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To: [Wylfa Newydd](#)
Subject: RE: IACC Deadline 2 Submission : Local Impact Report - Economic Development - Local Employment (email 5)
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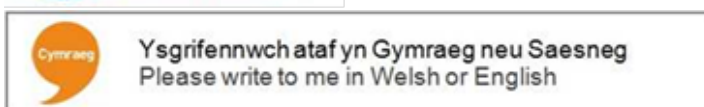
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Cofion/ Regards,
Manon

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A report prepared by Oxford Economics

May 2017

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Anglesey: Baseline economic analysis update and growth scenario

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Executive Summary

A challenging economic outlook

Our baseline outlook suggests that employment in Anglesey will be relatively stagnant over the forecast period to 2030. The accommodation, transportation and storage sectors are expected to continue to be the drivers of job growth over the forecast period. Meanwhile, manufacturing and public sector employment are likely to continue to decline.

But planned investments offer plenty of opportunities

This study has shown that the local economy is about to enter a unique period of economic activity driven primarily by the construction of Wylfa Newydd (with other planned activity and decommissioning of current nuclear reactors having a smaller influence). The scale of labour required is significant, but a large proportion will be sourced from outside Anglesey.

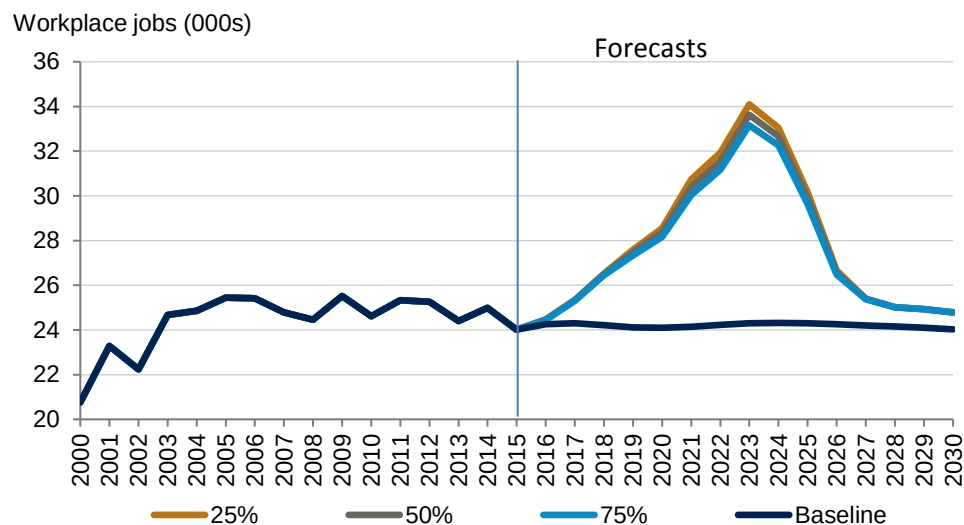
We find that under a low displacement scenario, 9,800 workplace jobs will have been created in Anglesey (growth of 40.3 percent) by 2023, however, the limited spare capacity in the economy means that unemployment falls by around 400 people. The inflow of non-home based workers, returnees along with migrants attracted to the area because of the job opportunities boost working age population by as much as 7,100 by 2023 and the resident employment rate jumps by 6.7 percentage points to 88 percent. Consequently, the additional jobs mean GVA is 28.8 percent higher than under the baseline outlook.

Figure: ES.1: Headline results in Anglesey at peak, 2023

Anglesey: Key Indicators	Baseline	Scenario					
		25% displacement		50% displacement		75% displacement	
		No.	Difference	No.	Difference	No.	Difference
Population (000s)	71.2	78.4	7.2	78.0	6.7	77.8	6.6
Population aged 16+	38.3	45.4	7.1	45.0	6.7	44.8	6.6
Workplace employment (000s)	24.3	34.1	9.8	33.6	9.3	33.2	8.9
Employment growth (p.a. 2016 to 2030)	-0.3	2.1	2.4	2.0	2.3	1.9	2.2
Total employment (people, 000s)	23.5	32.9	9.5	32.5	9.0	32.0	8.6
Resident employment (people, 000s)	31.1	40.0	8.8	39.6	8.4	39.2	8.1
Resident employment rate (%)	81.3	88.0	6.7	87.9	6.6	87.4	6.1
Unemployment (000s)	1.8	1.4	-0.4	1.4	-0.4	1.4	-0.4
Unemployment rate (%)	5.6	3.4	-2.1	3.5	-2.1	3.5	-2.1
Net migration (000s)	0.1	2.0	1.9	1.7	1.7	1.7	1.6
GVA (£m, 2013 prices)	1,029	1,325	296.5	1,311	282.4	1,297	268.2
GVA % growth (p.a. 2016 to 2030)	1.3	3.1	1.8	3.0	1.8	3.0	1.7
Productivity (£s per job, 2013 prices)	42,344	38,874	-3,470.6	38,997	-3,347.6	39,123	-3,221.0
Productivity (p.a. 2016 to 2030)	1.6	1.0	-0.6	1.0	-0.6	1.1	-0.6

Source: Oxford Economics

We find that by 2030, when the proposed developments are operational, workplace jobs would be 800 higher than under our baseline outlook (growth of 3.4 percent).

Figure: E2: Baseline and scenario workforce jobs, Anglesey, 2000-2030

Source: Oxford Economics

Despite the general uplift in employment in Anglesey, headline GVA remains close to baseline levels until 2019, after which the substantial job creation at Wylfa Newydd pushes GVA to over £1.3bn in 2023 and 2024. Under the low displacement growth scenario, GVA levels peak at £1.329bn, some 27.3 percent above baseline projections. By 2030, as the developments enter their operational phase, the additional jobs and presence of high productive nuclear related activity mean GVA levels are 6.9 percent above the baseline projections.

Unquantifiable opportunities

Across most measures, our modelling shows that the economy is expected to return close to baseline levels in the long-run as construction employment filters out. That would however represent a missed opportunity for a peripheral area of Wales and the UK that might find significant increases in demand hard to achieve in the future.

The construction phase of the Wylfa Newydd represents a short-term boost. The real opportunities for long-term change are in gaining experience of nuclear related activity, and any investment that is made to capitalise on the increase in population, such as investment in broadband, office space, and other infrastructure.

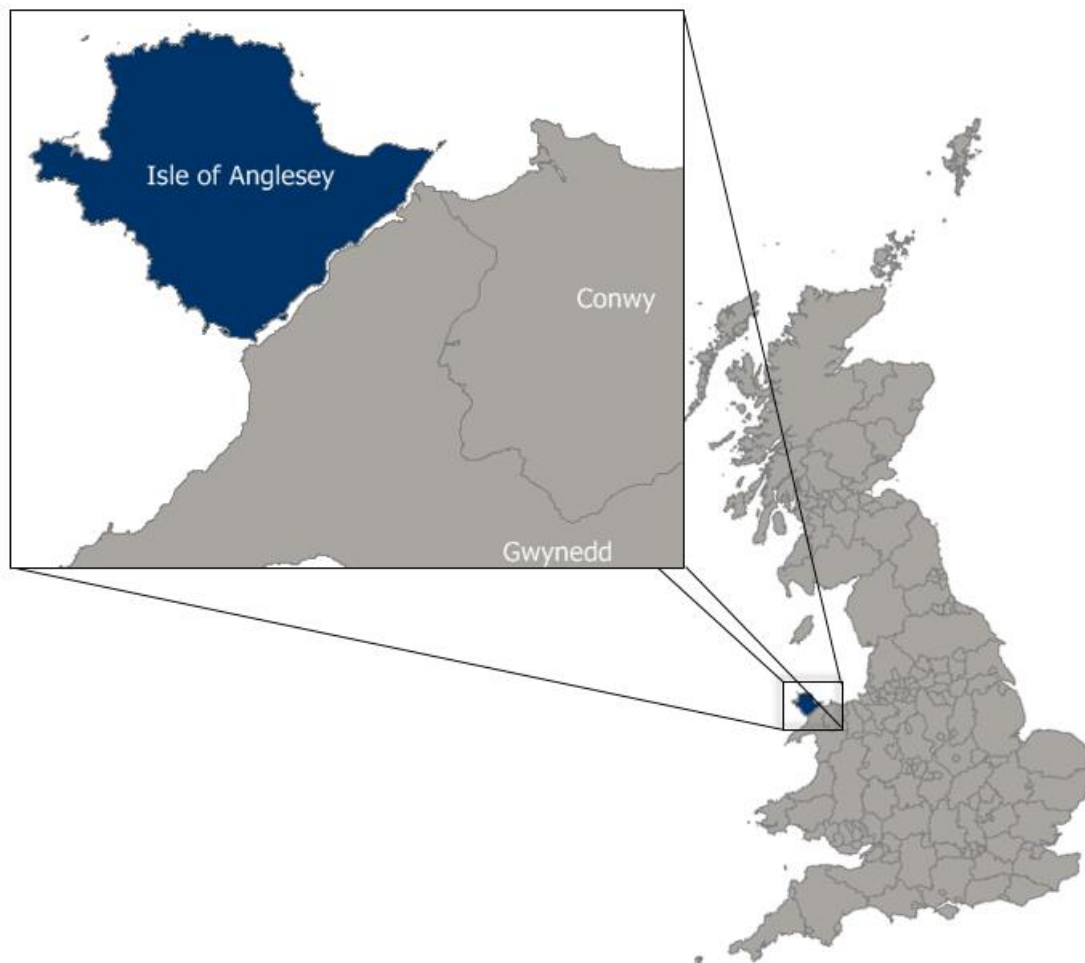
Our modelling does not capture long-term opportunities that could arise from delivering a nuclear new build. Given the UK's increasing energy needs and commitment to nuclear, as well as those elsewhere, local firms which have acquired the appropriate skills and experience could be well placed to capture future contracts.

