Tackling transport-related barriers to employment in low-income neighbourhoods

by Richard Crisp, Ed Ferrari, Tony Gore, Steve Green, Lindsey McCarthy, Alasdair Rae, Kesia Reeve and Mark Stevens

This report gives three actions that need to be taken to ensure public transport enables rather than constrains people who are returning to work.

JRF JOSEPH ROWNTREE FOUNDATION

INSPIRING SOCIAL CHANGE

Tackling transport-related barriers to employment in low-income neighbourhoods

Richard Crisp, Ed Ferrari, Tony Gore, Steve Green, Lindsey McCarthy, Alasdair Rae, Kesia Reeve and Mark Stevens

Transport can be a major barrier to finding work; this report looks at the transport issues facing out-of-work residents in six low-income neighbourhoods across England and Scotland, and how these issues might be overcome. The report presents findings and recommendations from six case study areas: Harpurhey (Manchester), Hattersley (Tameside), Seacroft (Leeds), Dewsbury Moor (Kirklees), Port Glasgow (Inverclyde) and Castlemilk (Glasgow). We interviewed 79 residents across these areas to find out the length of time and distances that residents were willing and able to travel to work. We also considered the extent to which local transport systems were available, reliable and affordable to potential places of work. Our key finding is that public transport is all too often seen as something that constrains rather than enables a return to work, because of a lack of affordable and reliable transport that gets people to locations where there is suitable work.

Actions

Coordinated action by the UK Government, combined and local authorities, transport bodies and partner agencies is needed to make sure that:

- 'Stronger' models of partnership or bus franchising (through the Bus Services Act 2017) improve the availability, reliability and affordability of public transport, to make it easier to access employment.
- Planning tools and approaches ensure that new housing and employment developments are well served by public transport that reduces the travel costs, times or distances between places of residence and work.
- Transport and employment policy are better integrated to enable employment support providers to help clients understand travel choices as part of their return to work.

August 2018
www.jrf.org.uk

We can solve UK poverty

JRF is working with governments, businesses, communities, charities and individuals to solve UK poverty. *Tackling transport-related barriers to employment in low-income neighbourhoods* plays an important part in promoting long-term economic growth benefiting everyone – a key focus of our strategy to solve UK poverty.

Contents

Executive summary

This research explores the potential to address the transport-related barriers to work that face households in poverty in low-income neighbourhoods. It draws on an evidence review, interviews with 79 residents and 51 stakeholders, an analysis of travel time maps, and policy development workshops to explore:

- how transport shapes the capacity of residents living in low-income neighbourhoods to secure and sustain employment
- how transport issues interact with other factors such as the nature of work in local labour markets, individual and household circumstances, and institutional support, to constrain or enable access to employment
- the scope for national, city regional and local stakeholders to reduce transport-related barriers to work.

Headline messages

- Transport is a key barrier to employment for many residents living in low-income neighbourhoods. All too often, **public transport is seen as something that constrains rather than enables a return to work.**
- Transport issues are **intimately related to the nature and location of employment.** The prospect of poorly paid and insecure work limits the range of areas where individuals consider looking for work. This is sometimes compounded by the inaccessibility of jobs that have become increasingly dispersed across city regions. Public transport systems have not accommodated this changing geography of employment.
- Transport-related barriers to work facing individuals on low incomes are more practical than perceptual. There is **little evidence of limited spatial horizons** where localised, cultural outlooks constrain people's perceptions of viable commutes.
- Challenges around transport and access to work **cannot be solved through transport policy alone**. Improving access to employment requires coordinated action across a range of policy areas that includes transport, but also relates to economic development, regeneration, housing and planning, and employment and skills.
- **Transport policy could play a bigger role in supporting poverty reduction and mitigation** by making it easier for low-income households to access work. The current focus on major national and pan-regional transport projects such as Crossrail, HS2 and Northern Powerhouse Rail arguably overlooks the need for significant complementary investment in local transport systems within city regions, to meet the needs of low-income households.

Methods and findings

The research considered transport-related barriers to work in six case study areas:

- Greater Manchester: Harpurhey (Manchester) and Hattersley (Tameside)
- Leeds City Region: Seacroft (Leeds) and Dewsbury Moor (Kirklees)
- Glasgow City Region: Castlemilk (Glasgow) and Port Glasgow (Inverclyde)

It used a combination of labour market analysis, travel time mapping and in-depth interviews to explore these issues.

Labour market data and travel time maps

Our analysis of travel time maps produced for the six case study areas showed that:

- case study areas are often **functionally disconnected from their wider regions** in terms of the time it takes to travel to key centres of employment by public transport. This disconnection most affects

the three areas that lie outside city boundaries (Port Glasgow, Dewsbury Moor and Hattersley). However, even residents in case study areas within cities can expect relatively long journeys – a minimum of 30 minute commutes into the city centre, without allowing for delays or onwards journeys

- the relatively long commute times required to access many employment opportunities from the six case study areas may be a problem, given the tendency of lower-skilled workers to undertake shorter commutes and the high travel costs they may face relative to wages.

In-depth interviews

Interviews with 79 residents and 51 stakeholders across the six case study areas generated a number of insights into experiences and expectations of employment, as well as the ways in which the transport system – in combination with wider contextual factors and household circumstances – shapes perceptions of viable commutes. Key findings are described below.

Experiences of work and job search

- Most interviewees had experience of low-paid, low-skilled work and continue to look for this kind of employment. Concerns about the quality and quantity of work led to a **pervasive sense of labour market insecurity** that shapes perceptions of viable commutes to work.
- Nearly all interviewees identified issues with the location of appropriate work relative to where they live, but **the degree of 'spatial mismatch' is not simply a reflection of distance from locations where there are most jobs**. Instead, the level of employment opportunity sometimes relates to the relationship between place of residence and the number (rather than just size) of employment locations, and how well these are connected by existing transport links.
- There is little evidence of 'limited spatial horizons' in terms of a reluctance to travel far, per se. Most interviewees **express a willingness to commute an hour or more to work**, although caring commitments or a preference to work in familiar areas may lead individuals to consider areas that are closer to home. Past commuting experiences show that a stated willingness to travel is often borne out by previous practice.
- Residents in more peripheral neighbourhoods do not necessarily benefit from the decentralisation of lower-skilled jobs away from city centres, as many areas of employment growth are relatively inaccessible. This implies that **more even distribution of job growth across city regions does not guarantee that it is inclusive**.

Transport and the feasibility of commuting

- Transport can present major barriers to work by constraining perceptions of viable commutes, especially due to **issues around the availability, reliability and affordability of public transport**.
- Perceptions of poor bus reliability can lead to reluctance to undertake commutes that involve changing services. This renders some areas on the periphery of major cities **'cut off' commuter zones**, despite their proximity to significant concentrations of employment. Jobs in the city centre are not always appropriate given an individual's skills and experience, while those in more peripheral locations that require interchange are not always seen as feasible commutes.
- The ability to drive or access to private transport can significantly increase commuting options, particularly to more peripheral locations, but financial constraints rule out vehicle ownership for many.
- Transport and commuting are **intimately related to the nature of work**. Low-waged work constrains the amount households can spend on travel, while the benefits of 'atypical' work may be considered insufficient to warrant lengthy commutes. Household circumstances – particularly caring commitments – also interact with transport infrastructure and the nature of work to limit viable commutes.
- The **complexity of fare structures and ticketing options**, as well as lack of access to comprehensive travel information, limits understanding or perceptions of viable commuting options.

Knowledge of discount travel schemes where they exist (eg the Jobseeker PlusTravel Discount Card) is also limited.

- Individuals may **lack confidence** in using the transport system where it is considered uncomfortable, unsafe or unfamiliar, particularly if this interacts with mental and physical health conditions.
- The complex nature of transport-related barriers to work requires solutions across multiple domains, although transport policy alone cannot solve problems that originate in the labour market.

Policy recommendations

Transport-related barriers to employment could be addressed through a wide range of measures. However, a 'pick and mix' approach may generate limited outcomes. Strategic and coordinated action is required, therefore, across four overarching priorities, to improve the connectivity of low-income neighbourhoods:

- implementing **bus franchising or 'strong' models of cooperation**, to address transport-related barriers emerging from a deregulated public transport system that all too often fails to meet the needs of low-income users
- making public transport more **accessible and more accountable through technology** – particularly through open data (including fares) and real-time data on public transport – to understand issues, develop solutions and communicate information to users
- developing **longer-term spatial planning frameworks and tools** to embed sustainability, density and transit-oriented development principles that better connect places of residence and work
- integrating **transport and employment policy** to enable employment support agencies to play a vital role in supporting clients to understand travel choices and how to navigate them as part of their return to work; action is required across spatial scales, but there is much that agencies working at local or city regional level (especially local authorities, Jobcentre Plus and other employment support providers, transport bodies and combined authorities) can do to develop solutions.

1 Introduction

This research explores the potential to improve the connectivity of low-income neighbourhoods to employment opportunities. It considers how the transport-related barriers facing households in poverty in such neighbourhoods could be addressed to help them secure and sustain work by exploring:

- how transport shapes the capacity of residents living in low-income neighbourhoods to secure and sustain employment
- how transport issues interact with other factors such as the nature and location of work in local labour markets, institutional support, and individual and household circumstances, to constrain or enable access to employment
- the scope for national, city regional and local stakeholders to reduce transport-related barriers to work.

Poverty and connectivity

> "They have tons of work, big industrial estate, but there's no bus service, it's about 13 miles away. I do not understand why they build a big estate where there's no transport, that's like tough, if you haven't got a car."
> Seacroft resident, male, aged 49

> "The sort of jobs I am going to get will wipe out in bus fares... by the time I've paid for travel expenses to get there, work in a part-time job on a part-time wage, it wouldn't be worth my while travelling that far."
> Dewsbury Moor resident, female, aged 59

> "[It's] got to be the worst bus service out, they're shocking, they're either five minutes late or five minutes early, sometimes they don't even show up."
> Port Glasgow resident, female, aged 20

Transport is a key factor shaping people's experiences of poverty. A comprehensive and reliable transport system can help individuals to access and sustain employment, to raise household incomes. Regular and reliable transport gives individuals the confidence to consider working in different locations, certain they can guarantee punctuality without spending excessive hours travelling. Affordable fares increase the geographical range of employment that is financially viable and, potentially, encourages jobseekers to look further afield.

Unfortunately, as the quotes above from our research show, **the current transport system is all too often seen as something that constrains rather than enables a return to work**. Among the people we spoke to, there are far too many stories of late buses, expensive fares or inaccessible jobs poorly served by infrequent transport.

A previous study for the Joseph Rowntree Foundation (JRF) found that the poorest areas of towns and cities are sometimes disconnected from their wider labour market areas and, potentially, cut off from job opportunities (Rae et al, 2016). These patterns can be exacerbated by changes in housing markets and policy; the Right to Buy scheme and a failure to invest in new social housing in more central locations, among other things, have seen tenants increasingly consigned to peripheral areas in towns and cities.

This research builds on these insights by using a 'bottom up' approach to understand the links between transport, poverty and employment in the everyday lives of households on low incomes. Drawing on interviews with individuals living in more peripheral locations, it looks at how issues with transport around availability, reliability, affordability, ease of use and security shape their ability to find employment. It considers how these transport-related barriers interact with the nature and location of available work, individual and household circumstances such as health issues or caring responsibilities, and support from key agencies such as Jobcentre Plus.

Away from the focus on, and sometimes furore over, major new transport projects such as Crossrail, HS2 and Northern Powerhouse Rail, this report is **a timely reminder that more attention needs to be paid to local transport systems that do not appear to serve low-income households well**. It cautions that growth itself is not enough – especially if the jobs created are located in hard-to-reach commercial, retail and industrial parks – and emphasises the need for transport policy to be more cognisant and inclusive of the needs of low-income households.

Fortunately, this is an opportune moment to engage with these issues for two reasons. First, urgent discussions around the need to promote more 'inclusive growth' highlight possibilities for embedding anti-poverty objectives across a range of policy areas, including transport. Second, devolution of funding and powers to city regional level and, in England, the Bus Services Act (2017) both provide new opportunities for Local Enterprise Partnerships (LEPs), combined authorities, local authorities and passenger transport executives (PTEs) to embed objectives around poverty reduction into transport strategies and policy.

As this report shows, these developments mean **transport policy could play a much bigger role in supporting poverty reduction and mitigation**, through making it easier for low-income households to access work.

Our approach

To understand the transport-related barriers to employment faced by low-income households we carried out:

- an evidence review of existing research on the links between, and experiences of, transport and poverty[1]
- interviews with 51 stakeholders and 79 residents in six case study neighbourhoods across three city regions:
    - Greater Manchester – Harpurhey (Manchester) and Hattersley (Tameside)
    - Leeds City Region – Seacroft (Leeds) and Dewsbury Moor (Kirklees)
    - Glasgow City Region – Castlemilk (Glasgow) and Port Glasgow (Inverclyde).

The precise rationale for selecting each of the case study areas is outlined in detail in Chapter 2.

In-depth interviews were carried out with two groups across the six case study areas:

- 79 interviews were undertaken with **residents**. Nearly all were out of work and actively looking for work, although a small number in low-paid work were included to understand experiences of in-work poverty. Further details on the characteristics of the group we spoke to are provided in Chapter 3. The purpose of these interviews was to explore a number of themes, including: previous experiences of paid work and commuting, perceptions of local job markets, aspirations and expectations around work, and ability to commute. A 'map elicitation' technique was used to understand travel options by exploring the feasibility of working in different locations based on our 'travel time' maps (see Chapter 2)
- 51 in-depth interviews were undertaken with a range of local **stakeholders**, including Jobcentre Plus officers, housing providers, bus service operators and policy officers in PTEs, and local or combined authorities. These interviews explored stakeholders' perceptions of transport-related barriers to work and the scope to address these through policy and practice
- a mapping exercise to produce travel time accessibility maps (known as isochrone maps), showing how far residents in case study neighbourhoods can travel within given times using public transport. We also produced 198 travel time maps for the most deprived area in each local authority across Great Britain that had at least one area fall within the 'disconnected' category on the earlier JRF typology (Rae et al, 2016)
- policy workshops with stakeholders in Manchester, Leeds and Glasgow to discuss the findings from interviews, and test policy and practice solutions to the transport-related barriers to work that our analysis identified.

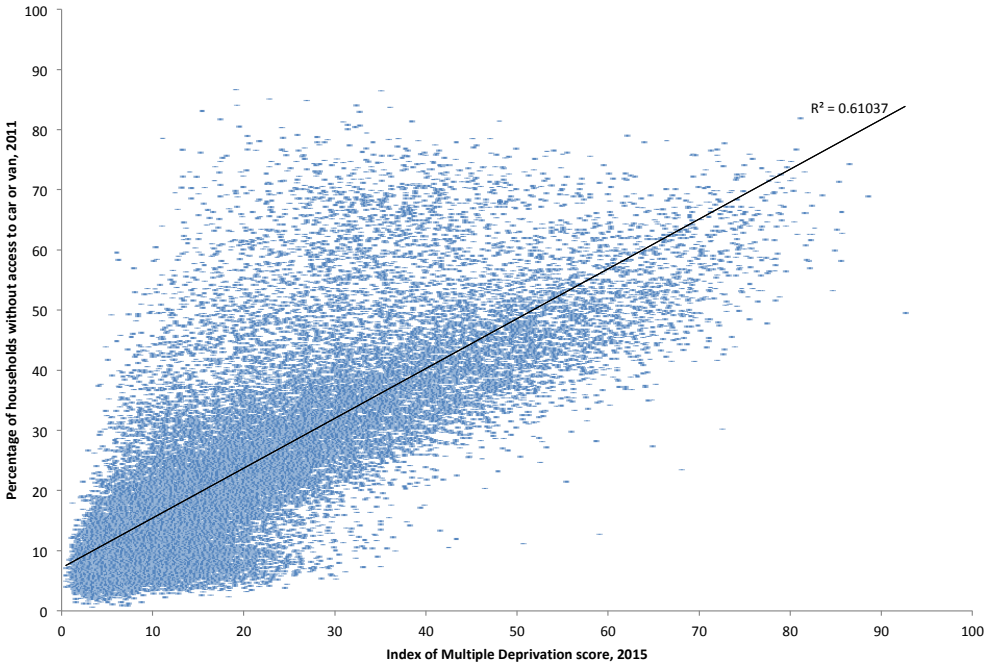
Transport trends and policy developments

An evidence review published in the first phase of research detailed the key trends, policy developments and economic changes shaping the capacity of the transport system to support individuals in low-income households to access work. We summarise here the headline developments in terms of: transport availability, usage and costs; the location and nature of work; and key developments in transport policy.

Transport availability, usage and costs

Low-income groups tend to have **less access to private transport and are, as a consequence, more reliant on public transport.** A feature of low-income neighbourhoods is the relatively low incidence of motor vehicle ownership (see Figure 1). This may be explained by the lack of income to meet both the relatively high entry costs (vehicle purchase, excise duty and insurance) and running costs (fuel, servicing and any loan repayments)(see Taylor et al, 2009).

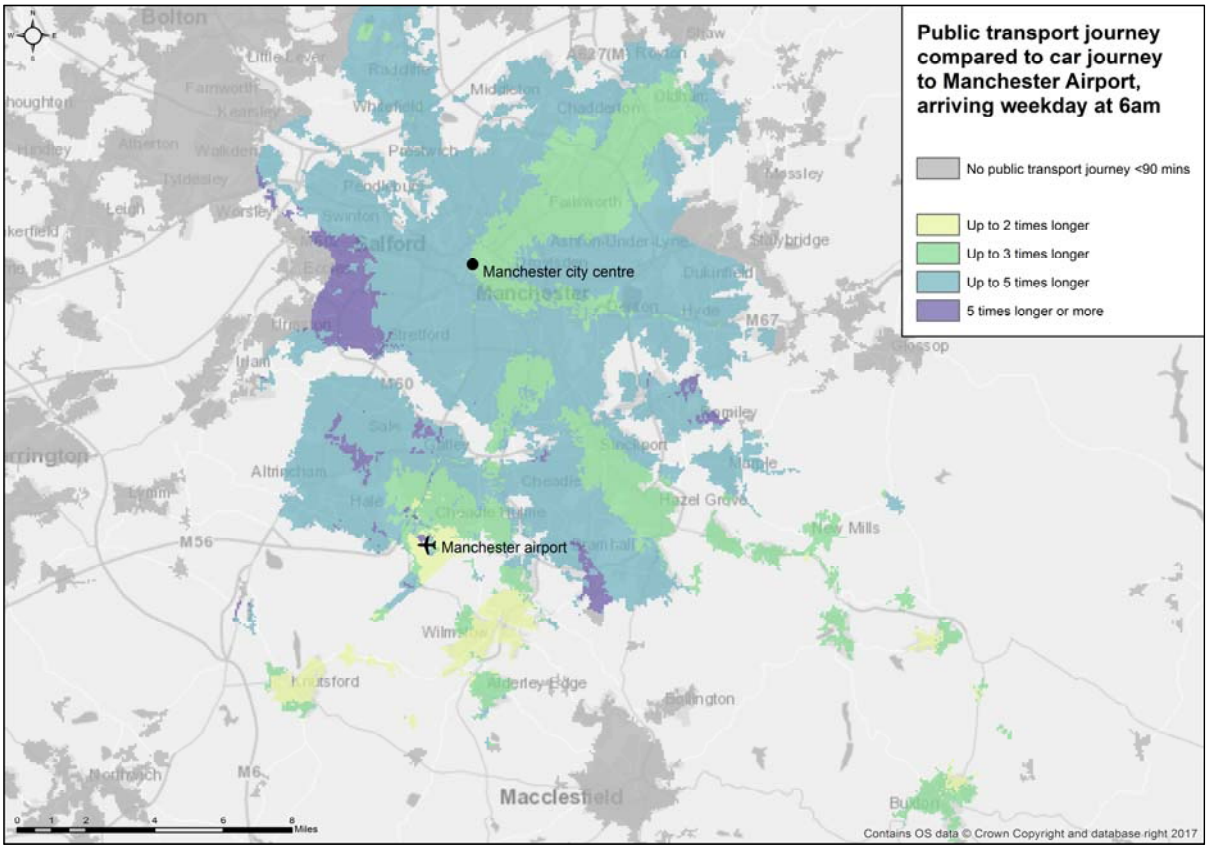
Figure 1: Levels of area deprivation and lack of access to a motor vehicle in England



Source: Census 2011 (via Nomis); English Indices of Deprivation 2015 (via Department for Communities and Local Government)

A lack of private transport can have significant implications for the accessibility of workplaces. For example, Figure 2 shows the ratio of journey times by public transport and car to Manchester Airport – a key growth area of employment in Greater Manchester. Our analysis shows that **public transport often takes up to five times as long as travelling by car** to arrive by a typical shift start time of 6am.

Figure 2: Relative length of journey by public and private transport to Manchester Airport (arriving at 6am Monday–Friday)



Source: Authors' calculations using public transport accessibility data from MySociety/Mapumental and ESRI ArcGIS Online World Traffic Service.

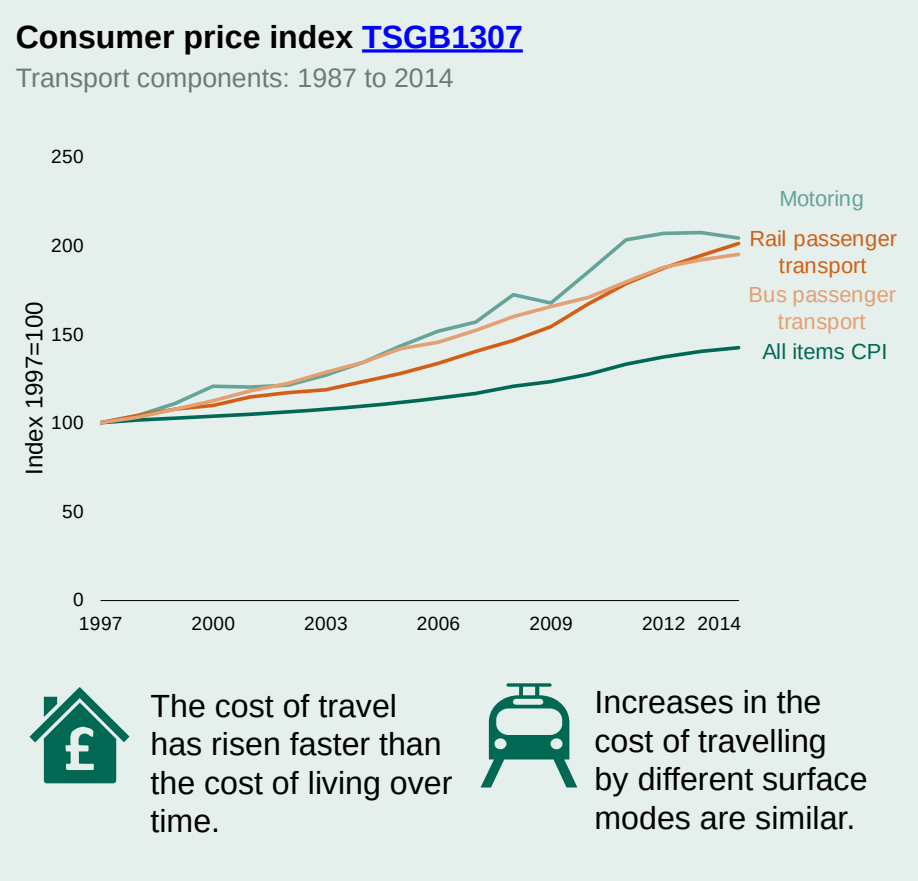
The high costs of car ownership leave many low-income households reliant on public transport, which is reflected in the higher use of buses as measured by annual trips per head by lower-income groups (Titheridge et al, 2014). This is particularly true of jobseekers, who are more than twice as likely to use buses as anyone else (Raikes, 2016). This can limit commuting options as **buses are often identified as a poorly performing mode of public transport** in terms of reliability and availability (eg to align with shift patterns), especially where users are making longer journeys that involve changing services (Social Exclusion Unit, 2003; Thakuriah et al, 2013; Transport Focus, 2018). This can, in turn, impact upon people's capacity to find work, with one survey finding that 19% of workers have turned down a job at some time because of poor quality bus services (Mackie et al, 2012).

Recent reports suggest **the deregulated operating environment for buses outside of London may contribute to poor performance or excessively high fares** (Competition Commission, 2011; House of Commons Transport Committee, 2012). Poor reliability is also driven by rising levels of congestion in and around major cities in the UK, partly due to the dominance of private motor transport. For example, over 70% of workers travel by car in the city regions around Manchester, Liverpool, Leeds, Sheffield, Newcastle and Birmingham (National Infrastructure Commission, 2018). At the same time, there is often **political ambivalence towards reducing car use**. The Greater Manchester Mayor, Andy Burnham, has pledged, for example, that he will never introduce a charge on car drivers when launching a consultation on reducing congestion in the city region (Cox, 2017). In Liverpool, the council made a decision to suspend and eventually remove some bus lanes which, an independent report suggests, has actually lead to increased congestion and longer journey times for both cars and buses, as well as fears that it will increase the use of private transport (Waddington and Jaleel, 2014).

Despite issues with availability and reliability, **the costs of public transport have increased consistently above the rate of inflation** over the last two decades (Figure 3). Transport now accounts for the greatest proportion of household budgets in the UK, with marginally more spent on average on transport

than housing, fuel and power across the whole population (Office for National Statistics, 2017a), although lower-income households still spend far more on housing, fuel and power than transport (Office for National Statistics, 2017b).

Figure 3: Transport costs and inflation



Source: Department for Transport (2015)

There is some **evidence to suggest that lower public transport costs may increase patronage** as well as capacity to use the system. Rowney and Straw's (2014) analysis shows a noticeable spike in public transport use after the formation of Transport for London (TfL) in 1999, when TfL held fares below inflation. Goodman et al (2014) also found that universal provision of free bus travel for young people in London enhanced their capacity to travel and facilitated the acquisition of the necessary skills, travelling companions and confidence to make a journey by bus.

Overall, however, **bus patronage continues to fall**: from 74% of all public transport journeys in Great Britain in 1991/92 to 59% in 2016/17 (Department for Transport, 2017a). Reasons for this fall include congestion, poor reliability and subsequent switching to other modes of transport (eg light rail), high levels of car ownership, and the growth in online shopping which has reduced physical trips to shops (ibid).

The location and nature of work

The extent to which low-income households can access employment using public transport is also shaped by the location of jobs relative to place of residence, as well as the nature of available work in terms of conditions and pay. Many residents of low-income neighbourhoods have few or no qualifications, which largely restricts them to unskilled employment in occupations such as retail, hospitality, cleaning, security, social care, warehousing and distribution. While some of these jobs can be found in town or city centres reasonably well served by public transport, or are highly localised in the case of home-care services, many are located in less accessible areas. Research has found, for instance, that the **geography of jobs is changing such that higher-skilled jobs are increasingly concentrated**

in cities along main transport corridors and in city centres, while low-skilled jobs are increasingly dispersed outside of city centres (Tochtermann and Clayton, 2011).

This growing 'spatial mismatch' in the UK means that **areas housing lower-income residents are often distanced from areas with suitable job opportunities** (Gobillon et al, 2007; Houston, 2005). This mismatch may be a particular issue given the reduced propensity of lower-income households to commute long distances. For example, the 2011 Census showed that 56% of lower-paid workers[2] in England and Wales travel less than 5km (3 miles) to their place of work. This figure is significantly at odds with the Department for Work and Pensions' (DWP's) expectation that jobseekers look for vacancies up to a 90 minute commute away, which was introduced as part of the Welfare Reform Act 2012. Moreover, this expectation does not take into account evidence that longer commutes appear to have a negative impact on well-being (Office for National Statistics, 2014), which suggests there are **good reasons to avoid promoting longer commutes.**

Spatial mismatch is also impacted by wages and other sources of household income relative to transport costs. Recent changes in the nature of employment, such as the growth of 'atypical' forms of working (involuntary part-time or temporary work, self-employment, agency work, employment in the gig economy, and 'flexi' or zero hours contracts) and declining real wages have occurred at the same time as rising levels of in-work poverty (Taylor, 2017; JRF, 2017). In addition, a series of welfare reforms since 2010 have significantly reduced average household incomes from welfare benefits (Beatty and Fothergill, 2016). Poverty-level wages or incomes have direct implications for people's ability to commute by limiting the amount that can be spent on travel to work. This can constrain the feasible distances workers can travel between their homes in low-income neighbourhoods and potential workplaces due to an inability to afford car ownership or the high costs of public transport (Zenou, 2009; Tochtermann and Clayton, 2011; Ong and Miller, 2005).

Housing also plays a role in shaping access to employment, particularly where **cheaper housing in more peripheral locations means households are distanced from centres of employment that could provide work** (Gibb et al, 2016). This issue is driven, in part, by the selling-off of council housing under the Right to Buy scheme, which has residualised stock in more peripheral locations (Jones and Murie, 1999; Murie and Ferrari, 2003; Pawson et al, 2002). While the extension of Right to Buy to housing associations in England has been scaled down to a one-year pilot in the West Midlands from July 2018, and the requirement for councils to sell off high-value stock to fund this extension has been delayed, any future acceleration of either policy could see further residualisation, if more attractive stock in prime locations near employment centres sells first. It remains to be seen if the different approach taken in recent years in Scotland, where Right to Buy has been terminated and affordable housing development increased, will mitigate or reverse these trends.

Key developments in transport policy

The UK Government is responsible for developing and funding local transport policy in England around highways, rail and buses, as well as active modes of transport (walking and cycling); in other parts of the UK, this is provided by the devolved administrations (Butcher, 2017). Westminster retains reserved powers for 'national' transport including aviation and maritime policy, as well as strategic road and rail (ibid).

While transport policy has **historically been highly centralised** in England outside London, this has started to change under the **'devolution revolution'** initiated in 2010 by the Coalition Government. The bulk of capital funding for transport projects has been devolved to Local Enterprise Partnerships through the Local Growth Fund (Butcher, 2016a). This is only one of a number of sources of funding, however, that can be used to fund capital or revenue costs for local public transport.[3]

Devolution deals agreed with combined authorities have also seen further funding and powers ceded to city regions that include:

- bus franchising powers to set routes and let franchises to bus companies for operating those services
- the ability to introduce multi-modal 'smart' ticketing systems (like the London Oyster card)
- multi-year integrated transport budgets

- a commitment to joint working between each combined authority, Network Rail, Highways England and (where relevant) HS2 (Butcher, 2016a).

These powers permit city regions to develop more horizontally integrated transport systems through powers to coordinate timetables and align ticketing (Raikes, 2016). They could also be used directly to benefit low-income households by, for example, introducing concessionary fares for jobseekers to support job search, or for low-paid workers to mitigate transport costs (ibid). The Bus Services Act passed in 2017 extends some of these powers to other areas by enabling local authorities, combined authorities and PTEs to determine bus routes and fares, and let franchises to private bus companies.[4]

Re-regulation of bus services in England would see a divergence from Scotland, where a deregulated framework continues, similar to the system in England before the Bus Services Act became law. However, there is growing interest in regulating buses in Scotland following recent developments in England (Butcher, 2016b).

