BRISTOL AND THE SDGs

A VOLUNTARY LOCAL REVIEW OF PROGRESS 2019

ESRC ECONOMIC & SOCIAL RESEARCH COUNCIL

University of BRISTOL
Cabot Institute
for the Environment

BRISTOL
ONE CITY

SUSTAINABLE DEVELOPMENT GOALS

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FOREWORD

The UN Sustainable Development Goals (SDGs) are often referred to as the 'closest thing the world has to a strategy' for building a more environmentally sustainable, inclusive and prosperous world.

As a city, we are proud Bristol has signed-up to the SDGs and the actions in our landmark One City Plan have been mapped against them.

The clear impact of the SDGs is that they interconnect. They recognize that ending poverty must go hand-in-hand with plans to improve population health and education, reduce inequality, and stimulate inclusive economic growth, at the same time tackling climate change.

Progress towards achieving these targets is tracked through 'Voluntary National Reviews', usually conducted by national governments. The UK Government has just completed its first Voluntary National Review which will be presented at the UN High-Level Political Forum in New York, where the SDGs, on a global level, are reviewed annually.

But cities are increasingly seen as key for tackling these global challenges through local action.

It is therefore a huge honour for Bristol to be leading the way as the first UK city – and one of just a handful around the world – to publish its own progress report which will also be presented at the UN next week when a Bristol representative will join the UK delegation.

It is very satisfying that this important report has been crafted by academics right here at the University of Bristol's Cabot Institute for the Environment - a diverse community of 600 world-leading climate experts united by a common cause: protecting our environment and identifying ways of living better with our changing planet. Together, they deliver the evidence base and solutions to tackle the challenges of food security, water, low carbon energy, city futures, environmental change, and natural hazards and disasters.

Our report summarises progress and challenges in areas ranging from education to economic growth to inequality to climate change and highlights the wide range of organisations working to make the city of Bristol, and the world, a more sustainable one.

Overall, while there is still work to be done it highlights the significant progress we have made as a city against the challenging goals we have adopted.

It reflects a strong local commitment to helping tackle global challenges through collaboration and partnership by highlighting dozens of local initiatives aimed at addressing the global goals here in Bristol.

The power of the SDGs is that they work across all levels of government – local, national and global, for all nations around the world and across sectors – private, academic and voluntary. They create a common language so that institutions, cities and governments can communicate their ambition and progress. Our report makes Bristol a part of that global conversation, and show how we can achieve these goals together.

Marvin Rees
Mayor of Bristol

Professor Hugh Brady
Vice-Chancellor & President
University of Bristol

ACRONYMS

ACRONYM	MEANING
ACE	Adverse Childhood Experiences
BAME	Black, Asian, Minority Ethnic
BASE	Barnardo's Against Sexual Exploitation
BBC	British Broadcasting Corporation
BCC	Bristol City Council
BEIS	Department for Business Energy and Industrial Strategy
BSCB	Bristol Safeguarding Children Board
CFPB	Bristol Children and Families Board
Defra	Department for Environment Food and Rural Affairs
EU	European Union
FGM	Female Genital Mutilation
FSTE 100	The Financial Times Stock Exchange 100
GCSEs	General Certificate of Secondary Education
GVA	Gross Value Added
HLPF	High Level Political Forum
IAEG-SDG	Inter-agency expert group on SDG indicators
LGBT+	Lesbian, Gay, Bisexual, Transgender and related communities
MOOC	Massive Open Online Course
NATO	North-Atlantic Treaty Organisation
NEET	Not in Education, Employment or Training
NGO	Non-governmental Organisation
NHS	National Health Service
ONS	Office for National Statistics
PHE	Public Health England
PM10	Particulate Matter 10 with a diameter of 10 μm
PM2.5	Particulate Matter with a diameter of 2.5 μm
SARAS	Somerset and Avon Rape and Sexual Abuse Support
SARI	Stand Against Racism & Inequality
SBP	Safer Bristol Partnership
SDG	Sustainable Development Goal
STEM	Science, Technology, Engineering, Maths
SUNEX	Sustainable Urban food-water-energy NEXus
SWIDN	South West International Development Network
UK	United Kingdom
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organisation
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
UWE	University of the West of England
VLR	Voluntary Local Review
WECA	West of England Combined Authority
WENP	West of England Nature Partnership
WHO	World Health Organisation
WUN	World Universities Network

OVERVIEW BY GOAL

SDG	SUMMARY
1 NO POVERTY	The proportion of children living in poverty increased between 2013 and 2018, and 32% of neighbourhoods had income poverty rates of 20% or more in 2015. More data is needed to monitor this goal effectively.
2 ZERO HUNGER	Some areas of Bristol experience high levels of food insecurity and the percentage of underweight children has risen. Several large partnership-based initiatives have been launched to address these challenges.
3 GOOD HEALTH AND WELL-BEING	Mortality rates from cardiovascular disease and from preventable forms of non-communicable diseases have declined, but the life expectancy gap between the most deprived and least deprived has increased since 2012.
4 QUALITY EDUCATION	Education attainment and early years readiness scores have increased, with notable convergence across ethnic groups, although the proportion entering higher education is below the UK average and varies significantly across wards.
5 GENDER EQUALITY	The proportion of female elected officials has been rising in Bristol, but the gender pay gap in the city has not been reduced and rates of domestic abuse and sexual violence have risen. More data is needed to monitor this goal effectively.
6 CLEAN WATER AND SANITATION	Citizens enjoy near-universal access to clean water and sanitation, and Bristol is not currently at risk of water stress. There is scope to reduce per capita consumption to ensure sustainable resource consumption as the city grows.
7 AFFORDABLE AND CLEAN ENERGY	Household energy consumption and the energy intensity of Bristol's economy have both fallen. Installed capacity of renewables has risen. An acceleration in these trends is required to achieve the 2030 target and fuel poverty persists.
8 DECENT WORK AND ECONOMIC GROWTH	Bristol's economy has grown strongly since 2010, unemployment is decreasing, and wages have risen. Youth and ethnic inequality within unemployment remain significant challenges.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	The carbon intensity of Bristol's diverse economy has been declining since 2010 while the proportion of commuters walking and cycling has increased, alongside the proportion of citizens accessing the internet.
10 REDUCED INEQUALITIES	Bristol's Gini coefficient is slightly below the national average, but the gap in earnings between the top 10% and bottom 10% has been rising. Reported incidents of racial discrimination and harassment have also risen sharply.
11 SUSTAINABLE CITIES AND COMMUNITIES	The ratio of income to house prices has increased significantly, and homelessness has risen since 2010. Public transport use and air pollution have both improved, but perceptions of safety have worsened.
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Recycling rates have increased and total waste production has decreased slightly over the past year, however food waste has increased. More data is needed to monitor this goal effectively.
13 CLIMATE ACTION	In 2018 Bristol was the first UK city to declare a climate emergency. Strong civic will to achieve carbon neutrality by 2030 will need to be followed by ambitious action across sectors and support from higher levels of government.
14 LIFE BELOW WATER	According to EU Water Framework Directive, 86% of Bristol's rivers are in 'moderate' ecological condition. Community-based initiatives are working to improve conditions alongside larger organisations in the region.
15 LIFE ON LAND	Bristol citizens benefit from extensive green spaces and tree canopy cover has increased since 2010. A recent award of £1 million will support the further development of sustainable management practices for parks and open spaces.
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	Bristol is a safe city with strong judicial institutions, but violent crime and domestic abuse rates have risen in step with national trends. Reports of modern slavery have increased. There has been an encouraging reduction in young offending.
17 PARTNERSHIPS FOR THE GOALS	The SDG Alliance has grown rapidly in the last two years and partnerships are forming across the city and across sectors to tackle specific challenges. A number of organisations are also operating internationally to tackle the SDGs.

EXECUTIVE SUMMARY

Bristol is a diverse, creative and internationally integrated city in the South West of England. It is widely recognised for its commitment to environmental sustainability and was European Green Capital in 2015. In November 2018 Bristol was the first UK city to declare a climate emergency and set a target of carbon neutrality by 2030.

The city is also known for its maritime heritage. It was from Bristol that some of the first European ships sailed west to explore uncharted waters, and the city played a key role in Atlantic commerce, profiting from the tobacco and slave trades in particular. While the city grew rich from this commerce, it continues to grapple with the legacy of its role in the slave trade.

Bristol's international history is reflected in its contemporary diversity. The population of the city today includes people from 187 countries, speaking 91 different languages. This diversity has contributed to Bristol's role as a hub of cultural and technological innovation. It is famous for its music and street art scenes, hosts 14 of the world's 15 leading aerospace firms, is one of the largest silicon chip manufacturers in the world and was recently named as the UK's most productive tech cluster. Bristol's dynamic culture and economy are reflected in demographic trends. It is one of the fastest-growing cities in the UK outside London and has some of the most affluent areas in the country. It is frequently voted one of the best places to live in the UK and even the world.

At the same time, Bristol faces many systemic challenges and entrenched inequalities. To address these, the city has recently undergone a collaborative rethink about how to prioritise and tackle complex problems. The result of this effort is the Bristol One City Plan, launched in January 2019. The One City Plan, which was developed through extensive consultation and citizen engagement, aims to provide a collective sense of direction for organisations and individuals all across the city, rather than serve as a plan for city government alone. It articulates a vision for making Bristol a fair, healthy and sustainable city for all by 2050. A commitment to the UN Sustainable Development Goals (SDGs) is integrated into this plan. The SDGs vision for sustainable and inclusive prosperity that 'leaves no-one behind' is strongly aligned with the city's collective priorities and ambitions.

Achieving the One City vision and SDGs requires a multi-sectoral and partnership-based approach in Bristol. Local government powers are very limited in England, with the majority of fiscal and legal authority concentrated in the UK Parliament. Moreover, local authorities across England have faced a period of fiscal austerity over the past decade. Against this backdrop of insufficient local autonomy and a shifting fiscal landscape, responsibility for localising the SDGs has necessarily been distributed across a range of actors in the public, private and non-profit sectors. Fortunately, Bristol benefits from a vibrant (if austerity-constrained) civil society committed to sustainability across social, economic and environmental dimensions.

The Bristol SDG Alliance is a network of city stakeholders devoted to driving interest and action towards the implementation of the SDGs in the city, the region and nationally. This informal network began in early 2016 and includes individuals from many of the anchor institutions in the city, including the city's two large universities, City Council officials, major businesses, and voluntary organisations and networks. Through partnership, members of the Alliance successfully bid for funding from the University of Bristol to support efforts to 'localise' the SDGs and integrate them into the One City Plan.

SDG progress is normally monitored and reported at the national level to the United Nations High-Level Political Forum through the production of a Voluntary National Review. In July 2018, a handful of cities around the world reported on their own progress through the use of Voluntary Local Reviews (VLRs). Inspired by these city-level pioneers, a second grant was secured from Bristol University's UK Economic and Social Research Council Impact Acceleration Account to produce this VLR for Bristol. The format of this VLR is based on the guidance laid out in the handbook for the preparation of VNRs produced by the Division for Sustainable Development of the UN Department for Economic and Social Affairs (UN DESA). To develop a holistic assessment of progress and action this

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13 CLIMATE ACTION	**14 LIFE BELOW WATER**	**15 LIFE ON LAND**	**16 PEACE, JUSTICE AND STRONG INSTITUTIONS**	**17 PARTNERSHIPS FOR THE GOALS**	**SUSTAINABLE DEVELOPMENT GOALS**

report combines a comprehensive review of statistical indicators with an extensive consultation exercise. A Data Annex, is included at the end of this document and contains all data cited in the document and their sources.

The goal was to produce an independent assessment of progress towards achieving the SDGs. Unlike many previous VLRs, this document was produced independently of the city government and aims to present an inclusive portrait of how the city is faring, and what actors across sectors are doing to support SDG progress. The emphasis is largely on key trends since 2010 (the chosen benchmark year) rather than levels of achievement in each area. The Overview by Goal table on the following page provides a concise overview of key findings.

In many areas Bristol is performing well. There have been very significant improvements in the quality of education in the city, particularly in early years attainment. Bristol's economy has grown consistently in recent years while unemployment has fallen. Energy consumption and local carbon emissions have fallen, and a strong civic commitment to climate action is clear: Bristol City Council was the first city in the UK to declare a climate emergency, followed shortly thereafter by the University of

Bristol. While these trends and initiatives are positive, they are not justification for complacency. Bristol's stated ambition to achieve carbon neutrality, in particular, will require sustained efforts at scale by a wide range of stakeholders across sectors and levels of government.

In other areas Bristol has performed less-well. Child poverty has been rising in the city and food insecurity is deep in some areas. The gender pay gap in the city has barely changed despite rising wages for women. Where it is possible to disaggregate indicators, it is clear that inequalities persist across neighbourhoods, income groups and ethnicities. Poverty, food insecurity and youth opportunities are spatially concentrated. Despite falling mortality rates overall, the life expectancy gap between the most deprived and least deprived citizens has grown. And the unemployment rate among some ethnic minorities is nearly double that of the White British population.

The One City Plan already reflects many of these challenges, which will not surprise most Bristol citizens. Fortunately, the city benefits from a rich civic culture. As documented in the chapters that follow, organisations across the public and non-profit sectors, as well as the city government, are tackling these issues in creative ways, from the neighbourhood

scale to the city scale. Many others are seeking to make positive impacts further afield.

In producing this report we encountered a range of difficult questions, data issues and new insights. The functional area of Bristol is much larger than the City of Bristol – the subject of this report. The difference between the de facto urban area and formal administrative boundaries create challenges in both implementing and monitoring the Goals at sub-national level. There is a clear need for an indicator framework that is tailored to the urban scale and suitable across income contexts. A subnational perspective also highlights the importance of disaggregating data if we are to take the 'leave no one behind' ethos of the goals seriously. Looking forward, cities have an important role to play in tackling global challenges, including influencing how the concentrations of capital in cities are channelled beyond their boundaries. But cities cannot do it alone. City governments need support from private sector and non-profit actors, as well as higher tiers of government and international organisations. The SDGs and the One City Plan both provide the kind of shared vision needed to forge strategic cross-sectoral partnerships to achieve a sustainable future.

INTRODUCTION

Bristol is a diverse, creative and internationally integrated city in the South West of England with a population of 459,300. The population of 'Greater Bristol' is 724,000, making it the 8th largest urban area in the UK, and the wider city region was estimated at 1.1 million in 2015. It is widely recognised for its commitment to environmental sustainability and was European Green Capital in 2015. In November 2018 Bristol was the first UK city to declare a climate emergency and set a target of carbon neutrality by 2030. This was followed shortly after by the University of Bristol in May 2019.

Bristol is also known for its maritime history. It has the second highest tidal range in the world and has been an important port in England for much of its history. It was first listed as a trading port in the Anglo-Saxon chronicle of 1051. It was from Bristol that some of the first European ships sailed west to explore uncharted waters. The city subsequently played a key role in Atlantic commerce, profiting from the tobacco and slave trades in particular. Approximately one-fifth of the British slave trade passed through Bristolian ships. While the city grew rich from this maritime commerce, it continues to grapple with the legacy of its role in this brutal trade.

By the late 19th century ships began to outgrow the River Avon channel that leads to Bristol's historic port, and a new port was built nearby at Avonmouth. Despite this, the city continued to play a key part in UK industry. Large quantities of tea and tobacco were processed in Bristol, boosting the city's fortunes. As these industries declined Bristol became a centre for engineering excellence and now hosts 14 of the world's 15 leading aerospace firms. Bristol's engineering prowess
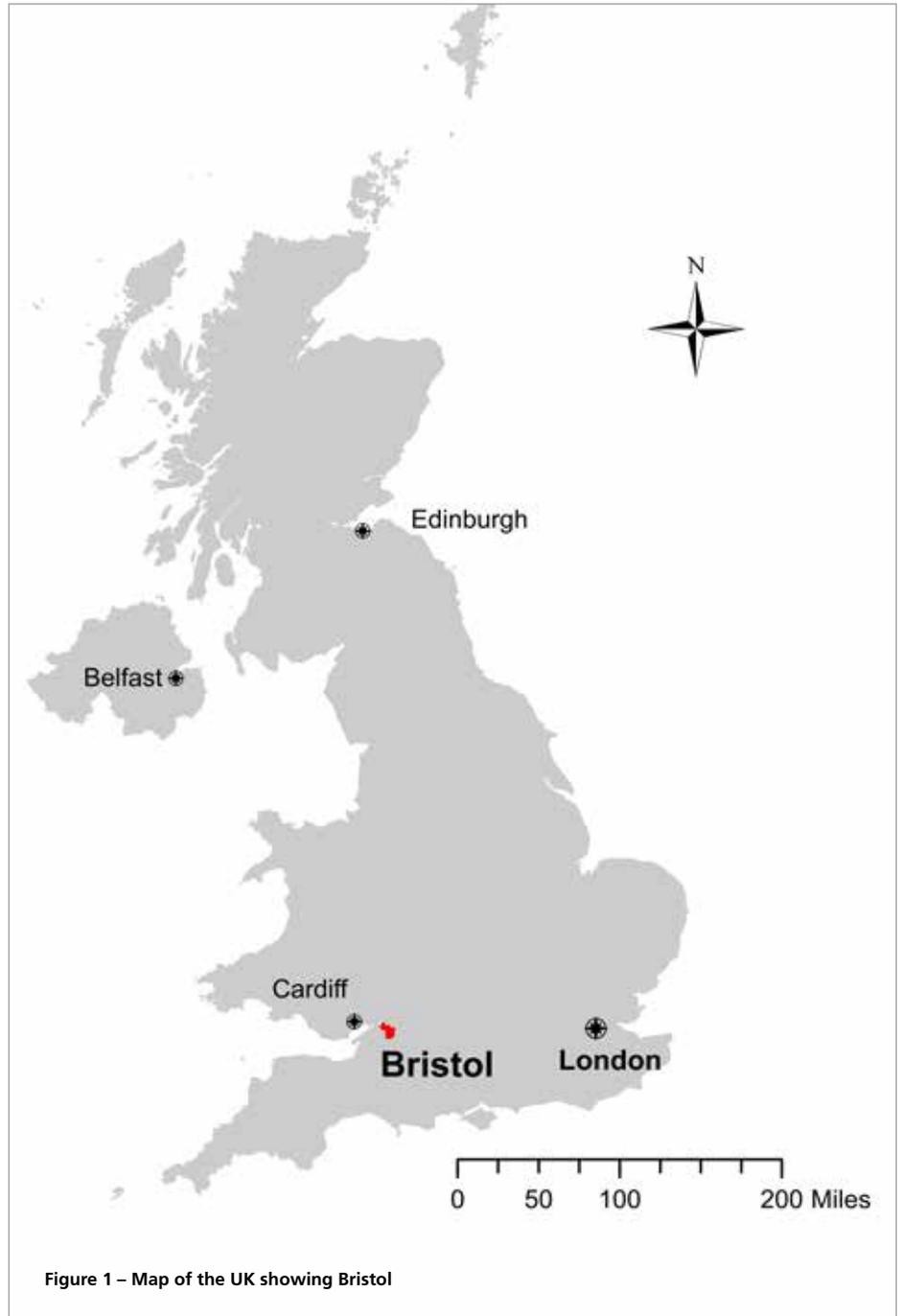
Figure 1 – Map of the UK showing Bristol

resulted in the production of some the UK's first airplanes and eventually the Concorde supersonic jet.

Bristol has also always had a strong activist culture. The city played a key part in the eventual passage of the Race Relations Act 1965 after the Bristol Bus Boycott, which challenged the colour bar that prevented Black or Asian people operating as bus crews in the city. Today the city is strongly associated with environmental activism, including movements such as Extinction Rebellion.

Bristol's international history is reflected in its contemporary diversity. The population of the city today includes people from 187 countries, speaking 91 different languages. This diversity has contributed to Bristol's role as a hub of cultural innovation. The city is known as the birthplace of drum and bass and trip hop. Its street art is famed worldwide thanks to artists such as Banksy, and Bristol hosts the largest street art festival in Europe.

Bristol's economy is similarly innovative and globally integrated. It is one of the

largest silicon chip manufacturers in the world and was recently named as the UK's most productive tech cluster. The city is home to the most productive financial and professional services sector in the UK outside London and Edinburgh, representing 25 per cent of Bristol's economic output. One third of FTSE 100 companies have a base in the area and it is home to the largest aerospace cluster in the UK. It was named as one of the top ten city regions in Europe by The Financial Times and the highest performing 'Core City' in England. Bristol is also home to the largest Chamber of Commerce in the UK.

Bristol's dynamic culture and economy are reflected in demographic trends. It is one of the fastest-growing cities in the UK outside London and has some of the most affluent areas in the country. It is frequently voted one of the best places to live in the UK and even the world.

At the same time, the city faces many systemic challenges. There are around 300 premature deaths a year in Bristol as a result of poor air quality; the disparity in access to higher education is almost 80% between local government wards; and nearly 16% of Bristol's population live in areas that are ranked among the 10% most deprived of areas in England.

It is this inequality that inspired recent efforts to rethink the way the city priorities are set and pursued. The product of these efforts is captured in the Bristol One City Plan, which was launched in January 2019. The One City Plan was developed through extensive consultation with citizens and stakeholders and is meant to provide a collective vision for organisations and individuals all across the city, rather than serve as a plan for city government alone. A commitment to the UN Sustainable Development Goals (SDGs) is integrated into this plan. The vision of sustainable and inclusive prosperity that 'leaves no-one behind' embedded in the SDGs resonates strongly with the city's collective priorities and ambitions.

Photos ©Bristol Design, Bristol City Council

Many organisations in Bristol are beginning to realise the relevance of the SDGs to their work. As we work collectively to deliver the One City Plan, the SDGs offer a common language for diverse city partners across the private, public and third sectors to address these issues. Moreover, the SDGs present an opportunity for Bristol, as an international city, to collaborate with other cities around the world and share learnings about how to address the most difficult challenges cities face.