In addition, Grwp Llandrillo Menai the Further Education college has been working to upskill the unemployed so staff lost to the nuclear projects can be replaced. This should provide a real benefit to the local economy and to the individuals involved.

I Introduction

Oxford Economics were commissioned to provide baseline analysis on the Isle of Anglesey economy and to model the likely impact of decommissioning, along with the construction and operation of three developments (Land and Lakes, a Biomass plant and the planned Wylfa Newydd new build).

This paper is an update of the work undertaken in 2015 and 2016 and provides an analysis of recent data and baseline forecasts before modelling the latest data on the upcoming investments and decommissioning.



2 Overview of macroeconomic conditions

This section provides an overview of the current economic environment at the global, UK and regional level. It is intended to give the reader an understanding of the broader trends affecting the Anglesey and Môn a Menai economies.

Key points:

- Economic headwinds have resulted in Oxford Economics' outlook for world growth becoming slightly more downbeat than previously.
- We forecast that the UK economy will grow by an annual average 1.8 percent from 2015 to 2020 – down from 2.2 percent in our previous report.
- Likewise, UK employment growth will average just 0.6 percent per annum – significantly weaker than the 1.5 percent enjoyed between 2010 and 2015.
- Employment growth in Wales will lag the national average with annual growth of 0.2 percent (2015-2030) in Wales, compared to 0.5 percent for the UK overall.

2.1 Global growth perceptions weaken slightly

In recent years, global economic growth has been relatively 'steady' – despite the economic challenges which continue to restrain confidence. Recent economic hurdles include events following the election of President Trump, China's continued slowdown, and Brexit (with the triggering of Article 50). These economic headwinds have resulted in Oxford Economics' outlook for world growth becoming slightly more downbeat than previously. Some of the advanced economies have also seen a slight downward revision in their baseline GDP growth projections compared to the previous report.

The US remains a key driver behind the success of the world economy. Its economy grew by 1.6 percent in 2016, though this is slightly weaker than previously projected (1.9 percent). Elsewhere, the UK economy grew slightly stronger in comparison, with growth of 1.8 percent in 2016 – though this does mark a fall from 2.2 percent projected in our previous report. In fact, the UK's economic performance was among the strongest out of the US, Germany, France and Italy in 2016.

Going forward, growth in the UK has undergone a slight downward revision relative to previous projections. We forecast, over the period between 2015 and 2020, growth will average 1.8 percent annually – down from 2.2 percent in our previous report. This growth is expected to be on par with the average of the advanced economies over the same period, but below that of the US (2.1 percent).

Latest flash Eurozone GDP estimate for Q1 2017 revealed growth of 0.5%, in line with the Q4 2016 outturn and confirming that the business surveys had overstated the strength of the recovery in early-2017 – both the composite PMI and EC Economic Sentiment Indicator had pointed to growth of about 0.7%. The global and Eurozone crises will leave their mark on growth for years to come. Going forward we expect

growth in the Eurozone to average 1.6 percent annually over the period between 2015 and 2020, slightly lower than 1.8% in the ten years to 2008.

Figure 2.1: GDP growth, world economies, 2015-2020, %/y

World GDP							
% Change on Previous Year							
	2015	2016	2017	2018	2019	2020	2015-20
US	2.6	1.6	2.2	2.7	1.7	1.6	2.1
Japan	1.2	1.0	1.4	1.3	0.9	0.0	1.0
Eurozone	1.9	1.7	1.8	1.5	1.4	1.3	1.6
of which:							
Germany	1.5	1.8	2.0	1.4	1.2	0.9	1.5
France	1.2	1.1	1.4	1.6	1.5	1.4	1.4
Italy	0.7	1.0	0.9	1.0	1.0	1.0	0.9
UK	2.2	1.8	1.8	1.4	1.6	2.1	1.8
China	6.9	6.7	6.6	6.1	5.8	5.6	6.3
India	7.5	7.5	7.2	7.5	7.1	6.8	7.3
Other Asia	3.2	3.8	3.9	4.2	4.2	4.2	3.9
Mexico	2.6	2.1	1.9	2.0	2.4	2.4	2.2
Brazil	-3.8	-3.6	0.1	2.8	3.1	2.9	0.2
Other Latin America	1.5	-0.3	1.2	2.9	3.3	3.4	2.0
Eastern Europe	-0.1	1.3	2.1	2.2	2.1	2.1	1.6
MENA	3.0	2.0	2.5	3.4	3.7	3.8	3.1
Advanced economies	2.1	1.7	2.0	2.0	1.6	1.5	1.8
Emerging economies	3.7	3.5	4.1	4.6	4.6	4.5	4.2
of which BRICs	4.0	4.5	5.2	5.4	5.2	5.0	4.9
World	2.7	2.3	2.7	3.0	2.8	2.7	2.7

Source: Oxford Economics

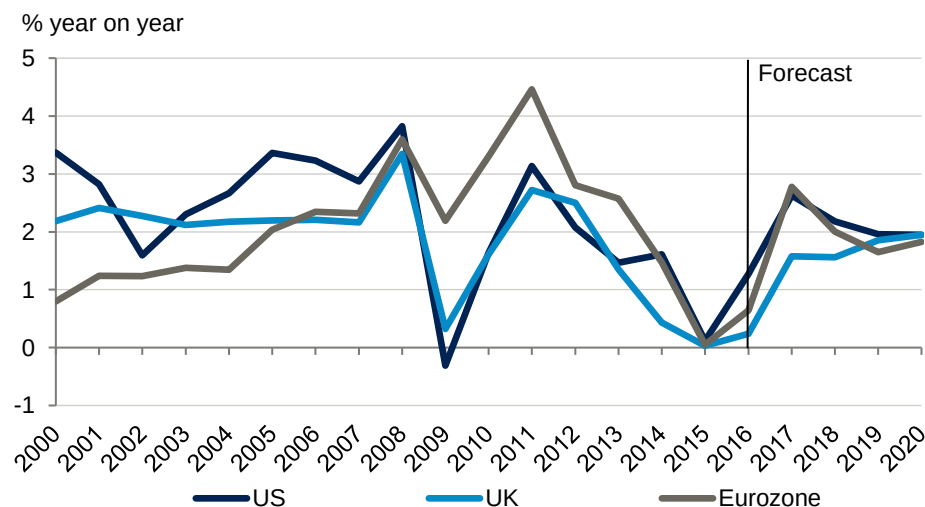
The slowdown within the Chinese economy has created ripples throughout the global economy. The world's second largest economy enjoyed double-digit growth through much of the 2000s despite the onset of the Great Recession. Much of this growth has, however, been investment driven, which has proven to be unsustainable in the long term. Slowing growth within the developing economies has led to weakening demand for global commodities—depressing prices. The most notable of which has been the fall in oil prices. World oil prices began falling in late 2014 and have since fallen in value to prices not seen since the early 2000s.

Figure 2.2: World oil price, 2000-2020, US\$ per barrel

Source: Oxford Economics

The fall in fuel prices has resulted in a welcome boost to real household incomes and as a consequence, improved consumer spending within the economy. Yet these benefits are fundamentally the result of weakened global demand. The UK, as an open economy, could find itself more vulnerable economically as a result.

Furthermore, lower commodity prices have helped to keep inflation relatively low in the UK for a couple of years. Low inflation and interest rates, in part, have helped to boost consumer spending in the UK. But inflation has accelerated more recently and this is likely to continue through 2017, in part, due to the impact of the sharp depreciation of sterling over the past couple of years feeding along the supply chain. Under these circumstances there will be increased pressure for Central Bankers to increase interest rates from the current historically low levels, thereby ramping up the pressure on those still struggling with high debt levels.