It is not yet apparent if devolution will transform transport networks to support economic growth and, pertinent to this research, increase economic opportunities for low-income households. Devolution is occurring at **a time of acute fiscal challenges** when transport will be expected to achieve more with fewer resources (Raikes, 2016). For example, despite two-thirds of public transport journeys being made by bus, funding for supported bus services[5] has been reduced by 25% between 2010 and 2016, resulting in alteration, reduction or complete withdrawal of services on 2,400 routes (Campaign for Better Transport, 2016; Isaac, 2015).

At the same time, devolution provides **genuine opportunities for city regions to develop integrated transport systems** that are designed to meet wider economic, social and environmental objectives. Transport operators have stated a willingness to act in partnership with local and city regional agencies, while emphasising the need for long-term planning and commitment in order to justify new investment and route innovation (Chartered Institute of Logistics and Transport, 2016). Moreover, current attempts to align public service agendas by local and city regional institutions could see greater emphasis on coordinating policies around transport, housing, planning, employment and skills, to improve connectivity for low-income households to employment and training opportunities.

These policy changes have occurred against the backdrop of **significant and disruptive technological change** in transport systems. The rise of Uber has proven the demand for app-based, on-demand services, and generated growing interest in the potential for other types of app-based service using medium-sized vehicles such as minibuses. Trials suggest that this development may help to meet the demand for transport to access employment in more peripheral locations (Kubitz, 2017). There is also increasing interest in developing Mobility-as-a-Service (MaaS) platforms that enable users to plan journeys using combinations of private and public transport, to maximise flexibility and accessibility. This could build on existing patterns of transport use. Research suggests, for example, that lower-income groups in Leeds are more likely to use taxis to get to work than more affluent residents, suggesting there may be scope for incorporating taxis into commutes, for example to connect to public transport hubs (see Forth, 2017).

Conceptualising the relationship between transport and poverty

The transport-related issues facing low-income households in accessing employment, as well as other essential services or amenities, have been conceptualised as a form of **'transport poverty'.** This has been defined in different ways, with the most comprehensive definition provided by Lucas et al (2016), who deconstruct the notion into four components:

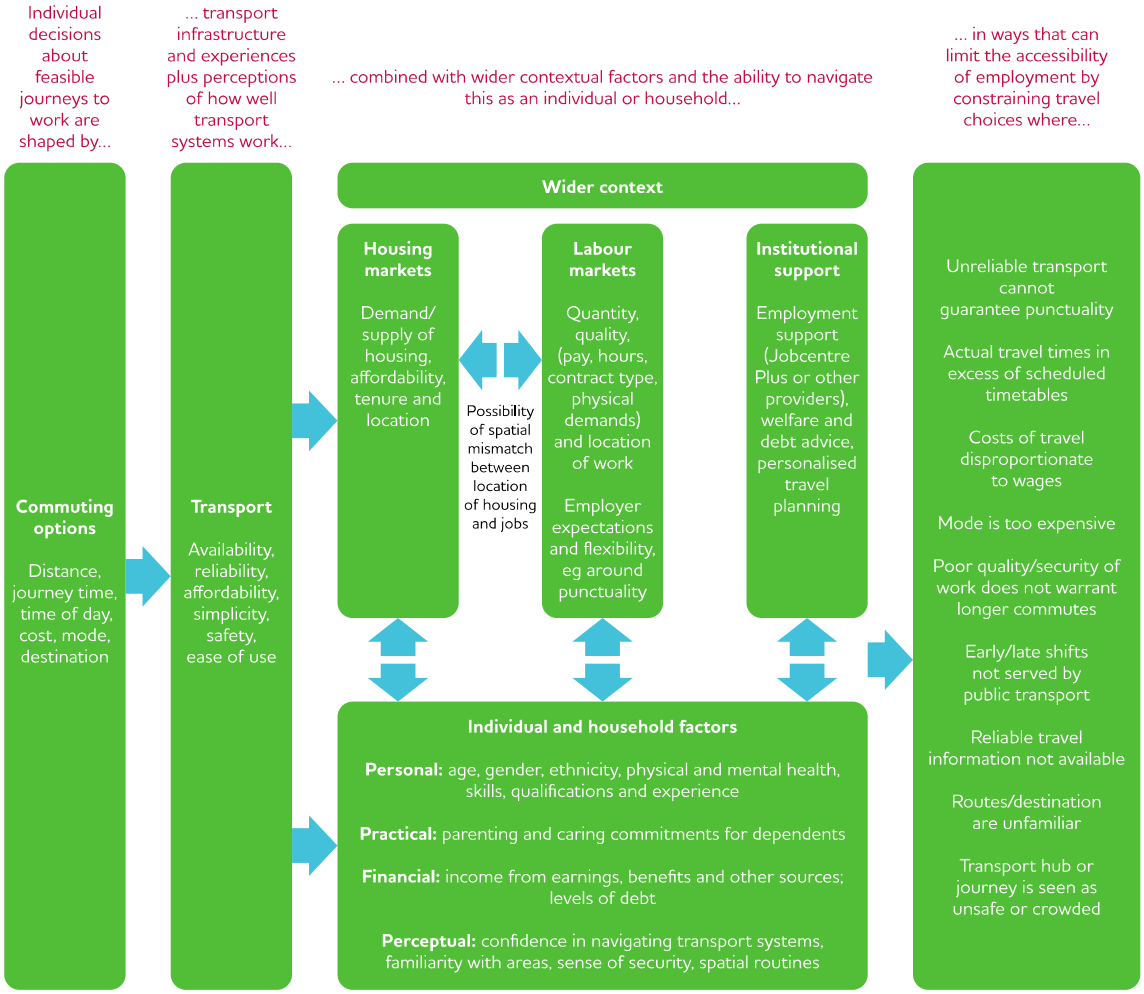
- **transport affordability**: the inability to meet the cost of transport to key activities such as employment, education, healthcare services, shops and so on, due to a lack of financial resources
- **mobility poverty:** the lack of availability of a means of transport (usually a motorised vehicle, but also including public transport) to reach those activities; this is often connected to a lack of services or infrastructures

- **accessibility poverty:** the difficulty of reaching the places where those activities are available in a reasonable time, cost and with reasonable ease (due to geographical distance and/or the nature of the transport network between homes and that locality)
- **exposure to transport externalities**: being disproportionately affected by adverse side effects of the transport system, such as road traffic casualties, and chronic illness or deaths caused by pollution.

This useful conceptualisation largely focuses on the practical dimensions of transport poverty in terms of the time, distance, cost and ease of moving between places. Other research has emphasised how physical disconnection is also shaped by residents' **subjective perceptions** of their relationship to place of residence and willingness to travel. For example, Green and White's (2007) study of young people's mobility and attitudes towards work found that young people had accurate basic knowledge of the geography of employment opportunities and were willing to travel. However, most 'mental maps' were highly localised, and transport barriers to accessing opportunities emerged as more 'perceived' than real.

Drawing on these respective insights, and the empirical data presented later in this report, we have developed a new conceptualisation for this report of the ways in which transport shapes the accessibility of jobs for those living in low-income households. Figure 4 illustrates how decisions about feasible commutes are informed by perceptions and experiences of transport systems, as well as wider contextual factors. These interactions can constrain or enable travel choices, although the figure highlights the ways in which combinations of factors might limit travel options and, by extension, reduce the accessibility of employment for households in poverty. There are too many examples to highlight here, but to give just one: perceptions that public transport is expensive relative to household income, combined with expectations of low-paid work by those with limited or no qualifications, may lead individuals to dismiss commuting options where travel costs are considered excessive relative to likely earnings and loss of benefits. The nature and scope of these interrelationships is explored in full in Chapters 4 and 5, which present findings from interviews.

Figure 4: The relationship between transport, poverty and employment



Report structure

The remainder of the report is structured as follows:

- Chapter 2 outlines the process by which the six case study areas were chosen, and the context in each; it also introduces the travel time maps produced to explore commuting options with residents, and reflects on what they tell us about spatial mismatch
- Chapter 3 is the first of two sections presenting findings from interviews with residents; it explores past experiences of work and commuting, before considering current expectations and activities around looking for work; and it reflects on the time and distance residents are willing to travel
- Chapter 4 looks at the ways in which transport networks enable or constrain individuals to secure employment; it examines the feasibility of commuting in relation to the transport system itself, and how this interacts with wider contextual factors and the circumstances of those looking for work
- Chapter 5 draws on the transport-related barriers identified by residents in Chapters 3 and 4 to propose a series of policy and practice solutions; it identifies the policy levers available to different stakeholders, and how these might be implemented over different timescales
- Chapter 6 offers conclusions on the potential for current transport-related barriers to be addressed.

2 Case study areas: an overview

This section explains how the six case study areas were chosen, and outlines the context in each in terms of transport infrastructure, employment opportunities, housing stock and demographics. It also introduces the travel time maps used to explore commuting options with residents, and reflects on what they tell us about connectivity to areas of employment from each of the six areas.

Box 1: Key messages

- Job accessibility data shows that there are more jobs of all types within a 60 minute commute from case study areas closer to major city centres. However, job growth in low-skilled occupations has tended to occur outside of core city boundaries.
- Travel time maps produced for the research suggest that case study areas are often functionally disconnected from their wider regions in terms of the time it takes to travel to key centres of employment by public transport. This disconnection is particularly true of those areas that lie outside city boundaries (Port Glasgow, Dewsbury Moor and Hattersley).
- This disconnection is still evident, though, to some degree, in relation to neighbourhoods closer to city centres (Harpurhey, Seacroft and Castlemilk). They are all within city boundaries, and no more than around 5 miles away from city centres, but residents can expect a minimum of 30 minute commutes into the city without allowing for delays or onwards journeys.
- The relatively long commute times required to access many employment opportunities from the six case study areas may be a problem, given the tendency of lower-skilled workers to undertake shorter commutes and the high travel costs they may face relative to wages.

Selection of case study areas

The project method and resources allowed for the selection of six case study areas across three city regions:

- Harpurhey (Manchester) and Hattersley (Tameside) in Greater Manchester
- Seacroft (Leeds) and Dewsbury Moor (Kirklees) in the Leeds City Region
- Castlemilk (Glasgow) and Port Glasgow (Inverclyde) in the Glasgow City Region.

Each city regional pairing includes one area within the boundaries of the urban core (Manchester, Leeds and Glasgow) and one outside city boundaries, to explore the relative benefits of proximity to, and distance from, city centres. The location of each of these areas within the UK is shown in Figure 5.

Figure 5: Location of case study areas within the UK

How case study areas were selected

Two case study areas were selected within each of the three city regions. These six areas were identified by drawing on analysis of 'disconnection' among neighbourhoods (Lower Super Output Areas in England, Data Zones in Scotland) undertaken for JRF by Rae et al (2016). This study used commuting data (travel to work and workplace data from the 2011 Census) to sort all areas among the most deprived 20% of areas across the UK into one of six types.

Drawing on this typology, we identified all areas that had been identified as 'disconnected' due to their lack of connection to employment destinations locally, both in relation to total number and variety of destinations. We then reviewed maps to identify a long list of disconnected areas where there was

significant deprivation within reasonably close proximity of employment areas.[6] This yielded 17 candidate areas across the three city regions, which were then assessed in relation to a number of criteria to allow a more in-depth analysis of local conditions:

- the type of neighbourhood from the 'Disconnection' typology in Rae et al (2016)
- the main public transport modes serving the area (bus, light rail, rail)
- proximity to Highways England/Transport Scotland strategic road network (motorways and trunk roads)
- peak bus frequency and fastest peak journey time by bus travelling to the respective city centre by 9am
- housing type (flats and maisonettes as a proportion of the total) and tenure (private renting, social renting, home ownership)
- average residential density (dwellings per hectare).

Looking across these criteria, the long list was narrowed down to the final six case study areas that captured different elements of disconnection in terms of distance from city centre, transport modes available and housing tenure. Key features are summarised in Table 1:

Table 1: Key features of case study areas and rationale for selection

Locality	City region	Local authority	Morning peak bus frequency to city centre (Leeds, Manchester or Glasgow)	Quickest timetabled morning peak bus time to city centre	Housing tenure (% split):			Main modes of transport serving case study area	Rationale for selection
					Owner-occupied	Private rented	Social rented		
Harpurhey	Greater Manchester	Manchester	5 mins	0h28	11.9	13.3	72.4	Bus, light rail (nearest Metrolink tram stop 20-min walk)	Proximate to Manchester city centre and other district centres, but connectivity to some cross-city destinations limited, opportunity to look at usage of light rail (tram).
Hattersley	Greater Manchester	Tameside	10 mins	1h29	30.2	3.5	64.4	Bus, rail (Hattersley station)	Classic 'overspill' social housing estate, very slow bus connections, but good rail service into Manchester.
Dewsbury Moor	Leeds City Region	Kirklees	20 mins	1h12	39.5	10.8	45.4	Bus only (nearest railway station is Dewsbury, 28-min walk)	Low-density suburban area, proximate to local employment centres, but limited connectivity to major cities.
Seacroft	Leeds City Region	Leeds	10 mins	0h35	24.5	4.1	68.0	Bus only (nearest railway station is Cross Gates, 33-min walk)	Peripheral social housing estate (though much closer than Hattersley), no rail or light rail, bus very slow.
Castlemilk	Glasgow City Region	Glasgow	10 mins	0h51	14.3	3.9	81.8	Bus only (nearest railway stations are Kings Park (33-min walk) and Croftfoot (28-min walk)	High density, peripheral social housing estate, poor links to city centre by bus, but near to employment growth in East Kilbride.

Port Glasgow	Glasgow City Region	Inverclyde	10 mins	0h47	37.5	16.7	45.3	Bus and rail (one railway station in Port Glasgow centre and two on periphery – Bogston and Woodhall)	Distinct settlement some distance from core of city region, served by two modes (rail and bus), and better connectivity than location might suggest.

Data sources: Google Maps (information correct as of 9 March 2018); Nomis

Access to jobs in the wider city region

Before introducing the case study areas in detail, we briefly consider the wider city regions. All three regions were selected on the basis of having relatively high numbers of deprived neighbourhoods, but different contexts in terms of the spatial distribution of jobs, as well as varying local and city regional 'levers' to shape strategies, policies and programmes around transport. Figures 6 to 8 show the distribution of employment within the three city regions in terms of the number of employee jobs, using workplace locations within a 2km radius of any given point based on 2011 Census data. The methods used to create the maps are outlined in detail in Appendix 3.

The maps highlight key differences, with Glasgow very much a 'monocentric' city region, with jobs largely concentrated in the city itself. By contrast, Greater Manchester and, to a lesser extent, the Leeds City Region, show more of a 'polycentric' pattern to employment, where concentrations of jobs are also evident within other district centres outside the respective core cities.

Figure 6: Employee jobs in the Glasgow City Region

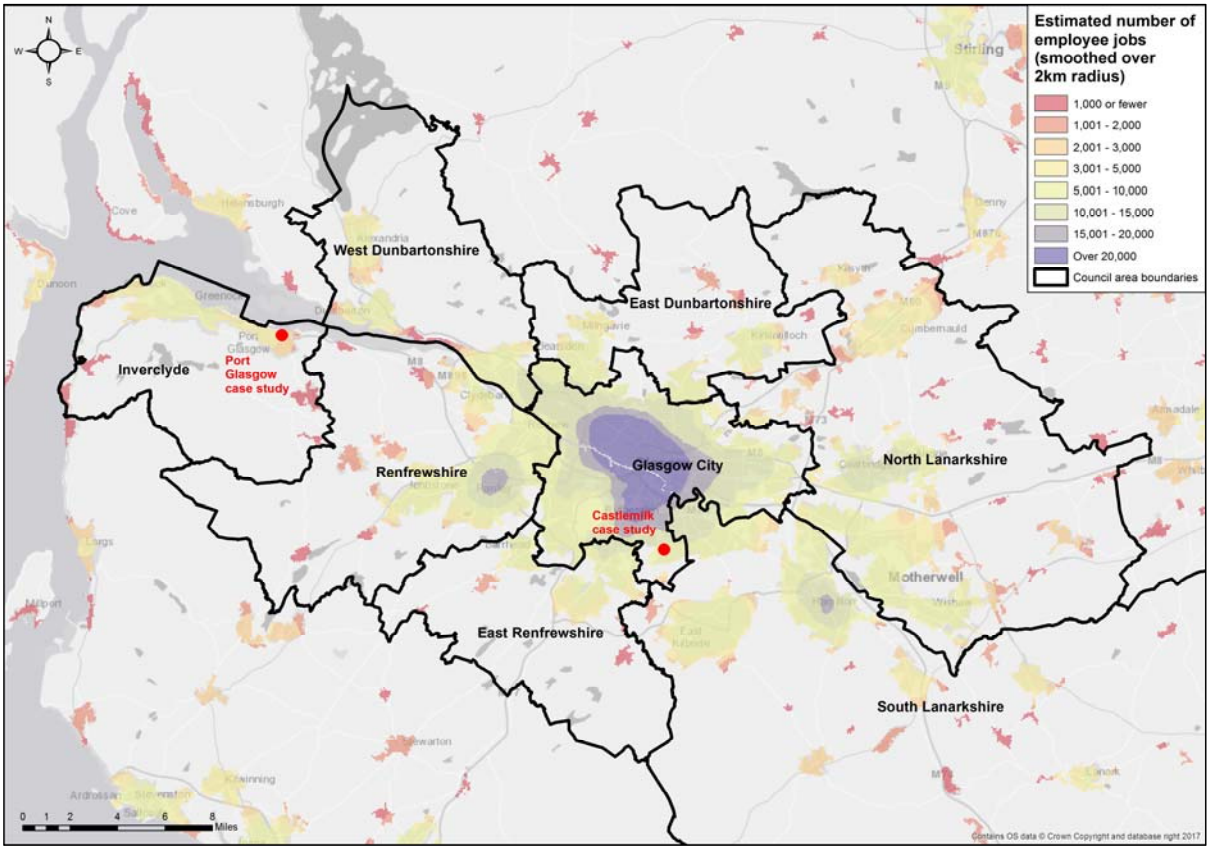


Figure 7: Employee jobs in Greater Manchester

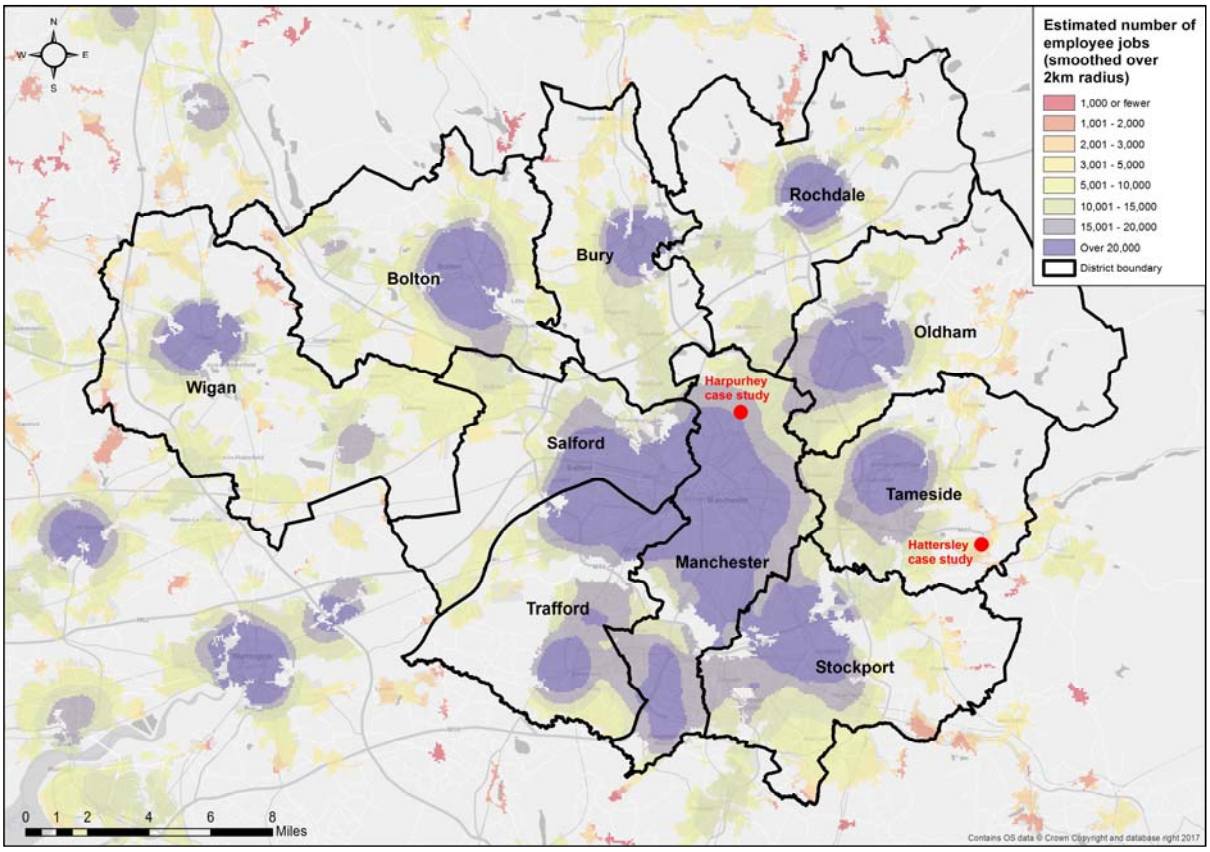
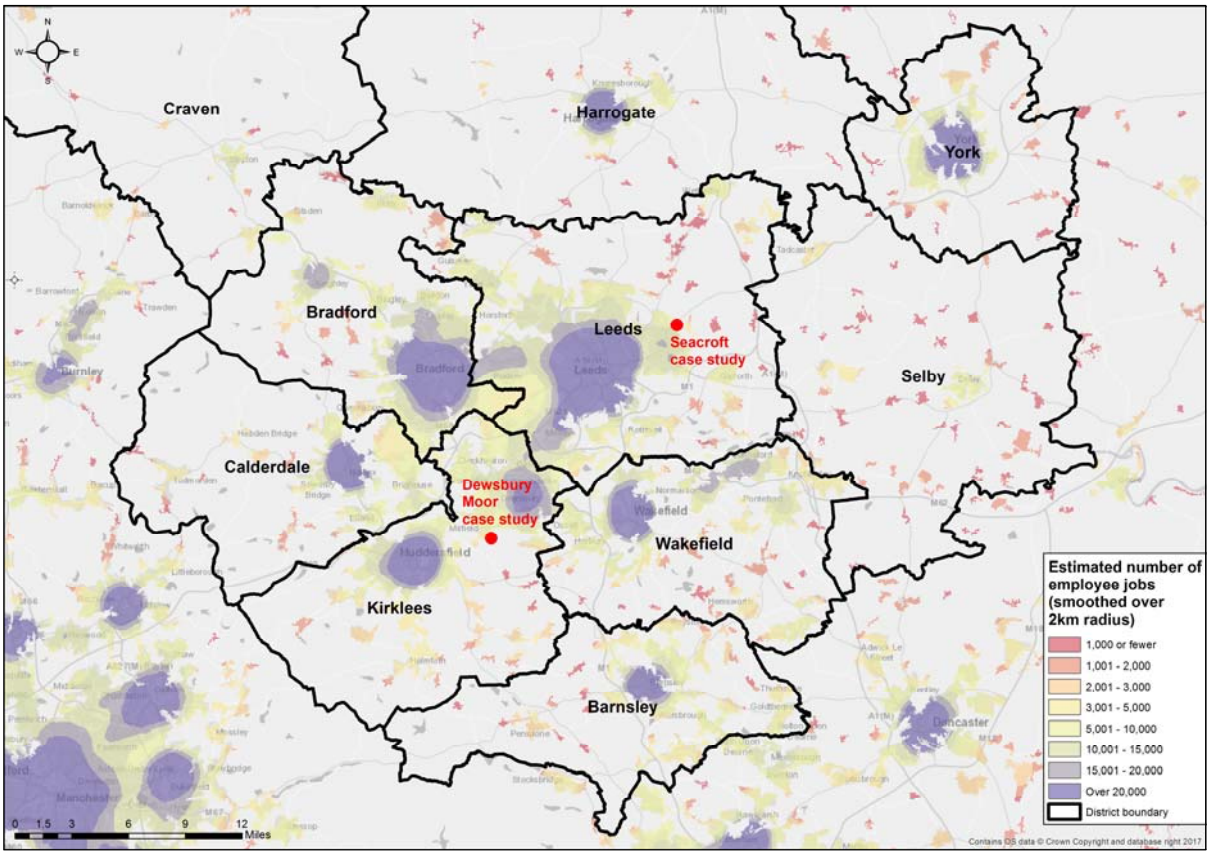


Figure 8: Employee jobs in the Leeds City Region



Another way to look at the distribution of employment across the city region is to consider the number of jobs that are accessible within 60 minutes' travel from each of the six case study areas. Table 2 estimates this using Workplace Employee Estimates from the Business Register and Employment Survey (BRES) dataset.[7] This clearly shows that the **case study areas within city boundaries in each city region (Castlemilk, Harpurhey and Seacroft) have more jobs within a 60 minute commute than those located outside (Port Glasgow, Hattersley and Dewsbury Moor)**. This is perhaps not surprising, but as we will see in later chapters, this does not always mean that proximity guarantees better access to jobs.

Table 2: Estimates of workplace employees within a 60 minute commute

	Distance to city centre (miles)	2010	2016	Change 2010–2016	% change
Castlemilk	4	304,000	310,300	6,300	2.1
Port Glasgow	20	242,400	246,200	3,800	1.6
Harpurhey	3	507,700	575,300	67,600	13.3
Hattersley	11	311,600	346,200	34,600	11.1
Seacroft	4	409,500	418,900	9,400	2.3
Dewsbury Moor	10	345,400	358,200	12,800	3.7

The BRES data is based on all jobs, which only provides a partial picture of opportunities for lower-skilled workers as it includes higher-skilled jobs that are not accessible to those without the requisite skills or experience. For this reason, Table 3 looks at job growth in a range of occupations[8] that account for a significant proportion of low-paid work. Using 'workplace analysis' employee estimates from the Annual Population Survey dataset (Nomis), it provides a proxy measure of low-paid jobs in the local authority

districts and city regions in which each case study area is based. Unfortunately the dataset does not provide data on a small enough scale to construct estimates for the case study areas themselves.

Table 3: Estimates of workplace employees in low-paid occupations, local authority districts and city regions

Local authority (case study area within) and city region	2010	2017	Change 2010–2017	% change	% part-time, 2017	% of all part-time jobs, 2017
Glasgow (Castlemilk)	121,500	115,000	-6,500	-5.3	39.8	44.1
Inverclyde (Port Glasgow)	11,100	11,100	0	0.0	45.7	63.2
Glasgow City Region	242,700	251,000	8,300	3.4	41.3	49.7
Manchester (Harpurhey)	104,000	104,200	200	0.2	34.7	43.9
Tameside (Hattersley)	22,200	22,700	500	2.3	37.6	59.7
Greater Manchester	338,600	360,100	21,500	6.3	42.5	50.8
Leeds (Seacroft)	107,500	108,900	1,400	1.3	48.5	49.7
Kirklees (Dewsbury Moor)	45,500	52,000	6,500	14.3	48.2	49.3
Leeds City Region	286,600	304,900	18,300	6.4	46.1	51.3

The data shows that growth in low-paid jobs has occurred across all city regions (between 3.4% and 6.4%), but **most of this growth has occurred outside of city boundaries**. The three core cities have either seen the number of low-paid jobs fall (-5.3% in Glasgow) or only increase marginally (0.2% in Manchester, 1.3% in Leeds) between 2010 and 2017. The cities still contain large proportions of all low-skilled jobs in the city region (29% in Manchester, 36% in Leeds and 40% in Glasgow), but job growth elsewhere in the city centre raises questions about the location and accessibility of new employment outside major centres. As our later empirical work shows, it can be problematic where job growth occurs in out-of-town locations such as commercial, retail and industrial parks.

Looking at local authority districts, one further finding is that a relatively high proportion of the jobs in low-paid occupations are part-time (ranging between a third and a half of the total), and contribute a disproportionate share of the total number of part-time posts in the area (63% in Port Glasgow and 60% in Hattersley). The lower take-home pay associated with such part-time jobs is likely to constrain the amount workers are willing or able to pay to meet travel costs, with an inevitable knock-on effect on commuting distances and hence job-search horizons.

The local context

Each of the six case study areas is unique and the descriptions that follow help to set the local context. There is more information on each area in the appendices. Appendix 1 shows the location of key employers or employment locations such as industrial estates, as well as indicative costs of travel from

case study areas to locations where job density is highest. Appendix 2 lists the type of work available in each of these locations, and gives travel times from case study areas by public and private transport.

Castlemilk

Castlemilk is one of Glasgow's post-war peripheral housing schemes, located approximately 4 miles south of the city centre within district boundaries. Buses are the primary mode of transport and there are frequent scheduled services (every 10 minutes during the day into the city centre). The fastest bus is scheduled to take 25–30 minutes, although empirical evidence suggests they can be unreliable and slow (see Chapter 4). Castlemilk is also served by a bus service to East Kilbride (every half hour) with a journey time of approximately 30 minutes.

While Glasgow is well served by suburban rail services, the nearest two train stations to the centre of the estate (Kings Park and Croftfoot) are a half hour walk away. Road links are also reported to limit connectivity to and from Castlemilk – for example, there is no nearby motorway junction.

Employment opportunities in the immediate vicinity are limited. A shopping centre (including a McDonald's restaurant), nursery and the four housing associations are the main local employers. There is also a small industrial estate (Drakemire) to the west of Castlemilk. Stakeholders highlighted that nearby East Kilbride was a key employment growth area, but difficult to access with only a half-hourly bus service that stops just outside the estate. Some also suggested that Castlemilk had been bypassed by the economic development and regeneration (especially following the Commonwealth Games) experienced by other peripheral areas of the city. Easterhouse, for example, has benefitted from a large retail development, new housing and enhanced road links, which also benefit wider parts of the city's East End.

Port Glasgow

Port Glasgow is the second-largest town in the council district of Inverclyde, and is around 20 miles west of the centre of Glasgow. It was traditionally a shipbuilding town on the Clyde but, in the wake of this industry's decline, it saw major investments made in a large, new industrial estate and housing in 'upper' Port Glasgow, on the hills situated above the river, in the 1960s. This supported some sizeable employers, including light engineering and electronic firms, until the late 1980s and 1990s when a number of closures saw large parts of the industrial estate fall empty; it remains only partially in use at present. This means that residents in this part of town are now often required to make the journey 'down the hill' to work, shop or use services in Port Glasgow, or catch connecting services to other areas in Inverclyde or beyond for these activities.

