# Severn Estuary Commission
## Socio Economics Workstream

## **Appendix 6** Regional Economy Baseline

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**Final Report**
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# Socio-economic baseline

This appendix provides an overview of key economic indicators for the Severn Estuary area. It helps to define the economic structure of the region and its industrial composition, highlighting key strengths and weaknesses. It also provides a summary of the future economic prospects of the Study Area, which serves as the basis to assess the potential socio-economic impact of tidal energy development in the Estuary. This part of the analysis draws on our baseline forecast, which does not include any tidal energy projects. The potential economic impact of alternative tidal projects in the Estuary is assessed in the report titled “The future economic impact of tidal range energy in the Severn Estuary”.

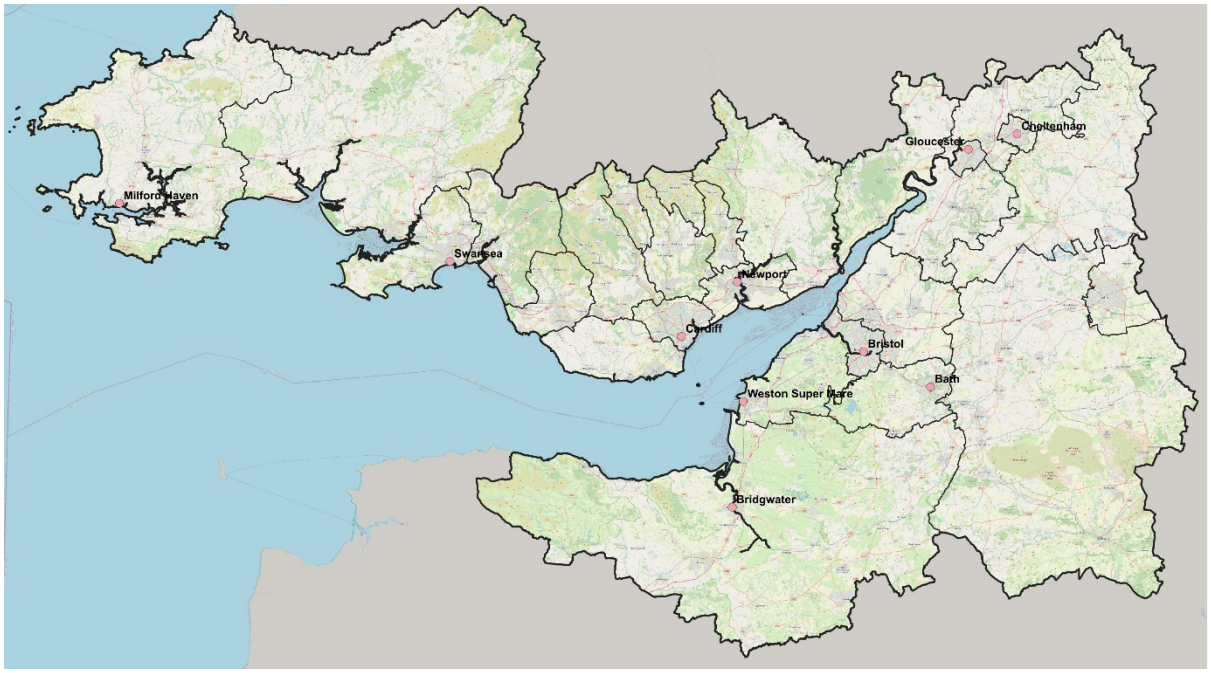
## A large and diverse economy

The Severn Estuary is located in a densely populated region between England and Wales, surrounded by the major urban centres of Bristol, Newport, and Cardiff. The Estuary is the core part of the Western Gateway partnership, a pan-regional organisation that spans across the West of England and South Wales. For the purpose of this report, the geographical area used in this report (the “Study Area”) includes the Western Gateway as well as Somerset Unitary Authority. The boundary of the Study Area is shown in Figure 1.

The Study Area is an extensive and diverse region, which covers 19,000 square kilometres and accounts for close to 8% of the UK’s land area. The region is characterised by a diverse landscape, with dynamic urban centres and sparsely populated rural areas. It hosts leading research and innovation clusters alongside traditional industrial activities. It is also marked by significant inequalities, covering both prosperous places and areas of high economic deprivation.

The estuary itself is at the core of the Study Area, and also contributes in its own right to the economy of the region. It is a logistics corridor that leads to the ports of Bristol and Newport, a place for energy generation (in particular at Hinkley Point) and industry,  as well as leisure and tourism, attracting millions of visitors a year.

**Figure 1: The Study Area**



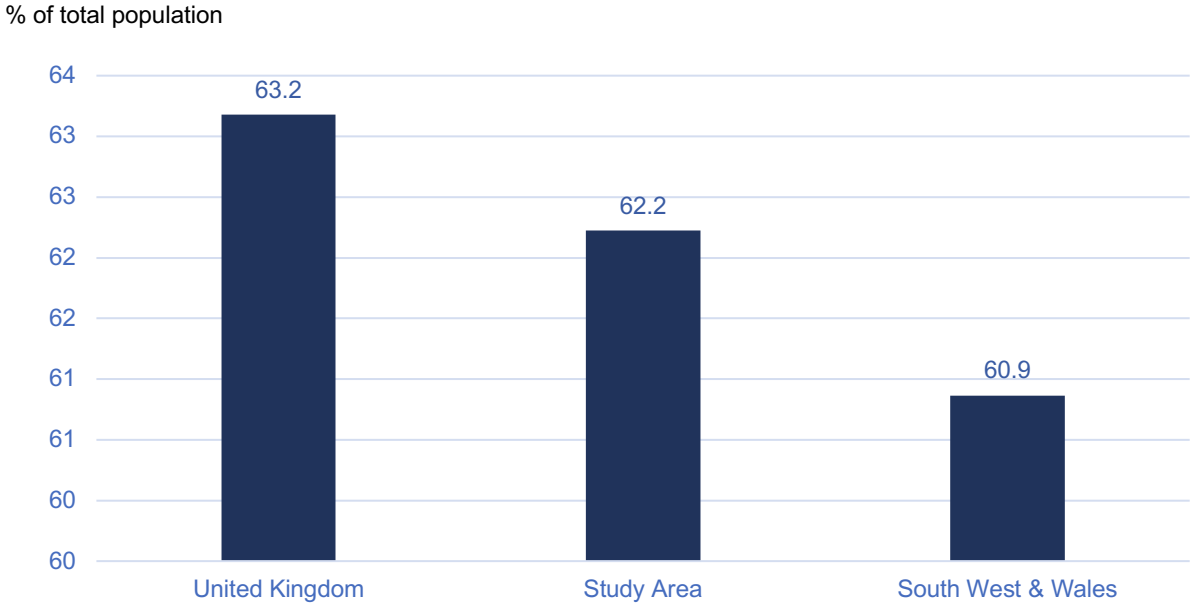

Source: Oxford Economics, Open Street Map

## Population, labour market and skills

The Study Area has an estimated population of 5.5 million in 2024, accounting for 8.0% of the UK total. The population of the broader South West and Wales area is estimated at 9 million, or 13.1% of the UK. The region has experienced rapid population growth, broadly tracking the national average at 0.6% between 2009 and 2019, but since 2020, growth has accelerated and outpaced the national average. Some areas shouldered a significant share of the recent growth, including Cardiff (11.6% of the additional population since 2020), Somerset (10.6%), and Wiltshire (10.1%).

