

Scotland Manifesto 2016

Building teams:
boosting productivity



Follow us @ACEPolicy
#Scotlandmanifesto





Contents

- Foreword..... 5
- Introduction 6
- Energy 8
- Transport..... 10
- Environment..... 12
- Skills & Capacity..... 14
- ACE economic and policy papers 16
- About ACE 17



Foreword



By investing in Scotland's infrastructure, we are able to build our quality of life now and for future generations.

Infrastructure and the services it provides drives the economy forward by generating jobs, productivity and well-being. However, to deliver long-term infrastructure benefits to Scotland, we need to think about what our national needs are, how we fund and procure projects that meet those needs and how we attract and develop our people to build these projects.



The brakes that have previously been applied to the Scottish government's ability to plan and execute projects in Scotland's interest have now been removed with the further extension of power to the Scottish Parliament backed up with an effective fiscal framework. Now is the time for Scotland to take its future in its own hands and develop the infrastructure network we need.

Our citizens require high quality infrastructure services and so it falls to the Scottish government to use these new powers to consider all forms of funding to ensure that we can improve our quality of life and attract businesses to invest here. Investment in infrastructure has a ripple effect on the rest of the economy, with every £1 of investment generating £2.84 in the wider economy.

In addition, 94% of businesses report that the quality of infrastructure is a decisive factor when planning future investment. Infrastructure has a clear impact on businesses' competitiveness and it remains central to growth.

We welcome the devolution of further power to the Scottish Parliament and would encourage the Executive to now set five year capital expenditure for our key infrastructure projects. This should apply to opex and well as capex spending as we must adequately maintain our assets- otherwise they will fail to perform as intended.

With the 2016 election providing a period of reflection, we would encourage our leaders to focus on the economic and social outcomes which are underpinned by investment in economic infrastructure.



Dr Nelson Ogunshakin
Chief Executive of The Association
for Consultancy and Engineering



Simon Innes
ACE Scotland Chair

Introduction

Scotland's infrastructure network is crucial to our quality of life and the effective functioning of our society yet its true importance only becomes clear when the system starts to fail. Despite the network's importance to the essential wellbeing of Scotland, successive governments over the last thirty years have failed to take a long term view of its investment needs. We now face a situation where we can no longer put off the investment decisions needed at a time when government finances have never been tighter.

The agreement of the new fiscal framework for Scotland paves the way for passage of the Scotland Bill and transfer of significant new powers to the Scottish Parliament. This will ensure that the Government of Scotland has the ability to make the decisions and investments that Scotland needs.


The Association for Consultancy and Engineering (ACE) Scotland as the voice of the consultancy industry working in the built and natural environment is only too aware of the problems we face. To highlight these challenges and to promote the solutions to these problems, ACE has produced this manifesto as an important contribution to the infrastructure debate at the next general election.

Scotland's economic position in the world and its ability to compete in the global race is coming under increasing pressure with the emergence of new economies that are making significant investment in their own infrastructure networks to sustain their economic growth. The continuing success and growth of the Scottish economy is vital if we are to sustain and improve our quality of life. The provision of predictable and affordable energy generation and distribution, water supply, waste management, construction of housing and the transportation of people and goods by rail, road, sea and air are the means by which Scotland will achieve this.

Scotland is facing a potential shortage in peak energy supply that is being exacerbated by the retirement of 55% of Scotland's electricity generation capacity over the next seven years. As this affects an area of responsibility that is not devolved, the Scottish government must ensure that it works with the UK government to create a stable environment for energy investment in Scotland.

Improvements to our road network will also be an important challenge facing the next government. Around one-third of our local roads are in an unacceptable condition and the maintenance backlog stands at over £2bn. Alongside the road network, investment within the rail network is also needed. Following the success of the re-opening of the Borders railways, the Scottish government must continue to push for improved connectivity between the major cities of Glasgow, Edinburgh, Aberdeen, Dundee and Inverness. It must also ensure improved connectivity with the rest of the UK through the extension of HS2 to these two cities and the development of a transport strategy with the Northern Powerhouse.