The town is directly connected by rail to Greenock, Gourock, Paisley and central Glasgow, among other locations. Road links are less well developed, with the motorway stopping 5 miles from Port Glasgow. Bus services also connect Port Glasgow to nearby conurbations including Greenock and Gourock. While some residents commute to Paisley and Glasgow, one local stakeholder suggested that most residents work within the Inverclyde district boundaries. Stakeholders report that job quality in the local economy is poor, and that the area has not benefitted significantly from growth in Glasgow. Aside from Glasgow city centre, key employment growth areas in the city region include the area located around the airport (advanced manufacturing including Rolls Royce and James Fisher Defence), Braehead (retail) and East Kilbride (manufacturing and warehousing), all of which are difficult to access using public transport from Port Glasgow.

Seacroft

Seacroft is a suburban area of Leeds lying approximately 4 miles east of the city centre, and is dominated by a large social housing estate. The primary mode of public transport is bus, with frequent services into Leeds city centre, and a scheduled journey time of around 45 minutes (although it is often reported to take longer).

Leeds city centre is regarded to be Seacroft's main employment node. A number of other employment areas were identified within reasonable distance of Seacroft, but often reported to be difficult to access by public transport. These include: Coal Road (retail, leisure and business development, including the Unilever plant); the Aire Valley Enterprise Zone (a mix of manufacturing and engineering sites);

Leeds/Bradford airport (retail, food service, warehousing and distribution); Sherburn-in-Elmet (an industrial and commercial park); and Thorpe Park (a new retail, business and residential site currently in development).

Furthermore, the large highways cutting across the south and east of Leeds are not conducive to cycling or walking to employment centres in those areas. For example, there are plans for major regeneration in South Leeds around the proposed HS2 station, including the new Southbank development, yet it was reported to be relatively inaccessible from Seacroft, requiring a commute into the city centre and then a walk across busy highways.

Dewsbury Moor

Dewsbury Moor differs geographically from other case study areas in this study. Rather than focusing on a single neighbourhood or town, participants were drawn from a wider area to explore experiences of living in a low-density area with different settlements. The research focused on the area of Dewsbury Moor (on the edge of Dewsbury town, 1.5 miles away) along with the nearby towns of Heckmondwike, Liversedge and Cleckheaton. Dewsbury Moor and the surrounding towns are predominantly served by bus, although services are reported to be slow due to congestion. There are rail services from Dewsbury station, but it can take at least 30 minutes to reach the train station by bus or on foot.

Stakeholders characterised Dewsbury and the surrounding area as a low-wage, low-skilled, low-productivity economy suffering from an overall lack of jobs relative to similar sized centres nearby, such as Huddersfield. There are few large employers left, with some exceptions such as Fox's Biscuits and Carlton Cards. Other key sites of employment identified included: Ravensthorpe (a business park); Huddersfield (where the local council, Huddersfield University and NHS services are large employers); IKEA (on the M62); and the White Rose Centre near Morley (a retail and business park). However, stakeholders also pointed out that many of these locations were poorly served by public transport. The case study area is also, in theory, situated within reach of larger employment centres, especially Bradford, Leeds, Manchester and Wakefield, although journey times can be lengthy.

Harpurhey

Harpurhey is located about 3 miles north-east of Manchester city centre. The main mode of transport is bus, with direct services to many locations including Manchester city centre, Bury (approximately 45 minutes) and Rochdale (approximately 50 minutes). Manchester's Metrolink tram does not serve Harpurhey directly, but there are tram stops at Queens Road (a 15 minute walk from the district centre) and Central Park (a 25 minute walk). Bus services directly into the city centre were reported by stakeholders to be frequent, but orbital links were poor, as were east–west links across Manchester. Connecting routes are often slow: for example, it can take 90 minutes to reach Manchester Airport via bus and train.

Key sources of employment for lower-skilled residents include: hospitality and retail (in the city centre), construction and Manchester's universities (including lower-level service jobs). Other major sites of employment growth (particularly, but not exclusively, in industrial/warehousing sectors) are: the Heywood and Kingsway business parks (both in Rochdale); Salford Quays (including Media City UK); Port Salford and Carrington (to the west of Manchester); and Trafford Park (a long-established site of industrial employment).

Hattersley

Hattersley is a classic 'overspill' estate located 11 miles from Manchester city centre, and is mainly an area of social housing. It is served by both rail and bus. There are direct buses into Manchester city centre and the district centre of Ashton, but they are regarded as being slow – the 201 service, for example, was reported to take around 80 minutes to get to central Manchester. A new service (the 330) has recently been added to connect Ashton (the main town in Tameside) to Manchester airport via Stockport. There is a train station in the middle of the estate with good rail connectivity to Manchester city centre – it takes 22 minutes and there are two trains per hour. However, stakeholders and residents reported low usage because of concerns around personal safety, given its secluded location and low patronage (see Chapter 4).

Hattersley's economy has suffered from the decline of Tameside's industrial base, and new employment tends to be located some distance from Hattersley. The main nearby centres of employment in Tameside are Dukinfield, Hyde, Ashton (all a bus ride away) and Glossop (a short train journey). A small number of residents reportedly work at the airport, although travel difficulties limit its role as an employment node for Hattersley. Similarly, Stockport is reported to be a major employment centre, but this is difficult to access by public transport. Hattersley does have some local employers: Kerry Foods employs around 600 people, many of whom walk to work. Also, the Tesco superstore in Hattersley employs a high proportion of its staff locally (around 90%) and many walk or cycle into work.

Travel time maps

A key part of the research centred on producing 'travel time' maps showing how long it takes to get to selected areas using public transport, overlaid with the geography of employment opportunities within city regions (in terms of areas with the highest concentrations of jobs). The analysis reported here is based on data provided by Mapumental (https://mapumental.com). This enabled us to create travel time maps (also known as isochrone maps) for the six case study areas, plus a further 198 maps for the most deprived area in each local authority across Great Britain that had at least one area fall within the 'disconnected' category on the JRF typology developed by Rae et al (2016). More detail on the methods used to produce the maps is provided in Appendix 3.

Put simply, the data shows public transport travel times to or from a chosen postcode, in map format. The service covers Great Britain only, so we were not able to include Northern Ireland in this analysis. The underlying data is compiled from a variety of sources, including local public transport information, the Traveline National Data Set (TNDS), coach service data, and rail information from the Rail Delivery Group. The transport timetables used are based on data last updated in January 2018.

As with any public transport model, a number of assumptions are built in to the data, to help provide more realistic and accurate results, as stated by Mapumental:

> Mapumental journey times assume you can walk at approximately three miles per hour as the crow flies. It allows for ten minutes' walking between stations and to/from your final destination. 30 minutes' walking is allowed at the other end of the journey. It assumes that one minute is enough time for changing buses at the same stop, and that five minutes is enough time for changing train, coach, underground and ferry at the same station.

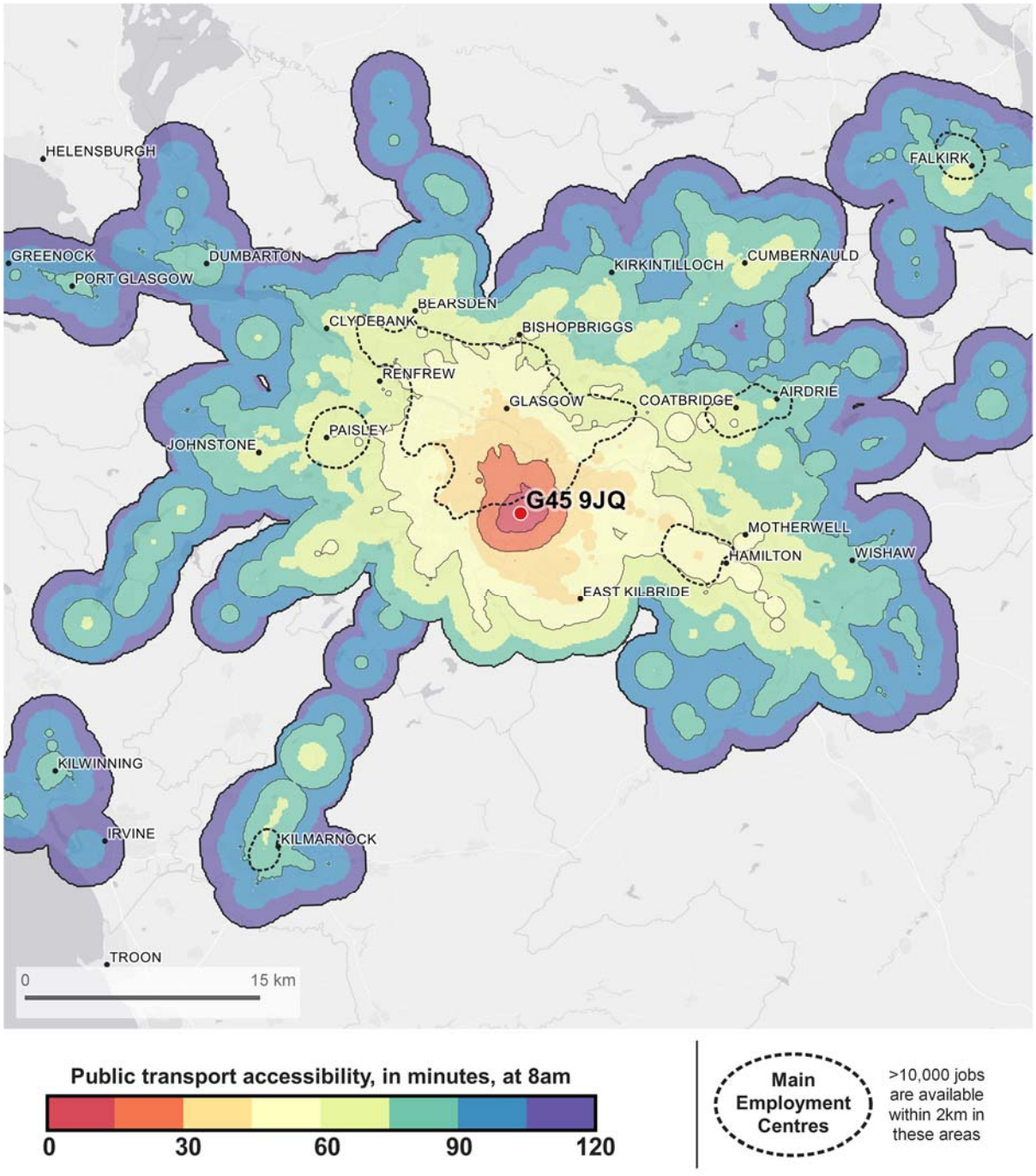
Our approach to the analysis of Mapumental data relied on taking a standardised approach across all case study areas, and then extending this to cover nearly 200 neighbourhoods across Great Britain using the following approach:

- we selected a single postcode unit (eg G45 9JQ – Glasgow) within each case study area as the starting point (ie six in total)
- we then selected a single postcode unit (eg LL13 8TG – Wrexham) from the most deprived area within each local authority that had a 'disconnected' LSOA or Data Zone for all other locations across Great Britain (198 in total)
- we chose 8am as the departure time for each location, and set the maximum travel time at 120 minutes; we also produced 5am departure time maps for the six case study areas for use in resident interviews, to discuss commutes to early shifts
- for each postcode, we created a travel time map by looking at how far people can go on public transport within a given time. This enabled us to draw a set of boundaries (called isochrones) that tell us, using 15 minute intervals, approximately how far people are able to travel on public transport. These are presented in the maps in this report, and it allows us to get a sense of the geography of peoples' job horizons if they are travelling by public transport
- as a final sense check, we tested the results against known travel times by consulting with local stakeholders, and exploring publicly available transport times using online services such as Google Maps.

The results of our analysis indicate that the **residents of low-income neighbourhoods would often have to travel for significant periods of time to reach major areas of job opportunities within their wider city regions**. This is not always the case, but a **pattern of disconnection** does emerge.

We begin by looking at travel-to-work horizons in the Glasgow City Region as an example. The first area shown below is Castlemilk, a high-density, post-war peripheral housing estate. The map (Figure 9) indicates how long it takes to travel from a particular point within the estate (the G45 9JQ postcode, shown as a red dot) at 8am on a weekday, using public transport. This map, and all subsequent ones, show 15 minute travel bands in different colours, with solid grey 'isochrone' lines at 15, 30, 60 and 90 minutes. The thicker, dotted lines represent areas within which there are 10,000 or more jobs available, in a 2km radius from any given point. These areas are, in effect, the main employment centres. In addition, on each map, we have labelled major towns and cities in order to give a better idea of how far residents can travel on public transport at different time intervals. Each map is shown at the same scale, to aid comparison.

Figure 9: Travel time map for Castlemilk (G45 9JQ)



From the G45 9JQ postcode in the centre of Castlemilk, it is approximately 5.5 miles to Glasgow city centre. This journey would typically take around 30 minutes at 8am in a car. We can see from the map, based on published timetables, that this journey takes around 45 minutes by public transport but, of course, this relies on services being on time.

The remaining five travel time maps for each of the case study areas shown below also indicate that **the accessibility of key areas of employment using public transport is often very restricted**. Key points include:

- **Port Glasgow, Inverclyde** (PA14 5NT): Port Glasgow ought, in theory, to be well connected to the wider city region, given the range of potential transport modes available, which includes bus and rail. However, significant portions of the city region are more than an hour away by public transport, including much of Glasgow.

- **Harpurhey, Manchester** (M9 5UQ): despite being the closest of the six case study areas to a major urban centre, our analysis underlines the fact that the accessibility of some employment locations is quite restricted. For example, it could take more than an hour to travel to Manchester Airport (near Wythenshawe on the map), a major jobs hub, and even 30 minutes to the Town Hall in Manchester city centre (a distance of only 3 miles).
- **Hattersley, Tameside** (SK14 3NW): the maps show that most of Manchester city centre is barely reachable within an hour. When we compare the two Greater Manchester maps, we can also see that the main employment centres are less accessible from Hattersley than Harpurhey, and that key locations such as Bury, Oldham, Rochdale and Stockport are more than an hour away by public transport.
- **Dewsbury Moor, Kirklees** (WF13 3NT): our analysis of journey times by public transport tells a similar story as Hattersley. Leeds city centre is reachable in under 45 minutes in theory, but much of the immediate area around it could take up to an hour to reach. Many of the areas that can be reached within an hour are, unfortunately, not the major employment centres shown in the dotted lines.
- **Seacroft, Leeds** (LS14 6DQ): Leeds city centre is clearly more accessible from Seacroft than from Dewsbury Moor. Even so, much of Leeds city centre is more than 30 minutes away by public transport, despite the fact that the city centre is only just over 4 miles away.

Figure 10: Travel time map for Port Glasgow (PA14 5NT)

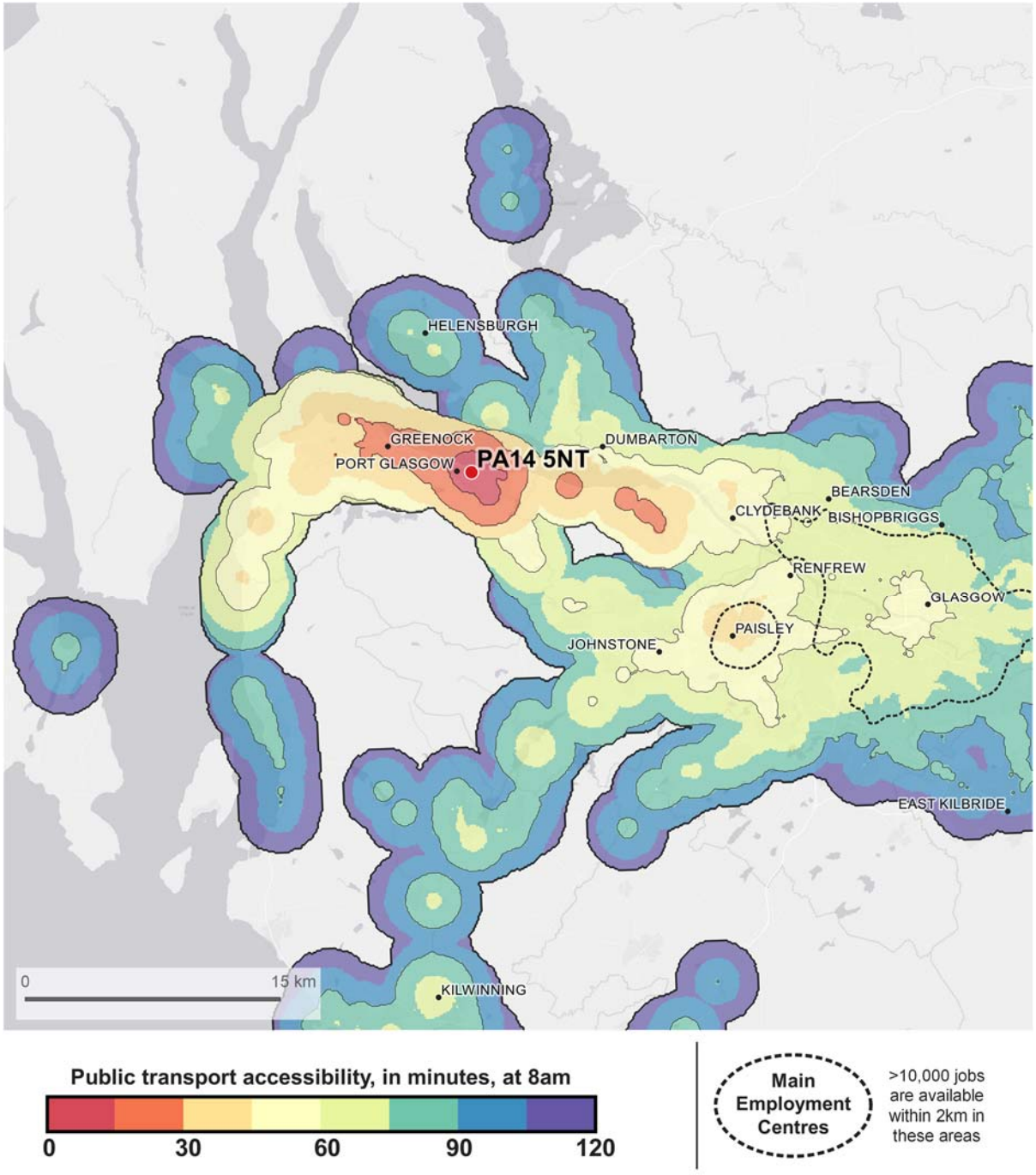


Figure 11: Travel time map for Harpurhey (M9 5UQ)

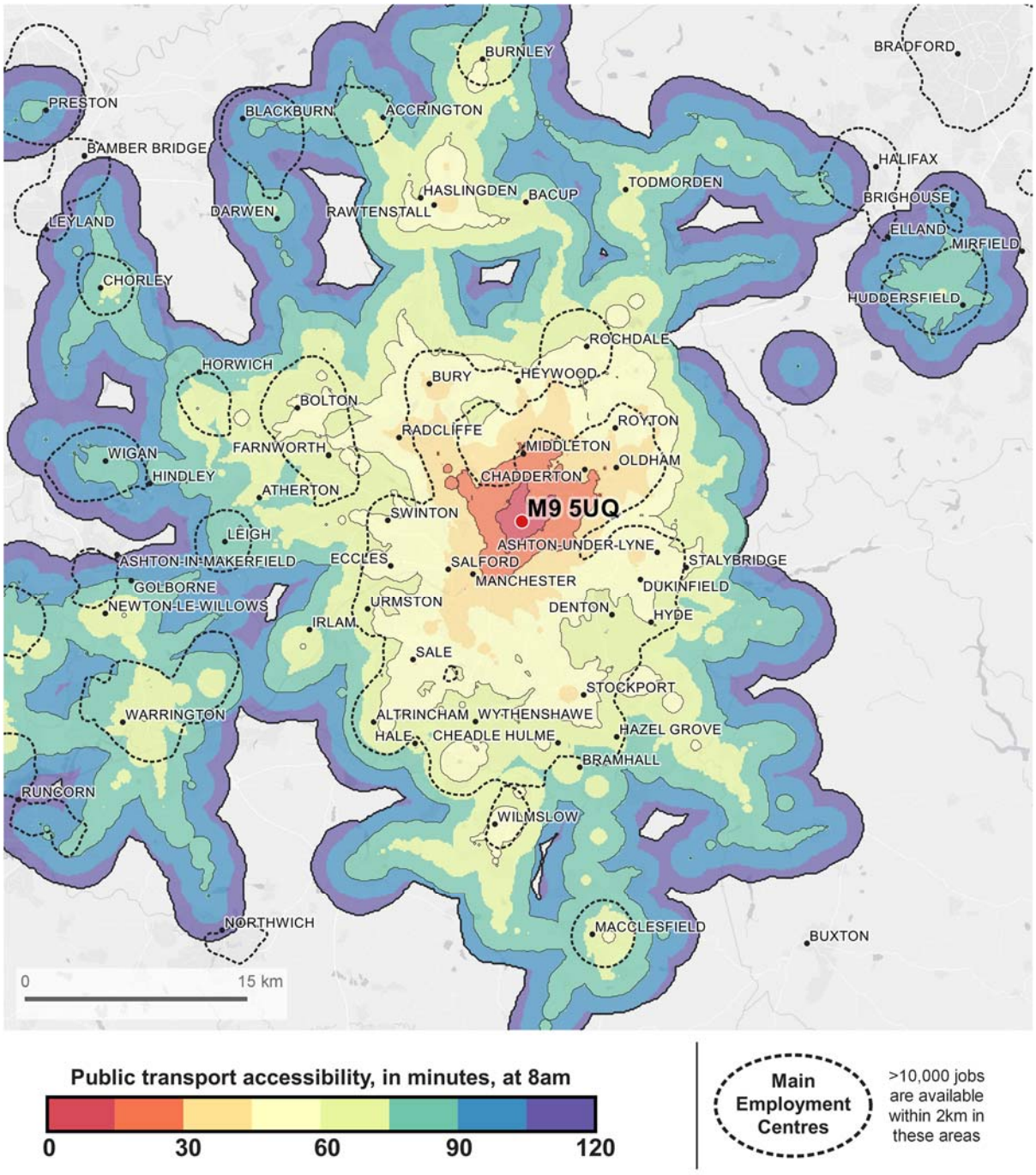


Figure 12: Travel time map for Hattersley (SK14 3NW)

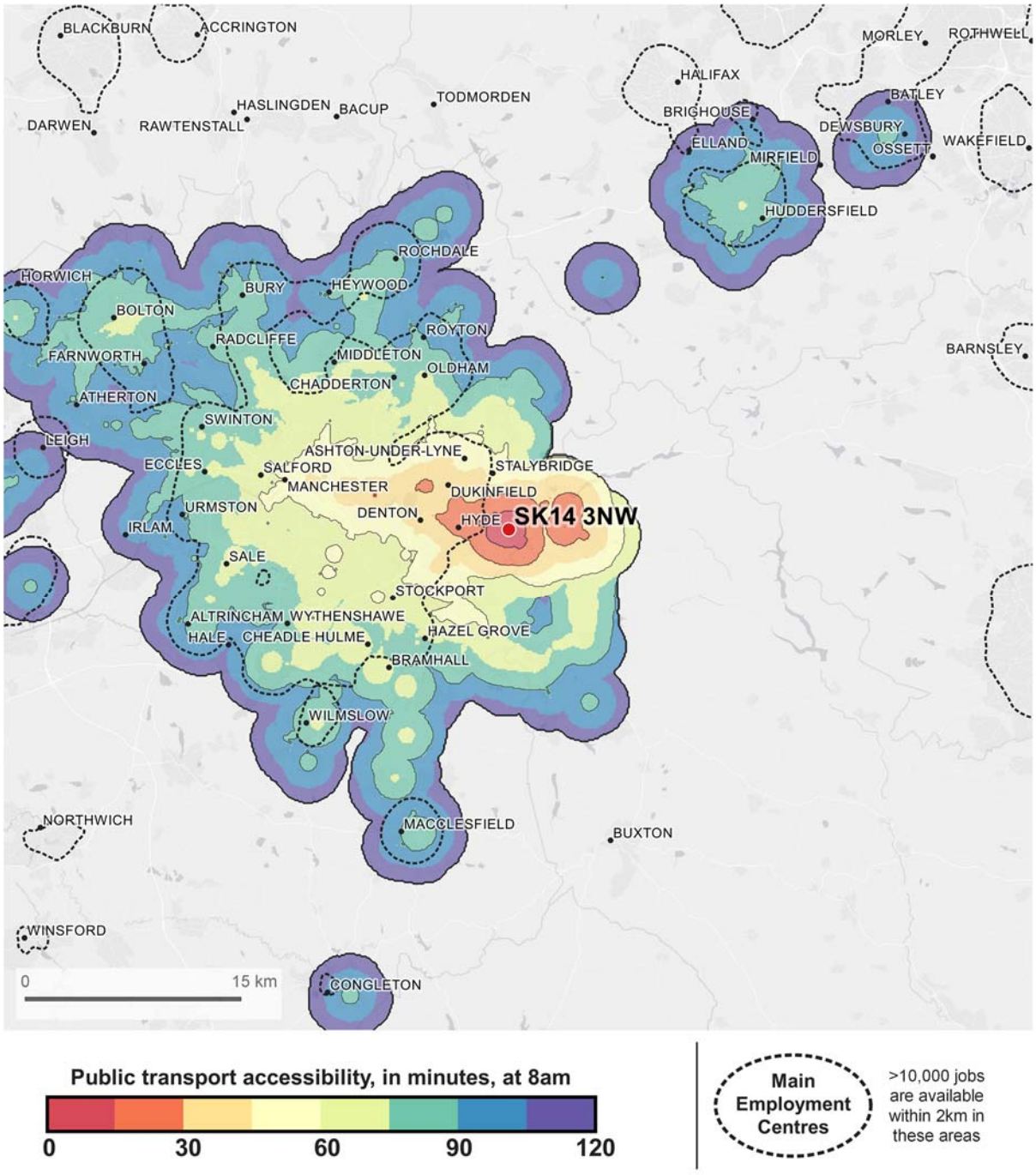


Figure 13: Travel time map for Dewsbury Moor (WF13 3NT)

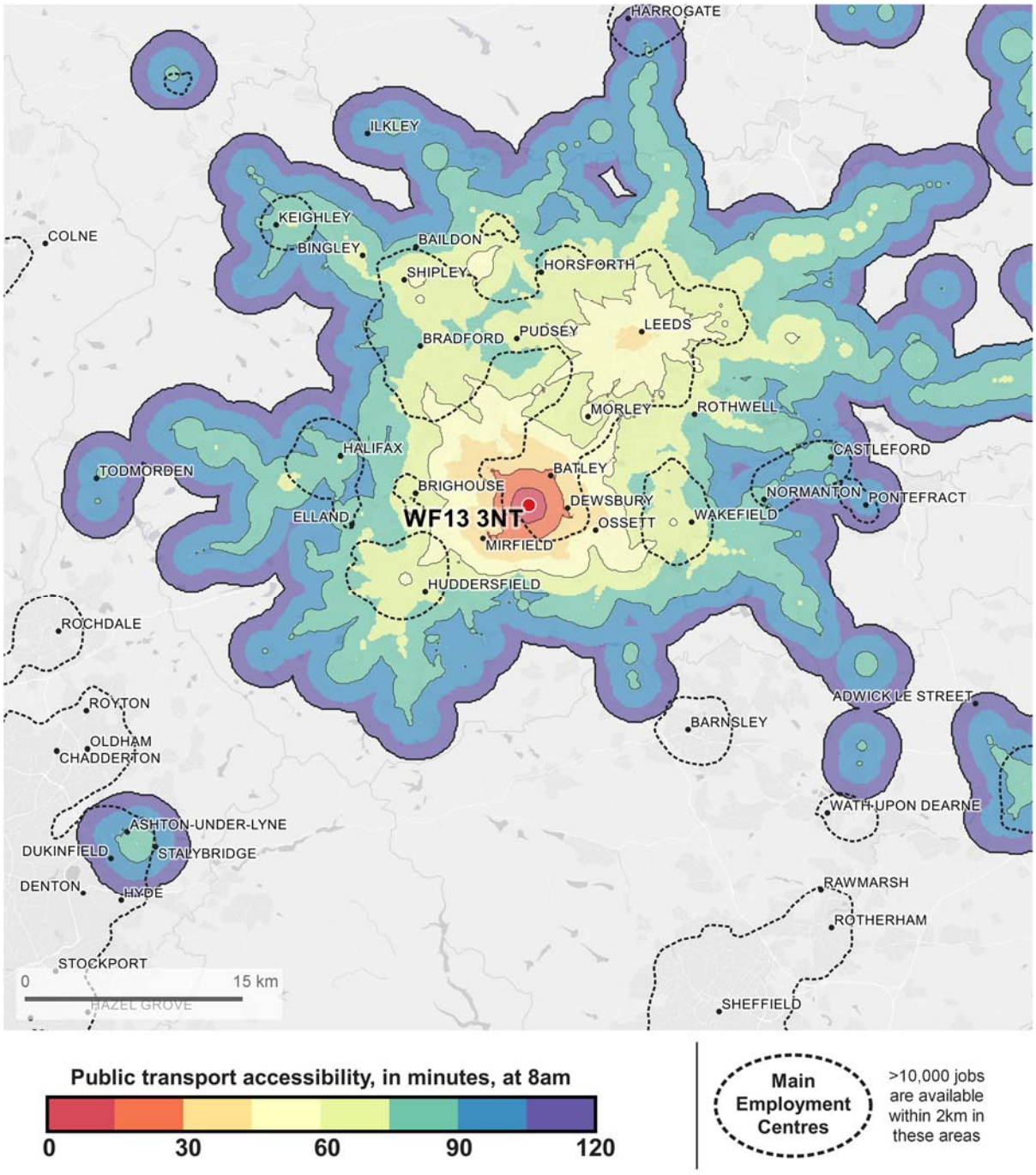
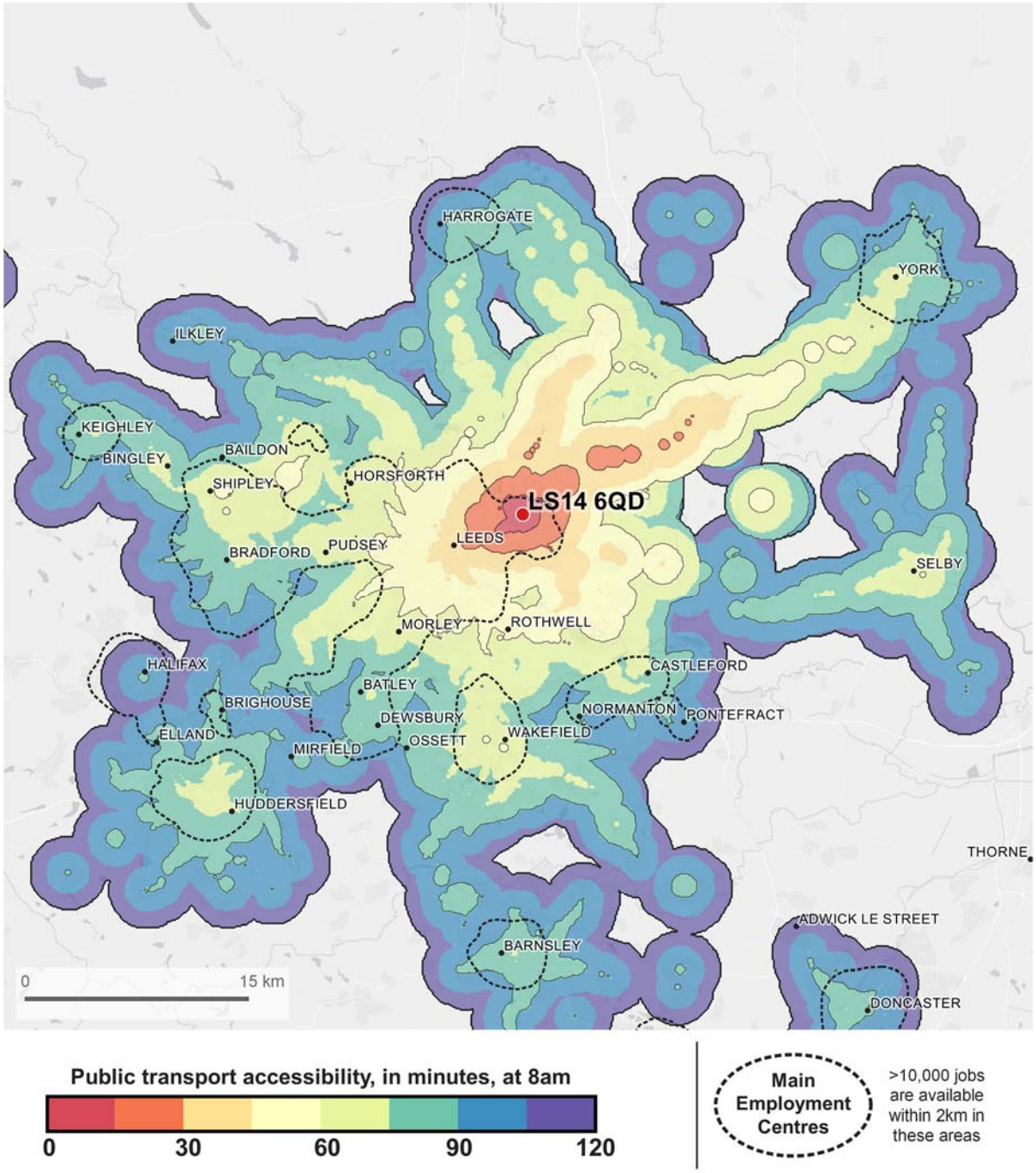


Figure 14: Travel time map for Seacroft (LS14 6QD)



Conclusions

The overview of the travel time maps confirms that the **most of the case study areas we looked at are often functionally disconnected from their wider city regions**. In other words, residents in case study neighbourhoods are living in city regions where there are clusters of job opportunities, but these are not readily accessible in terms of journey times by public transport.

