Essential Infrastructure 2018

Scape Group

Contents

"Infrastructure is not just about improving the roads we use every day or building bridges to new locations. Each project has the potential to unlock incremental and significant benefits for local people."

Mark Robinson,
Scape Group Chief Executive

Executive Summary

This report analyses publicly available Output in the Construction Industry data from the Office for National Statistics (ONS) and Construction Output Statistics from the Northern Ireland Statistics and Research Agency (NISRA). This data provides an overview of infrastructure output in the UK from 1997 to 2017.

The data in this research has been adjusted to account for inflation, enabling a year-on-year comparison of infrastructure output in real terms. The analysis has been conducted on a regional and sector basis, providing an assessment of areas where infrastructure output needs to increase in order to ensure that towns and cities across the UK are competitive, attract inward investment and encourage development. Similarly, an analysis of individual sectors highlights trends in infrastructure delivery over the past 20 years and enables us to identify gaps where output must increase to meet future demands.

Overall, construction output on infrastructure projects has increased in real terms by £6.4 billion over the last 20 years, growing from £13.42 billion in 1997 to £19.82 billion in 2017. Despite this overall increase in output it is the equivalent of just an additional £70 per person. The World Economic Forum's annual Global Competitiveness report illustrates that the overall quality of UK infrastructure is declining, with the country currently ranked 27th in the world, down from 24th in 2016.

By assessing the ONS and NISRA data and industry trends, we have made a series of recommendations. These include:

1. A removal of cash retentions and a commitment from clients and contractors throughout the construction industry to ensure payments to Tier 1 suppliers within 14 days, Tier 2 suppliers within 19 days and Tier 3 suppliers within 23 days, in line with the Fair Payment Charter
2. A commitment to driving forward the devolution agenda to support the joined up delivery of infrastructure
3. A widening of the National Infrastructure Commission's remit to prevent the 'politicisation' of infrastructure decisions
4. A commitment to ensuring that all public sector contracts valued at £10m or more, produce at least 20 per cent of that figure in Social Value to the community

We recognise that there is an impetus within the industry to enact fundamental change in the assessment and delivery of infrastructure projects across the UK. The Infrastructure and Projects Authority (IPA) unveiled its Transforming Infrastructure Performance plan at the end of 2017, which seeks to increase the sectors productivity and maximise the value infrastructure investment delivers. Similarly, Build UK, focuses on key issues that seek to increase the efficiency and delivery of construction projects. One of its current focus areas is improving business performance through developing a truly collaborative supply chain, part of this includes a campaign with Civil Engineering Contractors Association (CECA) to deliver zero cash retentions. We are extremely passionate about the abolition of cash retentions, as it will remove a fundamental barrier to entry for SMEs.

Applying retentions does not provide an appropriate or proportional mechanism for ensuring quality, this can be achieved through more collaborative working. The supply chain, in particular SMEs, have their ability to invest in skills and technology limited by the reduction in working capital caused by retentions. This ultimately impedes a company's growth.

The Government is currently reviewing responses to a consultation on the practice of cash retentions. Scape, alongside Build UK and CECA, will be continuing to advocate for their complete abolition.

The cascading of payment through the supply chain is essential and by adhering to the Construction Supply Chain Payment Charter SMEs are provided with assurance on fair and timely payment. It also recognises the huge value that SMEs hold within the industry.

"This report provides vital insight into construction output, contributing to our understanding of how infrastructure is delivered across the UK. Over the past 20 years we have seen huge infrastructure projects delivered in London, yet the analysis shows that per capita since 2015 output in the North East is far outstripping that in the capital. This completely changes are notion of the discrepancy between the delivery of infrastructure in the north and south of England. Conversely there are areas across the country that have had low levels of construction output consistently over the past 20 years, including the West Midlands and the South West.

"Infrastructure is essential for regions to remain competitive and attractive to industry and investment. This is becoming increasingly important as the UK prepares to exit the EU. We recently passed the one year countdown to Brexit and the outcome of the negotiations has a huge impact on the construction industry.

"Over the past decade the UK has become increasingly reliant on construction talent from the European Union, so much so that EU migrants now comprise around 8% of the construction workforce. Coupled with a shortage of UK labour the industry will face a real issue in the immediate future if action isn't taken to widen the talent pool to include those who may not have considered a career in construction before. This will mean challenging misconceptions that construction is just for men, and showing young people the wide variety of career options available.

"A shortage of suitable labour on the ground is also driving up wages, which combined with the increase in the cost of construction materials is placing significant pressure on firms to deliver more with less, and as a result, the future delivery of key infrastructure is in a very vulnerable position."

Mark Robinson,
Scape Group Chief Executive

27th

Quality of UK infrastructure is ranked 27th globally according to The World Economic Forum

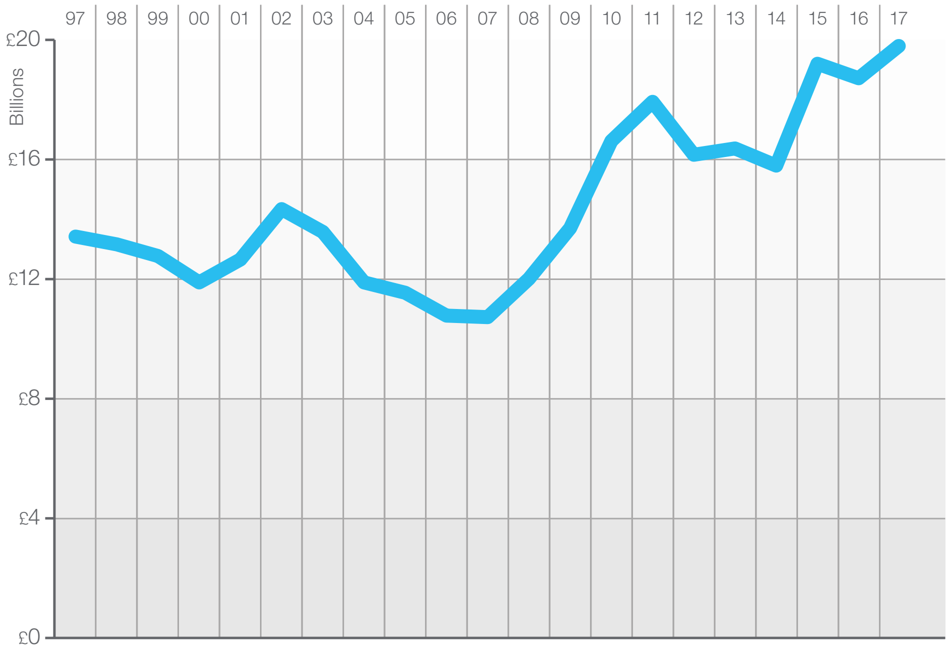
£19.82bn

construction output on infrastructure projects in 2017, up from £13.42bn in 1997

Infrastructure output across the UK

Over the last two decades, infrastructure output has increased by £6.4 billion in real terms, but this increase has not been on a straight trajectory from 1997 to the present day. In reality from 2000 to 2007, infrastructure output in the UK decreased hitting a low of £10.73 billion in 2007.

UK infrastructure output 1997-2017



Source: Output in the Construction Industry ONS data & NISRA Construction Output Statistics

Year	Infrastructure Output (£ billion)
1997	£13.42
1998	£13.16
1999	£12.77
2000	£11.89
2001	£12.66
2002	£14.34
2003	£13.58
2004	£11.92
2005	£11.54
2006	£10.78
2007	£10.73
2008	£12.01
2009	£13.70
2010	£16.62
2011	£17.93
2012	£16.16
2013	£16.37
2014	£15.85
2015	£19.20
2016	£18.72
2017	£19.82

However, infrastructure output started to increase from 2008 onwards. The increase in output can be explained through a combination of transport improvements as a result of the London 2012 Olympics, the start of Crossrail construction and the delivery of large scale on- and off-shore windfarms. The UK Government also increased its commitment to infrastructure spending in order to support the economy in the wake of the financial crisis.

The UK's population is rising

A top level analysis shows us that infrastructure output has accelerated in recent years. However, a more granular analysis of infrastructure output per person shows that the increase between 1997 and 2017 is an additional £70 per person and highlights that more needs to be done if the UK is to remain competitive and attractive to investment.

As the population of the UK continues to rise, this also places increasing strain on infrastructure. In 1996 the UK population was 58.2 million; in the last 20 years this has increased to 65.6 million and is projected to increase by a further 8.4 million people by 2039*. Infrastructure enables countries to operate efficiently and effectively but it must be renewed to cater for growth in demand. Simple things such as congestion, delayed trains and poorly performing communications decrease productivity and can cost billions of pounds to the economy if it does not respond to shifts in population.

65.6m

UK population

8.4m

UK population increase by 2039*

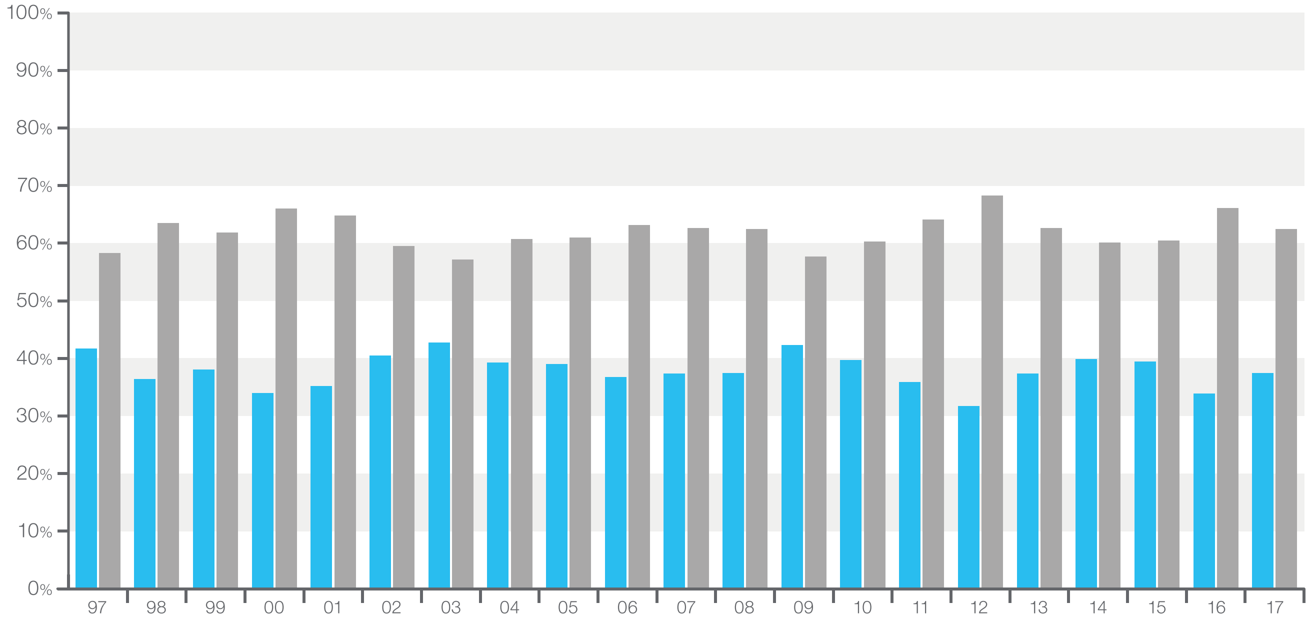
*Overview of the UK Population: July 2017, ONS data

Publicly and privately funded infrastructure projects

Over the past two decades, the percentage of infrastructure projects being delivered by the public sector has only decreased marginally. In 1997, 41.7% of infrastructure projects were delivered publicly, compared to 37.5% in 2017. In fact since 1997 to the present day, the percentage of publicly funded infrastructure projects has only fluctuated by 10% from a high of 42.8% in 2003 to a low of 31.7% in 2012.

Privately funded infrastructure includes output arising from the Private Finance Initiative (PFI), introduced under John Major in 1992. Under New Labour, this method of investment really took hold. The graph below highlights the increased use of PFI between 1998 and 2000, where the percentage difference between projects being delivered publicly and privately widened.

