Director of Public Health Annual Report 2022

Creating a built environment that makes Birmingham a healthier place to live

A BOLDER HEALTHIER BIRMINGHAM

Foreword

The environment in which we live, work and play has a huge impact on our health and wellbeing, from birth to when we die.

It can help us achieve our potential in life or disable individuals by creating barriers and obstacles that marginalise, disempower, and fragment communities. The environment around us, from the house we live in, the streets we walk down, the parks we may or may not feel able to use, and the air we breathe all impact our health and wellbeing.

It is too simplistic to see this as just being about physical space impacts our physical health. Our relationship with the environment goes beyond the physical space. Think about the last time you walked in a wood or a garden and how that space impacted your mental state. The environment in which we live, work and play impacts our health and wellbeing.

As a city, we have much to be grateful to our ancestors for the assets they have left us. These include the many public green spaces and the network of canals that bring blue space into so many lives, to the beautiful heritage buildings and public art that inspire us to get out and explore. The rail network that was so instrumental to Birmingham's economic history creates a framework for active living that we can build on today. In some parts of the city, the historic wide roads enable easy integration of segregated cycle lanes.

However, some of their legacies are less positive. Many of our communities are dissected by major roads and rapid housing expansion in the post-war era that fall short of today's expectations. Cars dominate our city, and although technology is working hard to reduce their impact, they cause a significant bu den of illness and disease through pollution and inactivity.

Neglect and apathy often mean the spaces we have are under-utilised and under-valued, and their potential as healing and enabling spaces goes unrealised.

The way we live our lives has moved on rapidly over the last fifty years, as has our understanding of the environment and its impact on our health and wellbeing. The contributions of citizens to this report highlight some of the positive and negative aspects of Birmingham and the impact on people's lives.

I hope, through this report, we can continue to develop the approach to making the best of the assets we have as a city, redevelop and retrofit what needs to be improved and come together with communities to increase shared ownership of the city we call home.

Dr Justin Varney
Director of Public Health

Birmingham City Council

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1. Introduction

This year's annual DPH report focuses on health and the built environment. The built environment includes physical spaces where we live, work, and relax as well as the places that connect them. They can all contribute to a healthy life. For example, environments conducive to walking or cycling as part of the daily routine can improve our fitness and reduce car journeys. The use of parks and public spaces can improve mental wellbeing and reduce isolation, help reduce obesity and chronic disease.

The core purpose of the Director of Public Health (DPH is independent advocacy for the health of the population and system leadership for its improvement and protection.[1] This report highlights the major health implications and opportunities of our built environment in the context of housing, neighbourhoods, communities, local economy, and movement/access. It includes some inspiring examples of work being done locally to support residents' health.

It explores insights gathered from direct observation of Birmingham citizens in their natural environment (through a digital ethnography study. This describes daily life and travel for locals, explores views about commuting patterns, the quality of neighbourhood spaces and homemaking in Birmingham.

Birmingham has a rich history of public health policy and practice which has been influenced, directly and indirectly, by the living and working conditions of residents, and their health. This relationship between the built environment and public health outcomes is shown in Figure 1.

This shows some of the major public health milestones and developments, globally and in Birmingham, from the 19th to the 21st century. It illustrates how major progress in population health has occurred by improving general social conditions such as housing, food supply and quality, water, and sanitation. These have been underpinned by evolving standards of land use, planning, and design.

A growing population and poor environmental conditions accompanied the Industrial Revolution, resulting in poorer health for the workers and, as a result, a higher incidence of diseases. The average life expectancy was about 40 years. Efforts to better understand, prevent and cure disease have continued. The field of epidemiology (the mid to late 19th century) emerged from England's efforts to control a cholera epidemic which cost thousands of lives.

Furthermore, factors beyond 'the absence of sickness' have had a positive impact on public health. Birmingham was named a town around the time of the cholera epidemics (mid-19th century). The back-to-back slums were demolished (also mid-19th century) to develop better housing and stimulate economic development. Birmingham New Street Station, which now serves as a national transport hub, has created thousands of jobs. The Edgbaston and Bartley Green reservoirs were major developments of that era (mid to late 19th century).

The sanitary movement, which heralded the passing of the Sanitation and new Public Health Acts (mid to late 19th century) was followed by social concerns which reformers exploited to push for mandatory schooling for children as a strategy to end child labour in factories (mid-19th century). These improvements were only possible with government intervention.
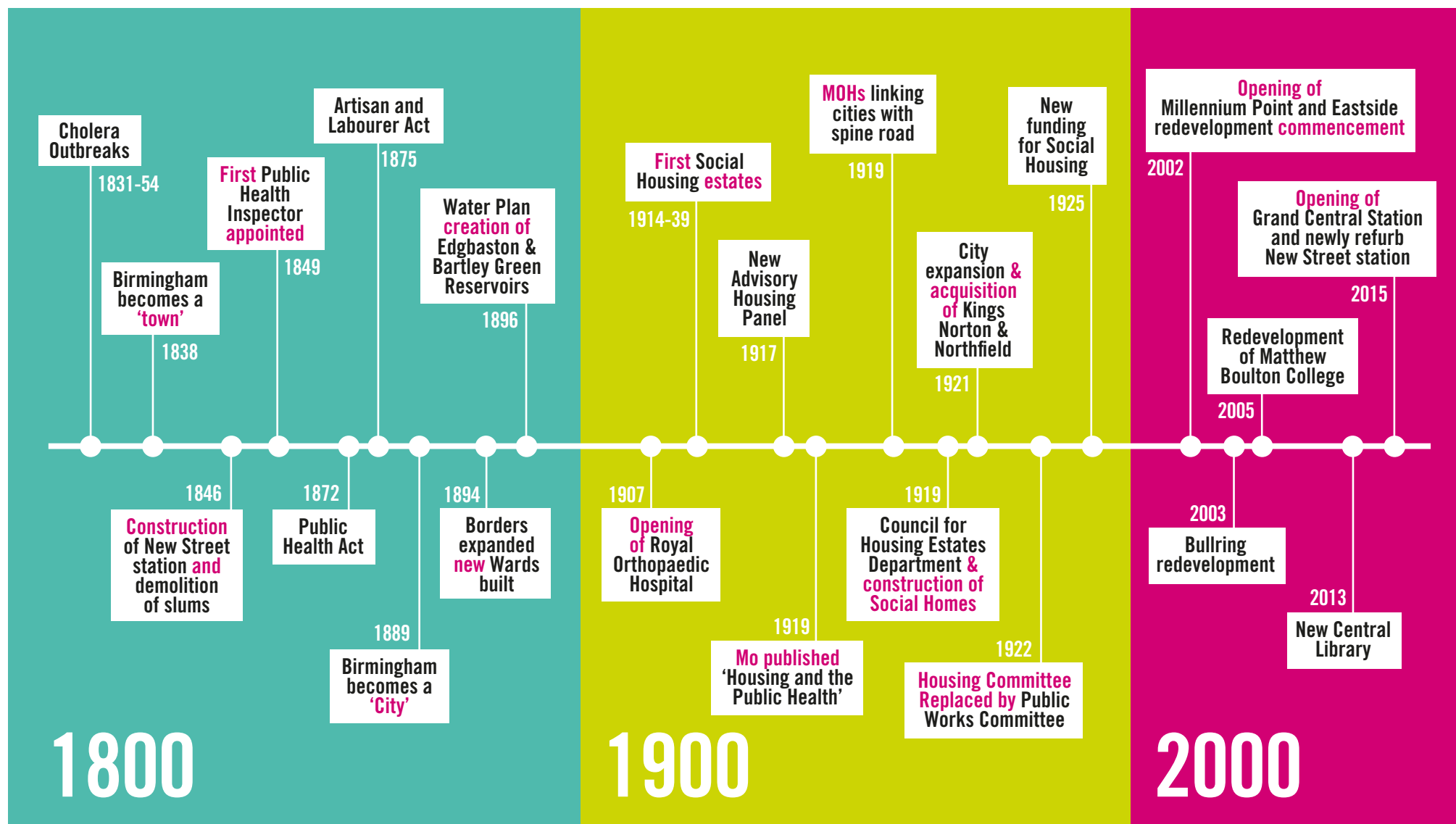
Following the Public Health Act, local health boards were established, and a Medical Officer of Hea th was appointed (MOH).

Even greater progress was made in England's public health in the early 20th century. Concern for improving the lives of mothers and children resulted in new local responsibilities for maternal and child welfare, health visiting, school medicine and learning disabilities. Major improvements were made to mental institutions in this period. The first group of social housing estates was constructed in Birmingham following Hill's notion that community cohesion, access to open spaces, and good quality housing supported health and wellbeing. The National Health Service (NHS) was launched in 1948, and some of these responsibilities shifted from local authorities.

While significant strides have been made in public health throughout the last century, major issues remain. Long-standing health inequalities have worsened. As Britain has become wealthier, for many people, diets have become less healthy and their lives less active, resulting in a significant increase in obesity and related illnesses, such as diabetes. Poverty and poor housing continue to harm health. And despite the considerable public health effort, many people smoke, some consume large quantities of alcohol, and social isolation is rife.

Figure 1: The Evolution of the Built Environment and its Association with Public Health

Cholera Outbreaks
1831-54

First Public Health Inspector appointed
1849

Birmingham becomes a 'town'
1838

Construction of New Street station and demolition of slums
1846

Artisan and Labourer Act
1875

Public Health Act
1872

Water Plan creation of Edgbaston & Bartley Green Reservoirs
1896

Borders expanded new Wards built
1894

Birmingham becomes a 'City'
1889

First Social Housing estates
1914-39

New Advisory Housing Panel
1917

MOHs linking cities with spine road
1919

City expansion & acquisition of Kings Norton & Northfield
1921

New funding for Social Housing
1925

Opening of Royal Orthopaedic Hospital
1907

Council for Housing Estates Department & construction of Social Homes
1919

Mo published 'Housing and the Public Health'
1919

Housing Committee Replaced by Public Works Committee
1922

Opening of Millennium Point and Eastside redevelopment commencement
2002

Opening of Grand Central Station and newly refurb New Street station
2015

Redevelopment of Matthew Boulton College
2005

Bullring redevelopment
2003

New Central Library
2013

1800

1900

2000

2. The Built Environment as Wider Determinants of Health

2.1 Defining the Built Environment

Where we play, live, learn and work has a significant impact on our health and wellbeing. Previous research has emphasised the relationship between the built environment and individual health outcomes.[2] The built environment refers to buildings and other built forms, such as parks and infrastructure that support human activity.

