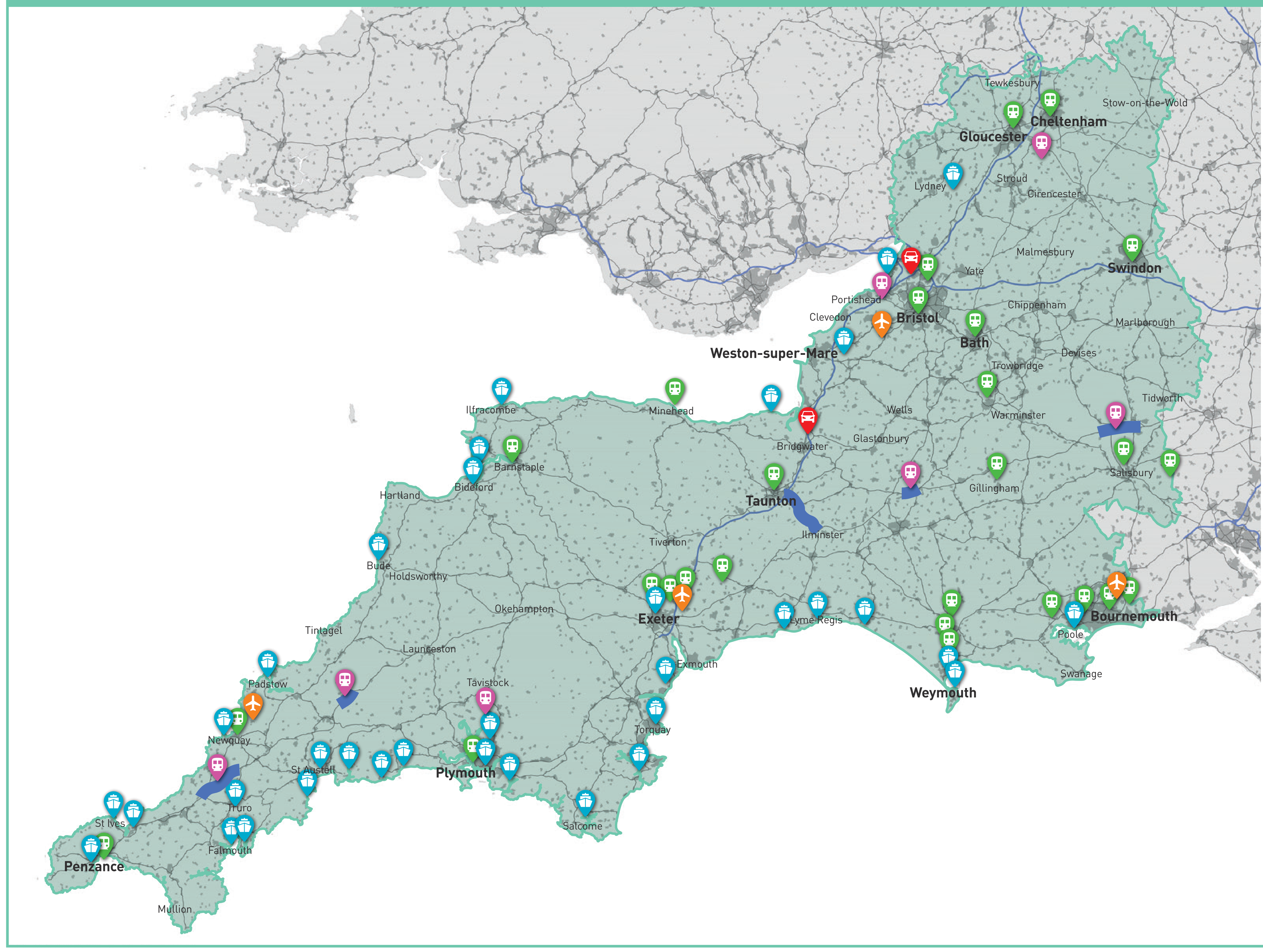
# TRANSPORT & CONNECTIVITY




Airports in the South West

South West Regional Ports Association (ports and members)

Main Train Stations in the South West

Highways England - RIS1 Junction Schemes

Highways England - RIS1 Major Schemes

Transport Development Consent Orders

**Sources:**

https://infrastructure.planninginspectorate.gov.uk/projects/

http://www.gis.co.uk/latest/

Greater Connected, Transforming Strategic Connectivity in South West England. 'An opportunity for local and national government and business leaders to work together to significantly accelerate economic growth'

