



ice

South East
England

ICE South East England - Our Vision for the Region

Welcome



Nick Gray, FICE

chair, ICE South East England regional committee

I have been chair of ICE South East for nearly two years. In that time, I have come to fully appreciate the scale, complexity and potential of our region. We are home to some of the nation's most significant infrastructure. These are assets and systems that support our communities today and will shape the lives of future generations.

I have been a member of the ICE for almost 30 years, and throughout that time I have found a true professional home within the Institution. What stands out most is the diversity of our membership. We have individuals from many different backgrounds, disciplines and experiences. We are united by a shared purpose to create infrastructure that delivers meaningful benefit to society. The pride in what we can achieve together as ICE members is something I see demonstrated time and again.

With its long and distinguished history, the ICE remains a unique and vital platform for civil engineers, technicians

and infrastructure professionals to come together. It is a place where ideas are shared, expertise is combined and solutions are developed collaboratively. This spirit of collective endeavour has defined the Institution since its foundation and continues today through the commitment and passion of our members.

Quite simply, the Institution is its members.

Across the South East, thousands of individuals give their time and expertise to support our work. They contribute through Regional or Branch Committees, speak at events, support our awards, act as Professional Reviewers, and engage as STEM Ambassadors. Many also represent the profession in the media or help shape reports such as this one. These volunteers form the foundation of our community. We warmly welcome anyone who would like to get involved. With approximately 10,000 members living and working across the South East, around 10 percent of ICE's global membership, we represent a significant and influential collective voice. It is a voice we are keen to strengthen further, so that we reflect the full breadth of expertise and experience across our region.

When I took over as the Regional

Committee chair in 2024, my ambition was to increase our influence, extend our reach and deepen engagement with our members, industry and wider society. Since then, we have made strong progress in raising the profile of ICE South East and strengthening our connections across the region. This report marks an important step in going further.

Above all, this report is intended to start a conversation. It invites all of our members to engage, to share their insights and to help shape the future direction of infrastructure in our region. Have a read and do join in.



Zoë Hutchison,

incoming chair, ICE South East England regional committee

As the current senior vice chair of the ICE South East Regional Committee, I succeed as regional chair this autumn. It is an incredibly exciting time to be working with ICE South East, and I would encourage as many of you as possible to find out how you can get involved with our work.

This Vision report sets out our regional perspective on infrastructure. It highlights both its importance and the challenges we face. From climate change and water stress to population growth and ageing assets, the demands on infrastructure in the South East are significant and growing.

Addressing these challenges will require collaboration, innovation and leadership across our profession. This is a key initiative for us and there will be many ways that you can become involved.

The ICE can be a home for us to all work collaboratively to address some of the challenges we face in our working lives. Our regional and branch Committees are run by volunteer members for the wider benefit of the 10,000 members across our region. We are here to support you, be it through CPD opportunities, awards to recognise achievement, speaking to media on behalf of the industry, or supporting the next generation into our industry.

I encourage you to read this report with your future in mind, and to consider the role you can play in delivering infrastructure that is resilient, sustainable and trusted by society. There is something that every member can offer, so please do find your home with us.

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The ICE - Who we are and what we do

The Institution of Civil Engineers is more than a professional institution. We are the home of infrastructure.

Having received our Royal Charter in 1828, we are an established charity whose object is to foster and promote the art and science of civil engineering. We are proud of our 95,000-strong global membership, our more than 200 years of history, and our enduring commitment to delivering sustainable and high-quality infrastructure.

We champion engineering professionals who design, build and maintain the infrastructure that we all rely on. In 2025 the ICE unveiled a new five-year strategy, which sets out how we will support members and the sector in pursuit of a vision for a world where infrastructure enables people and the planet to thrive.