In this report, we begin by describing the enabling environment that has facilitated localisation of the SDGs and the production of Bristol's first VLR. We then briefly explain our methodology for data collection, stakeholder consultation and scoring. The core chapters report on all 17 Goals drawing on statistical data and case studies, and highlight key trends and activities related to each. Extra attention is devoted to the priority SDGs for the 2019 High Level Political Forum. The discussion section reflects on the challenges of implementing and monitoring the SDGs at city level, as well as questions and ideas that emerged in the process of preparing this report. We conclude with thoughts on how this VLR might support further action at local and national levels.

ENABLING ENVIRONMENT

Bristol's embrace of the SDGs and pioneering efforts to undertake the UK's first Voluntary Local Review reflect a confluence of concerns, ambitions and initiatives. While 'localising' the SDGs is often portrayed as a process to be driven by local government, UK cities face a number of constraints in providing such leadership.

Local government powers are very limited in England with the majority of fiscal and legal authority concentrated in the UK Parliament. This highly centralised system leaves local government with limited control over revenues, expenditure and public policy. The bulk of city revenues come from central government grants and are spent on delivering local services. While these grants are topped-up by council tax (a type of property tax) and business rates, council tax cannot be raised above 3% unless a local referendum is held and business rate income is dependent on the number and success of businesses in the local area. Over the past nine years, as part of a UK-wide programme of fiscal austerity, Bristol's central government grant has been reduced by over 78% (from £201million in 2010/11 to £45million in 2019/20). Although some alternative funding mechanisms were introduced in this period, significant local authority budget pressures remain as a result of changes in costs and demand for statutory services, as well as significant cuts in core funding. For example, between 2014/15 and 2018/19, the proportion of main sources of council income being spent on Social Care increased from around 52% to 66%.

Against this backdrop of limited local government autonomy and a shifting fiscal landscape, responsibility for localising the SDGs has necessarily been distributed across a range of actors in the public, private and non-profit sectors. Fortunately, Bristol benefits from a vibrant civil society committed to sustainability across social,

economic and environmental dimensions. While austerity has also impacted negatively on the capacity of non-profit organisations and civil society networks to fulfil their civic ambitions, they have nonetheless played an important role in collective efforts to promote sustainability in the city.

The Bristol SDG Alliance

The Bristol SDG Alliance, which has played an instrumental role in driving the SDGs agenda in Bristol, is a network of city stakeholders that aims to drive interest and action towards the implementation of the SDGs in the city, the region and nationally.

The SDG Alliance emerged in the wake of Bristol's experience as European Green Capital in 2015. The city was awarded the status of European Green Capital in recognition of its commitment to environmental sustainability, investment in emission-reducing transport and energy projects, and support for low-carbon industry. At the end of this year, which also saw the launch of the SDGs, discussions were held about how to maintain momentum towards sustainability beyond the Green Capital year. The individuals involved in these discussions soon formed the Bristol SDG Alliance. It started with a mixture of

individuals who were either active in the implementation and use of the SDGs or were interested in the idea and wanted to support it. Gradually this network grew and came to include individuals from most of the key anchor institutions in the city, including the city's two large universities, City Council officials, representatives from major businesses, and voluntary organisations and networks.

In 2017 the SDG Alliance, in partnership with the Bristol City Council Resilience Officer and the Bristol Green Capital Partnership, commissioned a report from University of Bristol graduate students to assess the relevance and utility of
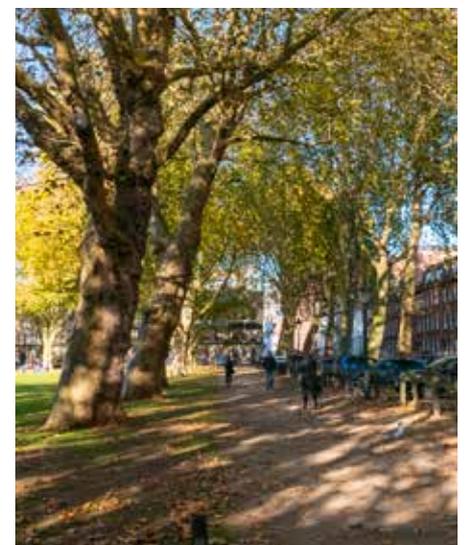
Photos: ©Bristol Design, Bristol City Council

the SDGs to Bristol. The report, Bristol and the UN Sustainable Development Goals, stimulated further interest and led to a formal partnership between the Bristol Green Capital Partnership and the University, which funded a new SDG Research and Engagement Associate based in the University's Cabot Institute for the Environment. The SDGs Associate became a coordinator for SDG activity in the city by supporting the SDG Alliance and working three days per week within the City Council.

This collaboration with the Council was made possible by support from Bristol's Mayor Marvin Rees, who has been a strong advocate for the use of the SDGs. In March 2018 he appointed an SDG Ambassador in the Cabinet tasked with attending SDG-related events within the city and beyond, and advocating for the SDGs within the cabinet and amongst other councillors.

One City Plan

All this coincided with a unique moment of reflection about how citizens, stakeholders and local government authorities could work together more effectively to achieve shared ambitions in Bristol. In 2016 Mayor Marvin Rees set in motion plans to bring key city stakeholders together to tackle systemic city challenges through partnerships, with a particular emphasis on reducing notorious inequalities in the city. It was this focus on tackling inequality that inspired the Bristol One City Plan. The SDGs Research and Engagement Associate worked with the City Office team, which was a new unit set up to support this initiative.

The One City ambition is to articulate a collective vision, enhance the resilience of public services, support problem solving in the face of complex city challenges, and increase the sustainability and scalability of innovations in the city. The City Office is supporting these efforts by serving as enabling hub aimed at coordinating consultation, resources and assets to pursue shared agendas and realise common goals.
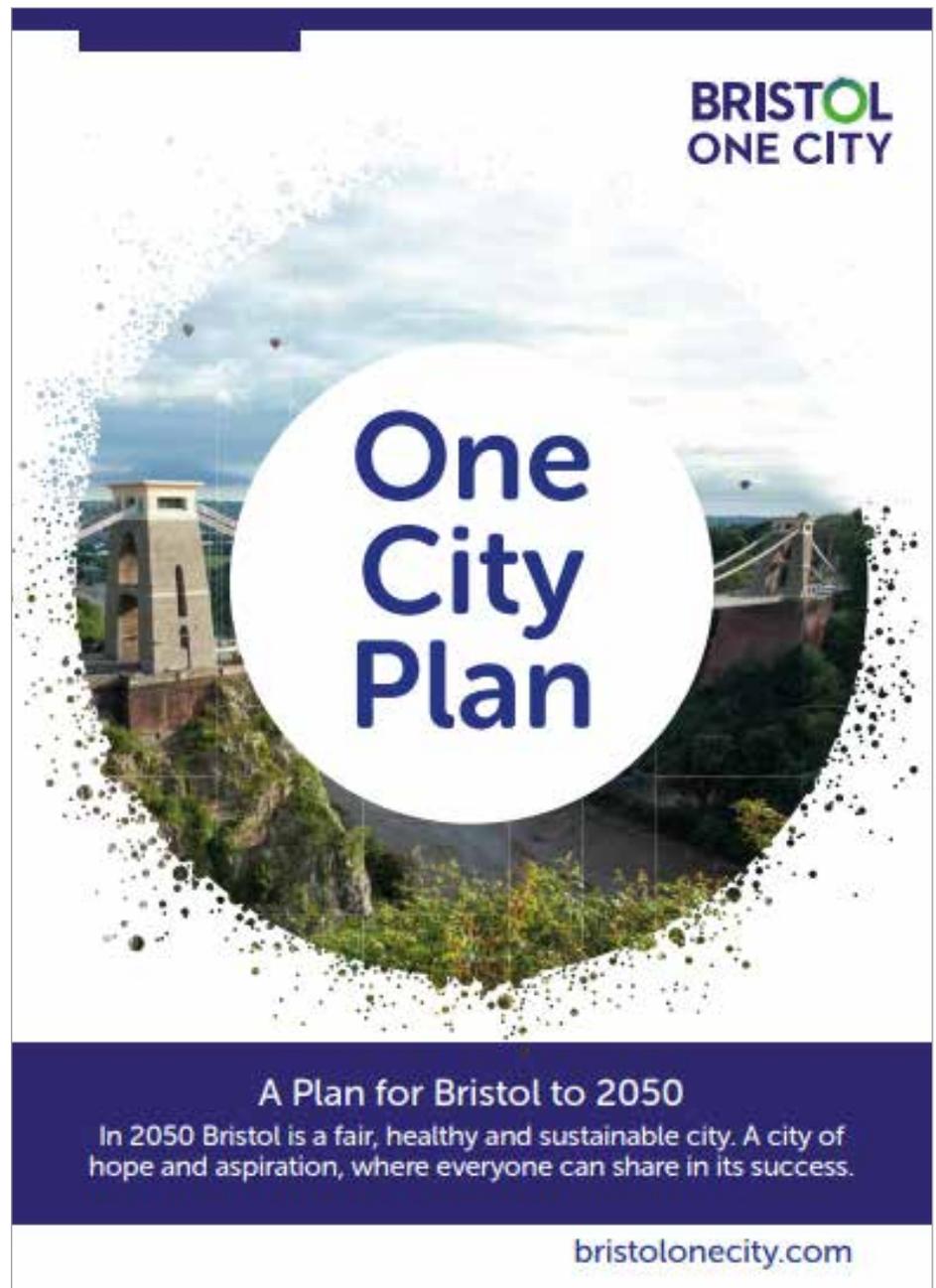
The One City Plan cover

The One City Plan, which was developed through extensive engagement with citizens and city stakeholders over the course of more than a year, articulates a vision for making Bristol a fair, healthy and sustainable city for all. It is structured around 6 core themes: Connectivity, Economy, Environment, Health and Wellbeing, Homes and Communities and Learning and Skills. The One City Plan identifies three priority initiatives associated with each theme for every year from 2019-2050 (a total of 558 initiatives). Monthly drop-in sessions are held at the city council to engage citizens and stakeholders and discuss how the city can take action towards achieving the initiatives outlined in the plan. Additionally, each thematic area has an associated board made of city leaders in their respective areas. These boards meet at least every three months to assess progress, provide guidance and make recommendations for revisions to the Plan. These city leadership groups are comprised of individuals representing

stakeholders with the capacity to support transformative change due to their resources or influence. These include the heads of the universities, the hospitals, police, council leaders and some of the leaders of the largest networks and businesses in the city.

Through the strategic partnership between the University of Bristol and City Council, the SDGs were embedded within the work of the City Office. No one board is given explicit jurisdiction to deliver on a specific SDG but instead every thematic area is expected to consider its impact on delivering the SDGs, as well as local priorities in other thematic areas. As a result, the SDGs sit across every area of the plan.

The City Council is now beginning to further integrate the SDGs into city government operations. Recently, the activities within its business plan have been mapped onto the SDGs and implicit within the business plan is the target to deliver on objectives within the One City Plan. The 558 initiatives contained within the plan have all been mapped onto the SDGs, and where relevant they have been mapped onto specific targets as well.

A key element of the One City Approach is about anchor institutions and networks which employ and represent large proportions of the city engaging with the Plan and the One City governance framework. Both universities have embedded the SDGs in what they do and how they operate. All the city's major networks are active members of the SDG Alliance and involved in the work of the

The January City Gathering 2019 (Photo credits: Bristol City Council)

City Office. This regular dialogue about the SDGs among organisations and networks has been vital in promoting the uptake of the SDGs in Bristol. The Bristol Green Capital Partnership has even gone as far as mapping all of their actions in the Environmental Sustainability Strategy onto the SDGs.

City Funds and Procurement

Alongside the One City Plan and SDG activity a new mechanism to harness resources locally has been developed. The Bristol City Funds is a mixed funding mechanism that provides, loans, grants and a mixture of the two to deliver key priorities that have been established in the One City Plan. The funds have been aligned to the SDGs and will operate as a source of

investment and grant funding to support projects that will help transform Bristol.

The council is also considering how it's procurement policy can impact delivery of the SDGs in the city. As a result of the Social Value Act in 2012 Bristol City Council has worked with the Social Value Portal to embed social value into its procurement policy. The targets, outcomes and measures for this policy have all been mapped against the SDGs to demonstrate how this policy helps contribute towards the city's SDG commitments.

In sum, Bristol's efforts to integrate the SDGs into local governance processes and practices are a product of collective will and initiative across a diverse range of actors and organisations in the city.

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METHODOLOGY

This report was produced by Sean Fox and Allan Macleod of the University of Bristol's Cabot Institute for the Environment, with funding from the UK Economic and Social Research Council's Impact Acceleration Account. The goal was to produce an independent assessment of progress towards achieving the SDGs in Bristol. While our research benefitted from collaboration with a range of stakeholders, the contents of this report reflect our independent assessment.

The format of this report is based on the guidance laid out in the handbook for the preparation of VNRs produced by the Division for Sustainable Development of the UN Department for Economic and Social Affairs (UN DESA). To develop a holistic understanding of progress and action the report combines a comprehensive review of statistical indicators with an extensive consultation exercise. The statistical review was informed by a prior mapping of the SDGs onto the One City Plan. From the targets that were relevant to the Plan, we compiled indicators from a range of sources, including eight city sustainability frameworks, the IAEG SDG indicators, and Bristol's existing sets of metrics established by some of the boards and strategies in the city. The resulting set of indicators overlap substantially with the recommended SDG indicators, but where these were inappropriate to the city scale or unavailable, alternatives that reflect the ethos of the Goals and targets were sought.

The next step was to collect publicly available data. Data was benchmarked against 2010 wherever possible to provide an indication of sustained trends in recognition of the fact that short time-series may reflect stochastic variation rather than genuine trends. Most statistics are reported at the Local Authority scale—i.e. for the areas governed by Bristol City Council. In some cases, data are disaggregated to the ward level; in other cases, only data for a wider area (e.g. West of England) were available. Most data are presented in graphs reflecting annual percentage change since the first year recorded. Lines in the graphs are colour-coded to facilitate interpretation: red lines indicate negative trends, orange lines reflect little net change over the reporting period, and green lines reflect positive trends. All underlying data for this report can be found in the Data Annex.

The statistical assessment was accompanied by a city-wide consultation to identify organisations undertaking activities aimed at making Bristol a fair, healthy and sustainable city for all. The consultation was conducted via an online survey designed to be as accessible as possible to organisations across sectors and of any scale. It was also designed to engage organisations that were not consciously or knowingly making contributions towards achieving the Goals. Respondents were first asked which SDGs they were working to achieve and then directed to a customised series of questions about those SDGs only to ensure an efficient experience. Respondents were asked to identify the scale of activities (i.e. neighbourhood, organisational, citywide, or international) and whether initiatives were done in partnership or on their own.

For SDG 17, Partnership for the Goals, respondents were given an option to share any internationally focused work. Many of the targets within SDG 17 focus on development assistance and support for other countries. Bristol has a strong network of organisations focused on international development, and as a result the consultation allowed us to capture efforts by organisations based in Bristol working to support the SDGs elsewhere in the world.

This survey was disseminated through key networks of city stakeholders, including the Bristol SDG Alliance, Business West, Voscur, Bristol Green Capital Partnership, and University of Bristol's Cabot Institute for the Environment. The survey was further shared with the Black Southwest Network, Babbasa, the Inclusive Cities Network, LGBT Bristol, Bristol Interfaith Group, and local news media.

Over the course of the six-week consultation we received full responses from 88 different organisations. Of these, 52% were from the private sector and 48% from the public and non-profit sectors. It is notable that 42% of responding organisations were not currently using the SDG framework within their organisations. By completing the survey, these organisations were implicitly

able to map their existing activities and initiatives onto the SDGs. In some cases, submissions were received outside of the formal survey tool from organisations that had already completed their own SDG mapping (e.g. NHS North Bristol trust).

While this methodology does not ensure a comprehensive or representative sample, it nonetheless yielded a large and diverse body of information to improve our understanding of how organisations across the city are contributing to achieving the SDGs. The process also substantially increased engagement with the SDG Alliance, which now has more than 120 members.

As shown in Figure 1, the SDG which received the highest response rate was SDG 3 related to mental health and wellbeing, with 65% of respondents including an initiative about SDG 3. Organisations across Bristol have been particularly active in addressing mental health, with many collaborating with the Thrive Bristol programme. The second most common SDG was SDG 10 "Reduce Inequalities" –

something that is central to the work of the City Plan and a key reason why the SDGs resonate strongly in Bristol.

Case studies were included as examples of how organisations are attempting to address the gaps in progress that we

found in the data. We would like to thank every organisation that participated in the consultation survey and apologise to those that were unable to engage with the survey or who felt their response is not adequately reflected in the main body of text.

SDG	Percentage
SDG 1	37.5
SDG 2	28.4
SDG 3	64.8
SDG4	39.8
SDG 5	37.5
SDG 6	13.6
SDG 7	21.6
SDG 8	42.0
SDG 9	30.7
SDG 10	51.1
SDG 11	33.0
SDG 12	43.2
SDG 13	43.2
SDG 14	15.9
SDG 15	18.2
SDG 16	29.5
SDG 17	23.9

Figure 1 – Percentage of Respondents working on each SDG
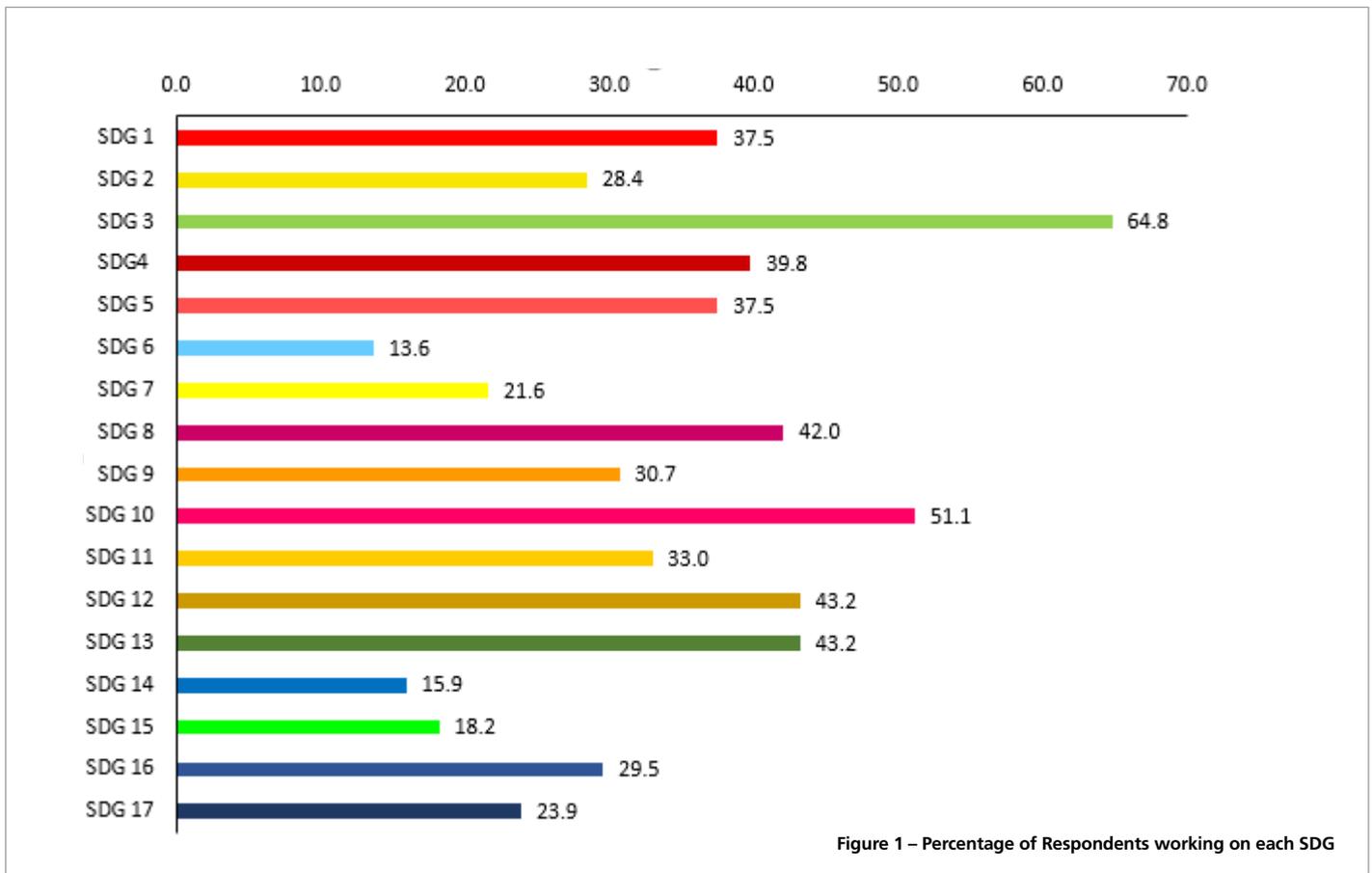
SDG 1
NO POVERTY

Reliable subnational time-series poverty data is surprisingly difficult to find. As a proxy for overall poverty, data from End Child Poverty were used (1.2). These show that the percentage of children in poverty (before housing costs) increased from around 17% in 2013 to 21% in 2018. After housing costs, levels are higher but the increase is more modest, rising from 26% in 2013 to nearly 28% in 2017 and falling slightly to just over 27% in 2018. While these levels are high, they are below the UK average.

Poverty rates vary considerably across the city: in some wards there are relatively few children in poverty; in others the proportion exceeds 50%. These trends and patterns differ from those published by Public Health England, which indicate a downward trend in child poverty. However, the methodology used by End Child Poverty was deemed to be more robust (see Discussion). According to income poverty data from the ONS, 32% of neighbourhoods had poverty rates of 20% or more in 2015. While time-series data are not available, these rates compare favourably to several similarly sized regional cities such as Liverpool, Manchester and Sheffield. In sum, the data paint a mixed and incomplete picture with regards to Bristol's progress in tackling poverty.