https://swrpa.org.uk/

https://travelwest.info/projects/metrowest/metrowest-phase-1

https://www.southwesternrailway.com/

https://www.bristolairport.co.uk/about-us/who-we-are/our-future

https://www.exeter-airport.co.uk/about-us/

# POPULATION & PLACE

Core Settlements

Major Settlements

Other Settlements

Rural Hubs

Urban Areas

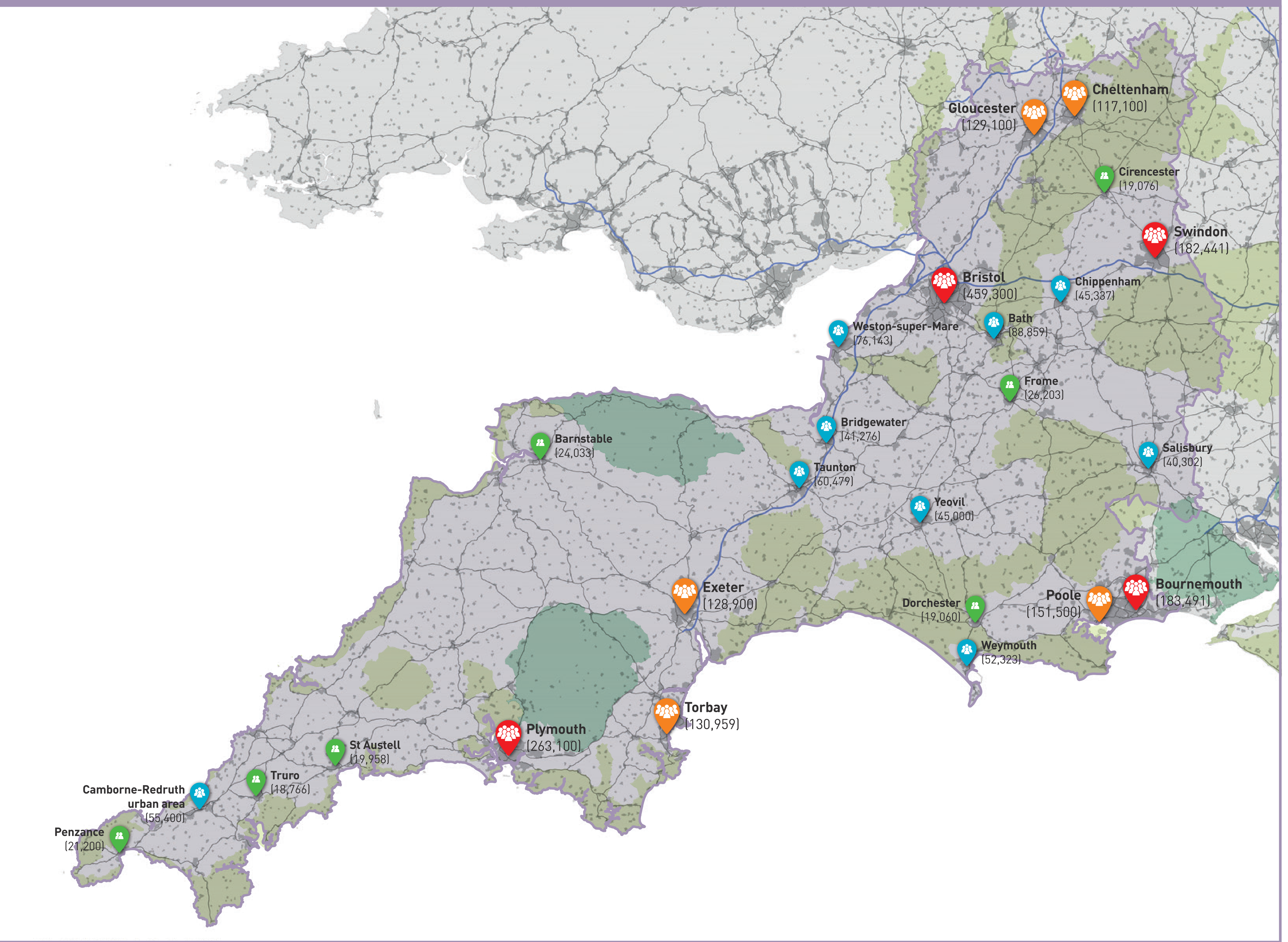
Areas of Outstanding Natural Beauty

National Parks

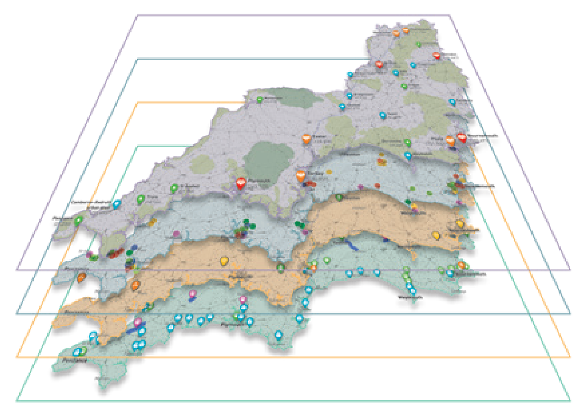
**Sources:**

Office of National Statistics 2011 and mid-2017 estimates

Barton Willmore national constraints map 2019




# ONE POWERHOUSE: A SPATIAL BLUEPRINT FOR THE SOUTH WEST

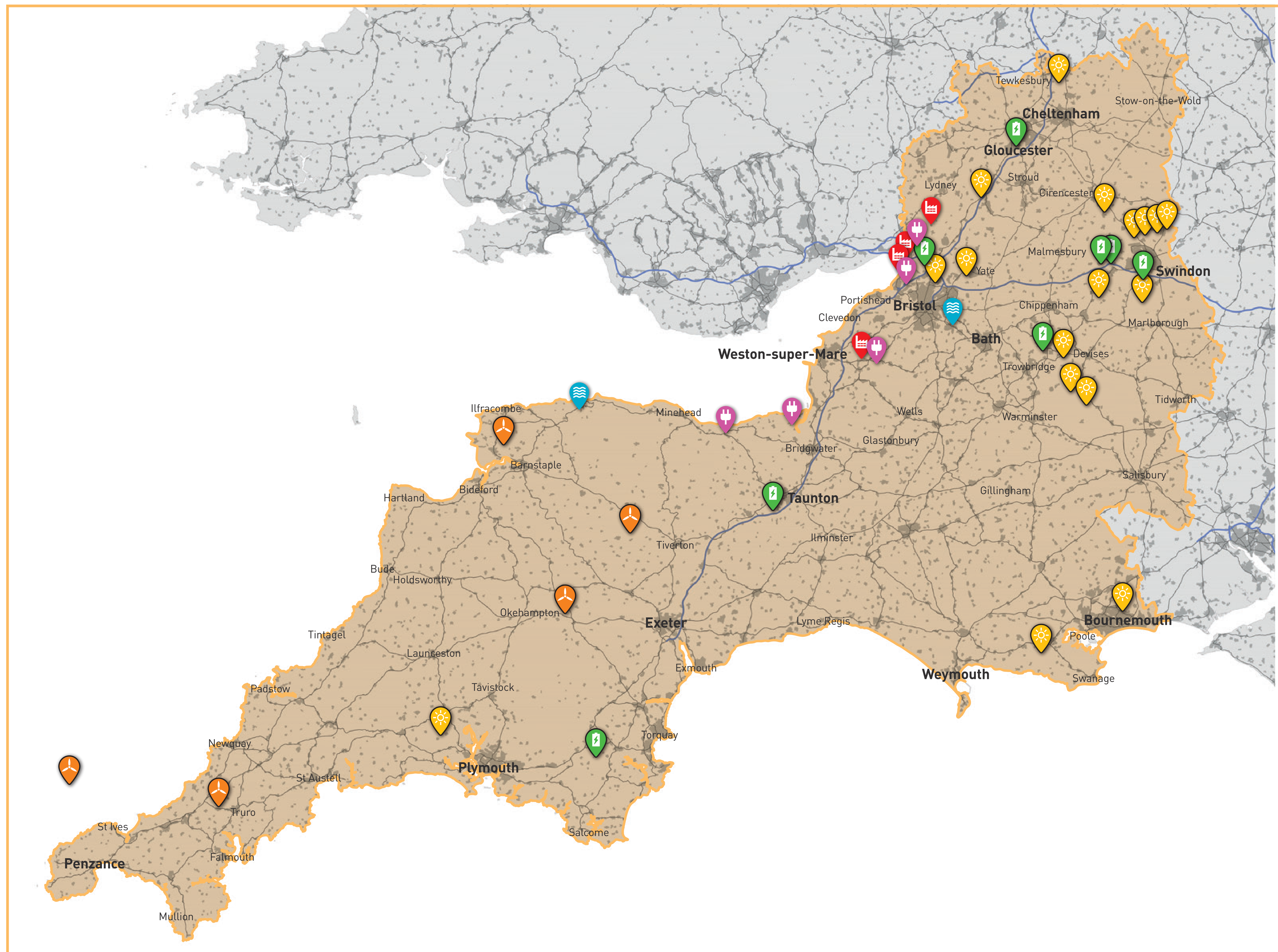


A vision for Britain. **Planned.**

ONE POWERHOUSE

RSA

BARTON WILLMORE




Power Stations

Wind Development with a capacity of more than 15MW

Solar Development with a capacity of more than 15MW

Hydro Power

Battery Storage with a capacity of more than 20MW

Energy Development Consent Orders

**Sources:**

https://infrastructure.planninginspectorate.gov.uk/projects/

http://www.mygridgb.co.uk/map/

https://theenergyst.com/net-zero-bristols-5-billion-decarbonisation-plan/

https://www.westernpower.co.uk/

Department for Business Energy and Industrial Strategy

https://www.somersetenergyinnovationcentre.co.uk/

Nuclear South West Strategy 2017 - https://heartofswlep.co.uk/wp-content/uploads/2017/05/NSW-Govt-Strategy-Green-Paper-Response-FINAL-.pdf

# ENERGY

Research, Professional, Creative & Design

Advanced Manufacturing

Transport & Logistics

Energy

Visitor Economy

Traditional Industries

Universities / Further Education

**Sources:**

https://www.westofengland-ca.gov.uk/lep/

SD15B West of England Economic Development Needs Assessment (EDNA) West of England Partnership (2016)

https://swlep.co.uk/

Swindon and Wiltshire Strategic Economic Plan (2016)

https://www.cioslep.com/vision/vision-2030

10 Opportunities Towards a Local Industrial Strategy – Cornwall and Isles of Scilly Local Enterprise Partnership (2018)

Cornwall and Isles of Scilly Employment and Skills Strategy 2016-2030

Cornwall and Isles of Scilly Integrated Territorial Investment Strategy (2016)

