

# Greening the city regions

## Opportunities for new metro mayors



# **Greening the city regions**

## Opportunities for new metro mayors

A report by Campaign for Better Transport, CPRE, Green Alliance, National Trust and The Wildlife Trusts.

Lead authors: Faye Scott with Costanza Poggi

### **Acknowledgements**

Thanks to James Elliott for his support in developing the index and Leah Davis for her editorial input. Thanks also for insight and input from James MacColl, Ayanda Collins, Bridget Fox, Erica Popplewell, Paul Miner, Adam Royle, Richard Hebditch and Steve Trotter.

---

Published by Green Alliance  
May 2017  
ISBN 978-1-909980-87-7

Green Alliance  
11 Belgrave Road  
London SW1V 1RB  
020 7233 7433

ga@green-alliance.org.uk  
www.green-alliance.org.uk  
blog: greenallianceblog.org.uk  
twitter: @GreenAllianceUK

The Green Alliance Trust  
Registered charity no. 1045395  
Company limited by guarantee  
(England and Wales) no. 3037633  
Registered at the above address

# Contents

Introduction	2
A new level of power	4
Green opportunities for metro mayors	6
The Green City Regions Index	8
Transport and air quality	10
Homes and communities	15
Natural environment and water quality	19
Resilience and resource efficiency	22
City regions in detail	27
Cambridgeshire and Peterborough	28
Greater Manchester	32
Liverpool City Region	36
Tees Valley	40
West Midlands	44
West of England	48
Annex: data sources for Green City Regions Index	52
Endnotes	54

# Introduction

“  
Metro mayors will  
have a unique  
opportunity for new  
green leadership.”

Cities are the engines of the UK economy. They are home to over half the population, generating over 60 per cent of the country's growth, and housing a substantial proportion of its businesses and jobs.<sup>1</sup>

Many cities are already working to make their centres, and the areas around them, greener, cleaner, more liveable and more resilient, recognising that this is central to their long term success. Greater Manchester's climate change target goes above and beyond national targets; Bristol was the European Green Capital of 2015; and Cambridge has been a sustainable cycling leader for decades.

In May 2017, a new opportunity will open up for England's cities. Following devolution deals agreed with central government, six city regions will directly elect 'metro mayors' for the first time. These new mayors will have strategic powers over wider geographic areas to encourage greater economic development and growth in a way that reflects and responds to local needs.

Green infrastructure, in the form of high quality parks and the surrounding natural environment, energy efficient homes, better air quality and active travel all have health and quality of life benefits, as well as making cities attractive places for businesses and their employees.

The metro mayors will have a unique opportunity for new green leadership, to create a vision for a sustainable future for their city regions and reflecting this in their plans. Their role can be used to tackle some of the most pressing environmental challenges in the city regions and to address issues that really

matter to voters. These include cleaning up toxic air and polluted waterways, developing new energy efficient housing and cleaner, better connected local transport, as well as creating networks of accessible, wildlife rich habitats.

This report focuses on how the six city regions electing metro mayors in May 2017 can realise this opportunity. Our Green City Regions Index, on page eight, ranks the current environmental performance of the city regions against a range of indicators. It provides a baseline for the new metro mayors and reveals some of the environmental opportunities and challenges. We have also explored the devolution deals, highlighting the options open to the metro mayors for achieving ambitious progress on the environment.

This report is not exhaustive in its description of each city region. They will all have their own local priorities and needs which the metro mayors will want to focus on, and local authorities, civil society groups and others in the regions will already be working to improve their local environment. Rather, it focuses on where the greatest environmental challenges and opportunities for metro mayors lie, based on the new powers and leadership roles offered by devolution, and provides a menu of options for action.

The six city regions electing metro mayors in May 2017:

---

Cambridgeshire and Peterborough

---

Greater Manchester

---

Liverpool City Region

---

Tees Valley

---

West Midlands

---

West of England

# A new level of power

“  
**Devolution deals transfer powers and resources from Westminster with the aim of enabling city regions to drive their own progress.”**

The new metro mayor positions have been created as part of devolution deals for city regions. These deals transfer powers and resources from Westminster with the aim of enabling city regions to drive their own progress, and to help rebalance the economy between the north and south of England.

City regions have identified how best to address their economic, housing and transport challenges. Local authorities have formed combined authorities, allowing them to work together at a new geographic scale and secure a devolution deal.

## **Devolved powers and resources**

The powers to be transferred vary by city region and are all dependent on the election of a metro mayor. Although the deals are bespoke, the broad areas where powers and resources have been transferred are:

**Shaping economic growth**, via the creation of a single investment pot.

---

**Strategic planning powers**, to accelerate house building and commercial development, eg creating a spatial plan for a city region to specify expected numbers and location of new homes and communities.

---

**Local control over transport budgets and planning**, including consolidating transport funding into a single budget, the power to improve bus services, including through franchising, and responsibility for managing a route network of local authority roads.

---

**Control of skills budgets**, so that local skills provision can be better matched to local business needs and economic opportunities.

---

**Integrating health and social care**, to provide better outcomes for citizens and greater efficiencies for providers.

---

## Soft powers

Alongside direct powers and resources, metro mayors will be new figureheads for their city regions. They will be able to use the role to demonstrate leadership and ambition in a number of areas including:

**Setting a vision:** metro mayors will have a mandate to set out a strategic direction for their areas, defining the shape of its future economy, priorities for investment, and the nature of its built environment, connectivity and liveability.

---

**Highlighting local priorities:** as figureheads, metro mayors will be able to draw attention to local challenges and priorities at a national level; they can also be more prominent advocates with business and internationally than English cities have had to date.

---

**Energising local action:** metro mayors will offer a more direct route for citizens, local civil society and businesses to influence decisions and effect change than national politics allows; even where mayors do not have direct power over an issue, they can bring stakeholders together and facilitate action between a range of organisations across the city region.

---

**Creating a sense of place:** metro mayors will have an essential role in making the newly defined city regions real in people's minds and cohesive in practice; citizen engagement with these new ideas of place, and the varied natural environment and heritage that they encompass, is essential if ambitious plans to improve the quality of life and the environmental performance of city regions are to work.

---

# Green opportunities for metro mayors

“  
Care for the environment is central to ensuring a city region’s success and should be a priority for incoming mayors.”

Devolving power to city regions has been driven by an economic growth imperative. But achieving long term economic success requires resilient and futureproofed plans. More importantly, cities need to be desirable places to live, for their existing residents and the businesses and employees they hope to attract.

Taking this longer view demonstrates why care for the environment is central to ensuring a city region’s success and should be a priority for incoming mayors. Mayoral plans will need to take account of climate change, identifying ways of mitigating and adapting to its likely impacts, such as increased flooding and extreme weather events. To facilitate growth, city regions will also need to be easy to get around, with integrated low carbon transport options that help to prevent ever worsening air quality, and to support active travel with its associated health benefits. New homes and communities should be resilient to climate change and enable greener choices by residents on transport, energy and waste management. Care for the natural environment and the rich built heritage of cities is also critical to making city regions more liveable, offering health benefits and giving them a competitive edge in attracting skilled workers.

The metro mayors will be setting out visions for their city region, which will have a strong influence over the priorities they agree for expenditure and the use of the substantial single investment pots they will be responsible for. For thriving city regions that are desirable and sustainable places to live, these visions should have a low carbon economy and care for the natural environment at their heart.

In particular, the incoming metro mayors will have a number of opportunities focused on four critical environmental areas:

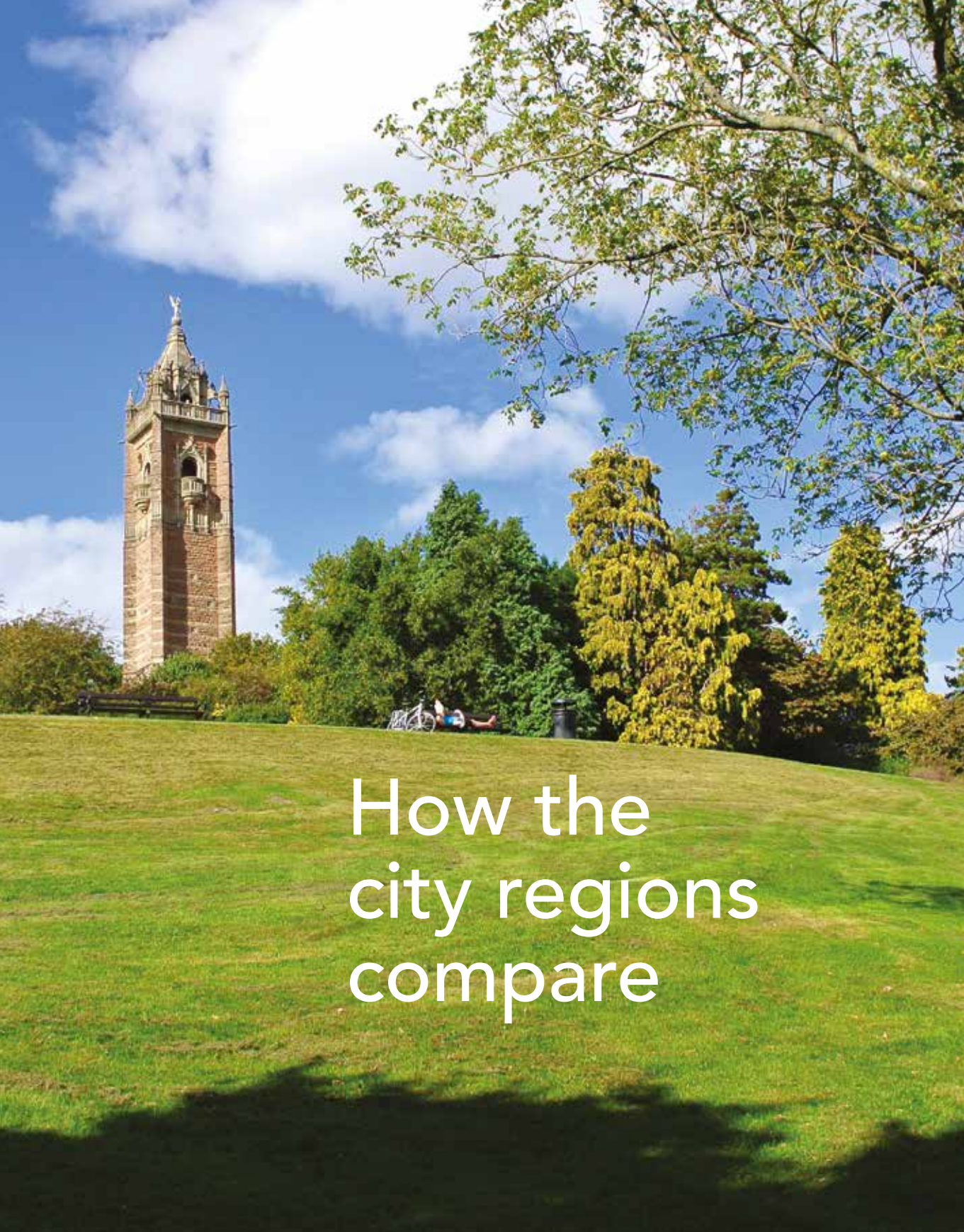
Transport and air quality

Homes and communities

Natural environment and water quality

Resilience and resource efficiency





# How the city regions compare


## The Green City Regions Index

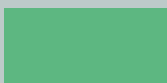
This index examines environmental performance against a range of indicators. Taken together, they provide a snapshot of how each city region is currently doing on issues, including energy use, emissions, waste, green infrastructure, housing and transport.