Over 62% of the population of the Study Area is aged between 16 and 64, close to the national average of 63.2%, as shown in Figure 2. The South West and Wales in total has a lower share of working-age residents, at 60.9%, reflective of the typical demographic structure of more rural areas. Meanwhile, key economic centres have a younger profile: in Cardiff, nearly 68% of the population is aged between 16 and 64, while in Bristol this proportion rises to over 70%.

**Figure 2: Working-age population as a share of total**



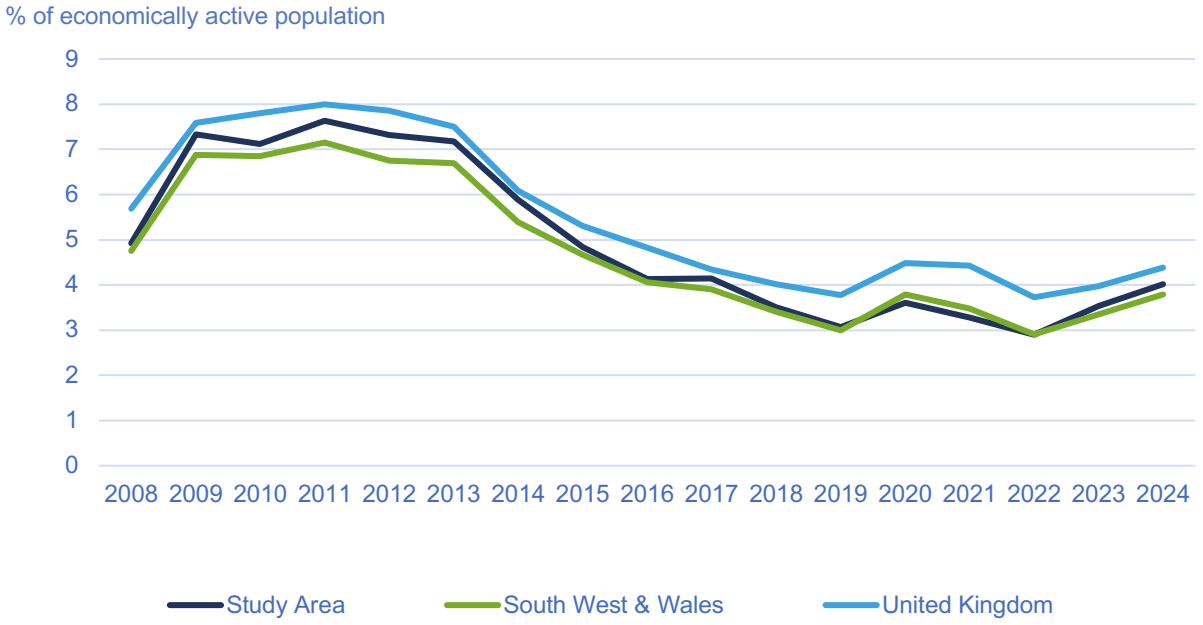

Source: Oxford Economics

The Study Area has an estimated employment rate of 58.5% in 2024, which is slightly below the UK average of 59.2% but above the South West & Wales average (57.2%).[1] There are however large variations across the area: Cheltenham, Gloucester, and Bristol have some of the highest employment rates (over 64%), whereas Monmouthshire, the Forest of Dean, and Bridgend have some of the lowest rates (at or below 50%).

The Study Area historically has benefitted from low levels of unemployment, with unemployment rates consistently below the UK average. Despite a slight pick-up in 2023 and 2024, unemployment remains below the national average, estimated to account for 4.0% of the economically active population in 2024, compared to 4.4% across the UK.

[1] The latest Independent Economic Review for the Western Gateway (2024) compares the performance of the area with the UK excluding London. In this research and unless otherwise mentioned, the Study Area is compared to the UK as a whole. This is to provide consistency with the rest of the economic impact study, which looks at the impact of Severn Estuary projects across the UK entirely.

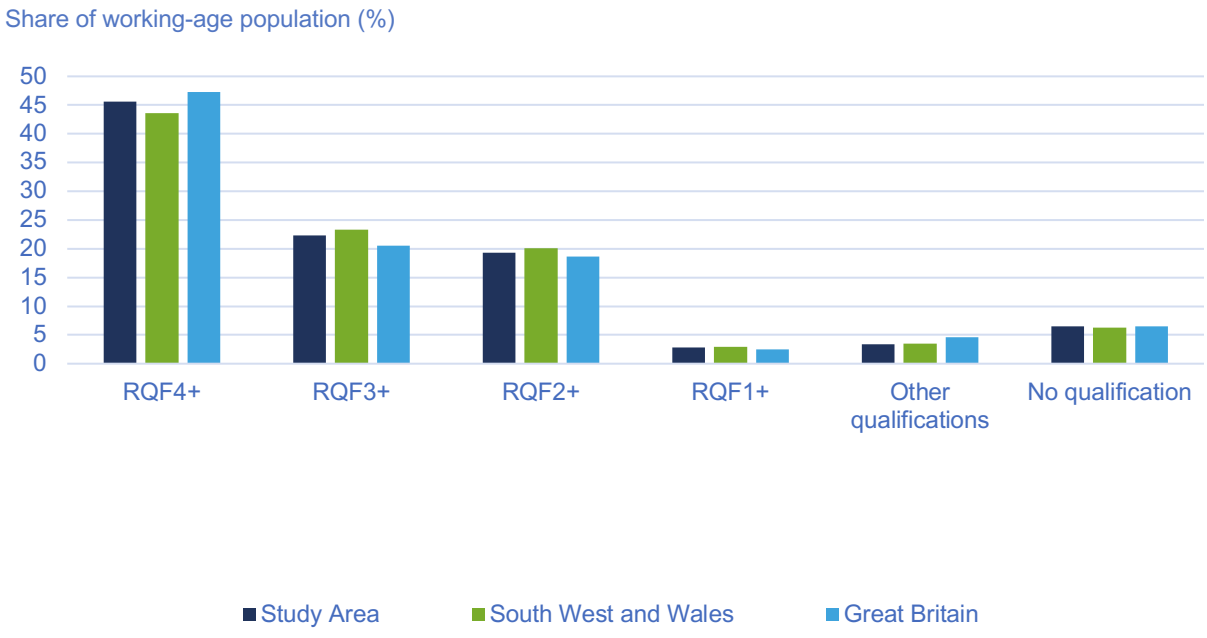
**Figure 3: Unemployment rate (2008–2024)**




Source: Oxford Economics

In 2023, 45.6% of the working-age population of the Study Area was qualified to RQF4+, which is equivalent to a degree level or above (Figure 4). This was above the average for the South West and Wales (43.6%), but slightly lagging behind the average for Great Britain (47.3%). There are also clear variations across the region, with urban areas tending to have a more highly educated workforce. For instance, 56.7% of Bristol's working-age population had RFQ4+ qualifications in 2023. The number of apprenticeship starts per inhabitants is below the England and Wales average.

