



The Density Dividend: solutions for growing and shrinking cities

Appendix

Case study: Birmingham

Authors:

Prof Greg Clark

Senior Fellow, ULI Europe

Dr Tim Moonen

Director of Intelligence at The Business of Cities Ltd



**Urban Land
Institute**

TH Real Estate

About ULI

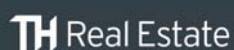
The Urban Land Institute (ULI) is a non-profit research and education organisation supported by its members. Founded in Chicago in 1936, the Institute now has over 35,000 members in 75 countries worldwide, representing the entire spectrum of land use and real estate development disciplines, working in private enterprise and public service.

ULI has been active in Europe since the early 1990s and today has over 2,200 members across 27 countries. It has a particularly strong presence in the major European real estate markets of the UK, Germany, France and the Netherlands but is also active in emerging markets such as Turkey and Poland.

ULI's mission is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. The Institute is committed to:

- Bringing together leaders from across the fields of real estate and land use policy to exchange best practices and serve community needs;
- Fostering collaboration within and beyond ULI's membership through mentoring, dialogue, and problem solving;
- Exploring issues of urbanisation, conservation, regeneration, land use, capital formation, and sustainable development;
- Advancing land use policies and design practices that respect the uniqueness of both the built and natural environments;
- Sharing knowledge through education, applied research, publishing, and electronic media; and
- Sustaining a diverse global network of local practice and advisory efforts that address current and future challenges.

To download information on ULI reports, events and activities, please visit <http://europe.uli.org>.



About TH Real Estate

TH Real Estate is an established investment management company, specialising in real estate equity and debt investment worldwide. As one of the largest real estate managers in the world, TH Real Estate has the scale, capital resources and knowledge to provide creative and effective real estate investment solutions for clients. With a focus on the retail, office, logistics, debt and multifamily residential sectors, TH Real Estate emphasises sustainable practices to protect assets and maximise their value.

The company is owned by TIAA-CREF, a US financial services and Fortune 100 company, with \$869bn assets under management*. Launched in April 2014, TH Real Estate has a dedicated global presence with offices across America, Asia and Europe, representing c.\$28.5bn* of real estate assets across c.50 funds and mandates. Together with TIAA-CREF's US real estate assets, the global real estate platform of \$86.6bn* represents one of the largest real estate investment management enterprises in the world.

www.threalestate.com

* As at 30 June 2015



Copyright ©2015 by the Urban Land Institute.

ULI Europe, all rights reserved. No part of this report may be reproduced in any form or by any means, electronic or mechanical, including photocopying or recording, or by any information storage and retrieval system, without written permission of the publisher. ULI has sought copyright permission for all images and tables.

Front cover image: © Photo by Jimmy Guano, available on a Creative Commons Attribution-Share Alike 3.0 Unported license

Contents

Acknowledgements	iv
This report	iv
Methodology	iv
 Executive Summary	1
 History of urban change in Birmingham	5
 Current trends and future drivers of density in Birmingham	11
 The enablers and constraints of density in Birmingham	14
 Birmingham examples of 'good' and 'bad' density	18
 Future outlook and the journey towards good density	21
Notes and References	24

Acknowledgements

The preparation of this report was supported by a steering group of leading ULI members and staff including:

Kathleen Carey, Rosemary Feenan, Lisette Van Doorn, and Clare Game. The authors are very grateful for their guidance and support.

The authors wish to thank all those who have participated in the ULI workshops, and those who contributed their ideas, knowledge and opinions. A list of those who gave exceptional assistance to the development of the case studies is listed on page 30 of the summary report.

This report

ULI Europe has identified *density* as a major theme for its content programme. This report is the second of a series of studies into the impact, implications and importance of density in today's cities.

The first report, *Density: drivers, dividends and debates (June 2015)*, examined what we mean by the term *density*, and explored the long term benefits density offers to people, the environment and on investments. This was done through consultation with ULI members, city experts, and industry leaders.

This report explores the question of density and urban change by looking more closely at the experience of six European cities. It examines how density may play a role in helping cities in cycles of growth or shrinkage to adapt, prepare and succeed in the future. The six case study cities – **Birmingham, Dresden, Istanbul, London, Stockholm and Warsaw** – cover a wide span of population trends, political frameworks and spatial evolutions. Together they offer many lessons for cities in different cycles of development.

Methodology

For this report, we initially undertook historical research on each of the six cities to understand the development path they have taken and what this means for the appetite of their residents and leaders for city living and future densification. Then, we developed detailed case studies for each of the six cities, which each identify the key drivers, enablers and attitudes to densification, and feature timelines of change. We identified and spoke with four to six specialists in each city – including city planners, academics, architects and development professionals – in order to clarify and calibrate these cases.

The case studies were used as the basis for discussion with ULI members at workshops that took place in each of the cities, except for Dresden where the workshop took place in Berlin. The feedback from the workshops was used to update and improve the case studies as well as to inform the summary report.

Authors

The authors of the report are **Prof Greg Clark**, Senior Fellow at ULI Europe, and **Dr Tim Moonen**, Director of Intelligence at The Business of Cities Ltd.



Executive Summary

Birmingham is a city bouncing back from a long period of chronic under-investment in infrastructure and flawed attempts by UK central government to restrict its industrial and office growth. The effect of these earlier policies was a starting point of a quite low density city, largely dependent on the car, and whose families with school age children invariably preferred the suburbs to the inner city.

Today, after a three-decade journey of re-thinking the city's spatial model, Birmingham is growing rapidly once again. The confidence to deliver attractive mixed-use projects in and around the city centre has soared thanks to the success of pioneering schemes such as Brindleyplace, Attwood Green and Park Central, and renewed leadership efforts by the Birmingham City Council. Development density has increased throughout an expanding city centre as the shackles of the 'concrete collar' are removed.

Birmingham is on the brink of a structural change in its economic make-up. Whereas in previous cycles it absorbed an overspill of corporate and back office functions as a

result of London's success, there are signs it is now gaining permanent front-office capabilities. Thirty-something Londoners are leaving for Birmingham in record numbers, while corporates in out-of-town business parks are moving back into an enlarging city centre after 20-30 years away. The conditions are increasingly in place for successful densification as one important means to improve overall city performance.

Increased investor confidence has created a spike in investment projects across the region, including in its financial, legal, advanced manufacturing, digital and car industries. Birmingham's appetite for this re-urbanisation and surplus demand is helping it to drive other important urban ambitions, including a dense and more polycentric future as set out in the city's Development Plan to 2031. Meeting the demands of new economy firms is essential to achieving competitive advantage and creating a new higher value jobs base, or Birmingham will miss out on opportunities to capitalise on its knowledge economy and creative assets.

Figure 1 Population, economy and density in Birmingham's city limits and functional urban area

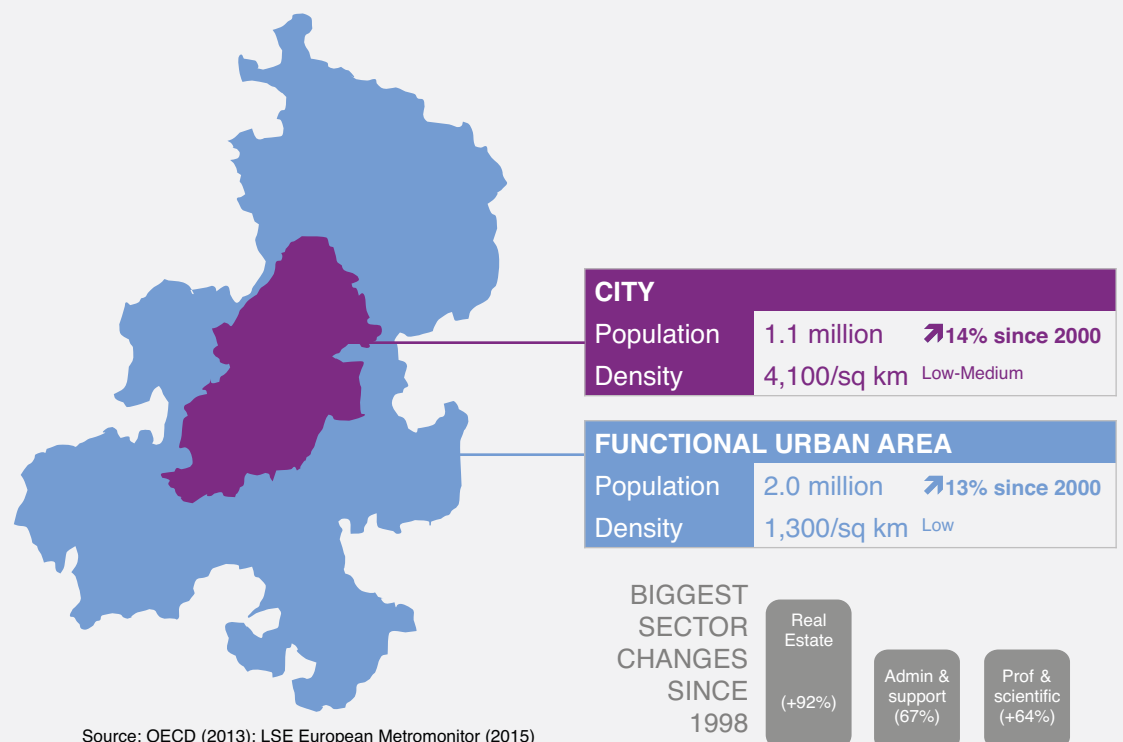
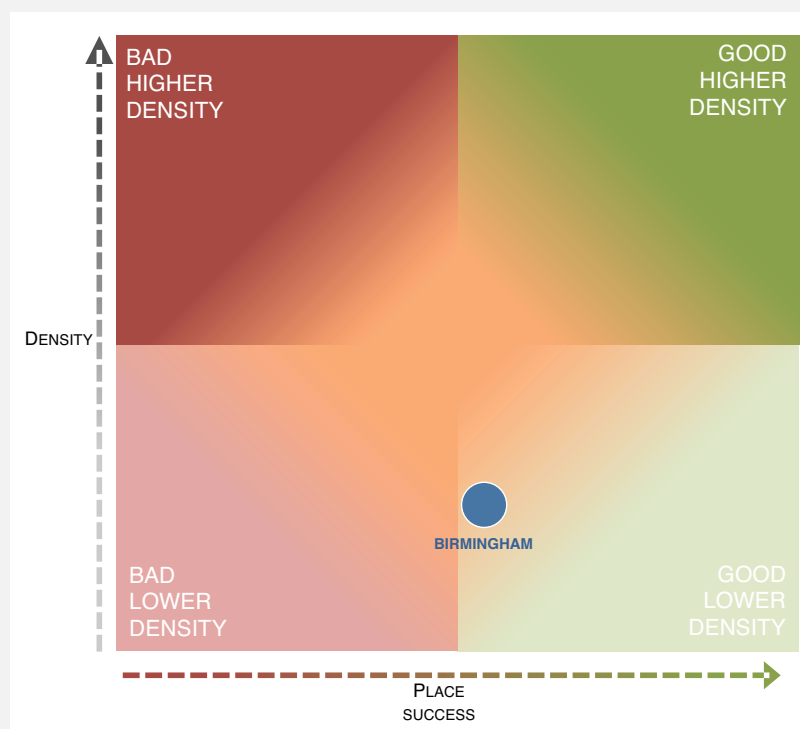


Figure 2 Birmingham's density profile in 2015



The pace of demand in Birmingham is such that it cannot be met by business-as-usual approaches. A one-off urban extension into part of the Green Belt can absorb less than 10% of future growth, meaning new solutions are needed, including targeted densification. But the city faces some local opposition and some market hesitation about building at medium or high densities in the suburbs.