Figure 2.3: CPI inflation, US, UK and Eurozone, 2000-2020

Source: Oxford Economics

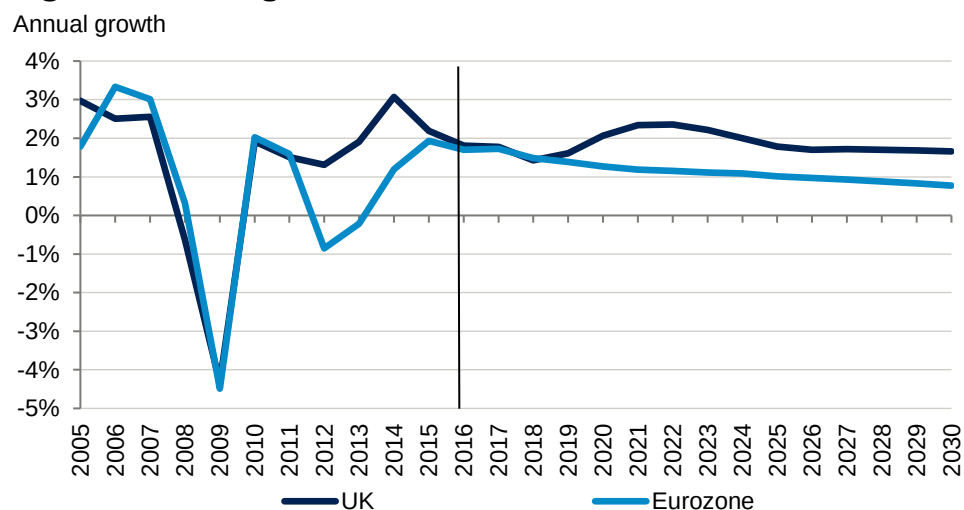
Interest rates remain at historically low levels in the UK. Between March 2009 and August 2016 the Bank of England set its official bank base rate at 0.5 percent, which was then lowered to 0.25 percent in early August 2016. Elsewhere the ECB lowered its benchmark rate to 0.0 percent in March 2016. Thus, policymakers remain cautious concerning growth prospects over the short to medium term.

2.1 Q1 2017 UK GDP growth slowed sharply

According to ONS data, the preliminary estimate for Q1 2017 reported quarterly GDP growth of just 0.3%, down from 0.7% in Q4 2016 and the softest outturn for a year. There was broad-based weakness across the sectors, but the most notable aspect was the slowest growth in services output for two years as higher inflation undermined consumer-facing sub-sectors.

Going forward we expect the rate of growth in the UK to remain positive, albeit slightly weaker. Over the next 15 years (2015-2030), annual growth is forecasted to average 1.9 percent. We therefore expect the UK to continue to outperform the Eurozone over the same period.

Figure 2.4: GDP growth, UK and Eurozone, 2005-2030

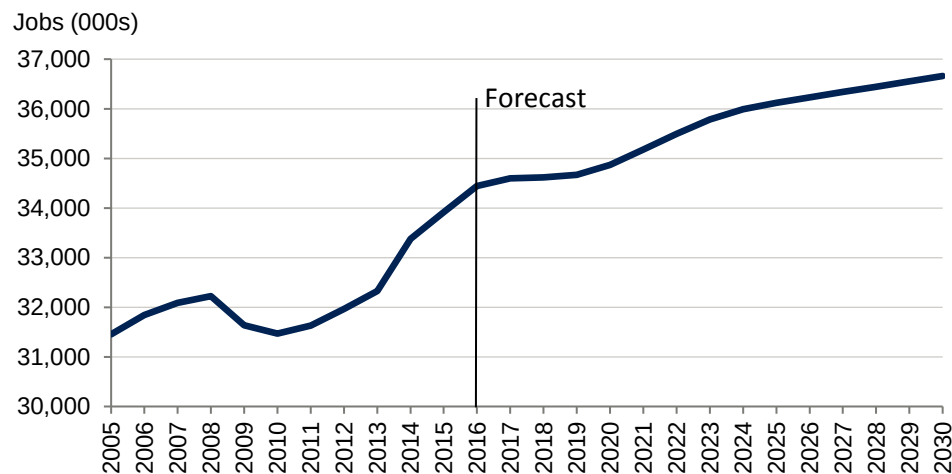


Source: Oxford Economics

2.2 UK economy benefits from an open economy

Western economies continue to carry significant debt burdens, and governments, on the whole, remain committed to austerity programmes. Equally, domestic consumption, as a driver of growth, remains heavily supported by historically low interest rates. The IMF steering committee recently noted that the global economy still relies on global trade to do the heavy lifting in the absence of more “growth-friendly” domestic policies. As a result, export markets and foreign investment are likely to continue to play a significant role in the UK economy.

The UK economy’s capacity to create employment has been one of the most distinctive characteristics of the labour market over the last five years. Total employment grew by 9.5 percent or 3 million jobs between 2010 and 2016. As a result, the UK was able to recover its pre-recession employment level in 2013.

Figure 2.5: Total employment, UK, 2005-2030

Source: Oxford Economics

Some of the strongest employment growth has come from the professional services and ICT sectors – growing an average of 4 percent and 3.5 percent a year between 2010 and 2015 respectively. These sectors represent relatively high value, exportable services which have proved resilient in the wake of weak domestic demand. Over the last five years these sectors collectively contributed an additional 737,000 jobs to the economy. On the other hand, the public sector experienced the largest contraction over the period. The sector lost 229,000 jobs between 2010 and 2015, (an annual average contraction of 2.9 percent).

We forecast more subdued employment growth over the outlook period. Annual average growth over the coming five years (2015-2020) is forecast at just 0.6 percent – significantly weaker than the 1.5 percent enjoyed between 2010 and 2015. Previously fast growing sectors are expected to cool slightly, meanwhile the public administration and manufacturing sectors are expected to continue to lose significant job numbers.

Figure 2.6: Sectoral employment change, UK, 2010-2030

Sector	2010-2015		2015-2020		2020-2030	
	(000's)	% pa	(000's)	% pa	(000's)	% pa
Agriculture	-0.5	0.0%	0.0	0.0%	-38.2	-1.0%
Mining and quarrying	4.3	1.3%	-13.8	-4.6%	-15.1	-3.3%
Manufacturing	39.0	0.3%	-107.8	-0.8%	-305.1	-1.3%
Electricity, gas and steam	6.3	1.0%	4.9	0.7%	-17.7	-1.4%
Water supply and sewerage	21.1	2.3%	0.2	0.0%	-15.0	-0.8%
Construction	91.3	0.9%	141.2	1.3%	261.0	1.1%
Wholesale and retail	180.5	0.7%	97.3	0.4%	218.9	0.4%
Transportation and storage	133.9	1.8%	82.8	1.0%	38.2	0.2%
Accommodation and food	290.2	2.8%	91.9	0.8%	127.7	0.5%
ICT	219.1	3.5%	87.9	1.2%	130.5	0.8%
Financial and insurance	-4.5	-0.1%	-39.4	-0.7%	-6.2	-0.1%
Real estate	92.5	3.7%	26.6	0.9%	64.1	1.0%
Professional services	517.7	4.0%	232.9	1.5%	396.3	1.2%
Administrative and support	452.5	3.5%	229.9	1.5%	369.9	1.1%
Public admin	-229.4	-2.9%	-123.5	-1.7%	-22.6	-0.2%
Education	157.1	1.1%	12.9	0.1%	92.1	0.3%
Human health	289.4	1.4%	110.0	0.5%	302.4	0.7%
Arts and entertainment	85.5	1.9%	47.1	1.0%	99.2	1.0%
Other service activities	96.5	2.0%	72.1	1.4%	112.1	1.0%
Total	2,442	1.5%	953	0.6%	1,793	0.5%

Source: Oxford Economics

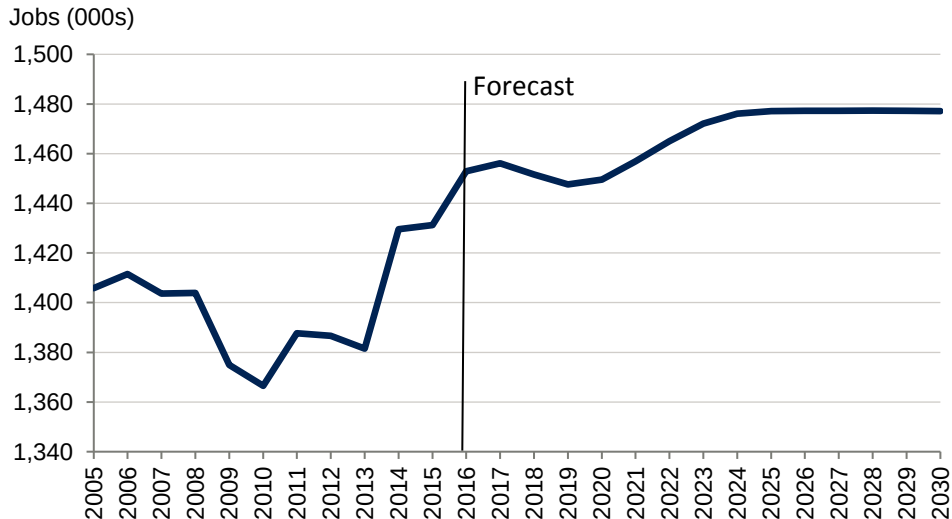
Note: Blue shading represents sectors with the largest employment gains; orange shading represents sectors

As a consequence of the job creation, unemployment has continued to decline, falling from a high of 8.1 percent in 2011 to 4.9 percent in 2016. Despite this, redundancies will persist in declining sectors, while productivity and wage growth remain an on-going concern.