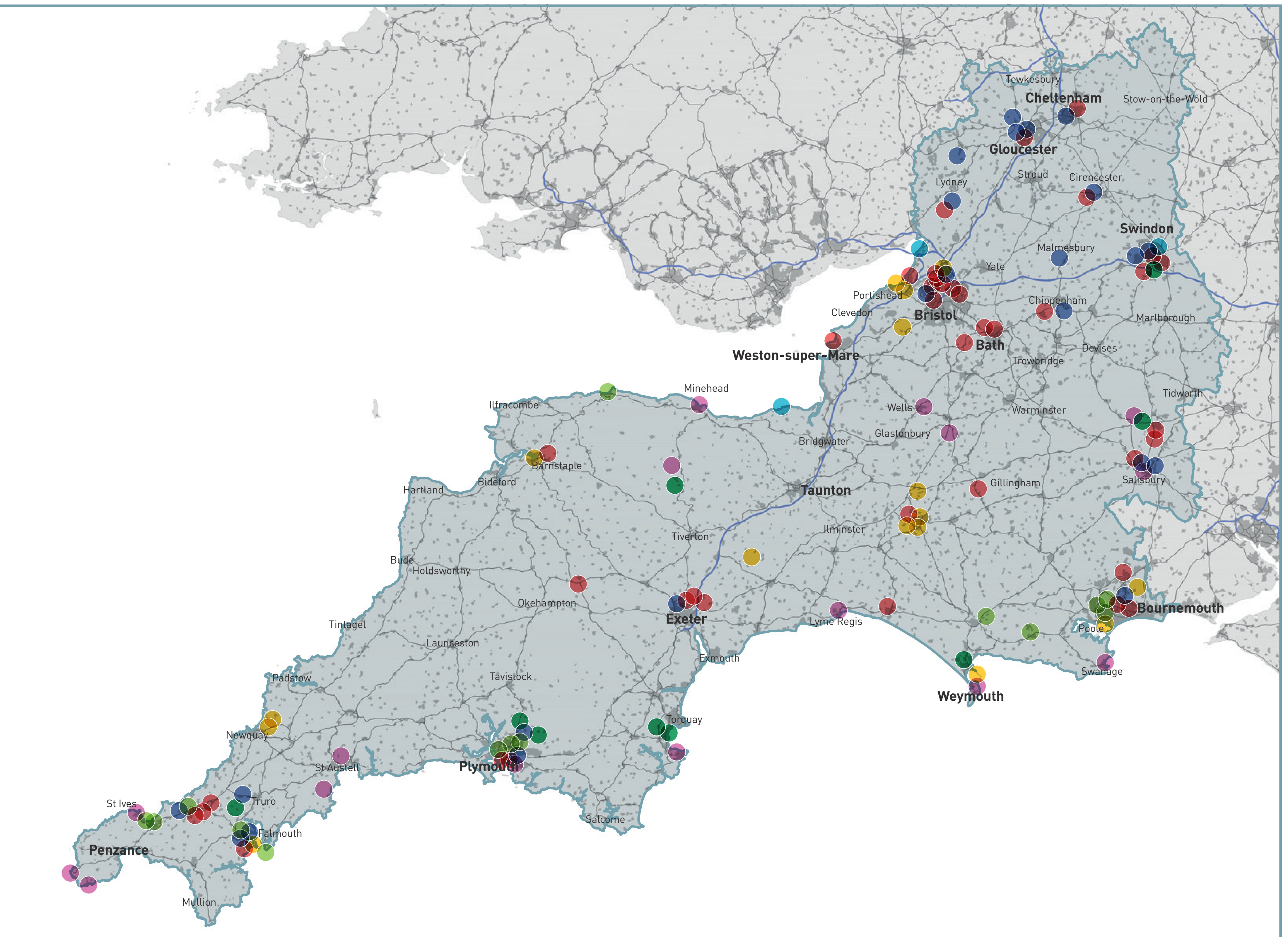
https://dorsetlep.co.uk/

Dorset Horizon 2038: A Vision for Growth (2018)

https://www.gfirstlep.com/about-us/our-vision/strategic-economic-plan/

Strategic Economic Plan for Gloucestershire 2.0 (2018)

https://heartofswlep.co.uk/




# ECONOMY

# ONE POWERHOUSE: A SPATIAL BLUEPRINT FOR THE SOUTH WEST

**A vision for Britain. Planned.**

ONE POWERHOUSE RSA BARTON WILLMORE

## TRANSPORT & CONNECTIVITY

The region is strong and vibrant, attracting start up and inward investors from across the world. It comprises rural areas and coastal towns and cities, many of which are popular tourist destinations. A key challenge in the region is critical connectivity issues.