Like other bounce-back cities, Birmingham has to develop 'pull factors' for new populations while persuading established residents that denser growth can make the city better. Birmingham needs ambitious demonstrator projects to overcome the myths and memories of failed density in the past. These important developments are now in train. The long-awaited Greater Icknield project offers the potential to show how dense family housing can work well on the fringe of the city centre, and can help usher in a more segmented residential offer. Equally, Smithfield Market is a means for Birmingham to prove it can foster vitality and vibrancy for a more creative economy. These can catalyse Birmingham's latent 'city of villages' character, which would be more capable of sustaining a mix of uses and age groups at medium and high density.

Figure 3 Birmingham's ingredients to achieving progress on density

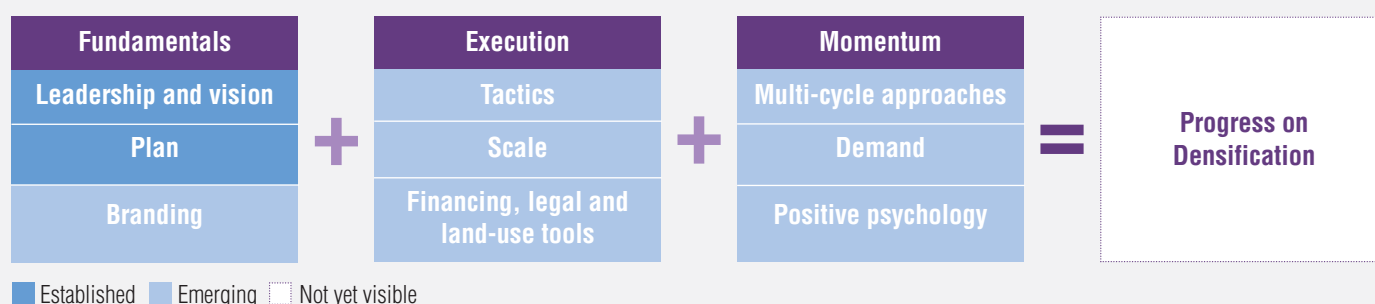
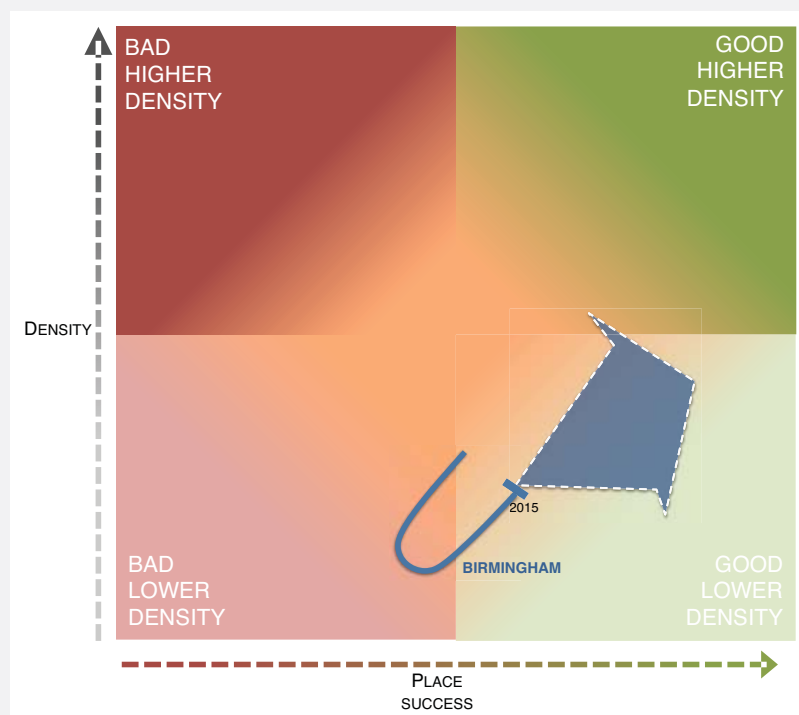


Figure 4 Birmingham's journey towards good density

In order to make accelerated progress on density Birmingham City Council has been highly proactive in using its assets. Its municipal housing trust is now the largest public sector developer in the UK, and it is also active in the booming private rented sector (PRS). The value of access to large landholdings, an Enterprise Zone that simplifies planning, financial tools such as tax increment financing (TIF), and a new development agency, is also becoming clear. Birmingham has assembled the tool box needed to promote densification.

Birmingham's density outlook

Birmingham is turning the corner more sharply than any of the other case study cities in this review. To accelerate its progress it needs the range and quality of housing that can serve its growing high value services economy and limit further suburban expansion. The alignment of public and

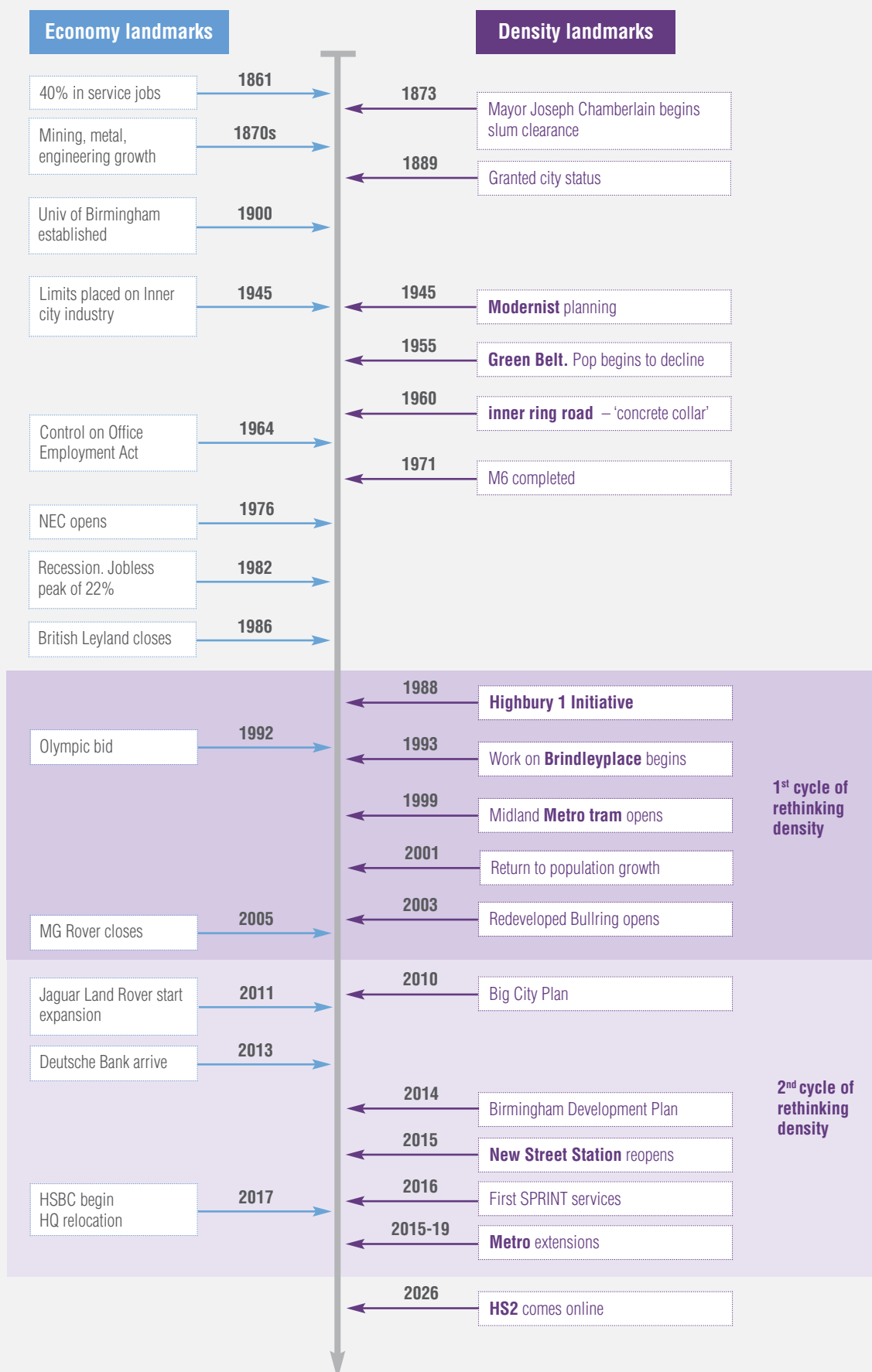
private sector interests is driving a collaborative new cycle of higher quality development, more mindful of the larger space and destination qualities and not just the building asset. The clustering of buildings at higher densities will need to be accompanied by upgrades to schools, skills, public realm, arts and public safety. The imperative to diversify housing also applies to ownership models and affordability, which also have a role to play in driving densification.

A new transport pipeline is the major enabler of future densification in Birmingham. The expanded tram system, a lengthened airport runway, and sequence of rail station refurbishments have given confidence to capital and businesses.

High Speed 2 (HS2) is the real game changer – adding vital rail capacity that will improve Birmingham's international visibility and its links to London and northern England. It creates a 'once in a century' impetus to densify the city centre and encourage a complementary offer east of the city centre at UK Central station. To leverage HS2 fully will require long-term strategic planning in order to ensure the right mix of real estate and amenities.

Improved regional collaboration offers a major opportunity for a step change towards building a collective and integrated economic and spatial strategy. Historically, low density in Birmingham was partly a product of competition and siloed initiatives among different local authorities. In 2015, the prospect of a West Midlands Combined Authority is also a new major opportunity for a step change towards building a collective and integrated economic and spatial strategy. This heralds the potential for a strategic approach to densification that gets to grips with travel-to-work patterns, identifies regional strengths and builds a coherent and compelling message about the past and future of both Birmingham and the West Midlands.

Figure 5 Timeline of economic and spatial change in Birmingham





History of urban change in Birmingham

2.1 Modern Birmingham and spatial development

Birmingham's spatial model was largely defined by the investment and population influx of the Industrial Revolution, when Birmingham became renowned as a city of 1,000 trades. Factories were located in the heart of the city, and much of the working population was concentrated in cramped and dense 'back-to-back' housing developments.¹ Small workshops and production units located next to residential quarters as Birmingham became a global centre of industrial innovation.