The built environment consists of six key elements: neighbourhood and community, public and green space, buildings and houses, movement and access, local economy, and the food system (see Figure 2).

Figure 2: Elements of the Built Environment

## 2.2   The Importance of the Built Environment for Health

The Barton and Grant health map shown in Figure 3 highlights the relationship between the built environment (wider determinant) and health. The six elements of the built environment are good examples of the social determinants of health including income and education. These broader factors have a 'knock-on' effect on other wider determinants affecting people's health in various ways. They influence our physical and social environments (weather conditions, air quality, civic participation, community capacity and local economy) and so our health and quality of life. According to the World Health Organisation (WHO), "the social determinants of health are mostly responsible for health inequities; the unfair and avoidable differences in health status seen within and between countries".[3]

We want to create a constructive process where we work jointly with planning, transportation, housing, and other council departments to create conditions for healthier lifestyles.

In Birmingham, a social gradient (inequities that runs from top to bottom affecting everyone) across negative environmental conditions contributes to health outcomes, with disadvantaged communities experiencing worse outcomes than better off ones.

The choice and range of built environment interventions must equal the disadvantage which our residents face. People who live in deprived areas are more likely to be affected by poor housing, high crime rates, poor air quality, unsafe traffic, and a lack of g een areas with children's play spaces. They are also likely to experience the negative effects from climate change.

Figure 3: The Broader Social and Economic Determinants of Health and Wellbeing
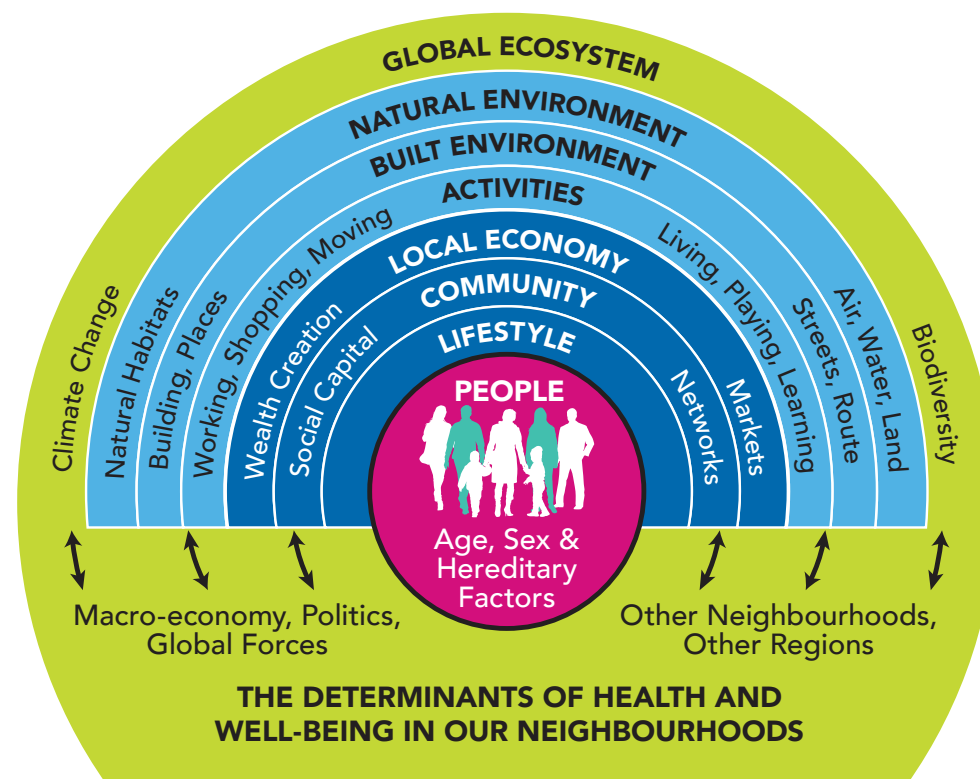
3. Housing

3.1 Why is Housing an Important Determinant of Health?

We are estimated to spend 90% of our time indoors, with 65% of that time spent at home before the COVID-19 pandemic.[4] If we want to improve individuals, families, and the community's health and wellbeing, practitioners need to start in the home where most people spend their lives.

Although the relationship between housing and health is complex, providing a physical environment where people can live healthier lives is vital to reducing health inequalities. Good building design encourages physical activity; hence 'active designs' promote health in their developments and create surroundings that are accessible and encourage physical activity. These include, safe, attractive, and labelled stairwells, bike racks, public open spaces, and water features.[5]

There are several housing characteristics that can affect our health and wellbeing. Poorly designed houses are linked to various physical and mental health conditions.[6] Housing conditions, such as dampness, mould, cold, and overcrowding are related to respiratory infections, severe asthma, and poor mental health. Inadequate heating is also closely linked to increased excess winter deaths.[7][8] Poor housing conditions negatively impact children's wellbeing. Children who live in cold, damp housing miss more school days, suffer from longer-term health problems and disabilities, and are more likely to perform poorly in school.[9]

Those who live in substandard housing often face one or more other disadvantages, including low income, high unemployment rates, and social isolation. On the other hand, age-appropriate, affordable, and safe housing promotes physical and mental health and better life chances.

There is a rich body of evidence linking poor living and housing conditions to human health, from Friedrich Engels and Rudolf Virchow to more recent World Health Organisation (WHO) reports and Marmot reviews of health inequalities. These have added to our understanding of the determinants of health. [10][11][12]

The disproportionate number of deaths from COVID-19 in ethnic minority communities are often explained partially by the conditions in which people live and work. COVID-19 has highlighted the link between housing and health in two ways: some poor housing conditions, such as overcrowding and poor indoor air quality, have resulted in increased virus transmission; and so, the lockdown measures used to control the virus have resulted in those living in poor housing being exposed to conditions that worsen their health. For some, the measures adopted to contain the virus have meant spending more time in damp, mould-infested, physically dangerous, and inappropriate dwellings.[13]

Housing also has indirect impacts on health with the UK's housing accounting for about a quarter of the country's total carbon emissions. This places housing at the heart of government's commitment to the climate change agenda and has resulted in increased local and national efforts to improve the quality of existing homes through retrofitting projects. However, retrofitting efforts have not kept pace with need. So, increased investment in upgrading the existing housing stock can generate a variety of co-benefits such as climates change adaptation, fuel poverty reduction and wider public health improvements.

3.2 Housing Conditions

3.2.1 Indoor air quality

Indoor air quality is critical for good health due to the amount of time we spend inside. People who can't heat their homes, due to high fuel costs, are particularly vulnerable to moisture and mould, which can occur regardless of the age of the building (old, recently upgraded, or new residences). Some people are more sensitive to mould than others, including babies and children, the elderly, and those with pre-existing skin and health conditions.

3.2.2 Fuel poverty

Even though it is well acknowledged that upgrading the quality of UK housing stock can result in significant health benefits, the number of homes affected by fuel poverty continues to increase year on year.

Poor energy effciency in existing homes, combined with rapidly rising fuel costs, makes it unaffordable for low-income households to heat and ventilate their homes adequately. This can compromise their health and quality of life thereby increasing financial dif fculties. Cold homes can have harmful effects on physical and mental health, putting extra strain on the NHS, local councils' social care budgets and the Department of Work and Pensions supplementary benefits budget (Winter Fuel Payments and Cold Weather Payments). It also contributes to higher winter mortality rate and long-term health conditions, which are associated with a threefold increase in healthcare costs.[14] According to the Committee on Fuel Poverty (2021) report 46% of the people in the fuel poverty were excluded from getting assistance from existing fuel poverty alleviation programmes as they did not receive any qualifying benefits.

3.2.3 Housing tenure and affordability

Another aspect of housing vital for health and wellbeing is feeling secure in your home. Insecure housing tenure or the threat of eviction can have a significant emotional impact on mental health, sense of belonging and community connection. People who live in insecure housing are three times more likely than those who live in secure housing to experience mental distress. Children have been reported to suffer from behavioural issues, educational delays, depression, low birth weights, and other health concerns because of housing instability.[15]

Insecure housing tenure restricts 'home making' for those living in the private rented sector, and tenure insecurity has made it difficult to feel settled.[16] The affordability of housing has clear health implications. The shortage of affordable housing limits families' and individuals' choices about where they live, resulting in lower-income families living in substandard or overcrowded homes.

Young people on low incomes in private rented accommodation generally live in low-rent accommodation and houses of multiple occupations (HMOs).[17] This raises concerns about privacy, control and choice, and various environmental problems.[18] An Australian study of low-income rental households found housing insecurity linked to a lack of privacy, belonging, physical comfort, housing mobility, housing instability, and feeling unsafe.[19]

3.2.4   Health impacts of housing

> **Our home, the location, and the physical structure itself impact practically every aspect of our lives, from how well we sleep how often we see friends to how safe and secure we feel. [20]**

Housing affordability and health have been shown to have a bi-directional relationship, implying that your physical and mental health affects the type of housing you can afford and vice versa. People living in good quality, secure, affordable housing have fewer health problems. The reverse is true for people living in substandard, insecure, and unaffordable housing. These consequences are more evident for more vulnerable populations, such as single parents and low-income households.

Indeed, housing affordability is likely to affect people's health and wellbeing in at least two ways:

1. People with restricted budgets and resources may choose between housing affordability. This includes location and access to jobs, education, and daily life services, such as schools, recreation, shopping, and food availability. The amount of time spent travelling increases sedentary behaviour while reducing the time available for local physical and social activities.