The indicators also reflect issues on which metro mayors have the potential to accelerate progress, for example through their new transport powers.

The data in the index has informed our analysis of the devolution deals and the proposals we make.

At the end of the report we look in depth at each city region, and the strengths and weaknesses the index highlights.

 Worst performing region

 Best performing region

\*See the annex on page 52 for notes on the data presented against this indicator, as data for some local authorities was absent.

	Indicator
Transport and air quality	Access to services by public transport or walking – minimum travel time in minutes
	Local bus use – passenger journeys per capita, per year
	Cycling five times per week for utility purposes – percentage of population
	Charging points for low carbon vehicles per 100,000 people
	Car use – vehicle miles travelled per capita
	Deaths attributable to anthropogenic particulate pollution (age 25+) per 100,000 people
	Urban area compliant with EU limits for nitrogen dioxide
Homes and communities	Percentage of new development on brownfield sites 2013-16
	Grade I listed buildings at risk
Natural environment and water quality	Local authority expenditure on open spaces per capita
	Local sites in positive conservation management*
	Use of open space for exercise and health – percentage of population
	Water quality – percentage of water bodies rated 'bad' or 'poor'
Resilience and resource efficiency	Total carbon dioxide emissions per capita (t)
	Buildings sold, built or let with an EPC rating of A, B or C in 2016
	Electricity consumption met by renewables
	Waste sent for recycling, compost or reuse

	Cambridge-shire and Peterborough	Greater Manchester	Liverpool City Region	Tees Valley	West Midlands	West of England	National average for England
	22	15	14	16	15	16	15
	38	74	84	48	95	63	83
	5.9%	0.9%	2.2%	0.4%	1.0%	2.5%	1.5%
	5	5	1	19	2	8	6
	5,415	3,228	3,064	3,796	2,891	4,060	3,873
	42	51	58	45	54	45	47
	No	No	No	No	No	No	N/A

	44%	65%	47%	44%	50%	55%	59%
	1%	17%	5%	9%	8%	2%	5%

	£10	£17	£28	£17	£22	£20	£20
	No report since 2011	55%	41%	47%	43%	42%	48%
	22%	15%	17%	21%	18%	31%	18%
	15%	8%	10%	44%	33%	15%	20%

	7.2	5	5.4	20.3	4.7	5.1	6
	41%	32%	34%	34%	27%	41%	36%
	34%	4%	8%	21%	5%	7%	19%
	49%	42%	35%	36%	32%	49%	40%

# Transport and air quality



Metro mayors will all have greater control over transport budgets and powers to plan transport provision, as well as strong national voices on improving transport infrastructure to better connect their city region. This provides them with a significant opportunity to introduce cleaner and more accessible transport options, help improve air quality and cut carbon emissions.

## **Clean and integrated transport**

Control over local transport budgets and decision making is one of the clearest transfers of power to city region mayors. As well as promoting less polluting vehicles, metro mayors can also plan, invest in and champion better integrated transport systems that help people to use, and transfer easily between, public transport and active travel like walking and cycling, as well as shifting freight to more efficient modes. This will also help to cut congestion in and around cities, improve air quality and day to day life for residents.

---

### **What can metro mayors do?**

#### **1. Use transport budgets to provide cleaner, healthier and more integrated local travel**

Metro mayors will have control over a consolidated transport budget. They will have significant scope to direct investment towards low carbon transport and to tackle challenges, such as city centre congestion. They should use this power to prioritise investment in sustainable transport options, supporting schemes that move away from car use, tackle air pollution, make public transport easier to use and integrate walking and cycling infrastructure. Most city regions plan to make transport easier for citizens via smart ticketing, which mayors can progress by prioritising it in transport budgets. Metro mayors will also be leading the development of spatial development plans and will have an important role in linking them up with transport plans, to ensure that new housing developments integrate public transport and enable residents to make clean, active travel choices, with shops and services closer to where people live.

#### **2. Take advantage of new bus service powers**

Some city regions have effective bus partnerships but others are lagging behind. The right to franchise buses, rather than relying on private providers to determine the routes and frequency of services, is an important option that metro mayors will gain, alongside other powers in the Bus Services Bill. They should take full advantage of these powers to promote simple, city region-wide ticketing and address gaps in bus provision and routes, and to commission low

emission buses. More frequent and comprehensive provision could boost bus use in those city regions lagging behind, improving access to employment opportunities and enabling a shift away from car use, particularly for shorter journeys.

### 3. Make the case for greater investment and transport connections

Metro mayors will need to take a long view of what their regions need and they should be outspoken in demanding it. Most of the city regions have good building blocks for sustainable transport. But, with plenty of challenges to face, incoming mayors can be valuable advocates for greater investment in sustainable transport infrastructure; in particular for connections between city regions, making them easier to access and do business in. Improved rail infrastructure will be central to this.

#### Ones to watch

**Cambridgeshire and Peterborough** has significant contradictions within its city region. Cambridge has a strong cycling culture compared to high car dependency in Peterborough. It has low overall bus use and much higher car use than any of the other city regions. Its devolution deal demonstrates a nuanced awareness of the range of transport options that make up people's choices, aiming for "an integrated approach to local buses, community based transport, the local network of car clubs, walking and cycling and, in partnership with rail operators."<sup>2</sup> So the incoming metro mayor has a clearly articulated brief for developing sustainable transport but some significant challenges to address in doing so.



## Clean vehicles and air

Poor air quality has significant health impacts, particularly on respiratory health, and accounts for 40,000 premature deaths per year in the UK.<sup>3</sup> The main contributor is vehicle emissions. Urgent action is needed to tackle air pollution. All of the city regions contain areas that are failing to comply with targets for harmful NO<sub>2</sub> emissions and citizens' health is being impacted by particulate air pollution. Metro mayors can use their role in strategic transport planning to prioritise investment in infrastructure for active travel and low emission vehicles, creating smart, integrated and clean transport systems that help to improve air quality.

“  
Metro mayors can champion the earlier introduction of clean air zones in the most polluted parts of their city regions”

### 1. Limit the most polluting vehicles and boost electric vehicle uptake

Local authorities will need to establish clean air zones by 2020 to bring emissions down to acceptable levels. Metro mayors can demonstrate their commitment to improved air quality by championing the earlier introduction of clean air zones in the most polluted parts of their city regions, calling on national government to ensure they are well funded and effective.

Clean air zones are areas where targeted action is taken to improve air quality and reduce emissions.<sup>4</sup> They can be used to restrict vehicle access to parts of cities that are particularly polluted, for example, by charging for vehicles that do not meet emissions standards for the zone. Currently, such charges are intended to apply to buses, coaches, taxis and lorries. Metro mayors will have some discretion to decide which measures to implement, and could consider extending clean air zone charging to private cars, as well as targeting the most polluting diesel vehicles. They could also use new powers to phase out polluting buses.

Mayors can accelerate the uptake of low emission vehicles through investment in electric vehicle charging infrastructure and by integrating electric vehicles into wider travel strategies, such as car clubs. With better electric vehicle infrastructure, taxis can be at the vanguard of uptake and mayors can promote the shift from diesel to electric by co-ordinating licensing standards across their city region. While electric vehicles make a vital contribution to air quality, they do not solve congestion. For healthier streets, their deployment should be part of an integrated move away from car dependency to improved public transport, walking and cycling.

### 2. Tackle congestion caused by delivery vehicles

Large fleets of diesel delivery vehicles are a significant cause of congestion and pollution in and around cities. With the continued expansion of online retail markets, cities need to develop

innovative solutions. One approach is to rearrange and combine goods shipments into fewer deliveries through urban consolidation centres, which can be shared by multiple retailers. This can reduce vehicle journeys for personal and commercial deliveries by up to 70 per cent.<sup>5</sup> By investing in charging infrastructure, mayors can also enable the uptake of electric vehicles in the delivery sector. Shifting freight from road onto rail, where possible, can also have significant benefits for air quality, as rail freight produces 76 per cent less CO<sub>2</sub>, up to 15 times less NOx emissions and 90 per cent less small particulate matter than the equivalent road journey. Metro mayors can prioritise these approaches in their transport plans.

“  
Shifting freight from road onto rail, where possible, can have significant benefits for air quality.”

### Ones to watch

The **West Midlands** and **West of England** devolution deals are the only two to mention air quality. They state the intention to introduce low emission and clean air zones. Cities in both regions have high levels of air pollution: 2016 World Health Organisation monitoring shows Bristol breached limits for particulate matter and Birmingham is the second most polluted city in England.<sup>6</sup>

Whilst all the city regions will be required to implement air quality measures under the government's national air quality plan, the West Midlands and the West of England are well placed to make early commitments and accelerate their implementation. This will give them a leadership position on a national issue and offer learning for other city regions and urban areas as they establish clean air zones.







# Homes and communities

Metro mayors will have new powers to develop strategic plans to guide the location and number of new homes and businesses in their city region. These plans will not only enable jobs and local growth, but will also be a route to ensuring that green spaces are preserved and city regions offer residents high quality, resilient and well connected housing that takes account of the existing built heritage.

Housing demand in the UK outstrips supply. Meeting that demand is estimated to require up to 275,000 new homes per year, instead of the average of 160,000 currently being built.<sup>7</sup> City regions are a new and potentially more effective scale at which to address this challenge. They encompass the city centres in which people work, as well as the wider geographies of where they live and travel from, and can take account of variations in the local housing market.

---

## What can mayors do?

### 1. Use brownfield land for new developments

To help mitigate the contentious issue of building on the green belt, and to help protect biodiversity, metro mayors should use their spatial plans to make the most of opportunities to develop on brownfield land. As our index shows, all of the city regions have significant potential to increase the use of brownfield land for new development. When done well, with due concern for natural and built heritage, building on brownfield sites can maximise the benefits of existing public transport and services, access to and enjoyment of culture and heritage in cities and protection of the surrounding natural environment.

### 2. Sensitively increase the density of new homes and developments

The built-up areas of the six city regions vary in density, but are still far below London's density.<sup>8</sup> Increasing the density of a city region's built up area by just ten per cent would support tens of thousands of new homes, enabling their integration into existing communities, without reaching uncomfortable density levels. With most city regions identifying a gap between what brownfield land can support and the housing numbers they need, a focus on sensitive density increase has the potential to release further sites for the sustainable housing development that city regions critically need.

“  
A focus on sensitive density increase has the potential to release further sites for the sustainable housing development that city regions critically need.”

### 3. Lead on higher environmental standards for new homes and developments

Metro mayors can use spatial plans to set expectations for the quality, design and expected standard of new homes and the public realm. For example, the draft Greater Manchester Spatial Plan sets expectations that new development should prioritise energy efficiency and the use of renewable energy before conventional energy sources, integrate with sustainable transport and enhance the city region's green infrastructure.<sup>9</sup> In addition, metro mayors can champion the use of good local authority supplementary planning documents on renewable energy and energy efficiency to their combined authority. They could follow London's lead in calling for the right to set standards for new development that go beyond national standards, setting expectations for developers and ensuring city regions are futureproofed in the face of climate change and rising energy prices.