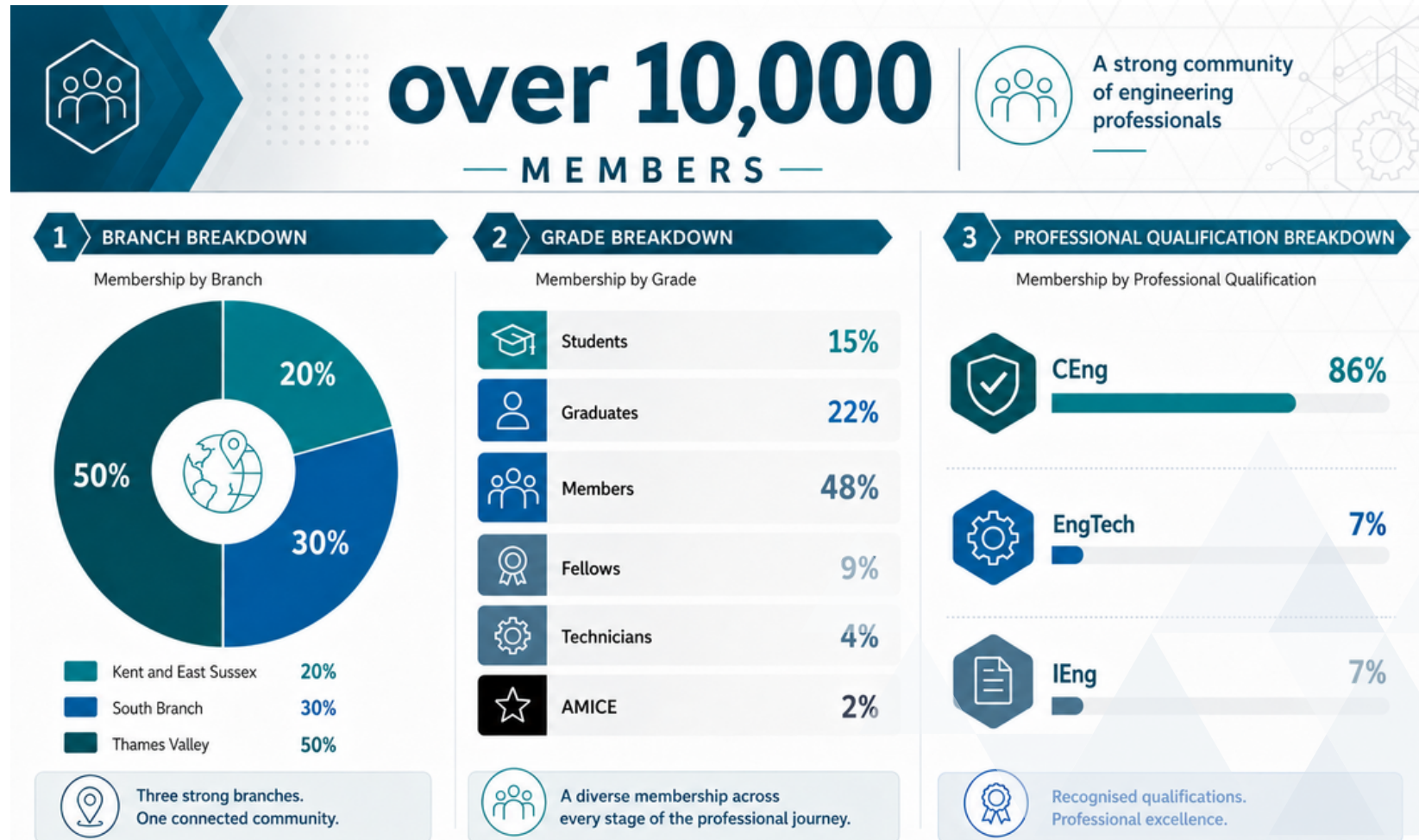


ICE South East - Representing our diverse membership

ICE South East represents over 10,000 members across all grades and professional qualifications.

Supported by the ICE staff, the ICE South East Regional Committee is made up of volunteer members and organised to both represent and support all members across our region.

