was 49% compared to 55% in the 10% most deprived and 63% in the 10-20% most deprived neighbourhoods. The implication is that, for many people in these deprived neighbourhoods, the challenge lies in boosting employment overall rather than solely focussing on the diversity of employment and the distance that people travel to work.

A key challenge lies in supporting residents to access employment. Despite relatively high job density in the local area, the jobs that are available locally may not suit their experience and skill levels and physical barriers may still make it difficult to get to work, even over relatively short distances. Yet low employment rates in employment rich areas would also seem to signal more entrenched challenges around low skills, possibly preventing residents from competing for jobs with others – as well as challenges around ill health and limited capacity for work.

4. Conclusion and next steps

This report has considered the housing and labour market connections of deprived neighbourhoods in Greater Manchester and Leeds City Region, applying typologies recently developed and reported by Rae et al. (2016). Building on this work we have also discussed the most deprived neighbourhoods (those in neighbourhoods that rank among the 1% most deprived nationally). The analysis illuminates the different circumstances of neighbourhoods that score highly on indicators of deprivation and suggests policy approaches bespoke to these varying conditions.

When it comes to formulating policies to tackle disadvantage at city-level, a number of factors, some of which have been considered here, need to be taken into account. Focussing on the ways that residents in these areas interact with the wider labour and housing markets of the city region, we have seen that:

- Far from being characterised by physical isolation, the most deprived neighbourhoods are often to be found in primary employment zones, or connected areas where employed residents travel over short distances to work. Many are in close proximity to town centres across the city region. Employment rates in these neighbourhoods indicate acute problems of labour market disconnection for some individuals.
- There are fewer deprived neighbourhoods in Leeds. But there are proportionately more 'disconnected' neighbourhoods in the city region than in Greater Manchester based on an assessment of residents' travel-to-work patterns.

The analysis suggests a few starting points for policy makers looking to tackle neighbourhood deprivation. First, there needs to be a renewed focus on supporting people to access employment and this must extend beyond attempts to physically connect people in deprived neighbourhoods with jobs. The creation of employment opportunities in a particular area is not sufficient and there is no guarantee that these will 'trickle down' to residents.

Access to employment is a key initial policy challenge. However the issues of low skills, the incidence of poor health and difficulties in balancing any caring responsibilities should also be considered.

We hope that this report will be of interest to a wide range of stakeholders concerned with tackling deprivation in these communities, including local authorities, combined authorities and Local Enterprise Partnerships.

In subsequent work, the Inclusive Growth Analysis Unit will be conducting further, more detailed work to understand the characteristics and dynamics of deprived neighbourhoods of different types using these typologies as a starting point and bringing in other data about housing, population dynamics and international migration, skills, health, work patterns and employment opportunities. This work will consider what opportunities are available to people in these neighbourhoods; what is preventing them from accessing these and wider opportunities; how policies are supporting residents and what else needs to be done.

For further information contact the Inclusive Growth Analysis Unit, University of Manchester.

Annex A

Neighbourhoods in Greater Manchester and Leeds city region that are among the 1% most deprived nationally

Greater Manchester: 41 LSOAs (neighbourhoods)