### 4. Engage citizens fully in place making

Creating a sense of place for city regions could be a challenge for the mayors. Many of them are new geographies and, although they are an effective scale at which to plan housing and economic development, the process will inevitably involve trade offs. Effectively engaging citizens will, therefore, be essential. Metro mayors should pitch strategic plans as an opportunity for people to influence the future of their wider city regions and to increase opportunities for their communities. Plans should acknowledge and protect the heritage and green spaces that people value, putting these cornerstones of local identity at the heart of broader plans.

## Ones to watch

**Cambridgeshire and Peterborough's** devolution deal acknowledged the city region's "exceptional housing market conditions" and secured an additional £170 million for affordable housing. It is also the only region to specify a housing target in its deal, of 72,000 new homes over 15 years.<sup>10</sup> So the mayor has a clear task to develop a non-statutory spatial plan and get development moving. The region will be a test of the degree to which a metro mayor, and their new powers, can unblock barriers to high quality, sustainable housing.

**Tees Valley** currently has the joint lowest percentage of building on brownfield sites out of the six city regions, at only 44 per cent. As an area of heavy industry, it recognises that many of its brownfield sites will not be developed by the market and that intervention is necessary if they are to be made available for commercial or housing development. The devolution deal has instigated tools to achieve this; for example, creating the first Mayoral Development Corporation outside London.



# Natural environment and water quality



Green infrastructure in the form of open spaces, wildlife and waterways, is integral to a good quality of life. Although metro mayors will not receive powers specifically related to the natural environment, city regions offer a new scale of action and metro mayors can use their leadership role to improve the green spaces and waterways in their city regions.

“  
The spatial plans the metro mayors develop should be underpinned by a commitment to preserving, protecting and improving the natural environment near people’s homes.”

Connecting people to wild places and wildlife in their cities for exercise and relaxation can make a significant contribution to their health and well-being and helps to address inequality. High quality green space is important in tackling health problems, contributing to better air quality and building resilience to climate change, as well as enhancing wildlife and biodiversity. But local authority park budgets are under threat, with 92 per cent making cuts in the past three years and more expected.<sup>11</sup> And the city regions vary widely in their performance in this area.

---

## What can metro mayors do?

### 1. Develop new green infrastructure plans

The spatial plans the metro mayors develop should be underpinned by a commitment to preserving, protecting and improving the natural environment near people’s homes. But they can also lead on green infrastructure strategies that will sit alongside and inform their spatial plans, such as the work already being done in London and Greater Manchester. Integrating robust and resilient networks of wildlife rich places into city region plans will provide more opportunities for people to enjoy and exercise in more natural environments.

These plans will provide an overview of the natural assets of the city region, such as parks, nature reserves, waterways, undeveloped green belt land and wildlife corridors, and identify weaknesses and areas that need safeguarding or support. Strategies could include drawing up natural capital accounts to quantify the economic value of green assets and waterways to the city region, and should be based on current information and evidence. Metro mayors can promote the use of geographic information system (GIS) mapping in planning, such as the ecosystem services maps being used in the West of England.

Green infrastructure strategies can identify opportunities to promote biodiversity and secure the maximum benefit from the natural environment for wildlife, citizens and the economy. Metro mayors can also use their convening power to facilitate new working relationships and partnerships to improve and better resource local green spaces in a tough financial climate.

## 2. Improve local water quality

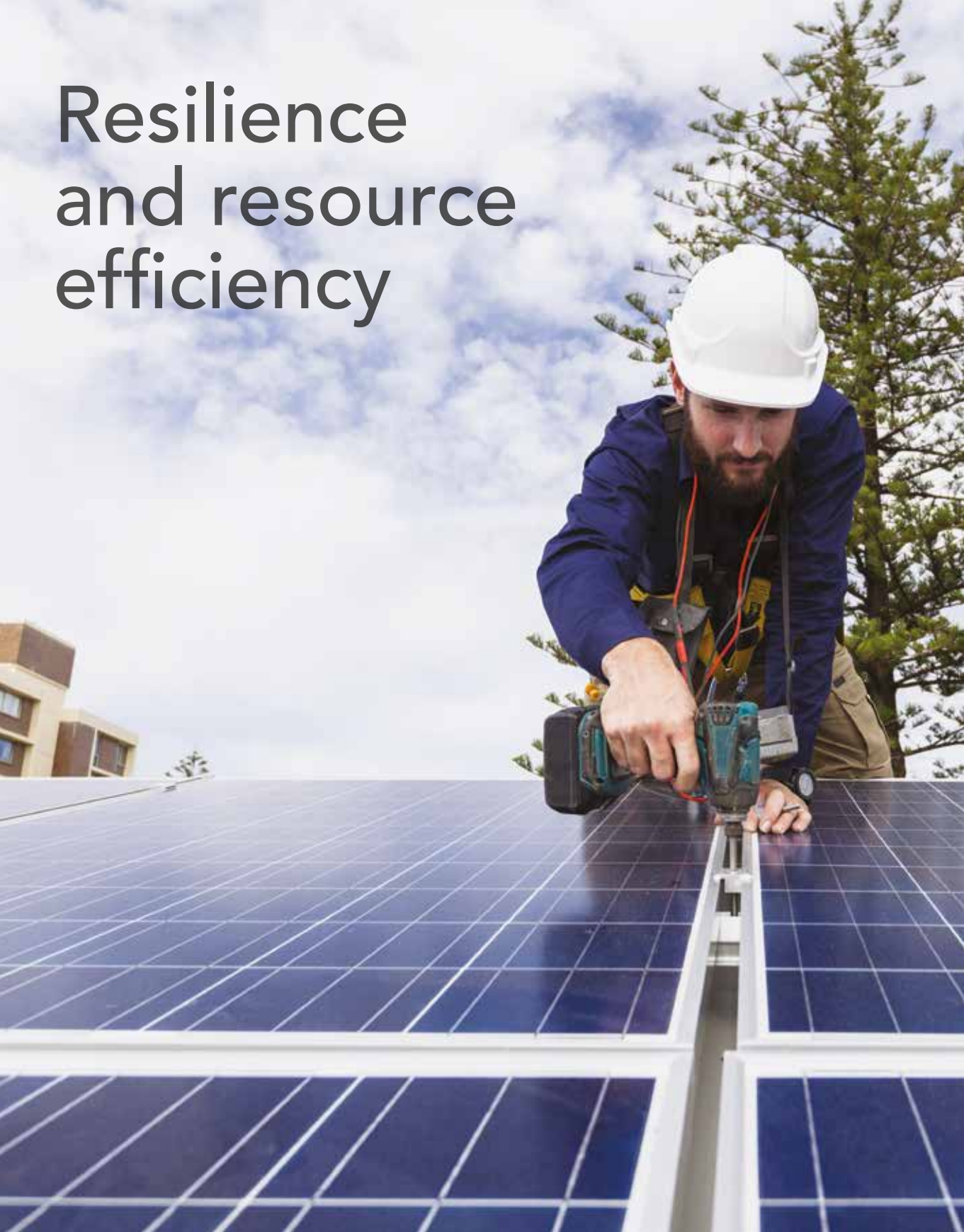
Metro mayors will need to explore the opportunities that the new administrative scale offers for more natural and upstream solutions to water quality and flooding challenges; and to sustainably exploit the economic potential of water in the region. Protecting biodiversity will be especially important in the Liverpool and West of England city regions, both of which aim to pursue tidal power.

### Ones to watch

The award winning clean up of the river Mersey has been one of the most impressive turnarounds in water quality in Europe. And the **Liverpool City Region** remains committed to further improvements. Wildlife has returned to the river, so the incoming metro mayor will need to balance the protection of this achievement with the intention to develop a clean energy source from tidal power in the river. It will be instructive to examine how the city region manages the balance between these competing demands.



# Resilience and resource efficiency





“  
With 70 per cent of the UK’s existing homes still likely to be in use by 2050, the degree to which a city region can offer affordable, desirable housing rests largely on existing stock.”

With 70 per cent of the UK’s existing homes still likely to be in use by 2050, the degree to which a city region can offer affordable, desirable housing rests largely on existing stock.<sup>12</sup> The poor energy performance of housing is a leading cause of fuel poverty. Combined with relatively low levels of clean, renewable energy supply, like solar and wind, it also leads to unnecessary domestic carbon emissions. Many older homes are challenging to retrofit due to their age and structure, so any efforts to improve energy efficiency must be done sensitively and with proper consideration of the nature of the built heritage. With their unique regional perspective and leadership role, metro mayors will have scope to address this challenge.

They are also well placed to work with local partners to improve recycling and waste collection, to cut costs for their constituent local authorities while improving recycling rates. Responsibility for waste management still sits with individual local authorities, so no direct powers on waste featured in the devolution plans for the city regions. However, the metro mayors could still help to raise performance within their region by convening local authorities to encourage best practice in recycling and reuse.

---

## What can metro mayors do?

### 1. Champion domestic energy efficiency and renewable energy

Overall, new homes rather than existing stock are the focus of new powers for the metro mayors. Changes to national policy on energy efficiency schemes and renewable energy tariffs have limited the scope and appetite of local authorities to introduce home retrofit programmes. However, metro mayors are in a good position to champion greater energy efficiency and renewable energy. They can bring local authorities, businesses and civil society together to share learning and encourage resources to be focused on improving existing social and private housing. At the national level, they can advocate for greater policy certainty and funding from national government to support higher quality and more energy efficient homes.

## Ones to watch

In our index, the **West Midlands** stands out as having the lowest percentage of homes with EPC ratings of A, B or C. It also has the highest incidence of fuel poverty among the city regions. Birmingham's past work to address energy efficiency has shown considerable commitment to tackling this problem, but central government policy changes have hampered its efforts. The West Midlands metro mayor can lead a focus on energy efficiency within the city region and advocate at the national level for policy to support improving the energy efficiency of existing homes.

“  
City region mayors could bring local authorities together with businesses, waste authorities, waste collection providers and local citizens to explore recycling harmonisation.”



## 2. Promote harmonised recycling across a city region

Within bigger cities, recycling and waste collections often vary from one local authority to the next. Standardising this in terms of what can be recycled, and how it is collected, could help to reduce confusion, increase recycling rates and cut costs. Research has shown that standardising recycling collection could deliver up to £408 million in financial benefits.<sup>13</sup> Local authorities spend £300 million a year dealing with waste packaging, so they stand to benefit significantly from a more harmonised system.<sup>14</sup> Meaningful savings will only accrue if enough local authorities are involved, so metro mayors could bring local authorities together with businesses, waste authorities, waste collectors and local people to discuss recycling harmonisation across their city regions. Such co-operation could serve as pilots for similar collaborations across the rest of England.

## Ones to watch

**Tees Valley** aims to become a centre of excellence for the circular economy. But its local recycling performance is among the poorest of the city regions. The incoming metro mayor could explore the benefits of a city region scale approach to recycling and waste management, so that local practice is in keeping with the region's economic ambitions.

The **West Midlands** may also want to explore the benefits of operating at the city scale, as it has the lowest recycling rate out of the city regions, at only 32 per cent. It would be an ambitious initiative but, if the mayor were to pursue harmonised waste collection, they could show national leadership in tackling poor performance, while providing local financial benefits and learning for other city regions.





A photograph of a modern suspension bridge with a glass-walled building in the background under a bright sun. The sun is low in the sky, creating a lens flare effect. The bridge has a metal railing and a paved walkway. The building has a glass facade and a logo that looks like 'utv'.