2.3 Welsh economy's recent performance

Labour market conditions remain challenging

The Welsh labour market finally turned a corner in 2010. By 2015, regional employment levels had grown by 4.7 percent, creating an additional 65,000 jobs. However, this job growth was significantly weaker than the UK average of 7.8 percent over the same period. Between 2010 and 2015, Welsh employment only grew in three of the five years. Indeed, it would have been highly likely that employment levels would have remained below the pre-recession peak if it was not for a strong performance between 2013 and 2014.

Figure 2.7: Total employment, Wales, 2005-2030

Source: Oxford Economics

The Welsh labour market suffers from low levels of employment in the fastest growing areas of the UK economy, including professional services, administration and support and ICT, whilst at the same time having above average employment in contracting and/or slow-growing sectors.

Manufacturing has performed relatively well between 2010 and 2015, despite the sector being significantly smaller in employment terms when compared to the early 2000s. The retail sector faced the most challenging environment since 2010—losing almost 12,000 jobs over five years. Equally, construction continued to struggle, losing 3,400 jobs over the same period. Construction remains a significant employer in Wales with the sector accounting for almost seven percent of all jobs in 2015.

Job growth between 2015 and 2020 is forecast to be concentrated in the administrative and support, retail and transportation and storage sectors, accounting for 18,700 jobs over the five years. Unfortunately, the net gain in employment is likely to be negated by significant job losses in the public admin and health sectors. We expect the jobs outlook to weaken slightly over the remaining forecast period. Thus, the region is likely to underperform relative to the UK average in terms of job creation. The outlook suggests annual employment growth of 0.2 percent (2015-2030) in Wales, compared to 0.5 percent for the UK overall.

Figure 2.9: Sectoral employment change, Wales, 2010-2030

Sector	2010-2015		2015-2020		2020-2030	
	(000's)	% pa	(000's)	% pa	(000's)	% pa
Agriculture	3.5	1.7%	-0.1	-0.1%	-3.9	-1.0%
Mining and quarrying	-0.1	-0.6%	-0.3	-3.1%	-0.5	-3.6%
Manufacturing	18.0	2.5%	2.0	0.3%	-18.3	-1.2%
Electricity, gas and steam	0.7	1.9%	0.7	1.6%	-1.2	-1.4%
Water supply and sewerage	0.5	1.0%	-0.5	-0.9%	-0.8	-0.8%
Construction	-3.4	-0.7%	0.2	0.0%	8.0	0.8%
Wholesale and retail	-11.5	-1.1%	3.1	0.3%	9.0	0.4%
Transportation and storage	1.8	0.7%	4.0	1.5%	1.2	0.2%
Accommodation and food	3.1	0.6%	2.7	0.5%	5.0	0.5%
ICT	6.7	4.6%	-0.1	0.0%	2.1	0.6%
Financial and insurance	2.8	1.8%	-0.4	-0.2%	-0.5	-0.1%
Real estate	6.9	8.5%	2.0	1.9%	2.0	0.8%
Professional services	1.5	0.5%	2.1	0.6%	4.9	0.7%
Administrative and support	8.6	2.0%	11.5	2.5%	9.8	0.9%
Public admin	-3.3	-0.7%	-9.9	-2.3%	-3.8	-0.5%
Education	9.5	1.5%	0.7	0.1%	0.1	0.0%
Human health	10.5	1.0%	-4.3	-0.4%	7.2	0.3%
Arts and entertainment	3.6	1.9%	2.7	1.3%	3.4	0.8%
Other service activities	5.2	2.8%	2.2	1.1%	3.9	0.9%
Total	64.7	0.9%	18.4	0.3%	27.5	0.2%

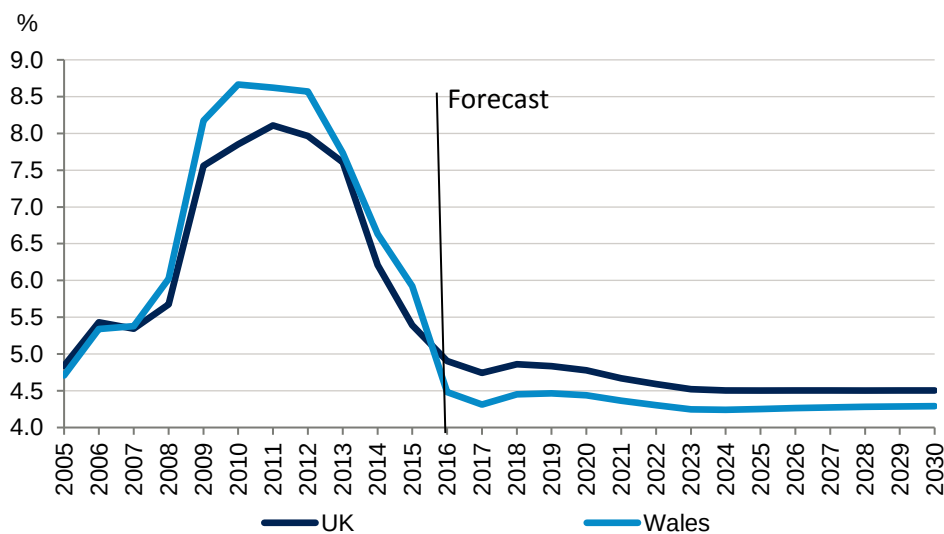
Source: Oxford Economics

Note: Blue shading represents sectors with the largest employment gains; orange shading represents sectors with the weakest employment growth

Unemployment above average as a consequence

Sluggish employment growth has meant that Welsh unemployment has remained above the UK average for much of the last decade. Nonetheless the region had recorded an improvement in its unemployment rate more recently, with the average rate having fallen from 5.9 percent in 2015 to 4.6 percent in 2016. The equivalent rate for the UK stood at 4.9 percent, marking a 0.4 percentage point reduction since 2015.

Job growth in Wales is expected to average 0.2 percent a year between 2015 and 2030, 0.3 percentage points lower than the UK. Despite this we expect the unemployment rate in Wales to improve over the forecast period, falling below the UK average. This will be driven by differences in the rate of growth of the working age population, which is expected to fall by 0.2 percent annually in Wales while at the UK level it is projected to grow by 0.3 percent.

Figure 2.10: ILO unemployment rate, UK and Wales, 2005-2030

Source: Oxford Economics

2.4 Summary

The current world economy has continued on a path of steady, if unspectacular, growth but our expectation is slightly muted given global downside risks. However, we continue to expect the UK to perform relatively strongly in comparison to other advanced economies.

The Welsh economy faces a number of additional challenges; employment levels have recovered their pre-recession peak level, recent growth has been patchy and the outlook remains relatively muted. The regional economy has above average employment in slow growing or contracting sectors. Equally, a number of higher value exportable sectors are less concentrated within the economy—weakening growth prospects.

3 A socio-economic review of the Anglesey and Gwynedd economies

This section outlines recent performance and the outlook for Anglesey and Gwynedd. Due to data availability we have analysed the full Gwynedd economy rather than just the Menai area of Gwynedd. The primary focus is however on the Anglesey economy where the four investment projects (the nuclear new build at Wylfa Newydd, decommissioning of the existing nuclear plant, the proposed Biomass Plant, and proposed tourism related development Land and Lakes) are due to be constructed.