This is even true to some degree of neighbourhoods closer to city centres. Spatial proximity is clearly no guarantee of securing work, but it might be assumed that it provides an advantage in terms of travel times to potential employment opportunities. Our analysis shows, however, that it **does not necessarily allow for significantly shorter commutes**. Seacroft, Castlemilk and Harpurhey are all within city boundaries and no more than around 5 miles away from city centres, but residents can expect a minimum of 30 minute commutes into the city, without allowing for delays or onward journeys.

Indeed, later analysis of findings from resident interviews shows (Chapter 4) that these areas sometimes function as **'cut off' commuter zones** where proximity to major city centres does not necessarily confer additional benefits in terms of access to employment. This happens where jobs in the city centre are not always appropriate given skills and experience, but poor transport links cut residents off from more peripheral centres of employment.

3 Experiences of work and job search

This chapter is the first of two that presents findings from interviews with 79 residents across the six case study areas. It focuses on experiences of, and expectations around, employment as the basis for exploring the feasibility of commuting in Chapter 4. It begins by outlining the broad characteristics of all 79 interviewees, before reflecting on the nature of paid work they have undertaken in the past. The chapter then examines current aspirations and expectations around returning to paid employment. It looks at the type of work sought and the distances individuals are willing to commute, and considers how this is shaped by contextual factors – conditions in local labour markets and the availability of institutional support – as well as individual- and household-level circumstances.

Box 2: Key messages

- Most interviewees had experience of low-paid, low-skilled work and continue to look for this kind of employment. Concerns about the quality and quantity of work lead to a pervasive sense of labour market insecurity that, as Chapter 4 shows, shapes perceptions of viable commutes to work.
- Nearly all residents identified issues with the location of appropriate work relative to where they live, but the degree of 'spatial mismatch' is not simply a reflection of distance from locations where there are most jobs. Instead, the level of employment opportunity sometimes relates to the relationship between place of residence and the number (rather than just size) of employment locations, and how well these are connected by existing transport links.
- There is little evidence of 'limited spatial horizons' in terms of a reluctance to travel far, per se. Most interviewees express a willingness to commute an hour or more to work, although caring commitments or a preference to work in familiar areas may lead individuals to consider areas that are closer to home. Past commuting experiences show that a stated willingness to travel is often borne out by previous practice.
- Residents in more peripheral neighbourhoods do not necessarily benefit from the decentralisation of lower-skilled jobs away from city centres, as many areas of employment growth are relatively inaccessible. This implies that a more even distribution of job growth across city regions does not guarantee that it is inclusive.

The characteristics of interviewees

In-depth interviews were conducted with 79 residents living in the six case study areas. Table 4 shows the number of interviews conducted in each neighbourhood.

Table 4: Interview sample by neighbourhood

Area	Number of people
Harpurhey	13
Hattersley	13
Port Glasgow	15
Castlemilk	10
Dewsbury Moor	17
Seacroft	11
Total	**79**

Two-thirds of interviews were undertaken with tenants of social housing providers (37% housing association and 20% local authority). This reflects the dominance of social housing in those areas, as well as the emphasis of the research on the role that housing providers as anchor organisations can play in

improving connectivity (Table 5). Efforts were also made to include smaller samples of residents from different tenures including home-ownership, supported housing and private renting.

Table 5: Housing tenure of interview sample

Tenure	Number of people	Percentage
Housing association	29	37
Local authority	16	20
Owner-occupier	11	14
Supported	6	8
Private rented sector	4	5
Living with parents	4	5
Sleeping at friends'	2	3
Unknown	7	9
Total	**79**	**100**

Residents had a range of current employment statuses and situations. The vast majority were not in paid work and were actively seeking employment, while a small number (n = 5) were in low-paid and insecure work, and looking for more work. A very small proportion (n = 2) was not actively seeking work at the point of interview, due to addiction and/or physical and mental health issues.

Efforts were made to ensure that a mix of gender and age groups were represented in the sample. Just over half of interviewees were male (57%), while 43% were female. People in all age groups were represented, as shown in Table 6.

Table 6: Age profile of interview sample

Age	Number of people	Percentage
Under 25	7	9
25–34	17	22
35–49	25	32
50 or over	30	38
Total	79	

Past experiences of employment

Nearly all residents interviewed had undertaken paid work in the past, although some had not worked for several years due, largely, to mental or physical health issues, or caring commitments for dependent children (including some with health conditions or disabilities) or family members. With few exceptions, **residents had tended to work in low-skilled, low-paid occupations** including: administration, labouring, hospitality, retail, social care, hairdressing and beauty, storage/warehousing, transport/distribution, food production, cleaning and security. Most had no or low levels of formal or professional qualifications, with only 11 interviewees possessing Level 3 (A-Level/Highers or equivalent) qualifications or above.

While some interviewees had past experience of jobs lasting a decade or more, a number had **work histories that included 'atypical' work** such as part-time, temporary, 'flexi' or 'zero hours' employment. In some cases this was a voluntary decision where, for example, part-time work enabled them to fit employment around caring commitments such as looking after younger children. For others, however, this reflected the insecurities of the labour market facing lower-skilled workers, which often led to cycling between short-term jobs and spells of unemployment:

> "I've done labouring and warehouse work, manual labour most of my life ... work with bricklayers, joiners, different trades. Warehouses, packing ... I'd prefer to ... have a decent wage. I've never had secure employment. The longest I've worked is about three months max. There have been big stretches of unemployment, like years – two years."
> Seacroft, male, aged 32

Such experiences were not uniform, however, as a very small number of residents had experience of higher-skilled and better-remunerated work that included working for local authorities and managing retail stores. A few older male interviewees also had prior experience of long-term, well-paid manual work with major employers, such as those who had worked in the shipbuilding industry in Port Glasgow. However it was evident that, regardless of past work histories, **nearly all interviewees now faced the prospect of looking for the type of low-waged, low-skilled and often 'atypical' work that dominated local economies,** as outlined below.

Interviewees were also asked about commutes to past workplaces, to ascertain the time and distance they had travelled to jobs. Some had worked closer to home, such as most of the residents in Castlemilk who described working near the scheme itself (including one resident able to walk to his former workplace), or in various locations in or near to the city centre. Equally, it was striking that that a number of residents across case study areas had often made quite long (in time or distance) and, sometimes, convoluted journeys to work, as shown by the selected examples in Box 3.

Box 3: Longer commutes to work

Seacroft: one resident with a history of manual employment in labouring and warehousing described how one job had involved a two-hour journey each way. He had to travel by bus first, to a pick-up point where he was collected by a workmate in his car. By comparison, journeys to other sites under 90 minutes were seen as "short":

> "Heckmondwike was nearly two hours depending on whether I got a lift from a friend who I was working with, but I still needed to get the bus to Pudsey to get a lift. It was an 8am start, no, I lie, it was 8.30, so I'd get up at 5[am] for a shower and scram and a smoke before I'd go. The bus was pretty decent, every 10 minutes. Other journeys to work were short. Anything between an hour to an hour and a half on average."
> Male, aged 32

Port Glasgow: one Port Glasgow resident described having to give up a job as a security guard on an industrial estate on the outskirts of Paisley because of the interaction of both transport issues and job insecurity. The commute involved catching a bus from his house to Port Glasgow railway station to get the train to Paisley, followed by a bus ride to his place of work for a 12-hour shift between 5pm and 5am. The journey usually took over an hour each way but delays could significantly lengthen his commute and long working day:

> "I was leaving the house at half three [in the afternoon] and I wasn't getting home the next morning till eight [in the morning], then get four hours sleep and get back up and go back again."
> Male, aged 61

Hattersley: one Hattersley resident (male, aged 36) used to catch three buses – taking over an hour and a half – to reach a site where he worked as security worker.

It is important to bear in mind that the average commute across all modes in Britain is around 30 minutes long (Department for Transport, 2017c), with longer commutes more common among those in higher-level – and therefore better-paid occupations (Hincks et al, 2018). These examples are, therefore, **significantly in excess of typical commuting times for lower-skilled work.** Far from exhibiting narrow spatial horizons, these journeys illustrate the relatively long time or distance that some interviewees were willing to travel for often low-paid and insecure work.

Looking for work

Most residents were currently looking for work although others, particularly those with health problems, were more distanced from the labour market and only beginning to contemplate a return to employment after years out of work. The majority (n = 70) were currently claiming out-of-work benefits including Jobseekers Allowance (JSA), Employment and Support Allowance (ESA) or Universal Credit, and many reported severe financial hardship on current household incomes.

Interviewees were asked about the kind of paid work they were looking for. Most continued to look for jobs in sectors and occupations in which they had already worked or felt were most likely to provide employment, given limited levels of skills, qualifications or experience. This typically included work in warehousing, social care, retail, administration, security and cleaning, or in, some cases, simply "anything". They were also asked about how far, and to what locations, they would be willing to travel to work. This is discussed in the next section, before looking at perceived barriers to work.

Viable commutes

As part of discussions about looking for work, we showed residents travel time maps for both a 5am and 8am start, to generate discussion about how far they would be willing to travel in terms of time and distance, including the feasibility of reaching key centres of employment. Jobcentre Plus' expectation that jobseekers consider employment up to 90 minutes' travelling each way was also discussed.

A **small number of interviews expressed a desire to work locally**. One resident living in Harpurhey spoke, for example, of a desire for a short commute into Manchester city centre, leading them to turn down an opportunity to apply for a job further afield because of the distance and perceived discomfort of commuting by tram:

> "One bus into town and a 5, 10 minute journey, that's me ... There was one job offer I got in Sale ... it's a good journey. But what put me off was the thought I've got to get a tram, you hear the same nightmare stories of getting crushed up. I want something in town, local, that is it."
> Harpurhey, female, aged 40

In some cases, the **preference to look for work locally was shaped by the need to fit employment around commitments as primary carers** for young children or dependent adults, particularly among female interviewees:

> "I can't go far out cos of her being in nursery and the amount of money it would cost and the travelling time, I'm just not able to do it, but if I got a local job, I've been looking at cleaning or retail or just something that would fit in with the hours that she'd be at nursery and stuff."
> Dewsbury Moor, female, aged 27

These difficulties can be compounded by the location of childcare relative to place of residence and work. One Port Glasgow stakeholder noted, for instance, that residents living on top of the hills away from the riverfront often had to travel to different parts of town where most childminders lived before making any onward journeys to work. Past projects had sought to increase childminding provision in the upper part of Port Glasgow, to reduce additional time and cost barriers, although funding was no longer available.

However, **most interviewees stated a willingness to consider longer commutes** – at least an hour and in some cases up to two hours, as the following sample of quotes illustrates:

> "I'm not good in terms of miles but I'd be willing to travel an hour up to an hour and a half. I'd prefer not to take three hours out of my day, but I'd take it."
> Seacroft, male, aged 21

> "I think that is reasonable at the moment [referring to the DWP's expectation of 90 minutes travelling]."
> Dewsbury Moor, male, aged 59

> "[I am] looking for anything, I've applied for all sorts, postman, warehouse, even taken CV down to local firms. I've been around a lot of local firms to see if they have got any work, anything around 15 miles. I'm willing to do anything, not just stuck in office work ... Bradford, Morley, Leeds, Wakefield, Bingley – I've looked all over the place, all the major areas – Halifax and places like that."
> Dewsbury Moor, male, aged 53

As the final quote attests, propensity to commute was shaped in part by the perception that it was **necessary to look further afield** to increase the prospects of finding work. Indeed, some residents reported increasing the distance or time they would consider commuting because of difficulties in finding work in their immediate area. It is also important to note, however, that ability to travel was contingent on many factors, including the trade-off of transport costs with wages (see Chapter 4) Furthermore, a willingness to commute long distances did not mean that Jobcentre Plus' '90 minute rule' was considered reasonable, as explained below.

This apparent willingness to make relatively long journeys to work among many interviewees sometimes **contrasted with the view of local stakeholders**. Some felt residents were reluctant to commute long distances or travel to work in city centres because of 'narrow spatial horizons' and fears about working in the "big city" (stakeholder, Dewsbury Moor), even where good transport links existed.

In terms of the validity of this claim, it was certainly true that many interviewees had **highly spatially circumscribed daily routines** in relation to how far they travelled for job search, as well to access amenities such as shops and GP surgeries, and to engage in social or leisure activities. However, this was often explained in terms of the inability to afford transport costs rather than a reluctance to leave the 'comfort' of the immediate neighbourhood: "I don't go far at all [beyond Hattersley or Hyde]. It's so expensive to travel these days though" (Hattersley, female, aged 37). Health conditions and localised social networks of family and friends were also cited as factors that limited travel outside the immediate area.

Discussion around commuting options also revealed preferences for certain destinations over others, but this was often **shaped by knowledge and perceptions of areas rather than reluctance to spend time travelling, per se**. In some cases, interviewees (mainly older and more experienced) said that they were happy to consider previously unknown places for work: "That [job] at the warehouse that's Paisley, that's a train up and [then] a bus if I get the job ... cos I don't know where this place is, I'll probably get a taxi from the train station [the first time I go]" (Port Glasgow, male, aged 44).

In other cases, **familiarity seemed important in terms of having the confidence to travel to work in particular locations.** This was partly about knowledge of the area itself and how to get around on foot, but also about how to navigate the transport system to get there. One Port Glasgow interviewee described, for example, how she would prefer to work in Paisley over Glasgow because of her familiarity with the public transport system acquired through visits to family:

> "If I had to I would travel to Glasgow but my preferred [option], cos I know the train line so well, I know the buses so well, it would probably be Paisley cos when you get to Paisley you know where everything ... whereas in Glasgow it's a nightmare ... there's so many different ways to go and different buses ... I stayed with [my grandparent] every weekend and we went to Paisley so it became very familiar and I now know my way around Paisley centre."
> Port Glasgow, female, aged 27

In some instances, preferred locations in terms of potential areas to look for work were actually further away in time or distance than unfamiliar areas that were dismissed.

Barriers to finding work

Interviewees were asked about factors that might make it harder to find work, which revealed the following key themes as discussed below: the nature and location of work, individual and household circumstances, and institutional support. Specific transport-related barriers are discussed in Chapter 4.

The nature of work

The **nature of work available in local economies both in terms of quality and quantity was seen to present a number of barriers** to securing employment. Many vacancies were deemed insecure, with some interviewees seeking to hold out for work that avoided the instability of cycling on and off benefits. One Dewsbury Moor resident, for example, explained how temporary seasonal work was not feasible because:

> "I'd get my benefits cut back cos I'm getting a wage and then after Christmas they'll start letting you go and then I've got to restart my claim with the Jobcentre ... there is quite a few places around these areas that are taking temporary staff, I just can't risk it."
> Dewsbury Moor, female, aged 27

One prominent finding across all case study areas was that **competition for jobs was intense, despite the poor quality of much of the available work**. A stakeholder providing employment support in Harpurhey described, for example, how cleaning jobs at the nearby hospital could routinely attract around 500 applications. For many interviewees, this translated into multiple applications but demoralisingly few responses from employers, let alone job interviews:

> "The last five years basically? ... I have been applying for everything, and anything. I've been going on courses to help you with your CV, but I am just unsuccessful, looking on the internet, going in to shops, handing in CVs. Nothing has been coming back."
> Port Glasgow, female, aged 38

The location of work

While individuals often expressed a willingness to undertake lengthy commutes (see above), the **location of potential employment remained a barrier in some circumstances**. As might be expected, there were distinct differences across case study areas. Those living in Harpurhey – the case study area closest to a major urban city (Manchester) – saw many of the district centres in the ten Greater Manchester boroughs as accessible. One resident suggested, for instance, that it would be feasible to travel into Manchester city centre itself as well as the district centres of Oldham, Bury, Ashton and Stockport, plus other locations that were significant sources of employment, such as Salford Quays and Trafford Park (Harpurhey, male, aged 53). The more polycentric nature of the city region, with employment located both in the nearby city centre as well as the surrounding district centres in each of the boroughs, appeared to increase employment options.

Other case study areas were less well situated in terms of access to areas where jobs were available, and appeared to experience some degree of 'spatial mismatch', although this was **not always directly related to proximity to major employment centres**. This was particularly evident in Castlemilk where regular, if not always reliable, bus services provided access to Glasgow city centre, but did not offer direct or quick connections to other key employment locations including industrial sites on the outskirts of East Kilbride and Cambuslang, as well as the Braehead or Silverburn retail parks located outside central Glasgow. The dispersed nature of employment outside of Glasgow city centre, much of it on the periphery of district centres, made commuting by unreliable public transport problematic, as discussed further in Chapter 4.

It was noticeable, by contrast, that residents in Port Glasgow described more employment options, despite being considerably further away from Glasgow city centre than Castlemilk (20 miles compared with 4 miles). The residents interviewed suggested it might be possible to find work, and undertake feasible commutes, into Glasgow and Paisley, alongside more local sites of employment including Greenock and Port Glasgow itself. Proximity to a number of different employment locations connected by two modes of transport (bus and rail) appeared to offer more choice than for residents in Castlemilk (bus only), although there were still issues with some residents having to travel down off the hills of upper Port Glasgow to access connecting rail services. One implication is that **the accessibility of employment is not always a function of proximity to the core of growing city regions where job density is highest**. It depends on the number and location of employment centres relative to residential location, and the extent to which they are connected by transport networks.

A recurring theme across a number of case studies was the **relative inaccessibility of newer employment locations such as retail, commercial or industrial parks** that are located outside of city or

town centres. Stakeholders in Leeds observed, for example, that the Aire Valley Enterprise Zone (manufacturing and engineering), Thorp Arch Trading Estate (industrial and retail), and White Rose and Thorpe Park developments (retail and leisure) were all relatively inaccessible by public transport. The quotes below also highlight three different examples of difficulties in commuting to industrial or commercial parks that provide work in warehousing, distribution and light manufacturing:

> "I was talking to my advisor, there's a place called Sherburn-in-Elmet and they have tons of work, big industrial estate but there's no bus service, it's about 13 miles away. I do not understand why they build a big estate where there's no transport, that's like tough, if you haven't got a car you can't have a job."
> Seacroft, male, aged 49

> "Heywood, that is one of your main places where you have a lot of factories so that is quite a good opportunity, but you would need a better link from Manchester to Heywood for people to grab that opportunity."
> Harpurhey, male, aged 32

> "I've looked at jobs in Paisley, but you find most of these places are on industrial estates on the outskirts and you can get to Paisley for a certain time but to get from Paisley town centre to these places, no."
> Port Glasgow, male, aged 61

This is a cause for concern. Our analysis in Chapter 2 shows that growth in low-skilled work tends to occur outside of the major cities, but our in-depth interviews suggest much of it is in relatively inaccessible locations.

Evidently, **the extent to which location presents a barrier to work also depends on the extent to which accessible employment matches the skills, experience and aspirations of jobseekers**. This is well illustrated in the case of Seacroft, which is connected by a direct and regular, albeit sometimes unreliable, bus service into Leeds city centre. This offers employment opportunities for those looking for lower-skilled work in particular sectors such as retail and hospitality, but little for those seeking manual work in other sectors such as manufacturing and distribution. As one resident observed, the city centre is "as good as connected as you could want" (Seacroft, male, aged 38) in terms of buses, but the warehouse supervisor roles he sought tend to be in harder-to-reach locations well outside the city centre, such as Stourton or Thorpe Arch. This may have implications for the accessibility of work by gender, given the tendency among some male interviewees to reject customer-facing service roles likely to dominate lower-skilled work in the city centre.

A final and important point to note is that location is not simply an issue for potential employees, as there was evidence that **employers' willingness to recruit is sometimes premised on perceptions of whether potential employees face a reasonable and reliable commute.** Two interviewees described being turned down for jobs that Jobcentre Plus required them to apply for on the grounds of their journey to work being too long, increasing the likeliness of lateness. As one explained:

> "[Jobcentre Plus] said you need to apply outwith the local area, and I said but it is the travelling, they said there is a job outside Glasgow and I had to apply for it otherwise they would sanction me ... I never got an interview but I got a phone call from a gentleman and he said he would love to offer me a job but I was too far away."
> Port Glasgow, male, aged 59

Individual and household factors

The ability of individuals to secure work in local labour markets was also shaped by a number of factors at the individual and household level. Many of the respondents in our research outlined ways in which their circumstances served to constrain their ability to find employment.

A **lack of skills, qualifications and experience** was a key barrier reported by several respondents. One Seacroft resident noted, for example, that having learnt all his skills as a joiner informally, he lacked the formal qualifications employers demanded: "I've nothing to prove that I am capable of doing that, cos now they ask for things I don't even understand what they are" (Seacroft, male, aged 49). He also felt he

lacked relevant experience which, as with some other residents, was compounded by **a gap on his CV** as a result of time taken out to look after dependents: "Work-wise last five years it's been rare cos my dad had a stroke so I looked after my dad. I think that's why it's a problem for me to get a job cos my work record isn't that solid." For a small number of interviewees who did not speak English as a first language, this served as an additional barrier alongside a lack of skills or qualifications that narrowed employment options: "I can do anything, but my English and then I do not have qualification, that is the problem, so just cleaning" (Harpurhey, female, aged 35).

Some interviewees reported **discrimination** as a barrier to work. Age was seen to count against older workers, with one claiming that: "The older you get the harder it gets. They're looking for young people. Age counts against you if you've not worked in the past" (Castlemilk, female, aged 48). Perceived 'postcode discrimination' was also cited in Harpurhey and Castlemilk as a barrier where, for example: "as soon as you mention Castlemilk [in a job interview] they just look at you as if you're dross or something" (Castlemilk, male, aged 58).

Physical and mental health issues were also reported by several respondents as limiting their ability to find work, especially given the physically demanding nature of some manual work. For a small number of interviewees, these issues were associated with previous or current substance misuse. Health conditions or disabilities did not simply act as a direct barrier to work by limiting the tasks individuals felt able to undertake. As Chapter 4 shows, it also defines their ability to use public transport and commuting options.

At the broader household level, **caring responsibilities** for dependent adults or children was one of the most commonly cited factors shaping capacity to secure and sustain work. This had a number of different dimensions, including its impact on the hours individuals could work, the distance and time they could commute, the nursery costs they could afford relative to wages, and the challenge of fitting caring commitments around the demands of work. The impact of both health issues and caring commitments on capacity to commute is explored further in Chapter 4.

Institutional support

The ability of individuals to navigate the process of looking for work depends, in part, on the support they receive from organisations delivering employment services. Most of the interviewees were engaged with at least one such agency, which included Jobcentre Plus as well as a range of employment support providers including (the then) Work Programme delivery partners, local voluntary and community sector groups, and other forms of council- or housing provider-run employability provision. We reflect on general experiences here, including expectations around commuting. Chapter 4 considers in more depth the extent to which these organisations helped individuals navigate the transport system.

There were **very mixed views on the value of support provided.** Some interviewees had a positive view of their Jobcentre Plus work coaches, who they regarded as helpful and supportive. However, others were more critical of the support on offer. This included reports of **being pressured to apply for work** regardless of the suitability of the job or the feasibility of long commutes expected under the '90 minute rule': "As long as their system says you can get there within 90 minutes, you should apply for the job" (Dewsbury Moor, male, aged 30). While the evidence presented above shows many individuals were prepared to undertake relatively long commutes, they **resented this being made a requirement of claiming out-of-work benefits.** This was because of the way this blunt rule failed to recognise that some jobs with poor pay or conditions did not warrant lengthy journeys, or that public transport was either unreliable or too expensive:

> "I'd be willing to travel any distance, it's more time ... [The JCP expectation) It's just silly, you've got three hours travel time on top of a job, so you do a 12 hour shift, 15 hour day, where are you supposed to sleep in that?"
> Harpurhey, female, aged 35

There was evidence, however, of some flexibility where respondents had travel time expectations reduced to reflect caring responsibilities. However, this did not seem to be applied consistently with one young parent describing how:

> "I have been upset quite a few times, they just put you down ... plus they want you to travel long hours, they just want to force you into a job that maybe you do not want to do ... they tell you to travel 90 minutes which would take you to Glasgow so yeah you do feel pressure to travel far."
> Port Glasgow, female, aged 20

This institutional inconsistency also seemed to apply to the extent to which Jobcentre Plus provided help with understanding travel choices, as outlined in the following chapter

Conclusions

The purpose of this section is to show how employment features in the experiences, perceptions and expectations of low-income households. As the lives portrayed here show, **there is widespread experience of low-paid or insecure work and almost universal – and increasing – concern about the quality and quantity of work available in local labour markets**. This is a key finding in relation to the discussion of transport and commuting options in the chapter that follows. As it will show, decisions about the feasibility of travelling to places of work are shaped in relation to these expectations that any employment is likely to be poorly paid and, potentially, insecure.

Against this backdrop of labour market uncertainty, a second, and perhaps surprising finding is that many **interviewees express a willingness to undertake relatively lengthy journeys to work**, either in terms of time or distance, despite the quality of work on offer. What is more, past patterns of commuting show experience of travelling longer distances to work. In other words, a willingness to travel is not simply a stated aspiration, but often borne out by previous practice. This challenges some stakeholders' conceptions of 'limited spatial horizons'.

Another significant finding is that there is **a degree of spatial mismatch** in terms of some areas being more cut off spatially from job opportunities, but this is not a simple function of proximity to the places (namely city centres) where there are most jobs. One important implication is that **policy-makers and practitioners should be cautious about assuming the benefits of proximity to large cities**, especially if there is a skills mismatch between vacancies in the city centre and jobseekers' experience, skills and qualifications.

Finally, the findings suggest that the **growth of some forms of low-skilled employment in increasingly peripheral locations can create locational barriers to work**. This is significant, as it might be assumed that greater decentralisation of jobs away from major towns and cities could increase employment opportunities for residents in more peripheral neighbourhoods. It has implications for inclusive growth strategies, which are often based on achieving a more even distribution of jobs across city regional economies, but without detailed analysis of the accessibility of new or growing employment locations.

4 Transport and the feasibility of commuting

This second findings chapter looks specifically at how the transport networks enable or constrain individuals to secure employment in this context. It looks at the feasibility of commuting in relation to the transport system itself, and how this interacts with other contextual factors and the situations of those looking for work.

Box 4: Key findings

- Transport can present major barriers to work by constraining perceptions of viable commutes, especially due to issues around the availability, reliability and affordability of public transport.
- Perceptions of poor bus reliability can lead to reluctance to undertake commutes that involve changing services. This renders some areas on the periphery of major cities 'cut off' commuter zones, despite their proximity to significant concentrations of employment. Jobs in the city centre are not always appropriate given skills and experience, while those in more peripheral locations that require interchange are not always seen to present feasible commutes.
- The ability to drive or access to private transport can significantly increase commuting options, particularly to more peripheral locations, but financial constraints rule out vehicle ownership for many.
- Transport and commuting are intimately related to the nature of work. Low-waged work constrains the amount households can spend on travel, while the benefits of 'atypical' work may be considered insufficient to warrant lengthy commutes. Household circumstances, particularly caring commitments, also interact with transport infrastructure and the nature of work to limit viable commutes.
- The complexity of fare structures and ticketing options, as well as lack of access to comprehensive travel information, limits people's understanding or perceptions of viable commuting options in some cases.
- Individuals may lack confidence in using the transport system where it is considered uncomfortable, unsafe or unfamiliar, particularly if this intersects with mental and physical health conditions.
- The complex nature of transport-related barriers to work requires solutions across multiple domains, although transport policy alone cannot solve problems that originate in the labour market.

How transport shapes the feasibility of commuting

This chapter looks at how transport shapes the ability of residents living in low-income neighbourhoods to secure and sustain employment. Drawing on interviews with residents across the six case study areas, it identifies four key themes that explain the relationship between transport and employment in terms of the feasibility of commuting:

- **accessibility**: the availability and reliability of appropriate transport to access employment, given the location of jobs and place of residence
- **affordability:** transport costs and their proportion of potential earnings as well as other existing sources of income
- **simplicity:** the availability, comprehensiveness and clarity of travel information, and the extent to which travel options can be understood
- **confidence:** the perceived safety, comfort and ease of use of transport, and the capacity of individuals to use transport given individual circumstances (eg health conditions).