2. Individuals with less money could find hat the suitability of available housing may be limited. They could live in lower-quality residences or neighbourhoods (high crime and incivilities) and overcrowding. A wide body of research suggests that poor housing quality (insufficient insulation, lack of heating) and overcrowding are linked to lower housing satisfaction, poor mental health, greater risk of contracting infectious diseases, respiratory illnesses, and injuries. These effects may be increased for people who live in unsafe neighbourhoods because they could feel restricted when going about their daily lives.

3.3   Local Context

Birmingham City Council has a housing stock of 60,673 units and many of these properties are in good condition. In 2021, the total housing stock in Birmingham was 445,276 with an estimated 89,000 new homes need by 2023. Housing occupations across Birmingham are broken down as follows: private sector 75% (owner-occupied and private landlords), council 13% and other housing associations 12%.[21] The poor housing quality is spread across council blocks, the private rented sector, HMOs, and temporary accommodation. A recent listening campaign by the homeless charity Shelter revealed many families currently living in sub-standard housing.[22]

The private rental sector satisfies the needs of a diverse group of people, but it does have some problems. This is because the number of people renting their homes from private landlords has increased, and the trend is expected to continue. Private landlords mostly provide decent quality housing. But there are concerns about high rental cost, security of tenure, and house condition which continues to be a problem for individuals. In the 'Home Truths' campaign, 17% of private renters report housing insecurity and instability.

Overcrowding is a major concern for the city, with 9% of homes in Birmingham classed as overcrowded. Outside London, Ladywood has the highest rates of overcrowding (15%). The 'Home Truths' campaign found that 22% of people lived in unsuitable homes for their household size, and 19% of people in temporary accommodation reported overcrowding.

Birmingham residents have poorer health outcomes than the national average. The city has unusually high rates of homelessness: over 3 out of every 100,000 households were homeless in 2019, which is more than 50% higher than the national average.[23] [24]

There are several disadvantaged neighbourhoods, especially in the city's inner sections. This is geographically related to other social issues such as overcrowding (worst in western areas), poor health and poverty. These areas often have lower levels of tree canopy cover and green space. Unemployment is a serious problem, and the employment rate is well below the national average.

An estimated 8,000 houses in Birmingham lack central heating and are unable to heat their homes to the temperature required to be healthy and warm. In the latest estimates (2019), around 69.692 (16%) households in Birmingham were fuel poor.

4. Neighbourhoods and Community Spaces

4.1 Why are Neighbourhoods and Communities a Determinant of Health?

While the conditions in our homes have important implications for our health, wider determinants (conditions) in the neighbourhood, community, and 'place' surrounding our homes can also significantly impact our health. A neighborhoods' design surrounding a home is crucial because it allows for social contact, access to nature, exercise, schools, and local facilities. Equally important are the policies that make access to a healthy and affordable home possible for everyone. All these factors influence how much a person enjoys living in their neighbourhood, but also their health and wellbeing too.

Wellbeing in neighbourhoods is strongly linked to the ecological dimensions, including physical (air), built (housing), services (educational), socio-cultural and reputation. Well-designed and appealing neighbourhoods with more people on the streets promote natural surveillance, making the neighbourhood appear and feel safer while encouraging social interactions (create social capital). Poorly designed neighbourhoods can make it difficult for vulnerable people to leave their homes, leading to social isolation and premature mortality.[25]

Attractive places in the neighbourhood support physical, psycho-social, and emotional wellbeing. Better street lighting, less noise pollution, well-kept pavements, green spaces, and streetscaping have all been shown to boost residents' sense of safety and civic pride.[26]

4.2 Health and Non-health Benefits of the 15-minute Neighbourhood

Walking and cycling become the natural choice for short trips, enabled by redesigned streets and space around, between and within buildings that are publicly accessible (public realm). Increased levels of walking and cycling contribute to better physical outcomes[27] and improved mental health[28] while providing more opportunities to spend time in green spaces, reducing the risk of anxiety and depression.[29] The ability to access everyday needs within the local area also contributes to being more inclusive by removing the transport barriers to jobs and services faced by people without access to a car and who often live far from the services on which they rely.[30][31]

4.3 Roads, Streets, Pavements (Public Spaces

Streets account for over 80% of all public space in most cities worldwide. When properly built, they provide commerce, cultural energy, a safe place to meet people, stay, or simply pleasant to travel through. However, our streets have often become dangerous places dominated by cars, noise, air pollution, and danger to active users.[32]

Vehicular traffic is the main source of health-harming noise and air pollutants such as nitrogen dioxide (NO2) and Particulate Matter (PM). Living near major or high-density traffic has been associated with short and long-term health outcomes, including asthma and other respiratory illnesses, adverse birth outcomes, and cardiovascular diseases.[33] The West Midlands Air Quality Improvement Programme (WM-Air) estimates that about 2.8 million people in the region are affected by air pollution-reducing life expectancy by up to 6 months.[34][27]

Likewise, people living in disadvantaged areas tend to live in more dangerous environments, with higher levels of on-street parking and higher volumes of fast-moving traffic. This implies they are more vulnerable to the dangers of road traffic. In 2019, there were 470 pedestrian fatalities and 21,770 pedestrian casualties of all severity in the UK.[35]

4.4 Open Spaces

Open spaces such as parks and green spaces are important built environment settings for promoting and improving health and wellbeing. Living close to good quality green spaces is associated with increased physical activity and good health.[36] Conversely, those with limited access to good quality outdoor spaces are more likely to have fewer social connections and poorer health, including cardiovascular disease, obesity, type 2 diabetes, and mental health.[37][38]

It's becoming evident that spending time in 'blue space,' or near water, can benefit our mental and physical wellbeing.[39] Blue spaces should be considered when developing and planning green space, parks, and other natural environment components.[40][41]

In addition to green and blue spaces, children need play areas to maintain healthy lifestyles. Informal play burns calories and has substantial benefits in maintaining a healthy weight. Green and blue spaces and play areas need to be accessible, safe, of good quality to deliver effective physical and social benefits.

4.5 Health and Non-health Benefits of Open Spaces and Community Infrastructure

One in six deaths in the UK is attributed to physical inactivity, and obesity rates are increasing for both adults and children. Compact and connected street networks with fewer lanes on major roads (pedestrianised streets) encourage walking and cycling and reduce morbidity for lifestyle diseases. In addition, street network design has a significant impact on road safety.[42]

Surface transport is a significant source of greenhouse gas (GHG) emissions (22% in the UK). Cities that promote walkability and cycling over car use can help to mitigate climate change by reducing carbon emissions.[43]

Parks and green spaces are not only important for recreation but contribute to good health through improved air quality, enhanced physical activity, stress reduction and better social cohesion.[44] The Glover review also emphasised the importance of connecting people and nature. The WHO estimates that 3.3% of global deaths are linked to lack of recreational areas and poor walkability.[45]

Parks and green spaces are also crucial for protecting against the effects of climate change, such as stormwater management and cooling the urban heat island effects. They also host diverse species of birds, animals, and plants.

Libraries, community and leisure centres are examples of public facilities and amenities that serve as services for communities and create a feeling of social cohesion. Research indicates that people who live near high-quality public places and amenities trust others and feel less socially isolated.[46]

4.6 Local Context

Birmingham has a population of over 1.1 million people spread over 26,777 hectares, and this figure is predicted to increase by about 3.7% by 2031. This will boost housing demand and create new opportunities to develop good quality, affordable mixed-use sustainable neighbourhoods that provide access to jobs and services. Birmingham's housing stock comprises mostly low-rise terraces and semi-detached housing, even in areas close to transport links.

Due to its car-centric development history, Birmingham has high-density residential land use at about 4,300 persons per square kilometre (2018 data).[47] The high population density in the city has increased productivity, overcrowding and material deprivation.

We depend greatly on the natural environment for our wellbeing and quality of life. Green, blue open spaces play an important role in promoting and encouraging outdoor recreation, exercise, and relaxation and addressing health issues, including obesity and mental health problems.

Birmingham is the third most deprived core city in England and is among the least prosperous 10% of local authorities in the UK. The city has one of the highest child poverty rates in England (40%) and is ranked fourteenth for income deprivation affecting older adults. 90% of wards in Birmingham are ranked among the most deprived areas in England.

The gap in life expectancy between Birmingham's least and most deprived areas is 6.2 years for women and 9.9 years for men. It is estimated that 68% of Birmingham adults are obese or overweight, and 26% of children in year 6 (age 10-11 years) are classed as overweight or obese, which is worse than the England average.[48]