WHAT WE'RE DOING

Bristol City Council recognise that the causes of poverty are multi-faceted and complex, and resultingly their work to

Bristol is a wealthy city by global standards, with very low levels of absolute deprivation. However, poverty persists. The best available indicator for poverty trends in the city is the proportion of children living in poverty, which has been increasing since 2013.

In 2018, one in five children were living in poverty, and this figure rises to over one in four after housing costs are considered. However, the City Council and many other organisations are working to tackle both the root causes and symptoms of poverty in Bristol.

% of Children Living in Poverty
(After Housing cost)

- 11.12 - 15.70
- 15.71 - 23.73
- 23.73 - 29.37
- 29.37 - 38.14
- 38.14 - 50.29

Figure 3 – Child Poverty in Bristol 2018
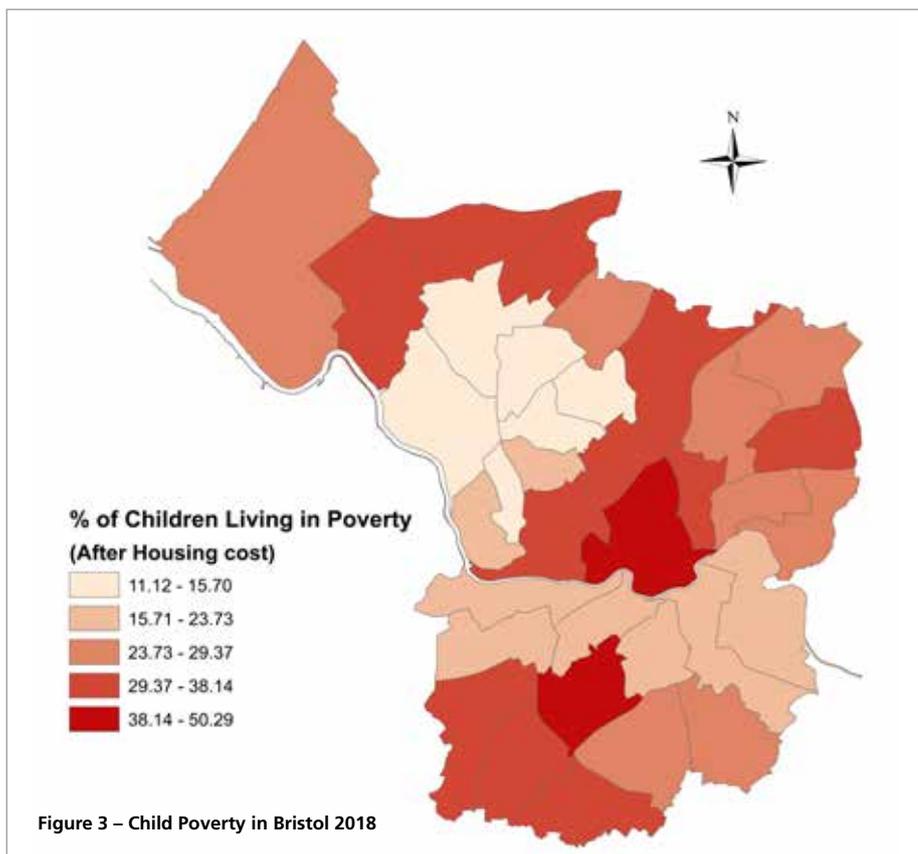
tackle SDG 1 spans a wide range of areas (1.5). The Corporate Strategy includes efforts to reduce poverty by tackling unemployment, low wages and insecure jobs, ill health, lack of skills and high costs of living (particularly for housing). Beyond the city government, over 37% of respondents to our consultation were working to tackle poverty. A few of these initiatives are captured here; many more can be found in the chapters to follow.

Children and Families (1.2, 1.3)

The Baby Bank Network work to relieve poverty by providing essential baby/children items to families who cannot afford to buy them. This allows families to spend their finances elsewhere.

Elderly and Disabled (1.2, 1.3)

The Lawrence Weston Community Transport Scheme is an initiative that provides low cost transport to elderly and disabled residents of Lawrence Weston to help them travel, socialise and learn.

Asylum Seeker and Refugee Poverty (1.2, 1.3)

Asylum seekers and refugees are particularly vulnerable to poverty. Bristol Refugee Rights help people in Bristol seeking asylum to receive support, to avoid destitution. Similarly, ACH aims to get refugees into median salary jobs to break the cycle of poverty through the #RethinkingRefugees campaign and is

working as part of the #LiftTheBan collation to allow asylum seekers the right to work.

Water Poverty

Bristol Water monitor their performance in helping those customers on the lowest incomes and experiencing the most serious financial difficulties by calculating and tracking the percentage of customers in water poverty. This is defined as the percentage of customers within the supply area for whom their water bill represents more than 2% of their disposable income. Currently Bristol has zero water poverty based on this measure, but Bristol Water continue to monitor this actively.

SDG 2
ZERO HUNGER

There are significant levels of food insecurity in Bristol and stark inequalities. In some wards over 1 in 5 people face moderate to severe food insecurity (2.1). At the same time, the city is experiencing problems with obesity and undernourishment (2.2). While there has been a decline in the proportion of children aged 4-5 years old who are obese, the proportion of children aged 10-11 years old who are obese has increased since 2010. Worryingly, the prevalence of underweight children aged 4-5 years old has increased since 2010 (2.2).

However, there are robust efforts to address these trends and ensure that Bristol achieves a more equitable and sustainable food system, with the goal of becoming the first Gold Standard City in the UK (2.4).

WHAT WE'RE DOING

Urban Agriculture (2.4)

It is difficult to get comparable data for urban agriculture, however 4% of the surface area of Bristol is zoned for allotments, agriculture, grazing and market gardens. These urban agriculture initiatives are supported by organisations like the Soil Association, the SUNEX project between UWE & Bristol Water, and Bristol Food Land working group, who are working to provide local growing opportunities and food to Bristolians. The Soil Association is also working to improve access to local sourced food through their national Food for Life programme.

Food Insecurity (2.1, 2.2)

One of the most significant times of hunger in Bristol is during school holidays when children who would normally receive a free school meal at lunch no longer receive food. Feeding Bristol, in partnership with the Bristol City Office, Bristol Chamber of Commerce Initiative, United Communities, Together4Bristol and the Blue Finger Alliance (amongst others), are tackling holiday hunger by providing fresh meals

% of households facing moderate or severe food inesecurity

- 0.00 - 3.17
- 3.18 - 5.34
- 5.35 - 9.33
- 9.34 - 16.21
- 16.22 - 24.43

Figure 4 – Food Insecurity in Bristol Wards 2018
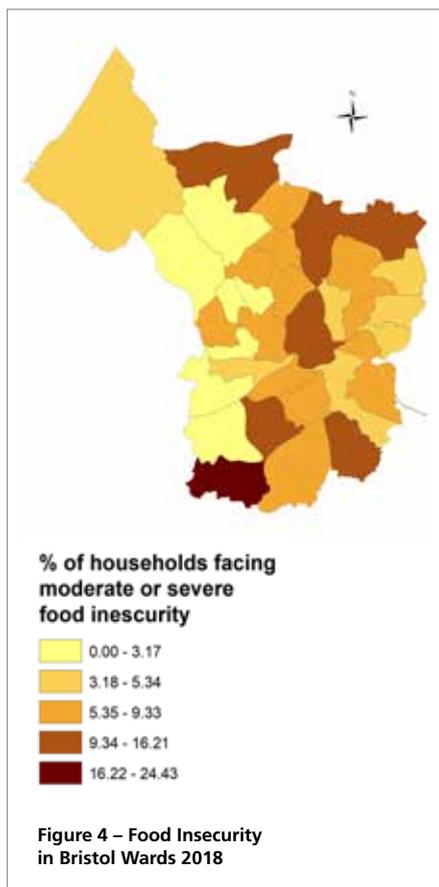
every weekday of the school holidays in the wards where the proportion of children receiving free school meals is highest. The Feeding Bristol initiative aims to feed over 50% of the children who would normally receive free school meals. No Child Goes Hungry is also a funding priority for the recently launched City Funds.

To further help tackle food insecurity many organisations in Bristol now arrange regular collections for food banks in Bristol. Womble Bond Dickinson have a permanent campaign across all their offices to donate food to food banks. Similarly, Hargreaves Landsdown supports the Easton Foodbank with donations from their Bristol offices and Together4Bristol organise the operations of 25 foodbanks across the city.

Food insecurity is a significant issue in parts of Bristol. There is some evidence that the percentage of underweight children is increasing, and there are stark inequalities. Some areas of the city experience moderate or severe food insecurity of over 20% and the deprivation gap for food insecurity is 9.9%, indicating that those in the worst decile for deprivation are facing nearly 10% more food insecurity than the wealthiest.

Several ambitious initiatives have been launched to combat these trends and promote sustainable food systems in the city.

SDG 3
GOOD HEALTH AND WELL-BEING

Bristol has seen positive trends across a range of measures of health and well-being. Road traffic accidents (3.6), premature preventable deaths from cancer (3.4), cardiovascular disease (3.4), adolescent birth rates (3.7) and smoking rates have all improved (3.5). In aggregate, Bristol has seen a steady decline in deaths from preventable causes (3.4).

However, there has been an increase in respiratory disease (3.4), little change in deaths attributable to air pollution (3.9), and a rise in diabetes. There has also been slight deterioration in infant mortality rates, from 2.3 deaths per thousand live births in 2010 to 2.9 in 2017 (3.2). Worryingly, the life expectancy gap between the least deprived areas and the most deprived areas has increased since 2012 for both men and women (3.8).

WHAT WE'RE DOING

Mental Health and Support (3.4)

Thrive Bristol aims to improve the health and wellbeing of citizens working in Bristol with a focus on meeting those worst affected. It uses public, private and third sector collaboration to deliver prevention and early intervention. Over 150 different organisations in Bristol attended the launch of Thriving at Work in April 2018, with some key speakers including Windmill City Farm, Triodos Bank, Rolls Royce and Ovo Energy. Windmill City Farm also provide supported volunteering services at their farm for people with mental health issues and therapeutic services through opportunities to farm. Nilaari Agency are a BAME-led charity that provide culturally appropriate counselling services for people with mental health issues. Similarly, Macmillan Cancer Support offer practical and emotional support to people affected by cancer.

Inequalities in Health

One25 are an organisation that reaches out to women trapped in, or vulnerable to, street sex-work, supporting them to break free and build new lives away from violence, poverty and addiction. Their night-van and drop-in clinic provide opportunities for some of the people furthest from achieving good health and wellbeing through dedicated mental health care provision and opportunities to access sexual healthcare, and wound care nurses. The Hearing Aid Support Scheme provides Bristol citizens with hearing aid repair so that those who otherwise would not be able to afford a new hearing aid, can have theirs fixed.

Bristol has mixed performance on the indicators for SDG 3. Road traffic accidents, premature preventable deaths from cancer, cardiovascular disease, adolescent birth rates and smoking rates have all improved. However, the life expectancy gap between the wealthiest and the poorest has increased alongside the incidences of respiratory diseases, diabetes and drug misuse.

In other areas – such as the mortality rate from preventable causes, suicide rates, cardiovascular disease and cancer rates – trends have been positive, but rates remain above national averages.

Figure 5 – Key trends in population health and inequality

- - - - Cardiovascular Disease Rate
—— Mortality Rate from Preventable Causes
—— Deprivation Gap in Healthy Life Expectancy (Male)
—·—· Deprivation Gap in Healthy Life Expectancy (Female)
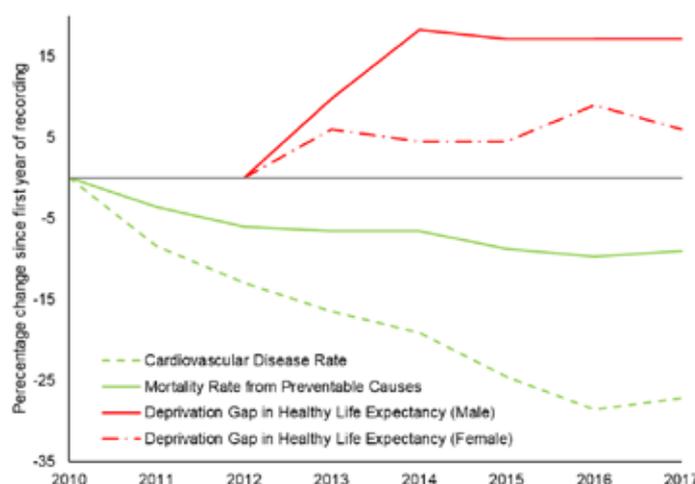
SDG 4
QUALITY EDUCATION

4 QUALITY EDUCATION

Many of the indicators for SDG 4 are improving. While boys tend to perform worse in education than girls, the data suggest that boys are catching up (4.5).

In 2013, the disparity between ethnic groups for the proportion of early years students who achieved a good level of development was 43% between the best and worst performing groups. However, this has been reducing and in 2018 this gap was only 15% (4.5). Aside from Chinese minorities (who were the highest performing ethnic group to begin with) every ethnicity has shown an increase of over 17.5%. Furthermore, absence rates from Bristol schools have declined while scores in GCSEs (until 2016) and attainment 8 (from 2016 onwards) have all shown continual improvement across the city (4.1).

In 2010, Bristol was behind the national average in many indicators; today the city has largely caught up and even exceeds UK averages in some areas. The proportion of the population who have full level 2 qualifications has risen by 12% to 82% (compared to the English average of 74.7%) (4.4) and the rates of engagement with training have nearly doubled (4.4). Additionally, the proportion of the population with higher education degrees has risen from 37.1% to 54.2% (4.3).

A notable and persistent challenge for Bristol is unequal access to higher education (4.3). Between 2009-2015 Bristol had a lower proportion of its population entering higher education (30.6%) than the average for England (37.5%). This is compounded by inequality within this figure. In South Bristol this figure is 17.5% and Bristol contains 3 of the 5 worst performing neighbourhoods nationally for this indicator.

Bristol has much to celebrate in the field of education. Early years education proficiency, literacy and numeracy skills, absence rates, the proportion of the population with higher education degrees, and proportion of adults with level 2 qualifications have all increased. While BAME and white minority ethnic students perform worse than white students in school readiness, trends suggest that all ethnic groups are experiencing improved outcomes in early years education.

However, inequalities persist. Access to higher education is a particular challenge: in some wards less than 20% of the school aged population enter higher education.
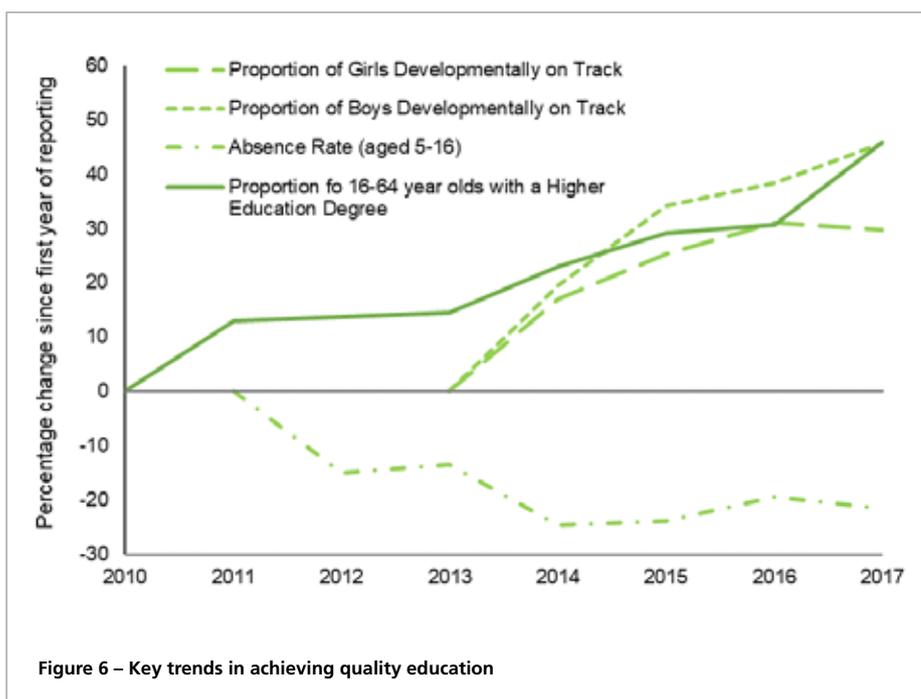

Figure 6 – Key trends in achieving quality education

WHAT WE'RE DOING

University Access (4.3)

Mott McDonald partners with schools and universities to encourage young people to study STEM subjects (science technology, engineering, maths). Ablaze is a charity that partners with organisations in Bristol to inspire and motivate students to raise their aspirations and stay engaged with education. Partners include Airbus, Bristol Water, Business West, Burges Salmon, Ovo energy, Rolls Royce, TLT, and the University of West of England. A similar program is run by Future Quest, which recruits business leaders in Bristol to work with teenagers to build aspirations and choices for disadvantaged young people in 25 schools across Bristol. The Creative Youth Network aims to help young people reach their full potential, and the Youth Education Service helps young people improve their English and Maths skills to expand opportunities.

Improved all-aged access to education and training (4.4, 4.6)

Knowle West Media Centre provides training and education opportunities for people interested in getting involved in the creative and technology industries, as well as providing digital skills programmes like MakerCity. Borderlands (a refugee and asylum support organisation) and Bristol Refugee Rights provide English classes to help refugees and asylum seekers improve their education and integration into society. Similarly, ACH's training program "Himilo" helps to integrate refugees and asylum seekers into mainstream jobs and society

by delivering vocational training and advice. Himilo won the "Best Training Scheme" award at the 24 Housing Awards in October.

Sustainable Development Education (4.7)

Healthy Planet Bristol visit local primary schools to teach about climate change and health. Similarly, Catalyse Change provide workshops to empower young women and girls to be sustainability leaders and change makers. The University of Bristol has integrated the SDGs into its teaching with courses like the Sustainability, Technology and Business unit which has lectures that cover all the SDG goals and targets. This unit includes coursework in which students propose a technology project to improve sustainability and must include specific reference to SDG targets. The University of Bristol also runs a free MOOC called Sustainable Futures, which has been taken by 5758 people—half of whom are not attending the University. The University has also embedded the UNESCO definition of Education for Sustainable Development into all their course and programmes. Similarly, the University of West of England has mapped all courses and modules to show they help students understand different aspects of the SDGs.

Bristol has been a part of the Film for Learning program, which involves film making to improve literacy attainment. It is a key part of Bristol's international knowledge exchange as a UNESCO City of Film. Furthermore, the recently signed Bristol Children's Charter includes a pledge to improve children's global
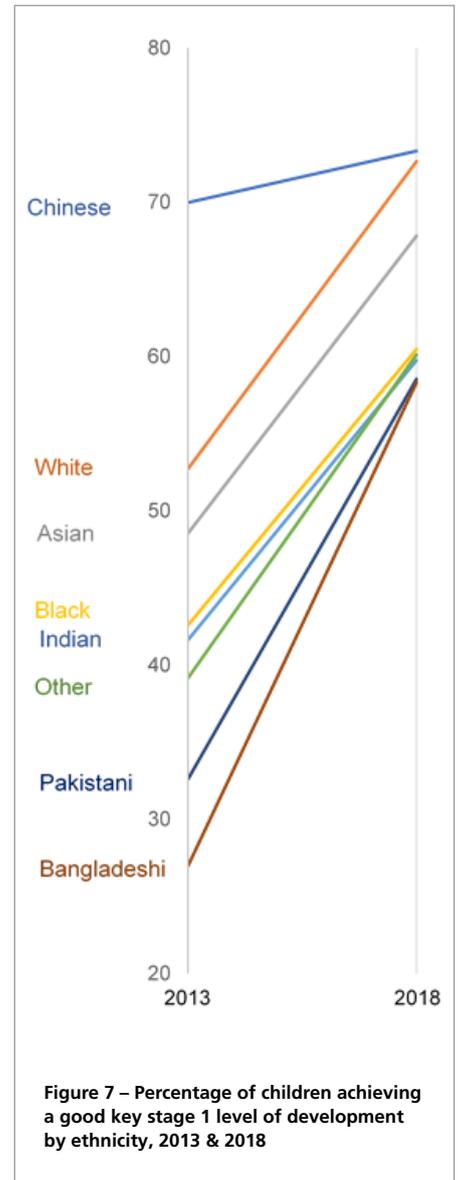
Figure 7 – Percentage of children achieving a good key stage 1 level of development by ethnicity, 2013 & 2018

citizenship. This charter is based off the United Nations Convention on the Rights of the Child and was adopted by many organisations last year.

SDG 5
GENDER EQUALITY

The proportion of women serving as Councillors in Bristol has increased steadily from 24% in 2012 to 36% in 2015 and 42% today (5.1). Since 2001 the proportion of female candidates and the proportion of female councillors elected to office has remained close to the UK average for unitary authorities (5.1). The latest election, in 2016, saw the highest proportion of female candidates ever at 33.7%, and the proportion of women among the council's top earners has ranged between 54-60% over the past four years (5.1).

Beyond the council there is encouraging evidence that new incidences of FGM have decreased in the past two years, falling from 385 to 200 (5.2). However, rates of both domestic abuse (5.2) and sexual offences (5.2) have been rising, alongside rising rates of violent crime in general (see

Goal 16). While it is difficult to determine whether these reflect trends in incidents or improvements in reporting, they indicate that challenges persist. Data also indicate that the gender pay gap in Bristol has remained roughly constant (around 14%) despite rising wages for women in the city.