We have a broad and diverse membership, which includes members at different stages of their professional career, covering different sectors of infrastructure.



over 10,000 members driving our profession forward



3 strong branches across the region



A diverse community at every career stage

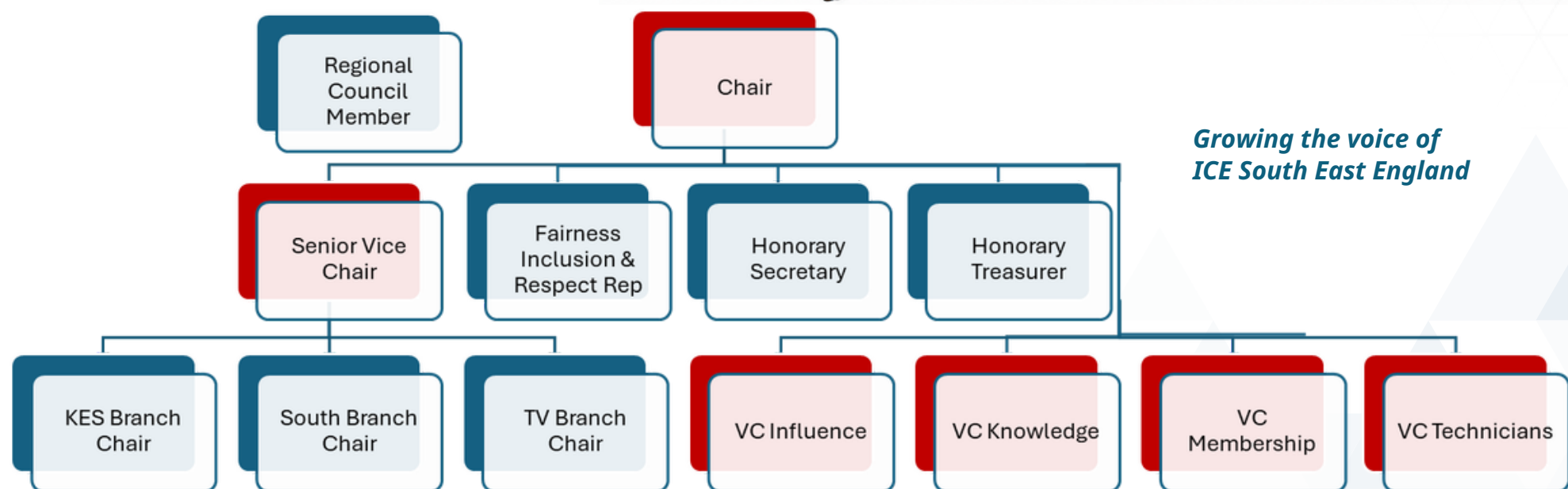
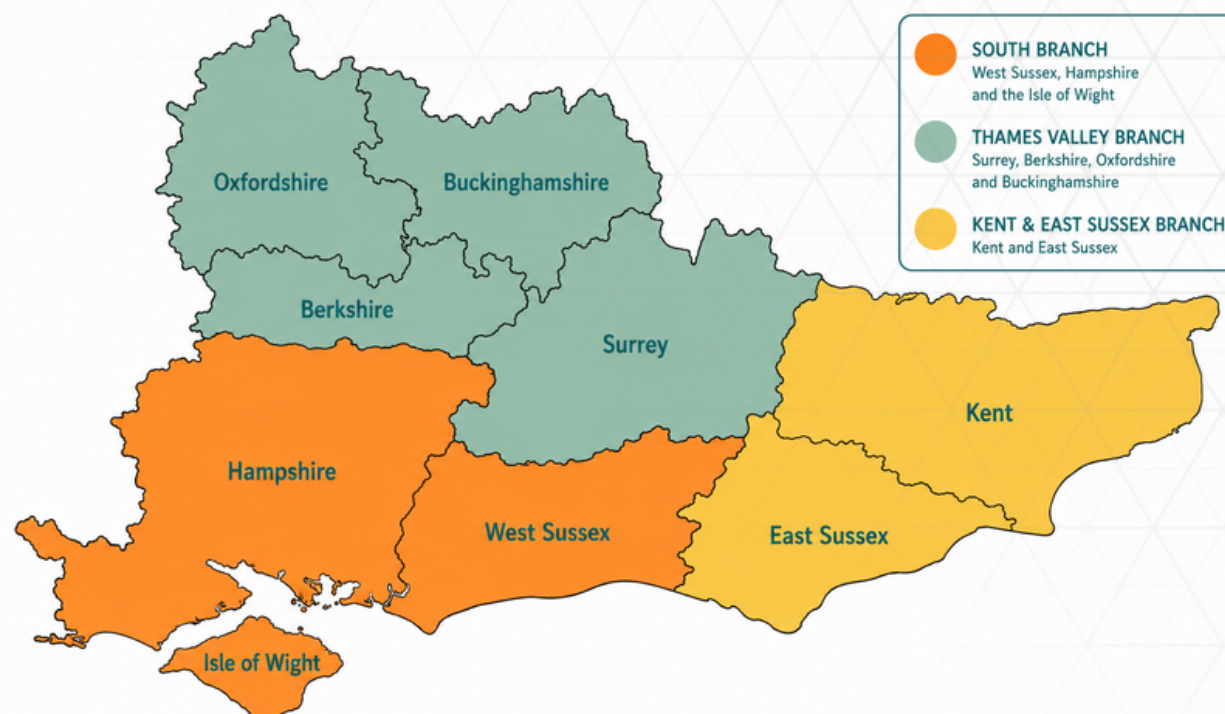