### Key Assets:

| | |
|---|---|
| Ports | » Members of South West Regional Ports Association;<br>» Members of the British Ports Association and UKMPG. |
| Road | » M49, M5, M4, M32<br>» A roads (A303, A358, A30, A31, A35, A350, A37) |
| Rail (main stations) | » Bournemouth, Exeter, Poole, Portsmouth, Isle of Wight, Weston Super Mare, Dorchester, Weymouth, Salisbury, Westbury, Bath Spa, Filton Abbey Wood, Bristol Temple Meads, Bristol Parkway, Gloucester, Southampton, Cheltenahm, Taunton, Tiverton Parkway, St Erth. |
| Aviation | » Bristol Airport;<br>» Bournemouth Airport;<br>» Exeter International Airport. |

### Key Issues

The region suffers from a range of critical connectivity issues, which results in the competitiveness of businesses being disadvantaged by productivity inefficiencies and increased costs. Key issues include:

» **Poor access** with congestion problems;
» **Prolonged journeys** wasting time and decreasing management productivity;
» **Increased cost** of transport leading to non-competitive pricing/reduced margins;
» **Frequent disruption** delaying day-to-day business needs and transportation of time critical goods; and
» **Difficulties in recruiting** key personnel because of extended travel.

The region is surrounded by water with many coastal communities, presenting connectivity challenges. The lack of dual carriageway on the A303, A30 and A358 is a recognised national priority. The aged design of the single carriageway roads, steep gradients and sharp bends, contribute to longer journey times, particularly for heavy goods vehicles. This is exacerbated during the summer holiday peaks.

Trunk roads and the motorway network are under pressure at key locations, despite recent investment such as the managed motorway scheme on the M4/M5 at Bristol. Particular pressure points exist along numerous sections of the M4, M5, M32, A30, A31 and A35. There is also a lack of adequate trunk route connectivity to the South East and of linking of the major conurbations along the South Coast with the M4 corridor. In addition, there are no motorways in Dorset and numerous bottlenecks encounter heavy congestion.

### Opportunities

**Ports**

Bristol Port is one of the UK's major ports. There is an opportunity to connect with international ports. In February 2019, the South West Regional Ports Association (SWRPA) had 49 members, many of which are also members of the British Ports Association (BPA), demonstrating their national interests to central government and further presenting international opportunities. The region contributes £1.08 billion of the total £19 billion GVA generated by UK ports (Oxford Economics).

Ports in the region are connected by the M4 and M5 but rely heavily on its trunk road networks and dualling programmes - investment and enhancement of trunk roads and carriageways must be undertaken.

**Road**

Improvements to the road network will support access to businesses, new residential developments, unlock potential employment sites, and improve connections to ports and international airports. The following improvements to road networks will be key:

M49; M5; M4; M32; A303; A358; A30; A31; A35 A350; and A37.

Ensuring that investment is secured through Highways England's road investment strategy review is a priority for the region.

**Rail**

Improving rail connections to other regions in the UK is vital to maintain and enhance economic competitiveness and growth. The rail service from London to the South West is inferior to the trunk services radiating from London to other regions, offering a substandard rail product, with an average speed of 69mph, compared to over 90mph on the East coast main lines.

The MetroWest project is a package of major rail improvements for the West of England. It presents the opportunity to increase the UK's passenger rail network by 14km, connecting an additional 50,000 people to the rail network. The first phase proposes to re-open the Portishead rail line enhancing train services on the Severn Beach and Bath to Bristol Lines.

Bristol Temple Meads is a key railway station and is connected to major cities in the UK. The investment in modernising and electrifying the Great Western Mainline aims to add an extra 14,000 more trains per year. An additional two fast off peak trains per hour from Bristol Temple Meads to London Paddington will be added and one peak time service between these destinations will be added which will reduce the journey from Bristol to London by 17 minutes

**Aviation**

Bristol Airport is the third largest regional airport in England and supports approximately 15,000 local jobs and generates £1.3bn GVA. Over 8.6m passengers used Bristol Airport in 2018 - a 6.2% increase on last year's passenger numbers. Bristol Airport's draft Master Plan seeks to serve up to 20m annual passengers by the mid 2040's, bringing a potential 10,350 extra regional jobs and up to £2.6bn GVA.

Exeter International Airport has become more popular, with the number of terminal passengers increasing by 26.25% 2013-2018. With over 40 routes across the UK and Europe, investment and new Ryanair routes, there is the potential to increase passengers by 1m annually in 2019/2020.

## POPULATION & PLACE

The population of the South West is over 5.5 million (ONS), making up 8% of the UK's population. The core settlements of Bristol, Bournemouth, Plymouth and Swindon make up approximately 1 million of the region's population. Bristol has the highest population, followed by Plymouth, Bournemouth and Swindon. Other major settlements of the region include Cheltenham, Poole, Gloucester, Exeter, and Torbay. The largest concentration of people is located in the north and south east of the region. The region has the oldest median age in the UK (2011 census) with West Somerset having the oldest median age of 48.

There is a net in-flow of 25 people per 1,000 moving to the South West from London (ONS). According to the ONS, the South West has more people moving in than out, with a net inflow of over 10 people per 1,000.

### Key Assets

Areas of Outstanding Natural Beauty: Quantock Hills, Scilly Isles, Cranborne Chase and West Wiltshire Downs, Cotswolds, North Wessex Downs, Cornwall AONB, Dorset AONB, Wye Valley, Mendip Hills, Cheddar Gorge.