None of this will be possible unless we ensure that there are enough skilled people in the engineering industry to deliver on the infrastructure needs of Scotland. UK STEM subjects face a skills challenge at all levels. Priorities for the Scottish government include attracting the next generation of employees from all sections of society, recruiting people to replace those who have left or are due to leave the industry due to the economic crisis and upskilling the work force to meet the gaps created by retirement.

A flexible, adaptable, and diverse consulting engineering industry is required to address these future challenges. ACE and its members look forward to working with the Scottish government to help meet these challenges.

Alongside the proposals made in this manifesto, ACE feels that there are several overarching commitments that needs to be made if Scotland is to ensure that it has an effective infrastructure network that meets its needs.

These are:

1. Work to achieve a long-term, cross-party vision for infrastructure, underpinned by sustainable and achievable investment that delivers long term value for money.
2. Undertake an assessment of Scotland's long-term infrastructure needs that takes into account the interdependencies of each sector. This should then be used to feed into the UK National Infrastructure Assessment.
3. Create a Scottish National Infrastructure Commission that would be responsible for assessing the infrastructure needs of the nation and creating the Infrastructure Investment Plan Project Pipeline.
4. Upskill Scotland's workforce and increase the number of engineers to meet future infrastructure needs.
5. Ensure all of Scotland's networks are resilient to changes in demographics and climate.

ENERGY

Powering a better Scotland

The starting point for any country is the generation and distribution of power to enable infrastructure to operate, shops, schools, and hospitals to be open, and people to heat their homes. Indeed, Scotland spends £2.6bn annually on heating and cooling.

Similarly to the rest of the UK, however, Scotland faces a problem in this regard. Excess electricity supply over peak demand in winter 2015/16 could fall to 1.2% from 4.1% in 2014/15 - a large reduction from the 20% margin before privatisation.

This fall will be compounded further over the next seven years because 55% of Scotland's electricity generation capacity will be retired. Longannet coal-fired power station will be shut down in 2016, while Hunterston and Torness nuclear plants will close by 2023, thus increasing pressure on the margin further.

In the absence of new thermal or nuclear development, Scotland will have to become a net importer of electricity. Current interconnected capacity with the rest of the UK is only 40% of Scottish peak demand and although additional interconnection to England will bolster import capacity, the delivery project is experiencing delays.

THE CHALLENGE

55%

of Scotland's electricity generation capacity will be retired over the next 7 years

Scotland spends around

£2.6bn

per year on heating and cooling

The next Scottish government should:

Engage with the National Infrastructure Commission to ensure that there is a stable environment for investment in energy infrastructure across the UK.

Undertake an assessment of Scotland's energy needs up to 2050 with the appropriate scientific and technical advice.

Ensure that energy policy will meet the energy needs of Scotland today and in the future in a sustainable and manageable way that considers all viable energy modes and sources.