Throughout, these themes are discussed in relation to the transport system and the way it interacts with the nature and location of work in labour markets, the institutional support available to find work, and individual and household circumstances.

Accessibility

The extent to which transport is accessible in relation to employment depends on whether it is available in the first place and, if it is, whether it is sufficiently reliable to make the journey to work. Both are considered in turn below.

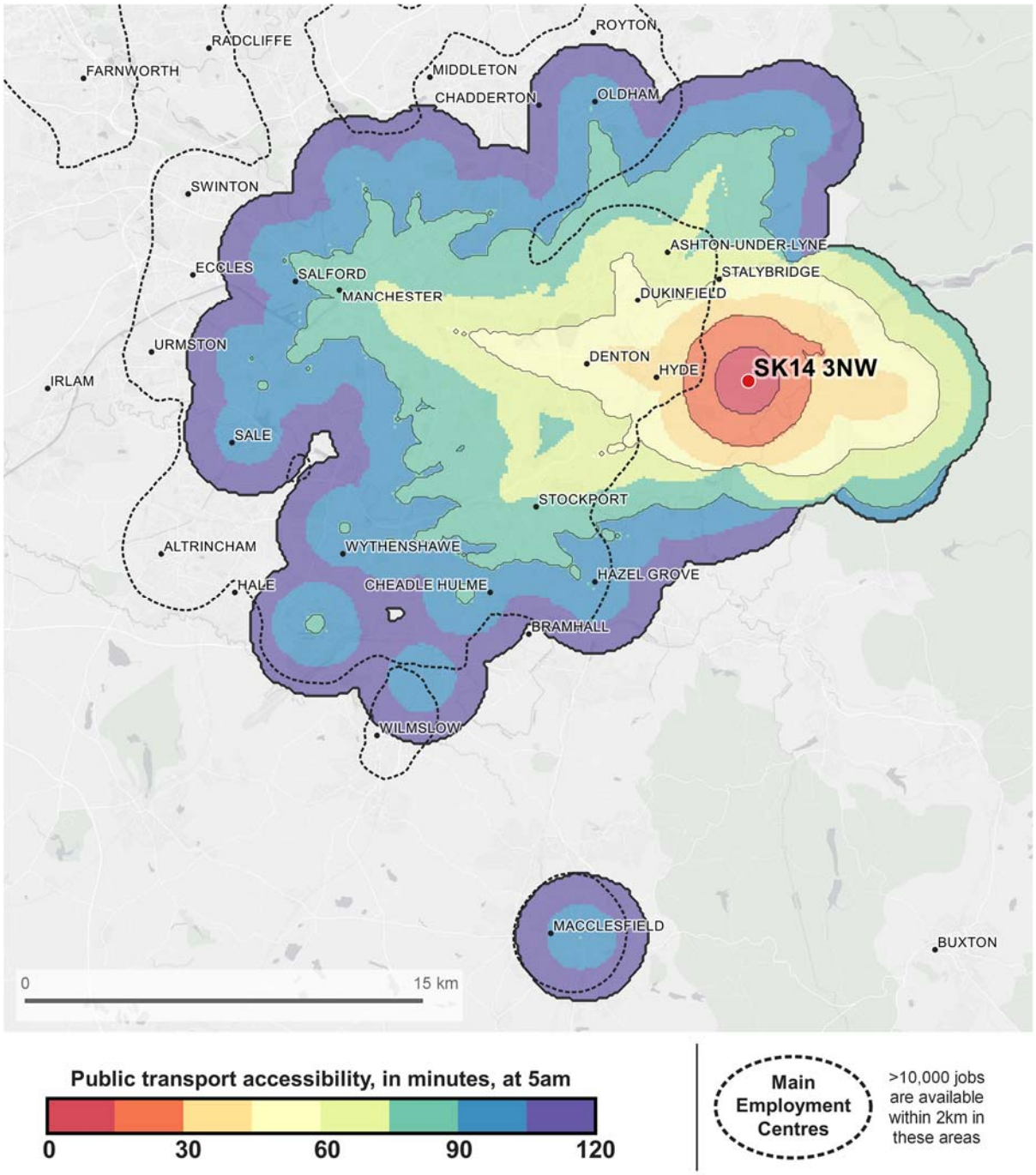
Availability

Issues around availability emerged a number of times across all case study areas, particularly in terms of residents and stakeholders observing the **lack of public transport to make very early or late shifts**. This was a recurrent difficulty in sectors and occupations such as distribution, warehousing, hospitality, retail and cleaning. One Hattersley interviewee spoke, for example, of how it would be impossible to make an early morning (6am) shift at the airport, given that public transport did not start running until that time (Hattersley, male, aged 20). This point is illustrated by looking at the travel time map for Hattersley (Figure 15), based on leaving at 5am (ie three hours earlier than the maps shown in Chapter 2). It shows that most of the areas where jobs are concentrated within the dotted line are well over an hour's travel time, including key locations such Manchester, Salford, Stockport and Manchester Airport (just south of Wythenshawe). This rules out a 6am shift using public transport in all these areas.

Returning home after late shifts can also be an issue given bus timetables, even for residents living closer to city centres:

> "If you're doing bars and restaurants and stuff then getting home's not going to be easy. And same with cleaning jobs, early morning there's no transport, you simply cannot get there."
>
> Harpurhey, local stakeholder

Figure 15: Travel time map for Hattersley (SK14 3NW), 5am start



Interviewees faced with the challenge of a lack of available transport were sometimes able to find ad hoc, though not always straightforward, solutions, such as lift sharing. Some interviewees in Port Glasgow described how a major employee had a noticeboard where staff could request or offer lifts. Another solution was to arrive early for night shifts by catching the last scheduled bus. At the other end of the day, one stakeholder delivering employment support reported a client walking over 7 miles from Harpurhey to the Heywood Distribution Park on the outskirts of Rochdale, because of the lack of buses to make early-morning shifts.

Issues around the availability of public transport led some to reflect that **the only feasible commuting option to such places was to have access to a car**. However, despite many reflecting it would increase employment opportunities, few interviewees owned private transport, largely because of the prohibitive costs of learning to drive or running a vehicle. Indeed, some had been forced by current financial circumstances to give up cars which, as one former security guard who had previously worked across

Glasgow and neighbouring districts reflected, significantly narrowed employment options in less accessible locations:

> "There used to be places I was going you would have never got to by public transport. [But now] for me to go [to] a particular job that was outside the city ... you're talking possibly two or three buses minimum and as far as security work, seven o'clock start [it's not possible]."
> Port Glasgow, male, aged 62

A further issue related to private transport was the **requirement of some jobs for employees to have driving licences and, in certain cases, even own their own car**. Evidently this was true of driving jobs, but also other occupations such as community-based care work that involved travelling between private homes. A number of interviewees in Port Glasgow were recruited from a health and social care course, which led many to reflect on such requirements as part of working in the sector. Some observed that undertaking visits to clients using public transport was feasible, albeit likely to be complicated by the unreliability of local buses, with potentially significant implications for sick or disabled clients:

> "Ideally, I would want a car for care, but at the moment it has just got to be bussing it. [But] you don't want to be dependent on a bus, and end up being late for a client you are going to see. I just need to get a motor because I can't afford to let people's life go to risk when you are running late with the bus; so in the long run definitely a car."
> Port Glasgow, female, aged 26

Some interviewees suggested that the lack of a car was not an insurmountable barrier, as certain care providers try and cluster appointments for employees reliant on public transport. Other companies paired non-drivers with colleagues who had a car, particularly for later shifts. However, this was clearly not universal practice, as one company reportedly no longer accepted applications from applicants without cars. These examples illustrate how the **lack of private transport may create difficulties for securing work in particular sectors**, which may sometimes impact female workers more, given their higher propensity to work in social care.[9]

Reliability

It was not just the availability of public transport that determined the feasibility of commutes. For the majority of interviewees who anticipated travelling by bus, often due to its cheaper cost where trains were also available (see below), there were significant **concerns about reliability.** While a minority suggested that local bus services were regular and reliable, the vast majority of residents across all case study areas expressed concerns about the reliability of bus services. These were particularly strongly voiced in Hattersley, Port Glasgow and Castlemilk:

> "It's normally 30 to 40 minutes you're waiting at a bus stop, and then it's a 30 minute ride into Hyde. They're supposed to be every 10 minutes though."
> Hattersley, female, aged 37

> "McGill's has got to be the worst bus service out, they're shocking, they're either five minutes late or five minutes early, sometimes they don't even show up."
> Port Glasgow, female, aged 20

> "They put timetables up at the bus stop but the buses never leave on the timetable ... they tell you it's every 15 minutes but I doubt that. I think it's every 20 minutes, maybe half hour. Once it gets to later on in the night time the buses are murder."
> Castlemilk, male, 50s

These experiences of **poor reliability had a direct impact upon perceived commuting options**. This included setting a limit on scheduled journey times to allow for likely delays: "An hour's fine for me, but I think anything more than that [is not possible], 'cause you've got to think of delays and roadworks and things like that "(Dewsbury Moor, female, aged 42). Other interviewees suggested that the solution was to set off earlier than should be necessary: "If I was in work [at Amazon] ... I would have to leave early by an hour, you can't rely on a bus to get there" (Port Glasgow, male, aged 59).

In some cases, the **perceived unreliability of buses, especially where it involved interchange to another bus or a different mode of transport, prompted residents to dismiss some journeys entirely**. Such concerns were particularly prevalent in Castlemilk, where the unreliability of services into Glasgow city centre led some residents to reject the notion of working in more peripheral parts of Glasgow or beyond:

> "I'd prefer just to be in the Glasgow area 'cause the time [it takes for] you [to] travel to Paisley. You're having to get a bus into town then a train and if that bus is late you're missing that train. And when you get off the train you're having to get another bus to wherever you're going so it's a lot of hassle. Say you're starting at seven in the morning you're having to get up at about four in the morning so you can get to work on time."
> Castlemilk, male, 50s

Again, this shows that **proximity to major urban centres does not necessarily increase employment opportunities** if its potential to function as a commuting 'hub' is constrained by a perceived lack of reliable transport. In this sense, Castlemilk and Port Glasgow stood out as the pairing where the area closest to the city centre felt more disconnected; this contrasted, for example, with Hattersley and Harpurhey, where the benefits of proximity are more obvious.

Concerns about reliability were also interlaced with **fears that poor punctuality could lead to reprimands from employers** and possible dismissal, in some cases based on previous experiences of work. This impacted upon perceptions of viable commutes. One Castlemilk resident, for example, dismissed the possibility of using more than one bus to travel to work because of acute fears about the impact that poor punctuality and eventual dismissal could have on financial security:

> "It could be a nightmare. If a bus doesn't turn up you could get the sack. It affects the house and everything. I hate being late. It puts me off changing [buses]. Employers expect you to be there nine to five. If you're not, it's like: "Right, out the door!"
> Castlemilk, female, aged 48

One parallel concern around unreliability was that this is **not well understood – and therefore not accommodated – by organisations delivering mandatory employment support**. This created tensions with Jobcentre Plus work coaches in terms of viable commutes: "I don't think they realise the transport you've got to travel by, whether you can get there or not ... I don't think they care about that really ... they say they can sanction your money for not travelling" (Hattersley, female, aged 48). There were also fears and, in some cases, direct experiences of Jobcentre Plus sanctioning claimants for failing to recognise poor transport reliability as a reason for being late for mandatory appointments. One interviewee also described tensions with a volunteering placement provider who failed to understand the need to leave two hours early to guarantee punctuality for a mandatory Jobcentre Plus appointment: "I wanted to avoid being late and sanctioned. [The charity shop] didn't have to be like that. I was working for nothing! It was pathetic. I was glad to get out of there." (Hattersley, male, 61).

Affordability

Another key factor frequently identified as shaping the viability of commuting options was the affordability of public transport. This had a number of dimensions including: its impact on perceptions of viable modes of transport; the trade-off between transport costs against potential wages and household income; the potential impact of cheaper transport on commuting horizons; and the lack of recognition by Jobcentre Plus of affordability issues. Each of these is addressed in turn.

Looking firstly at mode of transport, there was a tendency to dismiss rail (train or tram) as a viable mode for commuting because of its perceived expense. While many interviewees suggested bus fares could be expensive, bus often remained the preferred mode, even where there were faster alternatives (rail in Hattersley, Port Glasgow and Dewsbury Moor; light rail in Harpurhey) because of cost differentials:

> "The trains at peak times it can be quite a lot as well."
> Port Glasgow, female, aged 35

> "Train – I don't, I haven't used a train in five years or so – the fare would be too much."

Seacroft, male, aged 32

"It would cost a lot more than the bus."
Hattersley, female, aged 48

This tendency to eschew rail was particularly noticeable in Hattersley. Here, few interviewees used the train station located on the edge of the estate, despite it providing a twice-hourly service direct into central Manchester that was far quicker than the bus (22 minutes by rail, compared with at least an hour by bus). One clear finding was that the lack of everyday use due to cost as well as safety concerns (see below) led to an almost unconscious tendency to discount it entirely as a potential mode of transport for accessing work: "It doesn't cross my mind, it's that far outside my price range. It could be viable if I worked but I forget it's an option" (Hattersley, male, aged 61).

There was some variation, though, across case study areas. Rail seemed more widely used in Port Glasgow, where a number of respondents had previously commuted by train to different workplaces, including contact-centre work in central Glasgow, the former armaments factory in Bishopton, and security work on the outskirts of Paisley. The higher level of usage in Port Glasgow compared with Hattersley may reflect the lower cost differential between bus and rail in Port Glasgow, as Table 7 shows.

Table 7: Price difference between bus and train fares (cheapest option in bold)

Hattersley to central Manchester					
	Peak morning travel		**Non-peak travel**		
	Single	**Return**	**Single**	**Return**	**Journey time**
Train	£4.40	£6.60	£4.40	£5.60	24 mins (Manchester Piccadilly)
Bus	**£3.50**	**£4.50**	**£3.50**	**£4.50**	55–65 mins (Stagecoach). Note that a Jobseeker single ticket is £1.70
Port Glasgow to central Glasgow					
	Peak morning travel		**Non-peak travel**		
	Single	**Return**	**Single**	**Return**	**Journey time**
Train	**£6.10**	£9.40	**£6.10**	**£6.70**	36 mins (Glasgow Central)
Bus	£6.70	**£7.10**	£6.70	£7.10	55 mins, McGills, GoZone 5 ticket

Source: National Rail Enquiries; McGills, Stagecoach, Google Maps (all correct as of 28 March 2018)

In terms of other 'active' modes that may represent a cheaper way of getting to work, only a very small minority of interviewees mentioned walking or cycling, either in terms of past commutes or future travel-to-work intentions, although some did use bicycles to enable them to get to activities and amenities on a day-to-day basis. This may mean there is some scope for promoting active modes of commuting where workplaces or transport interchanges are accessible on foot or by bike.

A second point about affordability is that **viable commutes are often assessed in terms of the trade-off between transport costs relative to potential earnings, and the tapering or loss of benefits**. Those facing the prospect of low-waged work, especially if shifts fell short of a standard working day (ie less than eight hours), often felt this precluded longer commutes:

"The sort of jobs I am going to get will wipe out in bus fares ... I've been offered loads of jobs online, the only reason I've not been able to take them is cos of the distance, a lot of them

> are in Bradford or Leeds and by the time I've paid for travel expenses to get there, work in a part-time job on a part-time wage, it wouldn't be worth my while travelling that far."
> Dewsbury Moor, female, aged 59

> "[Reasonable transport costs] depends on what you earn I suppose, up to £20/week would be a lot, certainly no more than that. Cos once you start work you lose your Council Tax Benefit, Housing Benefit, all that, it all adds up."
> Hattersley, male, aged 36

> "Transport costs are an obstacle ... if it was good enough wages I would do it again, but I have rent to pay and, so I would have to do a calculation. I would travel to Port Glasgow, Greenock, Paisley, but not Glasgow."
> Port Glasgow, female, aged 20

One additional concern about affordability was the extra cost of travelling at peak time, which was seen as a "tax on the poor" (Port Glasgow, female, aged 27) by some for penalising low-wage workers on early shifts.

A third issue involving affordability related to parents with younger children. For those who had to put children in nursery or pay for pre- or after-school care, the costs of travel had to be weighed up against the **additional expense of childcare,** particularly if unreliable buses led to penalty charges for late pick up:

> "The thing I worry about if I did get a job somewhere with a bit of distance to it, that I wouldn't get back cos they'd eventually get fed up with it and you've got to pay the extra hour for the nursery ... you've got to consider that you're still paying for it out of your own pocket."
> Dewsbury Moor, female, aged 27

In view of these findings about travel costs as a barrier to finding work, it is significant that there was **some evidence that cheaper travel expanded individuals' familiarity of areas and, by extension, perceptions of viable commutes.** For example, two interviewees in Harpurhey who were in recovery from addiction used discount-travel passes to enable them to attend recovery-support sessions in different districts across Greater Manchester, including Manchester, Oldham and Rochdale. This made them noticeably familiar with, and positive about, the range of areas that was accessible from Harpurhey, as the following example shows:

> "When I'm getting the bus I'm clocking everywhere, in Oldham I've got more established in the group and I can start looking at going to other places around the area and ... finding out [what's there]."
> Harpurhey, male, aged 46

One implication is that discounted travel while jobseeking is as useful as support with travel costs once in work, which is what most current schemes provide.

Stakeholders reported that **subsidised travel schemes sometimes encouraged clients to look further afield**, or consider more expensive commutes, than they might otherwise have contemplated. They also suggested employed-backed loans for season tickets (monthly or annual) could be useful, although these do not work well for less secure work and do not always provide full refunds in the event of jobs ending before tickets expire.

Despite these potential benefits, **awareness of existing schemes was limited.** Across all case study areas, there was no mention of the national Jobseeker Plus Travel Discount Card available to some jobseekers, offering half-fare tickets on rail and some bus services. Awareness of local schemes (see Box 5) was limited, too. Stakeholders also raised **concerns about the value of time-limited schemes** and whether commuting costs remained sustainable once support was withdrawn.

Box 5: Support with travel costs

Greater Manchester (Harpurhey and Hattersley): jobseekers who find employment have access to the Greater Manchester-wide Travel Choices scheme, which provides a free one-month bus and tram pass, plus up to five additional months of discounted travel (£25 per month). The scheme is jointly funded by Transport for Greater Manchester (TfGM) and the DWP, with some local authorities choosing to top up funding to provide the maximum of six months' discounted travel. TfGM and the Greater Manchester Combined Authority (GMCA) are also piloting a free travel scheme for apprentices, which provides a 28-day pass for tram and bus travel.

Leeds City Region (Dewsbury Moor and Seacroft): West Yorkshire residents in receipt of JSA and ESA are eligible for a MetroRover pass which, for an upfront cost of £5/month, provides half-fare travel at any time of the day on buses and trains across West Yorkshire.

Glasgow City Region (Castlemilk and Port Glasgow): there did not seem to be any standard, universal support around travel costs for jobseekers, or to subsidise commuting costs once in work. In Port Glasgow, however, one council-funded employment support project provided free travel for the first month of work, and sometimes sought to negotiate additional top-up funding from Jobcentre Plus to cover the second month.

Simplicity

The ability of individuals to commute to work depends, in part, on understanding travel options, and the quickest and cheapest modes of transport to any given location. Some interviewees had an extensive knowledge of local transport network travel choices, and seemed confident in accessing travel information online or through smartphone apps, including Google Maps, National Rail Enquiries and Traveline. Meanwhile, others less proficient with, or without access to, appropriate technology were more reliant on information from service providers such as local employment support organisations, transport hubs or schedules provided at bus stops.

Some stakeholders suggested, however, that **many individuals struggled to understand the transport system,** not least because of the range of ticketing options and the lack of a single, integrated source of travel information that includes routes, fares (especially for buses) and timetables: "Sometimes it's a bit baffling ... bus travel must be one of the few aspects of the world you are told certain aspects of the product but not the full picture." (Greater Manchester, local stakeholder). This point was echoed by residents who described difficulties in navigating the transport system: "I could do with a little bit more [information]. I don't know how often buses change you see" (Hattersley, female, aged 48).

Frustrations about complexity were also expressed through concerns about fare structures that often appeared to penalise particular journeys. Many interviewees resented the choice under deregulated systems between paying for a more expensive 'any bus' type ticket, or buying a single-operator ticket, but potentially having to wait longer until the correct bus turned up. **Moreover, products offered did not always meet the needs of those in low-waged work with non-standard working patterns.** Many noted that weekly or monthly saver tickets were not suitable for jobs that did not offer regular shifts. One resident also reported giving up a job as a consequence of having to pay two sets of single fares when his night shift crossed over two days.

Potential solutions including more comprehensive travel information, integrated multi-modal fare products and smart ticketing are discussed in Chapter 5. However, it is worth noting that these solutions may not make transport easier to use for all users. A minority of interviewees noted, for example, they had no access to, or confidence in using, smartphones, which is an important consideration in developing new smart ticketing options.

One important finding was that **travel information was rarely presented in a way that enabled individuals to understand commuting options in terms of travel times to a range of potential locations of employmen**t. This became evident when some interviewees commented on how the travel time maps shown during interviews made them realise there were more options than they had been aware of:

> "I knew you could get to Manchester and Stockport and the airport and Bury and Oldham [in 90 minutes] but I didn't know Rochdale and Bolton and Altringham ... the Jobcentre should do it like this, it would show it a bit easier, 'cause they just say 90 minutes but they don't say like you can get to this in 90 minutes."
> Hattersley, female, mid-20s

Certainly, there seemed to be variable levels of support in terms of information on travel options to the locations of vacancies from organisations delivering employment support. Some respondents described having a good relationship with Jobcentre Plus work coaches who would "go out of their way" (Seacroft, male, aged 32) to provide support, including: help to access information about travelling to potential jobs; covering the cost of travelling to job interviews; or advising on options for free or discounted travel through concessionary schemes.

However, it was **more common for interviewees to suggest they had received little or no support about concessionary schemes or commuting options**: "They do not offer any advice or support with transport issues. Every now and again, an adviser will look up the nearest bus route for you, but don't look at the practicalities of it" (Dewsbury Moor, male, aged 30). This apparent lack of consistent or comprehensive advice raises questions about how jobseekers can be better supported to understand travel choices and navigate an often complex transport system.

Confidence

Discussions of commuting options sometimes revealed a preference to avoid particular journeys or modes of transport because of a lack of confidence in using the transport system. This had a number of different elements. As already observed in Chapter 3, familiarity was sometimes a factor shaping the places to which residents would consider commuting. Confidence in navigating the system can also be a function of having access to free or discounted travel to travel more widely, as some of the examples above highlight.

One important implication is that supporting jobseekers to increase their familiarity with areas – perhaps through 'trial runs' or significantly discounted travel – may help to increase the range of areas in which they would consider working. Indeed, a trial run is precisely what one Harpurhey resident did, to see if a commute to a potential job was feasible, only to conclude it was too far and too convoluted:

> "I've been offered a job and it was on the other side of Manchester and I did the bus journey to see how long it would take and it was too inadequate ... it was the opposite side of Manchester, like hour and a half, two hours on a bus, it wasn't just one bus, it was two or three."
> Harpurhey, female, aged 35

Confidence in using transport was also **a function of perceiving travel to be safe and comfortable** and, in this respect, there were some differences across modes. Some residents' preference to avoid rail or light rail systems was not just about cost, but a sense that these modes were often cramped and uncomfortable, and sometimes compromised a sense of personal safety in terms of the behaviour of other passengers. In Hattersley, there were also particular concerns around personal safety in using the run-down and secluded train station on the edge of the estate, particularly among female interviewees:

> "The train station at Hattersley isn't very nice, I'd be scared, it needs to be so you can feel safe and I wouldn't ... it's quite isolated round the area and there is a lot of kids out all hours and I would think they'd congregate round there so I think it would need to feel safer for me to use that facility."
> Hattersley, female, aged 52

A **further feature of confidence was the way in which individual health and well-being shaped people's abilities to use public transport** and, by extension, their capacity to commute. Some individuals with mental health conditions such as phobias, anxiety or depression were reluctant to use public transport unaccompanied or, at least, not for any great distance. One individual expressed a preference, for example, to work within walking distance to avoid having to use busy public transport:

> "At the moment, health issues are stopping me working, but until then I've always worked and enjoy working ... I'd look for something in walking distance so I don't have to take the bus when it's busy. I've always been a bit nervous about transport and things."
> *S*eacroft, male, aged 43

Physical health conditions can also shape considerations about journeys to work, such as the need to **minimise walking distance**:

> "The bus has to be near to where the firm is, I can't get off the bus and walk 20 minutes cos there is a few [jobs] like that, that are nowhere near the bus stop, not with arthritis, many moons ago maybe but not now."
> Harpurhey, male, aged 53

Conclusions

This chapter shows the different ways in which decisions about the viability of commutes are linked to perceptions and experiences of public transport, and how these interact with a range of contextual and personal factors. **All too often it appears to show that public transport constrains rather than enables low-income households to secure employment**. Among the different themes presented above, issues around the availability, reliability and affordability of transport options dominated discussion with residents. These are clearly priorities to address.

At the same time, it is important to be explicit about the limits of transport policy. One of the dominant points to emerge from interviews is that the viability of commutes is intimately related to the nature of work available, with public transport often failing to support individuals to undertake low-waged or atypical work. Accordingly, there is a balance to be struck between expecting transport policy and systems to respond to the flexibilities demanded by an increasingly insecure labour market, and the need for reforms to reduce those insecurities themselves, as recognised by the recent Taylor (2017) review. Transport policy alone cannot solve problems originating in the labour market.

Another clear implication is that that **potential solutions need to cut across a number of policy domains** including transport, employment and skills, housing and planning, and health, to address the range and complexity of transport-related barriers faced by individual on low incomes.

5 Policy recommendations

Introduction

This chapter presents policy solutions to the transport-related barriers to employment identified through our interviews with residents in low-income neighbourhoods. It begins by considering three wider, cross-cutting policy challenges that underpin the transport-related issues identified in this report in terms of: the regulation of transport policy; the increasing decentralisation of employment; and the disconnection between transport and employment policy. Using a bottom-up approach to policy development, the chapter then moves on to consider the specific issues facing low-income groups in terms of the four themes of accessibility (especially reliability), affordability, simplicity and confidence. For each, it discusses the policy challenges before identifying a series of potential policy and practice solutions. The chapter concludes with a timeline for action across agencies and spatial scales, to address transport-related issues in their entirety.

Below we summarise the key messages from this chapter as four overarching strategic priorities (Box 6) and 18 specific transport-related solutions (Table 8) that could improve the connectivity of low-income neighbourhoods to employment opportunities. Many areas across Britain are already putting some of these recommendations into practice, but the key point we emphasise is that improving outcomes requires a strategically coherent and carefully sequenced set of approaches across different spatial scales that engage the full range of agencies and operators.

We would also underline that improving the connectivity of low-income neighbourhoods is largely about enhancing local transport systems within, rather than between, city regions.

Box 6: Strategic priorities for improving connectivity

1. Implement **bus franchising or other 'strong' models of cooperation** to address transport-related barriers emerging from a deregulated public transport system that all too often fails to meet the needs of low-income users.
2. Make public transport more **accessible and more accountable through technology** – particularly through open data (including fares) and real-time data on public transport – to understand issues, develop solutions and communicate information to users.
3. Develop **longer-term spatial planning frameworks and tools** that embed sustainability, density and transit-oriented development (TOD) principles, and better connect places of residence and work.
4. Better **integrate transport and employment policy** to enable employment support agencies to play a vital role in enabling clients to understand their travel choices and how to navigate them as part of their return to work.

These overarching strategic priorities establish the framework in which stakeholders can implement a range of solutions to address transport-related barriers to work.

Table 8: Solutions for improving connectivity

What is the problem?	How might it be addressed through different policy and practice mechanisms?			
	Transport policy and regulation	**Transport planning and operations**	**Housing and planning policy**	**Employment and welfare policy**
ACCESSIBILITY				
Poor **reliability** of services limits perceptions of viable commutes, generates fears of consequences of poor punctuality, and leads to falling patronage.	• Franchise to set standards, routes, schedules, frequencies, fares and ticketing technologies in order to drive up performance • Encourage modal shifts from private to public transport to reduce congestion, eg through congestion charging • Introduce national systems of redress for bus and light rail users	• Reorganise routes, eg splitting longer, cross-city services where few passengers use the entire route • Bus prioritisation measures • Urban traffic control (UTC) technology and multi-agency working in UTC rooms • Real-time monitoring to improve information to customers and make within-service adjustments, eg early terminations or skip-stops • Smartcard/contactless ticketing systems to reduce boarding times	• Ensure employment land is allocated in sustainable and accessible locations, to reduce journey length or complexity • Ensure new affordable housing developments are well served by public transport • Strengthen use of accessibility criteria in sustainability appraisals • Link infrastructure bidding to long-term economic development plans, to maximise connectivity • Ensure adopted local plans in place and a five-year supply of land for housing can be demonstrated, to reduce development in less sustainable locations	• Employment advisers should work with employers to flex shift times or manage expectations around punctuality
Limited **availability** means peak flow	• Explore options through franchising			• Employment advisers should work with

services do not align with late/early shifts	for cross-subsidy of less viable services at earlier/later times • Fund 'use it or lose it' trials to test demand			employers to flex shift times, where job allows, to align with timetables
AFFORDABILITY				
High transport costs deter longer commutes; constrained spatial routines limit familiarity of areas where there might be suitable jobs; and a lack of private transport restricts access to more peripheral employment locations	• Review existing national concessionary schemes and explore options for extending them to jobseekers or low-paid workers • Carry out subsidy reforms and extend use of Bus Service Operators Grant to increase the net revenue support of local bus services	• Introduce carnets/multi-trip discounts • Implement lower-cost, multi-operator tickets or smartcard/contactless systems that cap fares automatically • Explore benefits of flat fares for more peripheral neighbourhoods • Eliminate interchange penalties • Introduce a peak period start time (eg 7am) • Reduce fare penalties for overnight working, eg introduce next-day return fares on local journeys that seem to not exist in Strathclyde	• Train housing officers working in financial inclusion to deliver transport advice around fares • Extend use of planning obligations or tariffs to compel housing developers to provide discounted public transport passes	• Raise awareness of existing discounted or free travel for jobseekers (eg Jobcentre Plus Discount Card) and those who find work • Use local funding across agencies to extend the length of time-limited schemes • Work with employers to reduce travel costs for employees, eg subsidised travel, loans for monthly/season tickets, car-sharing initiatives • Consider ways of subsidising the cost of using private transport, eg free driving lessons or paying for driving tests; or help to self-organise, eg sharing a lift with someone who's going the same way
SIMPLICITY				
Fragmented and complex transport system hard to navigate and understand;	• Require operators to publish and share data (using powers under Bus Services	• Compel operators to provide transparent information on fares, including at stops and on		• Local employment support providers should develop capacity, or draw on other agencies, to provide

information such as fares, routes (in map format) and interchange options across bus operators not readily available; lack of consistent 'visual language' causes confusion	Act where available) • Standardise pricing across operators and routes • Operators work with internet companies to ensure accuracy of search and mapping technologies • Develop national quality benchmarks to drive up quality of information on fares and services	vehicles • Extend use of real-time journey information, to include map-type displays and apps • Make historic real-time data available, to allow comparison of service quality • Standardise liveries and achieve consistent 'design language' across networks		personalised travel planning as part of customer support • Jobcentre Plus could work with transport bodies to develop travel time maps to show feasible destinations within given journey times
CONFIDENCE				
Lack of confidence in navigating the transport system because of its complexity or a lack of familiarity with travel choices; concerns about crowding or personal safety deter travel (especially rail or light rail); health conditions limit mobility and capacity to use public transport		• Bus drivers and other staff could work to improve quality of service and level of reassurance (but may conflict with objectives around reliability)	• Design of new residential and employment developments should adopt Transit Orientated Development (TOD) principles to increase patronage, accessibility and natural surveillance, to enhance safety • Ensure routes to public transport stops and stations are well-maintained, well-lit, signed, and covered by CCTV where appropriate	• Transport bodies and local/combined authorities should work with Jobcentre Plus and other providers to offer personalised support, eg transport information (including fares and travel time maps); travel training; mentoring/buddying; free tickets for 'trial runs' • Providers could work with agencies delivering support around health conditions to understand how best to facilitate confidence in using the transport system

Wider policy challenges

We have identified three key cross-cutting policy challenges that underlie and, to an extent, drive the issues of accessibility, affordability, simplicity and confidence that we have identified in our research. Addressing these key challenges will require coordinated action between transport bodies and a range of other agencies, and imply the need for stronger systems of legislation, regulation and investment in local public transport systems. These wider policy challenges are:

- the historic and ongoing decentralisation of jobs and economic growth
- the disconnection between employment support and transport policy
- the limited opportunity to improve regulation and cross-subsidy of transport provision.