WHAT WE'RE DOING

Female Empowerment and Period Dignity (5.1, 5.6, 5.c)

Team Brave is a women's football team focused on inclusivity and empowerment through sport. They are Bristol's SDG Football team and took part in the Global Goals World Cup in 2019. By reaching vulnerable women in society they aim to empower and inspire women and raise their self-esteem through sport. Similarly, Full Circle @ Dockworks run two Somali

The number of women represented in local government in Bristol has been rising. However, the significant gender pay gap in the city has remained largely unchanged in recent years, while the rate of sexual offences has risen sharply. Conversely, the total number of reported FGM cases has fallen over the past two years. Data gaps related to unpaid care work, intimate partner violence, and child marriage render it impossible to identify trends.

Figure 8 – Indicators of gender equality, 2010-2018
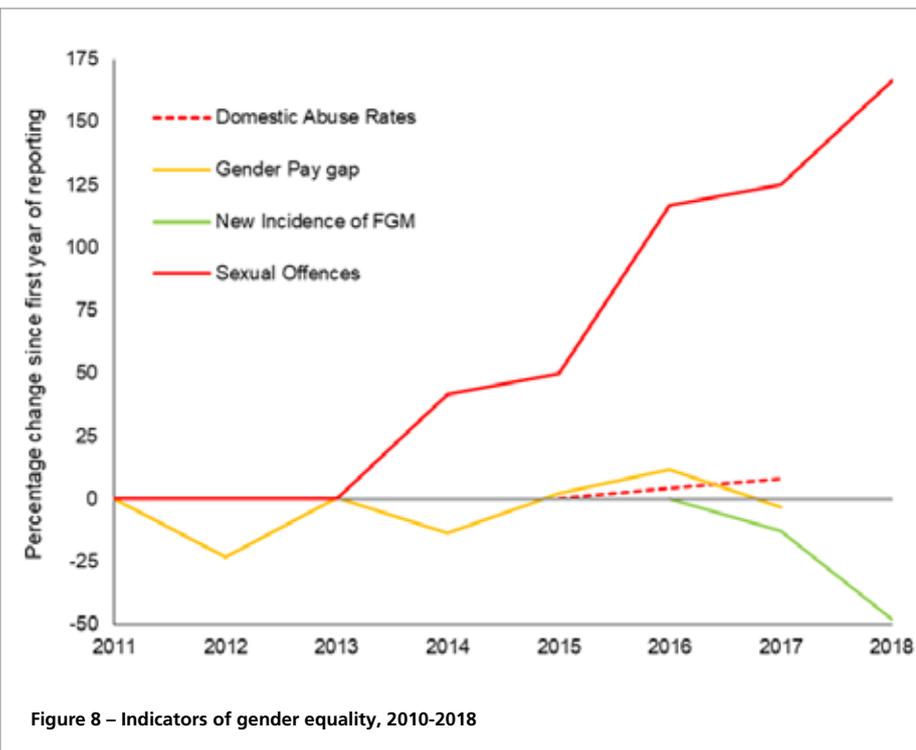
women's groups particularly focused on women only sport. The Bristol City Office is working in partnership with Burges Salmon and Hargreaves Landsdown to develop a network of free sanitary product distribution points so that no women in Bristol will have to struggle with period poverty. In January, Bristol held the UK's first summit to end period poverty bringing together more than 80 experts. From September sanitary products will be available to all children in Bristol schools aged 9-18 years old. In March, the UK government announced plans to launch a similar nationwide program.

Care Work and Domestic support (5.4)

Manor Community have developed a gender-based action plan to tackle discrimination in the field of care work, which is dominated by female employment and requires a skillset that is under-valued in other areas in the labour market. The Carers Support Centre for Bristol and South Gloucestershire provide practical and emotional support services for unpaid carers through advice, information, advocacy and counselling. Home Start Bristol provide domestic support to parents struggling with postnatal depression, feelings of isolation, multiple births, mental health and loneliness.

SDG 6
CLEAN WATER AND SANITATION

Access to clean water and safely managed sanitation facilities are near-universal in Bristol, which has well-coordinated provision through Bristol Water and Wessex Water. Efficient water management and restoration of water-related ecosystems are therefore more salient challenges for the city in relation to SDG 6. Although water efficiency indicators at the city scaler were not obtained, Table 1 shows that estimated water usage per person has remained relatively consistent since 2010, and quite close to the UK industry average (6.4). A notable increase in 2018/2019 can be attributed to an unusually hot summer. If Bristol Water is successful in achieving their target of reducing water consumption to 110 litres per person per day by 2045, Bristol's current demographic expansion can be managed with no further water resources required up to that date.

However, there is a notable difference in the water efficiency of households who have a water meter vs those who don't. According to data provided directly by Bristol Water, households with a water meter use 20.29% less water than those don't have a meter –167 litres per person per day without a meter vs 133 litres per person per day with a meter. This water use efficiency challenge has also been noted by the University of West of England, which recently conducted a study on water use in its halls of residence. It found that students used approximately 30 litres more water per day than the industry estimate. They hope to use this study to better design policy and interventions to reduce water use quantities.

WHAT WE'RE DOING

Reducing Water Usage (6.4)

Over the past two years, St Monica's Trust reduced its water consumption by almost 12,000m3 through initiatives such as better water monitoring, fixing leaks and improving efficiency. Similarly, We The Curious, Bristol's interactive science museum, are using a number of water consumption reduction measures in their museum and use green roofs to reduce urban run-off.

Reducing Plastic Bottles (6.3)

Refill Bristol, set up in partnership between City to Sea and Bristol Water, and working with businesses across Bristol, aims to improve access to water refill stations so that the amount of single use plastic bottles consumed is reduced. A free app provides the locations of free refill points across the city. Another example of reducing waste related to water consumption is Bristol Zoo, which no longer sells plastic bottles in zoo vending machines.

Bristol's citizens benefit from near-universal access to clean water and sanitation facilities. While data on overall water efficiency for the city is not available, usage per person per day has remained close to the UK average since 2010. However, population growth will place greater demands on regional water resources, and more could be done to reduce water use through expanding the proportion of voluntarily metered homes.

2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
146	142	141	144	143	141	144	146	151

Table 1 – Average litres of water used per person per day

SDG 7
AFFORDABLE AND CLEAN ENERGY

Between 2010 and 2017 the amount of energy used per unit of gross value added declined in Bristol, indicating that the economy is becoming more energy efficient (7.3). Domestic energy usage, measured in total kilowatt hours per household, also declined by 11% over the same period (7.1). Moreover, the amount of installed renewable energy capacity in Bristol increased by over 30% between 2014 and 2017 (7.2). While these are all positive trends, a significant acceleration in all three will be required to achieve Bristol's stated ambition to be carbon neutral by 2013.

Fuel poverty remains a significant challenge. The percentage of households experiencing fuel poverty rose sharply between 2012 and 2014 before returning to levels close to 2011 (7.1). The most recent estimate, from 2016, indicates that over 10% of households were experiencing fuel poverty. As the city seeks to decarbonise its energy mix, careful attention will have to be paid to how this affects the most vulnerable households.

WHAT WE'RE DOING

Tackling Fuel Poverty (7.1, 7.3)

One of the most significant projects occurring in Bristol to tackle fuel poverty is the Cold Homes Energy Efficiency Survey Experts (the C.H.E.E.S.E project). Using thermal surveys to assess where leakage occurs in the home, the C.H.E.E.S.E project helps people find where they can insulate to save the most money. They offer free surveys to those in fuel poverty to help reduce the cost of heating.

Increasing Renewable Energy Provision (7.2, 7.3)

In 2018, Bristol launched its City Leap Prospectus. This is an investment portfolio to rapidly decarbonise Bristol's energy system by providing opportunities to invest in the city's future energy. It has been supported by many key city partners, including Arup and Burges Salmon. Additionally, Bristol Energy Coop develop and operate community-owned renewable energy generation and storage infrastructure. They have already developed solar panels on community buildings, solar farms feeding energy into the grid, and grid-connected battery storage, and are currently working on run-of-the-river hydro power and integrated smart grids. Lastly, the University of West of England has recently installed the largest single roof mounted solar array in the UK university sector producing 450kWp. This will support decarbonisation of the University's campus.

The energy intensity of Bristol's economy, and energy usage per household, have both declined while installed capacity of renewables has been rising. However, on current trends the city will not be able to achieve its ambition to become carbon neutral by 2030, and fuel poverty remains a significant challenge. Further improvements in energy efficiency, a significant acceleration in the use of renewable energy, and the elimination of fuel poverty are required to realise Goal 7.

Figure 9 – Trends in energy consumption, efficiency and renewables
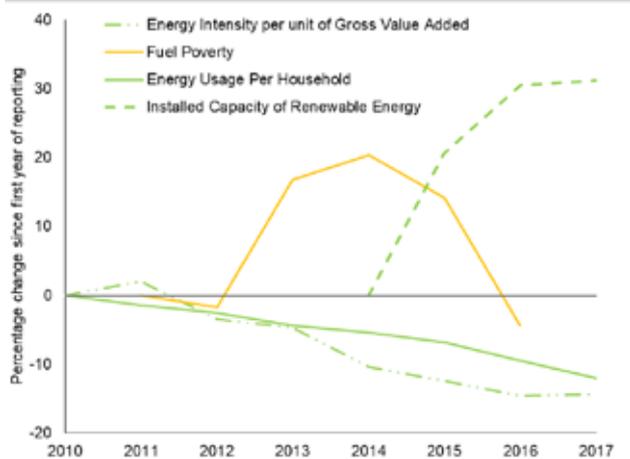
SDG 8
DECENT WORK AND ECONOMIC GROWTH

Bristol benefits from a diverse and innovative economy. Since 2012 the economy has grown and added new businesses (8.3) while unemployment has fallen. The city has the highest employment rate of any of the 10 largest British Core Cities outside London (8.3) and has emerged as the second largest tech cluster outside of the capital. Tourism provides £1.77 billion GVA to the local area and employs over 21,500 people (8.9). However, while the city continues to attract significant investment, recent evidence indicates that the economy has plateaued.

As in many other areas, Bristol's key weakness relates to inequality. Youth (8.6) and ethnic (8.5) unemployment are much higher than the Bristol average, and the gender pay gap has remained largely unchanged (see Goal 5), although female unemployment has tended to be lower than male unemployment in all years up to 2018, when female unemployment exceeded male unemployment for the first time.

The number of reported incidents of human trafficking in the city has risen from 42 in 2016/2017 to over double that in 2018/19 with 92 (8.7). However, it is difficult to determine if this reflects an underlying trend or improvements in the detection of human trafficking.

A key data gap for Goal 8 relates to Bristol's material footprint (8.4). With an increasing GVA (8.1, 8.2), steadily decreasing CO_2 emissions and gradually decreasing total waste volumes, it might be assumed that Bristol is reducing its environmental impact. However, none of these measures account for the production of energy, goods and services produced or consumed beyond Bristol's border that are directly linked to economic activities within the city.

One of the few economic indicators that can be disaggregated within the city is the proportion of 16-17 year olds who are not in education, employment or training

Bristol's economy has been performing well in many key areas. Since 2013 unemployment has been decreasing for both men and women, as well as among ethnic minority communities and youth. The economy has been growing steadily since 2012 and the number of businesses per capita has increased. However, significant inequalities persist. The unemployment rate amongst ethnic minorities in Bristol has been double that of the Bristol average, and there are notable spatial disparities in opportunities for youth.

Figure 10 – Trends in key economic indicators
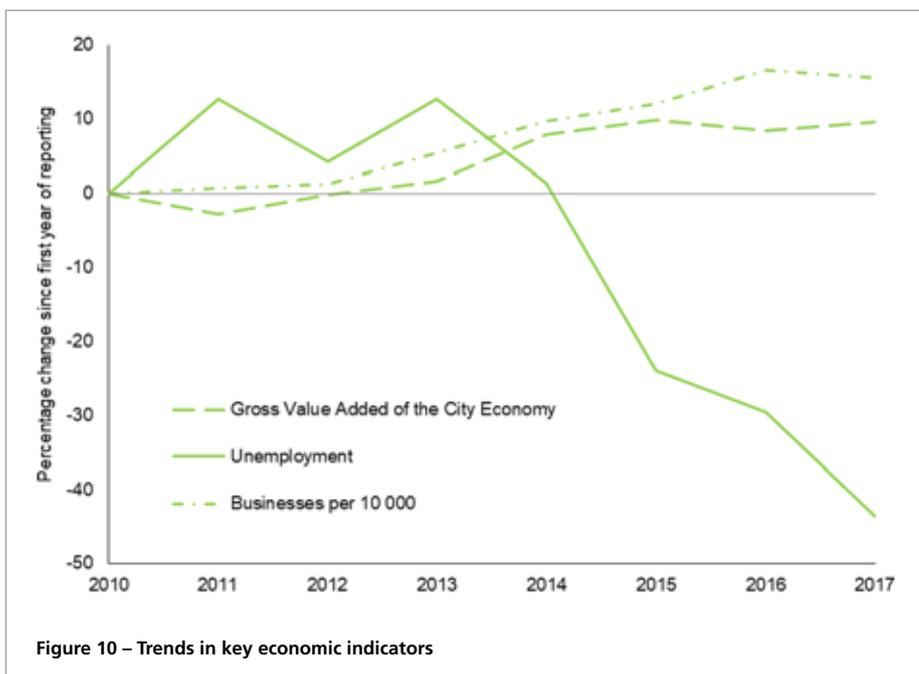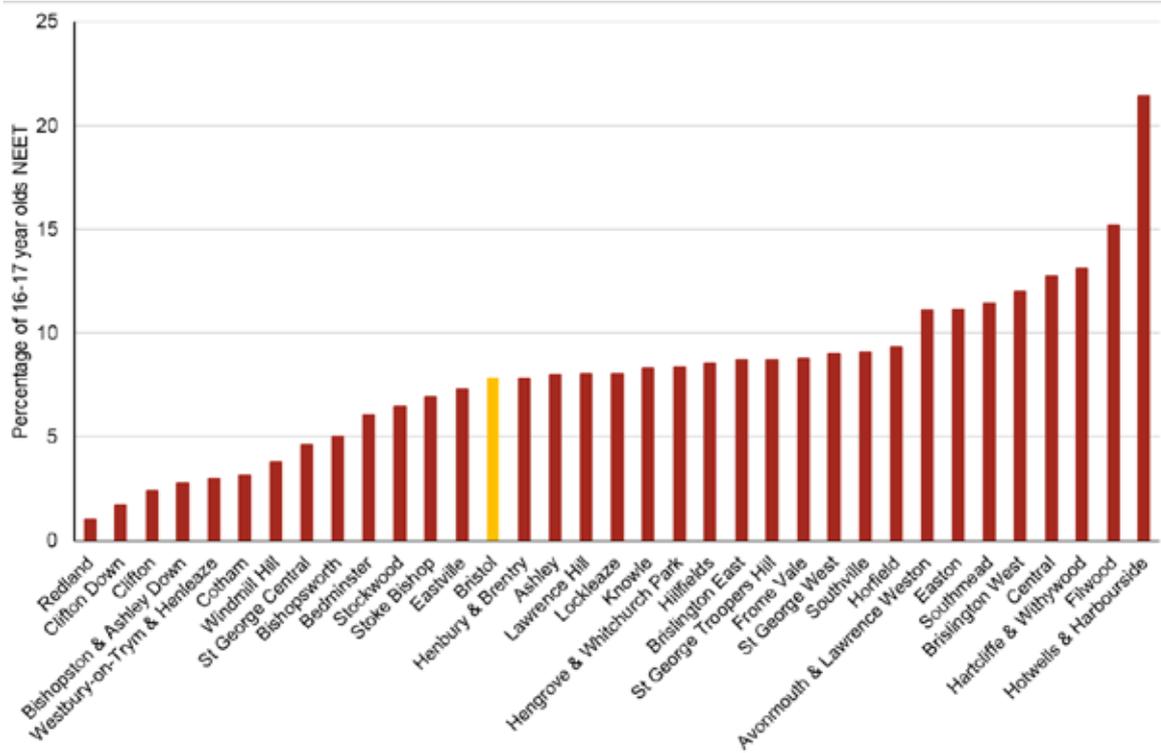
Figure 11 – Percentage of 16-17 year olds Not in Education, Employment or Training (NEET), 2017

(NEET). The inequality here is evident as 22 of 35 wards in Bristol (63%) have NEET rates higher than the Bristol average of 8.7% (8.6). The incredibly low rates of 16-17-year olds who are NEET in wards like Clifton, Clifton Down and Redland (some of the wealthiest wards of the city) reduce the Bristol average and highlight the large disparities in opportunities for youth in different parts of the city.

WHAT WE'RE DOING

Youth and ethnic economic inclusion (8.5, 8.6, 8.8)

1625 Independent People is a civil society organisation which helps young care leavers and young homeless people to access employment opportunities. They do this through two schemes: i) ReBoot West helps care leavers from all four unitary authorities in the region to access employment; ii) Young Ambition is a Deloitte funded project which helps employers hire and support young homeless people while also providing job mentors for them.

Burges Salmon are attempting to tackle social and economic exclusion through their Trailblazer legal apprenticeship scheme. One aspect of this scheme is targeting young people from disadvantaged backgrounds to make the legal profession more appealing and accessible.

ACH are working to tackle the problem of ethnic unemployment and protect labour rights. Their #RethinkingRefugees campaign aims to help employ 25,000 refugees into median salary jobs in the next 10 years. This will improve ethnic unemployment, help lift ethnic minorities from the traditional low-skilled jobs into employment and provide higher paid jobs, improving their input into the economy. Lastly, Bristol City Council have developed the Bristol Inclusive and Sustainable Growth strategy which sets out a plan to enable all the people of Bristol to create a sustainable, inclusive and growing economy from which all will benefit.

Access to economic opportunities (8.1, 8.3)

Raised in Bristol provides early age childcare through community centres to help connect families to the communities they live in. This generates income and economic activity in communities, as well as providing quality education and childcare for working families so that parents can access the job market. This will hopefully provide a reduction in the gap in unemployment for disadvantaged areas of the city and for women in the workforce. This work at the community level also relates to one of the City's priority objectives for 2019 of trialling affordable childcare in the city.

Training for organisations and charities (8.2, 8.3)

Voscur's Kickstart programme gives new organisations and social enterprises the inspiration and expertise that they need to develop their ideas and their training programme covers everyday organisational essentials, such as good governance, and emerging issues such as social investment. In 2018, 832 people from 605 organisations attended Voscur training courses. Additionally, since early 2017 Vosucr has run a Social Enterprise Innovation Programme (SEIP) to support social entrepreneurs, many of whom are from marginalised groups in society.

Tourism and Culture (8.9)

Destination Bristol, supported by the Bristol Chamber of Commerce Initiative, is a Place Marketing organisation in partnership with Bristol City Council to promote the interests and development of the visitor economy. They work in close collaboration with stakeholders to develop and enhance the city centre. Alongside this the Bristol Cultural Development Partnership aims to build a better Bristol by creating and celebrating arts, culture and heritage. In 2017 Bristol was chosen to become a UNESCO Creative City, with Bristol designated as a City of Film.

SDG 9
INDUSTRY, INNOVATION AND INFRASTRUCTURE

Bristol is an innovative city that benefits from the presence of two large universities and a diverse economic base. While the proportion of the GVA from manufacturing (9.2) and the proportion of total employment in the manufacturing sector (9.2) have decreased in Bristol since 2010, these are not necessarily negative trends. Other high-value sectors, such as aerospace and advanced engineering, creative industries, and digital technology are thriving and account for tens of thousands of jobs in the wider city-region. As of 2017 the Low Carbon Environmental Goods and Services sector supported 14,00 jobs in the city, which has seen a steady decline in the carbon intensity of local gross value added—although this only accounts for locally generated emissions rather than the total emissions that could be attributed to economic activity in the city.

Internet access has improved in Bristol: the proportion of the population who accessed the internet in the past three weeks rose from 82.4% in 2010 to 89.8% in 2018 (9.c). Alongside this, there has been an increase in the total trips taken on buses from 28 million in 2010 to 42 million in 2018 (9.1), while park and ride trips increased from 1.4 million to 1.7 million over the same period (9.1). Between 2010 and 2018 the proportion of people cycling to work rose from 10.5% to 15.9%, and the proportion walking from 17.5% to 20.2% (9.1).

WHAT WE'RE DOING

Transport Infrastructure (9.1)

Sustrans is a sustainable transport charity that has built large walking and cycling infrastructure projects in Bristol such as the Bristol and Bath Railway Path and the Festival Way. Sustrans are currently working

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on projects in Avonmouth and Severnside to improve the resilience of the transport network by providing safe walking and cycling networks. Lifecycle UK also aim to improve the use of bicycles in transport through promoting cycling and recycling old bicycles.

Innovation Inequality

The Black Southwest Network are developing a BAME enterprise & innovation hub that will help Bristol communities with technology and innovative business support for start-ups, as well as businesses looking to scale up.

Digital Connectivity (9.c)

Bristol Is Open is working to improve broadband in 91 schools, while also tackling connectivity in homes to improve access to health care and close the digital divide.