Kickstarted by the leadership of Joseph Chamberlain, the process of slum clearance grew Birmingham's stock of larger Victorian and Edwardian buildings. The city acquired a more liveable network of streets and squares and benefited from investments in gas and water works, as well as recreation spaces. These earned Birmingham the title of 'best governed city in the world'.² Wealth creation enabled the new middle class to move to more spacious suburbs – facilitated by the growth of the railway network.³

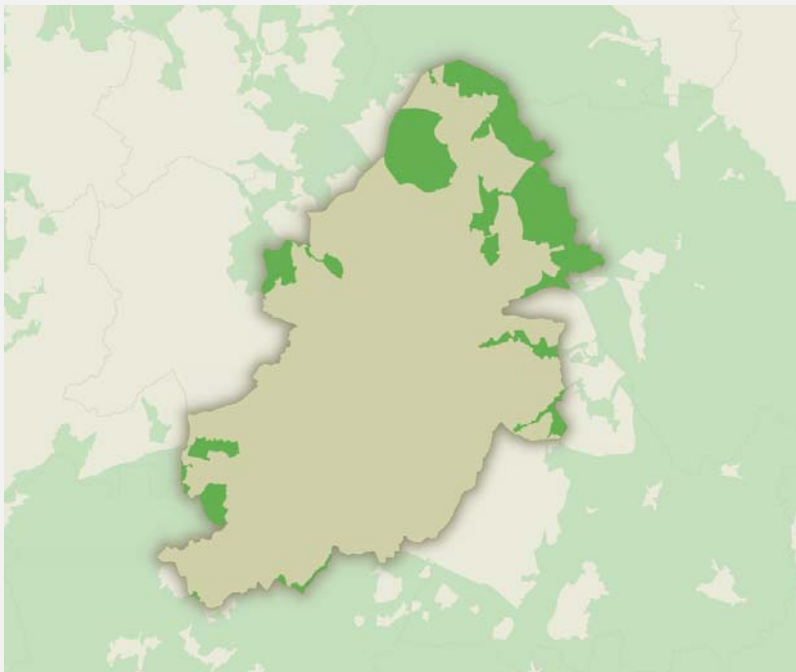
The nature and evolution of Birmingham's industrial development was a key reason it became more suburban in character than other British cities. Its newfound affluence in the 1920s and 1930s co-incided with the boom in semi-detached suburban living and mass car ownership. The desirability of the inner city suburb of Edgbaston also became a leitmotif for other areas in the aspiration for low density neighbourhoods, and the city helped pioneer the garden city movement that endorsed wide roads and spacious estates. With motor factories moving out to the city fringes, car culture became deep-rooted. Birmingham became deeply attached to the idea of gardens, abundant green space and private housing, a phenomenon that endures to this day.

Postwar containment and planning failures

The Second World War inflicted damage on the city fabric, but the major spatial change that altered Birmingham's density profile was the introduction of the Green Belt in 1955.⁴ This protected ring of green and agricultural land was second only in size to London's own greenbelt. Its strict development controls effectively diverted population growth to the surrounding shire districts. The Green Belt is largely credited for having prevented the emergence of a continuous urbanised zone in the West Midlands.⁵

In the immediate post-war years, restrictions on the agglomeration of industry prevented factories from setting up in the inner city without the permission of central government.⁷ Comprehensive redevelopment areas in the inner city accelerated the dispersal of population to new estates such as Chelmsley Wood and Castle Vale as well as to neighbouring areas, such as Redditch and Telford. Later, a boom in office jobs was cut short by central government fearful of over-concentrating investment in the city at the expense of other English regions. The Control of Office Employment Act 1965 halted a new wave of growth by effectively banning office development for two decades, and left the city dependent on an artificially small number of sectors.⁸

Figure 6 Birmingham and West Midlands Green Belt⁶



Map by Alasdair Rae. Data from DCLG 2015. © Crown Copyright and Database Right

“Here we are dealing with what is clearly an over-congested area, and indeed the congestion is getting worse... The Government, therefore, thought it timely to take steps to control the growth of office accommodation in Birmingham and the rest of the Birmingham conurbation before it got out of hand, in the same way as they control the growth of industrial employment.

I should like to give figures to show the threatening situation which must be faced... service employment increased by 27 per cent, a faster rate of growth than in any other region.”

– The Minister of State, Board of Trade Mr. George Darling, 1965⁹

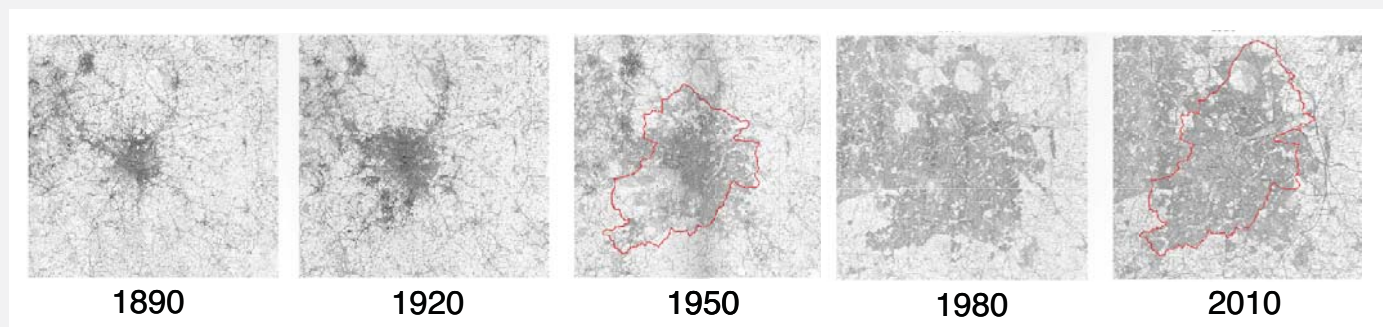
The effect of government policy in the second half of the 20th century saw the **city's physical footprint expand but its population decline** – by 12 percent over the period.¹⁰ At the same time, Birmingham's modernist urban planning had a number of lasting effects on the city's spatial DNA.¹¹

- The CBD became a heavily single-use commercial zone with limited residential options.
- The new Inner Ring Road became a physical and psychological barrier – a so-called ‘concrete collar’ that sealed off the CBD from non-motorised access.¹²

- Outer ring roads integrated with the national motorway network, increasing the attraction of car ownership.
- High-rise developments surrounded by empty spaces replaced the stock of dense Victorian and Edwardian housing in the centre and inner belt.¹³ The concentration of public sector housing in big clusters, both in high and low density projects, resulted in un-mixed communities that lacked stewardship and entered into spirals of decline.
- Disinvestment in the public transport network left Birmingham as one of the most car dependent cities of its class. Its extensive tram network was entirely removed in 1953 and many suburban rail routes cancelled. Public transport ridership fell by nearly 50 percent in two decades,¹⁴ and by 1990, Birmingham was the only major city in Western Europe without a light rail system. Transport deficits denied many in mono-tenure suburbs access to work, reducing the vitality of places.

This set of factors seriously weakened the incentives and options to increase densities outside Birmingham's city centre, and locked Birmingham in to, by European standards, a relatively low density sprawl model.

Figure 7 Birmingham's spatial development



Turning the corner

By the 1980s, structural industrial decline had triggered a change in planning practices. Quality of life and place emerged as policy priorities as the city sought to diversify and compete in a services and knowledge economy. The experience of large public housing projects such as Chelmsley Wood and Castle Vale had demonstrated the potential and the limitations of different types of housing estate lay-out. Resident efforts to stop road development were also gaining traction. Efforts to revitalise the central city were kick-started by the Highbury Initiative under the leadership of Sir Albert Bore (see box).

Sir Albert Bore and the Highbury Initiative

Sir Albert Bore has been a central figure in Birmingham's political landscape for nearly 30 years, and can be credited as one of the driving forces behind the city's physical and economic redevelopment. In 1988, he was instrumental in setting up an international design symposium, the "Highbury Initiative" in which the City Council invited local stakeholders and international experts to participate in a 'formalised brainstorm', with the aim of solving the city's spatial and architectural problems.

The Initiative drew attention to Birmingham's unappealing core, and the problems caused by the inner ring road. It has since been seen as a watershed period in Birmingham's spatial change, which activated major projects to break the 'concrete collar' and expand the city centre to incorporate distinctive quarters such as the Jewellery Quarter and Southside.

Sir Albert Bore was himself Council leader from 1999 to 2004, and returned to the same office in 2012. He has recently been central in getting a 'City Deal' for Birmingham from national government, which included the creation of an Enterprise Zone and greater use of the city's business rates as a financial instrument for infrastructure development.

This new phase of leadership sparked a series of development initiatives pursued throughout the 1990s – including Europe's largest mixed-used redevelopment project in 1993 at Brindleyplace. Projects like Symphony Court, across the Brindley Loop Canal, was one of the first city centre residential developments in this new cycle, albeit of fairly modest densities. Better quality social housing came online with the help of Urban Development Grants.¹⁷ At the same time, Birmingham's professional services economy began to boom, albeit temporarily, with the arrival of law and accountancy firms.

The Highbury Initiative also paved the way for the return of a tram network. Opened in 1999, the first line ran from Wolverhampton to Birmingham, although further expansion was stymied by a lack of funding. Nonetheless, it was clear by the end of the 1990s that Birmingham was visibly attempting to adopt a new approach to urban quality and density. Investment began in new international class assets, including at New Street and Snow Hill stations.

2.2 A return to growth and a new perspective on density

Since the turn of the century, Birmingham's population has returned to growth, in part fuelled by immigration and high birth rates as a result of the city's young demographic profile. Demand for such space has been increasing and new apartment projects in the city centre such as Liberty Place and Kings Edwards Wharf have highlighted the potential for a new style of living in the city.¹⁸

“Birmingham has rediscovered its self-belief”

– Andy Street, Chairman, Greater Birmingham and Solihull Local Enterprise Partnership

Source: FT, 28th September 2015

Over the last decade density in Birmingham's city centre has increased significantly, with development helping to add an extra 25 residents per hectare. The concentration of employment has created over 100 extra jobs per hectare compared with 2001, a far bigger change than any other part of the region. Residential densities now routinely reach 80-100 dwellings per hectare (dph) in the City Centre. The area is being effectively expanded beyond the Inner Ring Road (see Figure 8) to overcome the 'concrete collar' effect.¹⁹