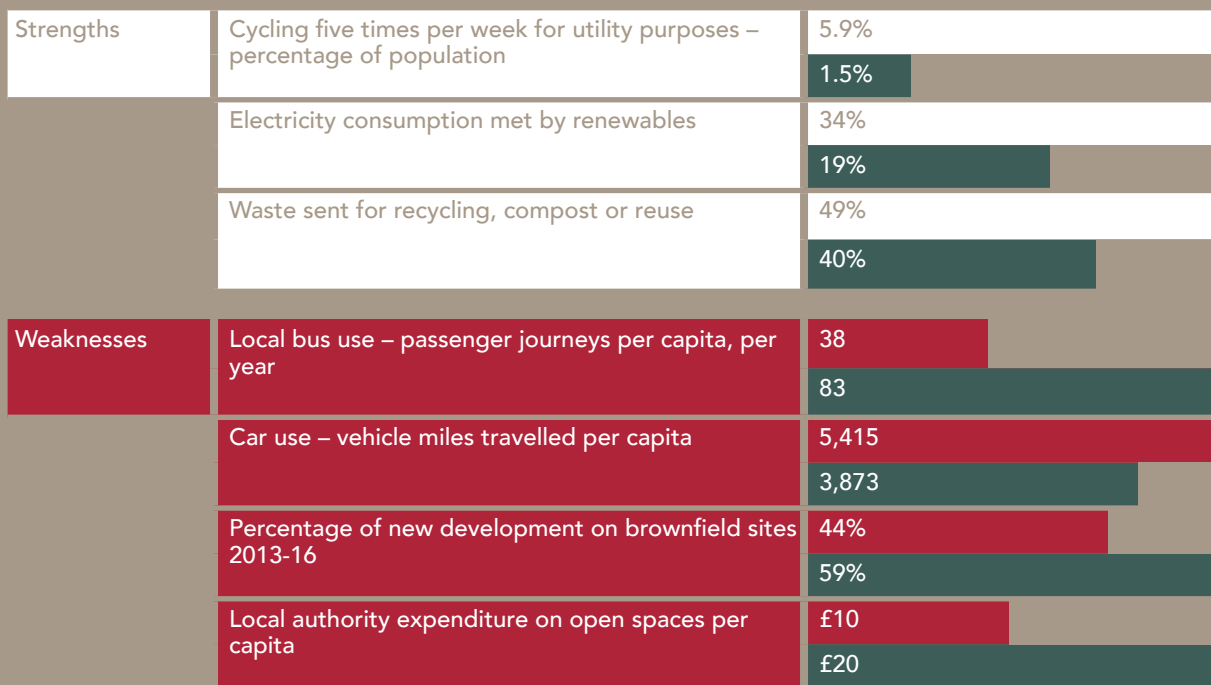
# City regions in detail

We encourage all the incoming metro mayors to commit to the actions we have set out. But the city regions vary and have different strengths, weaknesses and priorities. In this chapter, we highlight the particular challenges and opportunities for each city region, with reference to their performance in our Green City Regions Index (see pages eight and nine).

# Cambridgeshire and Peterborough



## Strengths and weaknesses



■ National average for comparison

## The city region's deal: powers and resources<sup>15</sup>



### 30 year investment fund

£600 million



### Housing

Strategic planning – a non-statutory spatial framework

£170 million for affordable housing



### Transport

Consolidated transport budget

Bus franchising

Responsibility for key route network of local roads

Transport integration

Smart ticketing

“  
Cambridgeshire and Peterborough is ahead on renewables compared to the other city regions.”

The Cambridgeshire and Peterborough city region encompasses a broad range of local authorities and a mix of urban city centres, suburban housing and a significant amount of rural land compared to other city regions. As the combined authority has only recently been set up, the new metro mayor will need to build strong working relationships among local authorities and public support.

Cambridge is already a key part of the UK's 'brain belt' and the Cambridgeshire and Peterborough devolution deal highlights its ambition to create an area that is known for its low carbon, knowledge based economy.<sup>16</sup> The new mayor will be in a good position to prioritise and develop the sector further. Cambridgeshire and Peterborough is ahead on renewables compared to the other city regions, meeting 34 per cent of its electricity consumption from renewables. It also performs well on recycling. But the newborn region faces significant challenges when it comes to broader environmental issues like green space and transport.

---

## Green opportunities



### Housing

The area's unique housing pressures were recognised in the devolution deal, which secured an additional £170 million for affordable housing. In this context, the mayor is likely to prioritise the development of a non-statutory spatial framework, setting expectations about where homes will be built and how many. If the region is to deliver a significant number of homes sustainably it will be challenging to identify sites while protecting green space.

In recent years, only 44 per cent of development in the city region has been on brownfield land, which is the lowest of the city regions. The region is also one of the least dense. The mayor should **prioritise building on brownfield land and encourage sensitive housing density increase** in their spatial framework. Both of these approaches should include due care for the city region's invaluable built heritage, building on current strengths: only one per cent of Grade 1 listed buildings are at risk, despite Cambridgeshire and Peterborough having by far the greatest number of them out of the six city regions.



### The natural environment

Extensive housebuilding plans can present a challenge to the protection and improvement of green space. This risk is acute in Cambridgeshire and Peterborough, which did not perform well on natural environment indicators. It has the lowest spending on open spaces of the six city regions, at only £10 per head per year. And Cambridgeshire has not reported on the conservation management





of its local nature sites since 2011. The metro mayor should address the lack of reporting and **lead on the development of a green infrastructure strategy** for the city region. This should ensure that development plans are informed by a robust understanding of the city region's natural environment, with plans to manage the impacts of development and to ensure that it results in higher quality provision for residents, with new and accessible green space to meet the needs of a fast growing population.



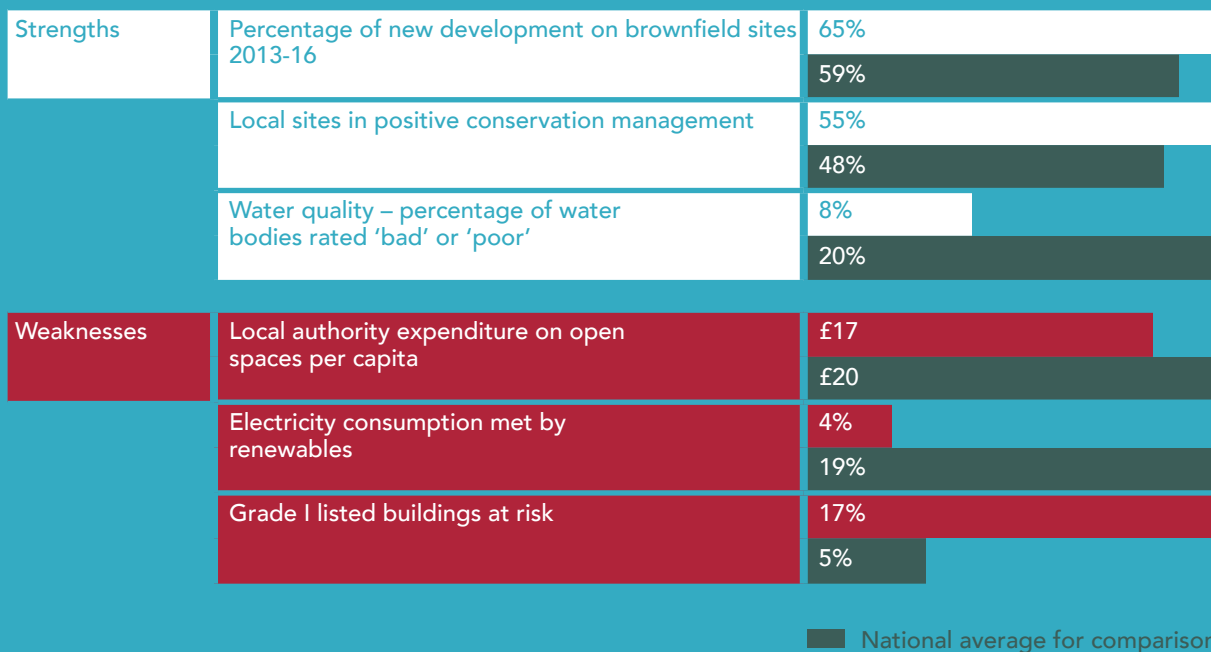
### Transport

The Cambridgeshire and Peterborough devolution plan provides the mayor with a framework for **focusing the transport budget on investment in sustainable travel**. It sets out ambition for an "integrated approach to buses, community transport, car clubs, walking, cycling and rail."<sup>17</sup> Given the city region's transport contradictions, this focus on integrating sustainable transport options is especially welcome. Cambridge is recognised as the UK's 'cycling city', which gives Cambridgeshire and Peterborough the highest cycling rates out of the city regions. But Cambridge also suffers serious congestion problems, and the city region as a whole has the lowest bus use and the poorest score for access to services by public transport or walking. Car use is well above the national average and the highest for the six city regions. The mayor should **make full use of their bus service powers** to provide better connections within the region, and **implement the workplace parking levy as planned, or move to wider congestion charging** to reduce congestion in Cambridge, encourage the uptake of cleaner public transport and improve air quality.

# Greater Manchester



## Strengths and weaknesses



## The city region's deal: powers and resources<sup>18</sup>



### 30 year investment fund

£900 million



### Housing

Statutory spatial framework

£300 million housing investment fund



### Transport

Consolidated transport budget

Bus franchising

Smart ticketing

Responsibility for key route network of local roads

Devolved rail stations

“  
The metro mayor should ensure that the spatial plan delivers on its aim to enhance green infrastructure.”

The ten urban local authorities that make up Greater Manchester include a range of cities and towns, with dense urban areas interspersed with rural areas. These local authorities have been working together as a combined authority since 2011. When created, the combined authority received devolved powers on transport, skills and planning, and a city deal in 2012 furthered this. But having a metro mayor will enable more radical transfers of power, such as the devolution of Greater Manchester's £6 billion health and social care budget.

The Greater Manchester city region works on green issues via a Low Carbon Hub, which brings together ten local authorities, businesses, voluntary and academic representatives to work on issues like energy efficiency retrofit, waste, transport and renewables. It has already produced a comprehensive, ambitious low carbon vision up to 2020 and has focused on ensuring that it informs the city region's strategic transport and development plans to date.

---

## Green opportunities



### Housing

Greater Manchester is ahead of the other city regions, in that it already has a draft city region spatial plan which sets out the extent and location of expected development. One of the incoming mayor's priorities will be to get the plan agreed by 2018. Its stated aims include a welcome focus on addressing the environmental capacity of Greater Manchester, including building resilience through flood management, and wildlife and green space protection.<sup>19</sup> The extent of green belt development proposed in the current draft is controversial locally and Manchester density levels are relatively low compared to London, so the metro mayor should continue to **prioritise brownfield development and sensitive building density increase.**

Greater Manchester is well placed to do this as it has the highest percentage of building on brownfield land to date out of the six city regions, at 65 per cent. But this should include due care for built heritage. The city region is the poorest performing on this with 17 per cent of its Grade 1 buildings at risk. The mayor should also lobby for the right to **go further than national standards on housing development**, with particular regard to increasing renewable energy in new developments. Manchester is currently the poorest performer on this out of the city regions, with only four per cent of electricity consumption being met by renewables.