Percentage of UK infrastructure-related construction by funding type



Source: Output in the Construction Industry ONS data & NISRA Construction Output Statistics

41.7%

of infrastructure projects were delivered publicly in 1997

37.5%

of infrastructure projects were delivered publicly in 2017

Supply chain and local economic impact

Crucially, infrastructure delivery can also generate employment and training opportunities at all levels, helping people build on their existing skills and develop new ones. For example, the Scape National Civil Engineering and Infrastructure framework, led by Balfour Beatty, is actively progressing over 120 major projects across the UK and is delivering high levels of social value, which include:

85%

of supply chain spend is with SMEs*

67%

of local labour within 20 miles of a project*

90%

of suppliers to the framework are SMEs*

Scape Procure
Civil Engineering & Infrastructure

Balfour Beatty

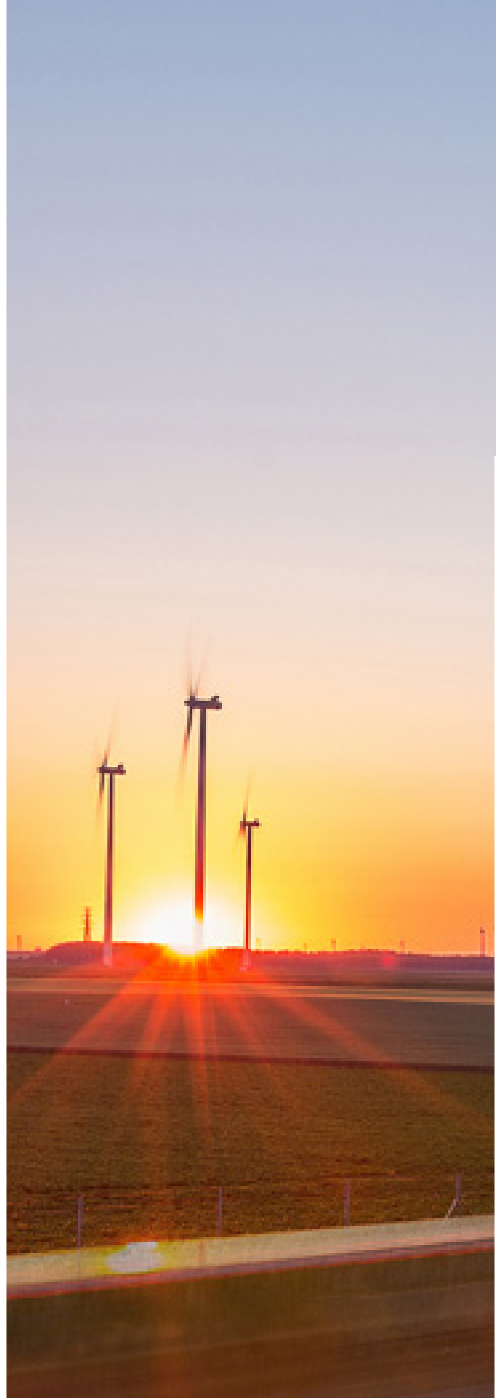
*figures correct for completed projects as at 31st May 2018.

Infrastructure by types of work

When analysing infrastructure output by types of work* over the last two decades, there is a clear spotlight on sectors where infrastructure output has fallen and how this impacts on Britain's ability to be competitive and operate efficiently.

We have identified that:

- Water related infrastructure output has decreased considerably since 2011
- Harbour projects have remained relatively consistent between 1997 and 2017
- Road related infrastructure output fell to an all-time low between 2012 and 2014 but has since increased
- The amount of electricity infrastructure being delivered has steadily risen over the past two decades, jumping up significantly in 2015-2017 and accounting for 41.2% of all infrastructure projects
- Rail related infrastructure has fluctuated between 14% and 27.5% of infrastructure projects
- Gas, communications and aviation projects have seen the biggest decrease, falling from 20% of all infrastructure projects in 1997-99 to just 3.6% in the last three years.



–

Water infrastructure output has decreased since 2011

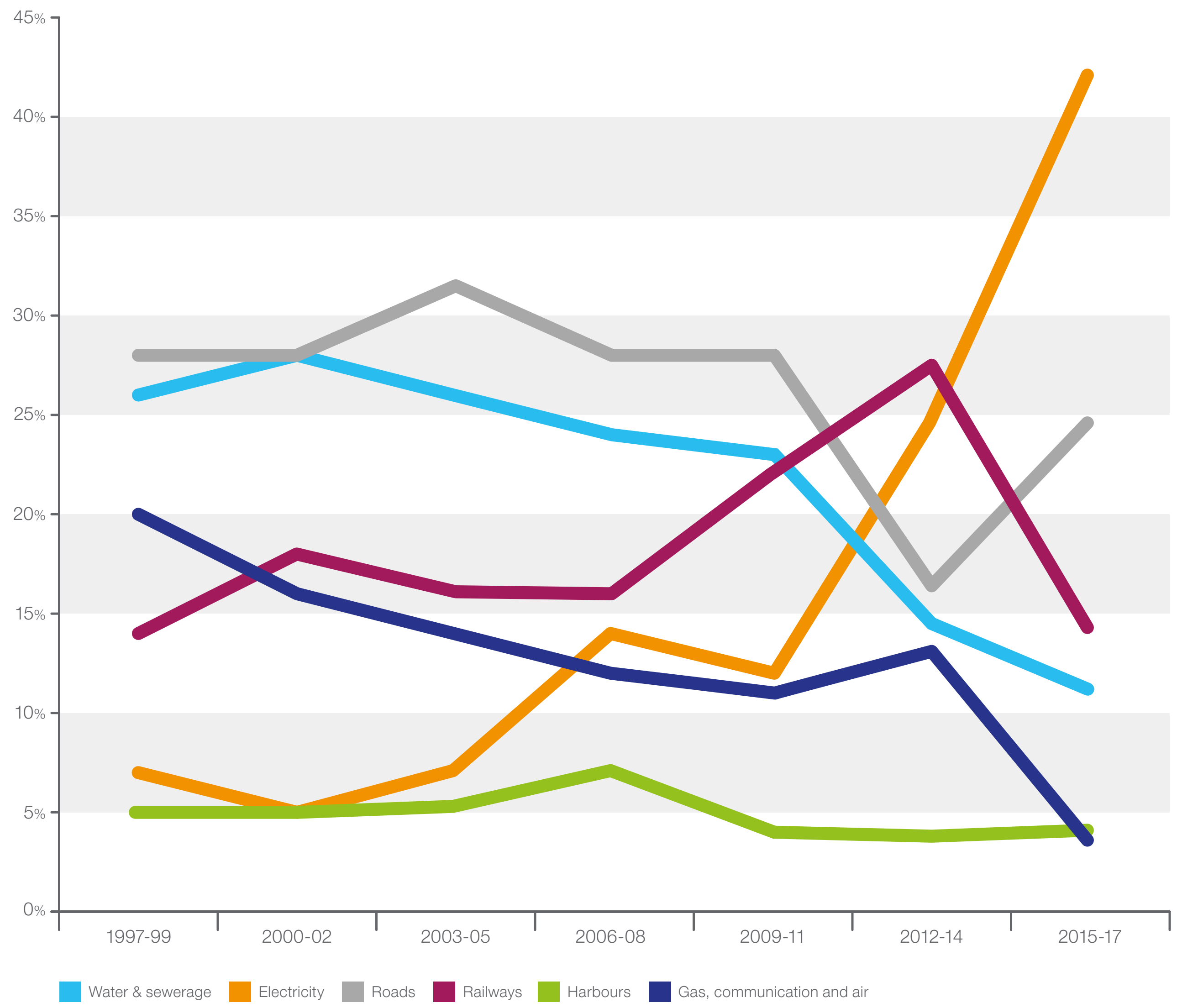
–

Road related infrastructure output fell to an all-time low between 2012 and 2014 but has since increased

+

Electricity infrastructure increased significantly in 2015-2017, now accounting for 41.2% of infrastructure projects

Percentage of British infrastructure output by types of work



*Output in the Construction Industry ONS data for Great Britain only. Data is not available by types of work for Northern Ireland.

Britain's strategic road network

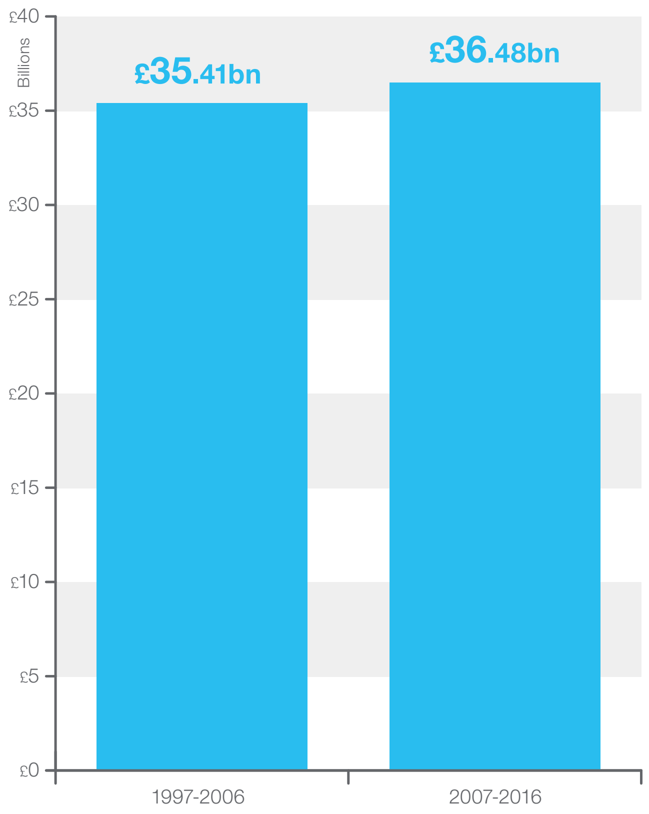
In 2016, 323.7 billion miles[1] were travelled on British roads and in the financial year 2016/17, 17.3 billion passenger journeys were made by rail[2]. Our road and railway networks are essential in keeping the country moving.

The economic benefits of improving transport infrastructure range from quicker journey times that make for a more productive workforce, to increased employment opportunities from new businesses that find the strength of available infrastructure to be attractive.

Construction output in the road network has remained relatively consistent over the past two decades, with £35.41 billion spent between 1997 and 2006 and £36.48 billion from 2007 to 2016.

In 1997, £3.79 billion was spent on road related infrastructure projects the equivalent of £66 per person. Although overall output increased to £4.16 billion in 2017, output per person has decreased to £64.

Road infrastructure output 1997-2016



Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Output (£ billion)	£3.79	£3.37	£3.37	£2.72	£3.46	£4.38	£4.25	£3.76	£3.35	£2.95

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Output (£ billion)	£2.78	£3.11	£4.01	£4.82	£4.3	£2.23	£2.44	£3.03	£5.24	£4.54	£4.16

[1] Department for Transport (Statistical Release 27 April 2017) Road Traffic Estimates: Great Britain 2016

[2] Office of Rail and Road – Popular Statistics

[3] Department for Transport (Statistical Release 7 April 2016) Road Use Statistics Great Britain 2016

With 90% of journeys taken by road, and road freight contributing £11 billion to the economy each year[3], poor road infrastructure can have a significant impact on productivity. According to The World Economic Forum Global Competitiveness report, roads in the UK are ranked 27th falling behind a number of our European counterparts, including Spain (16th), Germany (15th) and France (7th).

A key reason as to why the strategic road network in Britain lags behind our Europeans neighbours is because of the way projects have historically been financed, which has restricted long-term planning and prevented the then Highways Agency from entering into long-term contracts with suppliers.

In 2015, the Highways Agency was restructured and renamed Highways England. The new Government owned body was launched in response to the Road Investment Strategy, which set out 84 new road projects costing £15 billion. As a result, road construction output is forecast to increase in 2018-19 as road improvement contracts under Highways England's Collaborative Delivery Framework (CDF) rise.