Key points:

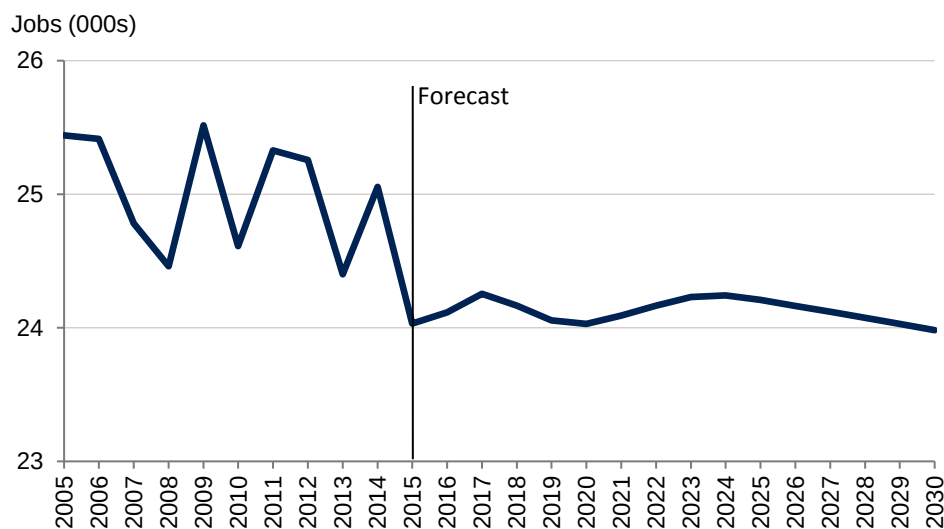
- In terms of employment growth, Anglesey and Gwynedd, combined, have fared better than Wales in recent years. Job creation averaged 1.3 percent a year between 2010 and 2015 period compared to 0.9 percent. Nonetheless the rate of growth varied significantly across the two local economies. Anglesey experienced job losses, due to its overreliance on struggling sectors (such as construction and retail), which were offset by the gains in Gwynedd overall.
- Going forward job creation is expected to remain muted at best, with growth averaging 0.1 percent a year in Gwynedd between 2015 and 2030, while job growth in Anglesey is projected to remain flat.
- Despite recent improvements in the rate of unemployment across both local economies, long-term unemployment remains a persistent issue. This is especially the case in Anglesey but also more recently in Gwynedd. Given unemployment is concentrated in lower skilled occupations, high long-term unemployment presents a challenge to local economies. In particular, it raises questions about how best to equip the labour market's spare capacity with the relevant skills needed to support future growth.
- With combined GVA of £3.2 billion (constant 2013 prices) in 2015, the local economies accounted for 5.8 percent of the total economic output of Wales. Productivity growth is expected to drive gains in economic output. Growth in productivity will facilitate average annual GVA growth of 1.4 percent to 2030 in Anglesey.
- The proportion of residents (aged 16-64) with no qualifications in Anglesey is below Gwynedd and the Welsh average. However, in terms of the proportion with NVQ4+, there is room for improvement.
- Deteriorating demographics places pressure on economic prospects and public services. In fact, low employment rates within both local economies reflects, in part, the issue of high-dependency – with almost a quarter of Anglesey's population is aged over 65.

3.1 The labour market

3.1.1 Recent job losses in Anglesey, but employment growth in Gwynedd

Job growth in Anglesey fluctuated considerably over the past decade. We estimate, that over the five years from 2010 to 2015, the number of jobs fell by 0.5 percent a year. This translated into an average loss of 116 jobs annually. As a result, 2015 marked the lowest jobs level in over a decade. Regional and national job creation in comparison grew by 0.9 and 1.5 percent a year on average between 2010 and 2015, respectively. Elsewhere, Gwynedd performed more positively over the period, with growth averaging 2 percent a year. Together employment growth in Anglesey and Gwynedd averaged 1.3 percent annually over the period.

Figure 3.1: Total employment, Anglesey, 2005-2030



Source: Oxford Economics

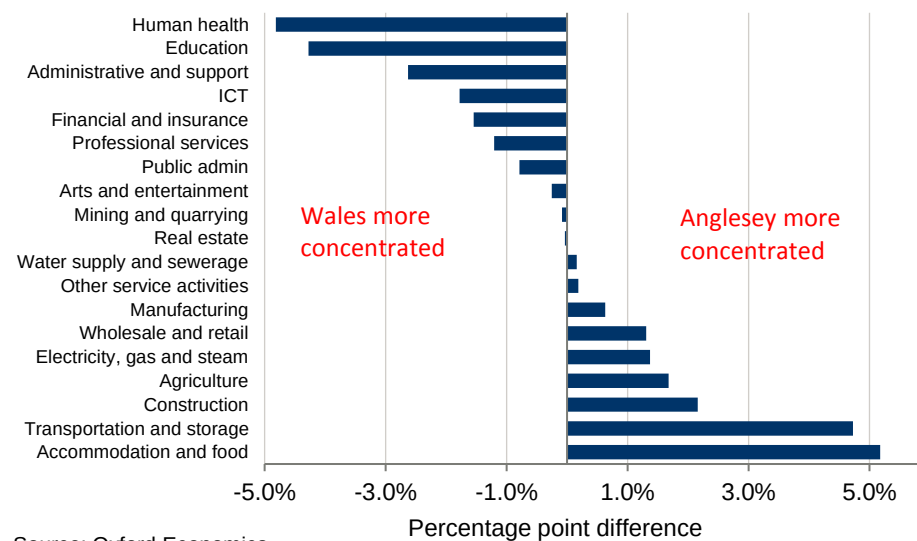
Job growth is intrinsically linked to the structure of the local economy. The structure of Anglesey's economy varies significantly from the UK and Wales as a whole. Compared to Wales, Anglesey has a higher share of employment in sectors which experienced job losses between 2010 and 2015. Both the construction and retail sector contribute significantly to Anglesey's economy, accounting for 23.9 percent of all jobs in 2015. Combined these sectors lost almost 700 jobs over the period.

Furthermore sectors associated with strong growth potential at the national level, such as professional services, are relatively under-represented in Wales and even more so in Anglesey. In fact professional services in Anglesey also performed poorly, with job losses of almost 600 between 2010 and 2015. The lack of critical mass in professional services employment locally suggests the economy is reaping little benefit from one of the fastest growing sectors at the UK level. ICT was among the fastest growing sectors within Anglesey over the same period, yet its below average employment share limits its overall employment contribution to the local economy.

'Accommodation and food' and 'transportation and storage' are key employment sectors within Anglesey. Together these sectors created almost 800 jobs in the five

years between 2010 and 2015. Job creation also stemmed from manufacturing which grew by 6.8 percent on average per year over the period, sustaining a further 780 jobs.

Figure 3.2: Sectoral employment structure, Anglesey, 2015



Oxford Economics' baseline outlook is policy neutral and therefore takes no account of policy changes or planned developments like the nuclear new build in Anglesey. Under these conditions we expect average annual employment growth to come out of negative territory, yet remain flat, over the next five years (2015-2020). Job creation is then projected to average growth of only 0.1 percent a year over 2020 and 2025, after which we expect a contraction of jobs – averaging a decline of 0.2 percent a year over the remaining forecast period. The net result is expected to be no overall growth in employment between 2015 and 2030.

Nonetheless Anglesey's labour market is likely to be supported by employment growth in transportation and storage, as well as accommodation and food – without which the local labour market is likely to contract overall. Furthermore, administrative and support is expected to contribute more positively towards job creation going forward.

Figure 3.3: Sectoral employment change, Anglesey, 2010-2030

Sector	2010-2015		2015-2020		2020-2030	
	(000's)	% pa	(000's)	% pa	(000's)	% pa
Agriculture	0.1	1.8%	0.0	0.0%	-0.1	-1.0%
Mining and quarrying	0.0	-16.5%	0.0	-3.3%	0.0	-3.8%
Manufacturing	0.8	6.8%	0.0	-0.1%	-0.4	-1.4%
Electricity, gas and steam	0.0	-1.4%	0.0	1.5%	-0.1	-1.4%
Water supply and sewerage	-0.1	-4.2%	0.0	-0.8%	0.0	-0.8%
Construction	-0.4	-3.0%	-0.1	-1.1%	0.1	0.5%
Wholesale and retail	-0.3	-1.8%	0.0	0.0%	0.0	0.1%
Transportation and storage	0.2	2.6%	0.1	1.3%	0.0	0.1%
Accommodation and food	0.5	4.0%	0.1	0.6%	0.1	0.4%
ICT	0.0	8.0%	0.0	-0.2%	0.0	0.5%
Financial and insurance	0.0	1.1%	0.0	-1.4%	0.0	-0.8%
Real estate	0.1	9.7%	0.0	0.7%	0.0	0.6%
Professional services	-0.6	-10.1%	0.0	-0.5%	0.0	0.4%
Administrative and support	-0.1	-1.5%	0.0	1.1%	0.1	0.7%
Public admin	-0.3	-4.3%	-0.2	-2.7%	0.0	-0.4%
Education	-0.6	-7.8%	0.0	0.1%	0.0	0.0%
Human health	-0.2	-1.8%	-0.1	-0.5%	0.1	0.3%
Arts and entertainment	0.1	3.3%	0.0	1.2%	0.0	0.6%
Other service activities	0.1	3.2%	0.0	0.9%	0.1	0.7%
Total	-0.6	-0.5%	0.0	0.0%	0.0	0.0%

Source: Oxford Economics

Note: Blue shading represents sectors with the largest employment gains; orange shading represents sectors with the weakest employment growth

Compared to Anglesey, Gwynedd's economy is more exposed to public sector activities and less exposed to sectors that experienced job losses. Gwynedd has a relatively larger share of employment within education and human health. It's education sector is supported by Bangor University and Grŵp Llandrillo Menai, a Further and Higher Education college, which employs 2,000 staff.¹ Nonetheless, like Anglesey, the local economy lacks significant exposure in faster growing sectors, and combined with the fact that employment in health and education are expected to contract, future job creation potential is limited. Agriculture, manufacturing and public admin are also expected to shed significant job numbers over the forecast period. Elsewhere, construction, retail and accommodation and food are expected to create an additional 1,400 jobs in Gwynedd by 2030.