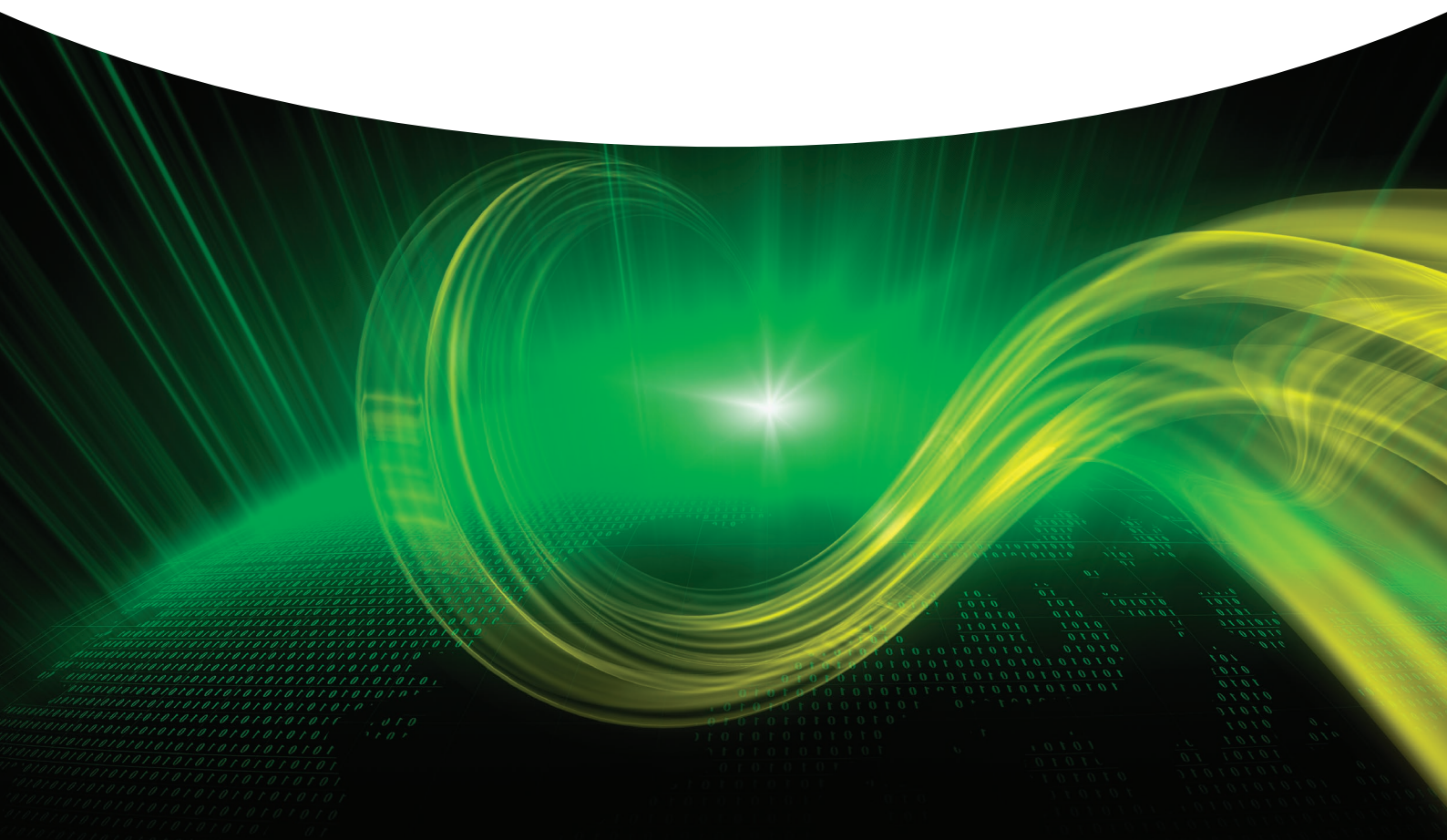
Encourage increased energy efficiency across the nation and incorporate this goal as a central feature of future improvements of and investment in infrastructure.

Aiming towards a better Scotland

The next five years present an enormous challenge to the incoming Scottish government. Without the necessary power supply to meet demand, the economy will be seriously undermined, homes will go cold, businesses will fail, and other infrastructure will cease to function. We must ensure this is avoided.

We must also be careful that the decisions taken today and in the coming days will be in the best interests of sustainability, connectivity, and operability, to enable future generations to best benefit. Scotland will need a balance of new technologies and reliable, well-understood infrastructure to ensure it delivers cost effective solutions for the future.

Working together with energy providers, engineering firms, other governmental organisations, and the communities that require power, will enable the best solutions to come forward. Scotland will then be in a position to look to the future, safe in the knowledge it can face the challenges ahead.



TRANSPORT

Moving to a better Scotland

Scotland's transport networks are the key to being able to access new jobs, training, and markets and as such must be a top priority for any Scottish government. Around one-third of our local roads, however, are in an unacceptable condition and the maintenance backlog stands at over £2bn. 'Patch and mend' approaches, simply preventing further deterioration, of already sub-optimal assets is calculated to cost £245.5m per year.

This is in spite of roads projects receiving a substantial share of the £14bn invested in transport since 2007. Indeed, investment in major roads projects has helped reduce congestion in spite of motorway usage growing by 8.7% over the past 5 years.