We discuss each of these issues in turn, looking at the challenges presented and potential policy solutions.

Decentralisation of jobs and growth

The challenge

The **spatial structure** of Britain's housing and labour market areas has been changing, with divergent trends evident. On the one hand, the renaissance and re-densification of city centres – particularly in larger metropolitan areas – has boosted the economy of those cities, and led to an increase in the density of skilled jobs, especially in service roles, and in creative, digital and knowledge-intensive sectors. On the other hand, there has been an expansion of employment sites in more peripheral locations, and these have disproportionately attracted lower-paid and less-skilled jobs, as outlined in Chapters 1 and 2. Growth in sectors such as logistics, out-of-town retailing and advanced manufacturing has tended to be in business park locations, which are less well served by public transport.

At the same time, a shift towards supporting economic growth through increasing housing supply has led to a **diminution of sustainability as an objective** within frameworks for spatial development. Incentives like the New Homes Bonus have encouraged local authorities to focus efforts on housing completions and streamlining planning approvals. Planning authorities, as a result, are less able to exercise control over the location of new housing and, in many parts of the country, there is increased focus on the review of long-standing policy instruments such as Green Belt designations. Although potential development sites need to be assessed on their own merits, it would be a cause for concern if this focus on removing barriers to housing supply undermines an emphasis on providing housing in areas that are well-connected to jobs and well-placed to support public transport services.

Fundamentally, the economics of public transport provision are undermined in peripheral areas where the density of trips made is low, and the marginal benefits of choosing private transport are high. This leaves those without choice in a difficult position: reliant on expensive, but infrequent, bus services. It also means that providing a comprehensive network without high levels of subsidy may be impossible. There is a challenge in funding high quality public transport, and in most places there exists a **"contradictory mission" between the goals of reducing subsidy and ensuring service coverage** (Walker, 2012).

The policy response

There are measures that can be taken to mitigate these challenges. Local planning authorities (LPAs) should seek to use planning tools to **allocate land for employment in sustainable locations,** and seek to drive up demand densities. LPAs can also work closely with transport planning colleagues, including those from PTEs or combined authorities where these exist, to implement techniques to assess the accessibility of new developments or allocations. Approaches that classify urban land according to public transport accessibility, perhaps like the Netherlands' A-B-C location model,[10] should be embedded within the planning system.

LPAs could also make wider use of a range of different **accessibility metrics**, such as Public Transport Accessibility Level (PTAL),[11] car and public transport journey times to key destinations (including peripheral employment parks), and 'walkscore' type approaches.[12] Local plans should also seek to integrate transit-oriented development (TOD) principles,[13] increasing planned densities around existing

or planned public transport routes and stations/stops. Most new developments should require the submission of travel plans to anticipate additional demand for travel and demonstrate how it can be met.

Planning authorities and transport authorities could explore the possibilities for creating more interchange possibilities between 'traditional' public transport networks (mainly bus, but perhaps also light rail and rail) and other travel options, such as bicycle parking or hire docks, car-club locations, car parking, taxis and demand-responsive transport (DRT). Our evidence suggests that simplifying complex multi-modal journeys such as through better journey information and integrated ticketing, would be necessary to minimise concerns about interchange. Suburban and peripheral areas in particular may benefit from integrating MaaS platforms and DRT services with the core bus network, with through-ticketing. Establishing a number of key orbital bus routes to connect suburban interchanges would provide better accessibility to more dispersed employment locations. **Integrating DRT and MaaS with classic high-volume transport corridors** may help overcome the contradictory mission problem. Some low-income groups make use of services like Uber to patch holes in public transport provision (Forth, 2017), and working to integrate these services with the classic public transport paradigm may hold some promise.

Finally, LPAs should ensure that strenuous efforts are made to **demonstrate a five-year supply and have an up-to-date plan**. Authorities unable to demonstrate a five-year supply of deliverable land for housing or an up-to-date local plan are unable to exert strong controls on development, which can result in housing developments in unsustainable or disconnected locations.

Disconnections between employment and transport policy

The challenge

One of the key findings from our interviews with stakeholders was that transport policy officers often had little contact with colleagues and other agencies responsible for employment strategy and policy within city regions and local authority districts. As a consequence, there was often limited transfer of knowledge, skills (such as delivering personalised travel advice) and information about travel choices, ticketing options and concessionary schemes. Awareness among eligible claimants of discounted fares or concessions appears to be low.

The policy response

This lack of alignment between employment and transport policy clearly suggests that **employment support providers** including Jobcentre Plus and those delivering key programmes (eg the Work and Health programme in England and Fair Start Scotland) should develop a clear programme around **travel options and improving travel confidence**, especially with regards to using public transport. Dedicated travel advisers, or specially trained employment or housing service providers, could help jobseekers better understand what possibilities exist. Ideally, residents should be involved in the design of travel support programmes. It may be appropriate to trial auto-enrolment to schemes that help with travel costs where awareness or take-up appears to be low. We also recommend that all **Jobcentre Plus and employment support services produce 'travel time' maps** similar to those provided in this report, to help clients understand broad job locations, travel times and typical costs. Ideally the production of the maps would be centralised.

To achieve, this, **closer collaboration within and between institutions responsible for employment and transport policy** is necessary. This will help to develop more effective tools and interventions to support jobseekers in navigating transport systems as part of their efforts to secure and sustain work. Strategically, this collaboration could be formalised within a range of frameworks including transport strategies and plans, Local Industrial Strategies, and 'inclusive growth' strategies that many city regions are now developing. These provide an ideal opportunity to identify the different policy areas that need to be coordinated to enable low-income households to overcome transport-related barriers to employment. In particular, LEPs (England) should make efforts to ensure that bidding processes for infrastructure funding for which they have oversight are aligned with objectives to connect low-income households with new economic growth opportunities.

Specifically, the DWP should **review how its 90 minute rule is understood and applied** by advisors. While we found many examples of people on low incomes willing to commute 90 minutes or longer,

concerns about service reliability, high fares and fitting round other responsibilities meant that this was not always practically feasible or desirable. Policy should recognise this explicitly.

Regulation of transport provision

The challenge

Our research clearly shows that public transport systems often fail to meet the needs of low-income groups in terms of access to employment. Yet the coordination between transport operators and other agencies required to implement solutions is unlikely to arise because **operators must, of necessity, put short-term business objectives first**. Bus operators' routes, fares, timetables and choice of vehicles remain commercial decisions that they are free to take and vary. And while most bus fares are comparable between operators, there is a lack of incentives for operators to cooperate on inter-available fares or multi-modal tickets.

The **impact of bus deregulation on fares is now arguably minimal**, with many areas left with a patchwork quilt of zones where operators may be operating in near-monopolistic conditions. Moreover, the incentive for operators to cross-subsidise less profitable parts of their network from the highly-patronised routes is diminished because there is little to be gained commercially over the short term and, worse, it could help to feed another company's services.

In this deregulated context, **local authorities, transport partnerships and other strategic bodies have only very limited powers to set or oversee key aspects of the public transport system**. Local authorities can tender bus services where private operators alone do not run them because they are not commercially viable. Yet tendered services are poorly integrated with commercial services (eg they are often provided by different operators, accepting different tickets) and concerns remain that tendered services supported by local authorities may benefit commercial routes, diminishing value for money from the public purse.

The policy response

Using the provisions of the Bus Services Act 2017 to implement a franchising scheme would address many, if not necessarily all, of these concerns in some parts of England. Some stakeholders we spoke to **embraced the potential to use franchising to implement simpler fare structures, and achieve a higher level of cohesion in the local network** and how it is understood by passengers. These in themselves are goals worth pursuing, particularly if it means lower fares for outlying peripheral areas or those who need to change buses.

At the same time, **franchising alone will not solve some of the underlying fundamental economic weaknesses in the buses model**, nor does it lead to an increase in net subsidy. This lack of additional funding is a critical consideration against a backdrop of national funding for transport that is heavily skewed towards more affluent parts of the country (Blakeley, 2017). There may be some options for raising revenue locally, however. Stakeholders pointed to possibilities within a franchise model of negotiating contributions from partner organisations, such as Further Education colleges or through the Apprenticeship Levy, to help extend concessions to specific groups. This may overcome some of the fiscal and political barriers to extending national concessionary schemes to groups such as jobseekers and low-paid workers.

Some stakeholders we spoke to suggested that franchising is not necessarily the right approach for their city regions. Specifically, there would need to be a high level of cooperation between constituent local authorities, who would need to work together to share responsibilities and financial risks. This will require strong political leadership. Where franchising is not seen as a viable or attractive option, **partnership models may provide an alternative solution.** In the Leeds City Region, for example, the Bus 18 initiative has seen a partnership of bus operators and the West Yorkshire Combined Authority work together to develop a redress system for poor service, improve reliability and real-time information on disruption, expand smart ticketing options, and extend concessionary fares for young people up to the age of 18.

Finally, there is a view that more use could potentially be made of transport fleets owned by community groups, schools and other organisations. There are opportunities to explore how **community transport**

and **social enterprise** models of transport provision can be integrated with mainstream services to address specific needs and service gaps.

Challenges and solutions: accessibility, affordability, simplicity and confidence

Within the context of the three broad challenges we outlined under 'Wider policy challenges', we now turn our attention to how local and sub-regional partners could respond to a range of specific challenges within local transport systems. We present a broad menu of 17 policy recommendations aimed at ensuring that low-income groups are better equipped to secure and sustain work through a transport system that is accessible, affordable, simple to use, and in which they have the confidence to make it work for them. We briefly review each type of problem, the associated policy challenges, and some potential solutions.

Accessibility

What's the problem?

Arguably the biggest concern around accessibility among the low-income groups we interviewed is the reliability of transport. We found consistently that residents do not trust the public transport system to get them where they need to be on time, all of the time. This impacts negatively on their ability to secure work, because poor reliability limits perceptions about what is a viable commute, particularly where jobseekers are anxious about punctuality.

Poor reliability in terms of late services and bus 'bunching' is caused mostly by a combination of increased congestion, slow boarding times, and the operational configuration of services into very long cross-city routes that are more susceptible to running late.

Even when services run to time, **public transport systems are not geared around the needs of those working in the flexible economy**. Early and late services do not always align well with shift patterns, and service frequencies to outlying business parks may be very low.

Bus and light rail operators are **not generally held to the same level of accountability** to passengers over punctuality as is the case for Train Operating Companies (TOCs) or airlines. Moreover, bus and tram passengers do not enjoy access to the same level of information about historic service reliability as exists for rail services or even, thanks to apps like Google Maps, typical car journeys.

What are the policy challenges?

Financial pressures mean that there is **little 'resilience' in typical urban bus networks**. Less financially viable routes, including tendered services, are run at a minimum frequency (eg hourly or less), which means that an early or missing departure, or a missed connection, has significant consequences for journey reliability. This issue affects peripheral locations more than it does dense corridors, owing to lower population densities and, consequently, fewer viable services.

Deregulation and competition within local bus markets has not provided effective incentives to operators to provide system-wide reliability. Operators have been able to protect financial returns by reducing or eliminating more peripheral services while concentrating on core corridors, thereby affecting the reliability and resilience of the bus network as a whole.

There are also **political obstacles to potential remedial actions** such as congestion charging and measures to prioritise public transport. Despite evidence of their effectiveness, the adoption of bus lanes, signal prioritisation and other measures are often unpopular with the general public and politicians, as the example of Liverpool's withdrawal of bus lanes shows (see Chapter 1). Outside London, attempts in Edinburgh and Manchester to introduce large-scale congestion-charging schemes suffered heavy defeats, and the idea now commands little support politically.

What are the potential solutions?

Improving the reliability of local public transport networks in the UK – particularly for buses as the dominant mode of public transport among low-income groups – will require coordination and partnership, together with investment and policy commitment from a range of agencies at different spatial scales. A stronger national framework for funding and regulating public transport, combined with devolved powers and responsibilities, could support the delivery of higher-quality public transport networks and encourage modal switch to public transport. This will yield benefits for the wider population, as well as disadvantaged groups. Specific measures that could improve reliability include:

Recommendation 1: franchising

Franchising powers, already available to some areas in England as part of the provisions of the Bus Services Act, offer one framework for local transport bodies to address a range of issues in a coordinated way. Through franchising, authorities can:

- specify minimum service standards, including frequencies, to ensure capacity while reducing redundancy (two or more operators' services timed closely together)
- set routes to serve specific developments, maximise interchange possibilities or avoid known congestion problems
- specify vehicles and journey information, and ticketing technologies, to achieve greater consistency across the network
- set fare structures that facilitate interchange between services and allow for cross-subsidy of routes and the extension of concessions to particular population groups.

Recommendation 2: operational changes

Poor reliability and bus bunching can also be addressed through a combination of operational interventions, including: investments in bus prioritisation and/or urban traffic control technology; changes to vehicles and fare payment technologies; improved in-running journey information and communications to passengers, and the ability for operators to make within-service adjustments (eg early terminations, skip-stops or route changes) to recover services to a timetable; and actions to reduce boarding times. To maximise the effectiveness of operational changes, operators working in partnership with transport authorities should use historic bus running information (eg from archived real-time information data) to analyse the performance of bus routes and determine candidate locations for bus prioritisation measures, changes to routes, or changed service patterns.

Using technology to monitor the bus network in real time can also help improve operational decisions and communications to passengers and drivers. One effective way to get bunched buses back on time is to encourage passengers waiting for a late, crowded service to avoid boarding it when it arrives, and instead wait for the following bus. This is only viable with good real-time information on high frequency routes. Finally, technologies like automatic exact-fare devices or contactless readers can reduce boarding times, but there may be a trade-off in accessibility for some passenger groups who are unfamiliar with, or lack confidence in using, these systems.

Recommendation 3: better traffic control

Operators and transport bodies should work closely with highway managers and urban traffic control (UTC) agencies to ensure the highways system – including the design of new road alignments and signalling – does not impede the free flow of buses. More use of technology and selective bus prioritisation measures (eg part-time bus lanes) could be explored to enable better use of road space. Bus operators' representatives should work proactively alongside police and other agencies within UTC control rooms to help coordinate management of the public transport network, sharing and using operational data such as that provided from traffic monitoring systems, as well as buses' real-time transponders. Urban road traffic signals controlled by systems like SCOOT (Split Cycle and Offset Optimisation Technique) can be configured to prioritise late-running bus services.

Recommendation 4: working with employers

Overcoming (the fear of) the consequences of poor punctuality will require employment advisers from Jobcentre Plus and other organisations to work with employers on behalf of clients. This could lead to greater accommodation of punctuality issues by flexing shift times, or relaxing expectations around start and finish times where the job allows it. Employment support providers can liaise with employers over transport reliability issues both at the point when clients apply for jobs and, once in post, through on-going, in-work support. Exploring options for greater flexibility could be promoted as meeting business objectives to reduce staff turnover and generate workforce loyalty.

Recommendation 5: accountability and redress

At a national level, policy-makers should explore the feasibility of developing a system of redress or rights for bus and light rail users equivalent to that in place for rail and air passengers. Public transport operators in receipt of any form of public subsidy, including providing services under a franchising arrangement, should be held to account for failure to provide an adequate service. This could include the possibility of financial claims being made against operators (eg from employers or employees). Transport authorities and partnerships should also consider establishing some form of bus users' charter in which: data on service reliability is routinely published; discounts or refunds are offered automatically to passengers using smart ticketing; and information on late-running or cancelled services is archived and made public, so that it can be used by passengers to justify (for example) missed Jobcentre Plus appointments or late arrival at work.

Recommendation 6: encouraging model shift and car-sharing

Congestion is largely caused by single-occupancy private car use. Low-income groups have less access to private vehicles, so congestion disproportionately harms them by reducing the reliability of public transport. The attractiveness of public transport increases when congestion is lower, which occurs when more drivers opt to use public transport instead. However, less congestion serves to make car use more attractive again. Overcoming this conundrum will require imposing marginal costs on private car use that are greater than those for public transport, and are invariant to levels of congestion. Such approaches include road-use restrictions such as high-occupancy vehicle (HOV) lanes, or parking restrictions and charges, together with stronger incentives for car-sharing. All of these solutions require deep and sustained political support, and ways of ensuring that the broader benefits to the general public are clearly articulated and realised.

Affordability

What's the problem?

Despite its central role in opening up opportunities for low-income and vulnerable groups, public transport is not cheap; yet for many people, there may be no alternative option. The costs of public transport have risen above inflation, as highlighted in Chapter 1. Fares for bus and light rail services tend to increase with distance, meaning those in more peripheral locations can face particularly high transport costs. As our research clearly shows, high travel costs in relation to potential earnings often restricts people's perceptions of viable commutes. It can also lead jobseekers to dismiss working in some locations, and using entire modes of public transport – especially rail and light rail – altogether.

Although cheaper period tickets are available in most localities, these are normally restricted to use on one operator's services. Where inter-operator arrangements exist, such as in PTE areas, there can be significant additional costs in comparison to single-operator tickets, as Table 9 illustrates.

Table 9: Comparison of adult fares for single-operator and multi-operator day tickets on bus services within selected urban areas

Ticket	Urban area and relevant transport partnership*					
	Glasgow City Region	**Greater Manchester**	**Leeds City Region**	**Sheffield City Region**	**Nottingham City**	**London**
	Strathclyde Partnership for Transport (SPT)	**Transport for Greater Manchester (TfGM)**	**Metro (Transport for West Yorkshire)**	**Travel South Yorkshire (TSY)**	**Nottingham City Transport (NCT)**	**Transport for London (TfL)**
Single operator day ticket (local)	£4.50 (FirstDay) £4.50 (Stagecoach DayRider)	£3.50 (FirstDay – selected corridors only) £4.50 (Stagecoach DayRider)	£4.00 (Arriva Day Saver, Leeds Urban) £4.30 (FirstDay, Leeds)	£4.00 (FirstDay, Sheffield) £4.00 (Stagecoach DayRider, Sheffield) £4.20 (Stagecoach DayRider Bus & Tram, Sheffield)	£3.70 (NCT Easyrider, cash, Nottingham)	N/A
Single operator day ticket (wider area)	£6.00 (Network FirstDay)	£4.80 (FirstDay, Greater Manchester)	£4.90 (FirstDay, West Yorkshire) £4.90 (Arriva Day Saver, West and South Yorkshire)	£5.00 (FirstDay, South Yorkshire) £6.30 (Stagecoach Explorer)	£6.00 (NCT Easyrider, cash, Network)	N/A
Multi-operator ticket (available at peak times)	None available before 9am	£5.60 (SystemOne 1 day AnyBus)	£6.20 (MetroDay Bus) – carnets loaded onto MCard start from £5/day	£6.60 (SYConnect Day)	£4.80 (Bus/Train/Tram, Nottingham only)	£4.50 (Oyster daily cap, pay as you go, buses)

*Note: the wider area over which some tickets are available does not always correspond with the definition of the urban area.

Source: authors' analysis of operator websites, correct at 13 February 2018.

A final issue repeatedly highlighted in interviews is the financial penalties that shift workers face to use early morning services, or, if working overnight, to travel home from work the following day. They often have to pay 'peak' fares, despite travelling at times when service frequency is low and services may be underutilised. Where peak hour restrictions are in place, early starters may not be able to benefit from multi-operator tickets (eg as in Strathclyde).

What are the policy challenges?

Bus and light rail fares throughout most of the country are set by operators on a commercial basis. The introduction of the national concessionary travel schemes (2006 in Scotland, 2008 in England and Wales) as a universal benefit from age 60 does little to help the majority of low-income groups into employment or training, and may have encouraged the increase of non-concessionary fares. Falling patronage on bus services, together with cuts to service subsidies, have increased the proportion of total operating costs that have to be funded from the fare box. Rail fares are set on a different basis and enjoy greater subsidies in general, but fares are still perceived to be high for those on low incomes.

Government subsidies, such as the use of the Bus Service Operators' Grant (BSOG), need to balance competing objectives. Using BSOG to incentivise the use of cleaner or more modern vehicles, for example, may penalise communities living in areas where services are only made viable by virtue of operators using cheaper, second-hand vehicles. Operators on long-distance services aimed at inter-city travel may potentially 'game' the BSOG regime by introducing intermediate stops, thus diverting much-needed subsidy to otherwise viable services.

In policy terms, there is also perhaps a tension between a commitment to a national concession scheme as a universal benefit for particular groups, and a need to provide more targeted support for lower-income groups who are not currently eligible for free travel. At the national level, there is scope for reviewing the effectiveness of concessionary schemes and exploring their extension to other groups, offset perhaps by raising the general age of eligibility.[14]

What are the potential solutions?

Recommendation 7: ticketing and fares

Operators should be encouraged by transport bodies to introduce carnets or other methods of providing multi-trip discounts for those in atypical work who use public transport on an irregular basis, and are therefore unable to benefit from standard week-day or weekly saver tickets. Operators should be expected by transport bodies to provide multi-operator ('inter-available') tickets as standard, and the price difference between these and any operator- or route-specific tickets should be limited. Ideally, transport bodies would coordinate the development of smartcard or contactless systems that automatically cap fares and remove the need among irregular bus users to guess in advance whether a period ticket (eg daily or weekly) would be advantageous.

There may also be potential benefits in some areas in moving towards a flat fare structure, as seen in parts of London. If well designed, this would likely benefit those living or working in more peripheral areas, and whose journeys involve a change of bus. Flat fares that incorporate interchange between service or between modes – for example within 60 or 90 minutes – would overcome the penalties associated with making more complex journeys. Wherever possible, PTEs, operators and TOCs should cooperate to minimise the differences in rail, bus and tram fares, especially where there is a clear opportunity to increase passenger numbers.

Recommendation 8: changing peak hours definitions

Definitions of peak hours and return journeys could be changed to reduce costs for early starters and help incentivise use of earlier services. Introducing a start time to a peak period (eg starting at 7am) would make bus and local rail services more affordable to shift workers who use the earliest services. Return tickets (or day tickets) from the previous day should be valid on the earliest morning services, to allow night-shift workers to avoid having to pay twice.

Recommendation 9: planning obligations

Planning obligations are often used to secure 'pump-priming' for new or altered bus services, where a development is likely to generate the potential for additional public transport journeys. However, the stability of bus services funded in this way cannot be guaranteed if they do not demonstrate a high degree of commercial viability after the initial support period has expired. To counteract such issues, an alternative approach is to expect developers to contribute to demand-side subsidies in the form of free

or discounted travel. There are examples of this: Residential MetroCard (RMC) is a scheme in West Yorkshire where, as a condition of some planning consents, developers commit to funding public transport tickets for residents. In the West Yorkshire scheme, residents of eligible new residential dwellings can apply for a free rail and bus MCard in year 1, with discounts of a minimum of 25% in year 2, and 10% in year 3. Similar conditions could be applied to housing association funding for schemes in certain peripheral locations.

Recommendation 10: embed connectivity objectives within affordable housing provision

Housing providers have a key role to play in helping ensure their tenants are better connected to jobs. Housing officers who provide financial inclusion or employment advice to tenants could be given training on personalised travel planning, to support residents to access work or training opportunities in the most cost-effective way. General principles we have outlined elsewhere, such as incorporating TOD principles and travel plans, and funding free travel passes, should also apply to housing developments in certain locations. Affordable housing providers should consult residents on travel and accessibility issues, and liaise with transport bodies and operators to help address these.

Recommendation 11: employment support

Reduced fares or free travel for jobseekers may increase the scope of their travel for employment-related and other purposes, thereby expanding their perceptions of viable commutes. There is a need to raise awareness of the Jobcentre Plus Travel Discount Card, which figured little in our discussions. It is also important to provide free or reduced travel for those on low wages, to increase their ability to take up work in more peripheral locations that involve more expensive commutes. Local schemes already exist, but these are often time-limited and there are calls for a more expansive national concession scheme for low-wage workers (eg Raikes, 2016). Employers could also be encouraged to offer subsidised travel, provide support for season ticket purchases through wages, and organise car sharing among employees. Benefits for employers include reducing lateness and expanding their pool of potential employees.

Simplicity

What's the problem?

Public transport networks in urban areas are often highly complex. Services that are fragmented into multiple modes and operators can result in an almost impenetrable web of fares. In some cases, bus operators do not publish details of their normal single and return fares, instead supplying these by telephone or email on request. Some operators and partnerships have made efforts in recent years to introduce online fare-search tools, but these tools are not standardised and can be very difficult to navigate. As our research shows, low-income groups do not always feel they have full access to the information they need on travel choices.

Few areas have comprehensive maps of the public transport network. Where they exist, maps may show only services specific to one operator. Bus timetables tend to use place or stop names that may only be understood by those familiar with an area, and often do not show which stops provide interchange possibilities to other services or modes. Provision of accurate service and timetable information at stops can be patchy and restricted to more frequently used stops. Perceptions of complexity may be accentuated by a lack of standardisation in livery across public transport networks.

What are the policy challenges?

The highly deregulated nature of local public transport provision means that attempts at simplification through enhanced coordination are unlikely to happen where there is no clear business benefit to operators.

At the same time, public transport information is increasingly moving online, with companies such as Google and Apple offering mapping applications that integrate information on public transport routes

and timetables, based on open data. These tools permit easy and flexible route planning across transport modes, but lack information on fares and historic service reliability.

Real-time traffic information is now routinely used in vehicle navigation and mapping technologies, combining data from road sensors and mapping companies, and aggregated location data from smartphone users. At present, however, such data is not used in calculating optimal public transport journeys.

What are the potential solutions?

Recommendation 12: open data

Legislation or regulation would likely be required to bring about the benefits of compelling public transport operators to share data. For buses, the Bus Services Act in England includes provision for regulations for open data and Advanced Ticketing Systems, and these should be used, particularly to provide more information on fares. Operators and transport bodies should work proactively with internet companies like Google to ensure that search and mapping technologies represent public transport networks accurately, and incorporate data on fares and reliability.

Recommendation 13: network information

The availability of public transport information on apps does not diminish the value of having clear information at bus stops. This should include a clear and easy-to-use public transport map wherever possible, and should also include information on fares.

Recommendation 14: network legibility

Operators should consider the value of clear and consistent liveries on vehicles. More effort could be paid by operators and public transport bodies to ensure that the public transport network as a whole (across all modes, and including interchange possibilities) is legible and easy to understand. This should involve adopting a clear visual 'design language' across all aspects of a local public transport system, including ensuring consistency and clarity in the ways that timetables are designed, and how information is presented at stops and on vehicles, websites and apps.

Recommendation 15: better standards

Employers' representatives (eg CBI and Chambers of Commerce), public transport users, and the public transport industry should work together to agree principles around a national quality benchmark for bus and light rail operators. This could cover commitments to vehicle quality and accessibility, cooperation with other operators and public transport bodies, and transparent information on fares and services. Subsidies made available through BSOG could be enhanced for operators that sign-up to such principles.

Confidence

What's the problem?

Our research shows that low-income groups sometimes lack the confidence to navigate public transport systems. This may be the result of the complexity of the system, as highlighted above, as well as a number of other factors including: unfamiliarity with routes; a lack of confidence in accessing information, particularly from bus drivers; and concerns about crowding or personal safety, especially among those with physical or mental health conditions.

Getting on most bus services requires a transaction with the driver. For some groups, understanding the correct fare and how to ask for a ticket, especially on a new route or to an unfamiliar destination, can be a fraught moment. On the majority of buses, the driver plays a dual role in both operating the bus and transacting with passengers. This puts customer service in tension with timekeeping.

Negative perceptions about safety and comfort can apply to all modes of transport, including buses, trains and trams. Some modes appear to have specific issues in our case study areas. For example, in Greater Manchester the Metrolink trams were seen by some respondents to be crowded and beset by

potential anti-social behaviours in a space that is largely uncontrolled by the driver. Remote and seldom-used rail stations, such as that in Hattersley, are seen by many to be unsafe, particularly in hours of darkness.

What are the policy challenges?

Falling patronage and revenues (including subsidies) puts pressure on bus companies to reduce their operating costs to ensure financial viability. Driver-only operated services, or contactless boarding, increase efficiency, but do so at the expense of direct engagement with passengers.

The designs of new residential or employment developments often do not adequately facilitate public transport services and facilities that are convenient and secure. Routes and stations are sometimes found on the peripheries of new developments, where densities are lower, rather than at their heart, contrary to the principles of TOD. This can discourage public transport use and lead to less natural surveillance of stops and stations.

What are the potential solutions?

Recommendation 16: mentoring and personal support

Housing associations and other employment-service providers that work to help people find jobs could offer transport 'buddying' or mentoring support to help jobseekers and those re-entering the workplace to understand their travel options and get experience in using public transport. Providers can also work with agencies supporting those with physical and mental health conditions to understand how best to design and deliver mentoring services.