Bristol has experienced year-on-year declines in the carbon intensity of gross valued-added since 2010. Although the share of employment in manufacturing has declined since 2013, this isn't necessarily a negative sign given strengths in other sectors of the economy. The proportion of the population accessing the internet has risen alongside the availability of superfast broadband. Bus trips and park and ride trips have also been increasing, along with the proportion of people cycling and walking to work.
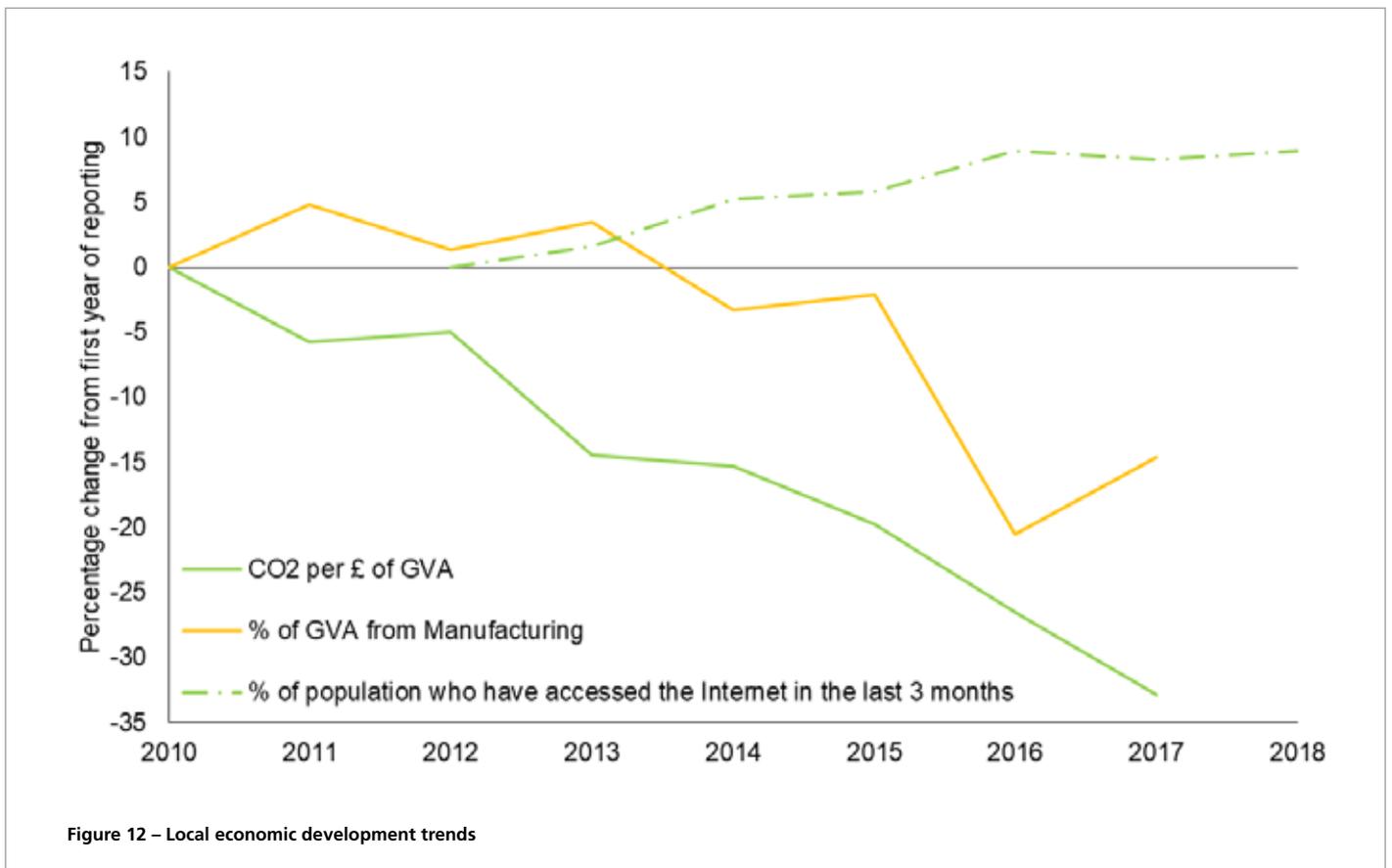
Figure 12 – Local economic development trends

SDG 10
REDUCED INEQUALITIES

10 REDUCED INEQUALITIES

Bristol's Gini coefficient of .40 in 2016 indicates that income inequality in the city is slightly below the national average, on par with Manchester, and a bit higher than other similarly sized cities such as Sheffield and Liverpool (10.1). However, despite increases in wages for both men and women, wage inequality has increased in Bristol. Between 2010-2018 the gap in wages between the top 10% and bottom 10% of earners grew by 14.4% for men and 9.3% for women, although Bristol's weekly wage inequality is lower than both the UK average and the South West average over the same time period (10.1).

The Bristol City Council race pay gap declined from 15% in 2016 to 12.6% in 2018, although this doesn't necessarily reflect broader trends in racial equality in the city (10.2). The proportion of the population that has felt discriminated against has risen from 3.9% in 2010 to

6.2% in 2018 and reported incidents of racial discrimination and harassment surged over this period (10.3).

The Bristol Trans health and wellbeing needs assessment and the Bristol LGBT health needs survey found that both groups were experiencing heightened fear and discrimination because of their identity, as well as heightened levels of anxiety and depression (10.3).

WHAT WE'RE DOING

Tackling hate crime and social exclusion (10.2, 10.3)

The British Red Cross provides refugee and asylum awareness sessions for groups in Bristol. They try to educate the public about the asylum system by explaining the process and why someone would want to come to the UK seeking asylum. Many new migrants face barriers

Inequality is a persistent challenge in Bristol across a range of domains. Bristol's Gini coefficient of .40 is just below the national average and similar to comparable cities in the UK. However, the earnings gap between the bottom 10% of earners and top 10% of earners has been rising. There has been a significant increase in reported incidents of racial discrimination and harassment.

As noted elsewhere in this report, persistent inequalities are also evident between men and women, between ethnic groups, and between wards across many measures.

Figure 13 – Trends in income inequality and racial discrimination
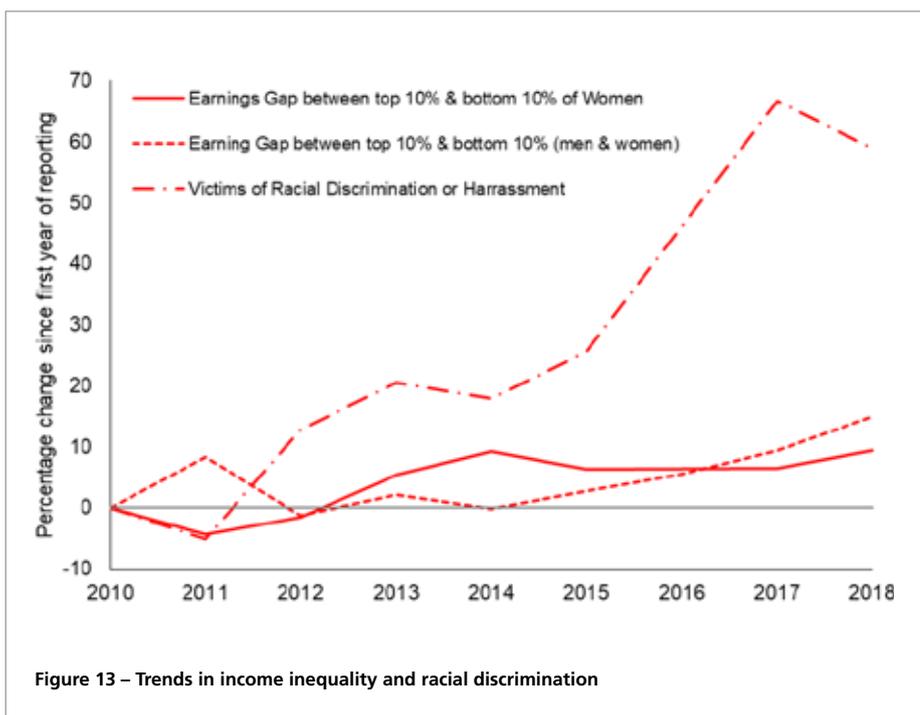
to accessing mainstream services. The Bristol Somali Resource centre aims to support new migrants to access these services and integrate into Bristol. LGBT Bristol works to improve awareness of the challenges LGBT+ communities face and raise the problem of discrimination in partnership with the Bristol Hate Crime and Discrimination Service. United Communities also attempt to improve community cohesion by addressing biases and inequalities.

Improving the Voice of the Voiceless (10.1, 10.2, 10.3, 10.4)

Arkbound Foundation helps disadvantaged people in Bristol to have a voice by accessing writing workshops, mentoring and supported journalism and book publishing opportunities. Their work addresses wellbeing, social isolation, employability, mental health issues, by tackling barriers such as addiction, homelessness, ex-offender stigma, and lack of educational qualifications.

Bristol Dementia Action Alliance aims to improve awareness of issues around dementia to make Bristol a dementia friendly city. Similarly, SAVED(usap) aims to improve the awareness of the disabled

community in Bristol as well improve access to employment for this often-overlooked community.

In 2017 the Commission for Racial Equality was established. This commission has worked with communities and groups to ensure that lived experiences of inequality are included in the commission's action plan to tackle inequality in education, employment, criminal justice, housing, leadership and representation. Many organisations are involved in the work of the commission for racial equality, including the Black Southwest Network, SARI, and Voscur, as well as elected officials and community workers from Bristol City Council.

Lastly, Ujima Radio are a community radio station that celebrate African and Caribbean cultures through music and informative talk. It provides economic and community development opportunities; a media platform for communication, community development and increased social capital; and media training and consultancy for community organisations, businesses and individuals. Their work helps empower many communities in Bristol.

Employment (10.1, 10.2)

Babbasa is a youth empowerment network that works in Bristol to improve the lives of young people from some of Bristol's most deprived communities and ethnic groups. They offer 1:1 mentoring to improve these young people's progression into jobs. Legal firms Womble Bond-Dickson and Burges Salmon both have apprenticeship schemes aimed at improving the diversity of their workforce and increasing opportunities for those from disadvantaged backgrounds.

The Stepping Up programme is a Positive Action Programme aimed at improving the representation of black, Asian and minority ethnic people, disabled people and women in senior leadership roles within Bristol and the wider region.

The University of West of England launched 'Equity', a programme that works with BAME students to unlock their potential, by linking them with organisations and professionals in their chosen industry to improve their confidence, skills and networks so they can succeed in their chosen career.

SDG 11
SUSTAINABLE CITIES AND COMMUNITIES

Between 2010 and 2018 the ratio of average house prices to average earnings rose from 6.7 to 9 (11.1). Over the same period statutory homelessness in the city rose by 200% and rough sleeper counts increased from 8 people in 2010 to 82 in 2018 (11.1). Furthermore, 28% of people in Bristol feel that crime has gotten worse in their local area in the past three years, a significant increase since 2015, and this proportion is even higher in the most deprived areas of the city (11.7).

More positively, public transport usage has been steadily increasing and the number of cyclists has increased by over 10,000 people since 2010 (11.2). Despite high prices, Bristolians are also increasingly satisfied with their accommodation (11.1). Air pollution levels have fallen, with annual and hourly mean levels of PM2.5 and PM10 consistently below those recommended by the European Union

(11.6). However, there are uncertainties about the coverage and consistency of monitoring, and evidence that NO2 concentrations have regularly breeched EU regulations.

Bristol benefits from a rich civic culture. According to the UK Civil Society Almanac, the South West of England has the highest number of voluntary organisations per capita of any region in the UK (3.2 per 1000), many based in Bristol. Civil society organisation in the city play a critical role in generating opportunities for citizens to participate in city affairs in a sustained manner (11.3). Turnout at local elections has been in line with the UK average for unitary authorities since 2010 and was 12.5% higher than the UK average in 2016 (at 44.7%) (11.3). Finally, Bristol has been fortunate to have faced no deaths from natural disasters since 2010 (11.5).

Bristol faces major housing challenges. While the quality of housing stock is high by global standards, the ratio of income to house prices has increased significantly since 2010. The number of homeless people in the city rose sharply between 2010 and 2015. Although there has been a subsequent decline, the number of homeless people remains well above 2010 levels. Fewer people report feeling safe in their local area and there has been a decrease in the use of outdoor space by Bristolians. Conversely, use of public transport has increased, air quality has improved, and civic culture is thriving.

Figure 14 – Trends in housing affordability, public transport use and air pollution
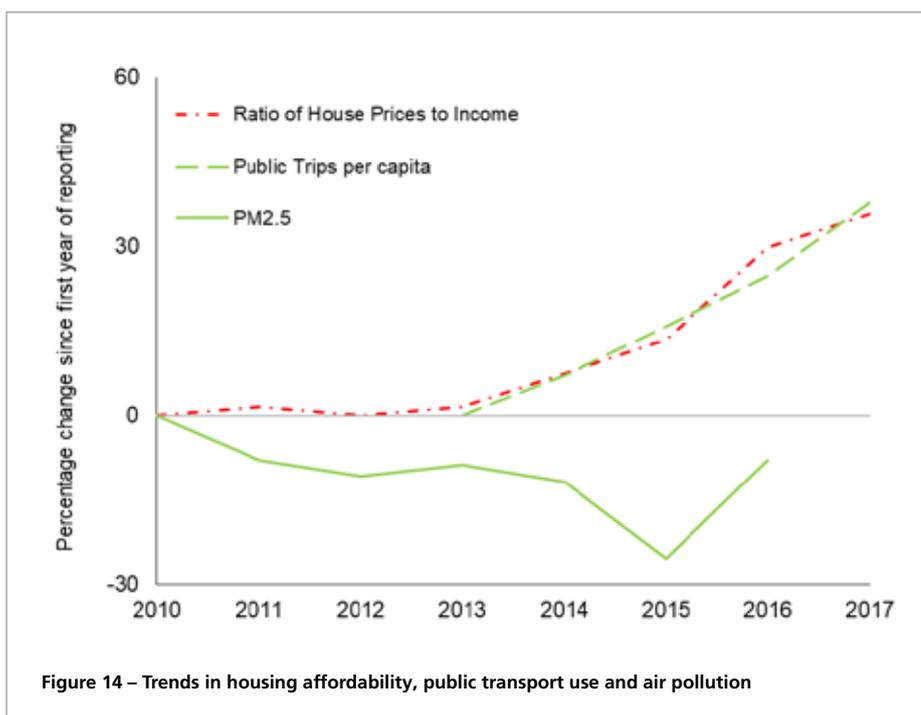
WHAT WE'RE DOING

Sustainable Transport and Clean Air (11.2, 11.6)

Currently Bristol Zoo offers discounts to visitors who arrive by sustainable modes of transport. The Bristol Bath Cycle, a Sustrans project, has over 2.5 million annual users. Lawrence Weston Community Transport provide access to affordable community transport that improves access to the city and reduces private vehicles. The Bristol Clean Air Alliance are working to persuade the local authority to adopt the fairest, most ambitious and sustainable option for tackling air pollution.

Homelessness (11.1)

One25 is a charity that works with vulnerable women who are homeless and living on the streets. They are working alongside Goldenkey to deliver improved services for these homeless women who are often hidden from formal counts. CHAS Bristol works to tackle homelessness and improve living conditions for the most vulnerable people in Bristol, through a combination of advice, practical, hands-on support, and advocacy. 1625

Independent People, work to provide affordable housing for young people faced with homelessness. Bristol Homeless Connect, launched in 2018, is a website providing a single online access point for information and help on rough sleeping in Bristol. The project is an initiative of the

Rough Sleeping Partnership whose core members include St Mungo's, The Julian Trust, Caring in Bristol and Crisis Centre Ministries. The wider partnership includes Avon & Somerset Police, the Golden Key Programme, and the City Office.

SDG 12
RESPONSIBLE CONSUMPTION AND PRODUCTION

Reliable, time-series data on the material footprint of the city and its citizens is not currently available (12.2). The waste data that are available paint a mixed picture. Total waste quantities have increased and food waste per capita increased by 16.4% between 2015-2018 (12.3). However, the percentage of city waste that was recycled increased from 35.5% in 2008 to 44.9% in 2018 (12.5). This was accompanied by a reduction in residual waste per household from 536.2 kg/household in 2011 to 462.9 in 2018 (12.5). Just 19.9% of Bristol's municipal waste went to landfill last year—down from 57.7% in 2011 (12.5).

Importantly, there appears to be broad support for changing practice in the city, with growing interest across sectors in supporting Bristol's One City Plan, which includes a target to become a zero-waste city by 2050. Similarly, there is growing interest across sectors in the UN Sustainable Development Goals, which contains related targets. This can be seen through the increased membership of the SDG Alliance (now over 120 individuals representing approximately 100 organisations) and strong attendance at two UN Global Compact Roadshow events in the last 6 months targeted at private sector firms. These events brought together representatives from nearly 100 different organisations. The interest from large employers in particular indicates progress against target 12.6.

WHAT WE'RE DOING

Supply Chains (12.2, 12.5, 12.6)

The Tiscreport is an organisation in Bristol that aims to tackle modern slavery through transparent supply chains. It is

Goal 12 is particularly difficult to monitor due to data gaps related to the material footprint of the city's consumption and production. The data that are available indicate that food waste, food waste per capita, and total waste quantities in Bristol have increased since 2015. Conversely, recycling rates have improved over this time, and the quantity of household waste that went to landfill fell from 230kg per household in 2010 to 142kg per household in 2018.
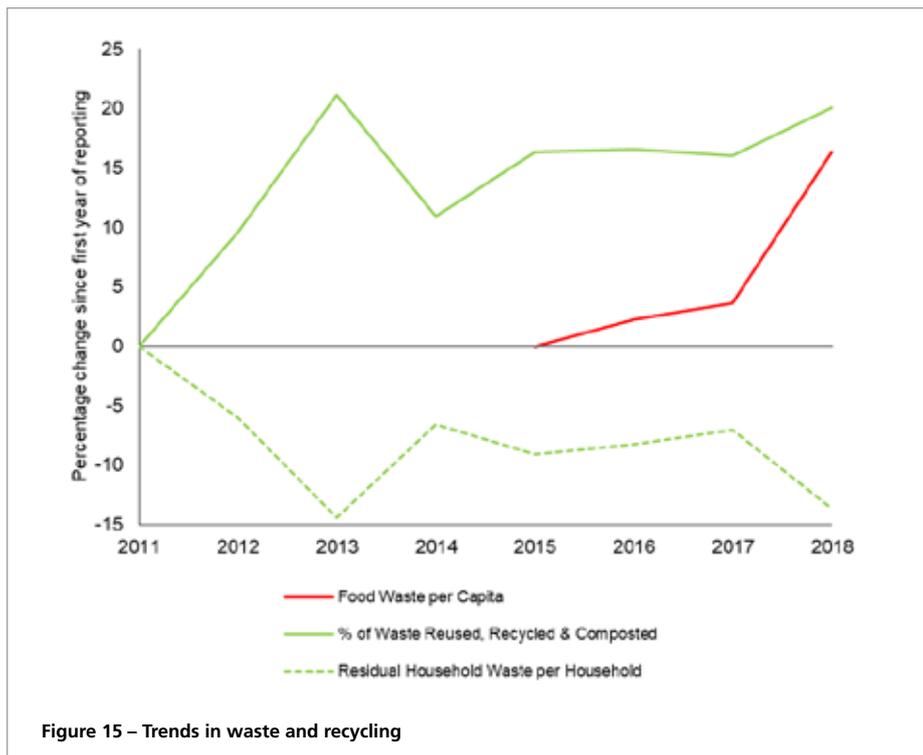
Figure 15 – Trends in waste and recycling
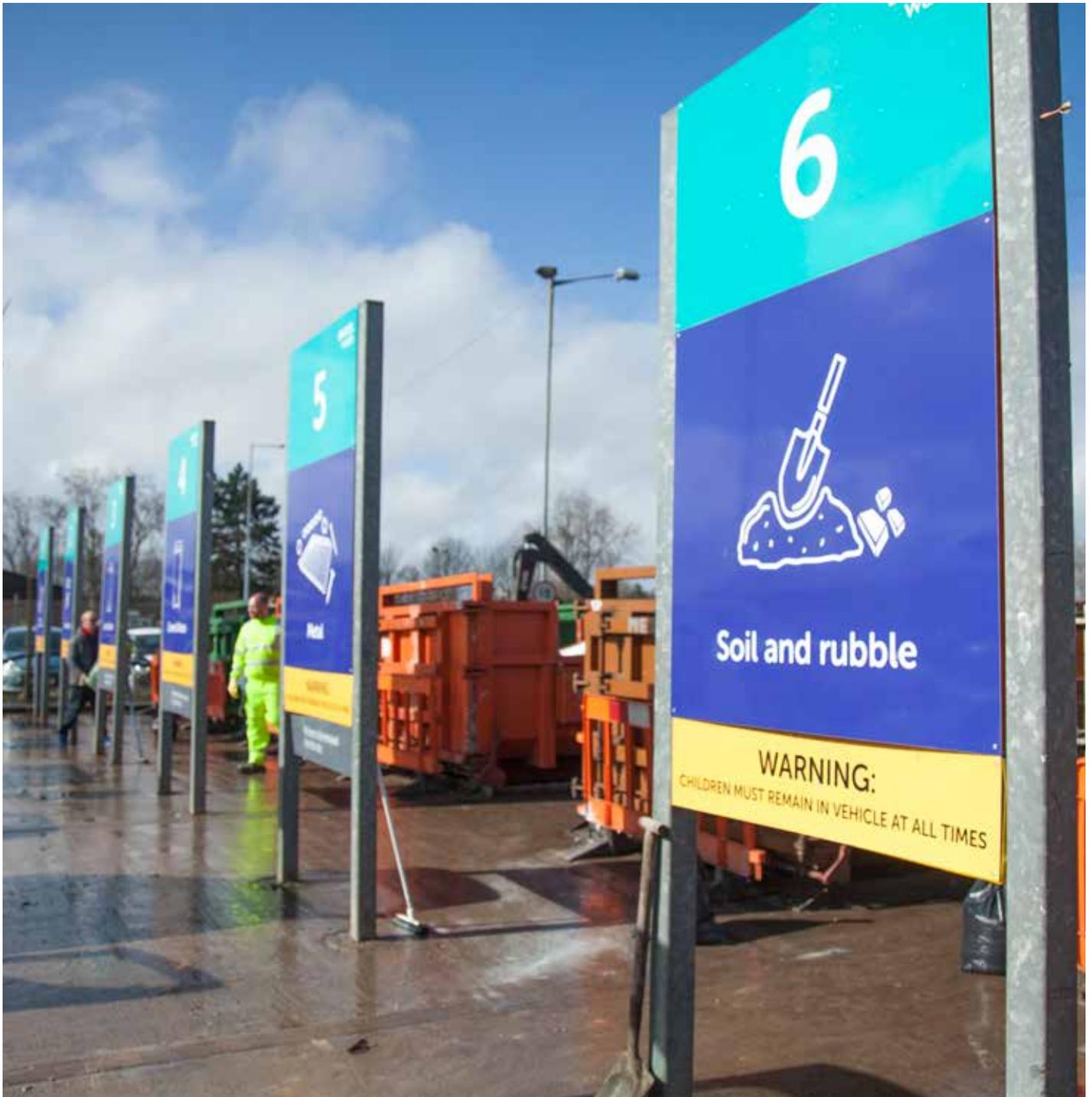
a platform where organisations report on their efforts towards tackling modern slavery. It was piloted in Bristol and has since been rolled out nationally. Tiscreport is currently working to highlight the gender pay gap in a similar way. The Bristol Pound is a local currency that aims to create a more resilient, sustainable and inclusive economy by encouraging citizens and business to buy locally.