Figure 4: Life Expectancy by Birmingham Railway Stations
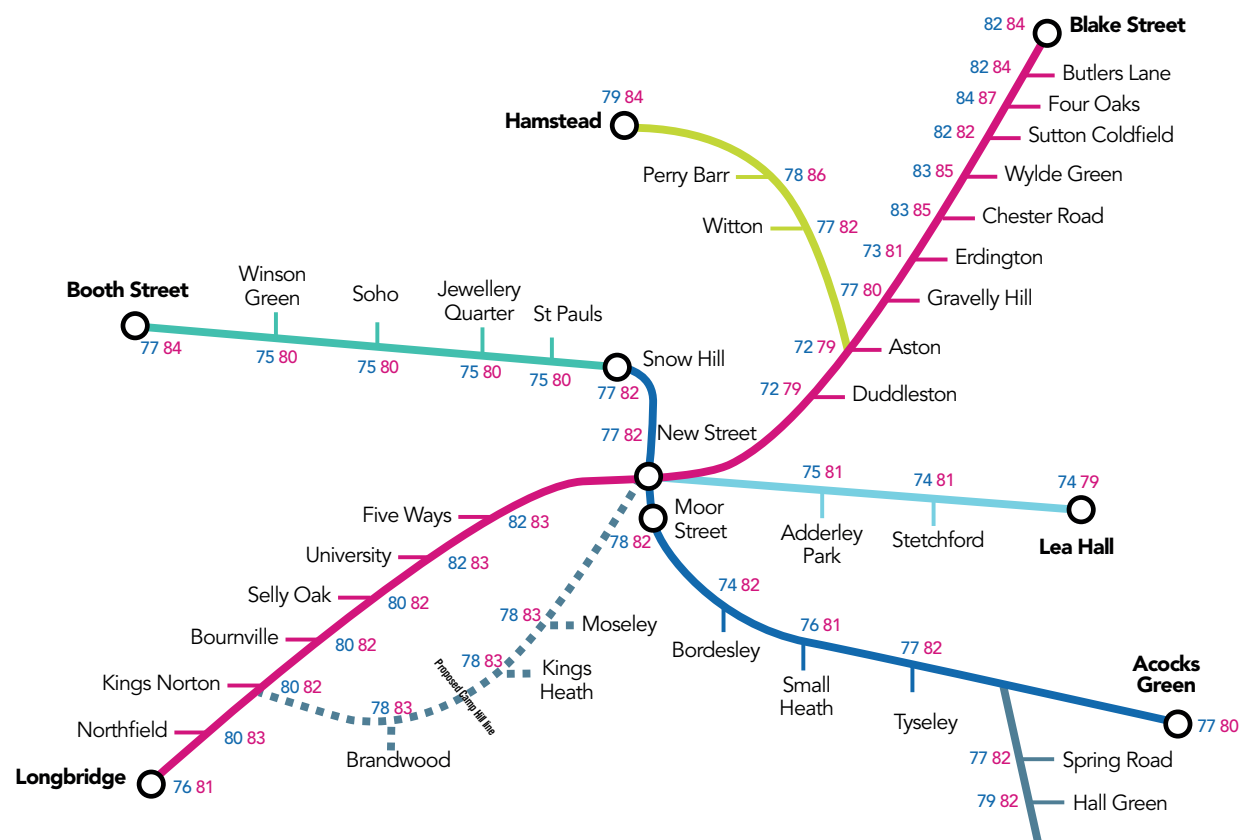
Average male life expectancy in Birmingham is **77.1 years** compared to **79.4 years** for England

With only **one stop** you can shave **ten years** off the average life expectancy of a male citizen

Average female life expectancy in Birmingham is **81.8 years** compared to **83.1 years** for England

With only **two stops** you can shave **five years** off the average life expectancy of a female citizen

Birmingham is one of the greenest cities in the UK, with over 600 (4,700 ha) public parks and green spaces, many of which are linked by over 160 miles of canals and waterways. The city's parks and green spaces are mostly used for leisure and recreation, with an estimated 58-million visits annually. About 96% of residents have access to green space within 15 minutes of their home. But levels vary between wards (see Figure 5); areas with the least green space, as measured by 'canopy cover', the area of leaves, branches and tree trunks are among the most deprived.
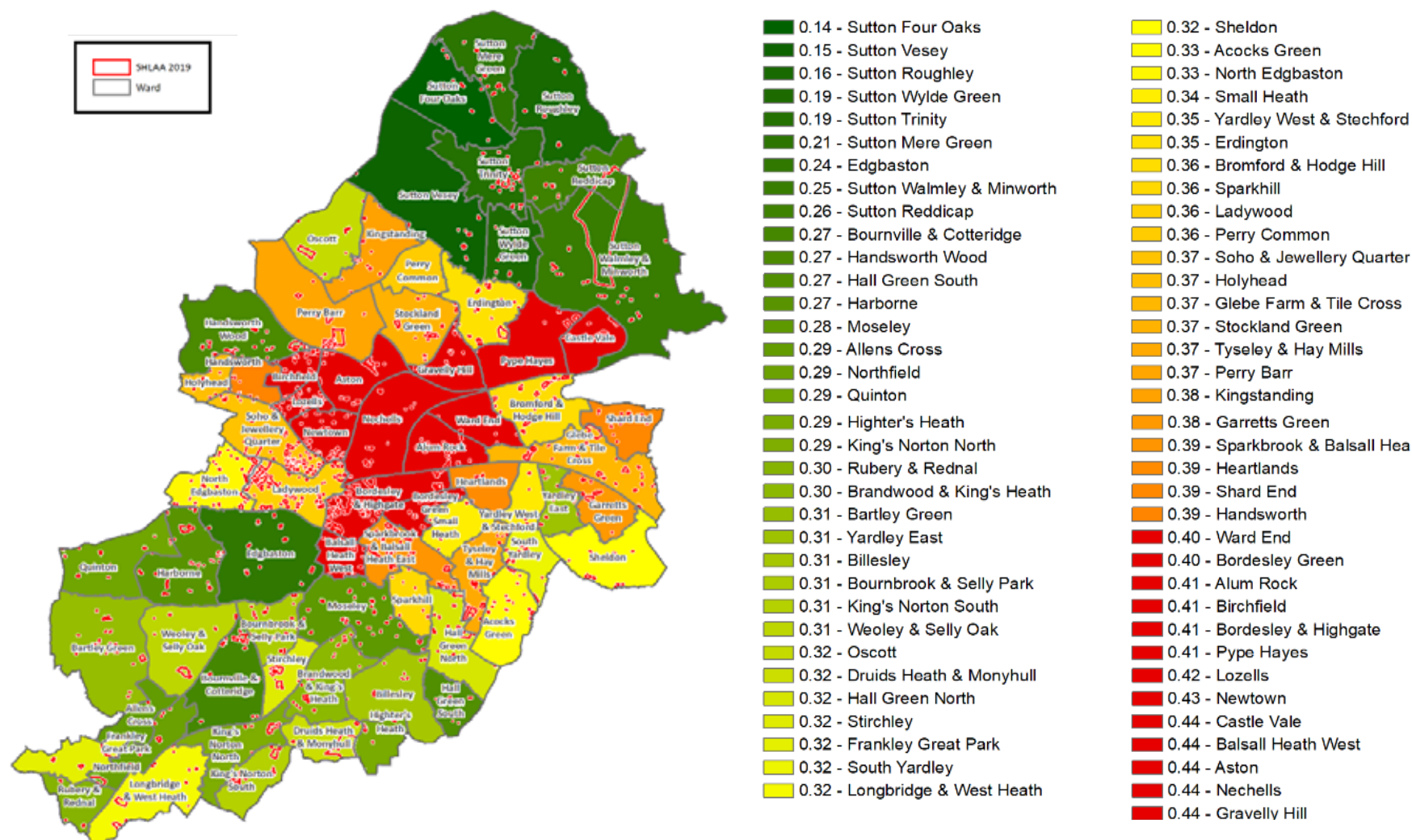
For instance, the ten wards with the least canopy cover are all among the poorest 10th of wards. An additional 400 green space provision is needed to meet the national required standard for green spaces and play areas in the city.

Birmingham's parks and greenspace provide a net benefit to society of approximately £600 million each year, including £192 million in health benefits.[49] [50] There are several other benefits that green spaces provide to the city's wider ecosystem that contribute to health. For example, through carbon capture (350 tonnes each year), quality-adjusted life-years (3,300 per year)[51] and biodiversity.

Birmingham aspires to become carbon-neutral by 2030, with the main goal of requiring about 80% of all trips to be made on foot, bike, or public transportation. The city's road network is quite complex, with around 12 major radial routes, two ring roads, and a stretch of the A38M running through it. In addition, the city is encircled by four heavily traveled motorways, M5, M6, M6 Toll, and M42. The average congestion level in 2021 was 24%. This means a 30-minute drive took 7 minutes longer.[52]

Figure 5: Environmental Justice Map displaying the Mean Value for the Combined Index by Birmingham Ward 2019

Legend:

0.14 - Sutton Four Oaks	0.32 - Sheldon
0.15 - Sutton Vesey	0.33 - Acocks Green
0.16 - Sutton Roughley	0.33 - North Edgbaston
0.19 - Sutton Wylde Green	0.34 - Small Heath
0.19 - Sutton Trinity	0.35 - Yardley West & Stechford
0.21 - Sutton Mere Green	0.35 - Erdington
0.24 - Edgbaston	0.36 - Bromford & Hodge Hill
0.25 - Sutton Walmley & Minworth	0.36 - Sparkhill
0.26 - Sutton Reddicap	0.36 - Ladywood
0.27 - Bournville & Cotteridge	0.36 - Perry Common
0.27 - Handsworth Wood	0.37 - Soho & Jewellery Quarter
0.27 - Hall Green South	0.37 - Holyhead
0.27 - Harborne	0.37 - Glebe Farm & Tile Cross
0.28 - Moseley	0.37 - Stockland Green
0.29 - Allens Cross	0.37 - Tyseley & Hay Mills
0.29 - Northfield	0.37 - Perry Barr
0.29 - Quinton	0.38 - Kingstanding
0.29 - Highter's Heath	0.38 - Garretts Green
0.29 - King's Norton North	0.39 - Sparkbrook & Balsall Hea
0.30 - Rubery & Rednal	0.39 - Heartlands
0.30 - Brandwood & King's Heath	0.39 - Shard End
0.31 - Bartley Green	0.39 - Handsworth
0.31 - Yardley East	0.40 - Ward End
0.31 - Billesley	0.40 - Bordesley Green
0.31 - Bournbrook & Selly Park	0.41 - Alum Rock
0.31 - King's Norton South	0.41 - Birchfield
0.31 - Weoley & Selly Oak	0.41 - Bordesley & Highgate
0.32 - Oscott	0.41 - Pype Hayes
0.32 - Druids Heath & Monyhull	0.42 - Lozells
0.32 - Hall Green North	0.43 - Newtown
0.32 - Stirchley	0.44 - Castle Vale
0.32 - Frankley Great Park	0.44 - Balsall Heath West
0.32 - South Yardley	0.44 - Aston
0.32 - Longbridge & West Heath	0.44 - Nechells
	0.44 - Gravelly Hill

SHLAA 2019
Ward

5. Local Economy

5.1   Why is the Local Economy a Determinant of Health

Employment opportunities significantly affect population health. Unemployment is linked to poor physical and mental health in the short and long term due to fewer financial resources to live a healthy life, stress associated with job loss and financial difficulty, and higher levels of fuel poverty and homelessness.[53] Also, the quality of available local jobs directly affects health. To lead healthy lives, people must earn a living wage. Insufficient income means that people cannot afford good quality housing, healthy food, or leisure services. Developing regional employment and investing in human capital is essential to improving long-term local health.