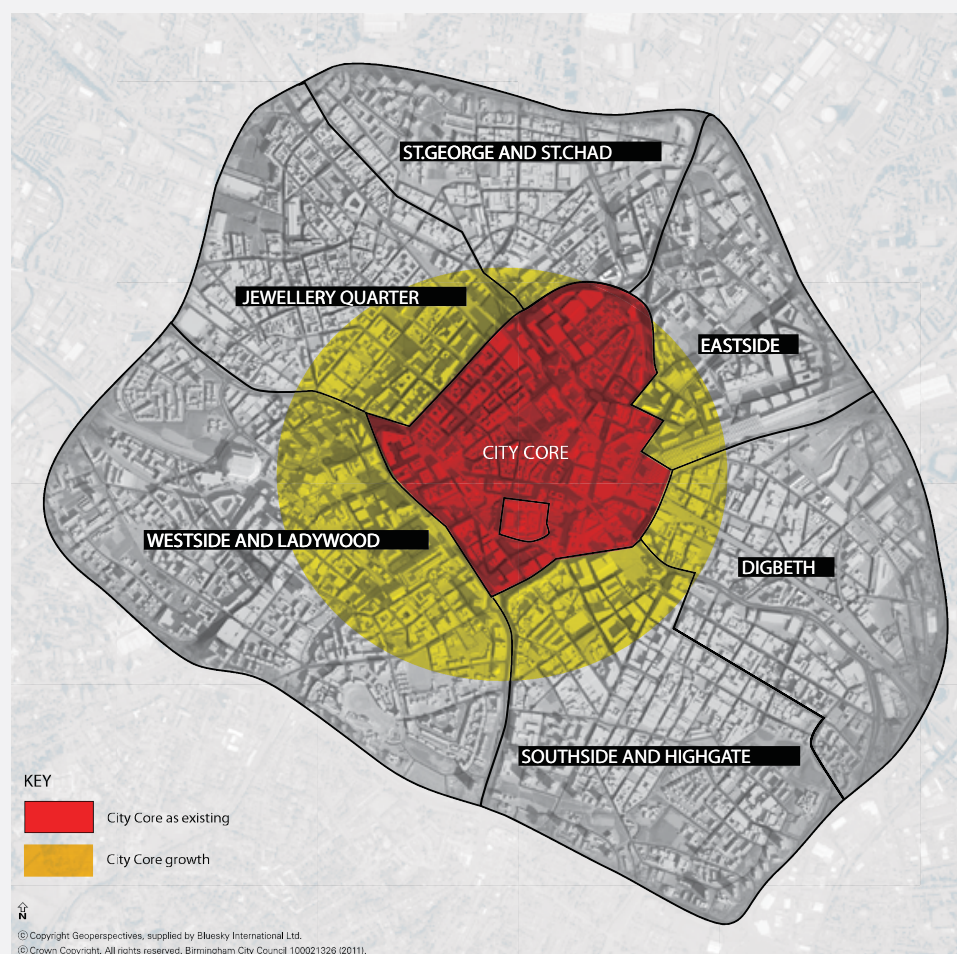
As the centre of Birmingham gradually becomes more dense and mixed-use, it is increasingly attractive to the under 35s, especially students and young professionals. There also signs of the over 55s returning to the city. The City Centre has not yet, however, been able to create the housing and lifestyle offer to appeal to families.

Planning ahead

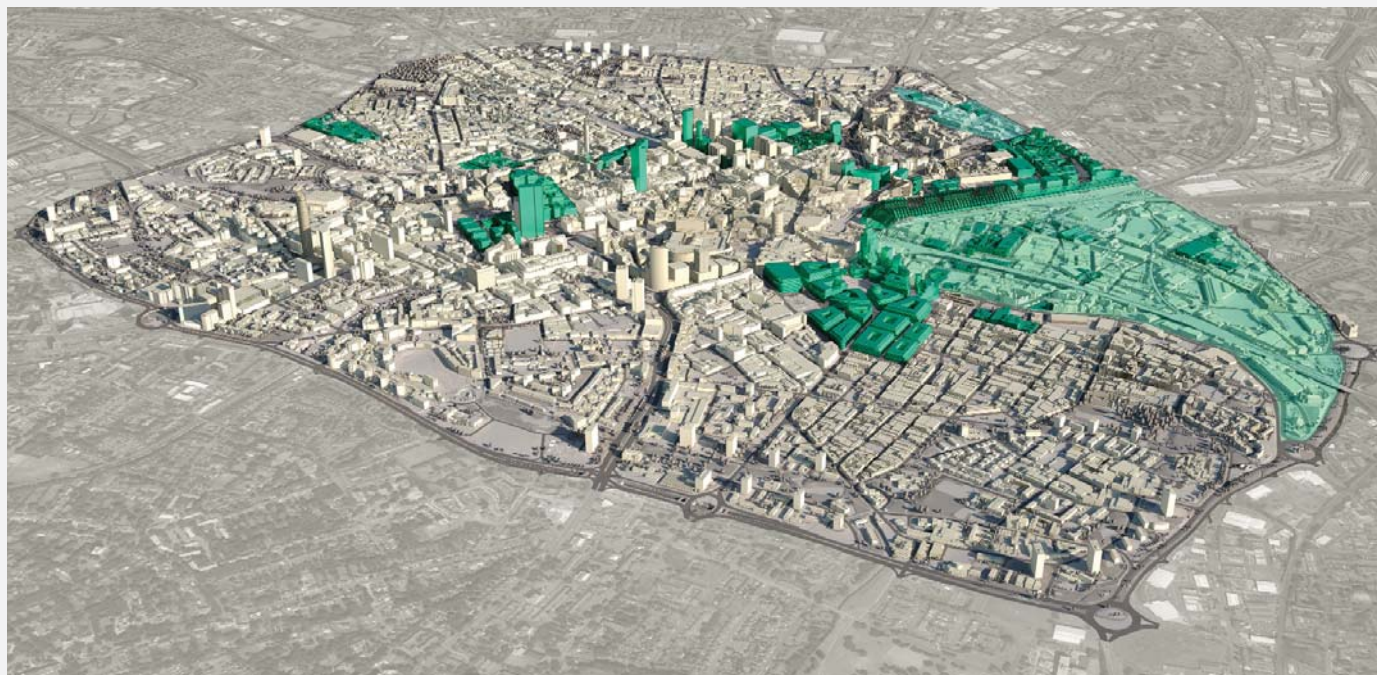
The City's most recent spatial plan, the Birmingham Development Plan actively responds to the growing population pressures.²¹ Higher densities on brownfield sites are a priority, especially around transport stations.²² Planned intensification sites include:

- **Eastside**, which maximises the potential of the HS2 station in the area included in the Birmingham Curzon HS2 Masterplan including a range of commercial and residential development.
- **Snow Hill** station will see further commercial densification and mixed-used developments.²³
- Birmingham **Smithfield**, which capitalises on the opportunity presented by the relocation of the Wholesale Markets out of the City Centre with a focus on residential, cultural and leisure uses (see box).

Figure 8 City centre spatial structure showing planned core expansion



Source: Birmingham City Council
 © Geoperspectives, supplied by Bluesky international

Figure 9 City Centre Enterprise Zone²⁴

Sourced: Birmingham City Council

The scope to densify is greater in some areas than others: historic districts such as the Jewellery Quarter are constrained by their character and planning restrictions. Birmingham's 2003 Tall Buildings Strategy High Places restricts the construction of buildings higher than 15 storeys to an east-west 'ridge' that includes Digbeth and Eastside.²⁵

An agenda for change

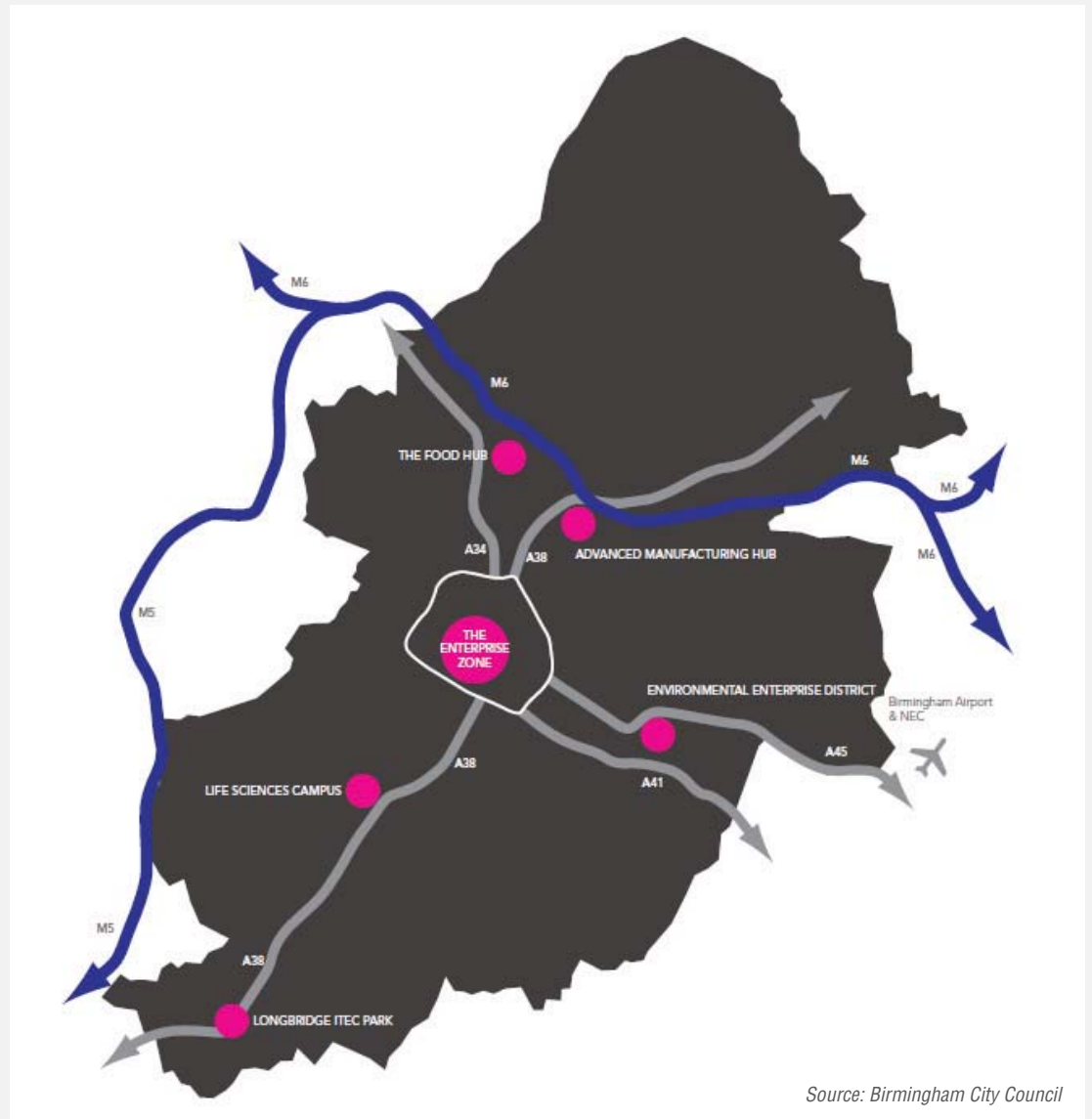
Today the Birmingham Development Plan estimates that 89,000 additional homes will be needed by 2031, but only half can be supplied on brownfield land. **Targeted greenbelt development** is needed to respond to population pressures, with the council stressing that this must be at slightly higher densities than achieved previously. 2.7 sq km of land has been released from the Green Belt in Langley to provide 6,000 new homes at an average density of 35-40 dph.²⁶

“In order to ensure that best use of land is made a minimum density of 40 dwellings per hectare will be expected in the suburbs with higher densities in the City Centre, other centres and along transport corridors.”

– Birmingham Development Plan, 2012

Towards a polycentric city?

Despite the concentration of development activity in the city centre, Birmingham is seeking ways to bring a polycentric model into being. A network of growth centres is planned to align with growth in six economic growth areas.²⁷ For example an advanced manufacturing hub is taking shape in East Aston, and a life science cluster is springing up around the Queen Elizabeth Hospital and the University at Selly Oak.²⁸ This includes the relocation of Birmingham Children's hospital from its constrained central site, along with high street upgrades, new housing and a new biomedical innovation centre at a nearby research park.