Professional standards for a better future

ICE South East England includes three branches which support members on a local level. Our three branches are: Kent and East Sussex, South Branch, & Thames Valley.

Each of these branches is led by a Branch Committee of volunteer members, who create the programme for membership in that area.

Our branches are the heartbeat of our region. They run events and activities for ICE members, to share knowledge and expertise.



*Growing the voice of
ICE South East England*

A direct conduit into the local identity of our branches – regional lens with a local focus

Saying the right things to the right people

Knowing the right things

Connecting with our members

Positively engaging directly with a key group in our region

The South East region – who does our infrastructure serve?

The South East of England covers the counties of Berkshire, Buckinghamshire, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey and East and West Sussex.

We are the most populous region in England, with over 9.3million people, and this is expected to grow to just under 9.7million by 2032 ([ONS](#)).

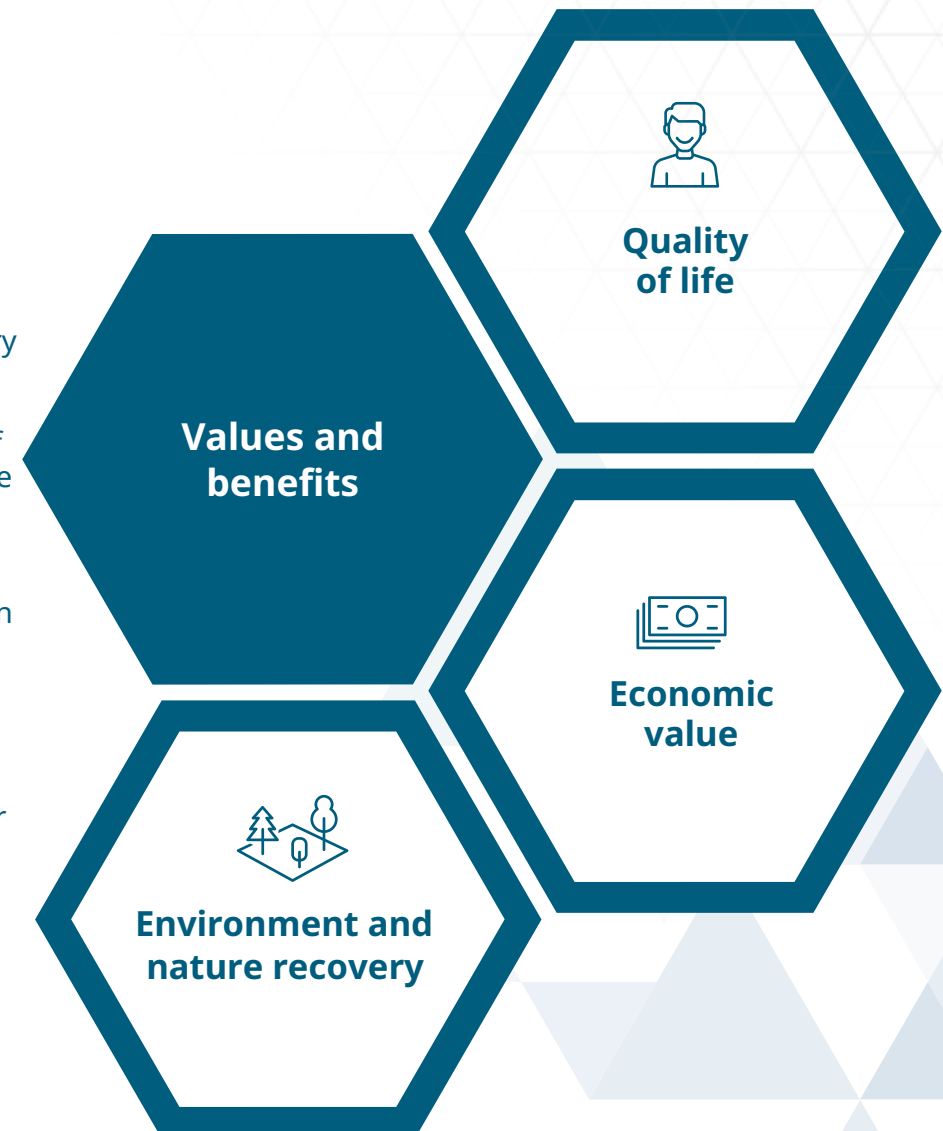
The South East is critical to both its own and the broader Nation's success.

However, with population and housing growth, climate change and the need to protect the natural environment that feeds and sustains us, infrastructure in South East England must be both recognised for its value (not just when it fails) and understood for the part it will play in sustaining and growing the region's economic, social and environmental future.

South East England is steeped in history – covering over 19,000 sq km, South East England has played a vital role in our nation's history - from the Battle of Hastings in 1066, to being pivotal in the Battle of Britain - much of which was fought from the region's RAF bases.