Short-sea shipping is recognised as playing a role in reducing freight transport by road, and in 2013 Scotland's ports handled 72m tonnes of freight. However, figures have been in decline since the early 2000s. Scotland's ports and harbours are considered to be in good condition, but concern has been expressed about a lack of private owner investment at some facilities.

Connectivity with London and the rest of the UK will also be a key issue for any incoming administration, with a decision expected on new runway capacity around London and the prospect of HS2 being extended up to Scotland. The next Holyrood government needs to be at the forefront of these discussions to ensure the Scottish people do not lose out.

THE CHALLENGE

The Scottish
Government spends over

£2bn

per year on transport projects

This amounts to around

£833

per household per year



The next Scottish government should:

Commit to working with local authorities to addressing the roads maintenance backlog and ensuring the network is fit for a twenty-first century economy.

Ensure that our ports, which are currently an under-utilised resource benefit from investment and development to enable better access to global markets for goods.

Speak up for Scottish aviation to ensure that any new runway capacity, wherever it is sited, takes connections with our airports into consideration.

Continue to put the case for HS2 to extend to Scottish cities, as well as investigate the benefits of linking Edinburgh and Glasgow with a new high speed rail line.

Continue to improve the trunk road network on the A9, A96 and beyond to connect together the whole of the Scottish community.

Aiming towards a better Scotland

The upcoming election represents a significant opportunity to ensure that the foundations are laid for a future where Scotland's transport infrastructure is fit for a twenty-first century purpose. Businesses need to know they can move people and goods around quickly, efficiently, and affordably, while strong commitments from Holyrood will ensure confidence and certainty for the construction sector.

This connectivity cannot be limited to just the large-scale, strategic level, however. Focus and investment must also be given to small, targeted interventions that reduce congestion, promote sustainability, and improve the travelling experience. This will all contribute to a Scotland that is more pleasant to live in and improves the wellbeing of its citizens.

Transport is rightly recognised as a key driver towards economic growth and competitiveness in Scotland. The next five years will provide an opportunity for whomever forms the next government at Holyrood with the chance to embed the right conditions to ensure a prosperous future.

ENVIRONMENT

Making a Better Scotland

Flooding has devastating socio-economic and environmental consequences, and costs Scotland £700m per year. While Scotland has tended to suffer less than other areas of the UK, Scottish Environment Protection Agency (SEPA) has identified 243 potentially vulnerable areas (PVAs) where the potential impact is sufficient to justify the further appraisal of flood risk management actions.

During the last regulatory period £2.5bn was invested in the water network, with £3.5bn planned for 2015 - an average of £590m per year over 12 years. Work to date has reduced leakage by 47% between 2004/05 and 2013/14. But around a third of the total clean water to supply is still lost to leakage, which is high compared with the rest of the UK.

While drinking water standards too, have risen substantially in the past 10 years, achieving 99.89% compliance, the DWQR reported a substantial rise in microbiological water quality issues in 2014. This reinforces the importance of designing, building, maintaining and operating resilient assets.

Business waste data falls within commercial and industrial (C&I) waste data, and waste from the C&I sector comprises about 80% of the total waste generated in Scotland. The current ambition would see no more than 5% of all waste generated in Scotland being sent to landfill by 2025.

In addition, Scotland has around 10,874 hectares of brownfield land classed as derelict or urban vacant land. This should be put to more efficient use as a matter of priority, whether as housing or economic developments.

THE CHALLENGE

£3.5bn

will be spent on the water network between now and 2021

Flooding is estimate to cost Scotland around

£700m

per year

The next Scottish government should:

Reduce construction site emissions – Emissions from Non-Road Mobile Machinery (NRMM) on construction sites, must be tackled. There needs to be proper enforcement of the scheme which requires such machinery to meet tough standards.

Brownfield land remains an under-utilised resource – New housing and non-domestic development should be on brownfield sites where possible. ACE's 'Revolutionising Housing' paper proposed that the cost of preparing such land for development could be met by capturing the land value uplift that occurs as development takes place.