Circular Economy (12.4)

One of the Bristol Green Capital Partnership's five focus areas is supporting the transition to a zero-waste city with a circular economy by 2050. Collecteco is based in Bristol and partners with businesses across the UK to donate furniture, equipment and materials to charities, schools, NHS and non-profit organisations. This reduces waste and helps Bristol move towards becoming a circular economy. Similarly, Baby Bank Network redistribute donated pre-loved baby and children's items to families that have been referred because they are in need. Hoare Lea is currently working with the UK Green Building Council to promote the circular economy in the construction industry, and the North Bristol NHS Trust has significantly improved its landfill totals by over 1000 tonnes. The University of Bristol use a Whole Life Costing approach to consider the environmental, social and economic implications of the procurement that the university makes. Boston Tea Party, a popular local café chain, removed the use of all disposable cups from their stores on June 1, 2018. As of June 2019 they estimate that they have used 154,786 less cups than they would have otherwise.

SDG 13
CLIMATE ACTION

In November 2018, Bristol City Council was the first in the UK to declare a climate emergency and subsequently brought forward its stated aim of becoming carbon neutral from 2050 to 2030 (13.2). In April 2019, the University of Bristol became the first university in the UK to declare a climate emergency. These declarations reflect broad-based concern in the city: the percentage of respondents to the Bristol Quality of Life Survey expressing concern about climate change rose from 74% in 2015 to 86% in 2018 (13.3). Moreover, these concerns are largely consistent across income brackets, in contrast to conventional wisdom. Even in the most deprived communities, 4 out of 5 people express concern about climate change. Bristolians are increasingly concerned about how climate change will affect their jobs, work, neighbourhoods, the weather and the economy. Over the past three years, the proportion of respondents that have changed their diet, household waste, energy use and travel as a result of climate change concerns has also increased (13.3).

There are signs of progress: per capita CO_2 emissions fell between 2010-2016 from 6.44 tonnes per year per person to 4.68. Furthermore, total emissions have dropped from 2230.9 k-tonnes (2010) to 1547 (2018). While these are positive trends, the downward trajectory is not fast enough to achieve decarbonisation by 2030. Moreover, these figures only account for Scope 1 emissions—i.e. emissions produced within Bristol's administrative boundaries. Yet the city imports a significant amount of energy, goods and services produced outside its borders, and the emissions associated with these imports (i.e. Scope 2 and Scope 3 emissions) are unknown. To achieve true carbon neutrality, a collective effort will be required involving a wide range of stakeholders, as well as central government support.

WHAT WE'RE DOING

Carbon Neutrality (13.2)

The 2018 Bristol City Council motion to declare a climate emergency was passed unanimously. It called for the Mayor to make a pledge to make Bristol carbon neutral by 2030 (Including scope 1, 2 and 3 emissions), work with central government to provide the powers and resources to make this possible, and work nationally and internationally to determine and implement the best practice methods to limit Global warming to less that 1.5°C. On March 5th 2019, nearly 200 city stakeholders gathered to discuss how to accelerate progress towards becoming a carbon neutral city, and generated nearly 600 ideas. Alongside this action, both universities are working in partnership with the City Council sustainability team to provide research capabilities on how the city can decarbonise and encourage behaviour change. As part of the One City approach a new Environmental Sustainability Board has been established which will help support decarbonisation. In April 2019, the University of Bristol became the first UK university to declare a climate emergency and set a target of carbon neutrality by 2030.

Education (13.1, 13.3)

At the March 2019 Carbon Neutrality city gathering, many of the suggestions and responses made by participants called for greater engagement with communities and citizens of Bristol. There are already a lot of organisations working to improve education on the need for climate action. We The Curious, an

In November 2018 Bristol City Council declared a Climate Emergency, followed a few months later by the University of Bristol. These declarations reflect the concerns of Bristol citizens more widely. Per capita CO_2 emissions have decreased since 2010, as have overall emissions despite population growth.

However, as a comparatively wealthy city, Bristol imports a large volume of goods and services for which associated emissions are unknown. Moreover, limited powers constrain the ability of local government to realise ambitions to decarbonise the economy. A collective effort, including support from central government, will be required to achieve this goal.

interactive science museum, is focusing its public programmes on climate change through shows, activities, experiments and artworks. The Global Goals Centre is planning to have one of its interactive scenarios focused entirely on climate change. The Bristol Inter Faith Group have held education events on care for the environment, and the Bristol area Quaker chapter have held events supporting Solar Aid, climate change and Tree Aid. Education and awareness are also being improved through street art images like the one of Greta Thunberg, the teenage climate activist, completed in mid-May. Finally, schools such as Ashton Park School are joining the Eco-schools club and getting involved in projects that help

tackle climate change while educating the next generation of change makers.

Construction and regulation (13.2)

APG Architecture use sustainable design principles and recognised standards in all their projects to ensure that sustainability is built into all their work. Bristol City Council also acts as a regulator for the Environmental Permitting, ensuring emissions from industrial processes are in compliance with regulations.

Reducing Emissions (13.2)

Business West help to run & resource the Somerset Energy Innovation Centre business support programs, which are available to help develop low carbon

businesses. Social enterprise Raised in Bristol operate out of Easton Community Centre, which is solar powered and uses an underground thermal source for heating and hot water. SustainIT solutions purchase green electricity, use low energy electrical equipment and lighting, and choose sustainable transport where available. Stride Treglown have upgraded their bulbs to maximise energy efficiency and moved to green energy providers with 100% renewable tariffs where possible. St Monica's Trust are incorporating solar power into their recent developments and tender their electricity consumption to have renewable energy.
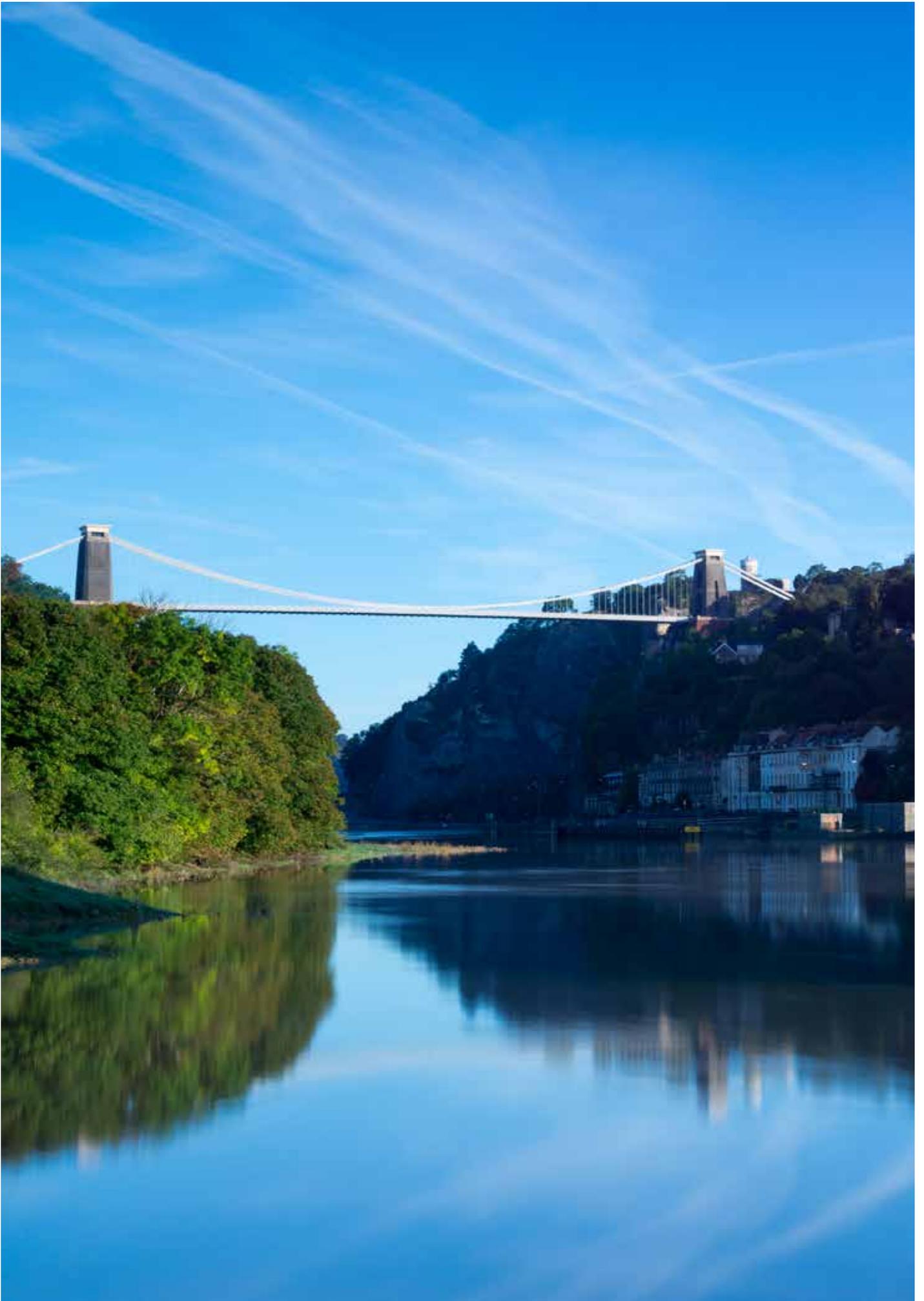
SDG 14
LIFE BELOW WATER

14 LIFE BELOW WATER

Bristol sits at the confluence of the River Avon and the River Frome, which together feed into the city's famous 'floating' harbour. From here, the water flows into the River Severn Estuary and on to the Bristol Channel. These rivers, and the many smaller ones around the city, are classified using the EU Water Framework Directive. As Table 2 shows, the percentage of rivers classified in Good or Moderate status has increased from 71% in 2012 to 86% in 2018 (14.1). While this reflects an overall improvement, there has been a deterioration in the status of some rivers over this period. More can, and is, being done to improve conditions in Bristol's waterways.

Goal 14 is one for which few SDG indicators are appropriate for cities, but for which there is great scope to reflect on the ways cities might contribute to improving marine ecosystems. Reducing rubbish in waterways, implementing voluntary certification schemes for restaurants serving sustainably-sourced fish, and incentivising the reduction of single-use plastics are all ways cities can contribute to and monitor this goal locally.

WHAT WE'RE DOING

Improving water quality (14.1)

Friends of Brislington Brook is an organisation that meet frequently to gather litter from parks and woodland. They often run stream cleans of Brislington Brook and are currently working with the Environment Agency to reconnect mis-connected drains and sewers so that the water quality in the Brook will be greatly improved. Sustainable Westbury-on-Trym have removed approximately 4 tonnes of litter and rubbish from the river Trym and its tributaries and work to clear the natural areas next to the river system of litter. Their aim is to restore the river Trym to a high enough level of water quality to allow trout to return.

Bristol Water are also working to improve water quality in the wider Bristol region by working with farmers to reduce phosphorus loads in the rivers that feed lakes and the water supply. In addition, Bristol Water work with the Avon Wildlife Trust to maintain and improve sites like Herriots Pool Nature Reserve. This nature reserve next to Chew Valley Lake, supports internationally important wildfowl and the southern end is a nature reserve where islands, lagoons, bays and channels have been created to provide safe areas for birds to roost, nest, feed and shelter. The rich waters of the lake teem with aquatic insects and water plants, which provide both protection and food.

Bristol sits at the confluence of the River Avon and the River Frome, which flow on into the Bristol Channel. Since 2012 there has been a net improvement in the ecological status of rivers according to the EU Water Framework Directive. This is also a Goal where there is greater scope for cities such as Bristol to consider how local production, consumption and waste may affect life below water downstream and beyond.

Status Descriptor	2012	2013	2014	2015	2016	2017	2018
Rivers in Good ecological status	14%	14%	14%	0%	0%	0%	0%
Rivers in Moderate ecological status	57%	57%	57%	57%	100%	86%	86%
Rivers in Poor ecological status	14%	14%	29%	43%	0%	14%	14%
Rivers in Bad ecological status	14%	0%	0%	0%	0%	0%	0%
Rivers without data	14%	14%	0%	0%	0%	0%	0%

Table 2 – Trends in ecological status of Bristol rivers

SDG 15
LIFE ON LAND

According to a recent analysis, 29% of Bristol is green space, making it the greenest city in England and third greenest city in the UK (15.1). Between 2010 and 2018, the city's tree canopy increased from 14% to 18.6% and the city has a total wildlife network of 3000 hectares, protecting 27% of the land area in the city (15.1). The One City Plan includes a range of targets to further enhance parks and open spaces in the city, such as increased tree cover, improved access to excellent green space, expansion in the number of new buildings with green roofs, and increased wildlife (15.9).

A significant boost has recently been provided by a £1 million award to help transform the city's future parks and green spaces. The Future Parks programme is funded by the National Trust and The National Lottery Heritage Fund to help councils find sustainable ways to manage and fund parks and open spaces across entire towns and cities. Bristol is one of eight cities in the UK selected to take part and will work to develop tools,

approaches, skills and finance to create new ways of managing green space in Bristol and sharing experiences with other councils.

WHAT WE'RE DOING

Better ecosystem management (15.9)

Bristol Water have developed a Biodiversity Index assessment calculator. This calculator assesses the impact of operational and conservation activities on Bristol Water sites. Currently, Bristol Water has assessed the biodiversity value of 54 sites and over the next three years aims to assess all 450 of their sites. These Biodiversity Index assessments ensure a net gain is provided for the natural environment in terms of the quality and quantity of habitats owned by Bristol Water. The Biodiversity Index calculator will also be used with contractors and local authorities to demonstrate how environmental enhancements can be delivered at a regional scale.

Bristol citizens benefit from extensive green spaces and there has been an increase in the city's tree canopy over the past eight years. There are a range of terrestrial ecosystems across the city, from wetlands to grasslands to woodland, and many organisations from across sectors are working to improve biodiversity in the city.

Bristol City Council were recently awarded £1 million to develop sustainable ways to manage parks and open spaces.

Bristol Water have also been working in partnership with Bug Life to run the Urban Buzz project. This project has identified patches of unused urban ground and grassland to turn into hotspots for bees, butterflies and other pollinator species by leaving grass to grow wild increasing potential habitats. Similarly, the University of Bristol proactively manage their estates to benefit wildlife and conserve biodiversity through implementing Habitat action plans.

Bristol Zoo work both locally and internationally to improve ecosystem management. They perform conservation work on threatened species and habitats in 10 locations globally, including UK native species. All this work is undertaken with local governments & communities to develop sustainable change towards better coexistence with the ecosystems around them. Furthermore, Bristol Zoo manage their two sites in Bristol as ecosystems.

The West of England Nature Partnership (WENP) has mapped the range of ecosystems in the city. These maps have been included as evidence in Bristol's joint spatial plan. WENP have also developed a regional Nature Recovery Network to help meet the Government's 25-year Environmental Plan aimed at conversation, restoration and enhancing biodiversity.

Education

BBC Bristol hosts the BBC's Natural History Unit and Rural Affairs Radio, which engage audiences about the importance of biodiversity and ecosystems and produce 25% of the world's nature documentaries. Additionally, BBC Bristol created a wildlife garden which local primary schools are invited to access for a Bioblitz once a year.

The University of the West of England runs a Wildlife Ecology and Conservation Science programme. This programme trains ecologists to help conserve biodiversity. The programme is created in partnership with Bristol Zoo Gardens and has opportunities for students to carry out work in natural habitats in and near Bristol.

SDG 16
PEACE, JUSTICE AND STRONG INSTITUTIONS

By global standards, Bristol is a very safe city with strong judicial institutions, but many key indicators for Goal 16 show a negative trend. The overall crime rate has increased by more than a third (16.4) and the violent crime rate has increased by over 70% since 2011 (16.1). Rates of domestic abuse (16.1) and reported incidents of modern slavery (16.2) have also increased over the past three years, although some caution is required when interpreting these data, which may reflect changes in reporting rather than underlying trends.

It is also important to contextualise these trends. Increased rates of violent crime and sexual offences are part of nation-wide trend, and while Bristol has higher rates than the UK average, they are lower than for some similarly sized cities, such as Manchester and Leeds (16.1). Although domestic abuse rates have been increasing, they remain well-below the English average and the rates observed in similarly sized cities.

More positively, the number of youths aged 10-17 entering the youth justice system for the first time has declined significantly from 1158 per 100,000 in 2010 to 407 per 100,000 in 2017 (16.4),

although this rate has remained consistently above the national average. Data from the Quality of Life survey show that fear of crime declined between 2010 and 2017 before a notable uptick in 2018 (16.4). More worryingly, the same data source indicates that the proportion of Bristolians who feel they can influence decisions in their local area, and the proportion of citizens who feel the council provides value for money, have both decreased slightly since (16.6, 16.7). It is hoped that the newly developed inclusive governance framework of the One City Plan and the Bristol City Office will help citizens to better engage with and influence local decision making (16.6, 16.7).

WHAT WE'RE DOING

Tackling Crime, Sexual Offences and Harassment (16.1)

Bristol Crown Courts are a pillar of local justice and deal with the most serious criminal cases which the police bring in the city. They issue restraining orders to reduce domestic violence and stalking; issue Criminal Behaviour Orders for repetitive offenders to protect our communities from anti-social behaviour; and use electronic tagging orders to reduce further crime.

Bristol is a very safe city with strong judicial institutions by global standards. However, there have been notable increases in overall crime and violent crime in recent years. Rates of domestic abuse have increased since 2016 and reported incidents of human trafficking and modern slavery have increased over the same time period. Conversely, the number of youths aged 10-17 entering the youth justice system has fallen significantly, although it remains above the national average.
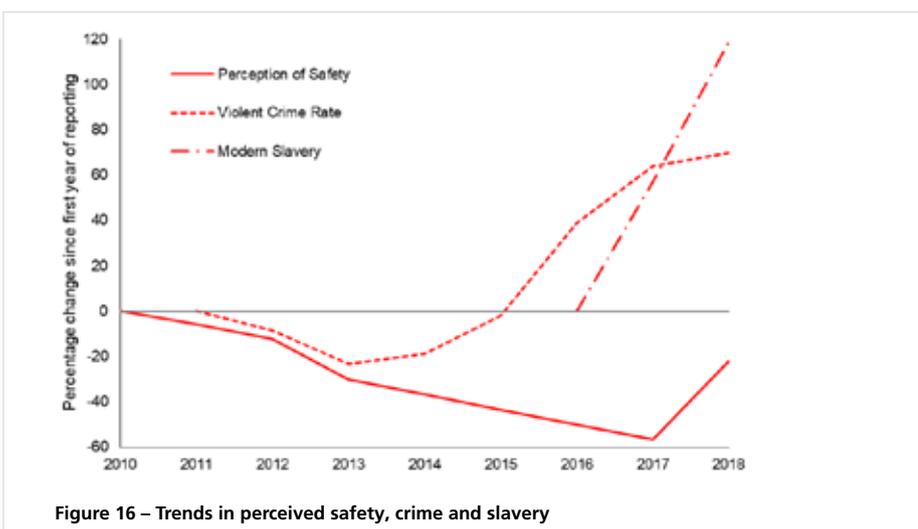
Figure 16 – Trends in perceived safety, crime and slavery
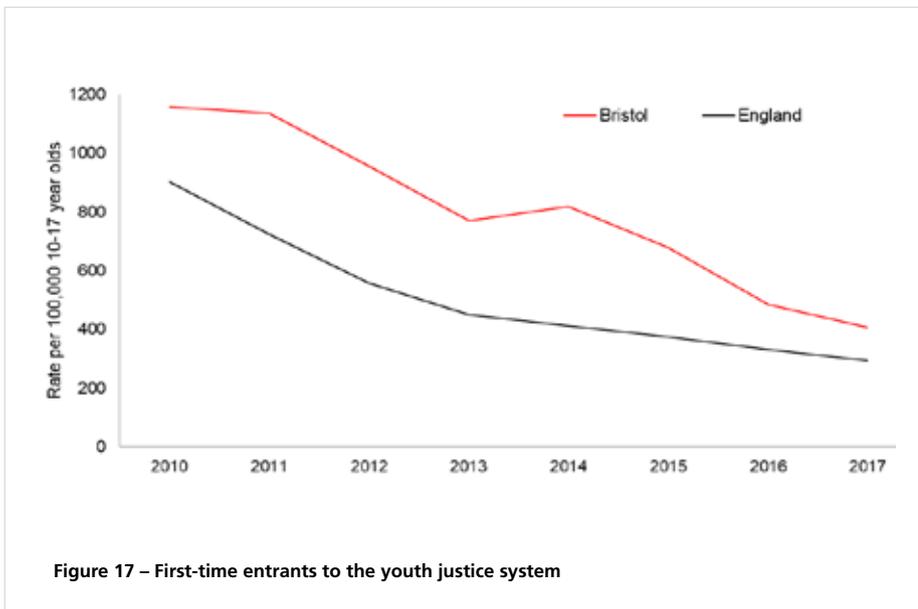
Figure 17 – First-time entrants to the youth justice system

Sustrans are working with Bristol Women's Voice and Bristol Zero Tolerance to directly tackle street harassment on the Bristol and Bath Railway Path. Their 'One Path Initiative' has been promoting a message of 'Share, Respect, Enjoy' on the path since September 2018.