The region saw the first blast furnace in Britain in the late 1400's, the first Lighthouse with electric light, and Portland cement was developed in Northfleet, Kent in the late 1800's.

The South East has also been a pioneer in the importance of infrastructure to prosperity. It was the place of the first passenger rail service – Canterbury to Whitstable Railway in 1830 – and the first aircraft flown in the UK in Farnborough in 1909.



The South East region – who does our infrastructure serve?



Environmentally, the South East England combines urban areas, farmland, and protected landscapes like the South Downs and National landscapes.

The region faces environmental pressures, including housing demand, infrastructure expansion, water stress, and habitat loss.

Climate change risks are significant, particularly coastal erosion and flooding, as well as rising temperatures and drought conditions.

At the same time, there are active efforts in conservation, growing renewable energy, and sustainability initiatives aimed at protecting biodiversity and improving air and water quality.

The region is designated as 'water stressed' by the Environment Agency with further pressures from population growth, and climate change. Circa 25% of the region is designated as natural landscape, including rare chalk streams, rivers and other water courses across the region.

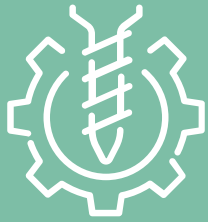
South East England is one of the UK's most economically dynamic regions, benefiting from its proximity to London.

We have a diverse and high-performing economy, with strong sectors including finance, technology, creative industries, advanced manufacturing, and tourism (especially along the coast and historic towns).