£0.37bn

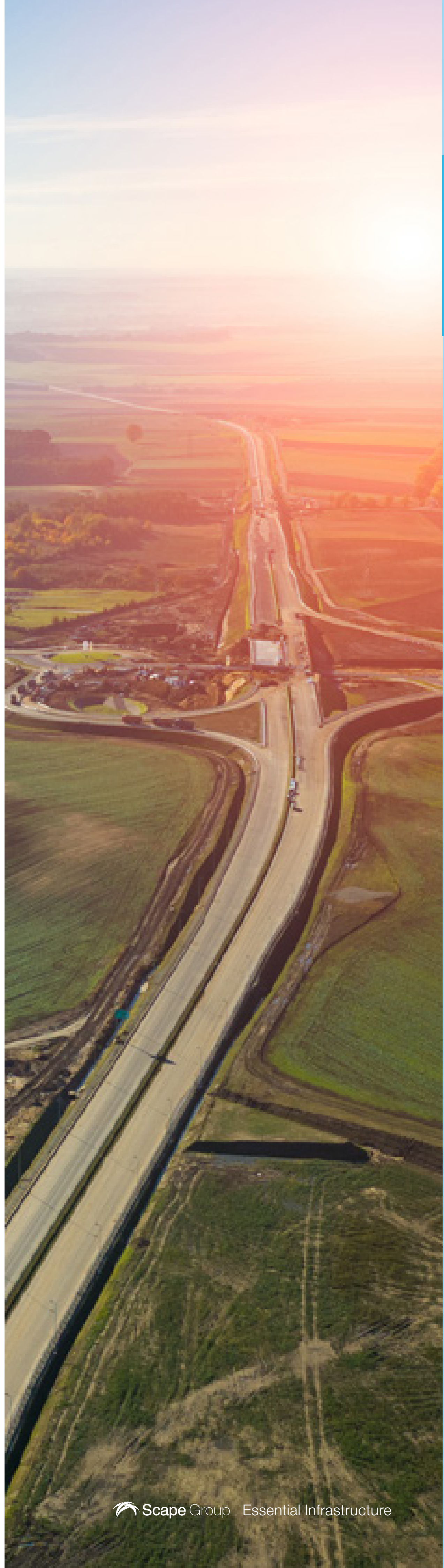
increase on road related infrastructure projects in Britain between 1997 and 2017

£2

Equivalent to a £2 decrease per person in road infrastructure output between 1997 and 2017

90%

of journeys are by road contributing £11bn to the economy



Road and rail projects across Britain continued...

The privatisation of British Rail began in 1994 and was complete by the time New Labour came into power in 1997. The success of this move is hotly debated with the state of the rail network a frequent topic in the news. Most recently Northern Rail has been top of the news agenda, as timetable changes and delays highlight the impact of underinvestment. In the present day, the railways are a partnership between private and public, with the state owned Network Rail carrying out track maintenance and improvements.

In 1997, £2.05 billion was spent on rail infrastructure increasing by over a billion pounds to £3.14 billion in 2017. The graph highlights how the London 2012 Olympics and Crossrail created a significant increase in infrastructure output for the rail sector, with output jumping up to a peak of £4.87 billion in 2012.

Rail construction output is expected to grow significantly with projects like HS2, the Great North Rail Project and Crossrail 2 being brought forward, seeking to create a better connected Britain and a more reliable train service.

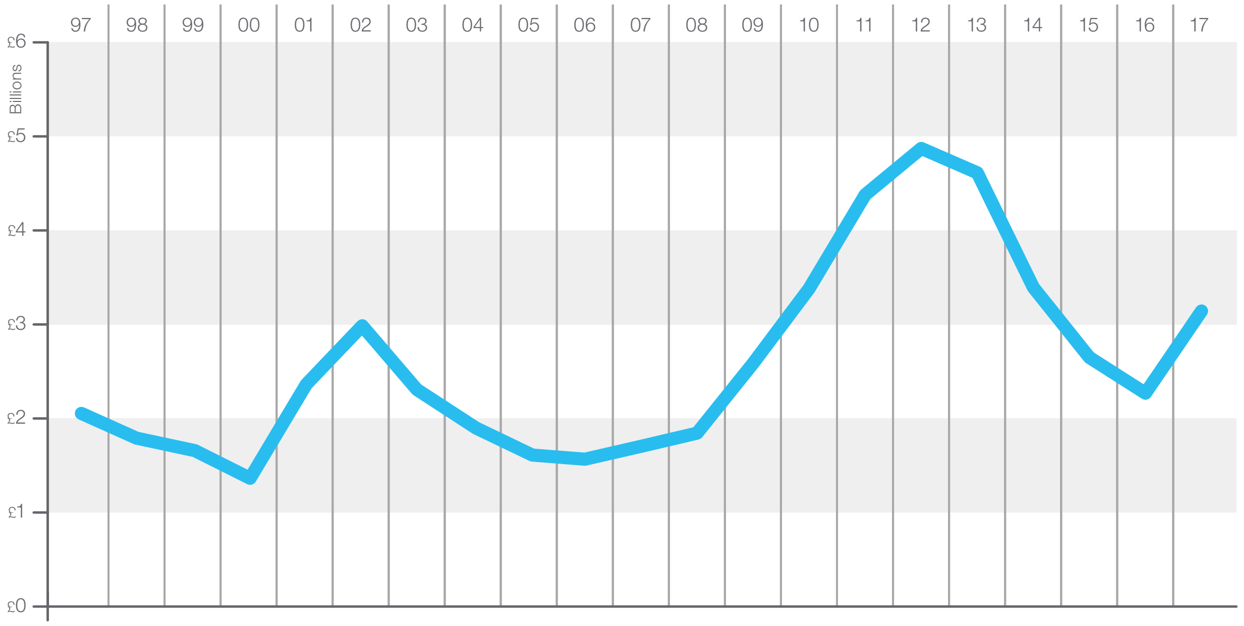
£3.14bn

spent on rail infrastructure in 2017 up from £2.05bn in 1997

38

transport bodies with devolved responsibility for funding

Rail related infrastructure output 1997-2017



Transcending borders

In 2015 the 38 transport bodies, formed three years prior, were given devolved responsibility for funding, removing a layer of bureaucracy and ensuring projects can commence.

Further to this, the creation of organisations such as Transport for South East and Urban Transport are important examples of Local Authorities and Local Enterprise Partnerships working together to develop integrated transport strategies that connect communities across boundaries.

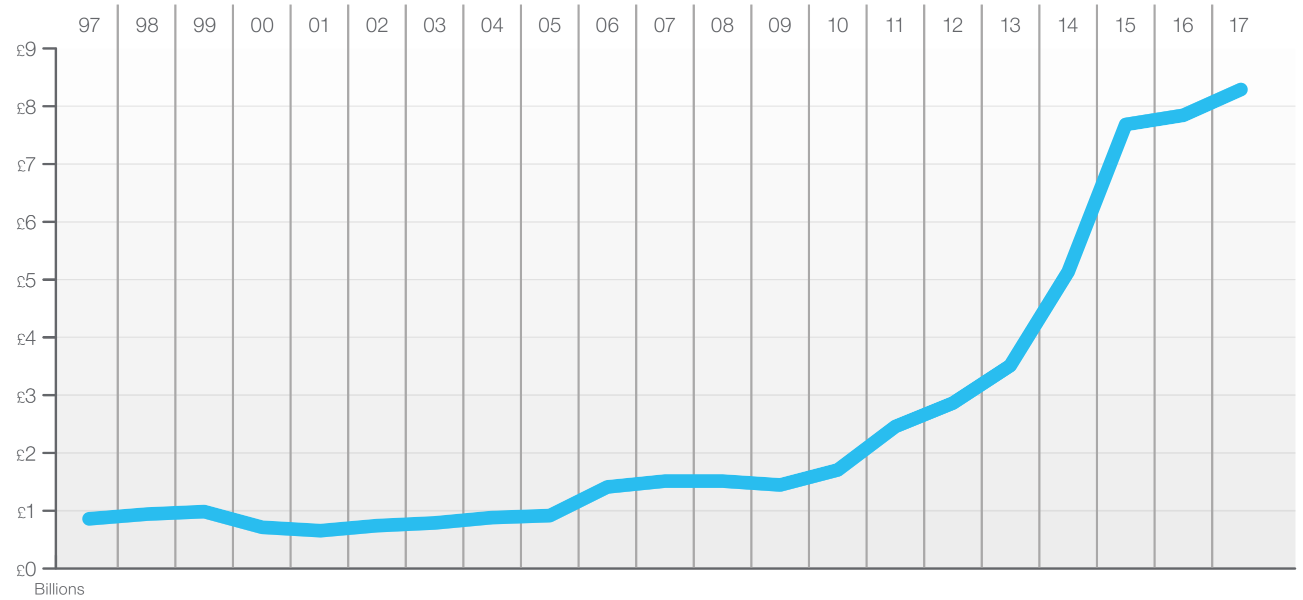
Transcending borders is essential to delivering the connections the country needs, a good road and rail network brings people closer to employment opportunities by enabling more people to access jobs and participate in boosting the economy.

A strong road and rail network is essential for people to access employment opportunities and to boost the economy.

Powering the future: electricity projects in Britain

The largest increase in infrastructure output has been in electricity where output has grown from £0.85 million in 1997 to over £8 billion in 2017, accounting for 42% of total infrastructure output last year. Per person output has increased by £115 from just £15 in 1997 to £130 in 2017.

Electricity related infrastructure output 1997-2017



Source: Output in the Construction Industry ONS data

The increased focus on improving the UK's electricity capabilities is reflective of a shift in focus, away from coal and gas towards renewable sources of energy. By 2025, all coal-powered plants are due to close, in a drive to help tackle climate change. However, this will put intense pressure on the National Grid to create enough sustainably sourced electricity to keep the country powered during the winter months when demand is higher. Added to this is the growing trend towards electric cars, and recent Government announcements that the sale of petrol and diesel cars will be banned by 2040, further highlights the urgency of improving the capabilities of the electricity grid.

In 2017, renewable output rose by 27%, and 96 TWh of energy was generated through wind, solar, biomass and hydro – more than enough to power the whole of Britain in 1958. In March (2018), a new record for wind energy was set when turbines delivered 14 gigawatts of power or 37% of the UK's electricity requirements. While this increase in output and focus on renewable energy is positive, billions of pounds worth of investment is needed over the coming years to replace coal and nuclear power plants, in order to prevent a shortfall in energy supply.

Furthermore, the UK currently benefits from tariff-free trade in gas and electricity within the EU internal energy market, which could be disrupted as a result of Brexit negotiations.

88%

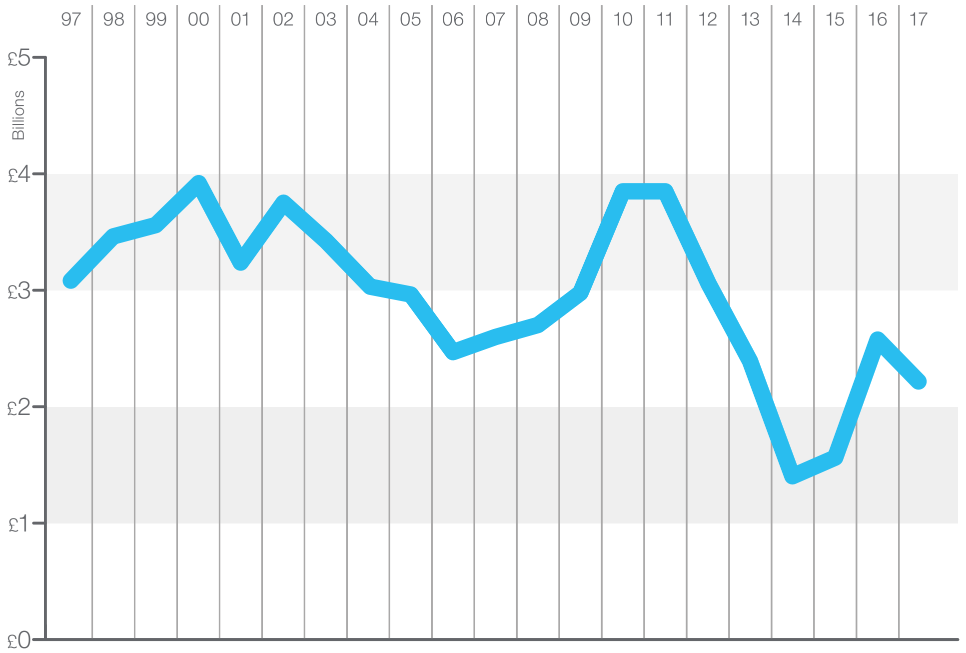
Per person electricity related construction output has increased by 88% between 1997-2017

Meeting Britain's water requirements

The water industry is a capital intensive and long-term sector that is increasingly coming under pressure from climate change, population growth and tightening environmental standards.

While progress has been made over the past two decades to reduce leaks, create cleaner rivers and beaches and improve the quality of drinking water, there is still a considerable amount that needs to be done. What is concerning is that water-related infrastructure output has decreased dramatically in recent years, falling to just £1.39 billion in 2014. While output increased to £2.2 billion in 2017, this is the equivalent of just £34.50 per person and sits nearly 50% lower than the per person output seen in 2002 and in 2010-2011.