Aiming towards a better Scotland

The next administration in Holyrood must ensure that it acts as a responsible guardian for the environment, to enable our children are able to live in a clean and stable world. The challenge of climate change is one of the most pressing that faces us today, and to do nothing to limit and mitigate its impacts would be a dereliction of our responsibilities to the next generations.

Our communities will need to be made more resilient in the face of increasing flood risks or else they will be unable to thrive, continually picking the pieces up from one disaster after another. And with sustainability a key issue, it will be vital that Scotland's water resources are stored and distributed as efficiently as possible, with as little wastage as can be managed.

Finally, efforts towards instigating a fully circular economy will see Scotland become one of the most efficient areas in the world, limiting waste to landfill and utilising resources such as brownfield land quickly and effectively. This is a challenge we must all face if the country is to be successful in the coming years.



SKILLS & CAPACITY

Making a better Scotland

UK growth forecasts of 21.7% in construction by 2019 highlight the immediate need for a sufficiently numerous and skilled workforce. This translates in Scotland to a need for an annual recruitment requirement of 4,270, given current Scottish growth estimates for the construction sector to 2020. Part of this will be due to an ageing workforce, with over 30% of people in employment over the age of 50.

As worrying perhaps is the fact that the UKCES Employer Skills Survey identified that those working in the construction sector were less likely to be offered training or development opportunities than other sectors, and longer term workforce and succession planning was lower than average.

An estimated 760 additional civil engineers are required each year to meet industry needs. This sits in the context of a 9% reduction in numbers of Higher Education students studying civil engineering in the period 2009-10 to 2013-14, and a 32% reduction in the number of Further Education students on civil engineering courses over the same period.

Although the number of women in the profession is slowly rising with graduate numbers at 18%, women represent only 10% of ICE's membership – a number mirrored across all engineering disciplines, which continues to lag behind European competitors.

Increasing the participation of women in the labour market could be worth between £15 billion and £23 billion (1.3-2.0% GDP), with STEM accounting for at least £2 billion.

THE CHALLENGE

67,000

unemployed 16-24 year olds
in Scotland

The UK faces a shortfall of

42,270

new engineers per year needed
to meet demand

To next Scottish government should:

Ensure that the Infrastructure Investment Plan Project Pipeline incorporates the future capability and capacity needs of the Scottish workforce to meet long term infrastructure projects.

Improve the uptake of Science Technology Engineering and Maths (STEM) subjects in schools.

Address the fragmented nature of small-scale STEM education initiatives to improve their coordination and impact.