The region generally has above-average incomes and productivity compared to the UK overall, though this prosperity is uneven, with some coastal and rural areas facing lower wages and higher deprivation.

Strong transport links, major ports, and international gateways (such as Gatwick Airport, and Southampton Port) supporting trade and commuting flows.

The infrastructure that we build needs to meet the demands faced by our region and the challenges that lay ahead.



Infrastructure in South East

The South East's infrastructure is both large in scale, complex and diverse.

The region's infrastructure does not only support regional movement – but is nationally significant due to the flow of freight and people through the region to the European continent, as well as global air travel.



Transport

Want
to
learn
more?

Transport for the South East are the Sub-national Transport Body for the South East of England

This partnership is made up of 16 local authorities, representatives of district & borough authorities, protected landscapes and national delivery agencies. Their purpose is to determine what investment is needed to transform the region's transport system and drive economic growth.



ROADS

The region's road network includes circa 6,000km of major roads (motorways and 'A' roads) with an additional 42,700 km of minor roads. ([DfT](#))

There are key international links with roads connecting to key ports like Dover, Southampton, and Portsmouth, supporting trade with Europe. We have ongoing issues include traffic congestion, maintenance costs, environmental impact, and pressure from population growth.



RAIL

The rail network is vast with numerous London corridors but with East West connectivity is an issue. The average speed of passenger rail services is 40 mph for East West corridors compared to 60 mph for London corridors. In addition, only 58% of people have a walk of less than 30 minutes to a train station. ([Transport for the SE](#))

We are home to the country's only High Speed line, with HS1 connecting London with north Kent and the Channel Tunnel.



PORTS

There are over 20 commercial ports, including the Port of Dover and Southampton, with 13 million ferry passengers, and 18% of UK freight tonnage travelling from our ports.

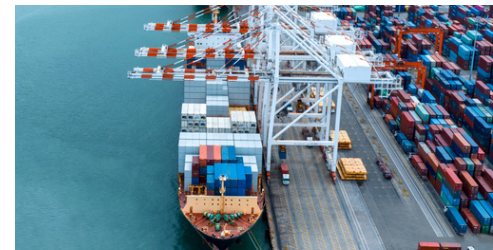
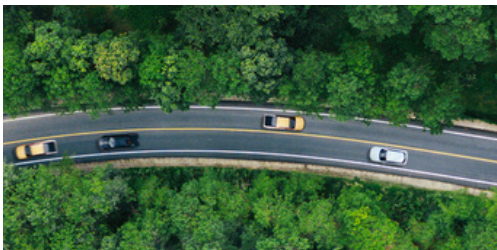
The only rail connection to continental Europe is via the Channel Tunnel, which carried over 18 Million passengers in 2023. ([Transport for the SE](#))



AVIATION

South East England is **the UK's second busiest aviation region**, serving as a major international and domestic travel hub. We host two main international airports in the region. Heathrow is the UK's largest airport, with over 83 million passengers in 2024. Gatwick is the second busiest airport in the UK, with over 43 million passengers in 2024. ([AVSN](#))

There are also numerous small commercial airfields.



Water



WATER SUPPLY

There are 6 water companies which supply water to 19 million customers and 2 million businesses across the South East of England.

Consumer demand for water is usually five billion litres a day. However on hot days this can exceed 6 billion litres a day.

Between 50-85% of the region's water comes from underground aquifers. These need winter rainfall to fill them, in order to meet demands of spring and summer.



WASTE WATER

Waste water management in South East England is a highly regulated and infrastructure-intensive system designed to collect, treat, and safely return water to the environment while protecting public health and ecosystems.

Much of the region uses combined sewer systems, where rainwater and sewage share pipes. Population growth and aging sewer systems increases demand on the existing infrastructure.



FLOODING AND DRAINAGE

Geographically, the South East region is prone to flood and coastal risk. With over 5 million properties under development, strategic corridors and major water infrastructures, even modest levels of risk translate into significant exposure.