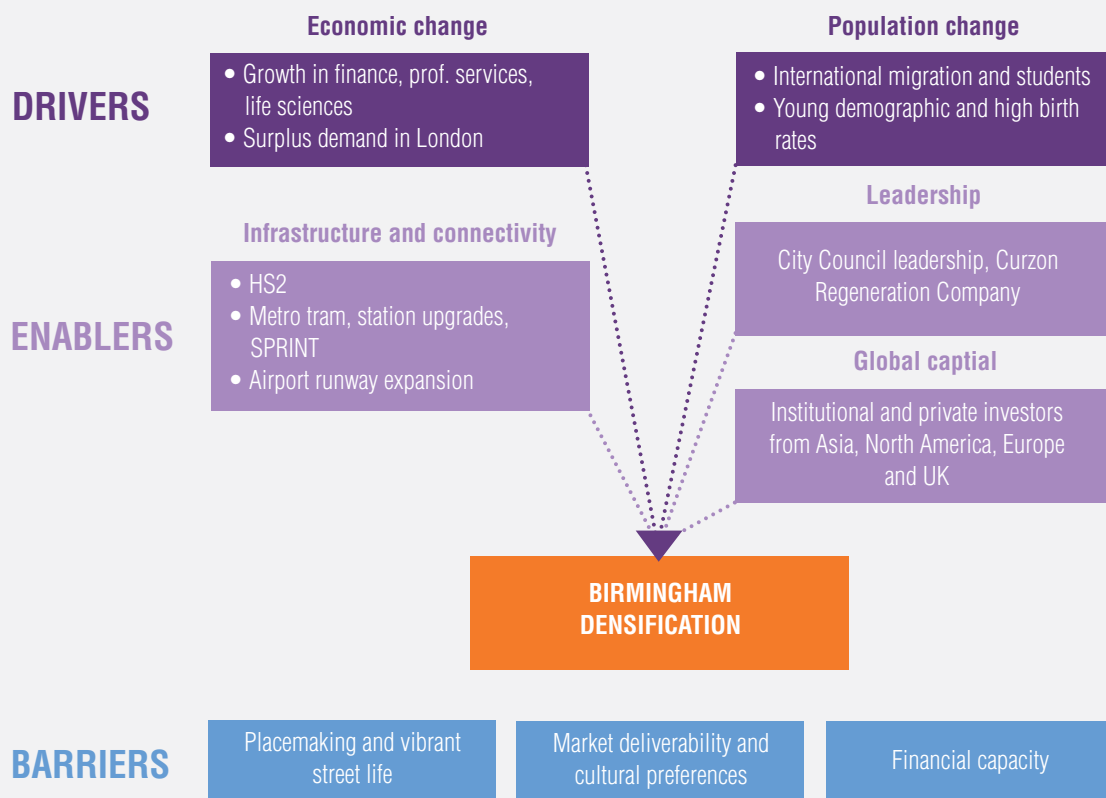


Despite the promise of diversified economic development, there are challenges in delivering medium or high density mixed-use sites beyond the expanded city centre. Market norms and public opinion are clear barriers to higher densities in the suburbs. Greater pace and scale may be needed if goals are to be met.

Current trends and future drivers of density in Birmingham



Figure 11 Drivers, Enablers and Barriers to Densification in Birmingham



Today the major driver of spatial change in Birmingham is rapid population growth. Birmingham is growing at a rate of around 1 percent a year, both because of net international migration of over 3,000 a year, and natural increase, especially among second generation migrants reluctant to leave their established social networks. The city is attracting large numbers of residents from Pakistan, Poland, India, Spain, Romania and China.³⁰ Almost a quarter of Birmingham's residents were born outside of the UK (compared to 11 percent in the West Midlands as a whole).

International students – many of whom favour city centre living – are also of growing demographic importance, while conferences at venues such as the National Exhibition Centre (NEC) and ICC play a critical role in the local economy. There is little evidence of population pressure in Birmingham abating. Unlike most of the UK, Birmingham has a young demographic profile – 45 percent of its residents are under 30.

“Birmingham is doing very well at the moment. It is growing across a number of sectors. You are going to see continued growth in financial and professional services.”

– Sir Albert Bore, Leader of Birmingham City Council

Source: FT, 28th September 2015

Birmingham's economic restructuring is a major driver both of high densities in the city centre, and more dense development in economic zones located near to the city's most deprived communities in order to maximise inclusiveness:

- Concentrated in the city centre, the **business and financial services** sector is a key growth industry for Birmingham. Disruption and innovation in the legal, insurance and banking sectors is helping Birmingham compete with the promise of operational efficiencies and high quality staff. HSBC, Deutsche Bank, Hogan Lovells, and Trowers & Hamlin are among those to have already moved, or agreed to move to Birmingham. These businesses are now bringing front office operations to high spec offices in the city centre.

These relocations are changing how Birmingham is perceived and raising the demand for quality large-scale office and residential space within the CBD. HSBC is

relocating the UK headquarters of its retail bank (along with 1,000 staff) from London and will occupy nearly 20,000 sq m when it moves in 2017. Deutsche Bank will run a full trading floor from Birmingham.

- Advanced manufacturing** is an established sector in the region which is driving demand to provide high-value research and development (R&D) and support services in Birmingham. Previously fragmented regional supply chains are being brought together to create denser hubs. Key locations are around Aston Expressway and (in the wider city region) Birmingham Business Park, where a critical mass of engineers is taking shape.
- Growth in the **life sciences** sector is closely linked to increased housing development around the university and hospital. The city's new life sciences campus will host three to four storey buildings that provide a mixed environment for business innovation.
- Food and drink is a growing sector with potential for 50,000 additional jobs. The evolution of this sector will also impact the spatial character of the city. The relocation of the wholesale food market from the city centre to Witton frees up a large swathe of central city land for a new mixed-use development (see box), and removes a significant barrier to expanding the city centre further towards Digbeth.

Figure 12 Employment density of Birmingham and wider metropolitan region, 2011³¹

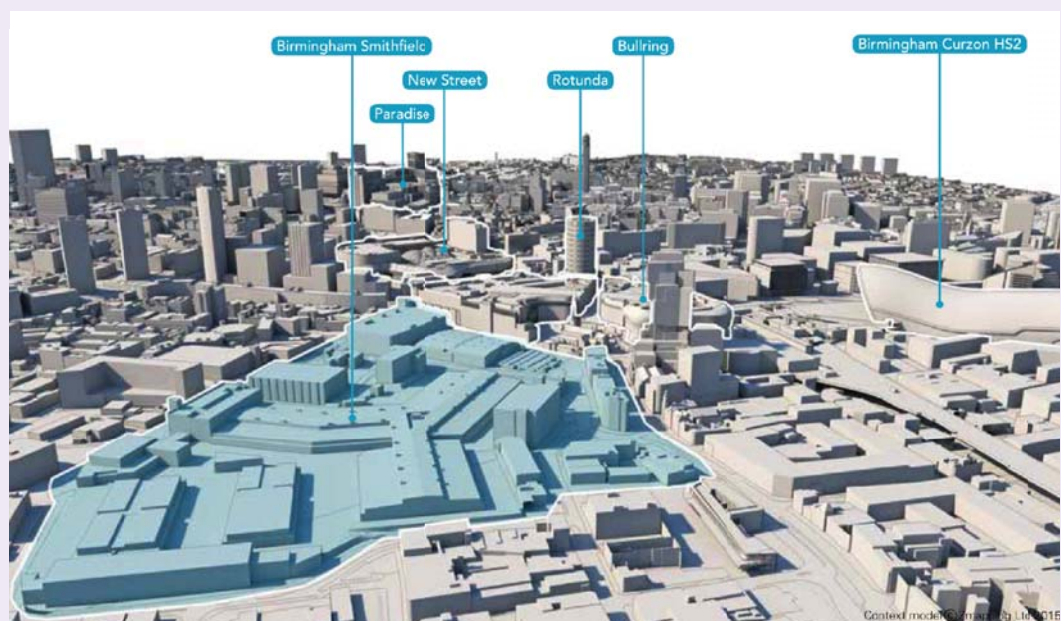


Source: Duncan Smith, LuminoCity3D

Smithfield Market

Large, high quality and mixed-use sites at medium to high density in Birmingham's city centre have been few and far between. Today the regeneration of Smithfield Market is a new opportunity to demonstrate the possibilities. Enabled by relocating the largest wholesale food market in the UK three miles north, over the next 10 years the 14 hectare site is set to deliver 1,000 homes, 3,000 jobs and a raft of new cultural facilities. In effect the project will more than treble the floorspace in the area and dramatically increase the density of interactions.

Figure 13 The Smithfield Market as outlined in Birmingham's Big City Plan



Source: Birmingham City Council

Smithfield Market is an important chance for Birmingham to prove it can sustain vitality and vibrancy that can appeal to workers in its higher value economy. Pedestrianisation of some local streets, and an emphasis on quality landscaping, are part of the aim to become a landmark space that will attract niche retailers and host prestigious events. Proximity to the Bull Ring shopping complex is another important advantage.

The capacity to develop such a large area has been made possible by the fact that Birmingham City Council owns all the land, and that it is in the City Centre Enterprise Zone eligible for funding. This has allowed the project to take an ambitious approach to reducing road and car-oriented infrastructure, including large car parks. The Midland Metro tram system is being integrated into the site, improving access to the high-speed rail terminus in Curzon Street.³²

The project highlights a renewed sense of pride in Birmingham's historic city centre spaces. Redevelopment could help unlock a corridor of residential and commercial development along the River Rea Corridor heading south.

The enablers and constraints of density in Birmingham



Transport

The major enabler of increased density in Birmingham, especially beyond the city centre, will be transport infrastructure improvements. A number of key projects are either underway or in the pipeline for the city, which are expected to increase the city's capacity to create hubs for intensification. These include:³³

- **High Speed 2** would not only bring Birmingham within 49 minutes of London, but dramatically increase regional rail capacity. The plan for a fully integrated transport interchange, close to Jaguar Land Rover's plants and Fujitsu, is called 'UK Central'. It already has a Master Plan drawn up by Solihull Metropolitan Borough Council and the Greater Birmingham & Solihull Local Enterprise Partnership,³⁴ which envisages a large-scale mixed-use development, capable of supporting 100,000 new jobs and 2,000 new homes.

In the city centre, HS2 is also driving growth through its own headquarters in Snow Hill which will employ over 1,000 people and the development of the area around the HS2 station at Curzon. The Curzon station is now benefiting from the **Curzon Urban Regeneration Company** which has been set up to oversee and deliver a 140 hectare redevelopment of the site. The whole project is set to create 2,000 new homes and 600,000 sq m of employment space to the east of Birmingham's city centre.³⁵ The higher densities planned, and the extension of the metro to the terminal, are intended to fully integrate the district into the functional area of the CBD, and extend the city's economic core eastwards.³⁶

- Expansion of Birmingham **airport**. The 300m extension to the airport's runway is expected to make 30 new routes feasible, including long-haul destinations (importantly including China). The first charter service from Birmingham to Beijing was launched in 2014 and the Airport continues to host a programme of charter flights to the Chinese capital for package tour tourists, run by Hainan Airlines.³⁷

- Expansion of the city's **Metro tram** system into the city centre in 2015 is unlocking a number of opportunities. Trams and buses are also likely to play a key role along the corridor between Curzon St and UK Central through east Birmingham once HS2 comes online. The extension to Broad Street along the same time frame has provided an incentive to firms such as HSBC to relocate in the city centre.
- Upgrade of **New Street and Snow Hill stations** are essential to Birmingham's ambitions in finance and business services. The Snow Hill Masterplan alone earmarks around 200,000 sq m of new office space in place of a multi-storey car park, with homes for young professionals also planned nearby as a result.³⁸
- In 2016, the city will be opening its first Bus Rapid Transit (BRT) route, **SPRINT**, running from Birmingham to Quinton. It is being hailed as metro's "little sister", designed with "turn up and go" timetables (10 minute frequencies), and could provide similar speeds and frequencies to the Metro. Nine lines could be operational in the future according to the city's transport white paper, including radial and orbital services.