**Figure 4: Qualification level by area, 2023**



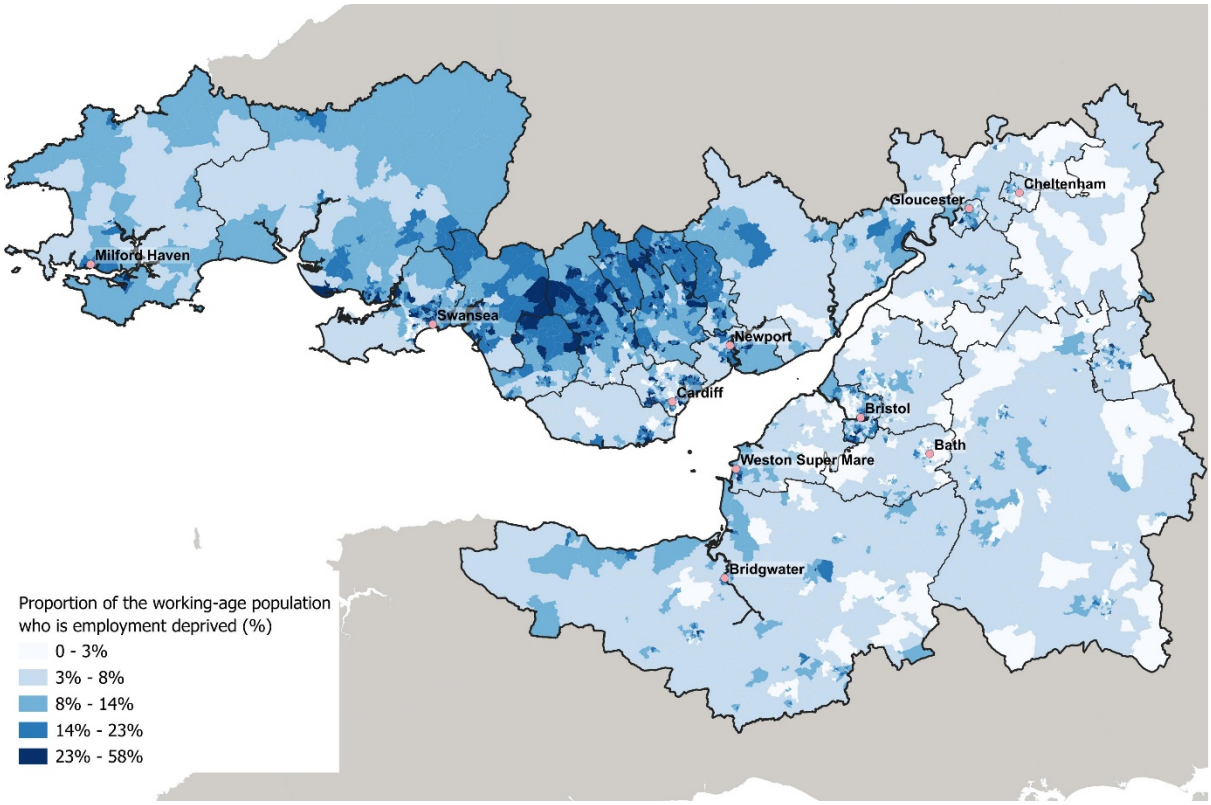

Source: Oxford Economics

## Deprivation

Overall, 12.8% of the population of the Study Area experienced deprivation related to low income in 2019, slightly below the England & Wales average of 13.0%. Meanwhile, 10.9% of the population was considered employment deprived, meaning that they were willing to work but excluded from the labour market, because of unemployment, sickness, disability, or caring responsibilities. Although the figure is close to the England & Wales average (10.2%), there are in fact large disparities across the area. Close to 20% of the population is considered employment-deprived in Blaenau Gwent and Merthyr Tydfil, compared to only 5.0% and 6.2% of the population of the Cotswolds and Tewkesbury, respectively.

Figure 5 shows the same results at a more granular geographical level. The main pockets of deprivation are clustered in the main urban centres (Bristol, Cardiff, Newport) and in the Welsh Valleys. There are also some small pockets of deprivation along the Severn Estuary, including in Weston-Super-Mare and in Somerset's coastal towns.

**Figure 5: Employment deprivation, 2019**



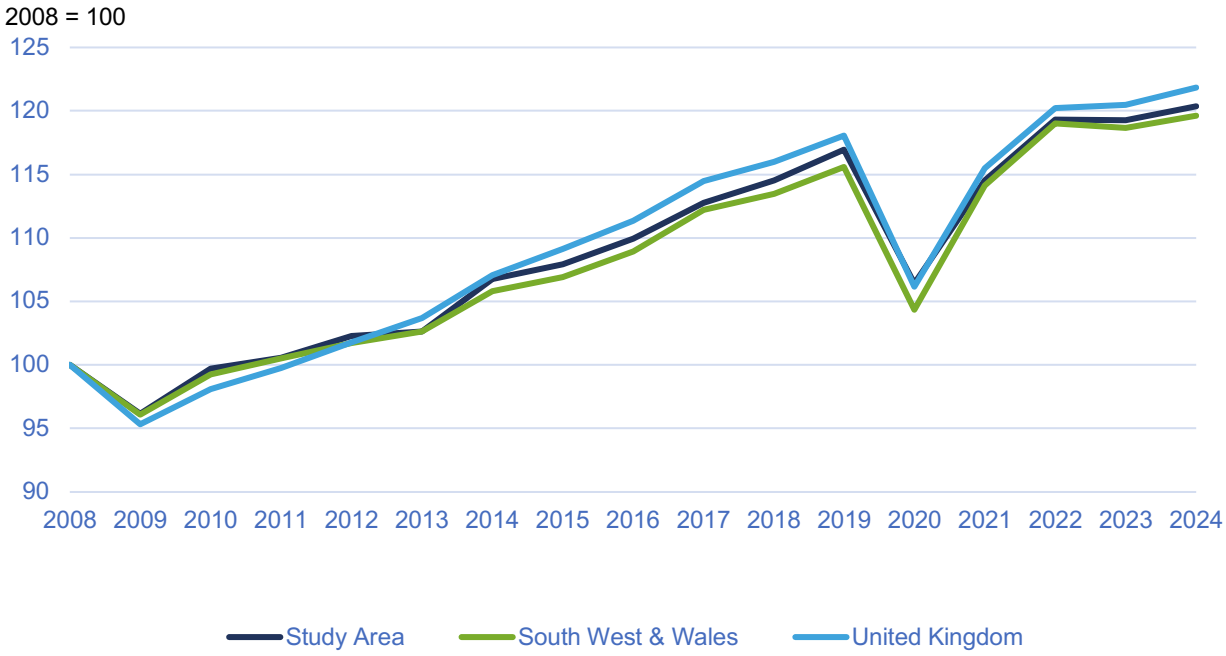

Source: MHCLG

## Recent economic performance

The Study Area benefits from a high level of economic activity, led by its main urban centres as well as smaller but equally dynamic clusters. In 2024, we estimate the area produced total GVA of £144 billion, making it a larger economy than Greater Manchester Combined Authority (£83 billion) and West Midlands Combined Authority (£70 billion).