Water related infrastructure output 1997-2017



Source: Output in the Construction Industry ONS data

Meanwhile, ageing infrastructure is contributing to a widening gap between supply and demand. Water companies need to be considering the impact of increasing populations and climate change when assessing their ability to deliver water in the future. The water industry faces a challenging situation as its current financing model sources greater expenditure by increasing consumer bills.

New water infrastructure is often linked to new housing schemes and with the Government targeting the delivery of 300,000 new homes a year, it is of paramount importance that utility companies and developers work together to deliver services efficiently. Water UK, an organisation that connects service providers across the UK, has made positive steps in recent years to respond to climate change, with the proposed launch of a scheme to deliver refill stations by 2021. This will increase the availability of free water to the public and help reduce the consumption of plastic bottles.

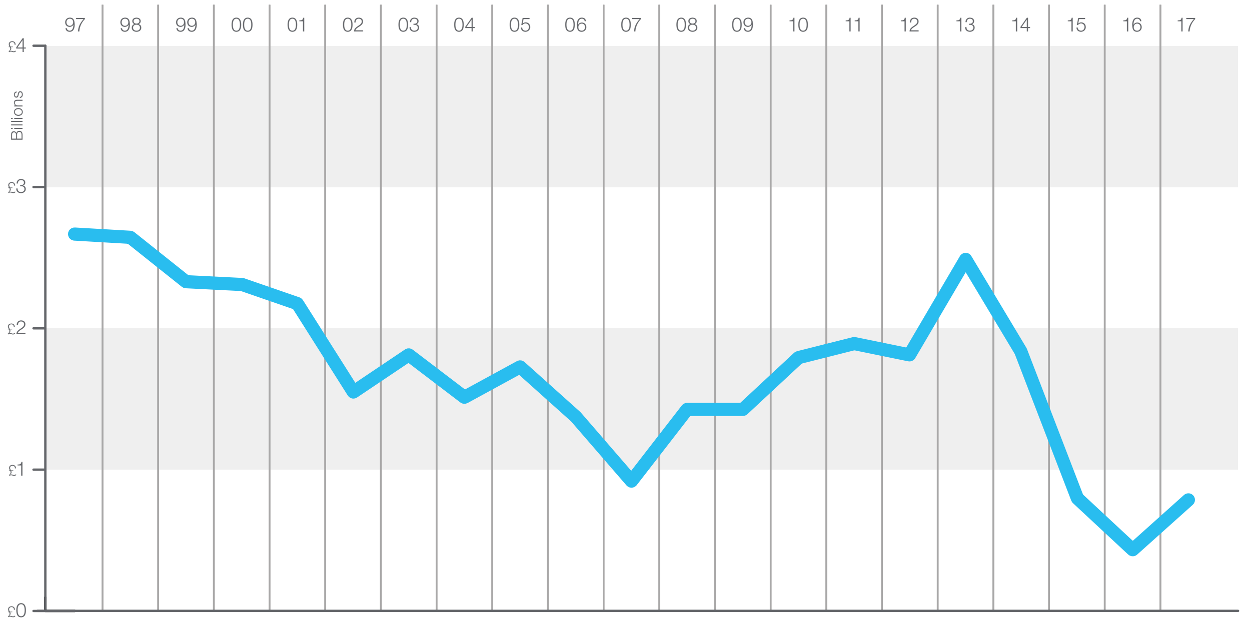
England is the only country to have a fully privatised water and sewerage system. Ahead of the June 2017 General Election, Labour announced plans to renationalise the industry, along with a whole host of other sectors, if elected. A call that has hit the headlines again this year, after the GMB union launched its campaign to push for renationalisation.

In our work, we find that projects are successfully delivered when there is close collaboration between the public and private sector, and that this creates a competitive marketplace that ensures best value for the taxpayer and the local community.

Connecting people

Communication infrastructure is instrumental in delivering technological advancement, yet the amount of new work in gas, communications and aviation in 2017 was just £0.79 billion, three times less than in 1997.

Gas, communications and air infrastructure output 1997-2017



Source: Output in the Construction Industry ONS data

Functioning telecoms and digital connectivity is key to connecting communities, especially rural communities that have historically been isolated. In Scotland for example, digital connectivity is central to an investment plan focused on delivering opportunities for the Scottish Islands and creating a sustainable future for those living in some of the most rural parts of the country.

SMEs cite reliable digital connectivity as fundamental to their ability to operate and build their companies. In the UK, fixed internet traffic is set to double every two years, while mobile data traffic is set to increase by up to 42% a year[1] and the key focus for the country needs to be on ensuring that the speed and reliability can continue to function at the levels expected as volume increases.

In December 2017, however telecoms regulator Ofcom released a report, Connected Nations, which found that just 3% of homes and businesses could connect to full fibre broadband, offering speeds of 1 gigabit per second. It also uncovered that 4% of homes (1.1million properties) do not get broadband speeds considered fast enough for daily use. According to Ofcom, this is behind countries such as Portugal and Spain. Recent Government announcements do demonstrate a heightened recognition of the important role digital infrastructure holds in increasing the economic productivity of the country. The Government is seeking to create the market conditions for 15 million households and businesses to be connected to full-fibre networks by 2025. It is critical that this technological advancement is delivered across the UK, ensuring that each and every household is able to access functioning levels of broadband.

[1] Department for Digital, Culture, Media and Sport – Policy paper – 1. Connectivity - building world-class digital infrastructure for the UK

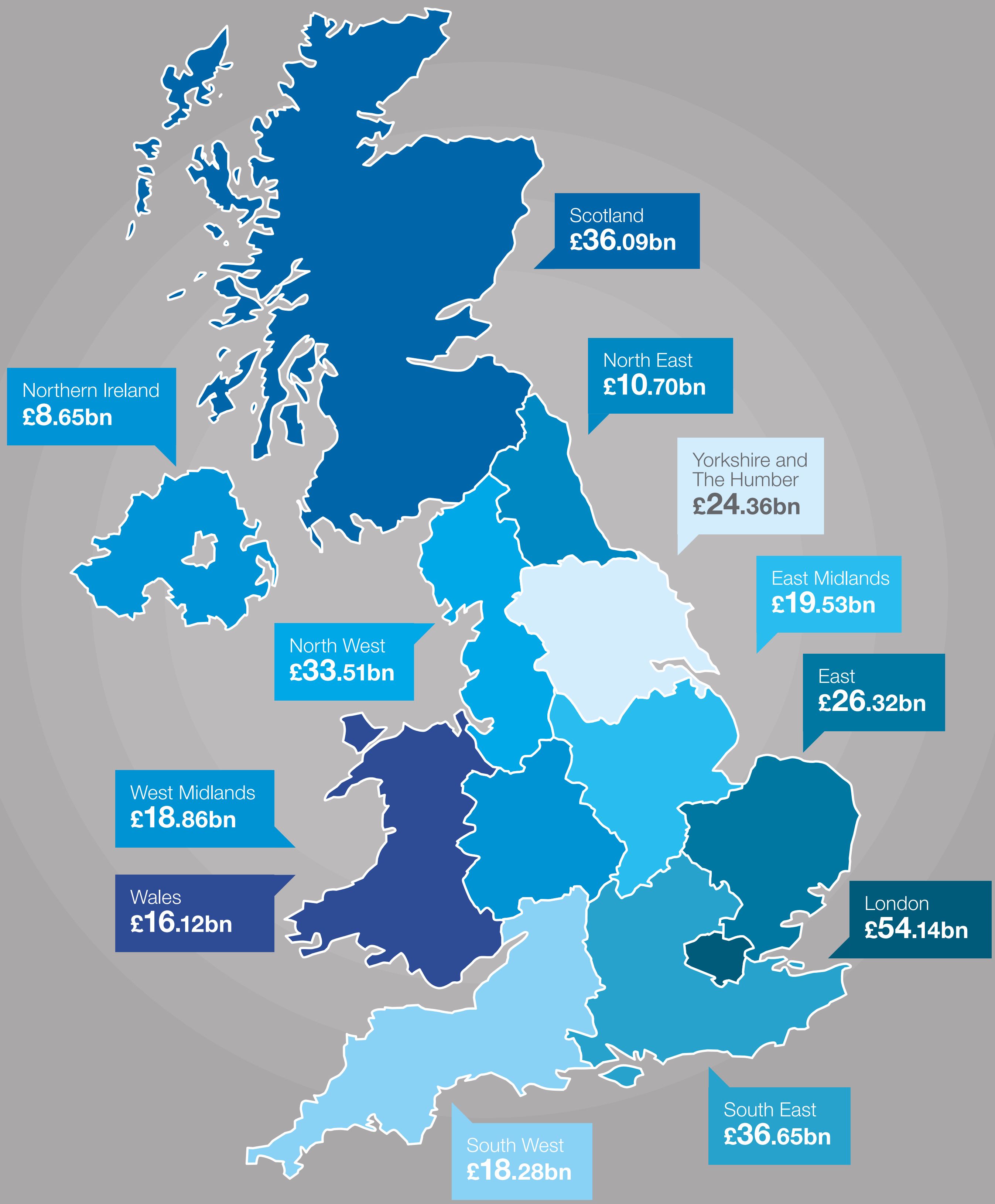
3 times less

The amount of new work in gas, communications and aviation was 3 times less in 2017 than in 1997

Aviation and airport expansion

There are over 40 airports in the UK, including some of the busiest in the world. In 2017, a record 78 million people passed through Heathrow a 3.1% increase that sees Heathrow operating beyond its capacity. A third runway at Heathrow will create far-reaching economic benefits for the immediate community as well as businesses around the country. Though the Government finally announced that the Cabinet is backing Heathrow airport in June 2018, it has been on the agenda since 2006. It is a clear example of an infrastructure project that has been impacted by the electoral cycle and Government indecision. Without quick action the airport is slipping down the world ranking below other European countries, such as France and Germany.

Total infrastructure output in the UK between 1997-2017



England's regions

Devolution has an important part to play in the delivery of infrastructure projects that meet the needs of local communities and deliver localised economic benefits. In 2015, the National Infrastructure Commission (NIC) was established to provide impartial advice to the Government on infrastructure delivery across the UK. The NIC seeks to support sustainable growth across the UK and develop a long term vision for infrastructure delivery in order to generate sustained economic growth.

Infrastructure output in each region of England 1997-2017 (£ billions)

	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
1997	**£0.51**	**£1.57**	**£1.02**	**£1.26**	**£0.86**	**£0.98**	**£2.52**	**£1.60**	**£0.93**
1998	**£0.54**	**£1.52**	**£1.19**	**£1.09**	**£0.95**	**£0.89**	**£2.25**	**£1.66**	**£0.79**
1999	**£0.57**	**£1.46**	**£1.33**	**£0.99**	**£0.93**	**£0.88**	**£2.02**	**£1.69**	**£0.77**
2000	**£0.50**	**£1.23**	**£1.11**	**£0.78**	**£0.97**	**£1.13**	**£1.59**	**£1.61**	**£0.75**
2001	**£0.37**	**£1.00**	**£1.10**	**£0.81**	**£1.11**	**£1.34**	**£2.74**	**£1.33**	**£0.81**
2002	**£0.37**	**£1.88**	**£1.27**	**£0.72**	**£1.34**	**£1.26**	**£2.38**	**£1.45**	**£1.49**
2003	**£0.44**	**£2.11**	**£1.06**	**£0.77**	**£1.10**	**£1.01**	**£2.29**	**£1.41**	**£1.05**
2004	**£0.31**	**£2.00**	**£0.85**	**£0.73**	**£0.92**	**£0.88**	**£1.60**	**£1.33**	**£0.87**
2005	**£0.30**	**£1.62**	**£0.88**	**£0.78**	**£0.76**	**£1.06**	**£1.40**	**£1.50**	**£0.72**
2006	**£0.33**	**£1.20**	**£0.86**	**£0.58**	**£0.75**	**£0.91**	**£1.78**	**£1.32**	**£0.72**
2007	**£0.29**	**£1.03**	**£0.85**	**£0.67**	**£0.78**	**£0.95**	**£2.02**	**£1.19**	**£0.62**
2008	**£0.19**	**£1.45**	**£0.77**	**£0.78**	**£0.90**	**£0.87**	**£2.11**	**£1.16**	**£0.59**
2009	**£0.20**	**£1.46**	**£1.40**	**£0.78**	**£0.85**	**£1.04**	**£2.57**	**£1.53**	**£0.64**
2010	**£0.27**	**£1.72**	**£1.45**	**£0.91**	**£0.96**	**£1.41**	**£3.55**	**£2.37**	**£0.75**
2011	**£0.51**	**£1.59**	**£1.13**	**£1.00**	**£0.98**	**£1.59**	**£4.51**	**£2.92**	**£0.96**
2012	**£0.62**	**£1.13**	**£1.54**	**£1.16**	**£0.82**	**£1.39**	**£4.25**	**£2.01**	**£0.77**
2013	**£0.54**	**£1.39**	**£1.88**	**£1.05**	**£0.70**	**£1.43**	**£4.07**	**£1.69**	**£0.78**
2014	**£0.79**	**£1.65**	**£1.46**	**£0.83**	**£0.59**	**£1.58**	**£2.90**	**£1.67**	**£0.93**
2015	**£0.95**	**£1.76**	**£1.18**	**£1.21**	**£0.72**	**£1.97**	**£2.45**	**£2.37**	**£1.23**
2016	**£0.89**	**£1.99**	**£0.98**	**£1.32**	**£0.75**	**£1.95**	**£2.71**	**£2.30**	**£1.01**
2017	**£1.21**	**£2.75**	**£1.05**	**£1.31**	**£1.12**	**£1.80**	**£2.43**	**£2.54**	**£1.10**

Source: Output in the Construction Industry ONS data

England's regions

London and the South East have historically received the highest percentage of infrastructure output. In 1997, 37% of infrastructure output was in London and the South East and over the past two decades the capital has seen £54.14 billion of infrastructure output – the equivalent of £6,160 per person.