While free travel for job interviews is often provided, similar support for 'trial runs' may enable clients to undertake new routes and explore potentially unfamiliar locations of employment. Reducing the costs of travel, as discussed in the 'Affordability' section, may also encourage more frequent use of public transport and, potentially, longer or unfamiliar journeys that enhance confidence in using the system. This could expand people's perceptions of viable commutes, given our findings that commuting options tend to be shaped by existing spatial routines, and knowledge and use of public transport systems. Other options include transport use training sessions for jobseekers, and information on real-life examples of commuting journeys to raise awareness of, and break down misconceptions around, viable commutes. Finally, in a small number of cases in relation to specific occupations and locations, it may be appropriate to support jobseekers to learn to drive and pass a driving test.

Recommendation 17: urban design and maintenance

The design of new residential and employment developments should adopt TOD principles to increase patronage and accessibility, promote the importance of public transport and 'normalise' its use, and enhance natural surveillance of the public transport network to ensure its safety. More generally, attention can be paid to ensuring that public transport stops and stations, and routes to them, are well maintained, well lit, signed and covered by CCTV where appropriate. Stations on some rail lines could be adopted by Community Rail Partnerships to bring about safety and security improvements with the aim of encouraging higher patronage.

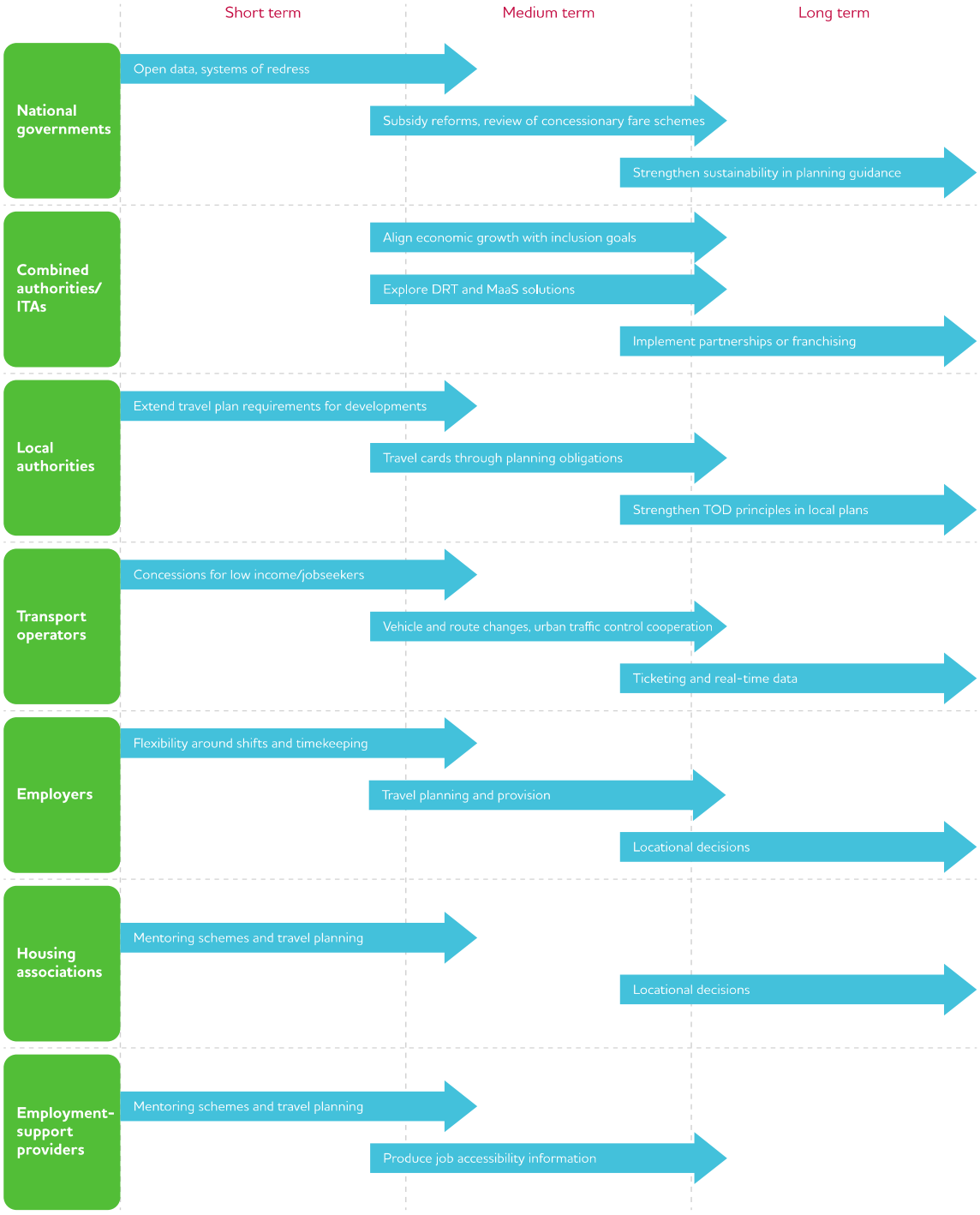
Designing local responses

It is important to recognise that the specific configuration of transport-related problems and challenges will vary from place to place. So, too, will the 'bundle' of policy interventions that is most appropriate to those configurations. The appropriate mix of policy interventions must also respond to the varying nature of employment, the existence and adequacy of existing infrastructure, and institutional capacity such as powers to regulate. Political commitment, a positive environment for partnership and collaboration, and the ability to countenance risk between local authority areas and other partners will be prerequisites for implementing some of the provisions of the Bus Services Act, for example.

Policy interventions will have different lead-in times and generate outcomes over varying timescales. Some of the longer-term impacts will require deep embedding in policy, at the national or city-regional

level, and may be less about transport and more about, for example, spatial planning, or changes to the national frameworks for the funding and regulation of infrastructure and housing. Figure 16 summarises some of the key policy interventions for different institutions and the timescales in which they might be expected to yield an impact. It provides an exemplar timeline for action across agencies, and spatial scales to address transport-related issues in their entirety.

Figure 16: Timeline of strategically coordinated actions



Conclusion

The policy recommendations made in this chapter are designed to address the specific issues identified through our interviews with residents and stakeholders. This bottom-up approach ensures that solutions are orientated to solve everyday problems as experienced by low-income households. The numerous

recommendations made, as summarised in Table 8, can be understood as options facing institutions and operators looking to address transport-related barriers to work.

The number of recommendations presented reflects the complexity of the transport system, as well as the way it cuts across policy areas and the wider spatial context in terms of housing and labour markets. One risk of a menu of options is that it encourages a 'pick and mix' approach to policy that supports isolated interventions that, by themselves, are unlikely to have significant impacts. For this reason, we emphasise the point that **improving outcomes requires a strategically coherent and carefully sequenced set of approaches across different spatial scales that engages the full range of agencies and operators.**

6 Conclusion

This research clearly shows that transport is a key barrier to employment for many residents living in low-income neighbourhoods. All too often, **public transport is seen as something that constrains rather than enables a return to work**. Across case study areas there were multiple accounts of late or cancelled buses, excessive fares, complex or confusing ticketing options, and lengthy journey times to more peripheral employment locations. These features of public transport systems all reduce access to employment opportunities by limiting people's perceptions of viable commutes.

A central finding of the study is that **transport barriers are intimately related to the nature and location of employment**. Low wages limit commuting options because of the trade-offs with high transport costs, early or late shifts that are difficult to reach when public transport is not running, and the uncertainties of irregular working patterns that prevent individuals from establishing commuting routines and benefitting from cheaper fares.

In addition to these difficulties, the location of work has become increasingly dispersed across city regions (aside from the low-wage service economy in city centres). Journeys to more peripheral sites such as retail, commercial and industrial parks for those without cars can take far too long, or are simply not viable using a public transport system that has often failed to accommodate the changing geography of work.

The broad nature of the challenges identified in this report makes it evident that **transport-related barriers to work cannot be solved through transport policy alone**. Improving access to employment requires coordinated action across a range of policy areas, including not only transport, but also economic development, regeneration, housing and planning, and employment and skills. It also requires action across spatial scales involving stakeholders in a range of departments and agencies at national, city-regional and local level.

It is important to recognise that every peripheral low-income neighbourhood cannot be connected with every centre of employment within cities and their hinterlands. Labour-market restructuring and the changing geography of work will always favour some areas more than others, and it is unrealistic to accommodate every potential commuting option. At the same time, poorly planned growth in unsuitable locations will only exacerbate the locational issues highlighted in this report. **Issues around accessibility have to be moved front and centre in planning decisions** about the allocation of land use and the control of development.

We have made several recommendations in this report about how connectivity might be improved. Effecting change presents considerable challenges, but the new institutions, powers and funding being acquired by city regions through devolution increase the range of levers available. Combined authorities working with their respective LEPs, PTEs and Sub-National Transport Bodies are particularly well-placed to drive this agenda forward, given their central role in the devolution process, their growing focus on issues of poverty and inequality, the expertise of constituent local authorities, and their ability to coordinate policy across multiple policy areas. The development of **Local Industrial Strategies in particular presents an ideal opportunity to embed objectives around improving connectivity and poverty reduction** in wider goals around economic growth.

Many of the measures proposed would require additional investment. Some of this funding could be raised locally through, for example, planning obligations or levies from local institutions, but **much will need to be subsidised by central government.** This goes against the grain of ongoing spending constraints and expectations that devolution is broadly fiscally neutral. Against a backdrop of regressive transport spending allocations to regions and huge investment in signature projects such as Crossrail or HS2, however, there is arguably **scope for reassessing declining investment in local transport systems** to the detriment of many low-income areas.

Indeed **many of the recommendations we make are broadly aligned with commitments in the UK Government's recently published Industrial Strategy** (HM Government, 2017). This underscores the need to support high-value transport investments in less productive parts of the UK, as well as develop a

more reliable, less congested and better connected transport network. The strategy also recognises the potential of new technologies such as the automation of road vehicles and new business models (ride-hailing services, ride sharing and MaaS) to challenge assumptions about the way we travel. It is perhaps too early to say precisely what the impact of these will be upon the connectivity of low-income neighbourhoods, but it is **vital that principles of inclusivity should be at the heart of the development and implementation of these platforms**.

There may also be opportunities to use the new £1.7bn Transforming Cities Fund intended to improve connectivity, reduce congestion, and utilise new mobility services and technology to support such agendas. Unchecked, however, such funds could disproportionately be used to invest in road schemes to unlock development land on the peripheries of urban areas, which will not benefit low-income and marginalised groups in the long term.

One final but significant finding from this research is that the transport-related barriers to work facing individuals on low incomes are often more practical than perceptual, and rooted in concerns such as the unreliability of transport or the limited financial benefits of work once offset against travel costs. We found **little evidence of limited spatial horizons** where localised, cultural outlooks constrain people's perceptions of viable commutes. Current spatial routines may be limited, but this more a function of poverty than of a reluctance to travel.

An important implication of this is that substantially discounted or free travel could play a vital role in increasing confidence in using the transport system, while also expanding the range of familiar areas where individuals might consider work. Addressing the constrained travel choices that poverty imposes may be an important element of increasing the employment opportunities facing low-income households.

Notes

1. Available at: https://bit.ly/2IXkFjo [accessed 4 May 2018]

2. Defined as those in occupations in the three classes 'Caring, leisure and other services', 'Sales and customer services' and 'Elementary'.

3. Others include: central government grant; the Local Majors Fund; the Regional Growth Fund; the Access Fund; local authority property taxes and localised charges; and local authority capital finance (Butcher, 2016a).

4. Franchising powers are only available automatically, however, to mayoral combined authorities. Other types of authority can request franchising powers for which secondary legislation is necessary. In addition, these other types of authority need the consent of the Secretary of State before they can begin to use the new powers (see Department for Transport, 2017b).

5. Supported bus services are those that receive subsidy from local authorities, as bus operators would not run them on a wholly commercial basis otherwise.

6. All areas selected fell into the two disconnected categories within the typology (disconnected core and disconnected suburb), except Hattersley – this was a Connected Suburb under the typology, but knowledge of, and past research undertaken in, the area identified it as an ideal candidate for exploring an 'overspill' estate.

7. One-hour commute zones have been constructed using electoral wards as a building block to define 'best-fit' areas covering the places accessible within 60 minutes by public transport at 8am, based on the travel time maps for each case study area. Source: Nomis.

8. The following categories have been included in the definition of low-paid occupations: 25 – Protective Service Occupations; 52 – Caring Personal Service Occupations; 58 – Sales Occupations; 61 – Customer Service Occupations; 70 – Elementary Trades and Related Occupations; and 73 – Elementary Administration and Service Occupations. For further discussion of low-paid occupations, see Rowlings and Nanton (2017).

9. Recent estimates suggest only 18% of the adult social care workforce is male (skillsforcare, 2017).

10. See https://dspace.ist.utl.pt/bitstream/2295/296481/1/abc.pdf [accessed 4 May 2018]

11. See the Greater Manchester Accessibility Level model (GMAL) for an example: http://www.gmtu.gov.uk/gmbusroute/GMAL%20Calculation%20Guide.pdf [accessed 4 May 2018]

12. https://www.walkscore.com/score/london-england [accessed 4 May 2018]

13. See for example: https://bit.ly/2uclvVt [accessed 4 May 2018]

14. See, for example, the recent consultation on the Scottish concessionary travel scheme at https://bit.ly/2zQghlz [accessed 4 May 2018]

References

Beatty, C and Fothergill, S (2016) The uneven impact of welfare reform: the financial losses to places and people. Sheffield: Sheffield Hallam University

Blakeley, G (2017) Paying for our progress: how will the Northern Powerhouse be financed and funded? Manchester: IPPR North

Butcher, L (2016a) Local Transport in England, 2010–, Briefing Paper Number SN5735, 23 August 2016. London: House of Commons Library

Butcher, L (2016b) Transport in Scotland. Briefing Paper Number SN03192, 26 July 2016. London: House of Commons Library

Butcher, L (2017) Transport in Scotland, Wales and Northern Ireland. Briefing Paper Number SN03156, 12 June 2017. London: House of Commons Library

Campaign for Better Transport (2016) Buses in crisis: a report on bus funding across England and Wales 2010–2016. London: CBT

Chartered Institute of Logistics and Transport (2016) Bus reform: survey of senior directors of local bus service operators – summary of findings. Corby: CILT

Competition Commission (2011) Local bus services market investigation: a report on the supply of local bus services in the UK (excluding Northern Ireland and London), 20 December 2011. London: Competition Commission

Cox, C (2017) 'Mayor Andy Burnham vows never to introduce charge on car drivers as he announces plan to fight congestion and pollution', Manchester Evening News, 22 September 2017. Available at: https://bit.ly/2lSb9SI [accessed 8 May 2018]

Department for Transport (2015) Transport Statistics Great Britain 2015. London: DfT. Available at: https://bit.ly/1Uv3QNd [accessed 8 May 2018]

Department for Transport (2017a) Annual bus statistics: England 2016/17, Statistical Release, 17 December 2017. Available at: https://bit.ly/2sn5Tf0 [accessed 8 May 2018]

Department for Transport (2017b) The Bus Services Act 2017: new powers and opportunities. London: DfT

Department for Transport (2017c) Modal comparisons (TSGB01), Table TSGB0111, Average time taken to travel to work by region of workplace and usual method of travel, Great Britain: October to December 2016, Available at: https://bit.ly/2IWMpoI [accessed 8 May 2018]

Forth, T (2017) Defending Uber. Available at: https://www.tomforth.co.uk/defendinguber/ [accessed 8 May 2018]

Gibb, K, Stephens, M, Reuschke, D, Wright, S, Besemer, K and Sosenko, F (2016) How does housing affect work incentives for people in poverty? York: JRF

Gobillon, L, Selod, H and Zenou, Y (2007) 'The mechanisms of spatial mismatch', Urban Studies, 44, pp. 2401–27

Goodman, A, Jones, A, Roberts, H, Steinbach, R and Green, J (2014) '"We can all just get on a bus and go": rethinking independent mobility in the context of the universal provision of free bus travel to young Londoners', Mobilities, 9(2), pp. 275–93

Green, AE and White, RJ (2007) Attachment to place: social networks, mobility and prospects of young people. York: JRF

Hincks, S, Kingston, R, Webb, B and Wong, C (2018) 'A new geodemographic classification of commuting flows for England and Wales', International Journal of Geographical Information Science, 32(4), pp. 663–84

HM Government (2017) Industrial strategy: building a Britain fit for the future. London: HM Government

House of Commons Transport Committee (2012) Competition in the local bus market: Third Report of Session 2012–13, HC 10 (incorporating HC 1861-i to iii, Session 2010–12). London: The Stationery Office Limited

Houston, D (2005) 'Employability, skills mismatch and spatial mismatch in metropolitan labour markets', Urban Studies, 42(2), pp. 221–43

Isaac, A (2015) 'Councils in the driving seat: transport devolution explained', The Guardian, 23 September 2015. Available at: https://bit.ly/2GZ84uo [accessed 8 May 2018]

Jones, C and Murie, A (1999) Reviewing the Right to Buy. Birmingham: Centre for Urban and Regional Studies, University of Birmingham

Joseph Rowntree Foundation (2017) UK Poverty 2017: a comprehensive analysis of poverty trends and figures. York: JRF

Kubitz, B (2017) 'On-demand shared transport offers new route for bus travel', transportxtra.com, 13th October 2017. Available at: https://bit.ly/2xnDsDf [accessed 10 May 2018]

Lucas, K, Mattioli, G, Verlinghieri, E and Guzman, A (2016) 'Transport poverty and its adverse social consequences', Transport, 169(TR6), pp. 353–65

Mackie, P, Laird, J and Johnson, D (2012) Buses and economic growth. Leeds: University of Leeds

Murie, A and Ferrari, E (2003) Reforming the Right to Buy in England. Working paper for Chartered Institute of Housing. Birmingham: Centre for Urban and Regional Studies

National Infrastructure Commission (2018) Congestion, capacity, carbon: priorities for national infrastructure – consultation on a national infrastructure assessment. London: NIC

Ong, PM and Miller, D (2005) 'Spatial and transportation mismatch in Los Angeles', Journal of Planning Education and Research, 25, pp. 43–56

Office for National Statistics (2014) Commuting and personal well-being, 2014. London: ONS

Office for National Statistics (2017a) Family spending in the UK: financial year ending March 2016. Statistical bulletin. Newport: ONS. Available at: https://bit.ly/2lWfc1P [accessed 23 May 2018]

Office for National Statistics (2017b) Detailed household expenditure by gross income decile group, UK: Table A6. Dataset. Newport: ONS. Available at: https://bit.ly/2kwP2Tp [accessed 23 May 2018]

Pawson, H, Satasangi, M, Jones, C and Leishman, C (2002) Assessing and predicting the long run impact of the Right to Buy. Edinburgh: Communities Scotland

Rae, A, Hamilton, R, Crisp, R and Powell, R (2016) Overcoming deprivation and disconnection in UK cities. York: JRF

Raikes, L (2016) Connecting lines: how devolving transport policy can transform our cities. Manchester: IPPR North

Rowlings, J and Nanton, A (2017) Earnings and low pay: distributions and estimates from the Labour Force Survey. London: ONS. Available at: https://bit.ly/2LIpkHI [accessed 10 May 2018]

Rowney, M and Straw, W (2014) Greasing the wheels: getting our bus and rail markets on the move. London: IPPR

skillsforcare (2017) 2017 State of the adult social care sector and workforce report. Leeds: skillsforcare

Social Exclusion Unit (2003) Making the connections: final report on transport and social exclusion. London: Office of the Deputy Prime Minister

Taylor, J, Barnard, M, Neil, H and Creegan, C (2009) The travel choices and needs of low income households: the role of the car. Report by the National Centre for Social Research. London: DfT

Taylor, M (2017) Good work: the Taylor review of modern working practices. London: BEIS

Thakuriah, P, Persky, J, Soot, S and Sriraj, PS (2013) 'Costs and benefits of employment transportation for low-wage workers: an assessment of job access public transportation services', Evaluation and Programme Planning, 37, pp. 31–42

Titheridge, H, Christie, N, Mackett, R, Hernández, DO and Ye, R (2014) Transport and poverty: a review of the evidence. London: UCL

Tochtermann, L and Clayton, N (2011) Moving on up, moving on out? Overcoming the jobs-skills mismatch. London: Centre for Cities

Transport Focus (2018) Using the bus: what young people think. Summary Report, February 2018. London: Transport Focus

Waddington, M and Jaleel, G (2014) 'Since removal of Liverpool bus lanes some journeys take longer, report reveals', Liverpool Echo, 22 October 2014. Available at: https://bit.ly/2L0h58M [accessed 10 May 2018]

Walker, J (2012) Human transit: how clearer thinking about public transit can enrich our communities and our lives. Washington, DC: Island Press

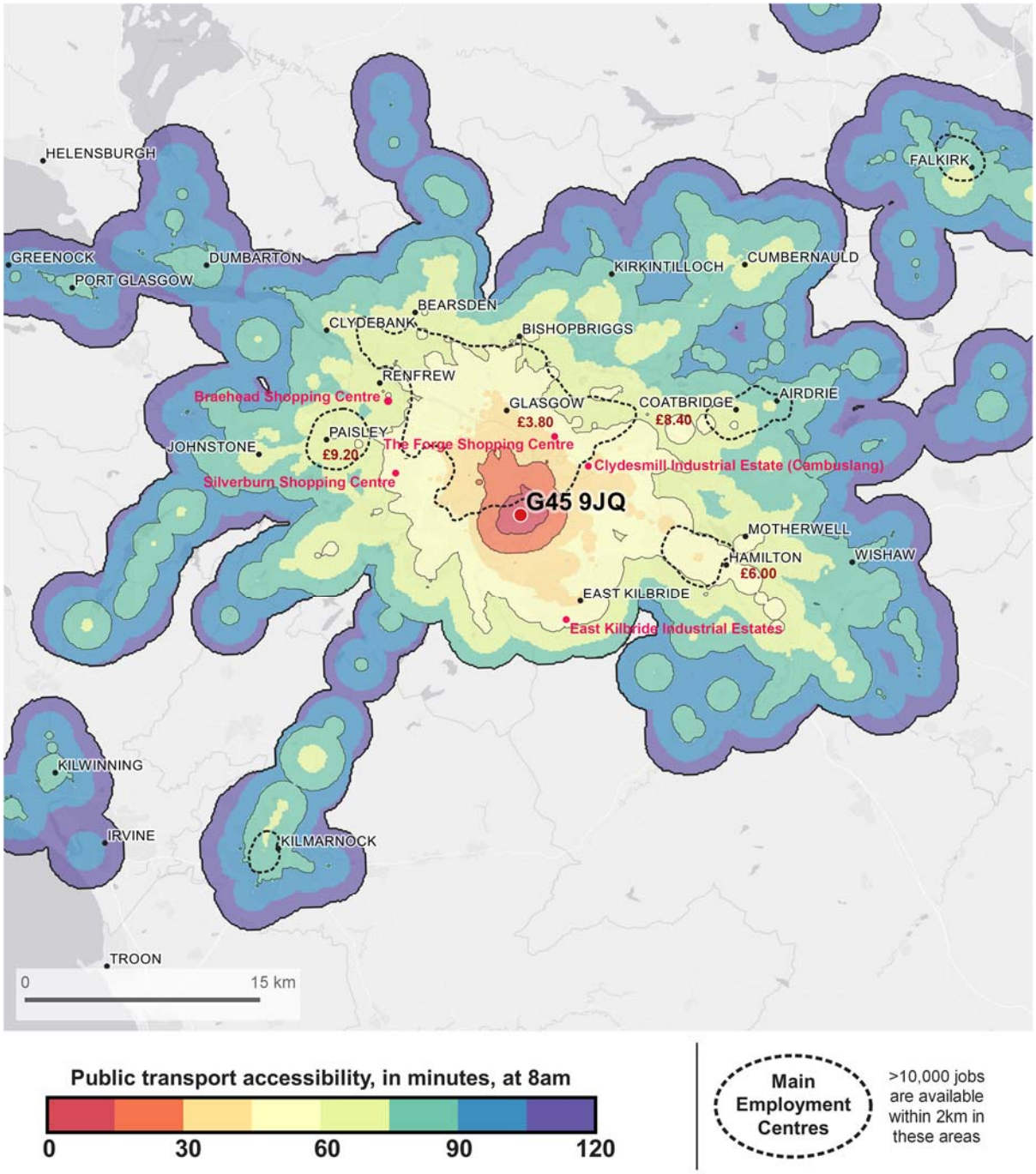
Zenou, Y (2009) 'Urban search models under high-relocation costs: theory and application to spatial mismatch', Labour Economics, 16, pp. 534–46

Appendix 1: Travel time maps showing workplaces and sample fares to centres of employment

The six maps below provide the following additional information on case study areas:

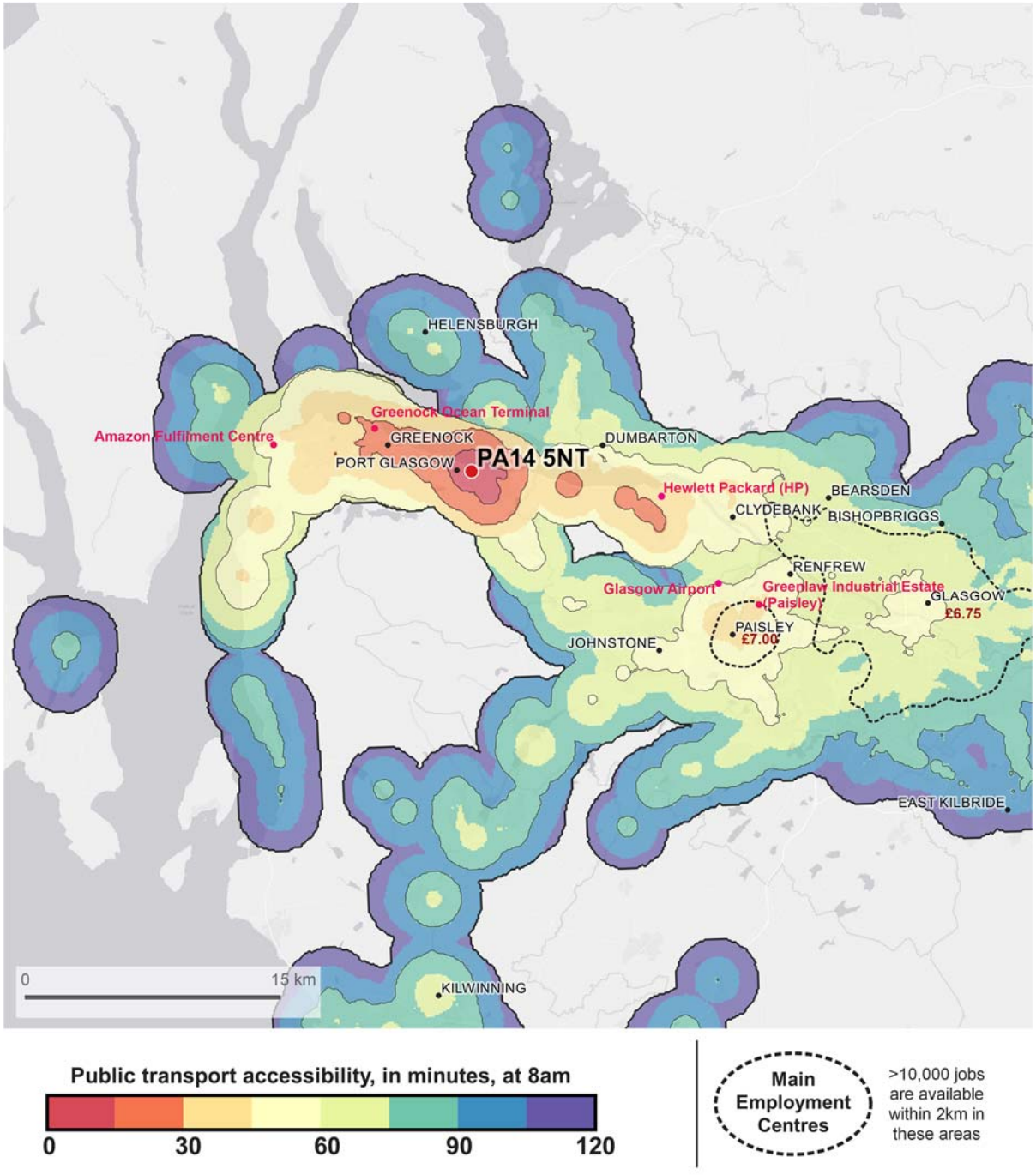
- indicative travel costs to major employment areas (where there are more than 10,000 jobs from any given point within a 2km radius, indicated by black isochrone lines based on the employee job maps in Chapter 2, Figures 6 to 8), assuming peak-time 8am starts
- key sites of employment: large employers or major commercial, retail or industrial parks; Appendix 2 provides more information on the distance of key sites from case study areas and indicative travel times by public and private transport.

Figure 17: Indicative travel costs and key employment locations (Castlemilk)



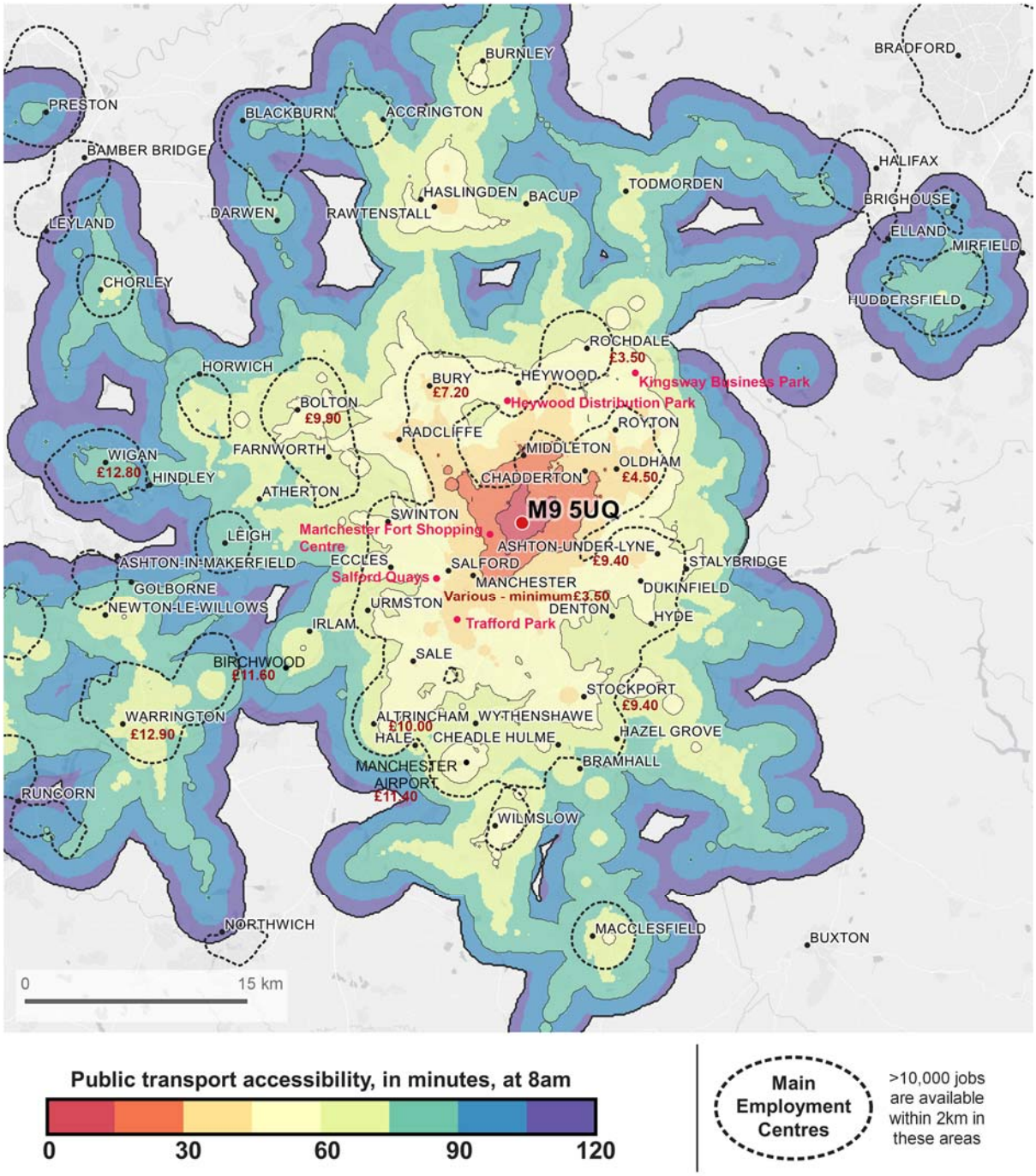
Note: selected employment locations referred to in the report are marked on the map in red text.