Over 60,000 properties are at high risk in the South East of flooding from rivers, over 127,000 properties from surface flooding and over 1,200 properties at risk from coastal changes.



Want to learn more?

"Water Resources South East (WRSE) is a regional group that brings together water companies, government, regulators and other stakeholders to secure sustainable water supplies through collaborative planning.

Their role is to plan how best to manage the region's water resources and where there is a need to invest for the future.

www.wrse.org.uk/

Digital

Digital connectivity across the South East is essential in supporting people, social infrastructure, businesses and ultimately is key to growth.

The South East of England has one of the UK's strongest digital infrastructure bases, driven by proximity to London (Europe's largest digital hub) and a high population density and business demand.

We benefit from advanced broadband, mobile networks, and world-class data centres. The South East (especially London–Slough–Thames Valley) is one of Europe's largest data centre and cloud regions.

Most residents and businesses benefit from fast broadband and widespread mobile coverage.

However, rural gaps and uneven coverage remain the main challenge, driving continued public and private investment

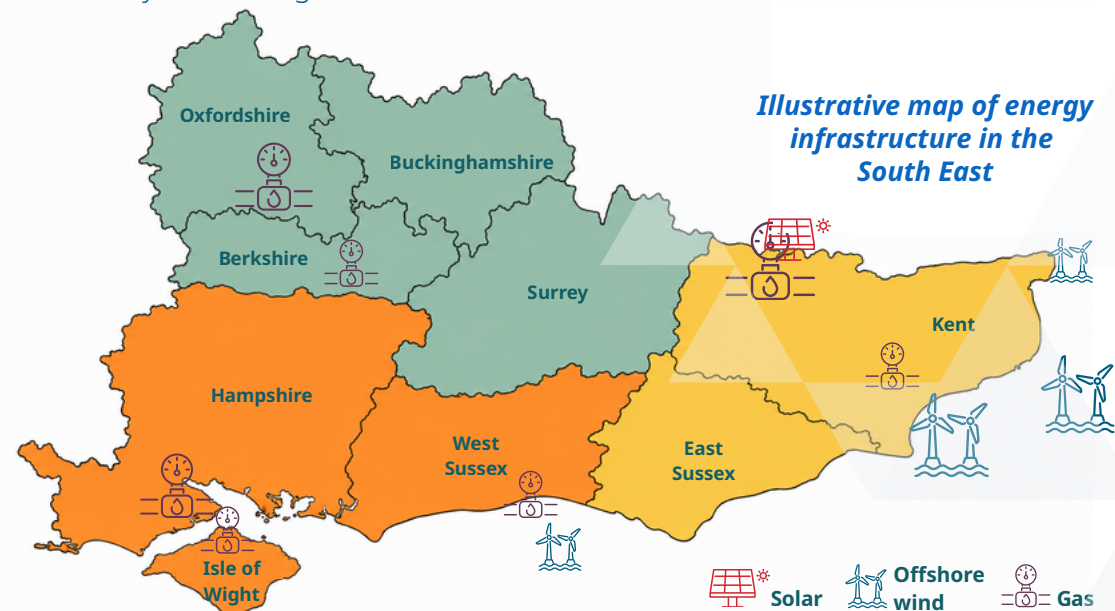
Energy

The South East is a major demand centre for energy. We have limited local generation compared to demand, so rely heavily on imports from other UK regions and Europe. As we see an increase in house building, the use of data centres and electric vehicles, then the demand for energy across the South East is set to rise.

Historically, the south east has been home to a number of coal and gas fired power stations, as well as nuclear power at Dungeness, but many are now closed. The majority of the energy generation in the South East now is though gas-fired power generation. Notably, the South East has lower renewable generation share than the UK average, although we do have a rapidly growing solar pipeline.