Infrastructure output 1997-2017 in £ billions

North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
£10.7	£33.51	£24.36	£19.53	£18.86	£26.32	£54.14	£36.65	£18.28

Source: Output in the Construction Industry ONS data

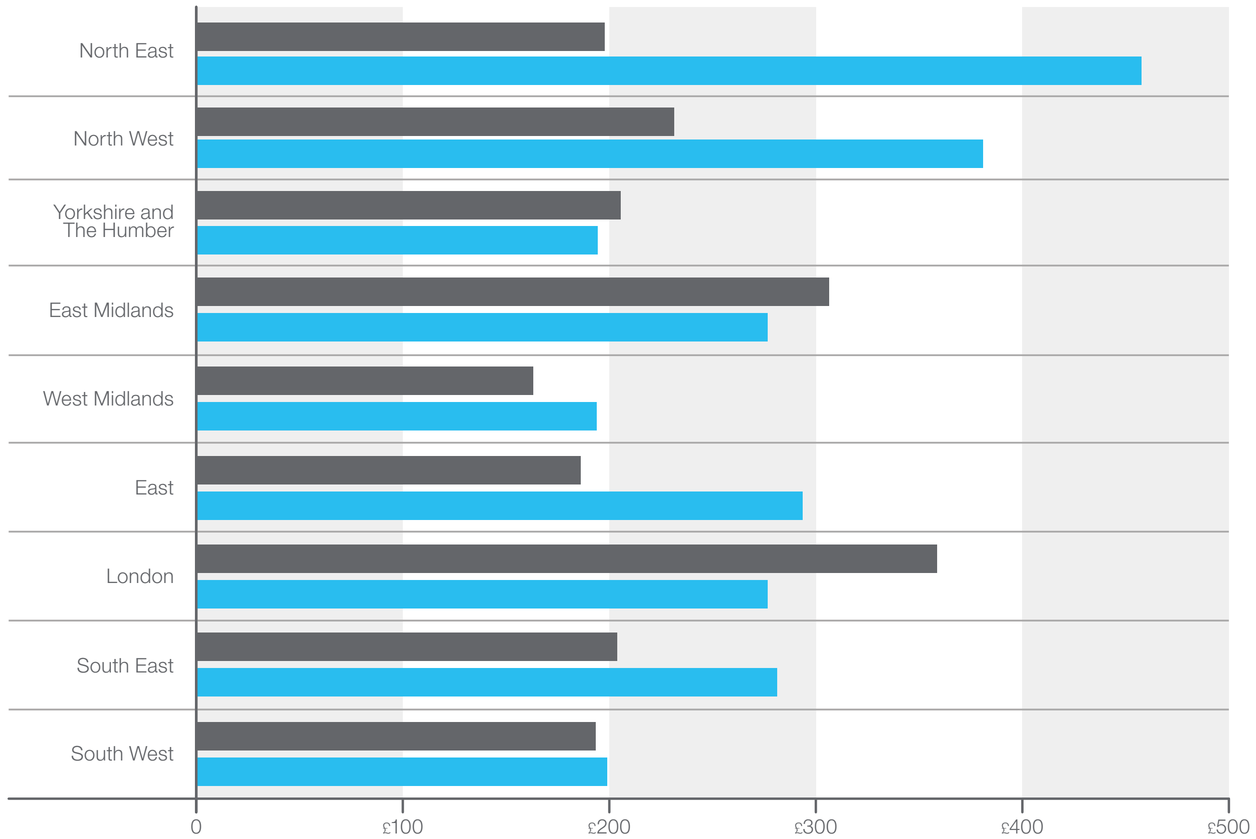
The above table shows that largely the regions in the south of England had the highest infrastructure output in the country. However, when you start to analyse the data relative to the population it starts to show that output is similar in the northern regions as the South East and East of England.

Infrastructure output per person 1997-2017

North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
£4,054	£4,642	£4,488	£4,135	£3,247	£4,294	£6,160	£4,060	£3,315

Source: Output in the Construction Industry ONS data & Population Estimates for UK, England and Wales, Scotland and Northern Ireland: Mid-2016

Infrastructure output per person 1997 & 2017



Source: Output in the Construction Industry ONS data & Population Estimates for UK, England and Wales, Scotland and Northern Ireland: Mid-2016

A more in-depth look at the data shows that in 1997 infrastructure output per person was similar in the North East (£198) and North West (£231) as the South East (£204) and South West (£193). In 1997, London had the highest infrastructure output per person at £359. In the intervening years this trend has changed with London seeing infrastructure output fall to £277 per person in 2017, the same as the East Midlands and lower than both the North East (£458) and North West (£381).

£6,160

Infrastructure output per person in London between 1997-2017

£457.74

Infrastructure output per person in the North East in 2017 was £457.74, up from £197.81

£194

Infrastructure output per person is lowest in the West Midlands at just £194

Spotlight on **London**

Infrastructure projects have often focused on ensuring the capital can remain competitive and attractive globally.

The population of London is projected to increase from 8.3 million people to 10 million by the mid-2030s putting increasing pressure on infrastructure such as transport, water and digital connectivity that are already stretched.

In 1997, infrastructure output in London was £2.52 billion - the equivalent of £359 per person. Output peaked in the capital in 2011 at £4.51 billion a huge £552 per person. The high encountered between 2010 and 2013 is closely aligned to the heavy investment that was made in transport infrastructure in the capital ahead of the London 2012 Olympics. The Olympic Games sped up investment in the east of London, contributing to the regeneration of the area and creation of thousands of jobs. While the Olympics and the legacy it produced was positive, large scale projects often divert resources away from other projects.

10m

The population of London is projected to increase to 10 million by the mid-2030s

£2.43bn

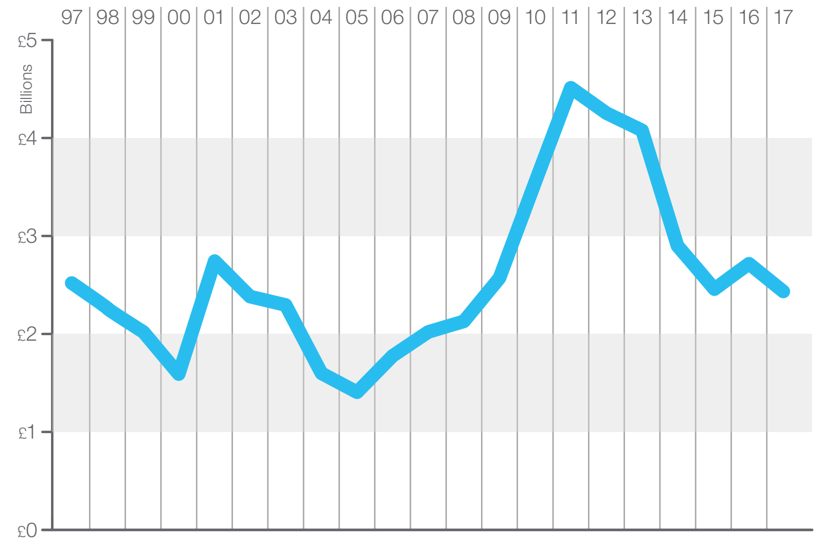
Infrastructure output decreased to £2.43bn last year, it is now lower than in 1997

Infrastructure output has decreased in recent years falling to £2.43 billion last year. Though it is important that infrastructure is delivered across the country it is concerning to see output in London decrease below levels seen in 1997, especially when facing rapid population growth.

The London Infrastructure Plan 2050 identifies and prioritises the areas where infrastructure needs to be delivered, to support economic growth and benefit resident's quality of life. It is important that long-term plans like this are put in place as infrastructure projects invariably span elections, disrupting schedules and the delivery of essential works.

There are a number of identified Opportunity Areas in London where large scale regeneration projects are underway or planned to commence. These huge schemes bring significant change to existing communities and thousands of people are expected to call these places home in the future. Effective co-ordination between the public and private sectors is crucial to ensuring efficient delivery of infrastructure from the outset

Infrastructure output in London 1997-2017

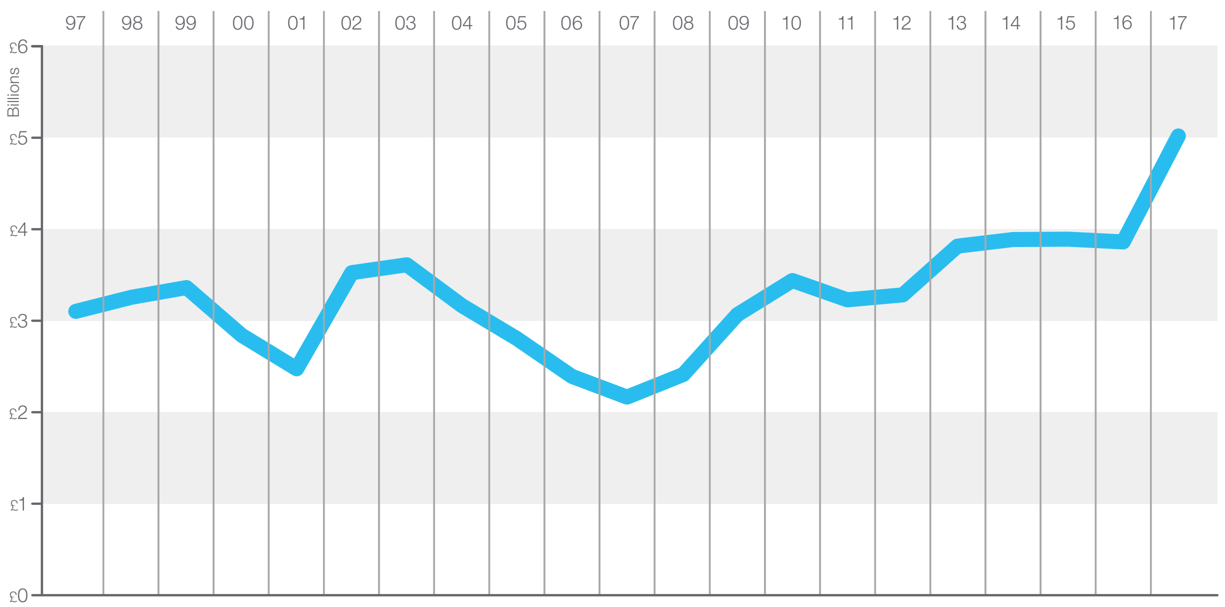


Source: Output in the Construction Industry ONS data

Spotlight on the **Northern Powerhouse**

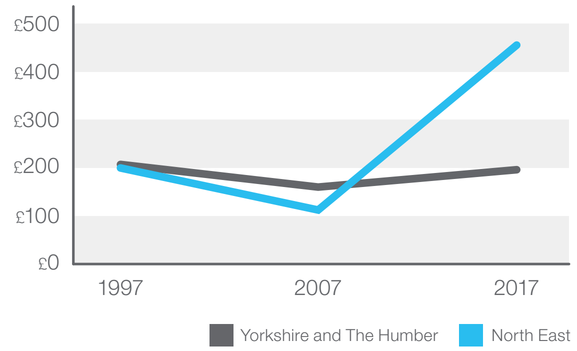
Across the northern regions, including the six core cities that make up the Northern Powerhouse, infrastructure output has increased from £3.1 billion in 1997 to £5.02 billion in 2017, an increase of £112 per person. The Northern Powerhouse has been prioritised in consecutive budgets and driving forward the initiative is a priority for the Government, evidenced by the increased funding the region is receiving for infrastructure projects.