Historically, growth in the Study Area has largely aligned with the UK average. Between 2009 and 2019, GVA expanded at an average 1.4% per year, compared to 1.5% across the UK. The year 2020 was marked by the Covid-19 pandemic, and although the local economy was severely hit, activity picked up rapidly in 2021, closely tracking the UK average (Figure 6).

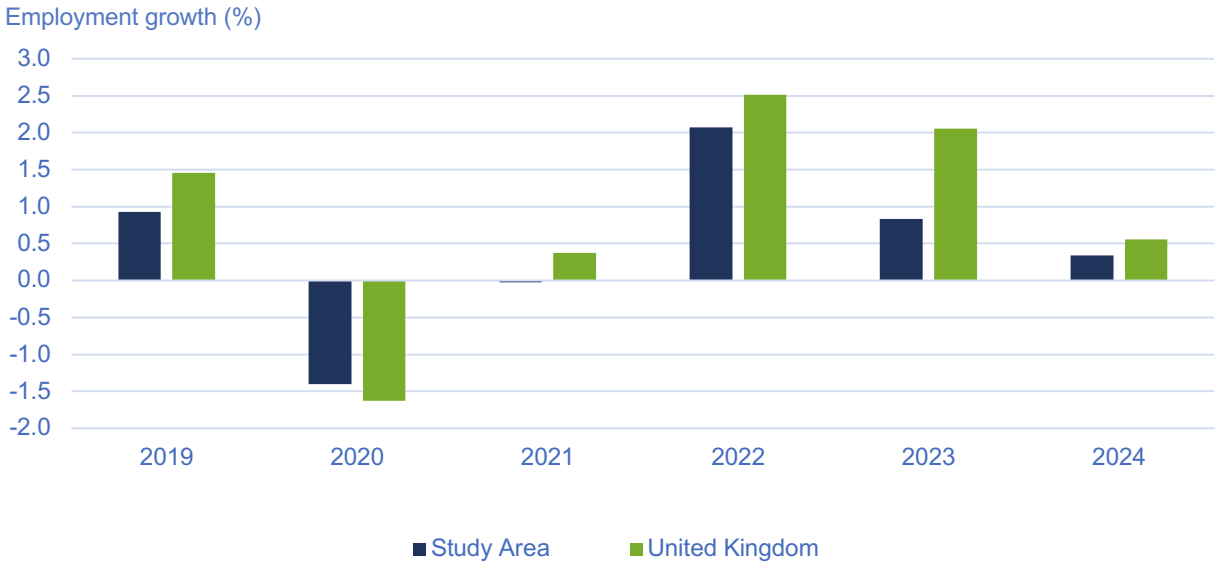
**Figure 6: GVA growth (2008–2024)**




Source: Oxford Economics

Employment growth also broadly tracked the national average in the decade before the Covid-19 pandemic. The shock of lockdown measures was somewhat less pronounced than in the rest of the country, perhaps thanks to the area's slightly higher reliance on public administration and human health jobs. But the recovery post-Covid has so far been slower. In 2023, employment expanded by just 0.8%, while the UK posted growth of over 2% (Figure 7). The result is that by 2024, we estimate a total of 2.8 million jobs in the Study Area, 1.8% above its pre-pandemic level. In contrast, job levels in the UK are expected to be 3.9% above its pre-pandemic level.

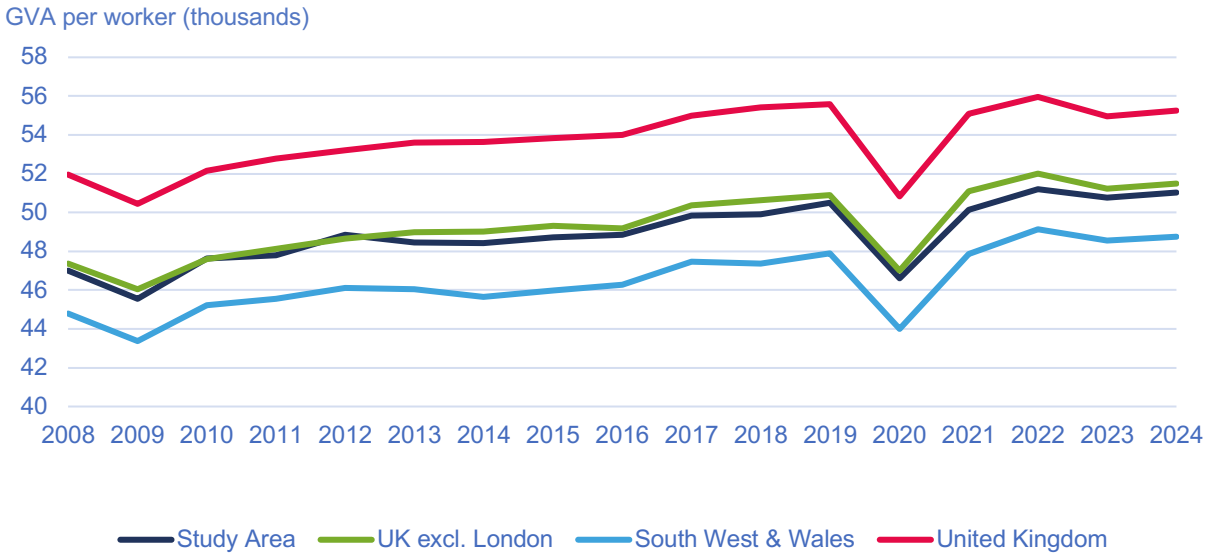
**Figure 7: Recent employment growth trends**




Source: Oxford Economics

Productivity in the Study Area has historically been lower than the UK average, even after excluding London (which tends to skew the national productivity level upwards). The bounce back that followed the Covid-19 pandemic was not as strong as expected, and although the productivity gap with the UK average has somewhat reduced in the past couple of years, it is persistent. Figure 8 shows that in 2024, productivity in the Study Area is estimated at £51,000 per worker, compared to £55,300 across the UK and £51,500 after excluding London. Productivity in the wider South West & Wales area is lower at £48,700, a result of the inclusion of more rural areas.

**Figure 8: Productivity, 2008–2024**




Source: Oxford Economics

Part of the lower level of productivity can be explained by the sectoral specialisation of the area. For instance, the highly-productive professional, scientific & technical services sector accounts for 6.9% of the Study Area's output, compared to 8.4% across the UK, which influences the aggregated productivity level of the area. But in addition, the data show that productivity in most sectors is below its respective UK average. The Independent Economic Review (IER) for the Western Gateway reports that, despite strong R&D and innovation assets, there are frictions in the transition process from research to commercialisation, and difficulties to foster cooperation between industries that are security-sensitive such as cyber and aerospace, which could at least partly explain the productivity gap, along with specific skills shortages.[2]

Earnings in the Study Area also show significant disparities, with the West of England generally having higher average earnings than South Wales. These earning disparities are also evident along the Severn Estuary: in Monmouthshire, annual earnings are estimated at £36,900 in 2024, compared to £34,300 in Cardiff, and £31,400 in Somerset. Overall, average earnings in the Study Area are estimated at £34,000 in 2024, below the UK average of £36,100.