The local economy impacts on health since it determines the services that are provided. The Royal Society for Public Health used the prevalence of fast-food outlets, bookmakers, tanning salons, and payday lenders to indicate poor health on the High Street in their 'Health on the High Street' report.[54] In contrast, community pharmacies, health services, leisure centres, libraries, pubs, and bars indicated good health. All these services impact on health by influencing lifestyle.

The level of education a person achieves has a direct impact on general health and wellbeing but also the economy. The Human Capital Theory conceptualises education as an investment into the economy by increasing people's productivity.[55] The level of education a person has can influence heir abilities to promote health, including skills, reasoning and effectiveness.[56] A lower education level is associated with poor health outcomes, chronic conditions, functional limitations and disability.

The COVID-19 pandemic has raised concerns about job security and the critical link between the economy and health. It has drawn attention to the large number of people in the UK who are in poverty or at risk. We need prospering communities and for this to happen people must be financially secure. The local economy must provide services that encourage rather than deter people from healthier habits.

The pathways in which education leads to better health can be grouped into four categories: economic, health-behavioural, social-psychological, and access to health care. A higher education level enables people to have more stable jobs with higher incomes.[55] Health harming behaviours such as smoking, excess alcohol consumption, inactivity and unhealthy dieting are linked to lower education levels.[57] [58] The neighbourhoods where people live also affect their socio-economic opportunities and vice versa.[59]

Neighbourhood poverty creates social disorganisation and disorder among neighbours. A neighbourhood with fewer opportunities for employment or neighbourhood facilities may nurture a hostile environment between residents.[60] This behaviour can limit social cohesion and may leave residents unable to control deviant behaviour or enforce positive attitudes towards education.[59]

Carbon emissions impact people's health through air pollution, climate change, and more. Economic activity is one of the main causes of carbon emissions. With local authorities' commitment to reach zero carbon by 2050, we are likely to be seeing a shift by UK business and industry toward 'green' sectors, which will have significant implications for health, education and skill and the wider economy.

5.2   The High Street

Around 80% of the UK population currently lives in cities,[61] and the high street is just one aspect of the urban environment. Its architecture and design influence how we use our high streets, whether they are somewhere we enjoy being or avoid, if they nurture community and social connections or encourage us to walk away quickly with our eyes down. The amount of traffic, how accessible it is for pedestrians, and how safe we feel affect whether we visit a local high street or prefer to shop online from the comfort of our own home.

The high street is largely a transactional environment where we can spend time relaxing with friends or shopping. We can also gain cultural experience or a sense of wellbeing from engaging in a dance or exercise class. But this exchange is not always beneficial to our health. The high street enables and supports unhealthy behaviour when our time and money are converted into a loss at the bookmaker, a tan from a sunbed, a high-cost loan, or a cone of fish and chips. On the other hand, healthy high streets promote good health, provide easy and inclusive access to many users. Health-promoting high streets are clean, safe, walkable and promote active participation contributing to social inclusion and cohesiveness and the growth of sustainable urban communities (green-scape and blue infrastructure reduces pollution).[62] [63]

The different approaches outlined above have pathways to improve health. For example, diversifying retail offers can lead to behavioural changes, leading to positive dietary habits or regular exercise in the community. Furthermore, preventing crime and safety initiatives can provide opportunities for social interaction, access to services and community activities, and social cohesion.[53]

Many high streets are saturated with fast food outlets. They do not offer fresh produce or a variety of healthy or suitable food options for all communities, e.g. vegetarian, vegan, religious diets. Fast food is easily accessible as it is cheap and quick; however, consuming unhealthy food regularly can increase obesity, high blood pressure and diabetes. Research has established that those living in the most deprived areas have a disproportional number of fast-food outlets close to them compared to those in more affluent areas.[64] [65]

5.3 Local Economy and Employment

A healthy and flourishing high street impacts the economy while indirectly influencing health. A thriving high street will provide its inhabitants with employment opportunities and improved living standards. Figure 6 highlights the factors that directly and indirectly impact health outcomes in the high street-built environment.

Figure 6: Approaches to Improving the Built Environment in High Streets. Adapted (Source PHE, 2018)

5.4 Local Context

Despite showing strong resilience, the local economy has been severely disrupted. The footfall in Birmingham city centre decreased by 46% from June 2020 to June 2021, which has impacted the economy and the ability of businesses to thrive.[66] The regional Gross Value Added (GVA) dropped by 13%, with overcast recovery not expected till 2022 at the earliest. The GVA measures the contribution made to an economy by one individual producer, industry, sector, or region and directly reflects the economy.

Birmingham has a strong economic centre in the 'financial district' where most high-paying jobs are concentrated. The financial district consists of business, finance, and professional service sectors. It is worth 17.2bn and with 206,200 jobs.[66] The city's most deprived areas are in the east and west while the most affluent areas are in the north. 41.3% of Birmingham's Lower Super Output Areas (LSOA) are living in the 10% most deprived LSOAs in England. This includes Hodge Hill, Ladywood, and Erdington constituencies. Communities of ethnic minorities tend to be concentrated in the less well-off and under-resourced neighbourhoods.

On the other hand, Birmingham's population is relatively young, with about 38% of the population being aged 25 years and below and so has a strong pool for the workforce. Youth unemployment rose to 13.8% in Birmingham in 2020, and young people also had a higher instance of furlough resulting from the closure of various venues and sectors due to COVID-19 pandemic restrictions. The skills gap also restricted business growth significantly. Of 57% of firms in Greater Birmingham that attempted to recruit in quarter 3 of 2021, 62% had great difficulty in doing so.[66] As a result, Birmingham has low productivity compared to the rest of the nation.

Figure 7: Deprivation by Sub-domain

INCOME

22%
Population in income deprivation

Birmingham Rank

7th

2nd Highest Core City

EMPLOYMENT

15%
Involuntarily excluded from labour market

Birmingham Rank

20th

2nd Highest Core City

EDUCATION & SKILLS

Measures the lack of attainment and skills in the local population. For children and young people

Birmingham Rank

41st

3rd Highest Core City

HEALTH DEPRIVATION & DISABILITY

Measures the lack of attainment and skills in the local population. For children and young people

Birmingham Rank

37th

5th Highest Core City

CRIME

Measures the risk of personal and material crime recorded locally
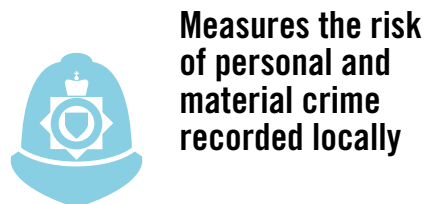
Birmingham Rank

66th

2nd Lowest Core City

BARRIERS TO HOUSING & SERVICES

Measures the physical and financial accessibility of housing and other key local services

Birmingham Rank

19th

1st Highest Core City

LIVING ENVIRONMENT

Measures the quality of housing; air quality and road traffic accident

Birmingham Rank

9th

2nd Highest Core City

IDACI

28%
of children live in income deprived households

Birmingham Rank **9th**

IDAOPI

26%
of over 60s are income deprived
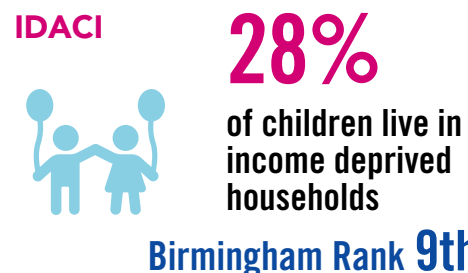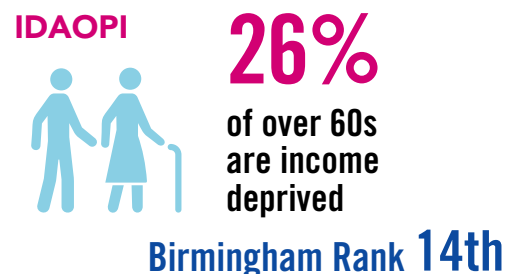
Birmingham Rank **14th**

6. Movement and Access

## 6.1 Why is Movement and Access a Determinant of Health?

The most important function transportation plays in community health is walking or cycling for physical activity (alone or part of public transport journeys). Physically active people have less risk of stroke, dementia, cancer, and type 2 diabetes. Also, active transportation reduces road traffic injuries and air pollution and significantly decreases respiratory illnesses such as asthma.

Traffic calming measures have proven to save lives. While the most significant health benefits come from active transport, vehicle speeds also impact health outcomes. The risk of a fatal accident at 20km for children is less than one-fifth of the risk at 30km.