Amid the promise there are concerns that the pace of progress with transport infrastructure is too slow, and that the city remains some years away from a fully fit-for-purpose public transport system.

Global capital

A strong buy-to-let market in the city fueled a boom in one and two bedroom new-build apartments in the early 2000s, and investor appetite is now back after the Global Financial Crisis (GFC). The West Midlands is one of the most popular regions in the UK for foreign investment in recent years, including from private and institutional funds from the US, Canada, China, Singapore and Malaysia.

Seven Capital is one of the key players in the local residential market. It currently owns around 12,000 new homes and is set to build up to 3,000 more. Its investments include 500 homes in a new urban village in the Jewellery quarter, and hotel and apartment blocks in Five Ways, Landsdowne House, Broad Street and Ridley House.³⁹

The rapid growth of the buy-to-let market for small apartments raises questions about how Birmingham can ensure the right product balance is brought forward in future, especially once its young adult population boom begins to age and adopt different housing preferences.

Council leadership

To meet housing targets in Birmingham requires investment of more than €13 billion from the public and private sector over the next 15 years. Despite budget cuts, the City Council is playing an important role in accelerating development in Birmingham. Its Big City Plan set the tone for a new bold approach to tall buildings, and at the same time it has become a provider of new homes for both rent and sale through the **Birmingham Municipal Housing Trust** (BMHT). Since its launch in 2009, BMHT has fast-tracked nearly 1,500 homes on 35 sites, with a mix of tenures and a financial model that allows developers to 'build now and pay later'.⁴⁰ The Trust is now building nearly a third of the city's homes. Although project densities vary, many in the suburbs usually fall in the medium density bracket at 40-50 dph.

The **private rented sector (PRS)** is a growing market in the city, and accounts for nearly a sixth of homes. In 2014 the City Council began working towards a business case for a wholly owned company to develop homes for market rent. The Council aims to lead the market and show developers the opportunities of building new PRS homes at high density quickly. A key test is whether the expanding PRS market can deliver home sizes and amenities to an internationally competitive standard.

Enhanced delivery-focused agencies are also now set to boost Birmingham's capacity to optimise development opportunities. The new **Birmingham Curzon Regeneration Company**, chaired by former CEO of British Property Federation Liz Peace, is managing the HS2 station redevelopment much more effectively to support the impending business growth around the site.

These enablers indicate that Birmingham has undergone a positive step change in approach, but there continue to be some obstacles on the path to further densification. These include:

Place-making

Birmingham urgently needs a broader focus on place-making. Its ability to attract younger professionals relies on a more vibrant street life and flourishing independent retail sector. Birmingham also needs pockets of real identity and sense of place. Some locations do possess this appeal – especially Bournville, Digbeth, Edgbaston, Four Oaks, Harborne, the Jewellery Quarter, Moseley and Sutton Coldfield. But many others do not. This is one reason the city struggles at graduate retention, compared to some other UK cities.

Good place-making principles are now embedded in the Council's local planning policies and several growth areas benefit from new or existing masterplans (e.g. Greater Icknield, Curzon, Smithfield). Central sites such as Paradise Circus (now being redeveloped by Argent) and Arena Central are essential to improving Birmingham's reputation for pedestrian access and high quality public realm.

At the same time, Birmingham's capacity to attract families with small children back towards the City Centre depends on a wider mix of residential accommodation, and more and better schools. The canal network which sustained Victorian Birmingham is an important and under-realised asset that can play a bigger role in enabling densified and attractive housing.

Market deliverability

Difficulties in acquiring and developing brownfield land include the costs of reclamation, the problems and costs inherent to land assembly, and until recently, diminished investor interest after the global financial crisis, which slowed the pace of redevelopment. Where permitted, the costs of high rises are raised by the need for expensive facades, sprinkler systems, structural and wind loads, and construction logistics.

The planning system can be a constraint to development in the city. In the past a development process to de-risk sites was absent and the release of central government land was poorly joined up. As a result, smaller development companies, including Argent, often play an important trendsetting role in Birmingham's appetite to build high quality medium-to-high density places.

The simplified planning process afforded by the City Centre Enterprise Zone is however allowing projects to move forward more quickly. The central government's post-election commitment in 2015 to an "urban planning revolution on brownfield sites" will also need to be supported by progress on a zonal system that reduces the burden of planning processes.⁴¹

Governance and metropolitan collaboration

Birmingham needs the participation of surrounding local authorities such as Redditch, Solihull, Sandwell and Bromsgrove to help contribute to housing supply and to support an integrated Birmingham-West Midlands labour market.⁴²

The forthcoming West Midlands Combined Authority – which could potentially also have regional economic development and planning powers – could make a significant difference. With hopes that it could be operational by 2016, the national government is making greater funding (and autonomy) for the metropolitan area contingent on adopting an elected mayor and a functional combined authority.⁴³

Cultural challenges

There is certainly some enthusiasm for higher densities in central Birmingham, especially among students, international migrants and young professionals. But ingrained attitudes among families and other residents are a barrier to increasing densities in suburban areas. Indeed, in the UK as a whole there are very few examples of greenfield development being achieved at densities higher than 40 dph. Preferences for space and gardens reinforce housebuilders' conviction that low density development is the only economically sound option for greenfield or suburban sites.

In addition, there has until recently been a lack of genuinely civic debate about density in Birmingham, and a lack of affinity with the issue as a whole. Good density will likely depend on developers and public sector leadership, rather than citizen demand, and so high-quality demonstration schemes are essential to show the unconvinced what is possible.

Finance

Birmingham, like other British local authorities, has limited financial autonomy from central government to pursue large scale redevelopment schemes. But the Regional Growth Fund has played an important role since the financial crisis, while Tax Increment Financing (TIF) is a promising new solution for Birmingham, used to great effect at Paradise Circus in the central Enterprise Zone.

Since 2011, the Greater Birmingham and Solihull Local Enterprise Partnership (LEP) has also been able to approve targeted investment for infrastructure works to unlock key sites. The LEP Enterprise Zone Investment Plan has expanded to £275 million by borrowing enterprise zone income up to 2023. The package will deliver 1.4 million sq m of business and commercial floorspace, and accelerate the improvements to the forthcoming HS2 stations. The ability of the Enterprise Zone to recycle revenues into priority projects has made viable many projects which needed advance investment in site clearance and utilities.

Birmingham examples of 'good' and 'bad' density



Most of Birmingham's most successful examples of place-making have been mature low density suburbs. Birmingham's high density areas, by contrast, tend to be more deprived than average, contributing to negative perceptions about densification. Ward-level data shows that Lozells, East Handsworth and Washwood Heath, all of which have more than 60 inhabitants per hectare, have high unemployment and educational under-achievement.⁴⁹ A similar situation is visible in Sparkbrook and Springfield. There is a deeply held aspiration to live in attractive, prosperous suburbs, where residents have high social and economic capital.

But since the 1990s – and continuing today – demonstration projects have increased confidence in the city's ability to build well at high density. Examples include:

- The area of **Attwood Green** used to consist exclusively of council-owned and social housing mostly in large tower blocks. The estates that comprise it used to have serious social problems including drugs, crime, suicide and anti-social behaviour. In the late 1990s the City Council's Estate Renewal Programme secured over £75m from public and private sectors, and the housing stock was transferred to a non-profit social landlord given powers to partner with private developers.

Park Central is one of the housing estates in Attwood Green that has been rebuilt over the past 12 years.⁵⁰ More than 20,000 sq m of commercial space and new park land was added to the estate, and all displaced residents were guaranteed a home in the area. On completion in 2018, 30 percent of the housing will be affordable. Partnerships with other developers in the other smaller estates ensured comprehensive regeneration of the whole area. In total 1,400 flats and maisonettes were demolished and 2,000 houses and flats built for rent, shared ownership and sale. As a result, the average density has increased from 50 to 70 dph.

The Attwood Green experience illustrates the value of a bold City strategy which gave confidence to public and private investors. Long-term financial planning and management allowed the project to focus on the ingredients that will sustain a mix of tenures and avoid the problems of single income communities.⁵¹

- **Birmingham City University city centre campus** has opened its first phase which includes television studios, libraries, a concert hall, theatre, music hall and lecture theatres.⁵² A new seven storey Birmingham Conservatoire is being rebuilt as a replacement for a building which is now being demolished for Paradise Circus. Student housing and retail outlets are planned as part of the wider project. The campus sets a high standard for mixed-use spaces in the city centre, including among some of the city's future workforce.⁵³

The city has had its fair share of unsuccessful or unsustainable density projects in the past, which provide useful lessons for the developers of the future. The fragmentary effect of road layouts in previous cycles of development has deterred pedestrian and bicycle access, and up to a quarter of daily car trips cover less than a mile.⁵⁴ Efforts are now being made to restructure major arteries and intersections to make them more amenable to public transport (e.g. the forthcoming BRT system).

One notorious example of an individual building which embodied unpopular density is the city's **Natwest Tower**, which is set to be demolished and rebuilt. Originally built in the 1970s, its brutalist style and design became widely viewed as unattractive and incompatible with modern workplace needs. Partly due to a lack of investment by previous owners, it has been sitting empty since 2003. Plans to replace it with a higher, better quality building will add to the CBD's concentration of higher spec buildings.⁵⁵

Figure 15 Natwest Tower⁵⁶ and New Street Station, before renovation⁵⁷



Photo by Erebus555. License: CC-BY-SA 2.0



Birmingham has turned bad density into better density in recent years by focusing on improved design and social infrastructure.

- **New Street Station**, which opened in the 1960's, also stood out as an example of a poorly designed public space which wasted land, provided poor access and links to the built environment and felt unwelcoming. The major redevelopment, completed in September 2015, now provides new mixed-use retail and an uplifting public space that increases the appeal of the urban realm, especially for visitors and commuters.
- **Castle Vale**,⁵⁸ was the largest housing estate in Birmingham, and one of the largest in Europe. It was an area built at relatively high densities but suffered from mono-tenure, poor urban design, and social and economic exclusion. It has since been redeveloped at a similar density but with improved health, social and economic outcomes for residents.

It saw 32 of the 34 tower blocks destroyed and replaced by terraced housing, and attempts to bring employment closer to the area have resulted in a greater focus on mixed use development, including more retail and a small business enterprise park. Public spaces were also enhanced, and community-building schemes were introduced. Unemployment levels dropped from above 20 percent to below 10 percent, and life expectancy rose dramatically, pointing to some of the positive effects of improved design without compromising on density.

Other public spaces have also begun to be reclaimed (e.g. Golden Square), and the ring roads are better integrated – for example Great Charles Street Queensway.⁵⁹ Work is underway to relieve the “pinch points” created by the ring road – e.g. around Holloway Circus – and to remove the barriers to pedestrian movement they create.⁶⁰ The road network's radial and ring structure means that it is adaptable to a more polycentric system in future.