### The natural environment

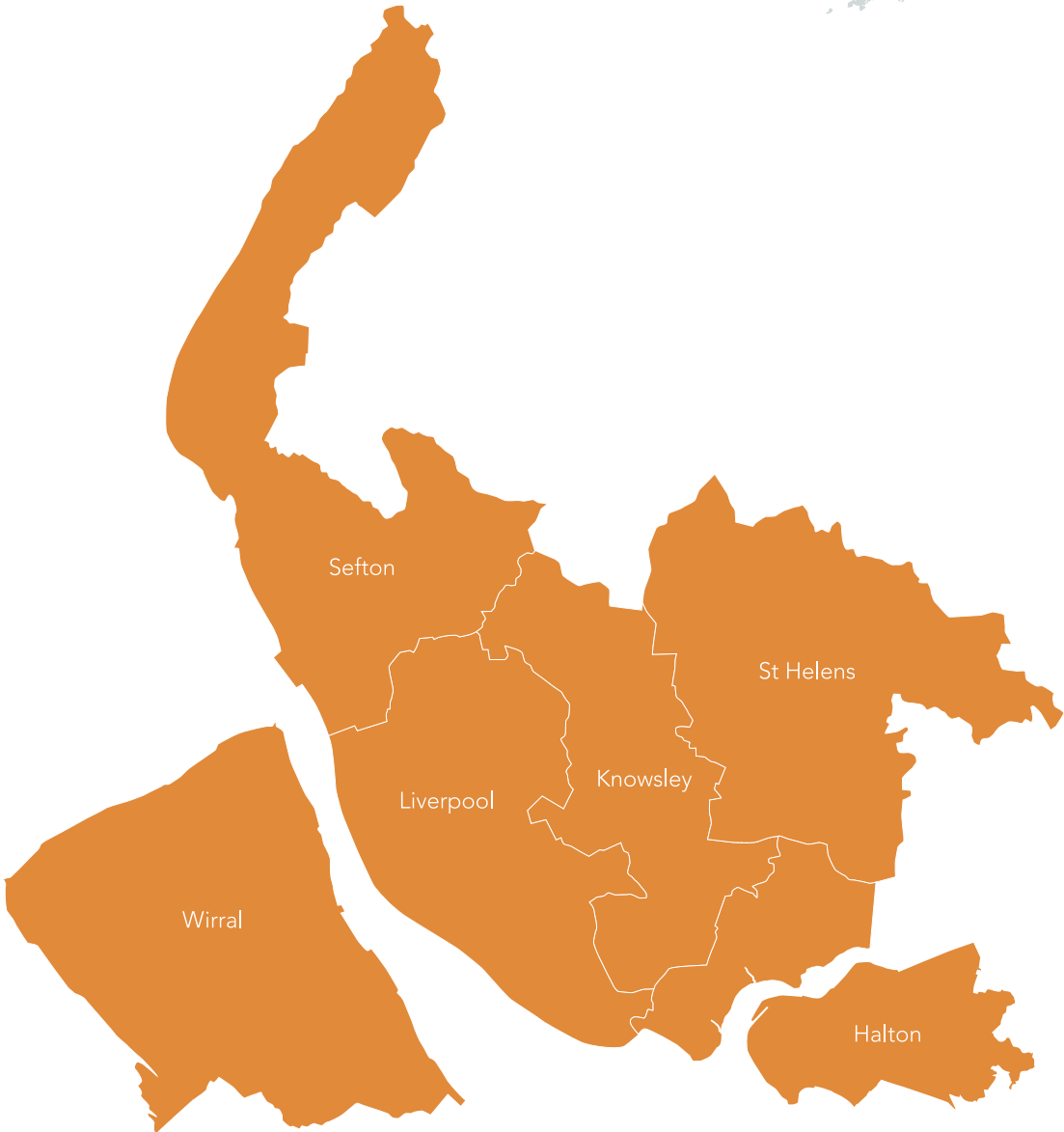
Greater Manchester has the lowest use of open space for exercise and health and the joint second lowest expenditure on open spaces among the six city regions. Its draft spatial plan aims to protect and enhance the city region's green infrastructure network but acknowledges that this is a challenge when planning extensive new development. The metro mayor should **ensure that the spatial plan delivers on its aim to enhance green infrastructure** provision. Although the release of land for development is under debate, the green belt is expected to remain largely intact and so offers scope for new woodlands and wetlands. The mayor should also ensure that planned development does not undermine the area's strong performance on water quality, with only eight per cent of water bodies rated 'poor' or 'bad', the best result out of the six city regions.



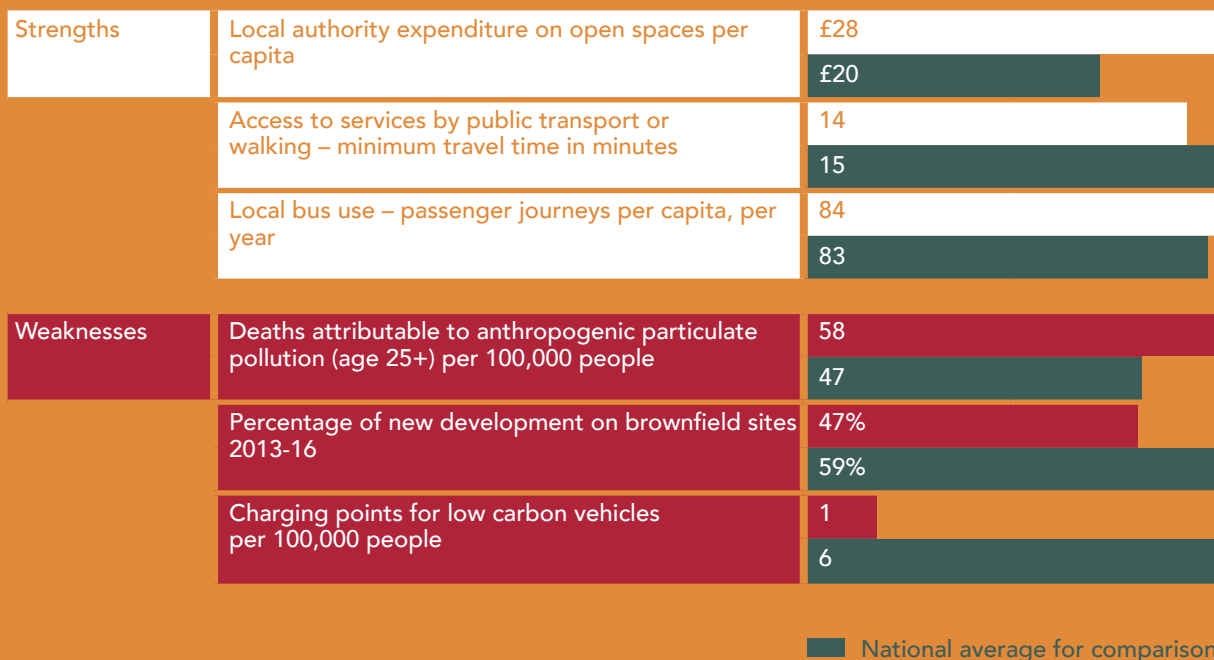
### Transport

Greater Manchester is well placed to progress integrated, low carbon transport alongside tackling air quality. Like all the city regions, it breaches safe air quality standards and has higher than national average deaths attributable to particulate pollution, but it has high bus use, good access to services by public transport or walking, below average car use and an emerging electric vehicle infrastructure. As the mayor decides on investment priorities they should **make the most of their bus service powers**, including franchising where appropriate, to address gaps in services, and ensure that residents in under served areas like Rochdale can get to work by public transport. The mayor should also **consider re-examining the potential for congestion charging, or introducing a workplace parking levy**, which has cut congestion and funded public transport improvements in cities like Nottingham. The commitment to integrating smart ticketing will also help to simplify transport for residents. Transport for Greater Manchester has demonstrated the added value a strategic transport authority can bring to a city region, by joining up local transport and planning, and improving journey options for the communities they serve. This a model that the new metro mayor can take on and other city regions could replicate.

# Liverpool City Region



## Strengths and weaknesses



## The city region's deal: powers and resources<sup>20</sup>



### 30 year investment fund

£900 million



### Energy and environment

Achieve cleanest river standard by 2030 and a discharge free Mersey by 2040

Explore tidal power

Input into the design of future energy efficiency programmes



### Transport

Consolidated transport budget

Bus franchising

Responsibility for key route network of local roads

Funding certainty for Merseyrail network

Explore smart ticketing

Progress Northern Powerhouse transport



### Housing

Statutory city region framework to support delivery of employment and housing

Liverpool City Region was established in 2014. A largely urban area, it builds on a history of local authorities working together on strategic issues like transport. The election of a metro mayor will be a prominent figurehead for this. A strong commitment to green infrastructure and water quality, and a well developed sustainable energy action plan, are good building blocks for the new metro mayor to become an environmental leader.

---

## Green opportunities



### Housing

The new metro mayor will have the power to develop a statutory city framework to support the delivery of housing and employment in the city region. This framework for development should **prioritise housebuilding on brownfield land and sensitively increase density**. To date, only 47 per cent of development has been on brownfield sites. Given the city region's relatively strong performance on the natural environment the mayor should **aim to be an exemplar in integrating new green space and improved water quality with development planning**.



### The natural environment

Liverpool City Region performs well on green infrastructure. It has the highest expenditure per capita on open space among all the city regions at £28 per year, and its use of open space for exercise and health score is very close to the national average. In contrast, it has the lowest reported percentage of local nature sites in positive conservation management. The region also made a uniquely prominent commitment to improve the River Mersey's water quality to the highest standard by 2030. It was the only city region to mention water quality in its devolution deal, and with only ten per cent of water bodies rated 'poor' or 'bad', it is well placed to achieve its ambition and share learning with other city regions.

The metro mayor should **develop a city region wide green infrastructure strategy that informs planning** and further enhances the city region's green assets. This can build on the work already underway in Liverpool itself. They could also **share learning on water quality improvement with other city regions**.