LSOA code	LSOA name	Ward in which the neighbourhood can be found	Local Authority	Travel to work typology	Residential typology	Matrix
E01004823	Bolton 016C	Halliwell	Bolton	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone
E01004960	Bury 007E	Moorside	Bury	Unclassified	TRANSIT	Transit+Unclassified
E01005133	Manchester 013D	Ancoats and Clayton	Manchester	Connected Core	TRANSIT	Transit+Connected Core
E01005067	Manchester 020A	Ardwick	Manchester	Connected Core	GENTRIFIER	Gentrifier+Connected Core
E01005239	Manchester 020E	Ardwick	Manchester	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01033688	Manchester 013G	Bradford	Manchester	Primary Employment Zone	GENTRIFIER	Gentrifier+Primary Employment Zone
E01005138	Manchester 002D	Charlestown	Manchester	Connected Suburb	ISOLATE	Isolate+Connected Suburb
E01005203	Manchester 009B	Cheetham	Manchester	Unclassified	ISOLATE	Isolate+Unclassified
E01005142	Manchester 058A	Cheetham	Manchester	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01005205	Manchester 006B	Harpurhey	Manchester	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01005202	Manchester 009A	Harpurhey	Manchester	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01005228	Manchester 009E	Harpurhey	Manchester	Connected Core	ISOLATE	Isolate+Connected Core
E01033678	Manchester 009F	Harpurhey	Manchester	Connected Core	ISOLATE	Isolate+Connected Core
E01033679	Manchester 009G	Harpurhey	Manchester	Connected Core	ISOLATE	Isolate+Connected Core
E01005257	Manchester 011B	Miles Platting and Newton Heath	Manchester	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01005259	Manchester 011D	Miles Platting and Newton Heath	Manchester	Connected Core	ISOLATE	Isolate+Connected Core
E01005261	Manchester 012E	Miles Platting and Newton Heath	Manchester	Connected Core	ISOLATE	Isolate+Connected Core
E01005129	Manchester 013B	Miles Platting and Newton Heath	Manchester	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01005088	Manchester 050B	Sharston	Manchester	Unclassified	ISOLATE	Isolate+Unclassified
E01005090	Manchester 050C	Sharston	Manchester	Unclassified	ISOLATE	Isolate+Unclassified
E01005322	Oldham 029A	Alexandra	Oldham	Connected Core	ISOLATE	Isolate+Connected Core
E01005350	Oldham 014B	Coldhurst	Oldham	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone
E01005432	Oldham 014C	St Mary's	Oldham	Primary Employment Zone	ESCALATOR	Escalator+Primary Employment Zone
E01005433	Oldham 014D	St Mary's	Oldham	Primary Employment Zone	ESCALATOR	Escalator+Primary Employment Zone
E01005466	Rochdale 016C	Balderstone and Kirkholt	Rochdale	Unclassified	ISOLATE	Isolate+Unclassified
E01005482	Rochdale 010C	Central Rochdale	Rochdale	Primary Employment Zone	GENTRIFIER	Gentrifier+Primary Employment Zone
E01005568	Rochdale 012E	Kingsway	Rochdale	Connected Core	ESCALATOR	Escalator+Connected Core
E01005586	Rochdale 004C	Smallbridge and Firgrove	Rochdale	Connected Core	ESCALATOR	Escalator+Connected Core

LSOA code	LSOA name	Ward	Local Authority	Travel to work typology	Residential typology	Matrix
E01005 610	Salford 022D	Broughton	Salford	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone
E01005 680	Salford 017B	Irwell Riverside	Salford	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone
E01005 683	Salford 017C	Irwell Riverside	Salford	Primary Employment Zone	ESCALATOR	Escalator+Primary Employment Zone
E01005 658	Salford 024B	Langworthy	Salford	Connected Core	TRANSIT	Transit+Connected Core
E01005 682	Salford 024D	Langworthy	Salford	Unclassified	ESCALATOR	Escalator+Unclassified
E01005 665	Salford 001E	Little Hulton	Salford	Connected Suburb	ESCALATOR	Escalator+Connected Suburb
E01005 729	Salford 025A	Winton	Salford	Connected Core	TRANSIT	Transit+Connected Core
E01005 754	Stockport 004B	Brinnington and Central	Stockport	Unclassified	GENTRIFIER	Gentrifier+Unclassified
E01005 756	Stockport 004D	Brinnington and Central	Stockport	Connected Core	ESCALATOR	Escalator+Connected Core
E01005 918	Stockport 014D	Brinnington and Central	Stockport	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone
E01005 952	Tameside 013D	St Peter's	Tameside	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone
E01006 386	Wigan 009C	Ince	Wigan	Disconnected Core	TRANSIT	Transit+Disconnected Core
E01006 357	Wigan 010C	Pemberton	Wigan	Disconnected Core	TRANSIT	Transit+Disconnected Core

Leeds city region: 31 LSOAs (neighbourhoods)

LSOA code	LSOA name	Ward in which the neighbourhood can be found	Local Authority	Travel to work typology	Residential typology	Matrix
E01010 730	Bradford 045C	Bowling and Barkerend	Bradford	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01010 666	Bradford 050C	Great Horton	Bradford	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone
E01010 710	Bradford 008G	Keighley Central	Bradford	Primary Employment Zone	ESCALATOR	Escalator+Primary Employment Zone
E01010 711	Bradford 011A	Keighley Central	Bradford	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone
E01010 735	Bradford 051A	Little Horton	Bradford	Connected Core	ISOLATE	Isolate+Connected Core
E01010 739	Bradford 051C	Little Horton	Bradford	Connected Core	ISOLATE	Isolate+Connected Core
E01010 679	Bradford 034B	Manningham	Bradford	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01010 824	Bradford 034C	Manningham	Bradford	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01010 610	Bradford 046B	Tong	Bradford	Unclassified	ISOLATE	Isolate+Unclassified
E01010 612	Bradford 052A	Tong	Bradford	Unclassified	ISOLATE	Isolate+Unclassified
E01010 819	Bradford 052B	Tong	Bradford	Unclassified	ISOLATE	Isolate+Unclassified
E01010 820	Bradford 052C	Tong	Bradford	Unclassified	ISOLATE	Isolate+Unclassified
E01010 964	Calderdale 012B	Park	Calderdale	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone

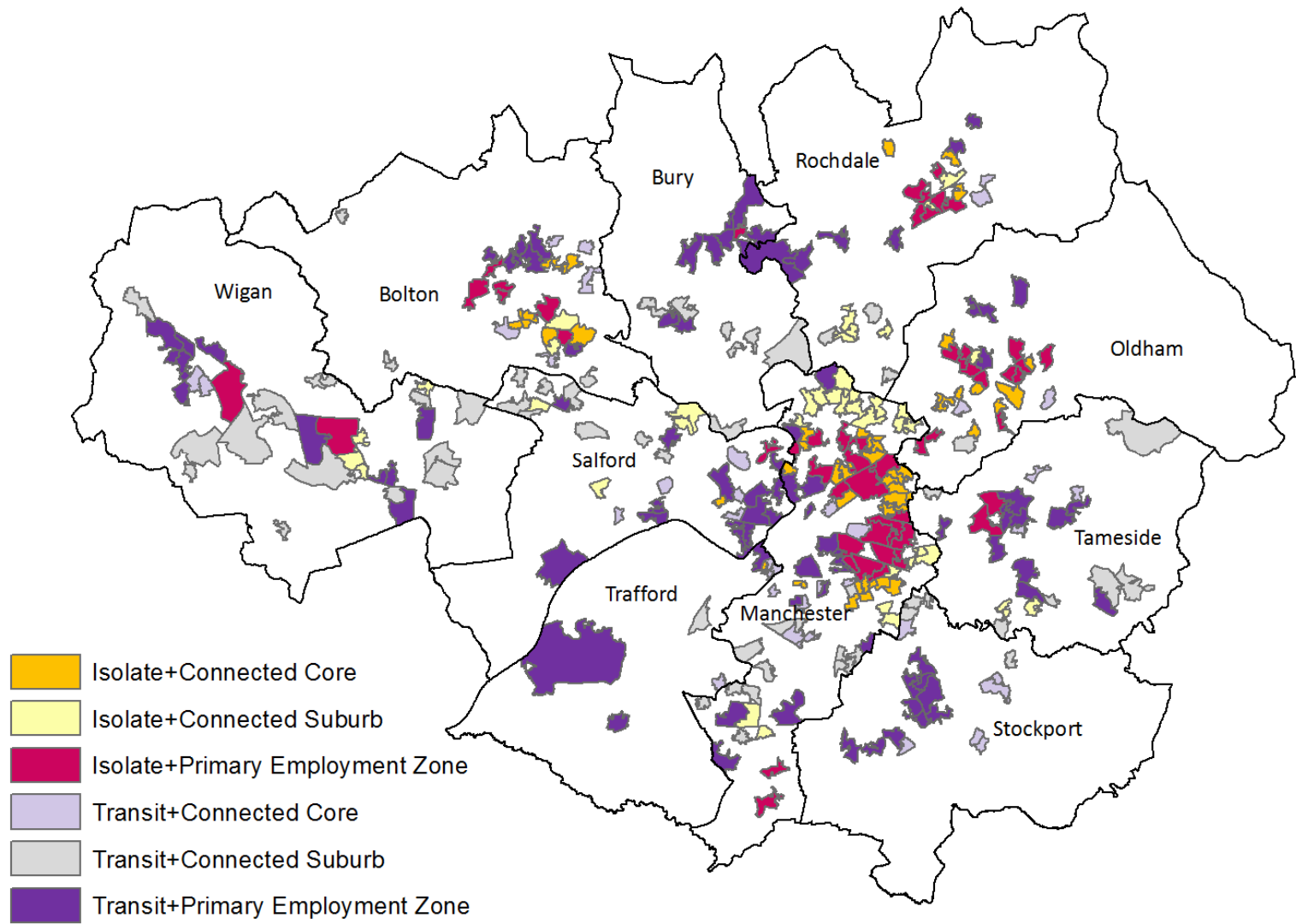|						
E01011 294	Leeds 071D	Armley	Leeds	Primary Employment Zone	TRANSIT	Transit+Primary Employment Zone
E01011 363	Leeds 071E	Armley	Leeds	Primary Employment Zone	ESCALATOR	Escalator+Primary Employment Zone
E01011 368	Leeds 082C	Beeston and Holbeck	Leeds	Connected Core	ISOLATE	Isolate+Connected Core
E01033 035	Leeds 064F	Burmantofts and Richmond Hill	Leeds	Disconnected Core	ISOLATE	Isolate+Disconnected Core
E01011 344	Leeds 065A	Burmantofts and Richmond Hill	Leeds	Disconnected Core	ISOLATE	Isolate+Disconnected Core
E01011 347	Leeds 065B	Burmantofts and Richmond Hill	Leeds	Disconnected Core	ISOLATE	Isolate+Disconnected Core
E01011 371	Leeds 085B	City and Hunslet	Leeds	Primary Employment Zone	ESCALATOR	Escalator+Primary Employment Zone
E01011 312	Leeds 086A	City and Hunslet	Leeds	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01011 372	Leeds 086C	City and Hunslet	Leeds	Connected Core	ISOLATE	Isolate+Connected Core
E01011 375	Leeds 086D	City and Hunslet	Leeds	Connected Core	ISOLATE	Isolate+Connected Core
E01011 433	Leeds 053C	Gipton and Harehills	Leeds	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01011 658	Leeds 040C	Killingbeck and Seacroft	Leeds	Unclassified	ESCALATOR	Escalator+Unclassified
E01011 662	Leeds 040E	Killingbeck and Seacroft	Leeds	Unclassified	ISOLATE	Isolate+Unclassified
E01011 667	Leeds 050D	Killingbeck and Seacroft	Leeds	Primary Employment Zone	ISOLATE	Isolate+Primary Employment Zone
E01011 473	Leeds 092C	Middleton Park	Leeds	Unclassified	GENTRIFIER	Gentrifier+Unclassified
E01011 624	Leeds 072D	Temple Newsam	Leeds	Unclassified	ISOLATE	Isolate+Unclassified
E01011 750	Wakefield 003D	Airedale and Ferry Fryston	Wakefield	Connected Suburb	TRANSIT	Transit+Connected Suburb
E01011 792	Wakefield 039D	Hemsworth	Wakefield	Connected Suburb	TRANSIT	Transit+Connected Suburb