Infrastructure output in Northern Powerhouse 1997-2017



Source: Output in the Construction Industry ONS data

The North East in particular has seen infrastructure output per person increase from £198 in 1997 to £457 in 2017 – the highest output per person in any of England's regions. Yorkshire and The Humber has actually dipped below the level of output per person seen in 1997 by £12.



Strategic projects like Northern Powerhouse Rail and The Great North Rail Project are seeking to connect the northern cities to each other and London to create a faster, more frequent and reliable rail network. Transport for the North is fundamental in driving this vision forward and a prime example of an organisation that transcends local authority boundaries bringing together business and interest groups to deliver the infrastructure needed to drive economic growth.

Cities like Manchester, Leeds and Liverpool are emerging as tech hotspots, attracting start-ups and innovation. More affordable housing and a less expensive cost of living are increasingly drawing people away from London to these cities. The digital economy is an industry still establishing itself and the northern cities are in a prime position to capitalise on the investment being driven into the digital sector.

Though high profile strategic projects are important in delivering new connections. It is also vital that existing infrastructure receives investment. The recent strikes, delays and cancellations on Northern Rail highlight the impact that underinvestment can have on businesses, tourism and everyday lives.

Silver Jubilee Bridge, Halton

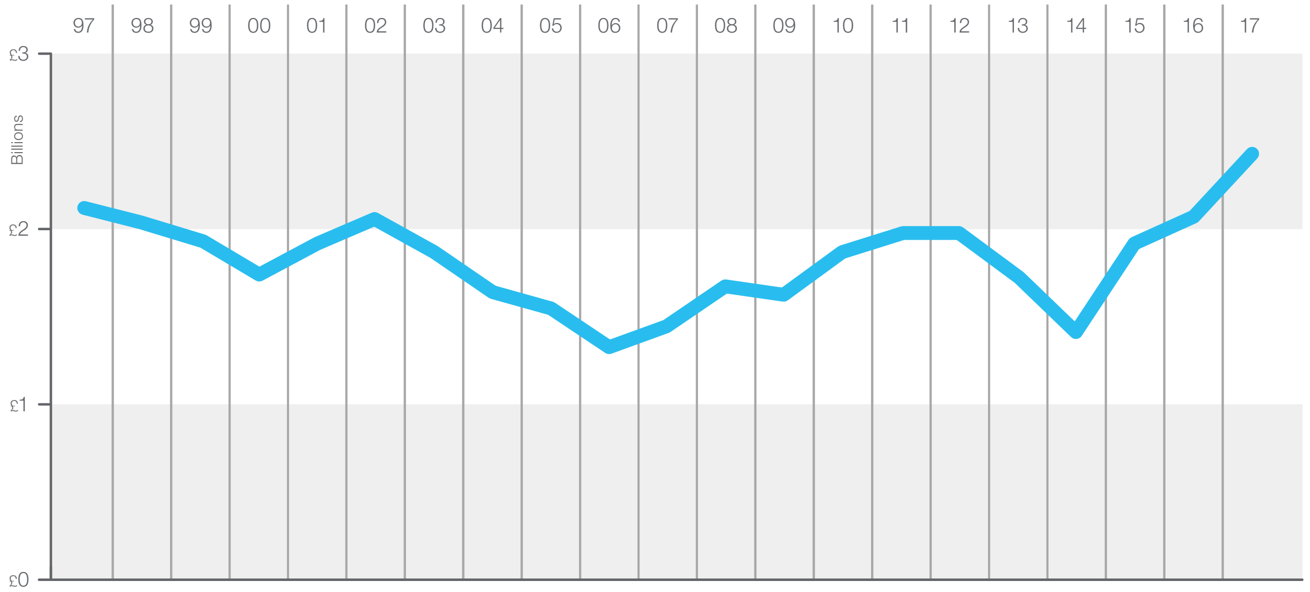
metro mayors

The election of metro mayors in 2017 to Greater Manchester, Tees Valley and Liverpool City Region is another positive step in delivering a devolution deal for regions across Britain. Giving regions greater fiscal responsibility provides cities with the necessary tools to increase growth and job creation.

Spotlight on the **Midlands Engine**

The Midlands, encompassing 11 cities, sits at the centre of the UK geographically and economically. Its position should make it a hub for economic growth and investment yet infrastructure output for the East Midlands and West Midlands has only increased by £0.3 billion in the last 20 years. Last year infrastructure output did reach a high of £2.43 billion across the region. However, due to population growth in the West Midlands the region is seeing extremely low infrastructure output per person at just £194.

Infrastructure output in Midlands Engine 1997-2017



Source: Output in the Construction Industry ONS data

There have been significant steps taken in the last five years to increase job creation and recent labour market figures show that the East Midlands has seen employment levels rise. In fact, the unemployment rate is 4.1%, lower than the national average of 4.3%. The picture in the West Midlands, however is slightly above the national average at 5%*.

Following the release of the Midlands Engine Strategy last March and the election of a directly elected Mayor for the West Midlands Combined Authority in May, the region is being given the opportunity to realise its potential. The investment being made in infrastructure, skills and funding is being injected into SMEs.

£2.43bn

Infrastructure output reached a high of £2.43bn across the region last year

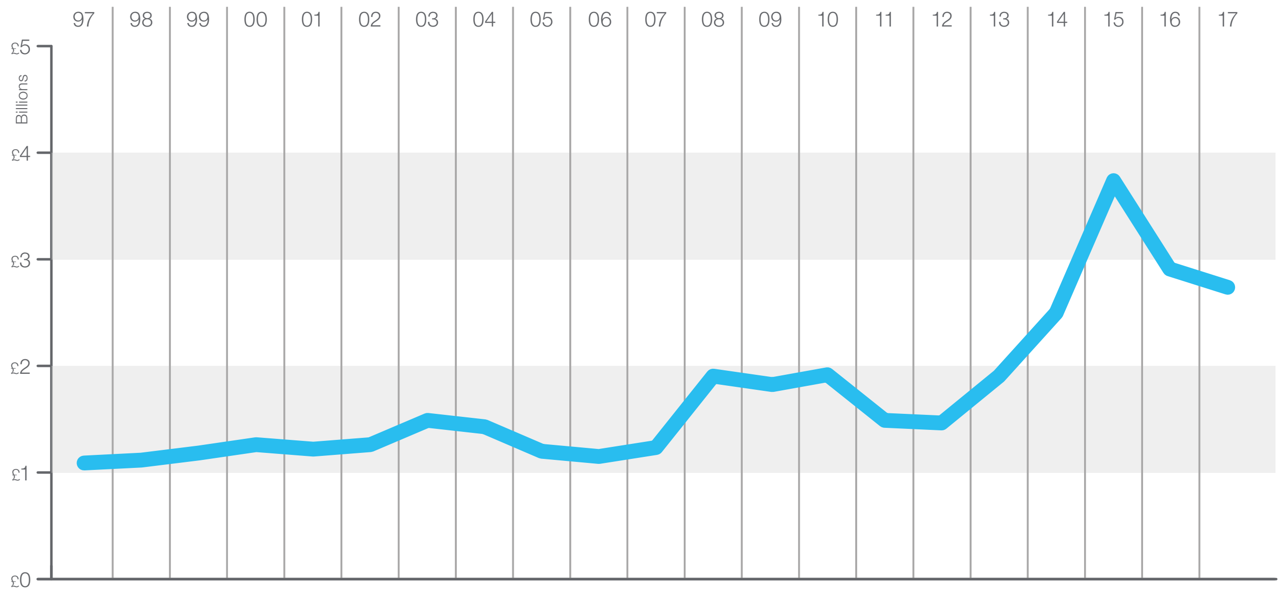
*UK labour market: March 2018, ONS data

The investment being made in infrastructure, skills and funding is being injected into SMEs

Spotlight on **Scotland**

In the last 20 years, Scotland has seen a significant increase in infrastructure output, rising from £1.09 billion in 1997 to £2.74 billion in 2017. There is a wealth of opportunity in Scotland as the Scottish Government and local authorities recognise the importance of delivering infrastructure to unlock economic growth. In 2017, despite a decline in overall infrastructure output Scotland experienced the highest infrastructure output per person in the whole of the UK at £507.

Infrastructure output in Scotland 1997-2017



Source: Output in the Construction Industry ONS data

In 2017, infrastructure projects equivalent to almost 5% of Scotland's entire GDP were underway. Almost 20 years on from the creation of the Scottish Parliament, the benefits of devolution for Scotland's economy and its communities are clear to see. The growth and investment happening in Scotland is having a lasting impact, not only on the health of the economy but on the social fabric of communities through the creation of new apprenticeships, job opportunities and the use of the local supply chain.

5%

Infrastructure projects equivalent to almost 5% of Scotland's entire GDP were underway in 2017

Upfront investment in infrastructure and major regeneration plans are unlocking cities and towns, attracting new businesses and enabling places to grow and flourish. Transport infrastructure is key in Scotland, as it is elsewhere in the UK. There are a number of large scale road and rail projects being delivered such as the Intercity Express Programme, the Queensferry Crossing and Aberdeen Bypass all seeking to ease congestion, reduce journey times and create a more productive economy.

Scotland has also recognised the importance of training the next generation of skilled construction workers with recent figures revealing that the number of Scottish construction apprentices has grown for the seventh consecutive year.

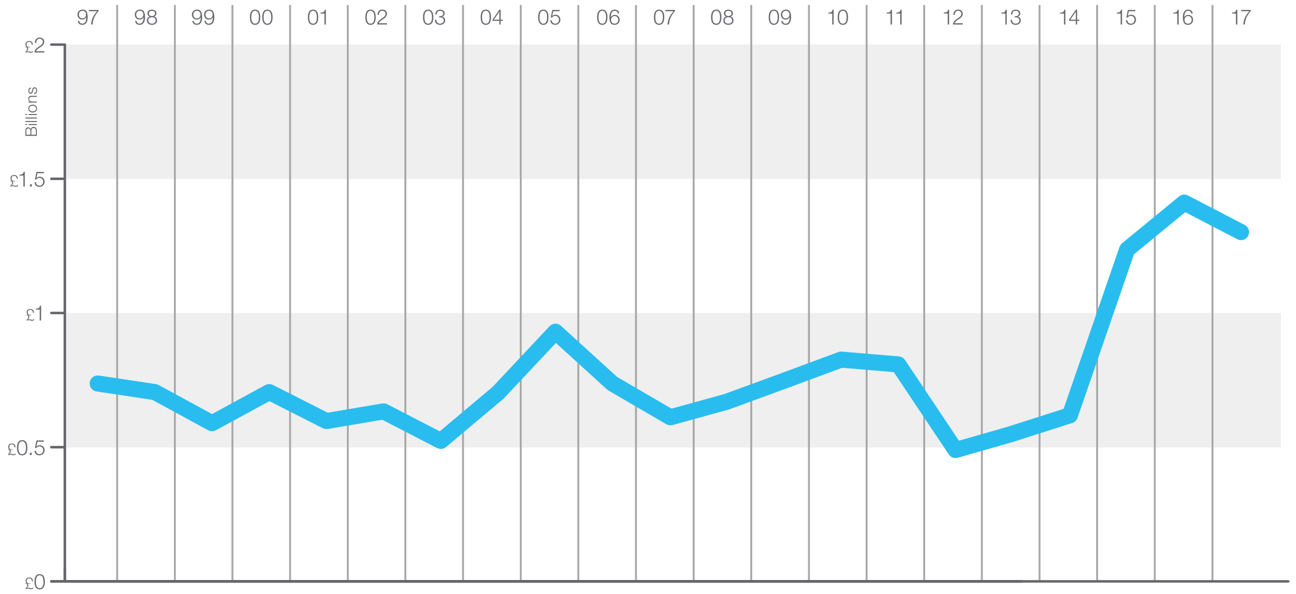
Upfront investment in infrastructure and major regeneration plans are unlocking cities and towns, attracting new businesses and enabling places to grow and flourish.