## Transport

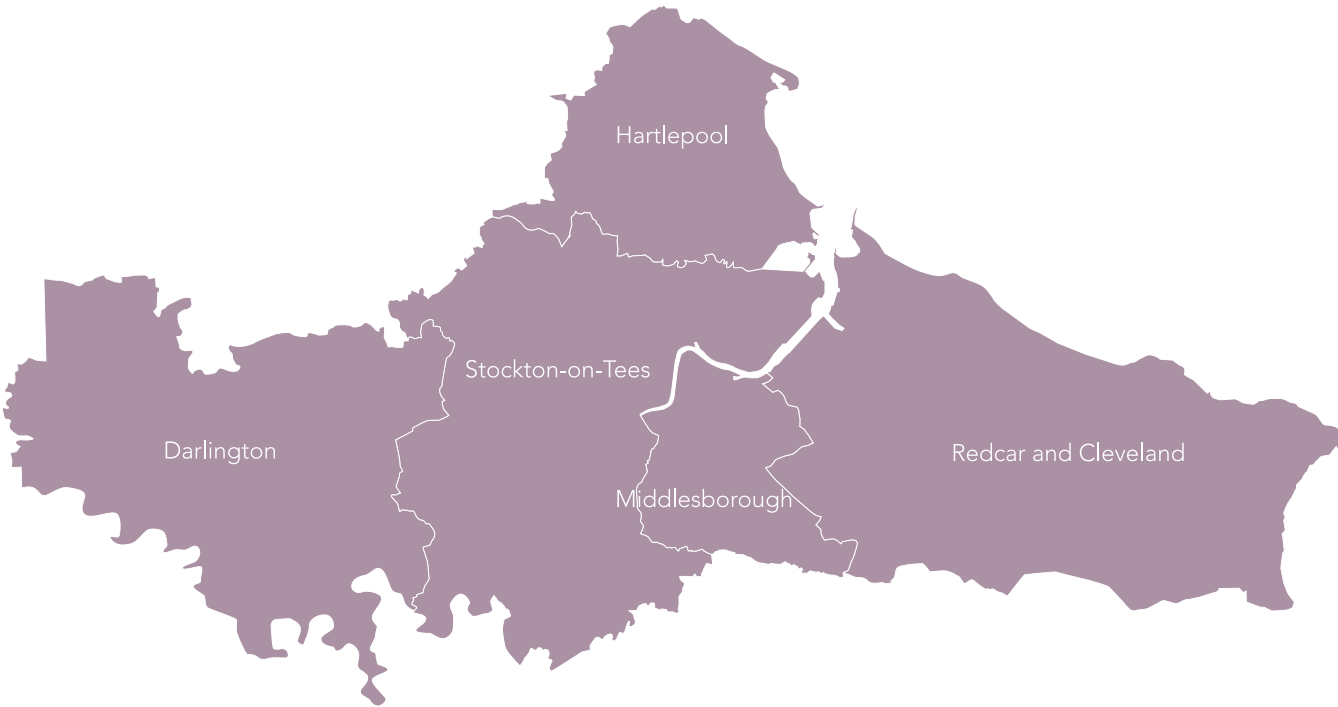
Liverpool City Region's devolution deal focuses on positioning itself as a lynchpin in the Northern Powerhouse's transport infrastructure. This is an important aim, but the metro mayor will need to balance this with ensuring ongoing clean and accessible transport options at the local level and urgently tackling air quality. The city region has the highest number of deaths attributable to particulate pollution out of the six city regions and is well above the national average. But there is a strong base for sustainable transport, with the fastest access to services by public transport and the second lowest car use among the city regions, as well as the second highest bus use. But electric vehicle infrastructure is at an early stage.

“  
When prioritising transport investment, the metro mayor should focus on integrating sustainable modes of travel so that the city has a holistic offer.”

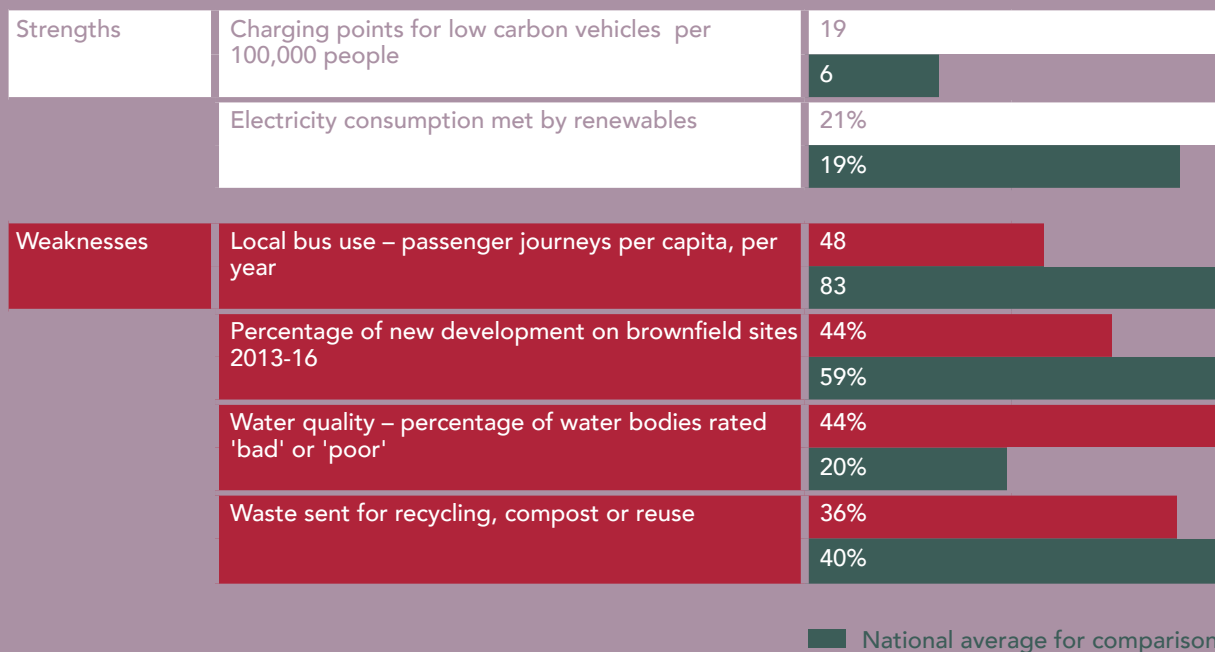
When prioritising transport investment, the metro mayor should **focus on integrating sustainable modes of travel** so that the city has a holistic offer which builds in its existing strengths while tackling congestion, ease of use and air quality. Smart ticketing plans will improve ease of use, and the metro mayor should **make full use of their bus service powers**, building on the existing bus alliance, to increase public transport use, develop smart ticketing and address gaps in services. They should also **look at bus priority and the reintroduction of bus lanes** to tackle congestion and air quality.



# Tees Valley



## Strengths and weaknesses



## The city region's deal: powers and resources<sup>21</sup>



### 30 year investment fund

£450 million



### Transport

Consolidated transport budget



### Housing

Mayoral development corporation



### Energy and climate change

Shared commitment to 2020s carbon capture and storage deployment

Support for new nuclear investment in Hartlepool

Joint work to address electricity network connection

“  
The metro mayor will have a clear leadership opportunity to build on the region’s existing low carbon strengths and industries.”

The Tees Valley combined authority was formed in 2016. It is a heavily industrialised area made up of five local authorities around the mouth of the River Tees, with Middlesbrough as the largest urban centre. The development of new industries and job opportunities, and support for retraining, are priorities for the city region, following the 2015 closure of the SSI Redcar steelworks.

As an area of nationally significant heavy industry, Tees Valley’s carbon emissions are inevitably high and are, by far, the highest of the six city regions. But the city region is ambitious about its place and role in a growing low carbon economy. The metro mayor will have a clear leadership opportunity to build on the region’s existing low carbon strengths and industries.

---

## Green opportunities



### Housing

Tees Valley has been struggling to attract investors and developers to build the new homes and offices it needs, due to the high costs of remediating industrial land. Its devolution deal aims to address this by agreeing the first mayoral development corporation outside of London.<sup>22</sup> This will enable more direct public sector intervention and provide the mayor with a ready made vehicle to **prioritise land remediation to release blighted brownfield land for development**. As land is released for homes and office development, the mayor should **set ambitious standards for the energy performance and integration with sustainable transport** of new premises. Prioritising renewable energy in new development will build on the city region’s strengths, as 21 per cent of its energy already comes from renewables, which is second highest out of the city regions.



### The natural environment

Tees Valley has focused on the potential of city region action to achieve economic progress, with less attention given to the natural environment. But the city region’s performance on the natural environment is poor and the incoming mayor should use their profile to address it. Tees Valley has one of the lowest expenditures on open space per capita out of the six city regions. More urgently, it has the poorest water quality, with 44 per cent of its water bodies rated ‘poor’ or ‘bad’ compared to a national average of 20 per cent. The metro mayor should **champion cleaning up the city region’s water bodies and develop a green infrastructure plan to inform economic and development plans**. In a context of heavy industry, the natural environment will be fragile and its protection is essential if the area is to build resilience and realise its aim of enhancing its natural and cultural assets.



## Transport

Tees Valley aims to integrate itself more into wider plans for northern transport so that it is accessible for new investors and residents. This is an important focus for the incoming metro mayor, but they should also improve the mixed performance on clean, local and integrated transport. Bus use by residents is currently the second lowest out of the city regions and its cycling rates are the lowest. However, it has the highest rates of electric vehicle charging points, over twice as many as the West of England in second place. The metro mayor should **secure bus service powers to improve provision**, including franchising if appropriate, and use their transport budget to **prioritise more sustainable freight transfer via rail improvements**. And, as more development gets underway, they should ensure that the new mayoral development corporation acts to **promote development that is integrated with sustainable and active travel schemes**.

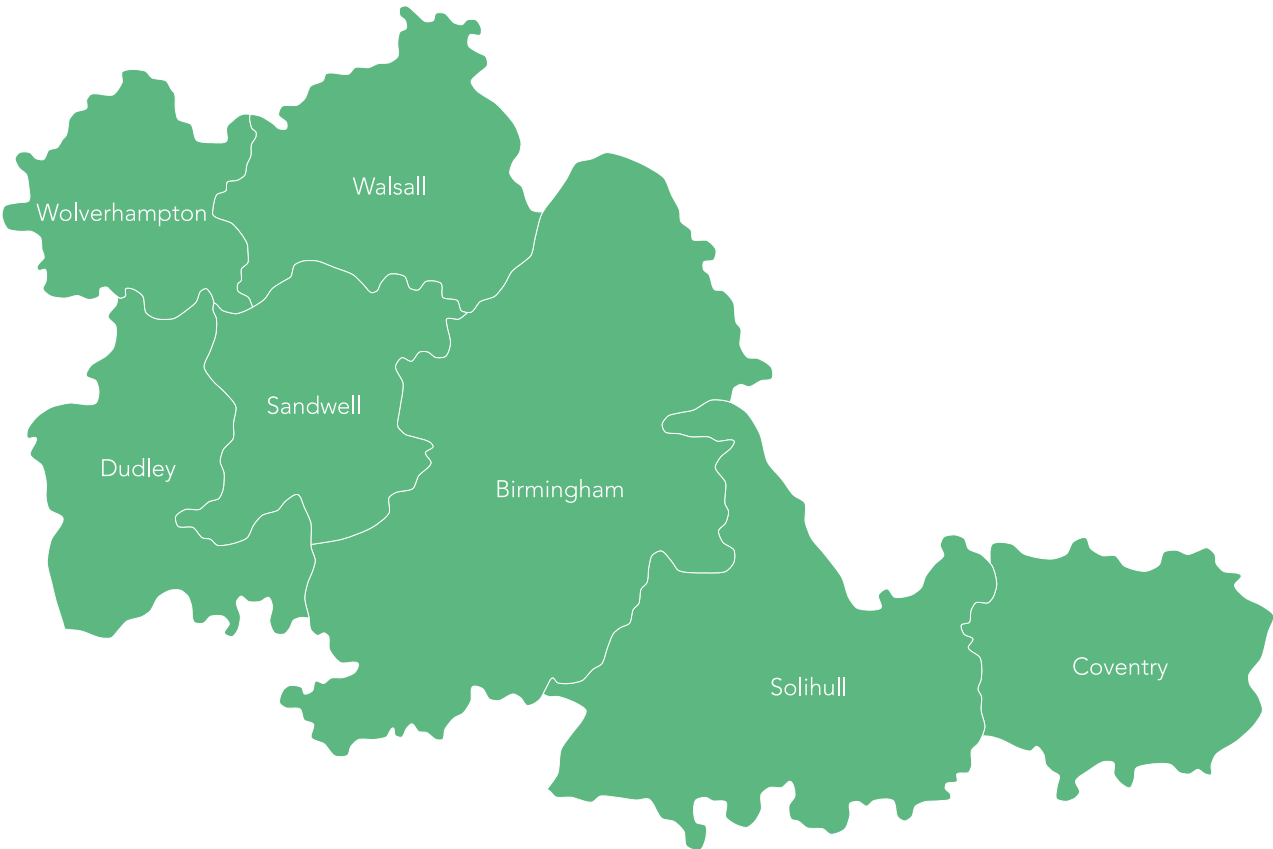


## Resource efficiency

Tees Valley has prioritised the growth of the circular economy as a means of mitigating the impacts of heavy industry. This includes integrating industry so that waste heat and production by-products from one process can be utilised as resources by others and piloting new, more efficient, production processes. However, the city region's performance on recycling is weak. It sends 36 per cent of its waste to recycling, compared to the best performing city regions at 49 per cent. The mayor should align Tees Valley's performance on recycling with its wider economic ambitions and **consider championing and piloting harmonised recycling across the city region**.