Annex B

A matrix for targeting policy in deprived neighbourhoods (from Rae et al. (2016))

	Escalator	Gentrifier	Isolate	Transit
Connected Core	Ensure training options for long-term residents match employment opportunities	Identify households at risk of displacement, focus on skills development	More jobs may be needed in these areas, or more targeted training initiatives	Ensure housing remains diverse enough to offer lower-income residents long-term security
Disconnected Core	Improving transport accessibility and focusing on training needs of long-term residents	Identify those at risk of displacement, focus on improving job accessibility in first instance	Improve skills to increase ability to exploit proximity to employment opportunities	Improving transport accessibility and focusing on training needs of long-term residents
Connected Suburb	Ensure housing mix remains diverse enough to offer lower-income residents long-term security	Focus on skills development for long-term residents, particularly those at risk of displacement	Develop 'pathways to employment' initiatives with local employers, focused on skills	Provide targeted training schemes for long-term unemployed, long-term residents
Disconnected Suburb	Improve transport links with long-term residents in mind	In England and Wales, a gentrifier is *least* likely to be here.	Develop 'pathways to employment' initiatives with employers, focused on skills *and* transport	Improve transport links with long-term residents in mind
Primary Employment Zone	Focus on skills and training initiatives to capitalise upon local employment opportunities - including in-work progression schemes			

Annex C

Greater Manchester: selected neighbourhood types (Travel-to-work and residential mobility combined)

Legend:
- Isolate+Connected Core
- Isolate+Connected Suburb
- Isolate+Primary Employment Zone
- Transit+Connected Core
- Transit+Connected Suburb
- Transit+Primary Employment Zone

Leeds City Region: selected neighbourhood types (Travel-to-work and residential mobility combined)

Legend:
- Isolate+Connected Core
- Isolate+Connected Suburb
- Isolate+Primary Employment Zone
- Transit+Connected Core
- Transit+Connected Suburb
- Transit+Primary Employment Zone

Craven

Harrogate

York

Bradford

Leeds

Selby

Calderdale

Kirklees

Wakefield

Barnsley