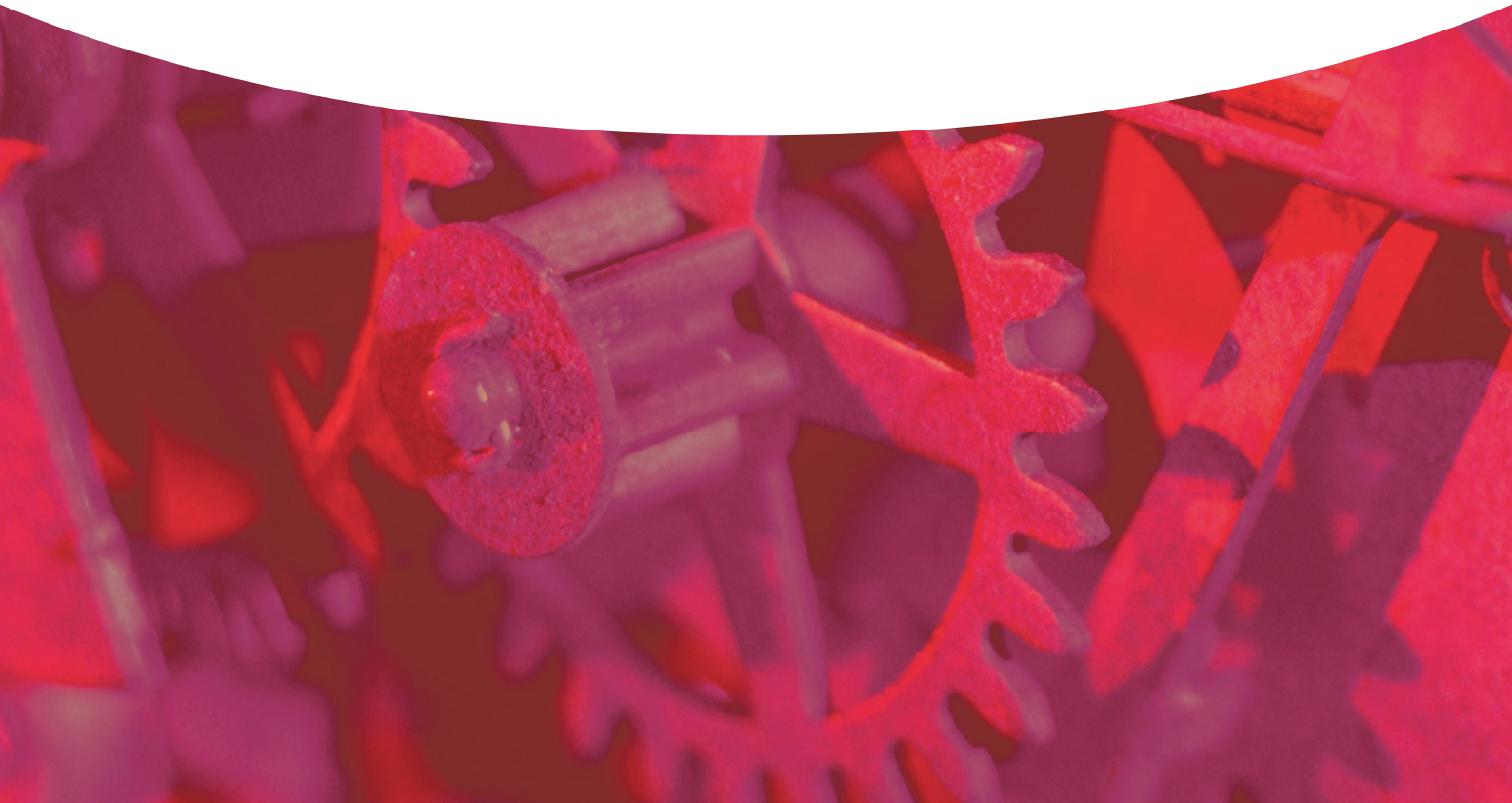
Work with industry to create clear pathways between school and further/higher education and work in civil engineering.

Promote the benefits and awareness of Modern Apprenticeships to students and employers through the development of schemes similar to the Highland Shared Apprenticeship Scheme.

Aiming towards a better Scotland

Getting the issues around skills in the engineering sector is a vital part of ensuring the capital will have the infrastructure to enable it to grow and thrive. Providing young people with a good grounding in vital STEM subjects, inspiring them to take up careers in engineering, and giving them an understanding of the variety of routes to a career as a professional engineer will provide the pipeline of talent we need. In addition, the diversity of the engineering community will have improved so making better use of the whole talent pool.

Ensuring education and training programmes are well-funded, rigorous, valued, and up to date will provide the confidence employers need that they are delivering the knowledge and skills required. Companies will then have the staff they need to deliver projects to quality, time and budget requirements.



ACE economic and policy papers

This paper forms part of a growing portfolio of research by ACE into the effects of infrastructure on the wider economy.

Electricity Market Reform: Generating Results

This paper explores the role of the current energy companies in the retail and generation sectors, and suggests reforms to EMR.

Funding Roads

This paper explores inefficiency within the road network and possible funding and financing solutions for the future.

Revolutionising Housing

This paper is the second in ACE's housing paper series and explores in detail a new model to rebalance the incentives for development.

The Housing Gap

This paper is the first in ACE's housing paper series and explores in detail the conditions within the UK housing market.

State Investment Bank

This paper is the final paper in ACE's infrastructure investment series and explores in more detail the rationale and practicalities of establishing a State Investment Bank.