## Sectoral specialisation

The Study Area's sectoral specialisation shows a diverse but two-speed economy. Knowledge sectors such as advanced manufacturing, aviation and computer science,

[2] Oxford Economics, Western Gateway Independent Economic Review (2024). Accessible at: The Western Gateway Updated IER: the UK's future economy (western-gateway.co.uk)

located between the West of England and Cardiff, are growing rapidly and strengthen the region's expertise in scientific research and development. But at the same time, there are pockets of legacy industry in Wales, such as in Neath Port Talbot. The Estuary itself supports some of these sectors, mainly through logistics and ports activity. Other important sectors for the Estuary specifically include energy generation, with significant opportunities around low carbon technologies, and—to a lesser extent—tourism.

The two largest economic sectors in terms of employment across the Study Area are human health & social work, and wholesale & retail. Taken together, these two sectors account for almost 26% of all jobs in the Study Area, similar to South West and Wales area and the UK average. There is also a significant share of jobs in professional, scientific & technical activities, manufacturing, and accommodation & food services.

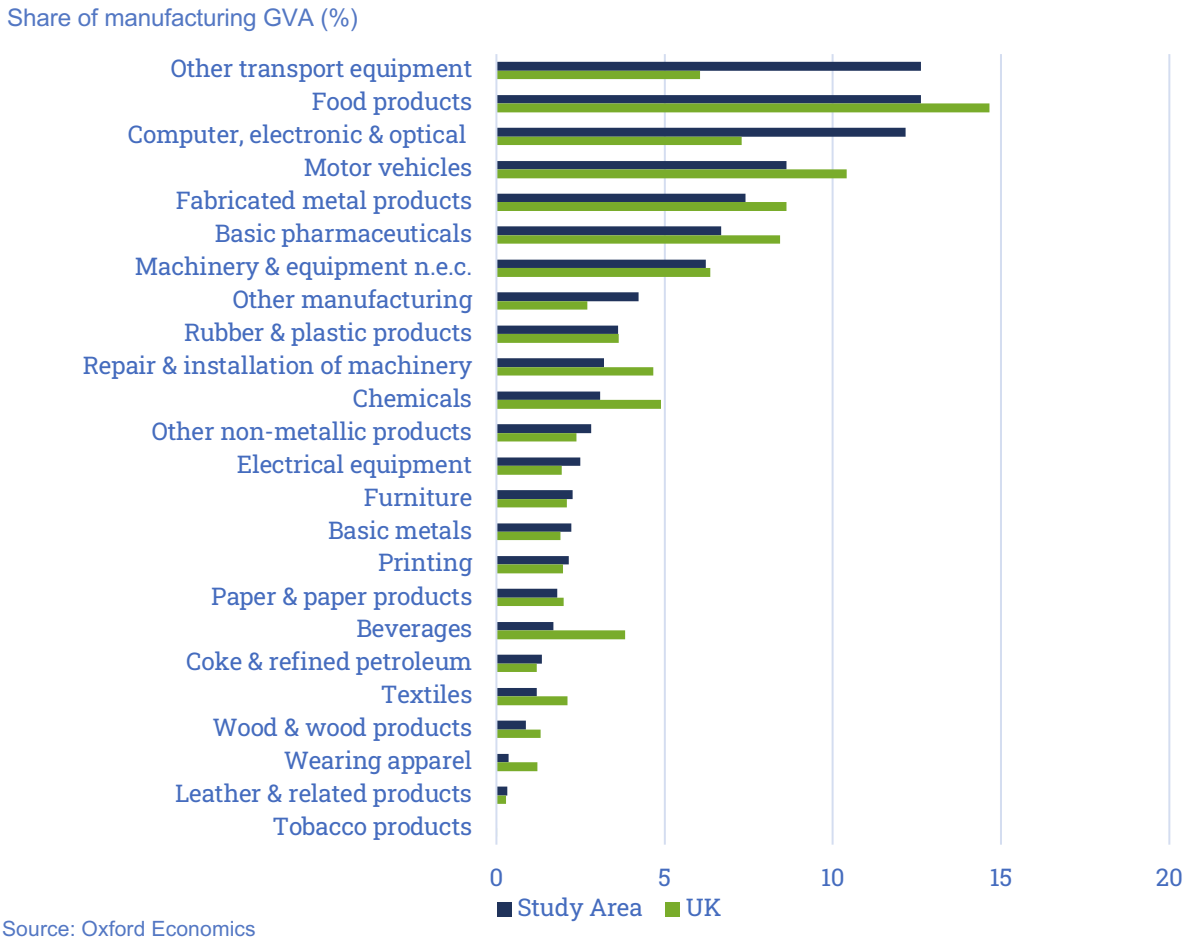
**Figure 9: Estimated employment by sector in the Study Area, 2024**


Source: Oxford Economics

Manufacturing is well represented in the Study Area, accounting for 8.1% of total employment (compared to 7.0% across the UK), and 12.0% of total output (9.7% across the UK). Some sub-sectors are particularly large and concentrated in the Study Area.

This is the case for other transport equipment, which includes aircraft manufacture, and is the largest manufacturing sub-sector in terms of output and is particularly concentrated in the Study Area (12.6% of manufacturing GVA compared to 6.1% across the UK). Specifically, aircraft manufacture and related activities are mainly located near Bristol and Bath. The Study Area represents over 20% of the UK output in this sub-sector. Similarly, the manufacture of computer, electronic & optical is well represented in the Study Area, particularly in South Wales which hosts a compound semiconductors research cluster.