Bringing families back to the city centre - Greater Icknield

A new pipeline of family-friendly housing close to the city centre is being brought forward in Greater Icknield, just a mile west of the CBD along the canal. It has been identified as a key brownfield site to intensify residential led mixed-use development.⁶¹ Its potential to host up to 3,000 new homes makes it a key feature in the city's Development Plan, as the site is a crucial step in the response to Birmingham's housing shortage.⁶²

The area is considered ideal as it is one of the city's largest brownfield sites, and is situated within walking and cycling distance of both the city centre and the local centre of retail and community activity (Dudley Road).⁶³ As such it can offer a fully walkable district with proximity to existing (and future) public transport (e.g. SPRINT). The site gives emphasis to housing combined with retail, employment, leisure and civic amenities.

Figure 16 Proposed spatial development of Greater Icknield⁶⁴



While initial development plans fell through because of the financial crisis, the city will shortly be appointing a development partner to develop the Icknield Port Loop. This area has been earmarked for around 1,400 homes aimed predominantly at families, together with a mix of supporting local facilities and uses.⁶⁵

Housing will be developed at a range of densities from 40-50 dph up to 120 dph in the different density zones proposed as part of the indicative masterplan. Densities will start at the medium-range to showcase the quality of developments, with the aim of creating a market and residential appetite for higher densities in the medium-term. One of the most keenly awaited regeneration sites in Birmingham, it has outline planning consent, enabled by public ownership of the land.

Future outlook and the journey towards good density



The City of Barcelona is less than half the size of Birmingham but is home to 500,000 more people.

Birmingham as a whole is less dense than it could be because of previous generations of planning and government policy. Only a quarter of the housing stock consists of flats, less than half the share of Barcelona or London. The city has had to work within the constraints of an incomplete public transport system and a commercial core without the all-day vibrancy to attract and retain talent.

Birmingham is turning the corner very rapidly, and beginning to escape these path dependencies in order to move to a higher density model. There is widespread recognition among the city's planners, decision-makers and regeneration professionals of the need to achieve higher densities in future, as long as this is delivered with a high quality of design and placemaking. The city has a

major window of opportunity to grow through increased densities and become a more competitive and liveable city on the international stage.

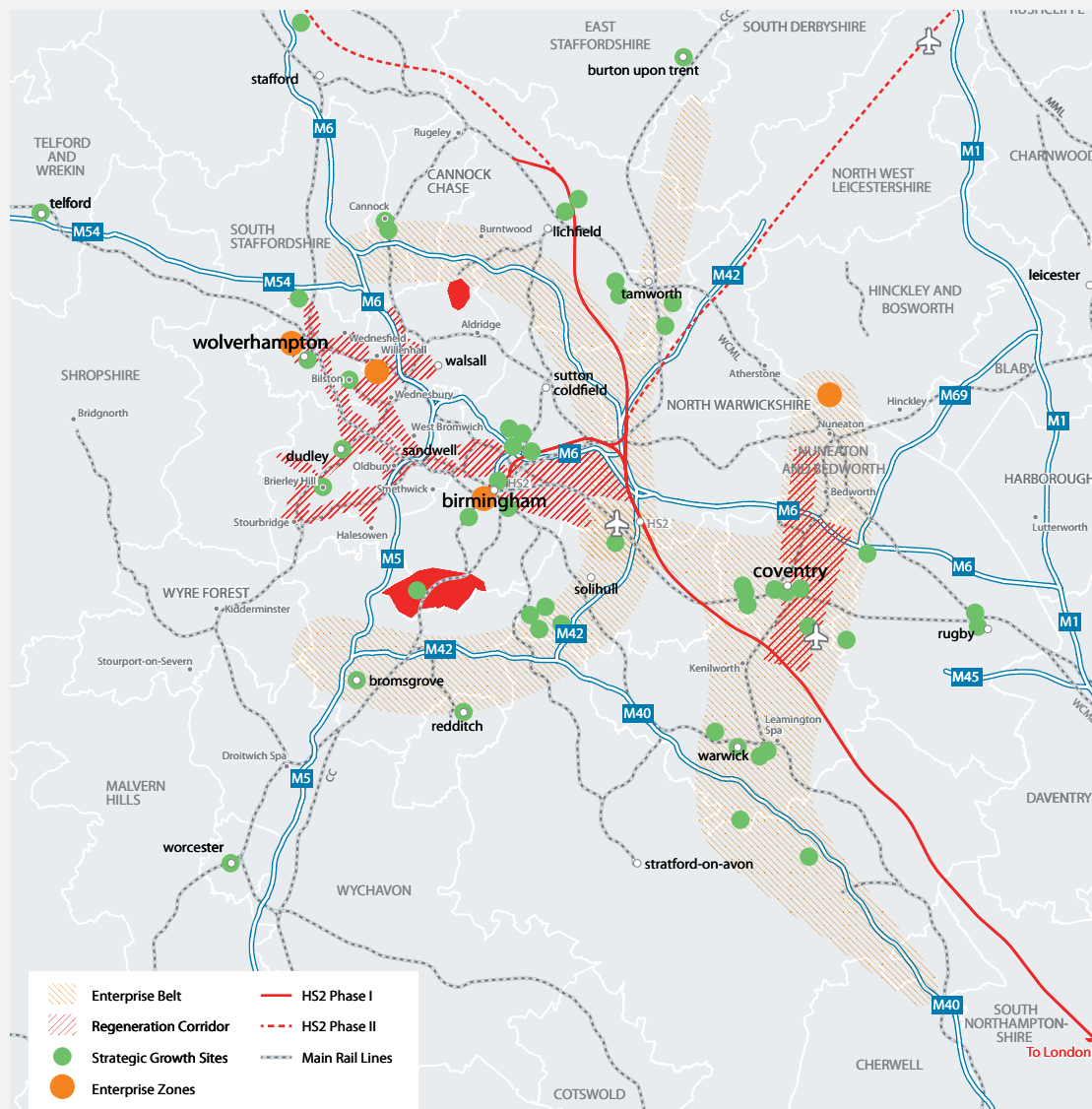
A rapidly changing economic dynamic is creating the appetite within both the City Council and the wider property industry to become a much bigger, more vibrant and more densely populated city. The Council in particular has become a leader and a demonstrator to show others what is possible in what is historically a green and suburban city averse to the idea of density.

Birmingham's current development plan has already identified key sites for future densification. These include extending and densifying the CBD with more mixed-use development (e.g. Snow Hill, Jewellery Quarter, Digbeth), and the network of economic zones nearer the edge of the city.⁶⁶ At the same time, the consolidation of city-scale capabilities, especially its university research and hospital functions, is an important avenue for intensifying land use.

Figure 17 Fundamentals of success for good density in London

	Durable city plan	Fiscal autonomy and flexibility	Transit-oriented development strategy	Metropolitan planning approach beyond city borders	District agencies and development corporations	National planning and policy framework for cities
Birmingham	***	*	***	*	**	**

*** Established ** Partly visible * Not strongly visible or developed

Figure 18 Greater Birmingham's future growth hubs⁶⁷

Source: Centro

Public transport projects are key to Birmingham (and the region's) future densification potential. While the current system is under-developed, planned increases in service frequencies, the restoration of suburban rail routes, and both a radial and orbital BRT network (which would include 9 lines) will allow densification.⁶⁸ Improving radial networks between major cities in the region will help to develop poles between them, while orbital networks will help connected polycentric hubs to each other without congesting the centre.⁶⁹

Figure 19 Perspectives on Birmingham's Future Density

<p>Keep the focus on quality</p> <p><i>"We need housing of higher density than we are used to, but they need to be comfortable and appropriate for 21st century living"</i></p> <p>Ian Ward, Labour Councillor – Deputy Leader of Birmingham City Council⁷⁰</p>	<p>Improve district management</p> <p><i>"Birmingham's local centres need higher-density urban living, design excellence, and management decisions that are taken by people with experience of running visitor attractions"</i></p> <p>Nick Corbett, Director of Transforming Cities.⁷¹</p>
<p>Preserve Birmingham's character</p> <p><i>"Birmingham City Council has focused on demolition of beautiful buildings and infilling the space with high density flats or allowing conversion of Victorian homes into bedsits. This may meet the short term housing needs of the city but does it meet the future economic and cultural needs of the city? The answer is a clear no."</i></p> <p>Robert Alden, Conservative Councillor for the Erdington Ward⁷²</p>	<p>Increase confidence in change</p> <p><i>"Birmingham's tradition of forever beginning again does not come from nowhere – it is founded in optimism and ambition and a belief in a better future – admirable qualities. The downside is having to live in a city where nothing lasts long, where everything is constantly in flux."</i></p> <p>Joe Holyoak, architect and urban designer⁷³</p>

Birmingham's pivotal role in HS2 will also provide a one in 50 year opportunity to become a higher density and more polycentric city.⁷⁴

Not only will the area around the city centre station become much more densified and vibrant, under the stewardship of the new regeneration company, expanding the central cluster of economic activity.⁷⁵ HS2's arrival at Birmingham airport also presents a once in a generation opportunity to expand and upgrade the city's spatial economy. The development of the area around the HS2 interchange is likely, over time, to become a major new piece of city, with thousands of homes plus commercial and office development. This area is likely to have a different offer and a different style of living that increases choice in the region as a whole.

Among the three different scenarios currently being considered, Scenarios 2 and 3 would achieve a density of between 75 and 125 dph. The long-term horizon of HS2 means that it could take up to 25 years for UK Central to reach its full potential.

A number of important challenges have emerged for Birmingham to leverage HS2 fully:

- how the new development adds value to Birmingham as a whole rather than competing with Birmingham for the same assets.
- how to complement its likely logistics functions with amenities that create vibrancy.
- how to embed strategic global thinking into its long-term planning, in particular in thinking of Birmingham's future economic roles in a dynamic global system of cities.

It is clear that Birmingham has begun to turn the corner and many of the ingredients are falling into place – cross-sector leadership, well applied development tools, new financing arrangements that use density positively, and an evolving framework for metropolitan collaboration. What is needed now is a stronger story making the case for change. There is an urgent need for wider civic debate and more demonstrator projects that are visibly successful in order to counter the still prevailing myth that higher densities are inherently negative. Birmingham needs to find a language for density that connects with citizens' aspirations for space, quality of life and economic opportunity.