Travel is necessary for connecting people to employment, education, health care, recreation, and other community services. Every day, most people travel somehow, making it a part of their daily lives and thus a factor that can significantly impact their health.[67] [31]

The success of cities and the quality of living is inextricably linked to how people move around within them. The average commuting time in the United Kingdom was roughly 30 minutes, compared to 25 minutes in the European Union. According to Eurostat, 60% of UK workers commuted for less than 30 minutes, and 80% commuted for less than 45 minutes in 2019.[68]

Research found shorter commuting time to be a consistent determinant of an individual's ability to escape poverty.[69] The COVID-19 pandemic has highlighted the disparity across UK communities living in areas with limited transport access who were disproportionately vulnerable to the virus. They could not get tested regularly or take advantage of early vaccine rollouts due to their distance from COVID facilities and lack of transportation. Vaccine penetration was slowest in areas with the most limited transportation networks.[26]
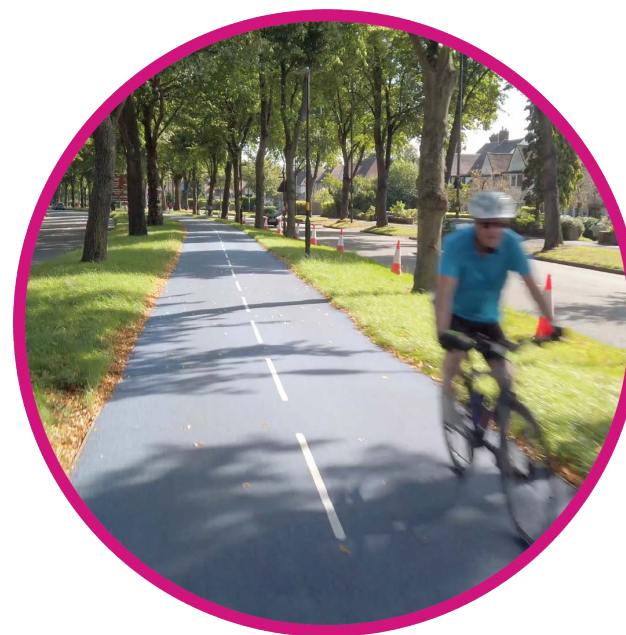
6.2   How Health is Impacted

The way we design and build our roadways (transportation network) and how people choose to move through their communities has an impact on health, including exposure to harmful emissions, physical activity, and access to services, amenities, employment, education, and social networks, among other things.

Walking, riding, and taking public transportation are more difficult for some populations. Older people, for example, are more vulnerable to road accidents. The safety and comfort of older persons who use active transportation is affected by factors such as sidewalk design, traffic, rest spaces, and aesthetics.

The difficulties to getting to school securely and conveniently are one of the reasons for the decline in children who walk and bike to school. Community design that encourages high traffic volume and speed while lacking pedestrian and cycling facilities, for example, might result in more injuries and fatalities.

6.3   Local Context

Birmingham's transportation network covers large physical areas where residents can access the city in 30 minutes. While the city boasts a large public transportation system, including a local bus network, a metro line, a sub-urban rail system, cycling and walking routes, including the canal network, Birmingham is highly car-centric, with vehicles accounting for nearly 70% of surface transportation activities. With an average of 80 hours lost annually per driver at an individual cost of £264 and £323 million to the wider city.[70] In addition to the financial costs to drivers, traffic congestion delays public transportation. It limits the flow of freight and commercial vehicles, all of which are essential to Birmingham's day-to-day retail operations.

Birmingham ranks as the third most transportation-congested city in the UK for commuting.[71] Public transportation accounts for 58 per cent of morning peak trips in Birmingham city centre alone. Most commutes to Birmingham are from Southeast Staffordshire, South Warwickshire, Solihull, and North Worcestershire.[72]

However, its wide-ranging geography results in vastly different transportation experiences and pain points for those who live and work here, with infrastructure and funding discrepancies resulting in worse service for poorer, underserved communities. In addition, area coverage depends on public transportation network capacity, journey times and infrastructure investment.

Over-reliance on private cars has a significant and negative influence on individuals living and working in Birmingham and visitors. Restoring the balance allows placemaking to prioritise people, and travel is enjoyable rather than frustrating.

7. Experiencing the Built Environment: Citizens' Stories

Everyone in Birmingham has their own experience of interacting with the built environment. This ethnographic research provides us with an understanding of residents' lived experiences of the built environment. The aim was to gain insight into their daily lives, their interactions with the built environment, and its potential and perceived impact on health and wellbeing. The research was commissioned by Birmingham City Council and completed by Shift Insight between November 2021 and March 2022.

Forty participants from across Birmingham took part (see Appendix 4 for a full breakdown of participant profiles), and their stories are woven through this section. Ten case studies were developed from journeys that citizens made through the built environment for their daily lives (see Appendix 3). The findings and case studies are not comprehensive reviews but rather snapshots of experiences in Birmingham's built environment. Citizens provided all the photos in this section as part of the digital ethnography.

The summary of information gathered from the research is split by subject (housing, neighbourhood and community, local economy, and movement and access).

7.1 Housing

The experiences of the Covid-19 lockdowns led to acute acknowledgements that a person's housing situation, whether positive or negative, deeply affected their experience during the pandemic.

> "I'm not going to lie, it's been really hard, especially these last two years, the fact that I couldn't go out when we were in lockdown. That was really, really hard mentally to basically be stuck indoors."

More widely, participants often formed aesthetic judgements of where they lived. Visual cues played a big role in how individuals felt about their surroundings, especially their immediate home environment. Residents mentioned clean, visibly thriving neighbourhoods with calming views.

> "If I look out of the balcony, I've got a really nice view of Sutton Park. It was actually a pretty big factor in why I liked this flat so much, because it s a nice view that I have from the balcony, and yeah, I don't want to live in a dungeon."

7.1.1 Housing Quality

A consistent theme emerged here, with participants emphasising the necessity of maintaining a safe and comfortable temperature in the home and how this relates to the quality and design. Highlighting the importance of materials (tile and stone are more difficult to heat), orientation (see lighting below), and floor level (temperature on the bottom floor and top floor more difficult to maintain). The ability to stay warm in the winter and cool in the summer. When it's hot outside, have windows that restrict or boost their ability to keep warm or adjust for ventilation and natural lighting.

> "Being a ground floor flat, and concrete as well, obviously you get the elements because it's only PVC and it's quite dated — the windows, the frames. The frames actually go to the floor so yes it can b very cold unless the heating is on, and then, of course, that's costly."

Participants expressed concerns about living in a cold environment. Improvements are frequently insufficient to maintain a comfortable temperature or are too expensive. The use of Economy 7 heaters, a lack of insulation, and residences with high ceilings are not energy efficient and add more to the bills. Residents were aware of moisture and mould forming in their homes because of the constant insufficient temperature.

"Because it hasn't got a window in [the bathroom] and it doesn't circulate air very well, you have to ventilate it quite well, so it doesn't like gather mould and all the rest of it … I have to ventilate it really well, the air vents and opening my bedroom windows quite a lot. It can seem quite cold."

"All the windows seem to be getting damp around them and getting like mould on the walls and stuff. It's not major, but you can tell it's been painted over before I moved in. Because our bed is right by the window and it's got obviously damp around it, I think it does make us a little bit poorly. Not poorly … me and my [partner] have realised that we feel a bit bunged up on a night and a bit of a sore throat in the morning."

This was especially true for those living in rented homes, and it brought up a crucial topic. Residents who do not own their homes sometimes feel powerless over these decisions. They also stated that these decisions are frequently made so that the landlord will incur a lower direct cost than the expense of heating the house.

Respondents frequently link their mental health to lighting quality in their homes. Their favourite rooms in the house were those with more light. Those with accessibility needs would normally make the necessary changes to their homes to meet their requirements. However, common building accessibility (flats without lifts and a stairwell without a handrail) and parking availability in residential areas were also of concern.

When discussing housing and health, it's important to include a discussion of homelessness, as it's a major predictor of a person's health. Health difficu ties disproportionately affect homeless or rough sleeping individuals. According to participants, homelessness is a major issue in Birmingham, and it can contribute to larger crime problems in some locations. On the other hand, several participants perceived homelessness as a tragic aspect of their journeys rather than a problematic issue.

7.1.2 Green and blue spaces

Access to nature and green places was quite important, and they appeared in various aspects of the data. Many emotional accounts about how a shortage of green space during COVID had trapped individuals in cramped dwellings or was being eased by access to a garden or a park. It demonstrated the importance of spending time in green space for mental and physical wellbeing.

Access to these spaces within their 15-minutes neighbourhood was highly valued, and the research highlighted some green areas throughout the city that were not always consistently well-kept with evidence of litter or substance abuse which could lead to their avoiding and not using them at all.

"The little space we do have are polluted and not policed or cared for like other parts of Birmingham where it's evident the council are present. "

"This is one of my favourite places in Birmingham and near my house. I love that, although you're in the city, you feel like you're in the countryside. There is no road noise, it's beautiful in the winter and the summer. Having this on my doorstep makes me happy!"

"I believe that harmony is where you find it and I am with one in my own backyard as they say! I am not a great gardener but take peace and tranquillity sitting out on the decking with a nice cup of coffee and just let the world go by ... It is my safe place."
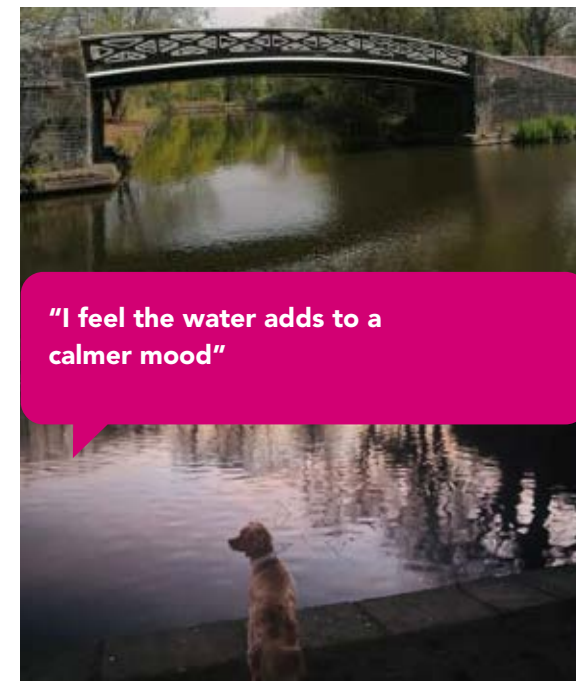
"I feel the water adds to a calmer mood"

7.2   Neighbourhood and Community Spaces

People spoke about social cohesion and pride in their community, often pointing out the lack of these qualities. Although they made suggestions for change, they were proud to call themselves 'Brummies'. People's hometown and local neighbourhoods needed to have aesthetic appeal. The level of pride people felt was down to maintenance, congestion and pedestrianisation, boarded up or lively shops and restaurants, access to green spaces and seeing less homeless people on the street.