**Figure 10: Estimated manufacturing output by sub-sectors, 2024**



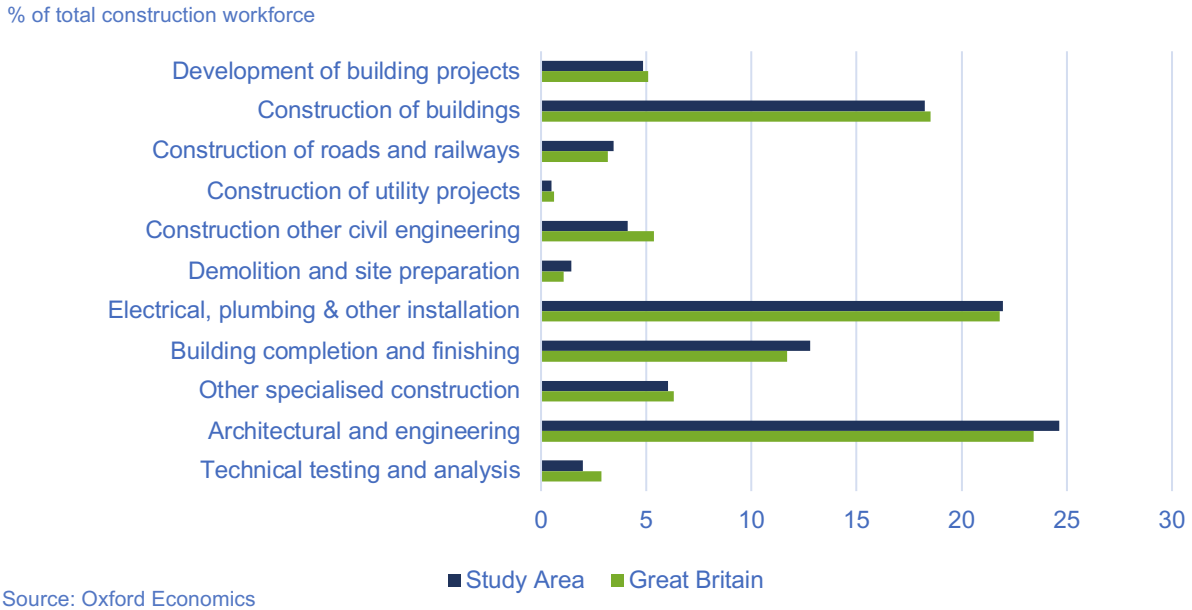

Source: Oxford Economics

A challenge for the Study Area though is that, although it has specialisation in advanced manufacturing activities, it also relies significantly on more traditional and highly polluting industries—such as steel production and oil refining. The production of basic metals accounts for just 2.2% of the manufacturing output, but this represents close to 12% of the UK production. Meanwhile, 11.1% of the national production of coke & petroleum takes place in the Study Area, mainly located in South Wales. Facing competition from countries with cheaper labour and land and targeted by government environmental targets, these industries have already been severely hit this year with Tata's restructuring plan in Neath Port Talbot just one significant example. The South Wales industrial cluster, where most of these activities are located, is part of a UK-wide plan for industrial decarbonisation, while initiatives on the ground are also taking place, but the transition to greener activities and energy distribution could create short term frictions in the labour market.[3]

The construction industry employs an estimated 180,000 workers in 2024 in the Study Area, accounting for 6.4% of the workforce, slightly higher than the UK average (6.0%). An analysis of construction employment data at a higher level of granularity shows a predominance of workers in architectural and engineering activities, which account for close to a quarter of the construction workforce, followed by workers in electrical, plumbing & other installations (22.0%). Meanwhile, construction of other civil engineering (4.1%) accounts for a smaller proportion of employment than it does nationally (5.4%).

[3] Oxford Economics, Western Gateway Independent Economic Review (2024). Accessible at: The Western Gateway Updated IER: the UK's future economy (western-gateway.co.uk)

**Figure 11: Construction employment by sub-sector, 2022**




Source: Oxford Economics

Energy generation is a growing part of the region's economy. The new nuclear power plant of Hinckley Point C is under construction in Somerset, and EDF estimates that 23,500 jobs have already been created and 1,320 apprentices have been trained at the facilities.[4] EDF also invested in skills and training programmes, making better quality jobs available to local residents. There are also various renewable energy facilities across the area. The IER for Western Gateway found that the area accounted for 6% of the UK renewable energy capacity, and 3% of the renewable energy generated in 2022, thanks to sites such as Pen Y Cymoedd in Neath Port Talbot, which is the largest onshore wind farm in England and Wales. There are also plans to develop floating wind turbines off the coast of South Wales, a low carbon energy park at Severn Edge, and various photovoltaic farms along the Estuary and in the rest of the area.[5] The Western Gateway has also put together a hydrogen strategy and is advocating for the development of hydrogen production and transport facilities. Finally, there are aspirations to revitalise the now-decommissioned nuclear site of Oldbury, with the potential to deploy small modular reactors (SMRs). According to the Western Gateway, this initiative could create 40,000 new jobs. In 2024, we estimate that employment in electricity, gas, steam & air activities is just over 12,000 workers, but these projects could contribute to increase the size of the industry in the future.

Transportation & storage, which is estimated to represent 122,000 jobs in 2024, is dominated by warehousing & transport support activities, and land transport activities. Freight water transport is of interest to this study considering the potential impact that tidal energy infrastructure could have on port activity. Data from the ONS suggest that there were about 260 jobs in water transport activities across the Study Area in 2022, but this likely underestimates the employment contribution of the region's ports.[6] For instance, the Bristol

[4] EDF, Socio-economic Impact Report (2024). Accessible at: DE19902 HPC Socio Economic Brochure 2024 A4 RGB V26 NMC.pdf (edfenergy.com)
[5] Oxford Economics, Western Gateway Independent Economic Review (2024). Accessible at: The Western Gateway Updated IER: the UK's future economy (western-gateway.co.uk)
[6] The ONS Business Register and Employment Survey (BRES) reports the number of employees based on the registered activity of the company they work for. A significant part of businesses operating in ports are likely to be registered as transport support activities rather than water transport.

Port Company has more than 600 employees.[7] Regarding freight activity, the Port of Bristol handled 8.5 million tonnes in 2023, making it the 14th largest port in the country. Meanwhile, Newport handled about 2.3 million tonnes in that same year. The large ports of Milford Haven and Port Talbot, which are part of the Study Area but outside of the Severn Estuary, have been designated to become the sites of a new Celtic Freeport, which aims to boost port activity through tax benefits and simplified custom procedures. The project is expected to create over 16,000 new jobs.[8] Traffic in the Severn Estuary is however limited by tidal range, which constrains the access of larger ships to certain areas when the tide is too low.

**Figure 11: Study Area's freight traffic by port**

| Port | Freight tonnage traffic, 2023 (Mt) | Share of UK total |
|---|---|---|
| **Milford Haven** | 34,681 | 8.0% |
| **Bristol** | 8,537 | 2.0% |
| **Port Talbot** | 6,718 | 1.5% |
| **Newport** | 2,274 | 0.5% |
| **Cardiff** | 1,106 | 0.3% |
| **Swansea** | 261 | 0.1% |
| **Bridgwater** | 2 | 0.0% |

Source: Department for Transport

Tourism is also an important part of the Study Area economy. Following the DCMS industrial classification of tourism, there were 297,100 tourism jobs in 2022, equivalent to 11.8% of jobs and in line with the UK average (11.9%).[9] Some places that have a larger tourism base include the Vale of Glamorgan (16.5% of the workforce in a tourism-related industry), the Cotswolds (17.8%), and Pembrokeshire (21.5%). Focusing on the Estuary, the Severn Estuary Commission reports over 11 million trips taken to Cardiff in 2018 (including both UK nationals and international visitors) and over 2 million in Gloucestershire in 2017.[10]

Employment in public administration & defence accounts for 6.2% of the Study Area total, above the UK average (4.6%). Public sector employment tends to be higher in Welsh districts, accounting for over 10% of jobs in Swansea and Cardiff. There is also a high concentration of employment in South Gloucestershire, likely due to the presence of various military facilities. Public sector employment in Somerset and North Somerset is much lower, accounting for less than 5% of the workforce.

Employment estimates in fishing & aquaculture in the districts that directly border the Estuary are just over 1,000 in 2024, largely concentrated in Somerset. Most fishing activity is likely to occur further out at sea, and the Severn Estuary Partnership considers commercial fishing within the Estuary to be rare.[11] However, recreational fishing is popular.