Going forward we expect job creation in Gwynedd to ease significantly, averaging growth of 0.1 percent a year between 2015 and 2030. Construction is likely to support employment growth locally, while accommodation and food; professional services and retail are all expected to contribute more positively towards job creation over the forecast period.

¹ <https://www.gllm.ac.uk/about/>

Figure 3.4: Sectoral employment change, Gwynedd, 2010-2030

Sector	2010-2015		2015-2020		2020-2030	
	(000's)	% pa	(000's)	% pa	(000's)	% pa
Agriculture	0.2	1.6%	0.0	0.0%	-0.3	-1.0%
Mining and quarrying	0.0	1.4%	0.0	-3.3%	-0.1	-3.8%
Manufacturing	-0.2	-1.1%	0.0	0.3%	-0.4	-1.1%
Electricity, gas and steam	0.2	9.0%	0.0	1.5%	-0.1	-1.4%
Water supply and sewerage	0.1	1.7%	0.0	-0.8%	-0.1	-0.8%
Construction	0.4	1.9%	0.1	0.4%	0.3	0.7%
Wholesale and retail	-0.6	-1.3%	0.0	-0.1%	0.5	0.5%
Transportation and storage	0.3	3.4%	0.1	1.1%	0.1	0.3%
Accommodation and food	-0.3	-0.8%	0.1	0.2%	0.4	0.5%
ICT	0.5	7.1%	0.0	-0.2%	0.1	0.5%
Financial and insurance	0.1	2.3%	0.0	-1.0%	0.0	-0.3%
Real estate	0.6	20.5%	0.1	2.1%	0.1	0.8%
Professional services	-0.1	-1.1%	0.1	1.0%	0.1	0.5%
Administrative and support	0.0	-0.1%	0.2	2.6%	0.1	0.8%
Public admin	-0.1	-0.2%	-0.5	-2.6%	-0.2	-0.6%
Education	1.5	4.7%	-0.1	-0.3%	-0.2	-0.3%
Human health	2.5	5.5%	-0.4	-0.7%	0.1	0.1%
Arts and entertainment	0.2	2.5%	0.1	1.0%	0.2	0.8%
Other service activities	0.6	5.9%	0.1	0.6%	0.2	0.9%
Total	6.0	2.0%	-0.2	-0.1%	0.9	0.1%

Source: Oxford Economics

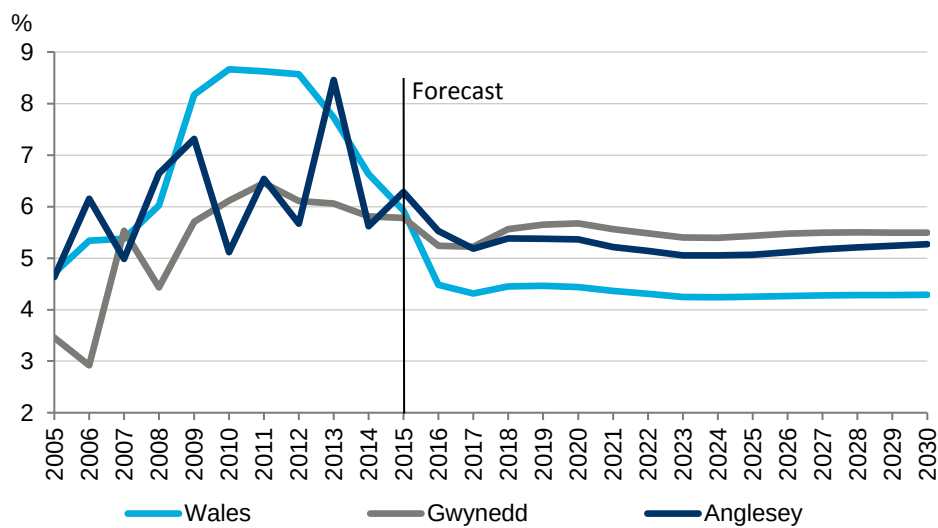
Note: Blue shading represents sectors with the largest employment gains; orange shading represents sectors with the weakest employment growth

3.1.2 ILO unemployment improves in both local areas but long-term unemployment a key challenge in Anglesey

Historically, unemployment rates in both Anglesey and Gwynedd have generally compared favourably to the regional average.² The average rate of unemployment in Anglesey has fluctuated over time, reaching 6.3 percent in 2015 (up from 5.6 percent in 2014), before falling to 5.5 percent in 2016. At the regional level the rate of unemployment has seen a steady improvement in comparison, falling to 4.5 percent in 2016 – down 2.1 percentage points since 2014.

Elsewhere, the rate of unemployment in Gwynedd stood at 5.2 percent in 2016, a fall of 0.6 percentage points since 2015. With Anglesey's employment outlook likely to stagnate over the forecast period, and Gwynedd's job creation only marginally better (with average growth of 0.0 percent a year compared to 0.1 percent, respectively), unemployment rates for both local economies are expected to remain above the Welsh average.

² Unemployment rate analysis is based on the ILO definition.

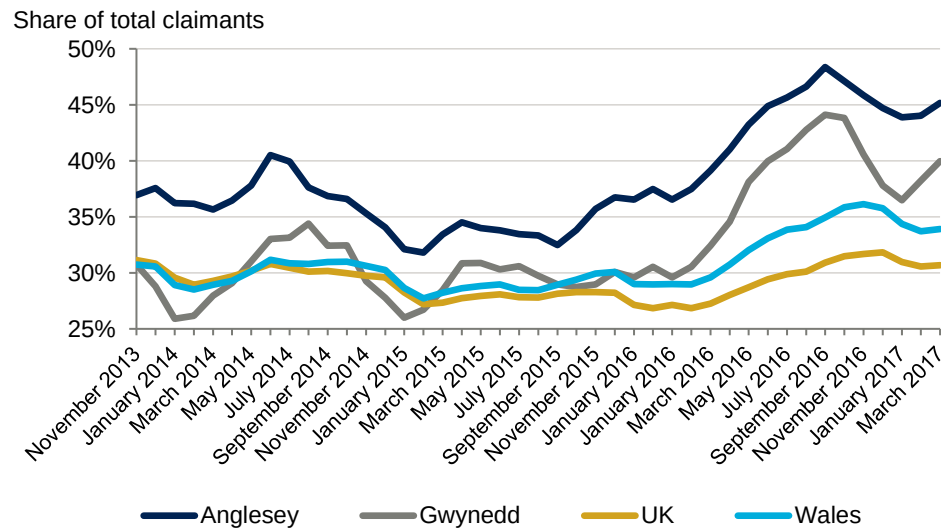
Figure 3.5: ILO unemployment, Anglesey, Gwynedd and Wales, 2005-2030

Source: Oxford Economics

Other labour market indicators signal further weaknesses – principally higher incidences of long-term unemployment among those seeking work in Anglesey compared to Wales. Indeed, long-term unemployment remains an issue for the local residents of Anglesey. The share of individuals claiming Job Seekers Allowance (JSA) for over 12 months (i.e. long-term unemployed) in 2016 remains consistently higher than both the regional and national average at 42 percent, compared to 32 percent and 28.9 percent respectively. Although the above average unemployment rate suggests availability of spare capacity in the labour market, it does not necessarily translate into the availability of skills needed to support future job growth. In number terms, Anglesey had 977,000 JSA claimants in 2016, of which 410,000 were long-term unemployed. Given almost half of the labour pool that are available to work are long-term unemployed suggests the potential need for retraining and skills development.

Gwynedd has historically performed better than Anglesey, with the rate of long-term unemployment tracking the Welsh average more closely up until early 2016. Following this period, the rate of long-term unemployment in Gwynedd has diverged away from the regional average and closer to that of Anglesey. High levels of long-term unemployment can contribute to social exclusion, higher economic inactivity rates and ultimately increased levels of localised deprivation within communities.