National Parks: Exmoor and Dartmouth

### Key issues

The region has a ranging population and placement of core economic areas, with the GDP per capita varying from below average in Cornwall to above average in Gloucestershire and Wiltshire. The more prosperous regions attract a skilled workforce, with businesses in the northern part of the region being influenced by the competitive pressures of the South East and West Midlands. However, the spatial areas between the core settlements are rural and less prosperous, with ageing populations and poor retention of a skilled work force. These differences create disparity of place in the region which is an issue that needs addressing.

With population clusters dispersed across the region, as well as poor public transport connectivity, it is harder for goods, people, and knowledge to move around easily.

### Opportunities

Place-making is key for the development of a region's economy as the quality and offer of a place attracts and retains a skilled workforce of people who appreciate a high quality, well-connected area with good economic opportunities.

Improving higher education and employment offer in the less prosperous areas of the region will attract a higher skilled workforce and improving transport and connectivity will facilitate better movement of goods, people, and knowledge, ultimately creating greater economic benefit.

## A VISION FOR BRITAIN. PLANNED.

The One Powerhouse Consortium, supported by The Sir Hugh and Lady Ruby Sykes Charitable Trust, believes that a substantial part of the problem of regional inequality in the UK can be solved not just by money, but by the transformative potential of spatial planning.

Spatial planning is the 'where' of decisions. It looks at a defined geographical area and makes an assessment of everything contained in that area – towns, cities, housing, schools, universities, roads, rail, airports, offices, factories, hospitals, energy sources, museums, parks and leisure activities - and makes a plan to develop those assets for the benefit of the people who live in that region, now and for the future.

It is well understood that countries and regions around the world have used spatial planning to focus political will, economic activity and social reform to great effect. Notable examples include Germany's Rhine/Ruhr, Holland's Randstad and New York City's Regional Plan Association.

### The Value of Place and Scale

There is evidence that spatial planning has already begun to deliver results in the UK. We are not alone in recognising that the two 'regional economies' that have the highest levels of productivity are those where there are coherent regional economic plans: London and Scotland.

Indeed, in England, there is good work taking place through some Local Enterprise Partnerships (LEPs) and Combined Authorities and Mayoralties but not all. In strategic planning and investment terms, these tend to be rather small and the outcome is rather patchwork.

### Our Plan

The clear 'gap' in terms of economic planning in the UK, therefore, is at the level of the English regions. Any spatial strategy needs to bring together the best local industrial strategies and plans within a wider regional strategy framework. The foundations of how this can be achieved are already present. The regions of England are already agglomerating: The Northern Powerhouse, The Midlands Engine, The Great South West and The Wider South East all exist as functional identities.

Our ambition is, in short, to work with these regional networks to prepare a series of draft spatial plans that will better enable decision-making and prioritization of investment across the country and thus help the UK as a whole develop over the long term – creating opportunity for all, jobs for all and prosperity for all.

We are also delighted to be supported on the technical side by some of Britain's most respected planning consultancies: Atkins in the North, Barton Willmore in the Midlands and The South West and Aecom in the South East.

Together, we hope to show how well thought out, long term spatial planning can start as words and diagrams on a page and end up changing lives for the better – wherever in the UK those lives are lived.

## What's next:

This prototype will be developed further over the coming months. Using this prototype and the equivalents for the South East/South West/Midlands/North, the One Powerhouse Consortium and the RSA will create joined-up plans. All these documents will be released by the end of 2019.

## How to contact us

If you are interested in this project, please get in touch with us at: info@onepowerhouseconsortium.co.uk

## Acknowledgements:

Thank you to the Sir Hugh and Lady Sykes Foundation for funding this project and to the One Powerhouse Consortium, the RSA and UK2070 Commission for their ongoing assistance.



## ENERGY

### Introduction

Energy provision in the UK is set to change dramatically, as the law for net zero carbon emissions by 2050 in the UK was passed, which increases the 2050 Greenhouse Gas (GHG) emissions reduction target in the Climate Change Act from at least 80% to 100%. This is a legally binding commitment.

The region has significant potential due to the prevailing South Westerlies and the tidal range in the Severn Estuary and the Bridgewater Bay which provides significant potential for tidal lagoon and tidal flow energy generation.

Opportunities in the region have been recognised by the Government and international organisations, including the European Investment Bank. Approximately £2m allocated for new energy products has been awarded to Bristol City Council, in partnership with Devon and Plymouth councils to fund new energy efficient, renewable energy, sustainable transport and heat network projects across the region.

Bristol City Council has invested approximately £50m in energy projects, including wind and solar and district heating. The Council has now agreed plans to 'decarbonise, decentralise and democratise' the City's energy Systems. Following the launch of Bristol's City Leap programme last year, 180 organisations from around the world have expressed their interest in working with Bristol. The programme includes investment values out to 2027 for district heating (£300 million) domestic and commercial energy efficiency (£400 million plus) and renewable energy (£40 million).