The Bristol Sexual Violence Support Consortium builds on over 20 years of experience from four organisations: SARSAS (Somerset and Avon Rape and Sexual Abuse Support), Womankind Therapy Centre, Barnardo's Against Sexual Exploitation (BASE) and The Green House. Voscur contribute to the consortium through expertise in collaborative working, links to the wider voluntary and community sector and by employing the Consortium Innovations Manager, who coordinates the project. Similarly, LGBT Bristol work with the Police and the Bristol Hate Crime and Discrimination Service to promote understanding of LGBT+ lives.

Children and Young People (16.2)

Bristol is aiming to become an ACE Aware City. In 2019, over 450 delegates attended the first Adverse Childhood Experiences (ACE) Conference. ACEs are negative experiences in early life and childhood that impact on health and well-being throughout life. Bristol's ACE awareness programme through the City Office shows its commitment to developing a holistic ACE approach across the city by focusing on recognition, prevention & early intervention and cultural change.

Bristol's efforts towards being an ACE Aware City will be supported by the Bristol Safeguarding Children Board (BSCB), the Bristol Children and Families Board (CFPB) and the Safer Bristol Partnership (SBP). The BSCB co-ordinates work on child protection; the CFPB works to make sure children, young people and their families are safe and nurtured, healthy and active, respected and involved and responsible and achieving. The SBP is the statutory crime and disorder partnership tackling crime, fear of crime, anti-social behaviour and substance misuse. All of these boards are supported by partners including Voscur, Avon and Somerset Constabulary, and the City Council amongst others.

Helping Young Offenders and Reducing Re-offending (16.4)

Arkbound support offenders and prisoners by giving them opportunities to tell their

stories, take part in writing competitions, and receive mentoring and help with literary skills, references and employability. This helps offenders and prisoners out of the usual cycles of reoffending. Similarly, Life Cycle UK work in partnerships with prisons to upskill prisoners by teaching them mechanical skills to refurbish bikes to help them to gain employment after release and reduce the likelihood of reoffending.

1625 Independent People have delivered Lottery-funded work 'Future 4 Me' to help young offenders and high needs care leavers to re-engage in society. Full Circle @ Docklands Ltd work on multiple projects with Avon and Somerset Police to protect young people from getting involved in serious crime, youth violence and gang related activity through parent support groups, providing support through evening and holiday provision, and role models for young people.

Inclusive Governance (16.6, 16.7)

The Happy City Initiative help improve governance by offering better measures of prosperity which highlight issues and provide information to help take positive and preventative action at the roots of the imbalances in the city. Finally, the Bristol City Office are working to establish an inclusive governance approach, engaging with stakeholders through regular drop-in sessions at the Council, and meeting with communities and networks in the city to co-develop further iterations of the One City Plan.

SDG 17
PARTNERSHIPS FOR THE GOALS

17 PARTNERSHIPS FOR THE GOALS

Local Partnerships

Bristol's One City Plan articulates a shared vision to be a fair, healthly and sustainable city by 2050 and outlines a range of key objectives and concrete initiatives to achieve that vision. The City Office aims to support these efforts by serving as a convening space and facilitator of the partnerships needed to achieve these goals. Together, the One City Plan and One City Office seek to break down traditional siloes and encourage discussions between different thematic and statutory boards to support a more holistic approach. Many of the networks and partnerships that supported the development of the plan were already working together, such as Bristol Green Capital Partnership, Voscur, Business West, Black South West Network, Bristol Women's voice. The City Office aims to amplify these efforts and anchor a common vision with collectively determined and clearly defined targets. This collaborative way of working resonates with the ethos of partnership embedded in the SDGs and will play an instrumental role in Bristol's efforts to achieve them. Bristol is also working with other UK cities through the Core Cities network and the Local Government Association to share experiences, promote city leadership on the SDGs, and encourage national government to support local action.

International Partnerships

The City of Bristol also maintains close links with similarly ambitious cities around the world. The Mayor of Bristol, is active in the Global Parliament of Mayors, the OECD Champion Mayors network, EUROCITIES and the Mayors Migration Council. Through these networks he promotes strong city leadership and collective city decision-making across national borders, to address critical challenges that face humankind. Similarly, the Bristol International Twinning Association help to facilitate knowledge exchange, better relationships and economic opportunities between Bristol and its seven twin cities. Currently Bristol Link with Beira is working to support Beira as it rebuilds itself after being devastated by a number of cyclones.

Bristol also has a strong international development community. The South West International Development Network (SWIDN) is a cross-sector membership network which supports and connects people and organisations working on international development and the SDGs in South West England. SWIDN aims to provide opportunities that enable members to connect, learn from one another, build their skills and capacity, and explore potential partnership and collaboration. Bristol-based African Initiatives work with international development partners based in Tanzania to improve girls' access to education; health and well-being; and livelihoods and resilience. Leg4Africa work with NHS hospitals, individuals and funeral homes across the UK to collect prosthetic legs that would otherwise end up in landfill but instead are shipped to partnering mobility centres across Africa so they can be fitted.

Finally, the University of Bristol is working in over 25 countries in sub-Saharan Africa in close partnership with universities, university networks (WUN and TransformU), international agencies (UNICEF, WHO, UNFPA, EU, SwissPeace, NATO, USAID), NGOs, policy makers and other stakeholders to support positive change.

Bristol's Once City Plan reflects a determination to work through partnerships in the city to deliver collectively articulated goals—an approach that resonates strongly with the ethos of the SDGs. The recently established City Office aims to support these efforts by anchoring a common vision linked to clearly defined targets. Through membership in the Global Parliament of Mayors, Bristol aims to support coordinated action in cities across the world. Bristol also has a strong international development community comprised of organisations working with partners in other countries to support delivery of the Goals.

REFLECTIONS ON LOCALISING THE SDGs

Through the course of preparing this review we confronted a range of questions and challenges—some anticipated and some unforeseen—and stumbled on new insights. This Discussion reflects on these questions, challenges and insights.

Why conduct a Voluntary Local Review?

The initiative to undertake a Voluntary Local Review for Bristol was motivated by four key factors. First, the process itself offered an opportunity to raise awareness by engaging with citizens and organisations in Bristol through our consultation to understand what is being done to deliver the Goals locally. Second, the VLR format provides a potential tool for monitoring our city's progress towards not only the SDGs, but also the local priorities outlined in the One City Plan, which have been mapped onto the Goals. In other words, the VLR is an instrument for simultaneously reporting locally to the citizens of Bristol and globally to networks and institutions supporting global collective action to address global challenges. Thirdly, to signal our commitment to tackling crucial global challenges that affect our citizens. Finally, as a public document the VLR serves as a mechanism for consolidating a common vocabulary that can help local actors share experiences and learnings with counterparts in other cities in the UK and around the world.

The challenge of jurisdictional complexity

This report has focused on the City of Bristol as defined by local authority boundaries. However, according to the Office for National Statistics, the Local Authority area only contains about 70% of the total population of the 'Bristol Built-Up Area' and just half of the city-region population of 1.1 million. This wider functional urban area contains multiple towns and cities situated in different local authority areas, which are nevertheless deeply socially, economically

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and environmentally integrated. Much of Bristol's work force live or work under the jurisdiction of other councils. Flows of people, goods, money and pollution cross these council borders on a daily basis. While each local authority is responsible for serving citizens within their boundaries, these flows create de facto interdependence. Partly in recognition of this, a new layer of government, with significant authority in areas such as transport and water, was added in 2017 when the regional devolved administration known as the West of England Combined Authority (WECA) was established. This jurisdictional complexity in a functionally integrated urban region creates coordination challenges when it comes to delivering the SDGs.

Where should we measure what?

The challenge of coordination across jurisdictions is reflected in questions around appropriate scales and boundaries for monitoring the SDGs sub-nationally. Most statistics are reported for administrative or statistical areas that don't necessarily map neatly onto de facto urban areas or functionally integrated regions. As a result, indicators of carbon emissions or wage inequality or hunger measured within the Bristol Local Authority Area may not reflect the realties and experiences of communities that feel part of the city but happen to live outside its administrative borders. The geography of measurement

has a substantial influence on the picture that emerges about how the 'city' is performing. The question of where we should measure what is an important one to address in future.

Disaggregating data is essential

Much of the data for this report was drawn from the Office for National Statistics or Public Health England. While the quality of this data is considered quite high, the spatial resolution is generally quite coarse: much of this report relies on indicators at the local authority scale. This makes it difficult to identify inequalities within the city across wards, which is absolutely necessary to assess whether we were meeting the 'Leave No One Behind' ethos of the SDGs. Where we were able to spatially or demographically disaggregate data, we often found divergent outcomes or trends across the city, suggesting significant inequalities. Reporting at the city-wide scale may therefore mask substantial variation in the lived realities of diverse communities across the city.

Data deficits and doubts

We encountered several data deficits in the course of preparing this report, with notable gaps or problems related to poverty, gender equality, food insecurity, ecology and resource efficiency. Moreover, credible data sources sometimes disagreed on similar phenomena. For example, there is little reliable time-series data on

poverty at the local scale. The English indices of multiple deprivation, which are the primary poverty indicators used by government, are only reported every five years. The last two available years of data are 2010 and 2015. Both Public Health England and End Child Poverty publish time-series for the proportion of children living in poverty, which was used as a proxy. However, Public Health England showed decreasing rates of children in poverty, compared to End Child Poverty's increased rates since 2013. Relying, as Public Health England do, on eligibility data, is problematic due to known issues with HMRC statistics, changes to the calculations of total child population, changes to in and out of work poverty calculations since the introduction of Universal Credit, and differences in how employment trends are recorded at the local level. In this case the End Child Poverty data was deemed more accurate at the local level. However, neither source provides data on other vulnerable groups that would ideally be monitored. To monitor SDG 1 locally, we need better poverty data. The same is true for Goals 2, 5, 8, 12, 14 and 15.

In other cases, concerns exist about how to interpret the data. For example, the most widely used measure of food insecurity is the total number of food bank users for a given period, but this can be deceptive. Food bank users often represent a small proportion of the population who are food insecure. Canada has monitored household food insecurity since 2005 and have found that while 13% of Canadians struggle with food insecurity, only 20-30% of these individuals reported visiting a food bank for help. Fortunately, the 2018 Bristol Quality of Life survey asked questions about food insecurity for the first time. Similar concerns around the interpretation of data related to domestic abuse, sexual offences, human trafficking and modern slavery. While all of these indicators are 'red' for Bristol, it is difficult to know if these trends reflect worsening conditions or improvements in reporting.

In sum, there are extensive data gaps and doubts about how to interpret key indicators that need to be addressed to monitor the SDGs effectively at the sub-national scale.

Inappropriate indicators

As many other cities have discovered, the SDG indicators were not developed with cities in mind, and some are inappropriate for relatively wealthy contexts. We found many indicators were simply inappropriate for the city scale. Similarly, as noted in our chapter on SDG 9, it isn't particularly useful to assess local economic development in Bristol in relation to the percentage of manufacturing in value-added or manufacturing employment as a proportion of total employment (indicators 9.2.1 & 9.2.2). While these may be more salient in a region transitioning out of low productivity agriculture, they aren't necessarily appropriate in a city benefitting from a high-value service sector.

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Similarly, SDG 17 is largely focused on international partnerships. Bristol benefits from a strong community dedicated to supporting sustainable development in other regions, and we have reported on some of this activity. However, in the spirit of the SDGs we opted to include information about local partnerships for local delivery in recognition of the importance of partnerships to achieve collective goals at any geographic scale.

Overall, as we discovered in the preparation of this report and through consultation with teams working on monitoring SDGs in other cities, there is a clear need for a standard set of indicators for cities that are spatially appropriate and globally applicable.

Where is our capital going?

Bristol is a relatively wealthy city by UK and global standards and hosts a considerable number of investment firms. As a site of capital accumulation and control, Bristol can have a significant impact on sustainable development far beyond its border. This issue came to our attention thanks to a submission from the Brunel Pension Partnership, which works to responsibly manage £29 billion of pension assets for nine government pension schemes and the Environment Agency. Where and how this kind of capital is invested affects social, economic and environmental outcomes far beyond Bristol. A broader consideration of how local capital is invested beyond city boundaries could be a powerful mechanism through which citizens and organisations within cities can make broader societal contributions to sustainability. For example, if local governments, large employers and finance firms based in a city commit to investing capital in responsible ways, the effects could be far-reaching. There is precedent for this: New York City divested $189 billion in pension funds from fossil fuel reserve owners. Both the University of Bristol and Bristol City Council have made similar commitments. If we are to successfully transition to a more sustainable way of living, a profound shift in the allocation of capital will be required and diverse actors at city-scale can play an important role in facilitating this shift.

Cities need support to transform ambition into action

Bristol has set ambitious targets to tackle climate change. The strength of civic will to confront this global challenge is clear but achieving carbon neutrality by 2030 is a daunting and complicated challenge. Bristol City Council, like city governments everywhere, has some levers of influence to support the transition to a low carbon world. However, most city governments simply don't have the power or resources to drive this transition alone. A collaborative approach that brings together organisations from across sectors and government authorities at multiple spatial scales is required. Cities are increasingly taking the lead in confronting global challenges, but they need support to follow through.

CONCLUSIONS AND FUTURE WORK

We hope this Voluntary Local Review will support local actors in Bristol, encourage other UK cities to engage further with the SDGs, illustrate the importance of subnational actors in tackling global challenges, and help to develop international relationships to support learning.

Bristol's One City Plan, and its inclusive governance framework, provide an innovative and exciting opportunity to advance the SDGs in Bristol. In preparing this VLR we engaged a wide range of organisations in the city, raised awareness of the Global Goals and strengthened the SDG Alliance. We have also reviewed and presented a wide range of indicators that may help to highlight areas of progress in the city, but also areas where more concerted collective action may be required.

At the national level, this VLR offers an example of how other UK cities might undertake similar efforts, and the lessons learned will be captured in a VLR a handbook for other UK cities. We hope this document will help to support for engagement with the SDGs in UK cities facing capacity constraints. This report, and any future iterations, may also serve

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as a source of evidence for the national government and add momentum to national efforts to engage with the SDGs. While the UK has just launched its first Voluntary National Review and stakeholders in Bristol have engaged with this, we hope the output of our VLR and the uptake of the SDGs by other cities in the UK will provide increased impetus to engage with and resource subnational activity.

Finally, in undertaking a VLR, Bristol is signalling its commitment to act locally in support of global sustainability efforts. We are committed to supporting the ever-expanding network of cities around the world grappling with this international agenda, learning and sharing from each other, and collectively changing the world one city at a time.

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DATA ANNEX

Goal 1	No Poverty	Eradicate Poverty in all its forms everywhere											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
1.2	Average % of children in poverty, before housing costs	End Child Poverty[i-iv]	%				16.56[i]		17.2[ii]		17.73[iii]	21.28[iv]	red
1.2	Average % of children in poverty, after housing costs	End Child Poverty[i-iv]	%				26.44		27.76		27.89	27.26	
1.2	Percentage of children in poverty, before housing costs (highest ward)	End Child Poverty[i-iv]	%				31.83		32.49		35.77	48.63	
1.2	Percentage of children in poverty, after housing costs (highest ward)	End Child Poverty[i-iv]	%				47.90		49.79		51.78	50.29	
1.2	Percentage of children in poverty, before housing costs (lowest ward)	End Child Poverty[i-iv]	%				3.15		3.73		3.41	6.85	
1.2	Percentage of children in poverty, after housing costs (lowest ward)	End Child Poverty[i-iv]	%				5.23		6.25		5.70	11.13	
1.5	Number of deaths, missing persons and directly affected persons attributed to disasters	Nomis[v]	per 100,000 population				0	0	0	0	0		orange

Goal 2	Zero Hunger	End hunger, achieve food security and improved nutrition and promote sustainable agriculture.											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
2.1	Proportion of children receiving free school meals	Bristol Open Data Platform[vi]	%						20.3	19.2	18.2	20.3	orange
2.2	Prevalence of reception aged children underweight	PHE[vii]	%	0.66	0.7	0.59	0.92	0.74	0.74	0.8	0.55	0.86	red
2.2	% obese and overweight in children 4-5 years old	PHE[viii]	%	25.8	22.9	23.4	21.7	22.9	23	22.9	24.2	21.7	green
2.2	% obesity and overweight in children 10-11 years old	PHE[ix]	%	32.9	32.7	32.7	34.2	34.7	35	35.6	33	34.5	red

Goal 3	Good Health & Wellbeing	Ensure healthy lives and promote well-being for all at all stages											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
3.2	Deaths of 0-1 year old per 1000 live births	ONS[x]	Deaths per 1000 live births	2.3	3	4	3.2	3.1	3.8	3.8	2.9		red
3.3	New HIV diagnoses among adults (aged 15 years+) per 100,000 population	PHE[xi]	New diagnosis per 100 000		12.4	12.1	12.5	12	14.5	11.2	12.4		orange
3.3	Incidence of TB (3 year average)	PHE[xii]	Per 100 000	18.8	19.4	19.5	20.5	21.5	20.6	18	15.2		green
3.4	Mortality rate from cause consider preventable	PHE[xiii]	Per 100 000	225.7	217.6	212.1	210.9	210.9	205.9	203.7	205.3		green
3.4	Prevalence of diabetes	PHE[xiv]	Per 100 000				5	5.1	5.3	5.6	5.8	5.9	red
3.4	Cardiovascular disease	PHE[xv]	Per 100 000	65.5	60	57	54.7	53	49.4	46.8	47.7		green
3.4	Chronic respiratory disease	PHE[xvi]	Per 100 000	18.8	18.4	19.3	22.3	23.6	22.1	22.7	21.9		red
3.4	Suicide rate	PHE[xvii]	Per 100 000	11.3	11.6	11.2	11.2	11.7	12.8	12.6	10.6		orange
3.4	Cancer	PHE[xviii]	Per 100 000	98.2	100.2	98.9	97.1	92.8	89	88.2	88.9		green
3.5	Alcohol related mortality	PHE[xix]	Per 100 000	52.9	52.5	52.5	55.9	53.2	52.7	50.6	54.8		red
3.5	Drug misuse	PHE[xx]	Per 100 000	5.7	5.4	4.8	4.6	5	6	7.2	6.7		red
3.5	Smoking Prevalence in adults (over 18yo)	PHE[xxi]	%		21.10	21.1	20.6	20.5	18.1	16.3	11.1		green
3.6	Deaths from Road Traffic accidents	PHE[xxii]	Per 100 000		31.5	33.9	31.6	28.4	26.3	26.1	22.7		green
3.7	Adolescent Birth rate	ONS[xxiii]	Per 1000 women aged 15-17	38.7	33.2	28.5	25.6	22.1	17.3	17.2			green

Goal 3	Good Health & Wellbeing	Ensure healthy lives and promote well-being for all at all stages											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
3.8	Gap in Healthy Life Expectancy between most deprived and least deprived (male)	PHE [xxiv]	Years			8.2	9	9.7	9.6	9.6	9.6		🟥
3.8	Gap in healthy life expectancy between most deprived and least deprived (female)	PHE [xxv]	Years			6.7	7.1	7	7	7.3	7.1		🟥
3.9	Fraction of Mortality Attributable to particulate air pollution	PHE [xxvi]	%	5.8	5.3	5.2	5.3	5.1	4.4	5.3	5.1		🟩
Goal 4	Quality Education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
4.1, 4.5	KS1 attainment Mathematics (Boys)	DfE [xxvii]	% reaching expected standard		87*	88*	89*	92*	91*	69	75	74	🟩
4.1, 4.5	KS1 attainment Mathematics (Girls)	DfE	% reaching expected standard		90*	92*	93*	92*	94*	72	74	75	🟩
4.1	KS1 attainment Mathematics	DfE	% reaching expected standard		88*	90*	91*	92*	92*	70	75	75	🟩
4.1, 4.5	KS1 attainment Reading (Boys)	DfE	% reaching expected standard		80*	83*	87*	87*	87*	67	71	70	🟩
4.1, 4.5	KS1 attainment Reading (Girls)	DfE	% reaching expected standard		87*	91*	92*	92*	93*	76	76	77	🟩
4.1	KS1 attainment Reading	DfE	% reaching expected standard		83*	87*	89*	89*	90*	71	73	73	🟩
4.1, 4.5	KS2 attainment Mathematics (Boys)	DfE [xxviii]	% reaching expected standard	81*	79*	83*	83*	83*	84*	69	74	74	🟩
4.1, 4.5	KS2 attainment Mathematics (Girls)	DfE	% reaching expected standard	79*	80*	84*	85*	83*	86*	68	74	75	🟩
4.1	KS2 attainment Mathematics	DfE	% reaching expected standard	80*	80*	83*	84*	83*	85*	68	74	75	🟩
4.1, 4.5	KS2 attainment Reading (Boys)	DfE	% reaching expected standard	79*	76*	81*	83*	85*	84*	63	68	71	🟩
4.1, 4.5	KS2 attainment Reading (Girls)	DfE	% reaching expected standard	85*	86*	88*	88*	88*	90*	70	76	76	🟩
4.1	KS2 attainment Reading	DfE	% reaching expected standard	82*	81*	84*	86*	86*	87*	67	72	73	🟩
4.1	KS4 attainment English and Maths	DfE [xxix]	% reaching expected standard	46.2*	50.2*	51.6*	52.3*	55.2*	46.8	47.7	44.0	45.4	🟥
4.1	Secondary school absence rate	PHE [xxx]	%		6.7	5.69	5.8	5.05	5.1	5.4	5.26		🟩
4.2,	Proportion of children under 5 years of age who are developmentally on track	DfE [xxxi]	%				49.5	58.4	63.6	66.3	67.7	69.6	🟩
4.2, 4.5	Proportion of children under 5 years of age who are developmentally on track (Girls)	DfE	%				56.4	66.0	70.7	73.9	73.2	75.4	🟩
4.2, 4.5	Proportion of children under 5 years of age who are developmentally on track (Boys)	DfE	%				42.7	51.0	57.3	59.1	62.2	64.2	🟩
4.2	Gap between children in the 30% lowest neighbourhoods achieving a good level at Early Years Foundation	BCC data team	%					14.2	14.2	12.6	13.2	13.1	🟥
4.2	Proportion of Asian children achieving Early Years Good Level of Development	BCC data team	% of Asian minority children				48.57	58.18	68.55	71.81	67.21	67.84	🟩