# West Midlands



## Strengths and weaknesses

Strengths	Local bus use – passenger journeys per capita, per year	95	83
	Car use – vehicle miles travelled per capita	2,891	3,873
	Local authority expenditure on open spaces per capita	£22	£20
Weaknesses	Deaths attributable to anthropogenic particulate pollution (age 25+) per 100,000 people	54	47
	Water quality – percentage of water bodies rated 'bad' or 'poor'	33%	20%
	Buildings sold, built or let with an EPC rating of A, B or C in 2016	27%	36%
	Waste sent for recycling, compost or reuse	32%	40%

■ National average for comparison

## The city region's deal: powers and resources<sup>23</sup>



### 30 year investment fund

£1.1 billion



### Housing

Planning powers to help drive housing delivery and improvements in housing stock

£200 million land remediation fund that will enable more brownfield land to be brought back into use for housing and employment



### Transport

Consolidated transport budget

Bus franchising

Responsibility for key route network of local roads

Metro extension

Smart ticketing

Powers to regulate air quality and freight

HS2 growth strategy implementation plan

The West Midlands brings Birmingham, England's prominent second city, together with Coventry and Wolverhampton. It is the most populous of the six city regions and provides a significant opportunity for planning economic development, housing and transport at scale. Building effective working relationships with the constituent local authorities could prove a challenge for the metro mayor. Their success in managing the trade-offs involved in a city scale approach to investment and development will depend on their ability to build these relationships.

---

## Green opportunities



### Housing

As with other city regions, the West Midlands metro mayor will develop strategic plans for new housing and development. With only 50 per cent of development on brownfield land to date, the mayor should **prioritise housebuilding on brownfield land and sensitively increase density** to create further capacity for the city region to support new homes. The devolution deal commits to establishing a land remediation fund which will be an important contribution to this effort.

“  
The West Midlands cannot afford to drop its focus on energy efficiency, as it has the highest fuel poverty amongst the city regions.”

The mayor also has an opportunity to lead on domestic energy efficiency and renewable energy. Birmingham has historically taken a lead on energy efficiency retrofitting of existing housing, with measures like wall insulation, and has expertise to offer the wider city region. Shifting national government policy has stifled these efforts, but the West Midlands cannot afford to drop its focus on energy efficiency. It has the highest fuel poverty amongst the city regions and the lowest percentage of energy efficiency homes being bought, sold or let. The metro mayor should **ensure that strategic development plans set ambitious expectations for energy performance and use of renewables in new development**. They should also push their constituent local authorities to do more on energy efficiency and **set an ambitious agenda for retrofit**, using their profile and convening power to drive progress.



### Natural environment

The West Midlands has relatively good performance on the natural environment and is close to or above average on expenditure on open space, use of open space for exercise and health, water quality and positive management of local nature sites. As the metro mayor will be spearheading strategic development planning, they should **commit to developing a green infrastructure strategy** that further enhances the city region's green assets and water bodies and mitigates the impact of new development, this can



build on Birmingham City's work on its Green Living Spaces Plan and could take the form of a 25 year plan for the environment, as advocated by local civil society groups.



### Transport

When deciding on priorities for their transport budget, the metro mayor has a strong foundation for clean and green local transport. The city region has the highest bus use, and car use is well below the national average and is the lowest for the six city regions. But congestion is, nonetheless, seen as a significant challenge and the incoming mayor will need to integrate local transport across a city region which includes a number of established urban centres. They will also need to **use their profile to ensure that the city region derives the maximum benefit from HS2** and other national transport infrastructure. As with all the city regions, air quality is also an urgent priority. The West Midlands has the second highest number of deaths attributable to particulate pollution out of the six city regions.

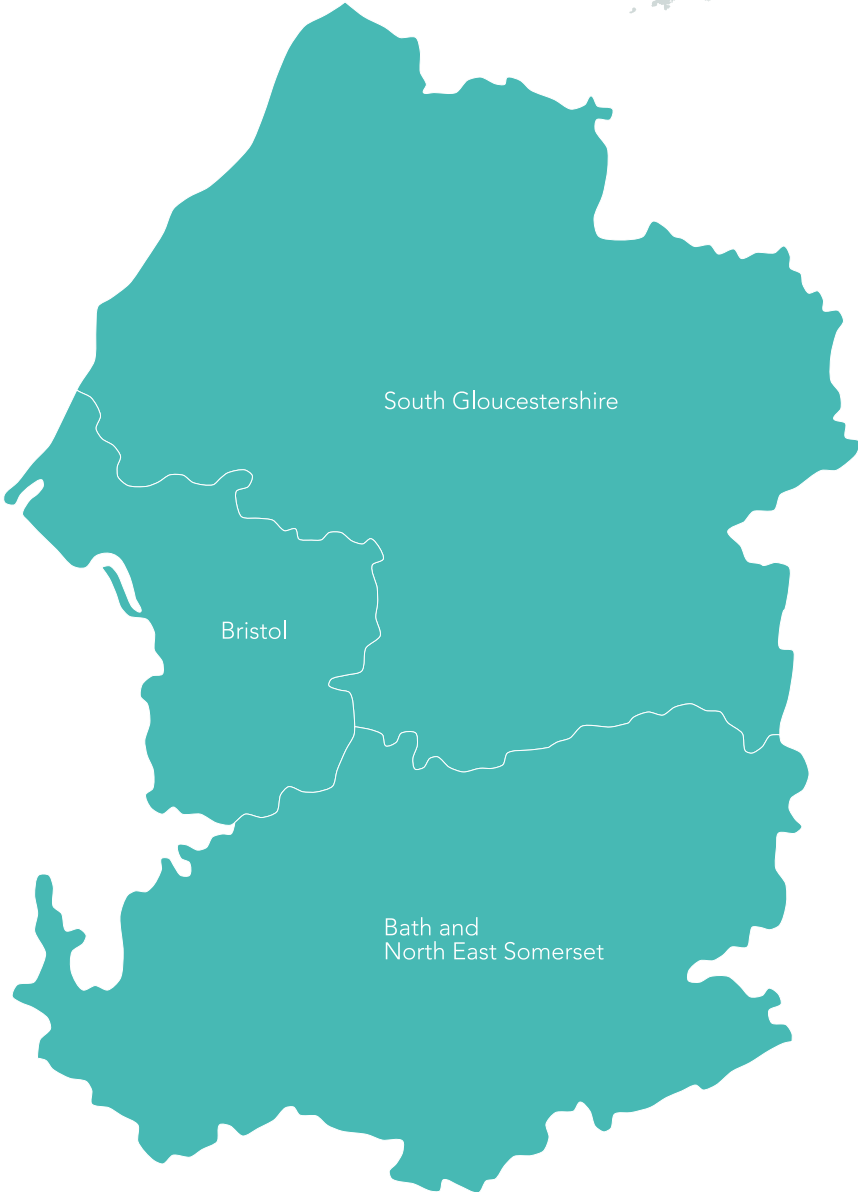
**Accelerating improvements to the single public transport ticket** currently on offer, so that it is smarter, caps payments and integrates more schemes, will help to cement the idea that the city region has a single transport system. The metro mayor should also **make full use of their bus service powers** to address gaps and even out provision, ensuring that people across the region can access services and employment opportunities. This can build on the existing West Midlands bus alliance. The city region was unique in calling for new powers to regulate air quality in relation to freight, acknowledging a persistent and growing problem for all urban areas. The West Midlands metro mayor should **ensure that their clean air zones can tackle freight pollution and share learning with other cities.**



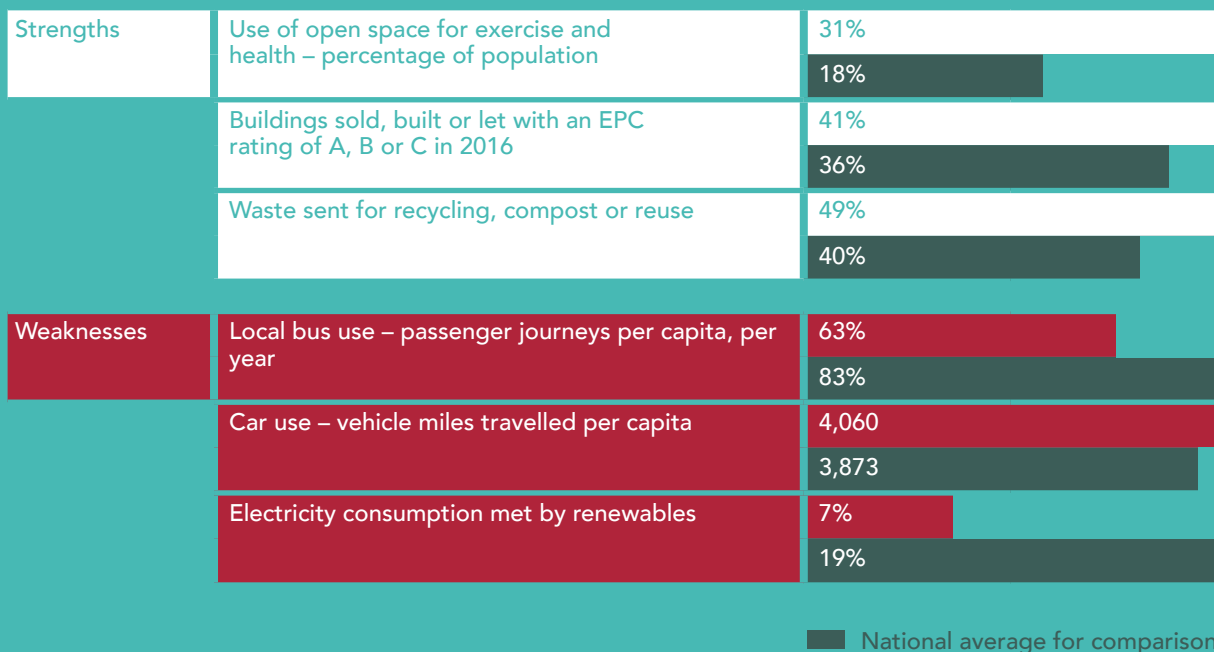
### Reuse and recycling

The West Midlands has the lowest recycling rate of the city regions, at 32 per cent. Dealing with this at city region scale, through the standardisation of collections, could offer significant savings for the local authorities involved. Although waste management remains clearly within the remit of individual local authorities, joint working is increasingly common and the mayor could **champion harmonised recycling across the city region**, putting it forward as a pilot.