Green Investment Bank

This paper is the fifth in ACE's infrastructure investment series and explores in more detail the rationale behind the Green Investment Bank and the challenges it faces going forward given market conditions in 2012.

Pensions and Infrastructure

This paper is the fourth in ACE's infrastructure investment series and explores in more detail the current conditions within the market, and the implications they have on pension funds' investment potential into infrastructure.

Performance of PFI

This paper is the third in ACE's infrastructure series and examines how to improve procurement in Public Private Finance Models (PPFM).

Public Private Finance Models

This is the second in ACE's infrastructure series and explores in more detail the rationale, performance and conditions that surround Public Private Finance Models (PPFM).

Performance of PFI

This paper is the first in ACE's latest infrastructure series and reviews the performance of historical PFI data to learn lessons for the development of new financing models.

The 2014 Budget

ACE's analysis – A comprehensive analysis of the 2014 budget, the economic and fiscal outlook from the Office for Budget Responsibility and the Infrastructure Delivery Update.

Budget Submission 2014

Budget submission to HM Treasury for 2014.

ACE reports on detail of Autumn Statement

A full analysis of the Chancellor of the Exchequer's Autumn Statement, the updated National Infrastructure Plan and the Office of Budget Responsibility report on the economy.

Barriers to Investment

Explores a wide variety of aspects that act as barriers, or significantly change the risk profile of an investment project. These processes are important within the investment cycle and should be understood by all parties involved.

Infrastructure: A case for Funding

This report reviews and analyses a range of material that is openly available to ascertain what effect infrastructure investment has on the economy.

About ACE

As the leading business association in the sector, ACE represents the interests of professional consultancy and engineering companies large and small in the UK. Many of our member companies have gained international recognition and acclaim and collectively employ over 250,000 staff worldwide.

ACE members are at the heart of delivering, maintaining and upgrading our buildings, structures and infrastructure. They provide specialist services to a diverse range of sectors including water, transportation, housing and energy.

The ACE membership acts as the bridge between consultants, engineers and the wider construction sector who make an estimated contribution of £15bn to the nation's economy with the wider construction market contributing a further £90bn.

ACE's powerful representation and lobbying to government, major clients, the media and other key stakeholders, enables it to promote the critical contribution that engineers and consultants make to the nation's developing infrastructure.

Through our publications, market intelligence, events and networking, business guidance and personal contact, we provide a cohesive approach and direction for our members and the wider industry. In recognising the dynamics of our industry, we support and encourage our members in all aspects of their business, helping them to optimise performance and embrace opportunity.

Our fundamental purposes are to promote the worth of our industry and to give voice to our members. We do so with passion and vision, support and commitment, integrity and professionalism.

Policy and External Affairs Team

Julian Francis

Director of Policy and External Affairs

ACE

E: jfrancis@acenet.co.uk

T: + 44 (0) 207 227 1894

Peter Campbell

Senior Policy Manager

ACE

E: pcampbell@acenet.co.uk

T: + 44 (0) 207 227 1885

Clare Rice

Scotland Manager

ACE

E: claire.rice@brodies.com

T: +44 (0) 141 245 6214

Further information

For further details about this publication please contact the authors:

ACE
0207 227 1882
pea@acenet.co.uk
www.acenet.co.uk

Disclaimer

This document was produced by ACE and is provided for informative purposes only. The contents is general in nature and therefore should not be applied to the specific circumstances of individuals. Whilst we undertake every effort to ensure that the information within this document is complete and up to date, it should not be relied upon as the basis for investment, commercial, professional or legal decisions.

ACE accepts no liability in respect to any direct, implied, statutory, and/or consequential loss arising from the use of this document or its contents.

No part of this report may be copied either in whole or in part without the express permission in writing of the Association for Consultancy and Engineering.

© Association for Consultancy and Engineering 2016



Association for Consultancy and Engineering

Alliance House
12 Caxton Street
London
SW1H 0QL
T: 020 7222 6557
F: 020 7990 9202
pea@acenet.co.uk
www.acenet.co.uk