Spotlight on **Wales**

In 2017, infrastructure output in Wales was £1.3 billion, increasing from £0.74 billion in 1997. The biggest increase for the country was seen between 2014 and 2015 where infrastructure output doubled from £0.62 billion to £1.24 billion. With a population of just 3.1 million infrastructure output per person was higher in 2017 at £418 than London and the South East. Despite this positive increase, Wales still needs significant investment to improve its infrastructure to stimulate growth and employment.

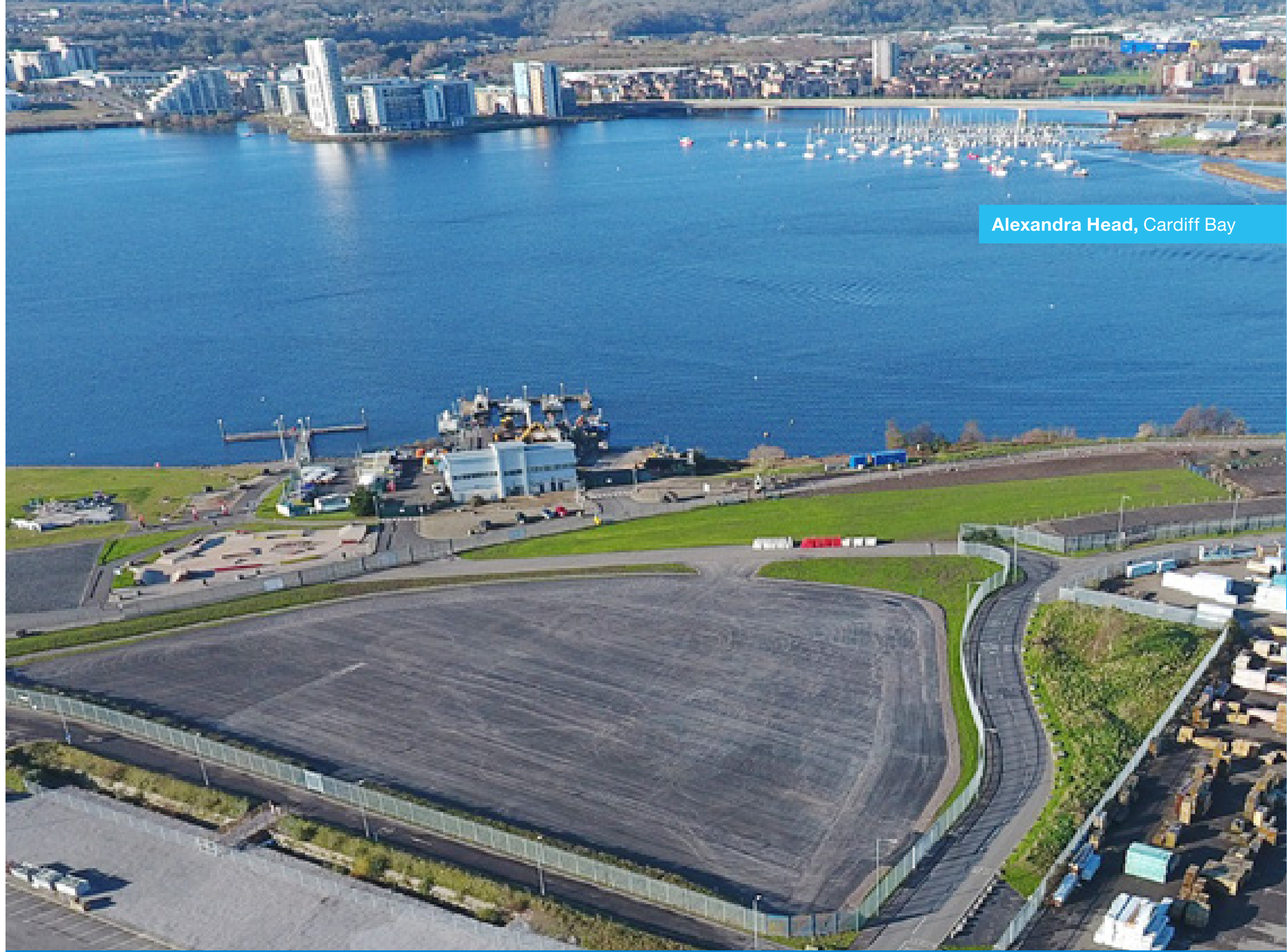
Since the turn of the century, Wales has increasingly taken control of its own funding and decision making. In 2012, the Welsh Government set out its infrastructure investment plan including a £15 billion investment in infrastructure until 2022. Wales is seemingly on track to deliver this investment through a combination of new work and repair and maintenance.

Infrastructure output in Wales 1997-2017



Source: Output in the Construction Industry ONS data

Wales has positioned itself as an attractive place for the energy sector to operate with large scale energy projects like Hinkley Point C, Gwynt y Môr offshore windfarm and Rhyl Flats windfarm making huge contributions to the Welsh economy.



Alexandra Head, Cardiff Bay

£4bn

of funding towards structural improvements received from EU since 2000

2022

In 2012 the Welsh Government set out plans for £15bn investment in infrastructure until 2022

In 2012, Wales was lagging behind the rest of the UK with the country having the highest proportion of households and businesses unable to access superfast broadband. An inability to connect to fast reliable internet creates a digital divide and inhibits businesses from establishing themselves. Important steps are being taken, however to address this through the Superfast Cymru scheme and the Next Generation Access Scheme.

Wales is currently a net benefactor of funding from the EU and since 2000 has received over £4 billion of funding towards structural improvements, including urban development, public sector buildings and infrastructure. Since 2007, the EU has injected £425 million into infrastructure and has funded 290 projects, creating 36,970 new jobs. The Welsh Government is taking important steps to protect its devolved powers following Brexit and encouragingly, is putting plans in motion to ensure that investment to regional economic development is maintained.

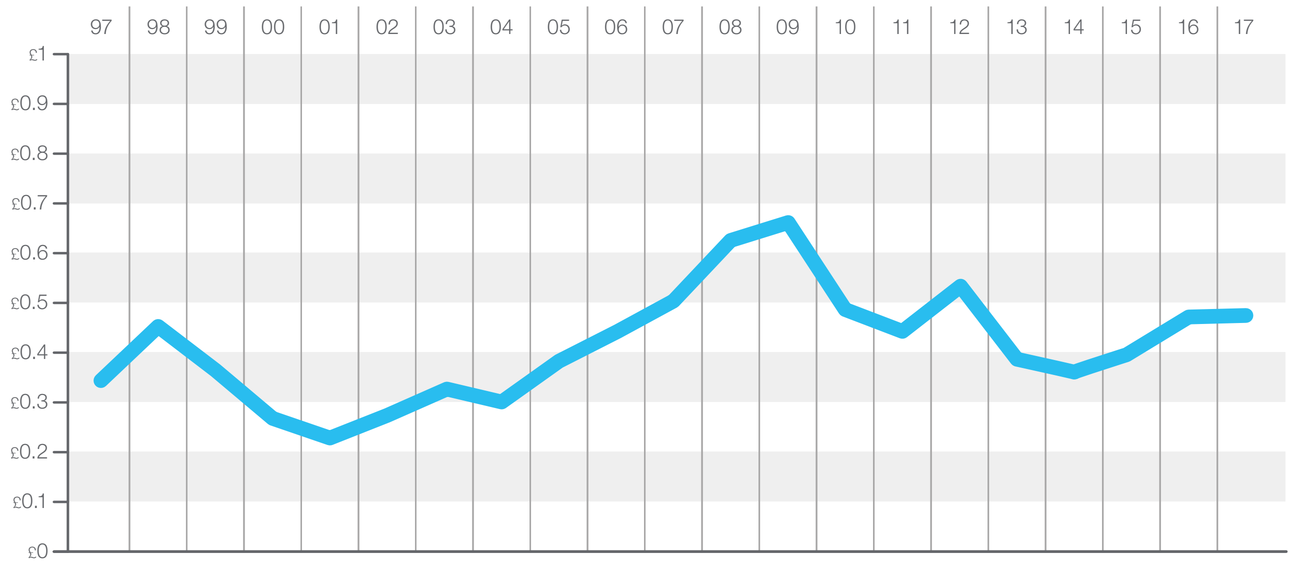
Spotlight on
Northern Ireland

Northern Ireland saw a steady increase in infrastructure output between 1997 and 2009, increasing from £0.34 billion in 2000 to £0.66 billion in 2009. Since 2009, Northern Ireland has experienced reduced investment in its infrastructure, seeing a large drop in output to £0.47 billion in 2017.

The population in Northern Ireland has remained relatively constant since 1997 increasing by just 190,837 people. Infrastructure output per person has fluctuated between a low of £134 in 2001 to high of £367 in 2009. Last year infrastructure output was £253 per person.

While the Investment Strategy for Northern Ireland 2011-2012 sets out the forward programme for delivering improved public infrastructure, the country still needs considerable investment to meet its future demands.

Infrastructure output in Northern Ireland 1997-2017



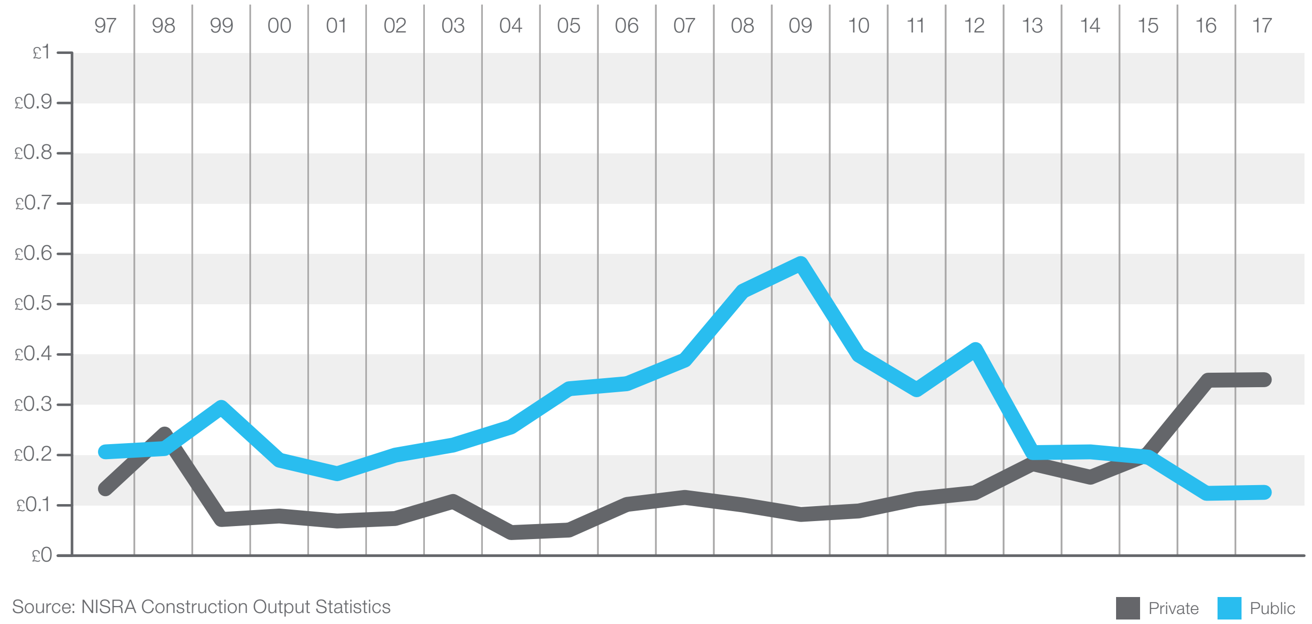
Source: NISRA Construction Output Statistics

In the 2017 autumn budget, Northern Ireland was promised an extra £0.54 billion to spend on infrastructure and unveiled plans to consult on a city deal for Belfast. A positive step in providing the city with the powers to create economic growth and decide how public money should be spent. Only in the last two years has private spending on infrastructure surpassed public spending.