"This photo makes me happy and proud – it's the Birmingham brass bull and it's iconic to Birmingham and the city centre. You only have to show someone this photo and, if they have knowledge of Birmingham or have been, I can assure you they will know straightaway where this photo was taken and what it is, I'm a proud Brummie!"

"If you go … the library way, you've got some old buildings, and then Grand Central way you've got all these modern things coming up, so you go 'Wow, this is nice!' I like this. I like a mixture of things so it's not all the same thing. You don't walk and find the same thing everywhere."

This is a Gurdwara in Handsworth. It's one of the biggest landmarks in Birmingham. Amazing to look at … Brings back warm happy memories from my childhood. It's nice to see a multi-cultural Birmingham. I feel safe in a mixed area."

"[This photo] shows how people find it easy to fly-tip. There are n consequences for people who do this. I feel the council should introduce collection days for all household items to overcome these scenes … The fly-tipping needs to be tackled. People need to take pride in their areas."

"It is so big that once you walk through you wouldn't even know you were near any roads. It is peaceful, the grass is well looked after. Full of trees and even has access to an allotment. It gives that green space that you need when you're living in and around the city. There are plants dotted around the edges and plenty of trees around. I really enjoy this park and how easy it is to access it. I can even walk there from my house so, whether I walk or drive, I enjoy this park being on my doorstep."

"This is general waste and recycling that hasn't been picked up for weeks… every road in this area is like this. It makes us not want to exercise in the area"

7.2.1 Lighting

Participants were frequently asked to consider how various circumstances made them feel comfortable or unsafe. We wanted to know whether the environment impacted on their mental health daily and influenced travel decisions. These could be whether to drive, avoid going out in the dark and exercising outdoors. The feeling of safety extended to driving as well, providing insight into drivers' perceptions of city streetlights on wellbeing.

"I would say the street lighting can be improved and this in turn would allow better visibility, safer driving conditions."

"Lift [is in] the dark … it was not bright enough for wheelchair users or buggy carriers, which may cause some concern for using the lift, especially in winter season."
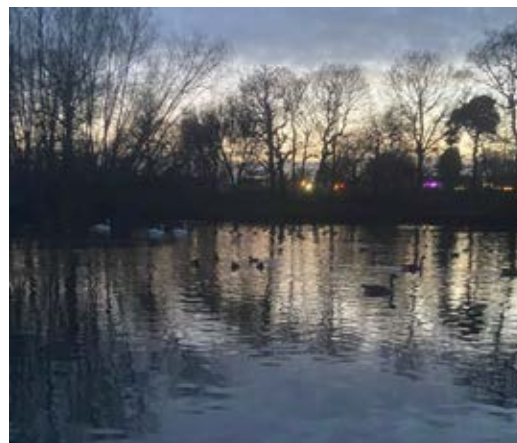
"A photo in our local park [that] we use to walk the dog. It's a clean park, nice walking paths, [but] would be nice to have more night-time lights."

7.3 Movement and Access

The recurring theme from people is that the city was intended for cars so harder to navigate for those on foot. In terms of sustainability, this was linked to participants' impressions of Clean Air Zones and their belief that traffic had been diverted to different parts of the city. The statistics revealed how multiple roadworks negatively influenced healthy behaviours such as walking, cycling, and exercising. It revealed inconsistencies in behaviour, such as respondents preferred to drive since it stopped them from having to navigate streets as a pedestrian. But they were actually adding to air pollution and congestion by doing so.

"This is probably my worst photo and sums up Birmingham city centre perfectly! … The area is full of pollution and all you can ever smell is fumes from exhausts or the smell from factories or the builders."
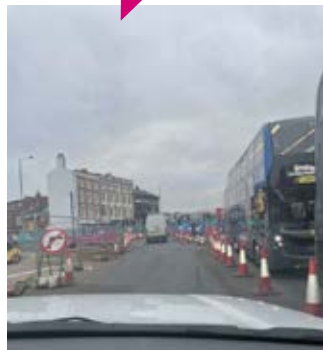
7.3.1 Public transportation

The citizen journeys represent that many residents have access to a local train station and numerous bus stops. Trains were thought to be a good way to avoid traffic and roadworks.

There was a notion that buses were unreliable, vulnerable to congestion, and that bus stops were more likely to be filthy or cluttered. Many of these negative comments were from people who rarely take the bus. Despite the amount of bus routes and stops available, several participants refused to take the bus.
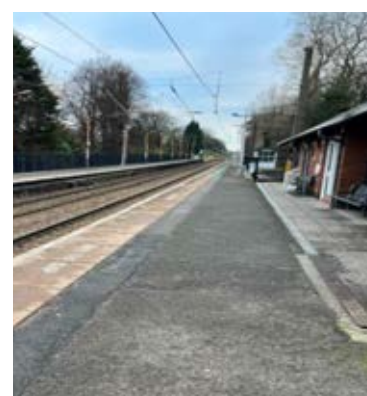
7.4 Local Economy

The city centre was a popular destination for most participants. However, on the other hand, participants' neighbourhoods were strongly featured, which might often highlight the disparity between visible investment in various parts of the city and more suburban areas.

These photographs show participants highlighting areas of the city that appear to be neglected or well-kept.

This image depicts dilapidated or boarded-up shops, which have been linked to feelings of depression, anxiety, and a sense of being 'left behind.' As a result, negative behaviours such as littering, or fly-tipping have become more frequent and accepted as the standard and resistance to walking and exercise.

Highstreets like Boldmere and Sutton was cited as ideal example of what residents want their high street to look like.

Experiencing the Built Environment: Citizens' Stories

7.5   CASE STUDIES: Citizens Journeys and Daily Routines

*Pseudonyms were used to anonymise participants.

JOURNEY*	WARD	TOPIC
Chris takes a walk to his local park	Kingstanding	Neighbourhood & Community Spaces
Louis travels his regular commute	Sutton Trinity	Movement and Access
Aaron takes a train to the city centre, using accessibility features for his wheelchair	Sutton Coldfiel	Movement and Access
Ishaa drives to the nursing home where her mother lives	Handsworth	Movement and Access
Melissa drives to the central library to return some books	Edgbaston	Local Economy
Jessica travels to the city centre for shopping with friends	Sutton Trinity	Local Economy
Tia takes a train to visit museums in the city centre	Nechells	Local Economy
Martin takes a walk around his local neighbourhood	Harborne	Neighbourhood & Community Spaces
Rachel takes a walk during her work lunch break	Erdington	Local Economy
Anand travels out of the city for a visit to Solihull	Heartlands	Movement and Access

Chris does a daily walk to his local park as he said it is refreshing for him and improves his overall Health

Chris normally goes from home and walks past his local streets. Chris finds some of the streets are often littered with rubbish.

Chris is a White British man, aged over 55 years old with a mental health condition.

Chris is a homeowner, and has been living in a house with his family in the Birmingham Kingstanding ward for over 5 years.

He loves that there are ample green and blue spaces in Birmingham, and, for him, these promote harmony with nature, positive mental and physical health, as well as connectivity.

Although walking is important for his health and wellbeing, Chris complained about the untidiness of the surrounding areas on his daily walks to the parks and the negative impacts these have on his mental well-being (and perhaps health) as he associated the rubbish with the transmission of diseases.

Chris describes this as "the best journey for positive mental health. With 2 lakes and lots of greenery, it is an ideal place to recharge the batteries and forget all your problems. It is quiet, refreshing…"

Chris passes his local high street and finds some of the buildings to be visually displeasing with graffiti and fly-tippin

On the way to his local park, Chris also sees a waterside area that is untidy and neglected.

Louis commutes from Sutton to Birmingham New Street three days a week on the train

Louis is a 25-34 year-old White man working in the city centre and living in a flat he recently purchased himself.

He lives on his own in Sutton Trinity and makes regular use of the local park and easy access to the train station.

Louis lives near Sutton Park and regularly walks or jogs through it. He feels that having such convenient access to the space has encouraged him to exercise more and has had an overall very positive impact on his mental and physical health.

Louis doesn't drive, but lives very near a train station, which he uses to take him to Villa Park to watch football matches with his friends. Although the stadium isn't always very well kept, to him it represents joy, community and socialising, as well as pride in his team. He's really glad that living near the train station allows him easy access to these kinds of spaces.

Louis has a very short walk to his local station along a quiet and safe road. He finds it easy to cross safely and notes that it's well lit, so he's comfortable walking down it when commuting in winter.

Louis passes through a small park on his way into the office, in which he likes to eat lunch. But he does not find it very relaxing due to buses nearby, which he thinks pollute the air.

There are plenty of spaces on the train, so Louis always gets a seat. During the winter, the train is heated, which Louis appreciates after a cold walk, although sometimes when it's busier the train can start to feel quite stuffy, which can cause some stress.

Louis finds the view out of the window to be very peaceful, but finds it more unpleasant as he moves into the centre as there's an increase in litter and graffiti.

Aaron uses his wheelchair to get to Wylde Green station and then takes the train into the city centre

Aaron is a wheelchair user, who lives in Sutton Coldfield. He lives alone in a bungalow that is rented from a housing association.

He is Black British, 25-34 years old and works part-time.

Due to his wheelchair, road and pavement maintenance is particularly important to his safety.

He has issues when there are potholes or a lack of drop-curbs.

Parked cars on the pavement are also obstructive and can force him onto the road, which can lead to frustration and anxiety.

He feels Birmingham can be a 'concrete jungle'.

He has access to Sutton Park and has lots of positive associations of spending time in local green spaces.

He has access to a local community café.

He feels that, due to lots of shop closures, the area around Sutton Coldfield has become more 'desolate' and regeneration projects seem to be continuously delayed.

He takes his wheelchair the short distance to the train station nearest his home.

He often has difficulties manoeuvring around parked cars that take up room on the pavement.

He found the area around New Street Station had changed a lot since he was last there, so he had to refresh his memory.

He feels anxiety and frustration on this journey as he has to wait a while for someone to get the ramp to help him onto the train.