Figure 18: Indicative travel costs and key employment locations (Port Glasgow)



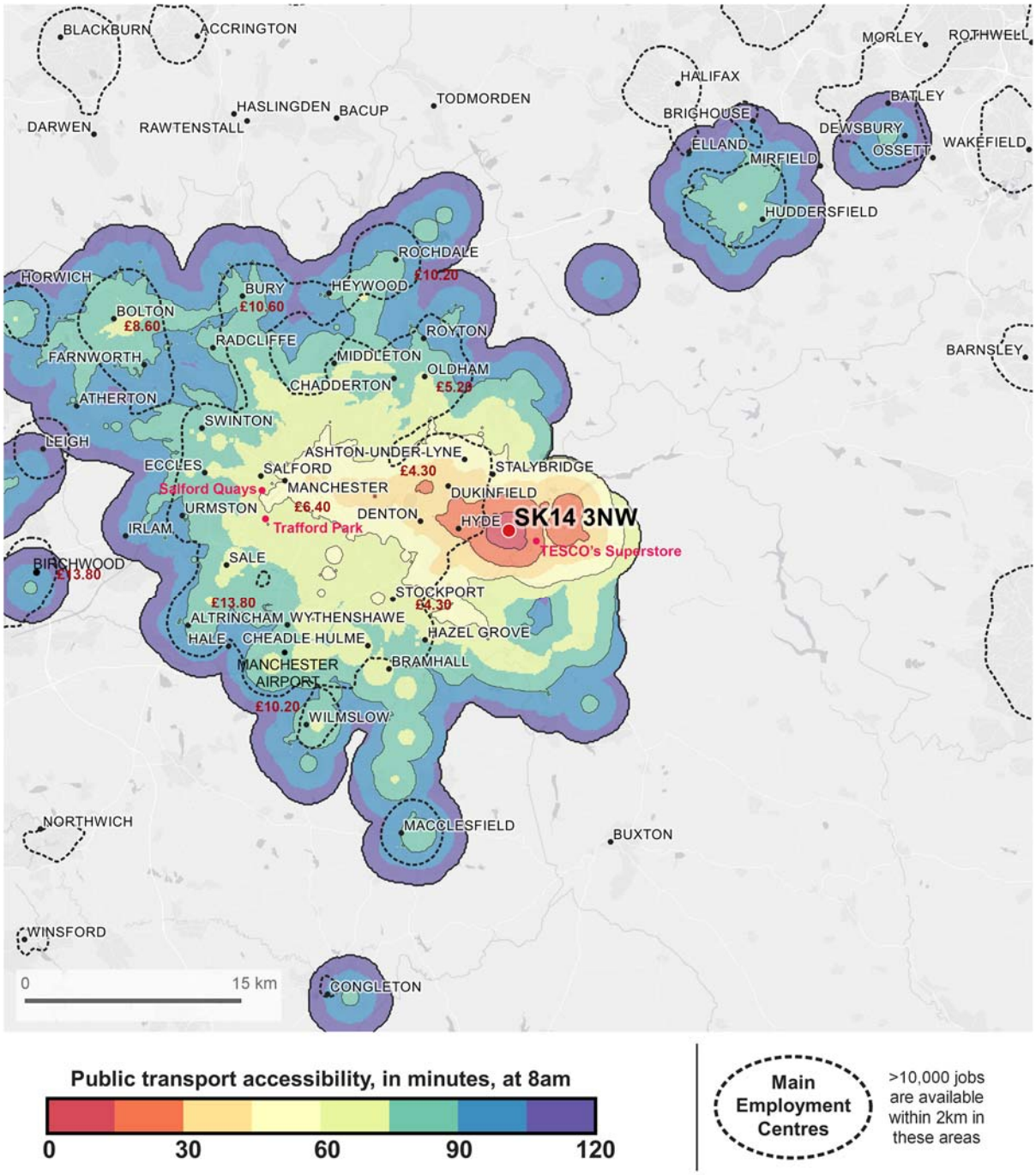
Note: selected employment locations referred to in the report are marked on the map in red text.

Figure 19: Indicative travel costs and key employment locations (Harpurhey)



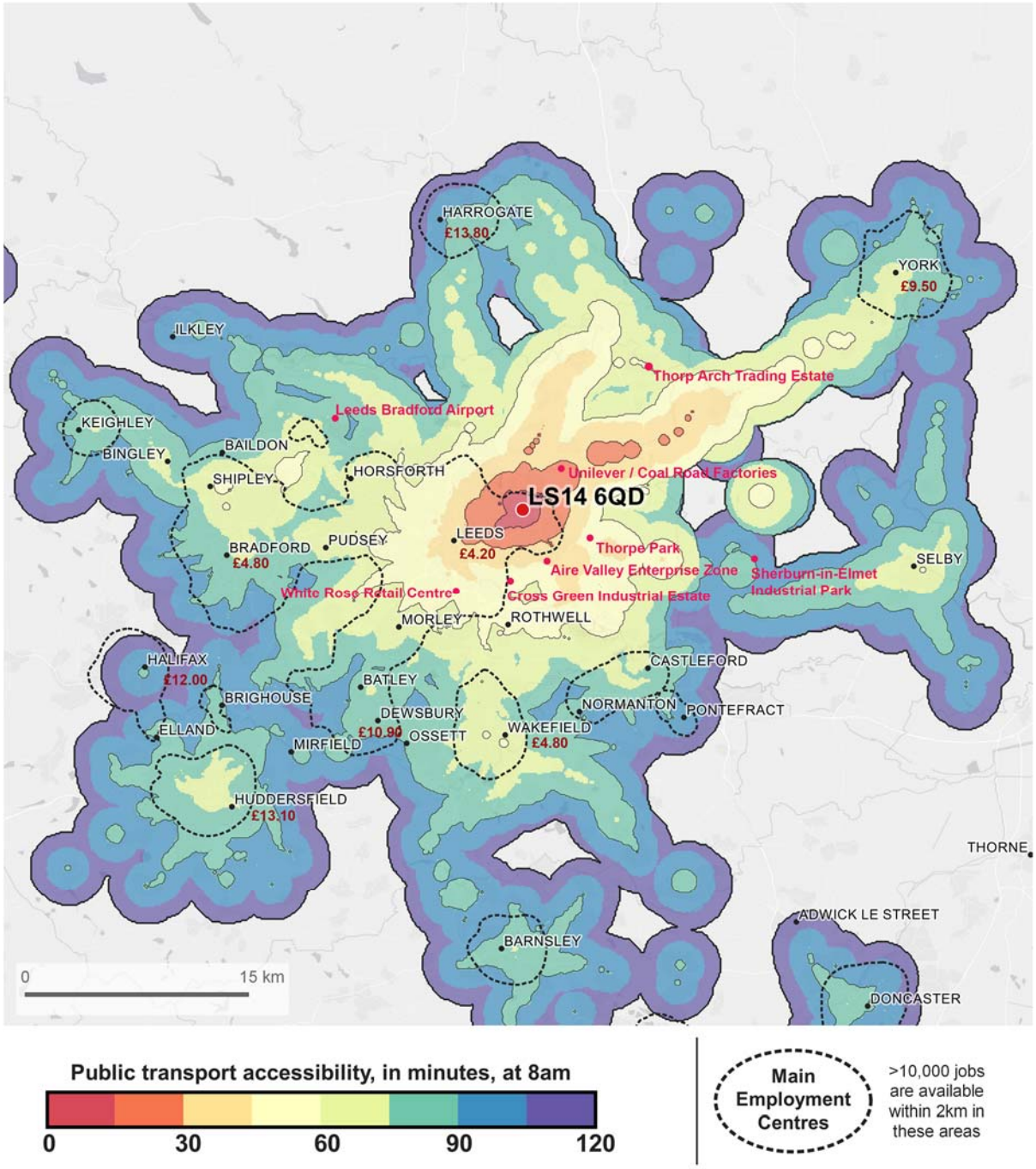
Note: selected employment locations referred to in the report are marked on the map in red text.

Figure 20: Indicative travel costs and key employment locations (Hattersley)



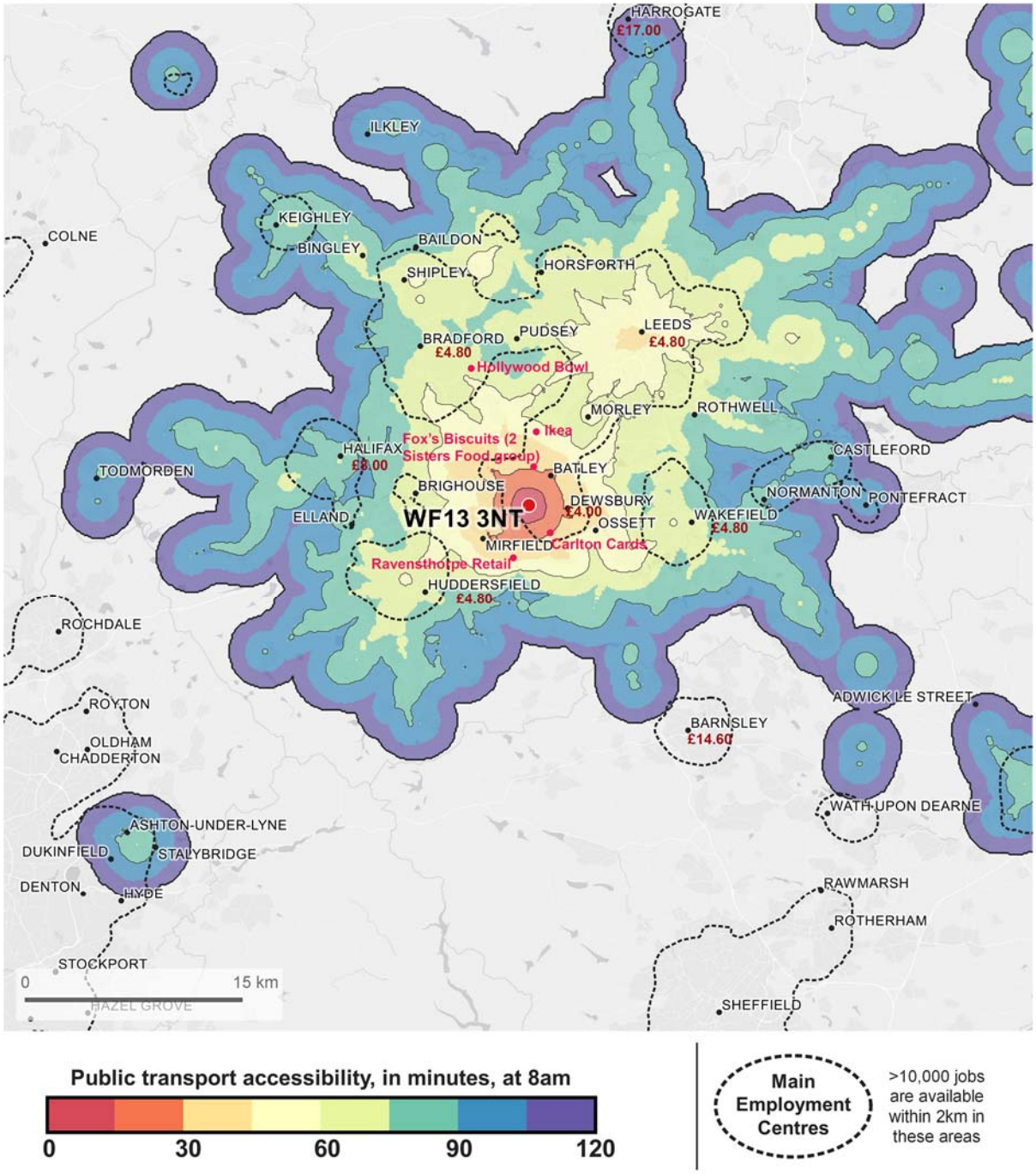
Note: selected employment locations referred to in the report are marked on the map in red text.

Figure 21: Indicative travel costs and key employment locations (Seacroft)



Note: selected employment locations referred to in the report are marked on the map in red text.

Figure 22: Indicative travel costs and key employment locations (Dewsbury Moor)



Note: selected employment locations referred to in the report are marked on the map in red text.

Appendix 2: Journey times and distance to key sites of employment

Table 10: Journey times and distance to key sites of employment in the case study areas

Case study area	Name of site/employer	Location	Nature of site	Nature of work	Distance from case study area (miles)*	Actual time to reach by car, arriving at 9am (minutes)*	Quickest timetabled journey by public transport, arriving at 9am (minutes)*
Castlemilk	Silverburn Shopping Centre	Pollok	Out-of-town shopping centre	Retail/service	5.8	18–30	55
Castlemilk	East Kilbride Industrial Estates	East Kilbride	Industrial	Warehouse/picker/packer/seasonal/temporary/ shift work	7.2	16–22	52
Castlemilk	Clydesmill Industrial Estate	Cambuslang	Industrial	Warehouse/picker/packer/seasonal/temporary/ shift work	4.4	14–22	61
Castlemilk	Braehead Shopping Centre	Renfrew	Retail/leisure	Retail/security/cleaning/catering	10.4	22–40	60
Castlemilk	Queen Elizabeth Hospital	Hillington	Healthcare/ cleaning	Healthcare/cleaning/portering	9.6	22–45	58
Castlemilk	The Forge Shopping	Parkhead	Retail	Retail/catering/beauty	5.4	16–35	46

	Centre						
Castlemilk	Rutherglen Exchange	Rutherglen	Retail	Retail	2.8	10–18	25
Castlemilk	Shawlands Shopping Centre	Shawlands	Retail	Retail	4.2	14–22	34
Castlemilk	Asda superstore	Toryglen	Retail	Retail	3.7	12–22	35
Port Glasgow	Amazon Fulfilment Centre	Gourock	Distribution centre/depot	Warehouse/picker/packer/seasonal/temporary/ shift work	11.4	24–40	59
Port Glasgow	Hewlett Packard (HP)	Bishopton	Commercial	Sales/IT/technology	9.8	12–16	29
Port Glasgow	Greenock Ocean Terminal	Greenock	Shipping	Security/contract work	4.3	12–20	22
Port Glasgow	Glasgow Airport	Paisley	Retail/service	Retail/cleaning/security/catering	12.3	16–22	58
Port Glasgow	Greenlaw Industrial Estate	Paisley	Industrial/ warehouse	Industrial/warehouse	14.9	24–45	42
Seacroft	Sherburn-in-Elmet Industrial Park	Sherburn-in-Elmet	Industrial	Warehouse/security	18.1	24–35	105
Seacroft	Cross Green Industrial Estate	Leeds	Industrial	Warehouse/manufacturing	3.8	12–22	55
Seacroft	Leeds Enterprise Zone	Leeds	Industrial	Manufacturing/engineering/transport/distribution/ service industries	3.8	12–22	55
Seacroft	Thorp Arch	Leeds	Industrial/retail	Commercial/retail/leisure	15.0	22–35	79

	Estate						
Seacroft	Thorpe Park Leeds	Leeds	Commercial/retail	Offices/retail/leisure	3.0	9–20	29
Seacroft	White Rose Shopping Centre	Leeds	Retail/leisure	Service/cleaning/catering/customer service	9.0	22–40	69
Dewsbury Moor	The Leisure Exchange	Bradford	Leisure	Service/cleaning/catering/customer service	9.6	26–50	85
Dewsbury Moor	Victoria Mills Business Park	Dewsbury	Industrial	Warehouse/factory work	1.8	8–16	21
Dewsbury Moor	Carlton Cards	Dewsbury	Warehouse	Warehouse/distribution/picker/packer	1.6	7–14	22
Dewsbury Moor	Fox's Biscuits (2 Sisters Food Group)	Batley	Food manufacturer	Assembly line	2.2	8–14	37
Dewsbury Moor	Ravensthorpe Retail Park	Ravensthorpe	Retail	Retail	1.7	10–20	20
Dewsbury Moor	IKEA	Birstall	Retail/warehouse	Retail/warehouse	4.2	14–16	69
Harpurhey	Heywood Distribution Park	One mile east of Junction 3 of the M66	Warehouse/ distribution	Warehouse/picker/packer/seasonal/temporary/ shift work	8.1	14–26	66
Harpurhey	Manchester Victoria Station	Manchester City Centre	Transport/retail	Cleaning/manual/shift work	2.5	10–26	23
Harpurhey	North Manchester General Hospital	Crumpsall	Healthcare	Cleaning/healthcare/portering	1.8	7–12	31
Harpurhey	Manchester Airport	Ringway	Retail/service	Retail/cleaning/security/catering	13.7	40–80	56

Harpurhey	Trafford Park	Trafford	Industrial	Warehouse/manufacturing	8.3	24–55	71
Harpurhey	Manchester Fort Shopping Centre	Cheetham Hill	Retail	Retail/catering/service	1.8	6–18	31
Harpurhey	Salford Quays	Salford	Leisure/catering/ retail	Leisure/catering/retail	5.7	22–50	53
Harpurhey	Kingsway Business Park	Rochdale	Warehouse/ distribution	Warehouse/distribution	12.2	18–30	84
Harpurhey	Stronguard Security UK Ltd	Moston	Security	Security	1.2	5–8	8
Hattersley	Kerry's Foods	Hyde	Food manufacturer	Assembly line/picker/packer	1.8	5–7	11
Hattersley	Tesco superstore	Hattersley	Retail	Retail/cleaning/security/catering	0.6	3	3
Hattersley	Tameside Hospital	Ashton	Healthcare/ cleaning	Healthcare/cleaning/portering	5.2	18–35	41
Hattersley	Asda superstore	Hyde	Retail	Retail/cleaning/security/catering	3.4	6–12	16
Hattersley	Manchester Airport	Ringway	Retail/service	Retail/cleaning/security/catering	18	40–85	60
Hattersley	Morrison's supermarket	Hyde	Retail	Retail/cleaning/security/catering	3.1	5–8	10
Hattersley	Manchester Central (formerly GMEX)	Manchester	Conference/ exhibition centre	Service/car park attendant	11.0	30–75	54
Hattersley	Booker Wholesale	Gorton	Cash and carry operator	Warehouse	7.6	14–35	32
Hattersley	Arbour Lodge Independent	Marple	Healthcare	Healthcare/care work/cleaning/portering	6.5	20–30	52

	Hospital						
Hattersley	Salford Hospital	Salford	Healthcare	Healthcare/care work/cleaning/portering	22.6	45–100	81
Hattersley	Trafford Park	Trafford	Industrial	Warehouse/manufacturing	21.2	45–100	88
Hattersley	Salford Quays	Salford	Leisure/catering/ retail	Leisure/catering/retail	12.8	40–100	64

*Source of distance and travel time data: Google Maps, accessed 1 March 2018; car journey times are range of actual journey times.

Appendix 3: Analytical approach

This appendix provides more detail on the analytical approaches used in the research in relation to three key areas:

- **public transport accessibility analysis** from specific locations: this is known as an 'isochrone' approach, as we explain below, and was used to produce the 'travel time' maps (Figures 9 to 14 and 17 to 22)
- **drive time analysis:** we also looked, where possible, at the question of how far people can travel by road using private motor vehicles (normally cars, but also vans and motorbikes) and used this as the basis for Figure 2
- **jobs density analysis:** this relates to sections of the report where we identify how many jobs are available from a given area, effectively identifying areas of high job density (Figures 6 to 8).

The purpose of each of these approaches is to help us understand more about the accessibility of jobs from more deprived neighbourhoods, and thereby to help highlight areas where access to jobs might be more problematic. Much of the analysis in the report (and the online map set) relates to public transport. The reason for this is that public transport is often the main mode of travel for residents of low-income neighbourhoods when accessing or considering employment opportunities.

Public transport accessibility analysis

The report uses public transport accessibility mapping to help shed light on the range of destinations that can be reached by public transport from the case study areas. Our approach is based on analysis we undertook using Mapumental, a tool created by MySociety, a not-for-profit social enterprise focused on building technologies aimed at promoting positive societal change. Mapumental is based on a comprehensive analysis of all public transport data.

The travel time maps presented in the report show 'isochrones', or lines of equal travel time around a location, similar to the isobars you might see on a weather map. These time-banded maps help illustrate the large differences in accessibility that can exist between different deprived areas. The service currently only covers Great Britain, so for that reason it was not possible to include Northern Ireland in this part of the analysis.

The timetable dataset that Mapumental is based on is compiled using a variety of public transport data sources including:

- the Traveline National Data Set (TNDS)
- the National Coach Services Database (NCSD)
- rail service data from the Rail Delivery Group.

The timetables information used by Mapumental is updated on a regular basis, and the maps in this report are based on data current as of January 2018. Most of the analysis in the maps is based on a departure time of 8am, but for our six case study areas we also looked at the range of employment destinations that were reachable based on a 5am departure time (Figure 15 is an example).

There are a number of assumptions built in to the calculations used by Mapumental and, therefore, the maps presented in the report and online. The first is that it uses an average walking speed of 3mph. The second is that it allows for up to ten minutes' walking time between stations and to/from a final destination. The third is that it assumes that five minutes is enough time for changing coach, underground, ferry or train at the same station. In this sense, we acknowledge that in some cases this may represent a best-case scenario. Furthermore, the use of timetable data assumes that services are punctual, when in reality complex journeys involving a change of service may take significantly longer than the timetable suggests. Again, we acknowledge that the maps represent the best case.

In some cases, the isochrone maps shown in the report will display isolated 'islands' of accessibility, where relatively far-flung locations appear accessible. This is often the case in locations close to mainline railway stations, connected to fast inter-city routes.

The maps are shown in 15 minute time bands, up to 120 minutes, since this provides an easily accessible way to assess the range of employment destinations that can realistically be reached within timeframes that most people intuitively identify with. It also avoids the spurious precision associated with displaying graduated travel surfaces down to the minute, which is likely to be misleading.

Drive time analysis

For a selection of employment clusters we looked at the length of time it would typically take to commute to that area by car. This was to inform a comparison of private versus public transport modes, and to help highlight what is often a significant extra time cost for employees who have to rely on public transport to get to work.

We used the ESRI World Traffic Service to calculate typical journey times using ArcGIS Network Analyst's Calculate Service Area tool. The following parameters were used:

- arrival time: 6am and 9am
- day: Thursday 8 March 2018.

This tool performs a server-side calculation using the most recent World Traffic Service historic model. While a specific date was chosen for the tool, the World Traffic Service model does not use specific dates, but builds its model based on the day of the week. This model is updated regularly using average travel times for the given day and time over the previous three years.

For this reason, calculations performed using this tool may return slightly different results to those reported in this research. However, when the results are tested using other online travel time tools (such as Google Maps or Bing Maps), they were shown to be accurate.

Jobs density analysis

A small area dataset derived from the 2011 Census of Population was used to estimate the number of jobs within each neighbourhood. Middle-layer Super Output Areas (MSOAs), with a typical population of around 7,800, were used to proxy neighbourhoods in England, and 'Data Zones' – typical population around 800 – performed the same role for Scotland.

An assumption was made that jobs have a physical location, and that this location was invariant. Clearly, some jobs violate this assumption in that they may be peripatetic (and the location varies, but is different from a notional base or head office). We further assumed that the physical location of jobs would be in a built-up area. Again, there are jobs where this is known not to be the case, such as jobs within agriculture. In both cases we know that our methods will capture such jobs, but potentially slightly misrepresent where they are.

Additionally, we have not sought to make a distinction between part-time and full-time jobs in our mapping of employment locations. We have made the assumption that employment clusters represent spaces of significant employment opportunities (as a result of turnover of jobs, and also that new employment locations tend to be physically clustered), and that each cluster will contain a range of part- and full-time opportunities. We know that in practice, this will vary by sector.

The jobs data relate to the Census day on 2011. While more up-to-date data on employment is available through other sources, such as BRES, this does not provide the detailed level of spatial granularity required for a study of accessibility. We made a decision to use the rich geographic data within the Census, accepting the cost in terms of data currency. The point in time represents a period of the beginnings of a post-recession recovery, and so may slightly underestimate the number of jobs.

The general method used followed this workflow:

1. Determine the number of 'employee jobs' from the Census in each MSOA/Datazone, based on workplace location.

2. Constrain this number to areas within each LSOA/Datazone that are built up, and assume that the jobs are spread evenly across these built-up areas. This was achieved by:

    a. Calculating a 100m x 100m grid ('raster') showing the number of postal delivery points from the ONS Postcode Directory (ONSPD). These postal delivery points were used as a proxy for a built-up area. A non-zero value was used to represent a 100m x 100m cell that was built up.

    b. Calculating the number of 100m x 100m cells within each MSOA/Datazone that are in the built-up area.

    c. For each 'built-up' 100m x 100m cell, dividing the number of jobs in the MSOA/Datazone by the number of built-up cells in the MSOA/Datazone.

3. Using the Spatial Analyst extension in ArcGIS, the total number of jobs within a moving window of 2km was calculated for each.

4. Again using Spatial Analyst, a contour was fitted to the raster surface resulting from step 3. Contours were fitted at 10,000 and 20,000 jobs. The areas enclosed within these contours represent the 'clusters' we used in our maps.

Acknowledgements

The authors would like to thank the Joseph Rowntree Foundation for funding the research, with particular thanks to Brian Robson for his support throughout the project. We would also like to thank Mike Hawking, Jim McCormick and Alex Marsh for insightful and helpful comments that helped strengthen the report. Administrative support from Emma Smith, Sarah Ward and Melissa McGregor at CRESR was invaluable in preparing the report. Charlotte Van Der Lijn played a key role in the final preparation of maps. Finally, we would like to express our thanks to all the residents and stakeholders who gave up their time to talk to us, and share their experiences and insights on which this report is based.

About the authors

Richard Crisp is a Reader at the Centre for Regional Economic and Social Research (CRESR) at Sheffield Hallam University. He specialises in research on poverty, regeneration, housing, sub-regional governance, worklessness and welfare reform. He has recently completed a number of related pieces of work for JRF, including a study of how city regions can tackle poverty through housing and planning policy.

Ed Ferrari is Director of CRESR. He is a co-investigator for the UK Collaborative Centre for Housing Evidence (CaCHE), and has experience of directing research projects for a wide range of funders including JRF, local government, charitable foundations and research councils. He is a past chair of the Housing Studies Association and currently edits the international journal Housing Studies. Ed's research interests include housing markets, land use planning, transport, and the application of geographic information systems to policy problems.

Stephen Green is a Research Fellow in Housing Studies at CRESR. He is an experienced qualitative housing researcher who has carried out projects for clients including Crisis; the Department for Work and Pensions; the Ministry of Housing, Communities and Local Government; JRF; and the Welsh Government. He has researched and produced reports on a wide range of housing issues including homelessness, housing in later life, housing affordability for low-income households, and access to housing in the private rented sector.

Tony Gore is a Research Fellow at CRESR. He has around 30 years' experience of quantitative and qualitative research as part of studies commissioned by organisations including the Department for Work and Pensions; the Ministry of Housing, Communities and Local Government; the Department for Digital, Culture, Media and Sport; the Government Office for Science Foresight; European funding bodies; Groundwork UK; and various local authorities and regional agencies. Previous work for JRF has focused on labour market connections between cities and their hinterlands, and access to employment and training opportunities linked to large-scale public infrastructure development.

Lindsey McCarthy is a Research Fellow at CRESR with specific expertise in housing and homelessness. She is particularly interested in subjective experiences of housing and 'home', especially among more marginalised groups and those living in inadequate accommodation. Lindsey has worked on research projects for a range of clients including Crisis, JRF, the National Housing Federation and the Eaga Charitable Trust. Lindsey is Secretary of the Executive Committee of the Housing Studies Association, the leading learned society for housing in the UK.

Alasdair Rae is a Professorial Fellow in Urban Studies and Planning at the University of Sheffield. His research focuses on deprivation, neighbourhoods, housing, labour markets and spatial data analysis. His recent published work has focused on commuting patterns in the UK and US, residential mortgage lending and housing market search.

Kesia Reeve is a Principal Research Fellow at CRESR, where she coordinates the CRESR Housing Research Team. Kesia is the author of numerous research reports, but has also published academically, particularly on issues relating to homelessness and housing deprivation, and squatting.

Mark Stevens is an Associate Researcher linked to CRESR. His doctorate was an ethnographic study of class and gendered inequalities within a socially mixed neighbourhood. He has extensive work experience of developing and running community and voluntary organisations at a neighbourhood level, working with a range of marginalised groups (including excluded youth, homeless persons and refugees) in the delivery of housing refurbishment, environmental and supported housing programmes.

To speak to us about this research, contact our subject experts.

See https://www.jrf.org.uk/about-us/our-experts

The Joseph Rowntree Foundation has supported this project as part of its programme of research and innovative development projects, which it hopes will be of value to policy-makers, practitioners and service users. The facts presented and views expressed in this report are, however, those of the authors and not necessarily those of JRF.

A pdf version of this publication is available from the JRF website (www.jrf.org.uk). Further copies of this report, or any other JRF publication, can be obtained from the JRF website (www.jrf.org.uk/publications) or by emailing info@jrf.org.uk

A CIP catalogue record for this report is available from the British Library.

First published August 2018 by the Joseph Rowntree Foundation
PDF ISBN 978 1 911581 38 3
Cover image: michaelpuche / istock

Joseph Rowntree Foundation
The Homestead
40 Water End
York YO30 6WP
www.jrf.org.uk

Ref 3293

JRF JOSEPH ROWNTREE FOUNDATION

Inspiring Social Change

www.jrf.org.uk