£0.54bn

promised in 2017 autumn budget to spend on infrastructure

Public & Private Infrastructure Output in Northern Ireland



Source: NISRA Construction Output Statistics

£253

In 2017, infrastructure output per person was £253

Perth Transport Futures
for Perth & Kinross Council

Challenge

Over the past 20 years, Perth's position at the heart of Scotland has seen it experience significant economic growth and become a vital strategic hub on the Scottish transport network, providing road connections to major Scottish cities within two hours. This growth has resulted in the city experiencing an increase in congestion and related air quality issues.

The Perth Transport Futures Project, part of Perth & Kinross Council's Local Development Plan, addresses these issues through the delivery of strategic infrastructure that eases road congestion at key points. It also plans for future growth by creating new transport links in areas that have been identified as long-term growth spots in the city.

Action

Through the Scape National Civil Engineering and Infrastructure framework, Balfour Beatty has been working closely with Perth & Kinross Council to develop the first £35 million phase of the Project as outlined in the Local Development Plan.

The works, currently on-site, will see the delivery of a new grade separated road junction on the A9 as well as new link roads to access development land to the west of the city which are due for completion in spring 2019. At peak times, around 100 people have been employed on the project and a number of apprenticeship opportunities have been created.

£2.5m

of savings achieved through value engineering and early design works

100

people employed on the project at peak times and apprenticeships created

Outcome

- The project as a whole will provide both new and improved infrastructure to facilitate the construction of 4,000 new homes and access to 50Ha of employment land. The project will also directly contribute economic outcomes by delivering a significant uplift in Gross Value Added (GVA), net additional employment, private sector investment and net additional tax revenues.
- Developing the project from inception phase, Balfour Beatty and Perth & Kinross Council have worked in an open and collaborative manner resulting in £2.5 million of savings achieved through value engineering and early design works.
- Alongside delivering financial savings that Perth & Kinross Council can re-invest elsewhere, the jointly developed project is being used to create a skilled workforce in the area that can deliver the subsequent phases of the Local Development Plan.
- Through the Institute of Civil Engineers 'Bridges to School' programme, young local people have been engaged on the opportunities available in the infrastructure industry. The project has also sought to help reduce re-offending by working with the Scottish Prison Service to offer ex-offenders opportunities to develop skills and secure employment.

"Delivering this project will help create long-term growth for the Perth area by facilitating both new homes and commercial developments that will bring jobs to the area. The collaboration between public and private sector has seen a very high standard Balfour Beatty team work in line with the NEC contract.

"Balfour Beatty has continually been committed to providing a quality product with the works delivered to a high standard and on programme. They have also provided a structured approach to ensuring the Council meets its objectives in relation to the Scape KPIs, with particular emphasis on local spend, education and training, and community benefits."

Jillian Ferguson,
Roads Infrastructure Manager,
Perth and Kinross Council

Our recommendations

Below we make four key recommendations to ensure essential infrastructure output continues to increase in the coming years and that the UK remains competitive.

A removal of cash retentions and a commitment from clients and contractors throughout the construction industry to ensure payments to Tier 1 suppliers within 14 days, Tier 2 suppliers within 19 days and Tier 3 suppliers within 23 days, in line with the Fair Payment Charter.

Applying retentions does not provide an appropriate or proportional mechanism for ensuring quality, this can be achieved through more collaborative working. The supply chain, in particular SMEs, have their ability to invest in skills and technology limited by the reduction in working capital caused by retentions. This ultimately impedes a company's growth. The Government is currently reviewing responses to a consultation on the practice of cash retentions. Scape, alongside Build UK and CECA, will be continuing to advocate for their complete abolition.

The cascading of payment through the supply chain is essential and by adhering to the Fair Payment Charter, SMEs are provided with assurance on fair and timely payment. It also recognises the huge value that SMEs hold within the industry.

A commitment to driving forward the devolution agenda to support the joined up delivery of infrastructure.

Infrastructure often transcends local authority boundaries meaning collaboration within the public sector is extremely important.

In recent years, important progress has been made to streamline decision making through the creation of combined authorities and metro mayors - this pace of devolution should be maintained.

In addition, steps need to be taken to encourage cross-boundary working to understand and deliver common ambitions and aspirations.

Investment in infrastructure could be provided proportionate to the strength and deliverability of shared ambitions.

A widening of the National Infrastructure Commission's remit to prevent the 'politicisation' of infrastructure decisions.

The National Infrastructure Commission (NIC) holds a central role in independently assessing infrastructure need and advising the Government. However, infrastructure can also be highly emotive and decisions on high profile projects, like the expansion of Heathrow Airport, can fall whim to electoral cycles.

The NIC should be given stronger statutory powers to make recommendations on nationally significant infrastructure projects and encourage cross-party collaboration and support for such projects. This would help to reduce the political pressure on the Government of the day to postpone important decisions.

A commitment to ensuring that all public sector contracts valued at £10m or more, produce at least 20 per cent of that figure in Social Value to the community.

The opportunities that infrastructure development provides for local people should be maximised by ensuring that training and employment opportunities are openly made available and information is provided on how to access them.

A commitment to producing social value of at least 20 per cent on contracts over £10m will strengthen local economies and deliver positive outcomes for communities. This aligns with the Infrastructure and Projects Authority Transforming Infrastructure Performance programme, which seeks to create maximum value from investment in order to deliver real benefits to individuals, communities and the economy.

Commentary

Scape Group

Mark Robinson,
Scape Group Chief Executive

"As the population of the UK continues to rise there is increasing pressure being put on our ageing infrastructure. At the same time, there is a need for flexibility and responsiveness to the huge technological change that is guiding how cities of the future will operate. For the UK, the pressure of population growth is coupled with political uncertainty associated with Brexit and a need to remain competitive and attractive to industry and investment. The ability to keep the country moving is essential; upgrading road and rail links in order to improve connectivity between cities and towns ensures that there is the opportunity for regions to flourish and importantly, for communities to reach their full potential.

"Infrastructure is not just about improving the roads we use every day or building bridges to new locations. Looking beyond the built environment the emphasis needs to be placed on delivering digital infrastructure. Upgrading our network to full-fibre broadband will create the market conditions for businesses to flourish and drive productivity. It is crucial that improvements to digital infrastructure are delivered across the country to avoid the creation of a digital divide.

"Every infrastructure project has the potential to unlock incremental and significant benefits for local people. Creating employment and training opportunities, engaging local businesses and keeping spend local are all 'must haves' within the delivery of infrastructure. This fundamentally means that the wider economic benefits of project delivery can be felt within local communities, as well as within local businesses".

Every infrastructure project has the potential to unlock incremental and significant benefits for local people. Creating employment and training opportunities, engaging local businesses and keeping spend local are all 'must haves' within the delivery of infrastructure.

Scape Procure

Victoria Brambini,
Managing Director of Scape Procure

"To bolster the confidence of the sector and to help replace completed projects with new work, the Government must commit to investing in projects, big and small, that connect communities and deliver vital public infrastructure up and down the UK.

"However, confronted with a more austere economic climate, and with the path to Brexit still unclear, the industry is challenged to find better ways of working. As a result, greater collaboration between public and private organisations is more critical than ever before. Partnering arrangements have multiple benefits, but mainly by creating a competitive market which leads to strong bids. This in turn creates the perfect balance of high quality and cost effective delivery from contractors. It also allows them to do so much more.

"We view our frameworks as a catalyst for social value, and our partners are committed to providing training opportunities and apprenticeships for local people, to help attract young people into the industry and create healthier communities. SME engagement is another vital component of our frameworks, which have achieved fantastic levels of involvement to date with 94% of suppliers and subcontractors across all our frameworks being SMEs.

"Improving our roads, rail links and other services by investing local money into local economies is vital. Demonstrating a considered and fair approach on how expenditure on the delivery of services will generate wider benefits is extremely attractive to local authorities and public sector organisations. Naturally they will want to ensure local communities benefit from the investment.

"Today's challenges present an opportunity to use the power of procurement to shape communities and deliver best value for money, and as an industry we must harness this, and engrain it into all that we do."

We view our frameworks as a catalyst for social value, and our partners are committed to providing training opportunities and apprenticeships for local people, to help attract young people into the industry and create healthier communities.

Commentary

Duncan Green,
Chairman, Perfect Circle and
Managing Partner, Pick Everard

"Connectivity across the UK – whether through high quality road and rail networks or digital infrastructure – is essential, and the delivery of infrastructure projects across the UK plays a vital role in managing the demands of an increasing population and supporting improved productivity to stimulate economic growth.

"It is important that we collectively place real emphasis on this delivery and that the public and private sector work in collaboration to provide greater certainty in making sure schemes happen on time and on budget.

"We have already seen significant steps taken in regions where devolution has taken place – for instance the Northern Powerhouse continues to drive forward schemes such as Great North Rail – thanks to a streamlining in the decision-making process. This regional focus will undoubtedly play an important part in improving efficiencies in delivery.

"By adopting a collaborative approach, we will be able to work alongside the Government and local authority partners to deliver solutions to ensure that the much-needed infrastructure schemes across the UK come to fruition and ultimately result in improved productivity and economic benefits."

We have already seen significant steps taken in regions where devolution has taken place... This regional focus will undoubtedly play an important part in improving efficiencies in delivery.

Dean Banks,
Chief Executive Officer –
UK Construction Services, Balfour Beatty

"This report aims to highlight the change in focus that the public and private sectors must embrace, should we want to realise the benefits of mega infrastructure projects equally across the country at both a national and regional level.

"An increased emphasis on engaging with SMEs and local employers, a consistent approach to assessing wider infrastructure needs, and a further focus on devolving power to a regional level so as to unlock even further localised economic growth and benefits will certainly support in ensuring the UK remains competitive.

"The next decade will see a wave of construction work, with such schemes as HS2, Heathrow, Hinkley Point C and a variety of strategic road network projects from Highways England. If the UK is to deliver these on time and to cost, it is imperative that together, we look to evolve how we as an industry work and deliver."

It is imperative that together, we look to evolve how we as an industry work and deliver.

Methodology

Data for Great Britain was obtained through the Office for National Statistic's Output in the Construction Industry dataset. The dataset provides monthly construction output for Great Britain, including quarterly non-seasonally adjusted type of work and regional data.

Using price indicator data, available within the output in the construction industry dataset, the types of work and regional data were adjusted for inflation (2015=100) allowing a year on year comparison in real terms of historic data to December 2017.

Data for the Northern Ireland-based research was obtained through the Northern Ireland Statistics and Research Agency Output in the Construction Industry dataset. The data from 2000 to 2017 for privately and publicly delivered infrastructure output was seasonally adjusted. The data from 1997 up to and including 1999 was adjusted for inflation using price indicator data.

The definition of infrastructure within this report refers to spending on the development of new physical and organisational structures and facilities or on the expansion of existing projects in a given year. The definition includes investment by the public sector, private sector and investment under the Private Finance Initiative. It excludes spending on repair and maintenance.

Population datasets were obtained from the ONS Population Estimates for UK, England and Wales, Scotland and Northern Ireland.

Office for National Statistic's Output in the Construction Industry dataset is correct as of 11th April 2018.

Northern Ireland Statistics and Research Agency Output in the Construction Industry dataset is correct as of 12th April 2018.

About Scape Group

Scape Group is a public-sector organisation, dedicated to creating ongoing efficiency and social value via the built environment. Scape and its subsidiaries offer fully managed frameworks, property services, innovative design solutions, community investment opportunities and joint ventures.

By bringing together the strongest teams from the public and private sectors, Scape's rapidly deployed, highly measurable and collaborative approach delivers value for money and quality buildings whilst stimulating local economic growth and community enrichment.

Scape operates with a buying capacity of £13bn and has helped to deliver over 2,400 public sector projects with more than 1,800 projects currently in progress. Last year, Scape Group was named the **'Best Client to Work With'** across the public and private sector, at the annual Construction Enquirer Awards.

2,400

public sector projects delivered

£13bn

buying capacity

1,800

live commissions

For press enquiries, please contact:

Scape Group: 0115 958 3200

Matt Carrington-Moore
Chief Marketing Officer
mattcm@scapegroup.co.uk

Sawan Koria
Marketing Coordinator
sawan@scapegroup.co.uk

Instinctif Partners: 0207 866 7854

laura.taylor@instinctif.com
james.mcewan@instinctif.com

Scape Group

2nd Floor, City Gate West, Tollhouse Hill,
Nottingham, NG1 5FN

+44 (0)115 958 3200
general@scapegroup.co.uk

scapegroup.co.uk

@Scape_Group **/scape_group**