Ishaa's husband drives them both to the nursing home to visit family, past roadworks and extensive traffi

Ishaa is a Muslim woman who lives in Handsworth with her husband and children. She suffers from a long-standing health condition that affects her nerves. She lives in a house that they rent from a housing association.

Her heath condition makes it difficult to walk long distances, but she gets pain when she has to sit for a long time, meaning traffic delays take a physical toll.

Traffic diversions make her very anxious, leading her to cancel social meet-ups, which makes her feel isolated.

She finds the smell of tarmac intense and flashing road signs strain her eyes.

Access to her garden was vital to exercising during COVID and she likes to spend time in Aston Park.

She notes how beneficial her brother's allotment was to him when he was battling drug addiction.

She struggles to find appropriate, private places to exercise, as there are no women-only gyms in her area and she feels exposed exercising in her garden.

They set off in the car, with her husband driving.

Ishaa feels calm once they arrive at the nursing home, which has good disabled parking, but dreads the journey home.

'Horrendous traffic' and narrowed lanes add an extra 15 minutes onto their journey.

They have to take a detour through City Hospital car park.

Melissa drove to the city centre, parked in a multi-story complex and then walked to the library to drop off her books

Melissa is a White British woman who currently lives alone in a large, Victorian flat conversion in Edgbaston. She is aged between 45-54, is full-time employed and owns her flat.

She described how journeys with heavy traffic often make her stressed.

She associates her home with a feeling of calm. She finds it very important to have separate spaces in which to work and relax in her home, and knows she is fortunate to have that.

She has lots of access to green spaces. She has a shared garden, but prefers to go to Edgbaston Reservoir or Harbourne Walkway.

However, she sometimes avoids using Harbourne Walkway as she doesn't always feel safe and there are few opportunities to leave if she is uncomfortable.

She enjoys the Birmingham skyline, which contributes to the sense of pride she feels in the city.

She parks in a multi-story car park in the centre of town, which she found quite expensive.

She notices how many lovely gardens there are around the city centre, for people that work there to enjoy during their breaks.

She really enjoyed her trip into town, and felt very positive about the changes she was seeing around the city.

She says she feels proud to be from Birmingham, and likes that the city is prepared to take risks with architecture.

Jessica heads out for a day of shopping with her friends in the city centre

Jessica is a White student aged 16-18 and lives with her family in their house in Sutton Trinity.

She enjoys travelling into the city centre for shopping, nights out or just for a day out. She'll often travel by train to do this.

Jessica's favourite green space in Birmingham is Sutton Park. This is not only because it is conveniently close to where she is, but also because she feels nature has not been disturbed there, unlike other green spaces she has seen with car parks and other man-made additions.

She feels certain areas of the city centre are particularly good for encouraging exercise and activity. She feels that spaces such as Chamberlain Square are open, airy and kept clean, which encourages activities such as jogging and running. She also sees people carrying yoga mats and other exercise equipment in this space. She feels that these features also make this an encouraging social space.

Jessica sets off for her local train station. This is a convenient 15 minutes away, but she is anxious because she wants to catch the next train or she will have to wait a while for the next one.

She was able to have a whole carriage to herself, which she thinks is a rarity at the weekend. There were some minor delays, but nothing that held her up too much.

They walk to Digbeth for shopping. They like that this is another modern space, which feels well cared for in the city.

She meets a friend in St. Paul's Square. They both like these spaces as they feel modern and offer some greenery in the city centre.

Tia loves visiting museums and the city centre with her family when she is not working

Tia is a 30-year-old Asian woman, who lives with her family in a rented council flat in the Nechells ward of Birmingham.

She works full-time and has a yearly income range of £35,000-£54,999.

Tia is proud of her city, Birmingham. She loves visiting its beautiful places as she associates them with enjoying leisure activity, social connectivity and good quality of life.

Tia praised Birmingham City for its good access to public transport and associates this with promoting environmentally friendly behaviour and reducing carbon emissions.

However, Tia is concerned that the volume of cars and roadworks cause the traffic situation to worsen and an increase in air pollution.

Tia often visits Birmingham city centre with her family as she loves the urban feel of it and the beautiful places in the city lift her mood.

Conversely, Tia sees the increased use of cars, heavy traffic and roadworks in Birmingham as promoting air pollution and detrimental to the commitment to climate change.

Tia calls the museums 'our city's treasure/hidden gem' and sees the museums, theatres, restaurants, all retail shops and a landmark library as visually pleasing and places that promote activity, social value and quality of life.

Tia also loves that she can access various public transport, including the train around Birmingham City, and associates this with promoting environmentally friendly behaviour.

Martin regularly goes on this walkaround Harborne, alone or with his partner, as he loves his neighbourhood and takes great pride in living there

Martin is a White man living in a flat in Harborne with his partner.

He mostly drives around Birmingham and has to drive outside of Birmingham for work. He has one local walk around Harborne that he likes to do multiple times a week.

Feeling comfortable enough to take an active walk around his home area is very important to Martin. He feels that having attractive community and residential buildings to look at whilst on this route make him happy, whilst also facilitating the comfort necessary to feel safe in leading a healthy, active lifestyle.

Martin has to drive for his commute to work, but also mostly drives around the city as he thinks it is faster and more comfortable. However, for shorter and more local journeys, Martin appreciates electric scooters. He thinks they're perfect for cutting cars out of journeys that are slightly too long to walk, therefore helping the environment, whilst also ensuring he doesn't have to take public transport if he is uncomfortable.

Martin loves passing this and other pubs on his journey as he feels they represent his local community. He really likes the architecture and it makes him proud of his area.

Martin notes that there are a number of charging points for electric vehicles along this walk. He likes seeing them, but believes even more are needed, as he considers electric cars to be the future of sustainable transport.

Passing closed-down shopfronts on his walk causes Martin some distress. They make him worry that the area is declining, which might make him want to move.

Martin is particularly proud of this old school, which has been turned into a collection of eateries. He goes there regularly with his partner and it makes him comfortable inviting friends to Harborne to socialise with him.

Rachel gets a lift or takes the bus to work in the city as she does not drive. During her lunchtimes, Rachel enjoys walks by the canal and Aston University campus

Rachel is happy taking the bus as she feels the bus network in Birmingham is very good. However, the traffic, both when she gets the bus and lifts, can be horrendous in the city due to heavy roadworks, busy road networks and poorly installed traffic lights.

Rachel is a White British woman aged over 66 years of age. She is a homeowner and has lived in her house with her family in the Erdington ward of Birmingham for over 5 years. Rachel works full-time and earns between £25,000-£34,999 per annum.

Rachel uses several aspects of Birmingham as a source of pride, including architecture in the city centre as well as a variety of green spaces. For her, these spaces are multi-functional, as they also promote physical and mental well-being and community interaction.

But for Rachel, with that sense of pride in Birmingham, also comes the frustration of heavy traffic, busy road networks and poorly installed traffic lights in Birmingham city centre. As lamented by Rachel: "it is not enjoyable when I have to go through all the busy traffic to get to where I want…"

Rachel also feels sad about the litter in the surrounding area of the new Unite building.

Rachel loves walking by the canal and through the Aston University campus during her lunchtimes. She finds these locations aesthetically pleasing and refreshing, promoting activity and physical health.

Whilst Rachel enjoys the visual comfort of the scenery during her lunchtime walks, she often feels frustrated about the graffiti sites in the surrounding area of the canal.

Anand enjoys getting away from the bustle of the city centre by taking the train out to Solihull

Anand is a South Asian man living in a local authority managed flat in the Heartlands ward

He is aged between 25-34, but does not drive, so he regularly commutes to his job as a retail assistant in the city centre by bus.

Anand takes this journey because he feels it is positive for his mental health. He dislikes that the area he lives in does not have any easily-accessible green space, and there is little opportunity for social interaction. If there were greater facilitation for this in his local area, he would not feel the need to travel outside of the city so much.

Because he lives in an area with few green spaces, Anand is aware of the importance of nature and the environment. He travels by train and bus because he feels this is better for the environment, and he finds himself drawn to spaces that make use of greenery or incorporate nature effectively.

Anand uses this alley while walking out of his local area. He notes it makes him feel uncomfortable at night because it is poorly lit and he feels it is a hotspot for crime.

He feels that Solihull is a place with local pride. This is evidenced to him through the well-kept greenery and a variety of places to shop and socialise.

He uses the 97 bus both for this journey and his regular commute. He notes that it is usually overcrowded, causing frustration, anxiety and him often to be late.

He prefers train travel because it is easily accessible from work and allows him to get to other parts of the city easily. He personally prefers Moor Street due to its historical features.

8. Creating a Built Environment that makes Birmingham a Healthier Place to Live: Opportunities for Action

This report sets out how the built environment can be used to improve citizens' health and reduce health inequalities in Birmingham. Its messages are current and in line, with the coronavirus (COVID-19) pandemic demonstrating that people's health and the built environment cannot be considered separately. Both are vital pillars of a thriving and prosperous society.

Health inequalities are increasing in Birmingham. Since 2010, advances in life expectancy have slowed, and people can expect to spend more of their lives in poor health. The health of a population is influenced by much more than just the health and social care services available to them. It is also shaped by the social, economic, and environmental conditions people live. Creating a city where every citizen can live a healthy life necessitates action from all levels of a local authority. Work is underway to reduce inequalities (i.e. income replacement benefits, free school meals and social housing). Still, a further focus is required to address structural inequalities in the economy, housing, and education to enable equitable access for all.

This annual report contains case studies of citizens' interactions with the built environment, exploring how it impacts their daily lives. The link between health and the built environment is well established and indicates that people's health and wellbeing is dependent on the quality of their built environment. This report highlights the lived experience of residents within different contexts. Not all residents have the same kind of exposure or understanding of the built environment, and policymakers should recognise this when making decisions. Developing the built environment to improve people's quality of life includes supporting social cohesion, equity, inclusion, and promoting access to health-promoting goods and services. Birmingham City Council can use a wide range of initiatives (some already underway) to create a built environment that makes Birmingham a healthier place to live.

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