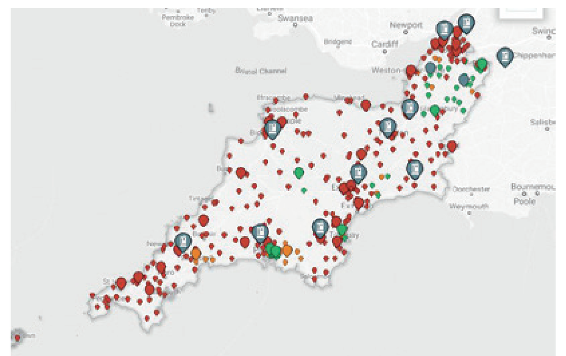
### Key Assets

A key asset in the region is Hinckley Point C nuclear power station. This forms part of the Nuclear South West Strategy, which is a partnership between the Heart of the South West LEP, West of England LEP and GFirst LEP with the nuclear industry, local authorities, academic and skills sectors and business support agencies. It will generate approximately £55bn worth of nuclear opportunities over the next decade. The project consists of building two nuclear reactors providing low carbon electricity for roughly 6m homes. A socio-economic impact of this asset includes £9.4m delivered to aid local community projects to date. It will create over 25,000 new employment opportunities and bring lasting benefits to communities throughout the region.

### Constraints

A constraint for the region is the rapid growth in construction of distributed renewable energy developments, including solar farms has led to a large strain on the grid network. The combination of this and the ever-growing expectation of producing low carbon development to achieve the legally binding government target, presents a challenge for the region.

Western Power Distribution have identified networks that future large scale developments can connect to major substations in the region. The map below indicates the % of each substations capacity that remains available. The red points indicate supply points which have less than 10% capacity available, amber sites with 10% to 25% capacity available, and green supply points with more than 25% available.



Map showing regional substation capacity.
Source: https://www.westernpower.co.uk/our-network/network-capacity-map

### Opportunities

In 2013, the Department for Business, Energy and Industrial Strategy (BEIS) estimated that wave and tidal stream energy has the potential to meet up to 20% of the UK's current electricity demand. The BEIS suggested that between 200MW and 300MW of generation capacity could be deployed by 2020, and up to 27 GW's by 2050. An example of this technology includes the proposed West Somerset Tidal Lagoon. This development presents the opportunity for the construction of a continuous breakwater mill, which would have the generating capacity of 2.8 GW per year.

Other opportunities include the research centres and key energy facilities. The Somerset Energy Innovation Centre (SEIC) in Bridgewater presents an opportunity to exploit the low carbon and nuclear energy sectors. SEIC provides support and low carbon supply chain expertise to identify live opportunities in this growing sector. The Centre provides up to 70 jobs, safeguards up to 210 over 15 years and will generate approximately £14 million of GVA over 15 years.

The energy sector employs 10,000 people in the region. The sector is strongly represented in the region including UKDEA, EDA and Ecotricity

## ECONOMY

The region's economy is worth approximately £127 billion (House of Commons 2018). It is home to clusters of world leading sectors ranging from aerospace to digital and creative. There are several prosperous areas within the region with some showing an above average growth in productivity since 2015 (i.e. Gloucestershire).

### Key Assets

**Research, Professional, Creative and Digital**

Several Enterprise Zones and Science Parks in the region facilitate 'innovation active' businesses, creating a dynamic, knowledge-based economy.

The region has a diverse research base, with 13 universities specialising in a range of fields and a network of world-class research institutions, creating and attracting a skilled workforce. Projects such as Goonhilly Earth Station provide important research and innovation platforms facilitating connections with other European Space research facilities.

**Advanced Manufacturing**

The region has a high concentration of high-tech manufacturing firms, with notable clusters in Gloucestershire and Bristol. Aerospace and advanced manufacturing are an integral component of the South West cluster and key to delivery of the UK Aerospace industrial strategy.

**Transport and Logistics**

Parts of the region are well connected to the UK and the world through motorway, rail, air and sea, helping businesses to compete nationally and internationally. With growing airports and important ports around the coast, the region is a key location for logistics and distribution companies.

A key aim of the region is to strengthen the transport infrastructure and create an efficient, sustainable, technology-driven system which enables increased productivity across all areas of the transport network.

**Energy**

The South West is ideally located for research and energy development - the west coast has one of the best wind resources in Europe and the best solar in the UK as well as advanced sites for testing offshore-energy. There is expertise in the area in nuclear and renewable energy (e.g. Hinkley Point C).

**Traditional Industries**

The region has a strong manufacturing base in marine, food and drink, and engineering. The agricultural economy has a strong presence, particularly in Dorset and Cornwall. Cornwall has a £1.5 billion turnover in the agriculture sector, accounting for 6% of the region's GVA.

**Visitor Economy**

This sector plays an important economic role in the region and is a significant source of employment. With 27% of Cornwall designated as an AONB and Dorset's world heritage coastline, the areas are major attractors of visitors. Renowned attractions such as Eden Project and Tate St. Ives and the blend of rural and urban locations provide diversity of the tourism offer and provide many jobs.