# West of England



## Strengths and weaknesses



## The city region's deal: powers and resources<sup>24</sup>



### 30 year investment fund

£900 million



### Housing

Statutory spatial development strategy

Strategic infrastructure plan



### Transport

Consolidated transport budget

Bus franchising

Responsibility for key route network of local roads

Joint transport plan

Clean air zone proposals



### Energy

Explore Severn Estuary's tidal lagoon potential

This new city region incorporates Bristol and Bath and contains a significant proportion of rural land. Bristol was the European Green Capital in 2015 and has developed a reputation as a sustainable place to live and a hub of low carbon initiatives and employment, aiming for 17,000 new jobs in the low carbon, creative and digital industries by 2030.<sup>25</sup> This offers the incoming metro mayor a strong foundation from which to build on Bristol's success, extending the benefits of its green focus to the wider city region.

---

## Green opportunities



### Housing

The new metro mayor for the West of England will have powers to develop a statutory spatial strategy and a strategic infrastructure plan. These will shape where new housing is located and how it is connected, as well as setting expectations for developers about quality. To date, the West of England has the second highest build on brownfield land out of the six city regions, at 55 per cent. But there is scope for improvement and the mayor should **prioritise building on brownfield sites and encourage sensitive housing density increase** in their strategic plans. The need for a sensitive approach that takes account of heritage will be particularly important in the West of England, which includes Bath, a world heritage site. The mayor should also **demand the right to set more ambitious standards for housing quality than national standards allow**, with a focus on including renewable energy in developments. At present the city region meets only seven per cent of its electricity consumption from renewables.



### The natural environment

The West of England city region has the highest use of open space for exercise and health and one of the higher expenditures per capita on open space, at £20 per person per year. It also performs well on water quality, with only 15 per cent of water bodies rated 'poor' or 'bad'. But meeting local housing needs will require more development so the metro mayor should **commit to developing a green infrastructure strategy** that further enhances the city region's green assets and water bodies. This should showcase the region's work integrating geographic information system (GIS) mapping of ecosystem services into plan making. In particular, exploring the Severn Estuary's tidal lagoon potential will require the metro mayor to carefully balance the opportunity for cleaner energy with care for the city region's natural environment and biodiversity.



## Transport

The West of England city region was one of only two city regions to mention air quality in its devolution deal, with the intention to develop proposals on clean air zones. All city regions will have to develop these by 2020 but the West of England metro mayor could take early action on air quality and make it a defining aspect of their local transport agenda. This will help to address the impacts of the region's much higher than average car use, which is also the second highest out of the six city regions.

“  
The West of England metro mayor could take early action on air quality and make it a defining aspect of their local transport agenda.”

When prioritising transport investment the metro mayor should **focus support on sustainable and active travel options that join up the urban centres** of the city region and enable a shift away from car use. They should **make full use of their bus service powers**, including franchising if appropriate, and **introduce smart ticketing across the city region**, improving provision and access to employment opportunities. A key challenge for the metro mayor will be liaising with North Somerset council, which declined to join the West of England combined authority but is vital to strategic transport planning as so much of the area's population travels into the city region for work.



# Annex 1

## Data sources for Green City Regions Index

	Indicator	source
Transport and air quality	Access to services by public transport or walking – minimum travel time in minutes	Department for Transport, 2015, <i>Journey times to key services table JTS0104</i>
	Local bus use – passenger journeys per capita per year	Department for Transport, 2017, <i>Passenger journeys on local bus services by local authority, England, from 2009/10 (onwards)</i>
	Cycling five times per week for utility purposes – percentage of population	Department for Transport 2016, <i>Walking and cycling statistics, table CW0901, Active people survey 2014/15 – Cycle at least 5 times per week for utility purposes</i>
	Charging points for low carbon vehicles per 100,000 people	Office for Low Emission Vehicles, <i>National charge point registry</i> Note: the data does not reflect the fact that the charging points could contain more than one connector. Data downloaded March 2017
	Car use – vehicle miles travelled per capita	Department for Transport, 2016, <i>Car traffic (vehicle miles) by local authority in Great Britain</i>
	Attributable deaths to long term exposure to anthropogenic particulate pollution (age 25+) per 100,000 people	Public Health England, 2014, <i>Estimating local mortality burdens associated with particulate air pollution</i> Note: this publication includes 2010 data on attributable deaths of people aged 25+ to anthropogenic PM2.5 air pollution. Deaths per 100,000 people in each city region are calculated using ONS, <i>Annual mid-year population estimates, 2010</i>
	Air quality – urban area compliant with EU limits for NO <sub>2</sub>	2013 assessment. Department for Environment, Food and Rural Affairs, 2014, <i>Updated projections for Nitrogen Dioxide (NO<sub>2</sub>) compliance</i>
Homes and communities	Percentage of new development on brownfield sites 2013-16	Department for Communities and Local Government, 2016, <i>Land use change statistics – live tables, 2015 to 2016, table p302</i> Note: the figures presented are an average of the percentage of new houses built on previously used land in each local authority in the region. These figures are not weighted based on the number of new homes built in each local authority.
	Grade 1 listed buildings at risk	RSA, 2015, <i>Heritage, identity and place index</i>

	Indicator	source
Natural environment and water quality	Local authority expenditure on open spaces per capita	Department for Communities and Local Government, 2016, <i>Local authority revenue expenditure and financing England: 2015 to 2016 individual local authority data – outturn</i> Population estimates: ONS, <i>Annual mid-year population estimates</i> , 2015
	Local sites in positive conservation management	Department for Environment, Food and Rural Affairs, 2017, <i>Bioiversity and wildlife statistics, local sites in positive conservation management</i> Note: for each local authority, the most recent report is used. If a local authority has not reported within the last three years they are not included. Liverpool City Region, Tees Valley and the West of England have fully comprehensive reporting. The Greater Manchester figure does not include Bury, Stockport, Tameside, Trafford or Wigan. The West Midlands figure does not include Walsall and Wolverhampton. We do not present a figure for Cambridgeshire and Peterborough because, although Peterborough has reported, the majority of the city region (Cambridgeshire) has not reported since 2011.
	Use of open space for exercise and health – percentage of population	Natural England 2016, <i>Monitor of engagement with the natural environment (MENE): the national survey on people and the natural environment, use of open space for exercise and health</i> Note: the data presented is an average of the percentage of people using open space in each local authority in the region. These figures are not population weighted.
	Water quality – percentage of water bodies rated 'bad' or 'poor'	Environment Agency, 2016, <i>Catchment data explorer</i> Note: the data presented is based on operational catchments or individual water bodies which fall within the geographical area of each city region. Some operational catchments extend beyond the geographical area of the city region. A list of the catchments and water bodies included in each combined authority can be provided upon request.
Resilience and resource efficiency	Total CO <sub>2</sub> emissions per capita (tons)	Department for Energy and Climate Change, 2016, <i>UK local authority and regional carbon dioxide emissions national statistics: 2005-2014</i>
	Buildings sold, built or let in 2016 with an EPC rating of A, B or C	Department for Communities and Local Government, 2015, <i>Domestic energy performance certificates lodged on register - by energy efficiency rating (certificates lodged between 2008 and Q4 2015)</i>
	Electricity consumption met by renewables	Green Alliance 2016, <i>Renewable energy locator</i>
	Waste sent for recycling, compost or reuse	Department for Environment, Food and Rural Affairs, 2016, <i>Local authority collected waste annual results, Generation from April 2000 to March 2016 (England and regions) and local authority data April 2015 to March 2016</i> Note: covers waste sent for recycling, compost or reuse

# Endnotes

- 1 Growth figure of City Growth Commission, 2014, *Unleashing metro growth – final recommendations of the City Growth Commission*, RSA; population, jobs and business figure, cited from: Centre for Cities, 2017, *Cities Outlook 2017*
- 2 HM Government and Cambridgeshire and Peterborough constituent local authorities, 2017, *Cambridgeshire and Peterborough Devolution Deal*
- 3 B. Williams and J. Longhurst, 2016, *Air pollution: a global crisis or a problem solved?*, Bristol Green Capital Partnership blog <http://bristolgreencapital.org/air-pollution-a-global-crisis-or-a-problem-solved/>
- 4 Department for Environment, Food and Rural Affairs and Department for Transport, 2016, *Draft clean air zone framework*
- 5 Transport for London, 2015, *Rethinking deliveries*, Mayor of London
- 6 Bristol: WHO, *Global ambient urban air pollution database* (update 2016), [www.who.int/phe/health\\_topics/outdoorair/databases/cities/en/](http://www.who.int/phe/health_topics/outdoorair/databases/cities/en/); Birmingham: S Jawad and A Kirk, 13 November 2015, *The Telegraph*, 'Mapped: where is air pollution killing the most people?'
- 7 Department for Communities and Local Government, 2017, *Fixing our broken housing market*
- 8 Citypopulation.de, 'United Kingdom: countries and major urban areas', [www.citypopulation.de/UK-UA.html](http://www.citypopulation.de/UK-UA.html)
- 9 GMCA, 2016, *Draft Greater Manchester spatial framework: draft for consultation*
- 10 HM Government and Cambridgeshire and Peterborough constituent local authorities, 2017, *Cambridgeshire and Peterborough devolution deal*
- 11 Heritage Lottery Fund, 2016, *State of UK public parks 2016*
- 12 A Stafford, C Gorse and L. Shao, 2011, *The retrofit challenge: delivering low carbon buildings*, Centre for Low Carbon Futures and EST
- 13 WRAP, 2016, *A framework for greater consistency in household recycling in England*
- 14 J Hazell and J Keech, 2017, *Recycling reset: how England can stop subsidising waste*, Green Alliance
- 15 HM Government and Cambridgeshire and Peterborough constituent local authorities and LEP, 2017, *Cambridgeshire and Peterborough devolution deal*
- 16 Ibid
- 17 Ibid
- 18 HM Treasury and GMCA, 2015, *Greater Manchester agreement: devolution to the GMCA and transition to a directly elected mayor*
- 19 Greater Manchester spatial framework overview, [www.greatermanchester-ca.gov.uk/GMSF](http://www.greatermanchester-ca.gov.uk/GMSF)
- 20 HM Treasury and Liverpool City Region Combined Authority, 2015, *Liverpool City Region devolution agreement*
- 21 HM Government and Tees Valley constituent local authorities and LEP, 2015, *Tees Valley devolution agreement*
- 22 Tees Valley Combined Authority, 2016, *Tees Valley strategic economic plan: the industrial strategy for Tees Valley 2016-2026*
- 23 HM Treasury and West Midlands Combined Authority, 2015, *West Midlands Combined Authority devolution agreement*; additional detail on land remediation fund, smart ticketing and air quality powers from West Midlands Combined Authority, 2015, *WMCA devolution agreement: key points*
- 24 HM Government and West of England constituent local authorities and LEP, 2016, *West of England devolution agreement*
- 25 [www.bristoltemplequarter.com](http://www.bristoltemplequarter.com)





**Please note:** our Creative Commons licence does not cover the use of any photographic images featured in this report which are subject to separate copyright and must not be shared or copied without permission.



Six city regions elect new metro mayors in May 2017. The new tier of power offers a unique opportunity for green leadership. This will be a key determinant of the city regions' long term success in terms of their resilience to climate change and the quality of the natural environment.

This report sets out the actions the new leaders can take to make their city regions greener, cleaner and more liveable.