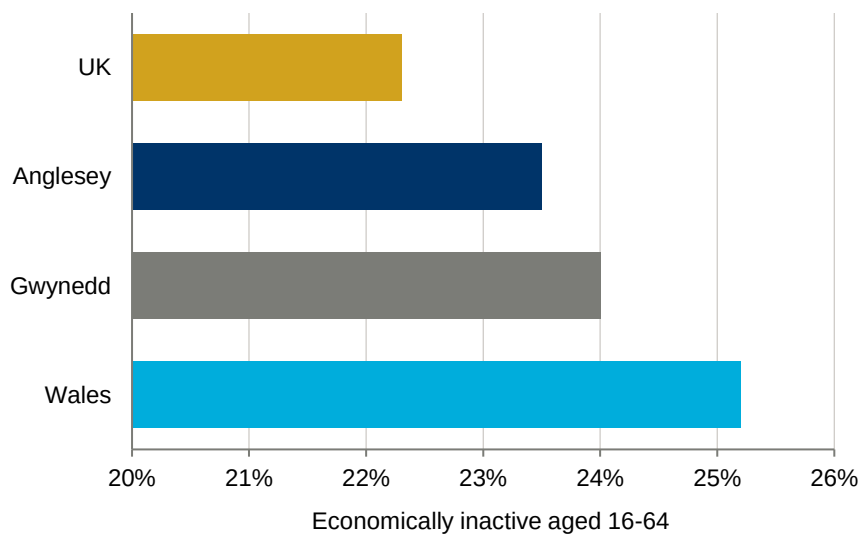
Figure 3.6: Long-term unemployment, Anglesey and comparators, 2013-2016



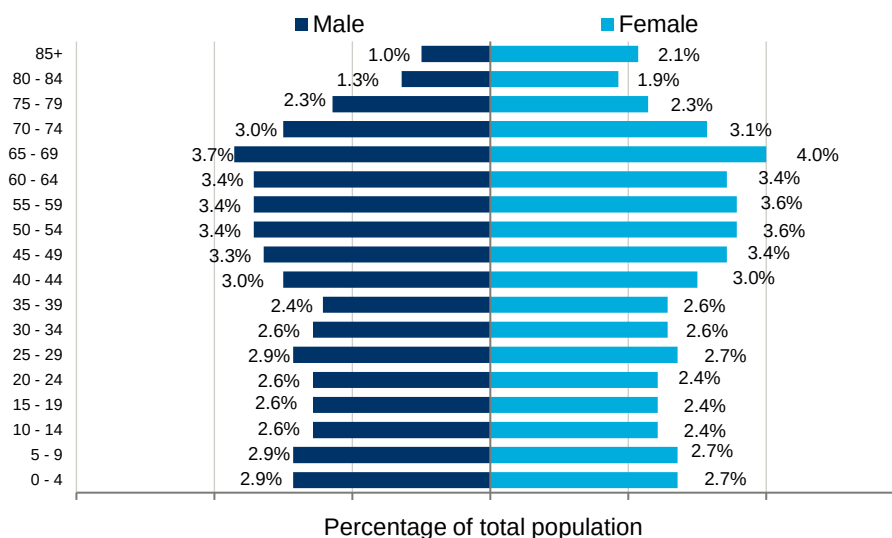
Anglesey has a relatively higher rate of unemployment and a below average rate of employment. In fact, the local economy has the lowest employment rate across all Council areas in Wales, with 51.8 percent of its population aged 16+ in employment – over three percentage points lower than the regional average.³

The latest available data suggests that economic inactivity (defined as students, long-term sick, unpaid carers and those who retire early) is below the regional average in both Anglesey and Gwynedd, but higher than the UK average. ONS estimates for the period October 2015 to September 2016 indicate that less than a quarter of both local authorities residents aged between 16 and 64 were unavailable to the labour market. This compares to the Welsh average of 25.2 percent, but does not fair better than the UK at 22.3 percent.

³ Resident employment rate is the number of residents employed, regardless of age, divided by the population aged 16 plus.

Figure 3.7: Economic inactivity, Anglesey and comparators, 2015

An important driver of economic growth is an increase in the working age population, and hence potentially, an increase in the labour force. However, the demographic structure of Anglesey suggests that there is high-dependency. It has an above average share of its population aged 65+, which account for almost a quarter of the population in 2015 – 4.6 percentage points larger than the Welsh average. As such the low employment rate is, in part, explained by Anglesey's above average share of its population aged 65+.

Figure 3.8: Age structure, Anglesey, 2015

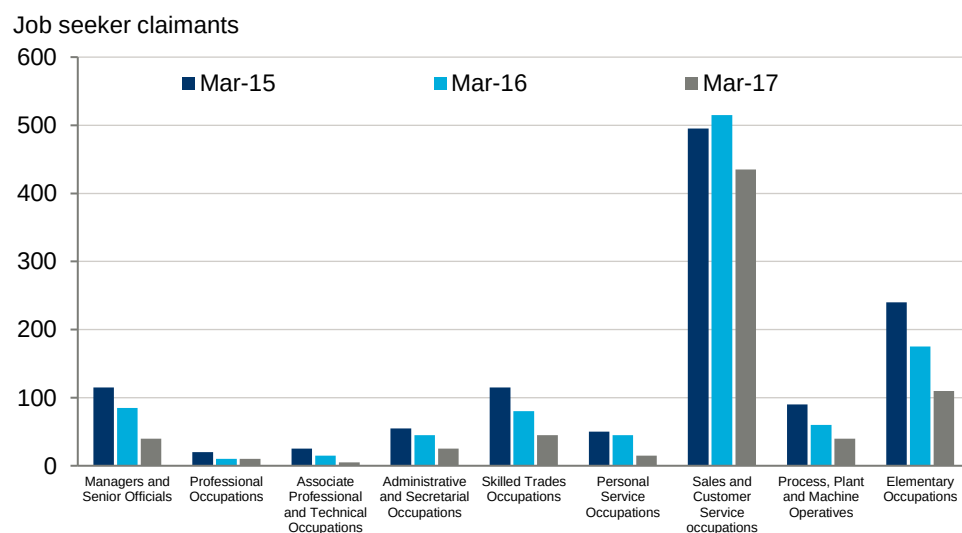
3.1.3 Unemployment and occupations

Lower skilled occupational groups continue to find opportunities more difficult to come by. The latest job seeker data shows that the bulk of the unemployed had usual occupations within elementary, sales and customer services. And across all usual

occupation groupings the number of claimants has fallen since March 2015. Despite this improvement those seeking employment within sales and customer services roles has remained stubbornly high, though it has reduced in the year to March 2017. Elsewhere, the retail sector has continued to struggle in both Anglesey and Gwynedd over recent years and projected job growth remains muted at best. This occupational grouping is therefore most likely to be a hotspot for those classified as the long-term unemployed in the area.

Furthermore, the increasingly “skill hungry” nature of the economy will make it more difficult for low or unskilled individuals to find stable employment opportunities. This is increasingly so for those unemployed for more than 12 months.

Figure 3.9: Unemployment by sought occupation, Anglesey, March 2015-2017



Source: ONS

3.1.4 Local skills profile: room for improvement

High levels of unemployment are a likely consequence of local skill levels not matching those demanded from potential employers. Equally, skills are a key driver of productivity and a key source of competitive advantage within the economy. The UK Commission for Employment and Skills noted that employers still face recruitment challenges in some key occupations and sectors. Furthermore, it is suggested that other developed countries are outperforming the UK on measures of skills (especially among younger people) which could threaten our ability to compete internationally.⁴

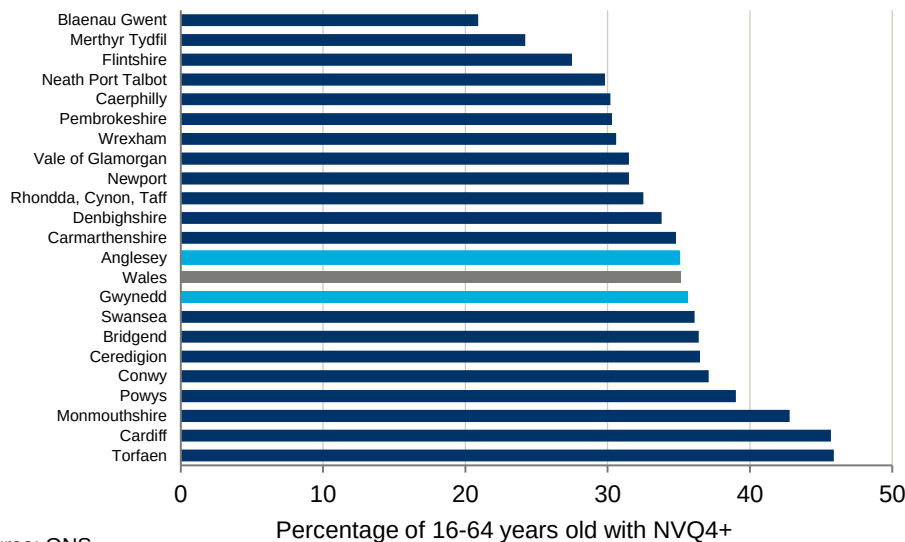
Both Anglesey and Gwynedd perform in line with the Welsh average in terms of skills attainment. According to the latest estimates, 35 percent of Anglesey's population aged between 16 and 64 held a degree level qualification or higher in 2016. This was only marginally below the regional average (35.1 percent) and Gwynedd (35.6

⁴ UK Commission for Employment and Skills, *The labour market story: The state of UK skills* (Briefing paper, 2014)

percent). The Welsh average of 35.1 percent is, however, 2.9 percentage points lower than the UK average, which by contrast, suggests local performance is less impressive.