The recent IER for the Western Gateway highlights the region's strategic strengths across several key sectors. In professional services, there are clusters of financial activities and digital and creative industries in the main cities—Bristol, Cardiff, Newport, and Bath mainly—as well as R&D research supported by a network of highly-ranked universities (the GW4

[7] Bristol Port Company website. Accessible at: About Us | The Bristol Port Company
[8] Celtic Freeport website. Accessible at: Green light for transformational Celtic Freeport bid - Celtic Freeport
[9] The DCMS definition of tourism can be found on: DCMS Sector Economic Estimates Methodology - GOV.UK (www.gov.uk)
[10] Severn Estuary Partnership website. Accessible at: Tourism and Recreation – Severn Estuary Partnership
[11] Severn Estuary Partnership website. Accessible at: Fish – Severn Estuary Partnership

Alliance[12]). In manufacturing, aerospace R&D and compound semiconductor research and production stand out, with clusters of activity in Gloucestershire for the former and South Wales for the latter. Meanwhile, in the information and communication sector, cyber security is particularly significant, with the presence of the Government Communications Headquarters (GCHQ) in Cheltenham, while fintech has a noticeable presence mainly in Bristol. Global growth trends and government development plans indicate that these sectors can be competitive on global markets and will continue to expand rapidly. This suggests that the area is well positioned to support this national ambition, as it is already leading the way in these areas.[13]

## Additional socio-economic considerations

As well as a place of residential and economic activity, the Severn Estuary is a natural environment possessing a wealth of natural capital, providing direct and indirect benefits that support production, wellbeing and the quality of life in the region. The Estuary itself is host to diverse habitats containing a variety of landscapes and seascapes including salt marshes, cliffs, islands and tidal flats with several protected sites on both its sides. It is an important nature conservation site because of its internationally important habitats and species, including over-wintering birds and migratory fish[14]. One example is Oldbury lagoons, which were artificially created from dredging silt when the nuclear power station was in operation.[15] These lagoons have become a valuable habitat for birds, and are in the process of being rehabilitated, further enriching the local ecosystem.

The Severn Estuary also plays an important historical, cultural and social role for the communities that live in and around it. The Estuary provides space for recreation and enjoys a rich heritage, and contributes to forging a sense of place for nearby residents. The Seven Bore is also a notable natural phenomenon which attracts large numbers of visitors each year. Changes to land use and development in and around the Estuary could affect its character and the impact of new developments on cultural heritage, environmental quality, and its existing landscape and use should be considered.

Environmental risks will also impact the future of the Study Area, particularly in the context of future climate change and the greater risks it could pose to the economy and ecosystem of the region. Focusing specifically on the Estuary, the main risks relate to coastal and tidal flooding and erosion. In March 2020, the highest tides were recorded since 1936, with a large number of properties flooded. No economic costs for this event for the Severn Estuary area are available, however the best estimate of the cost of flooding across England and Wales between January 2016 and November 2019 is estimated at £708 million[16]. Around the Estuary, a significant proportion of critical infrastructure such as roads, rail, energy and industrial developments are located on low lying land and at risk from flooding and erosion. Climate change is expected to lead to rising sea levels and wetter winters increasing surface water flows, while summer water flows could decrease significantly, impacting river flow, with both impacting communities and activities in the Estuary. While the nature of changes in

[12] The GW4 Alliance is a partnership between the University of Bath, the University of Bristol, Cardiff University, and the University of Exeter that promotes collaboration in research & development, training and business support.
[13] Oxford Economics, Western Gateway Independent Economic Review (2024). Accessible at: The Western Gateway Updated IER: the UK's future economy (western-gateway.co.uk)
[14] Severn Estuary Partnership (2011), State of the Severn Estuary Report
[15] Nuclear Decommission Authority (2023), Oldbury wetland restoration project – Cleaning up our nuclear past: faster, safer and sooner
[16] Environment Agency (2022), Evidence on the costs floods in England and Wales

flood risk as a result of climate change is highly uncertain, changes to land use could themselves exacerbate or mitigate flood risks.

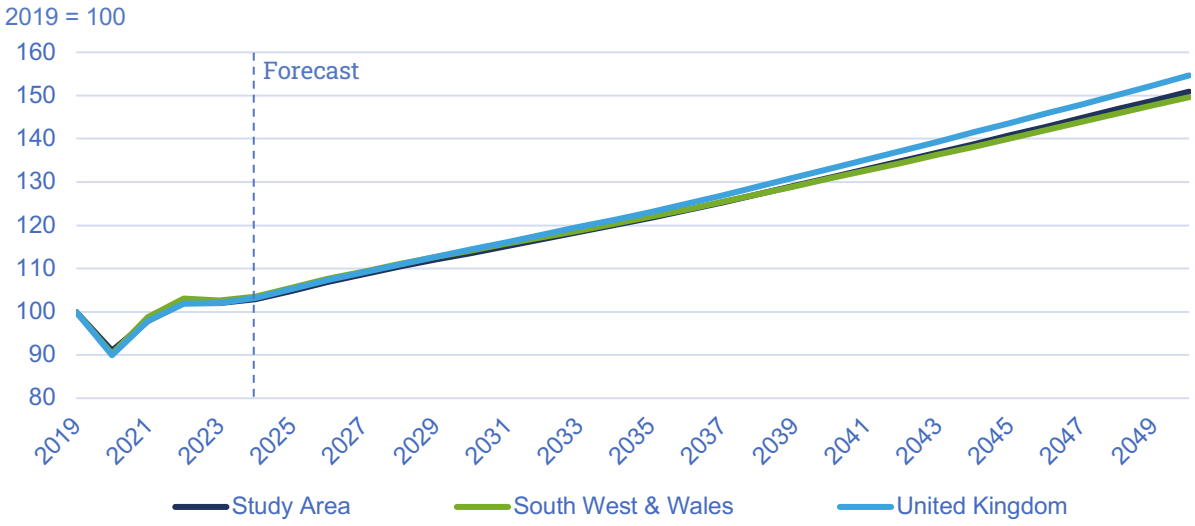
## Future growth projections

Our baseline forecasts for the Study Area is constructed using a set of assumptions about key economic variables and conditions, including monetary policy, fiscal policy, global economic conditions, and political factors, and is therefore driven by our view on how we think the Study Area will grow in relation to the UK. As such it is does not account for specific policies and investments that could influence growth beyond what is forecast in the model and does not include any tidal energy projects. It can be used to consider the likely future of the Study Area as a counterfactual to the scenarios developed for the report titled "The future economic impact of tidal range energy in the Severn Estuary".

We expect the economy of the Study Area to continue to grow in the five-year period to 2030, at an average annual rate of 1.7%, in line with the UK average and one percentage point above the UK average after excluding London. This means that by 2030, the area is expected to produce total GVA of £158.6 million, 10.4% above its estimated 2024 level. High-value services will continue to drive the economy, including growth in information & communication activities (2.7% per year on average) and professional, scientific & technical activities (2.3%).

Growth is expected to continue in the longer term and by 2050, we expect the economy of the Study Area to be worth over £210 billion. This suggests an overall growth rate that is on par with the UK average: we expect the Study Area to account for 6.9% of the UK economy by 2050, a similar share as today.