Energy infrastructure in the South East is currently benefitting from National Grid's

investment in expanding and modernising the UK's high-voltage electricity transmission network. This investment is needed as the shift to renewable energy means that the current grid cannot move enough of this power efficiently from where it is generated to where it is needed. The biggest issue in the region is one of capacity and transition, with major investment needed to: expand grid infrastructure, integrate renewables into the system, and reduce reliance on fossil fuels.



Social infrastructure



Looking at the challenges ahead

There are many challenges ahead facing the sector and society: geopolitical and economic instability, a worsening climate and nature emergency, changing societal demands, competing demand for skills and digital transformation. The ICE, our members and the profession have a major role to play in addressing these.

There is a large and growing gap between the infrastructure the world needs and the infrastructure systems that we have.

Recent safety failures such as Grenfell Tower, Baltimore Bridge and Toddbrook Reservoir highlight the critical importance of safety as the foremost responsibility for infrastructure professionals.

Across the South East of England we face the challenges of a growing population and the subsequent pressure on resources. Many of our infrastructure assets are already under pressure, and the maintenance of our existing infrastructure to meet future needs is a challenge many of our members deal with daily.

Society and nature are facing unprecedented threats from climate change. Climate change is demolishing fixed assumptions about the extremes of weather that our infrastructure will have to endure. The region is already water stressed. The growing population, combined with climate change, will continue to deliver challenges to those working in infrastructure over the coming years.

With huge stretches of coastlines, our members are also working on the impact of flooding and erosion through coastal management which is set to affect coastal communities in the years to come.

Automation, BIM, digital twins and AI are streamlining design and construction processes, while the Internet of Things and other technology are transforming the monitoring of the condition and safety of existing infrastructure.

As members of the ICE you can play an important role in helping us to shape the solutions to these challenges.

We are looking to work closely with our members to ensure we build trust amongst the public in infrastructure professionals.

Connecting with society, decision makers and the media, we will facilitate utilising our voice to support a better understanding of what infrastructure professionals contribute to our region.

Your expertise is vital in helping to influence the future work of the Institution, how we

inform those involved in decision making within infrastructure and communicate the benefits, challenges and importance of what we do to those we serve.

We need your help in shaping how these challenges present themselves across the South East of England, and how we, as ICE South East respond to them through our programme of work.

If you are interested in getting involved with how we do this, then we would welcome your expertise, insights, ideas and enthusiasm.



How can you shape the future of engineering with your Institution

We encourage all of you to find your professional home with the ICE. There are a number of different options to suit whatever time or interest you have. Volunteering with the ICE is a great way to expand your networks, meet new people and provide a platform to share and learn about things important to you. If you want to know more about getting involved, then please [click here to register your interest](#), and a member of our regional support team will get in touch.



Engage
and empower our
global networks

- Join a Branch Committee and contribute towards creating a **regional programme** for members to participate in
- Host/present at a regional/branch knowledge event
- Participate in the [ICE South East Engineering Excellence Awards](#)



Trusted and
impartial source
of expertise

- Join the Regional Committee to help shape how we **influence** local decision makers
- Become a media spokesperson
- Speak on a platform / conference / roundtable to influence others
- Author an [ICE Blog](#)
- Become an ICE Policy Fellow



Growing,
innovative and
diverse institution

- Become a [STEM Ambassador](#) and work with young people
- Become and [SCE/DE / Professional Reviewer](#) and support members to become qualified
- Sponsor someone for [ICE Fellowship](#)
- Promote the [Associate member grade](#) to non engineering colleagues
- Promote the [QUEST scholarship programme](#)



**Scan the QR code to share
your feedback and
get involved**

Institution of Civil Engineers

The Institution of Civil Engineers (ICE) is a 95,000-strong global membership organisation with over 200 years of history.

It is a centre of engineering excellence, qualifying engineers and helping them maintain lifelong competence, assuring society that the infrastructure they create is safe, dependable and well designed.

Its network of experts offers trusted, impartial advice to politicians and decision makers on how to build and adapt infrastructure to create a more sustainable world.

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