													Trend
Goal 4	Quality Education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*											
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
4.2	Proportion of Bangladeshi children achieving Early Years Good Level of Development	BCC data team	% of Bangladeshi minority children				27.03	45.24	55.00	51.35	61.76	58.33	🟩
4.2	Proportion of Black children achieving Early Years Good Level of Development	BCC data team	% of Black minority children				42.62	49.79	55.63	57.34	62.53	60.50	🟩
4.2	Proportion of Chinese children achieving Early Years Good Level of Development	BCC data team	% of Chinese minority children				70.00	71.43	63.16	86.96	72.73	73.33	🟩
4.2	Proportion of Indian children achieving Early Years Good Level of Development	BCC data team	% of Indian minority children				41.67	60.87	67.74	63.89	71.11	59.77	🟩
4.2	Proportion of Other children achieving Early Years Good Level of Development	BCC data team	% of Other minority children				39.20	47.84	50.13	61.87	62.03	60.13	🟩
4.2	Proportion of Pakistani children achieving Early Years Good Level of Development	BCC data team	% of Pakistani minority children				32.64	34.03	51.52	48.00	51.61	58.55	🟩
4.2	Proportion of White children achieving Early Years Good Level of Development	BCC data team	% of White children				52.76	62.15	66.87	69.14	70.37	72.66	🟩
4.3	Proportion of population with higher education degrees	Nomis[xxxii]	%	37.1	41.9	42.2	42.5	45.6	47.9	48.5	54.2	54.2	🟩
4.4	Proportion of adults without a full Level 2 qualification (equivalent to 5 GCSEs)	Nomis[xxxiii]	%	70	70	74.5	76.2	74.8	76.1	80.4	82.1	81.1	🟩
4.4	Proportion of adults who have participated in education or training in the last four weeks	Nomis[xxxiv]	%	8.7	8.8	7.9	7.7	9.1	11.2	11.1	15.5	14.2	🟩
Goal 5	Gender Equality	Achieve gender equality and empower all women and girls											
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
5.1	Proportion of Council Top Earners who are female	BCC data team	%						55.5	60.7	60.37	54.29	🟧
5.1	Gender pay gap	PHE[xxxv]			14.7	11.3	14.8	12.7	15	16.4	14.2		🟧
5.1	Proportion of elected councillors who are women	Local Elections Archive Project[xxxvi]	%			24.3			35.7	42.0			🟩
5.2	Domestic abuse related incidents and crimes	PHE[xxxvii]	Per 1000						18.5	19.3	20		🟥
5.2	Violent crime: rate of sexual offences	PHE[xxxviii]	Per 1000		1.2	1.2	1.2	1.7	1.8	2.6	2.7	3.2	🟥
5.3	Number of new cases of Female Genital Mutilation	BCC[xxxix]	Number of new cases							385	335	200	🟩
Goal 6	Clean Water and Sanitation	Ensure availability and sustainable management of water and sanitation for all											
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
6.4	Total daily water usage per person per day	Bristol Water[xl]	L per capita per day	146.4	141.7	141.1	144	143.1	141.1	143.5	146.3	150.7	🟧

Goal 7	Affordable and Clean Energy	Ensure access to affordable, reliable, sustainable and modern energy for all											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
7.1	Proportion Living in Fuel Poverty	PHE xli	%		11.3	11.1	13.2	13.6	12.9	10.8			🟧
7.1	Total Electrical energy use per capita (residential + city wide)	BEIS xlii	kWh per household	4,027	3,972	3,925	3,853	3,812	3,755	3,648	3,546		🟩
7.2	Installed Capacity of Renewable Energy	BEIS xliii	Mw					66	79.6	86.1	86.6		🟩
7.2	Generation of installed energy	BEIS xliv	MWh					129,258	156,878	157,264	138,525		🟩
7.3	Energy intensity measured in terms of primary energy and GDP	BEIS xlv xlvi	GWh/£billion	148.20	151.16	143.00	141.25	132.82	129.84	126.57	126.94		🟩
Goal 8	Decent Work and Economic Growth	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
8.1	GVA (millions)	ONS xlvii	£billion	12966	12599	12944	13180	13994	14247	14047	14200		🟩
8.1	GVA growth rate	ONS xlviii	%		-2.83	2.74	1.82	6.18	1.81	-1.40	1.09		🟩
8.2	GVA per employed person	ONS xlix and Nomis l	£ per employed person	59,696	59,739	61,200	62,316	63,493	59,461	58,700	56,483		🟥
8.2	% change in GVA per employed person	ONS li and Nomis lii	£ per employed person		0.07	2.52	4.39	6.36	-0.39	-1.67	-5.38		🟥
8.3	Unemployment rate	Nomis liii	% unemployed	7.1	8	7.4	8	7.2	5.4	5	4	3.4	🟩
8.3	Businesses Stock per 10,000 population	Centre for Cities liv	Businesses per 10 000 people	325.93	328.27	330.02	343.69	357.42	365.19	380.02	376.48		🟩
8.5	Average Male wages per hour	Nomis lv	£ per hour	12.64	13.10	12.93	13.11	13.50	13.66	14.11	14.34	14.99	🟩
8.5	Average Female wages per hour	Nomis lvi	£ per hour	11.14	11.38	11.89	12.18	12.80	12.7	12.78	13.19	13.82	🟩
8.5	Bristol Unemployment rate	Nomis lvii	% unemployed	7.7	7.0	8.6	7.6	7.0	7.8	5.3	4.7	3.6	🟩
8.5	Ethnic minority unemployment	Nomis lviii	% of ethnic minorities unemployed	12.1	12.1	14.1	10.4	21.2	15.8	19.3	11.5	7.8	🟩
8.5	Female unemployment	Nomis lix	% of women unemployed	6.2	6.0	5.5	7.4	5.5	4.9	3.6	2.4	4.0	🟩
8.5	Male unemployment	Nomis lx	% of men unemployed	9.0	7.9	11.2	7.7	8.3	10.4	6.7	6.7	3.2	🟩
8.5, 8.6	Youth unemployment rate	Nomis lxi lxii	% of population aged 16-24 unemployed	10.0	26.5	23.0	24.0	19.9	14.2	11.4			🟩
Goal 9	Industry, Innovation and Infrastructure	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
9.1	Annual Park and Ride trips	BCC data team	Total single Park & Ride journeys into Bristol	1,434,249	1,333,575	1,292,062	1,275,562	1,410,725	1,329,386	1,533,679	1,533,679	1,716,174	🟩
9.1	Passenger journeys on buses originating in Bristol	BCC data team	Total single bus passenger journeys	28,011,284	28,475,212	25,413,186	28,813,369	33,837,991	36,779,218	38,575,102	39,676,021	42,216,084	🟩
9.1	Proportion of population who cycle to work	BCC lxiii	%	10.5	8.4	10.0	10.4	16.0	14.6		20.0	15.9	🟩
9.1	Proportion of population who walk to work	BCC lxiv	%	17.5	19.5	18.8	17.1	20.4	18.9		24.0	20.2	🟩
9.2	Manufacturing value added as a proportion of GVA	ONS lxv	% of GVA from Manufacturing	5.79	6.07	5.87	5.99	5.60	5.67	4.61	4.94		🟩
9.2	Proportion of total employment in manufacturing	Nomis lxvi	% of total employment in manufacturing						3.9	4.3	3.7		🟩
9.4	CO₂ emissions per unit of value added	BCC & ONS lxvii	Tonnes of CO_2 per £million GVA	0.17	0.16	0.16	0.15	0.15	0.14	0.13	0.115493		🟩
9.c	Percentage of population who have used the internet in the last 3 months	ONS lxviii	% of population			82.4	83.7	86.7	87.2	89.8	89.2	89.8	🟩

Goal 10	Reduced Inequality	Reduce inequality within and among countries											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
10.1, 10.2	Gini Coefficient	Centre for Cities [lxix]	(N/A)					0.41		0.4			
10.1, 10.2	Average Weekly wage for bottom 10% of full time workers	Nomis [lxx]	£ per week	289.1	272.1	282.7	287.5	296.9	299.7	311.9	330	341.8	🟩
10.1, 10.2	Average Weekly wage for top 10% full Time Workers	Nomis	£ per week	900.6	934.1	886.9	912	907.2	928.4	957.3	998.8	1,044.8	🟩
10.1, 10.2	Gap in earnings between the top 10% and bottom 10% of wages	Nomis	£ per week	611.5	662	604.2	624.5	610.3	628.7	645.4	668.8	703	🟥
10.1, 10.2	Average Weekly wage for bottom 10% of full time workers (male)	Nomis [lxxi]	£ per week	171.2	172.4	166.2	163.7	151	178.6	222.5	228.5	234.2	
10.1, 10.2	Average Weekly wage for top 10% full Time Workers (male)	Nomis	£ per week	900.7	946.6				919.9	958.4		1,068.8	
10.1, 10.2	Gap in earnings between the top 10% and bottom 10% of wages (male)	Nomis	£ per week	729.5	774.2				741.3	735.9		834.6	🟥
10.1, 10.2	Average Weekly wage for bottom 10% of full time workers (female)	Nomis [lxxii]	£ per week	96	88.7	106.7	101	96.3	118.5	117.8	117.1	118	
10.1, 10.2	Average Weekly wage for top 10% full Time Workers (female)	Nomis	£ per week	695	662	696.6	732.5	750.2	755.3		754.4	773.00	
10.1, 10.2	Gap in earnings between the top 10% and bottom 10% of wages (female)	Nomis	£ per week	599	573.3	589.9	631.5	653.9	636.8		637.3	655	🟥
10.3	Proportion who have been the victim of racial discrimination or harassment in the last year	BCC [lxxiii]	%	3.9	3.7	4.4	4.7	4.6	4.9		6.5	6.2	🟥
10.3	Number of Hate Crimes	BCC [lxxiv]					747	1037	1301	1772	1764		🟥
10.3, 10.4	Race Pay Gap in Bristol City Council	BCC data team	%							15.38	12.96	12.62	🟩
10.3, 10.4	Gender pay gap	PHE [lxxv]			14.7	11.3	14.8	12.7	15	16.4	14.2		🟧
Goal 11	Sustainable Cities and Communities	Make cities and human settlements inclusive, safe, resilient and sustainable											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
11.1	Affordability of Home Ownership	PHE [lxxvi]	(N/A)	6.7	6.8	6.7	6.8	7.2	7.6	8.7	9.1		🟥
11.1	Rough sleepers	BCC	Number of rough sleepers	8	8	9	41	41	97	74	86	82	🟥
11.1	Statutory Homelessness	PHE [lxxvii]	Per 1000		0.9	0.9	0.9	1.5	2.4	2.5	2.8	2.7	🟥
11.1	Proportion of the population satisfied with their current accommodation	BCC [lxxviii]	%								83.1	84.3	🟩
11.2	Bus Passenger trips per head of population	BCC [lxxix]	Bus passenger trips per capita				63.7	68.2	73.8	79.5	87.8	92.1	🟩
11.2	Annual Park and Ride trips	BCC data team	Total single Park & Ride journeys into Bristol	1,434,249	1,333,575	1,292,062	1,275,562	1,410,725	1,329,386	1,533,679	1,533,679	1,716,174	🟩
11.2	Passenger journeys on buses originating in Bristol	BCC data team	Total single bus passenger journeys	28,011,284	28,475,212	25,413,186	28,813,369	33,837,991	36,779,218	38,575,102	39,676,021	42,216,084	🟩
11.2	Proportion satisfied with the local bus service	BCC [lxxx]	%		54.2	55.9	48.3	49.6	50.3		40	43	🟥
11.2	Number of people cycling to work	BCC [lxxxi]	Number of people cycling to work	15,800								25,9000	🟩
11.3	Voter Participation in last municipal elections	BCC [lxxxii]	% of eligible voters			27.9				44.8			🟩

Goal 11	Sustainable Cities and Communities	Make cities and human settlements inclusive, safe, resilient and sustainable											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
11.6	Annual mean levels of fine particulate matter (PM2.5)	PHE[lxxxiii]	µg/m³	10.2	9.4	9.1	9.3	9	7.6	9.4			🟧
11.6	Annual Mean PM10 Monitoring Results	BCC[lxxxiv]	µg/m³				17.8	16.4	14.9	15.4	14.7		🟩
11.7	Utilisation of outdoor space for exercise/health reasons	PHE[lxxxv]	%			17.7	15	23.3	35.8	10.8			🟥
11.7	Proportion who feel crime has gotten worse in their area in the last 3 years	BCC[lxxxvi]	%	19.5	18.3	16.7	14.4	20.2	17.4		24	28	🟥
11.7	Proportion respondents who visit parks and open spaces at least once a week	BCC[lxxxvii]	%	37.2	37	36.2	37.9	50.1	54.6		55.7	49.7	🟩

Goal 12	Responsible Production and Consumption	Ensure sustainable consumption and production patterns											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
12.3	Total Food Waste	BCC data team	Tonnes (kg)						10662.52	11,070.14	11,355.30	12839.20	🟥
12.3	Food Waste per capita	BCC data team[lxxxviii]	Tonnes (kg) per person						24.02	24.57	24.90	27.95	🟥
12.5	Recycling rate	Defra	% of waste recycled		37.4	41.0	45.3	41.5	43.5	43.6	43.4	44.9	🟩
12.5	Residual household waste per household	Defra	Kg/household		536.2	503.8	458.7	500.9	488	492	498.5	462.9	🟩
12.5	Total local authority collected waste	Defra[lxxxix]	Tonnes						177414	181101	184753	179798	🟩
12.5	Proportion of Municipal Waste sent to landfill	Defra[xc]	% sent to landfill		57.7%	38.7%	25.8%	31.2%	29.2%	28.0%	27.7%	19.9%	🟩

Goal 13	Climate Action	Take urgent action to combat climate change and its impacts											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
	CO₂ emissions per capita	Centre for Cities[xci]	Tonnes of CO₂ per capita	6.44	5.87	6.09	5.89	5.21	4.99	4.68			🟩
13.1	Number of deaths attributed to disaster per 100,000	Nomis[xcii]	Deaths per 100 000				0	0	0	0	0	0	
13.3	Percentage concerned about climate change	BCC[xciii]	%	74	70.9	70.6	67.1	70.6	74		81.7	85.8	🟩
	Total CO₂ emissions	BCC data team	K tonnes	2230.9	2044.2	2116.9	1940.7	2038.8	1967.7	1777	1640	1547	🟩

Goal 14	Life Below Water	Conserve and sustainably use the oceans, seas and marine resources for sustainable development											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
14.1	Proportion river in Good ecological status	Environment Agency[xciv]	%			14%	14%	14%	0%	0%	0%	0%	🟥
14.1	Proportion of rivers in Moderate ecological status	Environment Agency	%			57%	57%	57%	57%	100%	86%	86%	🟩
14.1	Proportion of rivers in Poor ecological status	Environment Agency	%			14%	14%	29%	43%	0%	14%	14%	🟧
14.1	Proportion of rivers in Bad ecological status	Environment Agency	%			14%	0%	0%	0%	0%	0%	0%	
14.1	Proportion of river without data	Environment Agency	%			14%	14%	0%	0%	0%	0%	0%	

Goal 15	Life on Land	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
15.1	Tree Canopy Cover	Multiple	%	14[xcv]						17[xcvi]		18.6[xcvii]	🟩
15.1	Proportion respondents who visit parks and open spaces at least once a week	BCC[xcviii]	%	37.2	37	36.2	37.9	50.1	54.6		55.7	49.7	🟩

Goal 16	Peace Justice and Strong Institutions	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels											Trend
Target	Indicator	Source	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	
16.1	Proportion of the population who's daily life is affected by fear of crime	BCC [xcix]	%	23	21.7	20.2	16.1	14.6	12.5		10.3	18.1	🟩
16.1	Violent crime (including sexual violence) – violence offences per 1,000 population	PHE [c]	Per 1000	37.2	37	36.2	37.9	50.1	54.6		55.7	49.7	🟥
16.2	Rate of Domestic abuse per 1000	PHE [ci]	Per 1000							18.5	19.3	20.0	🟥
16.2	Cases of Human Trafficking	Avon and Somerset Constabulary	Number of cases							42	66	92	🟥
16.2	Violent crime: rate of sexual offences	PHE [cii]	Per 1000		1.2	1.2	1.2	1.7	1.8	2.6	2.7	3.2	🟥
16.4	Crime rate	BCC [ciii]	Per 1000					84.7	86.5	99.9	114.1	115.4	🟥
16.6	Proportion satisfied with the way the council runs things	BCC [civ]	%	38.9	37.3	34	37.5	36.4	36		26.8	35.2	🟥
16.7	Proportion of Civil Servants who are women	Nomis [cv]	%				47.52	48.74	49.79	50.65	51.30		🟩
16.7	Proportion feel they can influence decisions that affect their local	BCC [cvi]	%	21.9	25	23.2	26.1	25	25.3		25.5	17.6	🟥
	First time entrants to the youth justice system	PHE [cvii]	Per 100,000	1,158.6	1,135.7	957.2	771	818.2	677.9	485.9	407.2		🟩

*KS1 & KS2 reporting changed in 2016 and KS4 reporting changed in 2015

KS1 – Changed from 'percentage achieving level 2 or above' to 'percentage achieving the expected standard'.

KS2 – Changes from 'percentage achieving level 4 or above' to 'percentage reaching the expected standard'.

KS4 – Changed from 'percentage achieving 5 + A*-C grades including English and mathematics GCSEs' to 'average attainment 8 score per pupil'.

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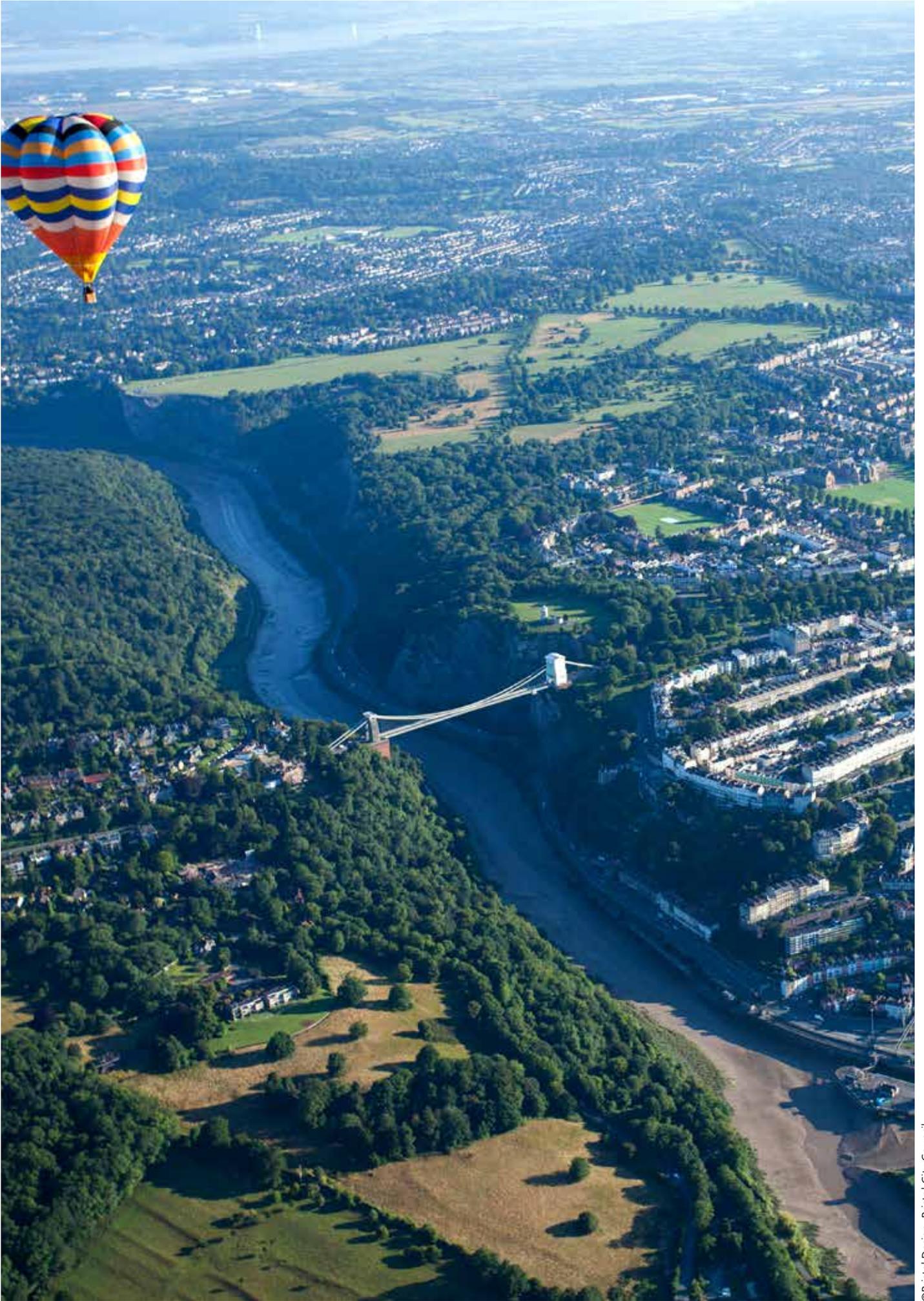
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