**Figure 12: Historical and forecast GVA growth, 2019-50**



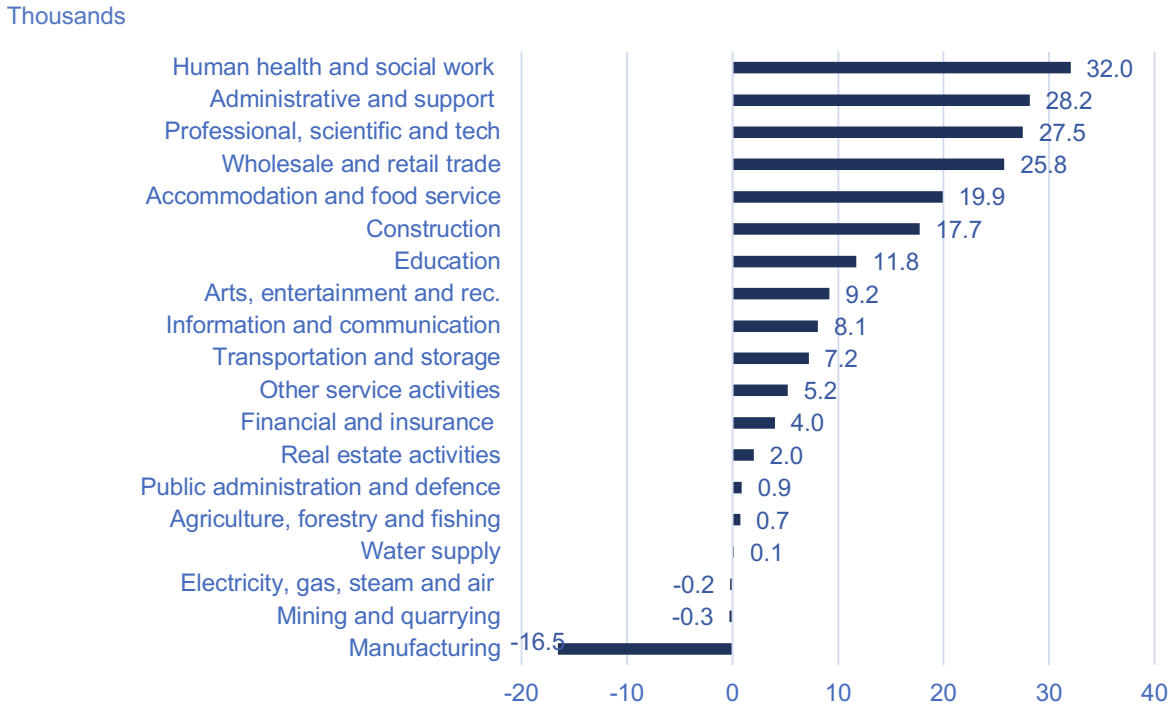

Source: Oxford Economics

Employment growth will expand at a similar pace to the UK average during the period 2025-2030 (1.1%), and a slightly faster rate than the UK after excluding London. We expect an additional 183,200 jobs across the Study Area during that period. The bulk of employment growth will be in health & social care work, with 32,000 more jobs expected by 2030, closely followed by professional, scientific & technical activities, administrative & support services, and wholesale & retail.

Manufacturing is expected to shed a significant number of jobs by 2030. Although we expect similar trends to take place in other parts of the UK, the reliance of the Study Area on

manufacturing results in the loss of an estimated 16,500 jobs by 2050. The automation of tasks and adoption of new technology is likely to play a big role in this trend, for instance in sub-sectors such as food production (3,700 fewer jobs), other transport equipment (2,300 fewer), and motor vehicles (1,600 fewer). Elsewhere, disinvestment in heavy and highly-polluting industries such as steel production and oil refining will also affect the labour market.

**Figure 13: Expected employment change, 2025-30**

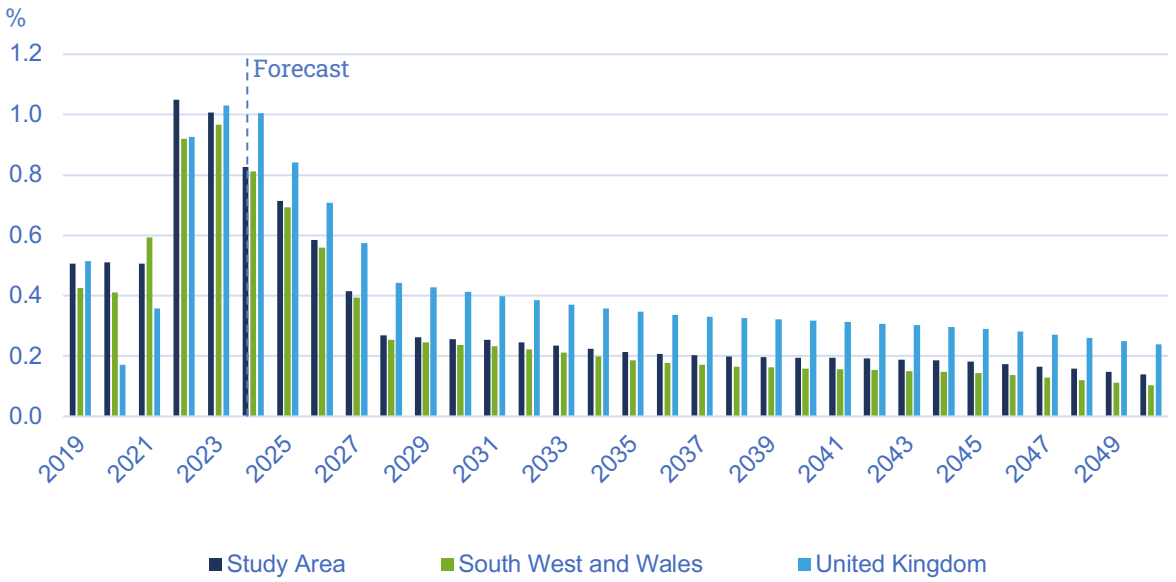



Source: Oxford Economics

Employment will continue to grow over the longer term, broadly matching the UK average. We expect over 3.2 million jobs across the Study Area by 2050, 400,000 more than the current level of 2.8 million.

However, population growth will be a key challenge for the study area. Total population is expected to grow by an average 0.4% per year between 2025 and 2030, below the UK (0.6%), and the UK excluding London (0.5%). Although we expect over 400,000 additional residents by 2050 across the Study Area, growth is forecast to lag the national average over the longer term (Figure 15). This is mainly driven by an ageing population which could itself impede growth in the labour supply.

**Figure 14: Historical and forecast population growth by year, 2019-2050**




Source: Oxford Economics

## Concluding remarks

The area around the Severn Estuary is well placed to continue to grow and remain a key contributor to the UK economy. It is a large and diverse area, largely unified under the Western Gateway initiative, and which benefits from a variety of economic assets —large urban areas, productive towns, ports, energy facilities, research clusters, and industrial and manufacturing estates. It relies on a dynamic labour market that shows low levels of unemployment and high levels of qualifications. Importantly, its economy is specialised in niche and fast-growing activities (including aerospace, compound semi-conductors, and cyber-security), which—although small taken individually—demonstrate significant global competitiveness and are expected to continue to expand and benefit from government support.

But the area is also exposed to various challenges. There are clear geographical disparities that are particularly visible at a granular level, with deprivation being an issue in several parts of the region. The area has also consistently had lower levels of productivity than the UK, even after excluding London, and even highly productive activities are somewhat less productive than their UK counterparts. The forecast decline in manufacturing employment, an industry that currently employs a significant proportion of the population, is also a concern, and supporting workforce transition to more resilient activities will be critical.