### Key Issues

The South West's economy makes up 7.3% of the UK's total GVA. This is one of the lowest of England's regions, and is due to several reasons:

» Issues with lack of productivity and skills gap are a barrier to future growth for the region (e.g. Cornwall and the Isles of Scilly has been recognised as a Less Developed Region). In Dorset and Cornwall there is a dependence on the visitor economy, resulting in high levels of seasonal un- and underemployment.
» High house prices and a low wage economy create long term risk for the region.
» Poor transport and infrastructure in parts of the region - there are issues with capacity constraints on highway networks and areas with limited public transport services.
» Residual gaps in high speed broadband coverage and reliable mobile phone network in rural areas.
» Difficulty in retaining and attracting talented people contributes to the low productivity and skills gap in parts of the region. A high proportion of retired people is a challenge for the work force and a strain on infrastructure.

### Opportunities

The region can strengthen its economy in several ways:

» There is opportunity for growth in the marine sector around the coast, where deep-water harbour facilities and clean energy research sites are exploitable assets.
» New transport infrastructure would be beneficial for boosting trade and investment opportunities. The region has potential to become the location for Europe's Space Hub by capitalising on Aerospace assets.
» There is a huge tourism asset which can be built on to develop new world-class attractions.
» Investing in new assets for successful and emerging markets in the digital sector through Enterprise Zones. Networks of Enterprise Zones/Areas offer unique employment growth opportunities and can facilitate growth in high value, knowledge-based sectors.
» The region can reduce skills gap issues by improving young people's attainment at 16 years old.
» Facilitating growth in research expertise can transform operational and research capabilities in areas such as environmental prediction in Exeter's MET Office, maintaining the UK's number one position in environmental science.

## WHY THE SOUTH WEST?

The South West has a wealth of attributes, making it a popular and attractive place to live, work, and visit. In 2016, the region saw the third fastest growth in GVA per head in the county at 3.3%.

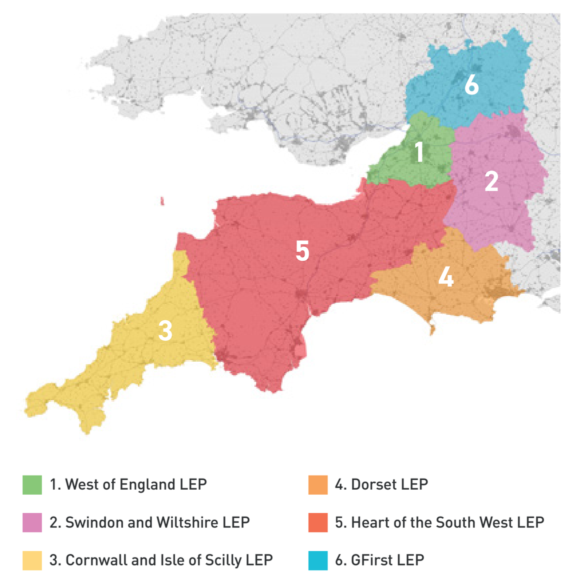
The region is continuing to grow, with strategic and infrastructure development proposals underway and in the pipeline. Accordingly, spatial planning in the South West is key over the next few years to ensure the region is sustainable and prosperous economically. An overriding issue, which continues to challenge the South West is the need to balance the level of investment and development that is essential to maintain the region's economy and quality of life of its residents, with the need to protect its greatest asset, being the quality of the renowned natural and built environment in its countryside, along its coastline and in its settlements.

Following the revocation of the South West Regional Spatial Strategy in 2010, the absence of a region-wide strategic planning policy mechanism for the south west is a barrier to enabling good spatial planning in the region. Spatial planning encompasses elements of planning and land use policy, and facilitates the management of space and development to create places that meet the needs of society, the economy, and the environment.

The current approach to spatial planning in the region is fragmented and there are six Local Enterprise Partnerships (LEPs), with areas defined in all cases by local authority boundaries but differing significantly in size and economic potential. In total, these LEP's host 19 local authorities. The six LEP's are listed below and shown on the accompanying map:

1. West of England LEP: Local authorities of Bath & North East Somerset, Bristol, South Gloucestershire, and North Somerset.
2. Swindon and Wiltshire LEP: Local authorities of Swindon, and Wiltshire
3. Cornwall and Isle of Scilly LEP: Local authorities of Cornwall, and The Isle of Scilly
4. Dorset LEP: Local authorities of Dorset, and Bournemouth, Christchurch and Poole
5. Heart of the South West LEP: Local authorities of Plymouth, Devon, Torbay, and Somerset
6. GFirst LEP: Boundary of Gloucestershire County Council (incorporating local authorities of Gloucester City, Cheltenham, Stroud, Tewkesbury, and Forest of Dean)

The LEPs are preparing Local Industrial Strategies (LIS), which will promote the coordination of local economic policy and national funding streams and establish new ways of working between national and local government, and the public and private sectors. In November 2017, the first wave of LISs were published, whilst the second wave were announced in July 2018, which included the Heart of the South West and West of England LEPs. These LISs will be published by March 2020. The remainder of the LEPs in the country will form the final third wave, including the remaining four LEPs in the South West. To truly deliver spatial planning these strategies need to be aligned through an overarching Regional Plan with the contents of each strategy informing this Plan.

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