Notes and References

- Andy Bounds (2015). 'Reversing industrial decline has been a priority in Birmingham'. Financial Times. Sep 28th. <http://www.ft.com/cms/s/2/0f0a7be0-5d3c-11e5-a28b-50226830d644.html#axzz3nKF2d5f0>
- John Murray Brown (2015). 'Birmingham, city of a thousand trades, enjoys a renaissance'. Financial Times. Sep 28th. <http://www.ft.com/cms/s/0/0f26ac5c-5d3c-11e5-a28b-50226830d644.html#axzz3nKF2d5f0>
- ¹ http://issuu.com/cambridgedesignresearchstudio/docs/e.atkins_-_pilot_thesis; http://wrap.warwick.ac.uk/43133/1/WRAP_Mah_0974301-so-230814-jhs_mah_urban_imaginaries_wrap.pdf
- ² Jon Neale and Ian Cornock (2014). 'Greater Birmingham: An Economic Renaissance.' JLL.
- ³ Atkins, E. (2013), Occupying Urban Space. Accessed June 2015 at http://issuu.com/cambridgedesignresearchstudio/docs/e.atkins_-_pilot_thesis; http://wrap.warwick.ac.uk/43133/1/WRAP_Mah_0974301-so-230814-jhs_mah_urban_imaginaries_wrap.pdf
- ⁴ Ibid.
- ⁵ Ibid.
- ⁶ www.telegraph.co.uk/news/earth/greenpolitics/planning/9708387/Interactive-map-Englands-green-belt.html
- ⁷ Jon Neale and Ian Cornock (2014). 'Greater Birmingham: An Economic Renaissance.' JLL.
- ⁸ Sutcliffe, A. and R. Smith (1974) Birmingham 1939-1970, History of Birmingham, Volume III, London: Oxford University Press; www.economist.com/blogs/blightly/2013/05/birmingham
- ⁹ <http://hansard.millbanksystems.com/commons/1965/nov/03/control-of-office-and-industrial>
- ¹⁰ Future Space Foundation (2015), Vital Cities not Garden Cities: the answer to the nation's housing crisis? Accessed June 2015 at www.futurespacesfoundation.org/wp-content/uploads/2015/03/Vital-Cities-not-Garden-Cities-FSF.pdf
- ¹¹ Hendriks, F. (1999), Public Policy and Political Institutions: The Role of Culture in Traffic Policy, Edward Elgar: Cheltenham
- ¹² Hendriks, F. (1999), Public Policy and Political Institutions: The Role of Culture in Traffic Policy, Edward Elgar: Cheltenham
- ¹³ Future Space Foundation (2015), Vital Cities not Garden Cities: the answer to the nation's housing crisis? Accessed June 2015 at www.futurespacesfoundation.org/wp-content/uploads/2015/03/Vital-Cities-not-Garden-Cities-FSF.pdf
- ¹⁴ Sutcliffe, A. and R. Smith (1974) Birmingham 1939-1970, History of Birmingham, Volume III, London: Oxford University Press.
- ¹⁵ Ibid.
- ¹⁶ <http://birmingham.livingmag.co.uk/sir-albert-bore/>; www.jll.co.uk/united-kingdom/en-gb/Documents/Greater%20Birmingham%20An%20economic%20renaissance.pdf
- ¹⁷ www.rudi.net/books/10634
- ¹⁸ <http://citygeographics.org/2013/09/09/an-urban-renaissance-achieved-mapping-a-decade-of-densification-in-uk-cities/>; Future Space Foundation (2015), Vital Cities not Garden Cities: the answer to the nation's housing crisis? Accessed June 2015 at www.futurespacesfoundation.org/wp-content/uploads/2015/03/Vital-Cities-not-Garden-Cities-FSF.pdf
- ¹⁹ Birmingham City Council (2011), Birmingham Big City Plan – City Centre Master Plan. www.birminghampost.co.uk/business/commercial-property/pit-falls-copying-capital-8886955; www.birminghampost.co.uk/business/commercial-property/golden-development-jewellery-quarter-9276682
- ²⁰ <http://bigcityplan.birmingham.gov.uk/wp-content/uploads/2010/08/Big-City-Plan-Part-1.pdf>
- ²¹ Birmingham City Council (2013), Birmingham Plan 2031: Planning for Sustainable Growth.
- ²² Future Space Foundation (2015), Vital Cities not Garden Cities: the answer to the nation's housing crisis? Accessed June 2015 at www.futurespacesfoundation.org/wp-content/uploads/2015/03/Vital-Cities-not-Garden-Cities-FSF.pdf; Birmingham City Council (2013), Birmingham Plan 2031: Planning for Sustainable Growth

²³ Birmingham City Council (2011), Birmingham Big City Plan – City Centre Master Plan.

²⁴ <http://bigcityplan.birmingham.gov.uk/wp-content/uploads/2012/10/Enterprise-Zones-12-11.jpg>

²⁵ <http://bigcityplan.birmingham.gov.uk/building-heights/>

²⁶ www.birminghampost.co.uk/news/news-opinion/joe-holyoak-new-chance-create-7543473; Birmingham City Council (2013), Birmingham Plan 2031: Planning for Sustainable Growth

²⁷ Birmingham City Council (2013), Birmingham Plan 2031: Planning for Sustainable Growth

²⁸ www.birmingham.gov.uk/sellyoakplan

²⁹ Birmingham City Council (2013), Birmingham Plan 2031: Planning for Sustainable Growth.

³⁰ Birmingham City Council (2015). 'International Migration in Birmingham'.

³¹ *ibid.*

³² www.birminghampost.co.uk/business/business-news/plans-turn-wholesale-markets-birminghams-8813781 ; www.birmingham.gov.uk/birminghamsmith-field

³³ Birmingham City Council (2014), Birmingham Connected: Moving our city forward. Birmingham Mobility Action Plan, White Paper November 2014.

³⁴ www.uk-c.com/sitebuildercontent/sitebuilderfiles/ukcmasterplanfullfinalpdf

³⁵ www.birmingham.gov.uk/birminghamcurzonhs2

³⁶ *Ibid.*

³⁷ <https://birminghamairport.co.uk/media-information/news/2015/03/new-birmingham-beijing-flights-announced/>

³⁸ www.birmingham.gov.uk/snowhillmasterplan

³⁹ <http://developer-update.co.uk/2015/04/17/new-fabrick-for-birminghams-digbeth-as-images-of-first-residential-square-are-unveiled/>; www.birminghampost.co.uk/business/commercial-property/seven-capital-appoints-cwa-city-8759865; www.birminghampost.co.uk/business/business-news/seven-capital-launches-landsdowne-house-8673561

⁴⁰ www.theplanner.co.uk/opinion/affordable-housing-diy

⁴¹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/443898/Productivity_Plan_web.pdf

⁴² *Ibid.*

⁴³ www.bbc.co.uk/news/uk-england-29949033; www.birminghampost.co.uk/news/regional-affairs/greater-birmingham-snob-council-leaders-9463894

⁴⁴ www.birmingham.gov.uk/longbridgeaap

⁴⁵ www.longbridgebirmingham.co.uk/vision/

⁴⁶ Birmingham City Council (2013), Birmingham Plan 2031: Planning for Sustainable Growth; www.birmingham.gov.uk/longbridgeaap

⁴⁷ www.birmingham.gov.uk/longbridgeaap

⁴⁸ www.longbridgebirmingham.co.uk/downloads/next-residential-phases-update.pdf; www.birmingham.gov.uk/longbridgeaap

⁴⁹ www.birmingham.gov.uk/cs/Satellite/economicfacts?packedargs=website%3D4&rendermode=live

⁵⁰ www.birminghampost.co.uk/business/commercial-property/birmingham-slum-lee-bank-transformed-6174528; www.birminghampost.co.uk/business/business-news/plans-335-birmingham-apartments-end-9334970; www.hbdonline.co.uk/news/park-central-breathing-life-into-a-city-centre/

⁵¹ Thanks to Birmingham City Council for information provided on Attwood Green.

⁵² www.macegroup.com/projects/birmingham-city-university

⁵³ www.birminghampost.co.uk/business/commercial-property/birmingham-post-skyline-2014-eastside-6410594

- ⁵⁴ Birmingham City Council (2014), Birmingham Connected: Moving our city forward. Birmingham Mobility Action Plan, White Paper November 2014.
- ⁵⁵ www.birminghampost.co.uk/business/commercial-property/john-madins-natwest-tower-could-8543577; www.birminghampost.co.uk/business/business-news/plans-tallest-office-scheme-outside-9370905; www.birminghampost.co.uk/business/business-news/natwest-tower-set-demolished-new-8519348
- ⁵⁶ <http://i3.birminghampost.co.uk/business/commercial-property/article8543753.ece/ALTERNATES/s615/NatWest-Tower-2.jpg>
- ⁵⁷ https://en.wikipedia.org/wiki/Birmingham_New_Street_railway_station#/media/File:Birmingham_New_Street_July_2006.JPG
- ⁵⁸ www.futurecommunities.net/case-studies/castle-vale-birmingham-1994-present; www.crp-ltd.co.uk/downloads/chapter05.pdf
- ⁵⁹ www.birminghampost.co.uk/business/commercial-property/pitfalls-copying-capital-8886955
- ⁶⁰ www.birmingham.gov.uk/cs/Satellite?c=Page&childpagename=Transportation-Projects-and-Developments%2FPageLayout&cid=1223470173465&page-name=BCC%2FCommon%2FWrapper%2FInlineWrapper
- ⁶¹ https://www.birminghambeheard.org.uk/development/greater-icknield-draft-masterplan/supporting_documents/Greater%20Icknield%20Plan%20Screen.pdf
- ⁶² www.birminghampost.co.uk/news/news-opinion/joe-holyoak-crack-code-could-6679844 ; www.birmingham.gov.uk/greatericknield
- ⁶³ https://www.birminghambeheard.org.uk/development/greater-icknield-draft-masterplan/supporting_documents/Greater%20Icknield%20Plan%20Screen.pdf
- ⁶⁴ https://www.birminghambeheard.org.uk/development/greater-icknield-draft-masterplan/supporting_documents/Greater%20Icknield%20Plan%20Screen.pdf
- ⁶⁵ <http://businessbirmingham.com/files/2015-03-11/HousingProspectus.pdf>; www.birminghampost.co.uk/news/news-opinion/joe-holyoak-crack-code-could-6679844
- ⁶⁶ Birmingham City Council (2013), Birmingham Plan 2031: Planning for Sustainable Growth; Future Space Foundation (2015), Vital Cities not Garden Cities: the answer to the nation's housing crisis? Accessed June 2015 at www.futurespacesfoundation.org/wp-content/uploads/2015/03/Vital-Cities-not-Garden-Cities-FSF.pdf
- ⁶⁷ https://www.centro.org.uk/media/208188/highspeedtwoconnectivitypackagefinal_1662.pdf
- ⁶⁸ Birmingham City Council (2014), Birmingham Connected: Moving our city forward. Birmingham Mobility Action Plan, White Paper November 2014.
- ⁶⁹ Birmingham City Council (2014), Birmingham Connected: Moving our city forward. Birmingham Mobility Action Plan, White Paper November 2014; https://www.centro.org.uk/media/208188/highspeedtwoconnectivitypackagefinal_1662.pdf
- ⁷⁰ www.birminghammail.co.uk/news/local-news/birmingham-heads-housing-crisis-house-building-3012084
- ⁷¹ www.birminghampost.co.uk/news/local-news/nick-corbett-living-above-shop-3908774
- ⁷² www.birminghampost.co.uk/news/local-news/dense-housing-obstructs-birminghams-cultural-3906276
- ⁷³ www.birminghampost.co.uk/business/commercial-property/squaring-circle-space-never-been-9628578
- ⁷⁴ https://www.centro.org.uk/media/208188/highspeedtwoconnectivitypackagefinal_1662.pdf; www.peterbrett.com/private/downloads/8mmla2hzgo84ckgwcogss40k8/Unlocking%20the%20Potential.pdf
- ⁷⁵ Ibid.