Equally, Anglesey and Gwynedd fall significantly behind Council areas such as Torfaen, Cardiff and Monmouthshire, which have over 40 percent of their working age population educated to this higher level.

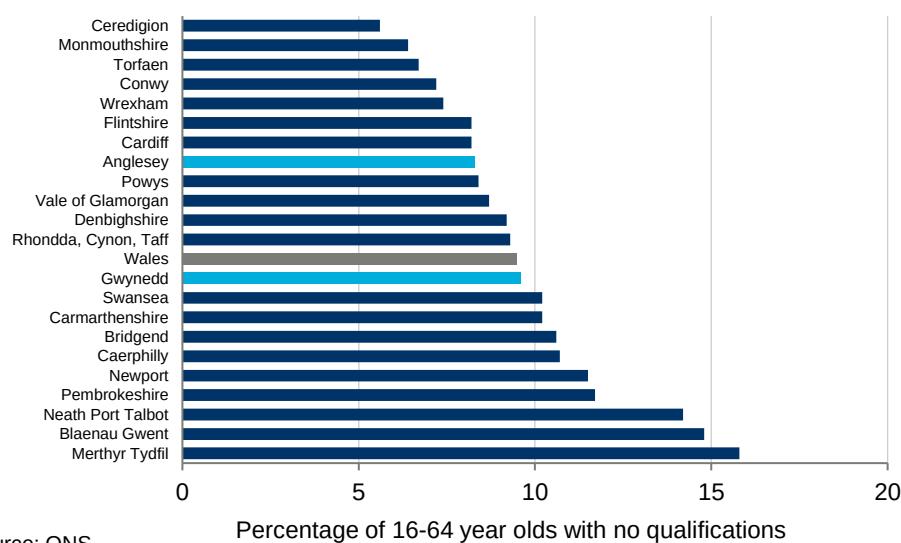
Figure 3.10: NVQ4+ level attainment, Welsh local authorities, 2015



Source: ONS

At the other end of the scale, Anglesey has a below average share of its working age population with no qualifications. Latest estimates indicate that only 8.3 percent of the local economies population aged 16-64 had no qualifications in 2016. This share is notably lower than both Gwynedd (9.6 percent) and the Welsh average (9.5 percent).

Figure 3.11: Residents with no qualifications, Welsh local authorities, 2015



Source: ONS

3.2 Employment specialisms

This section provides a more detailed analysis of the sectoral structure in both Anglesey and Gwynedd in 2015. The framework used highlights the presence of niche industries within the local economy, and in turn provides a better understanding on how the areas are primed to maximise the benefits of current and future developments. In other words, the aim is to flag any key industries which are relatively more concentrated in Anglesey and Gwynedd relative to Wales as a whole. This is captured by Location Quotients (LQ's) – which quantify an economy's degree of specialisation against the national or regional average, and to an extent highlight relatively prominent employment sectors within a given area. A value greater than one indicates that the local economy is more specialised in a particular industry than Wales as a whole.

Detailed sectoral analysis suggests that the local economies are better structured to support the temporary workforce. Both local areas have a large share of employment within accommodation, food retailing and/or manufacturing, and in the case of Anglesey, retail sale of hardware. In fact, Gwynedd has an above average holiday and short-stay accommodation sector, as well as camping grounds, recreational vehicle and trailer parks. These combined suggest that the local areas are well-positioned and will be able to support the influx of temporary workers to the area. Furthermore, Anglesey's large share of employment in repair and maintenance of aircraft and spacecraft, though unlikely to be directly relevant, could provide a pool of skilled individuals with transferable skills.

Anglesey's large concentration of employment in water transportation and production of electricity, together with Gwynedd's risk and damage evaluation, could in theory directly support the construction of the plant's development. Indeed, the opportunity to upgrade the port infrastructure to support more freight orientated transport could benefit the local area.

Figure 3.12: Employment specialisms – 4 digit (minimum 200 employed in local authority), Anglesey, 2015

Rank	Industry	LQ
1	Sea and coastal passenger water transport	43.4
2	Processing and preserving of poultry meat	17.0
3	Operation of dairies and cheese making	15.3
4	Service activities incidental to water transportation	12.4
5	Repair and maintenance of aircraft and spacecraft	11.5
6	Production of electricity	7.9
7	Camping grounds, recreational vehicle parks and trailer parks	3.4
8	Hotels and similar accommodation	2.8
9	Retail sale of hardware, paints and glass in specialised stores	2.7
10	General cleaning of buildings	2.4

Source: ONS, BRES

Figure 3.13: Employment specialisms – 4 digit (minimum 200 employed in local authority), Gwynedd, 2015

Rank	Industry	LQ
1	Quarrying of ornamental and building stone, limestone, gypsum, chalk and slate	12.4
2	Risk and damage evaluation	11.4
3	Activities of amusement parks and theme parks	10.0
4	Manufacture of sports goods	9.9
5	Camping grounds, recreational vehicle parks and trailer parks	5.7
6	Treatment and disposal of non-hazardous waste	5.5
7	Washing and (dry-)cleaning of textile and fur products	4.6
8	Retail sale of fruit and vegetables in specialised stores	3.9
9	Motion picture, video and television programme production activities	3.6
10	Production of meat and poultry meat products	2.9

Source: ONS/BRES

3.3 Business levels, GVA, productivity and wages

3.2.1 Challenging conditions for some business sectors

The latest ONS data shows that growth in business numbers has been below average within the main Môn a Menai economies. Business enterprise numbers grew by 8.8 percent in Anglesey and 7.8 percent in Gwynedd between 2011 and 2016. At the regional level, total business enterprise numbers increased by 14.2 percent over the same period.

The data suggests local retail businesses have had a challenging time of late. Wholesale and retail is the largest business sector outside of agriculture in both Anglesey and Gwynedd. ONS survey data shows that wholesale and retail business in 2011 accounted for 16.2 percent of all business activity within Anglesey. However, business numbers fell by 6.8 percent between 2011 and 2016. As a result, the retail business enterprises accounted for 13.9 percent of all businesses in 2016 – a 2.3 percentage point drop since 2011.

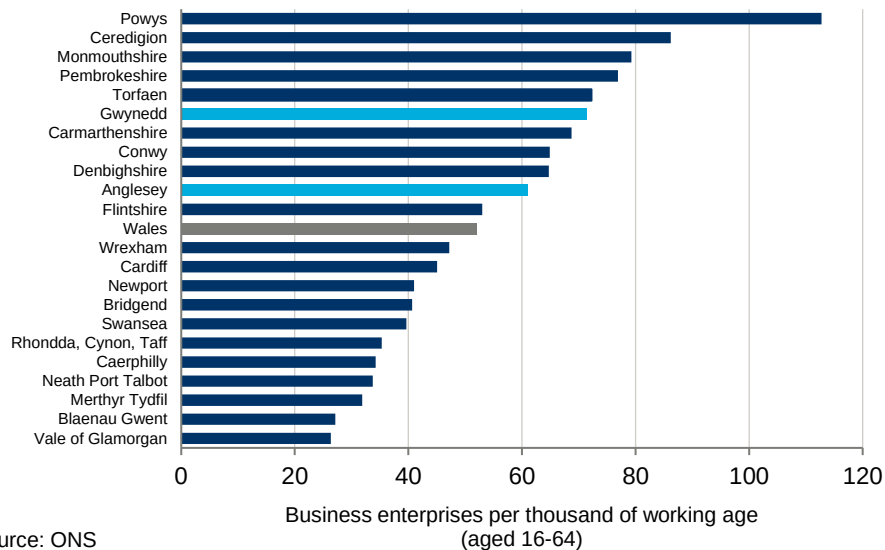
These trends have implications for the unemployed. Employment within the sector is estimated to have contracted by 860 jobs across both Anglesey and Gwynedd over 2011 and 2016. And yet a significant proportion of the unemployed sought sales and customer service or elementary occupations.

Professional service related business growth was one of the strongest within both local economies. However, both Anglesey and Gwynedd have weaker business shares in this sector compared to Wales overall, due in part to the lack of a critical mass in related activity and skills availability locally.

Despite the challenges, Anglesey and Gwynedd have an above average number of businesses relative to their respective population size. Business enterprise data for 2016 shows that there were 61 businesses for every 1,000 residents aged between 16 and 64 in Anglesey. The local economy's business concentration was therefore greater than that of the Wales at 52 businesses per 1,000 working age, but below that of

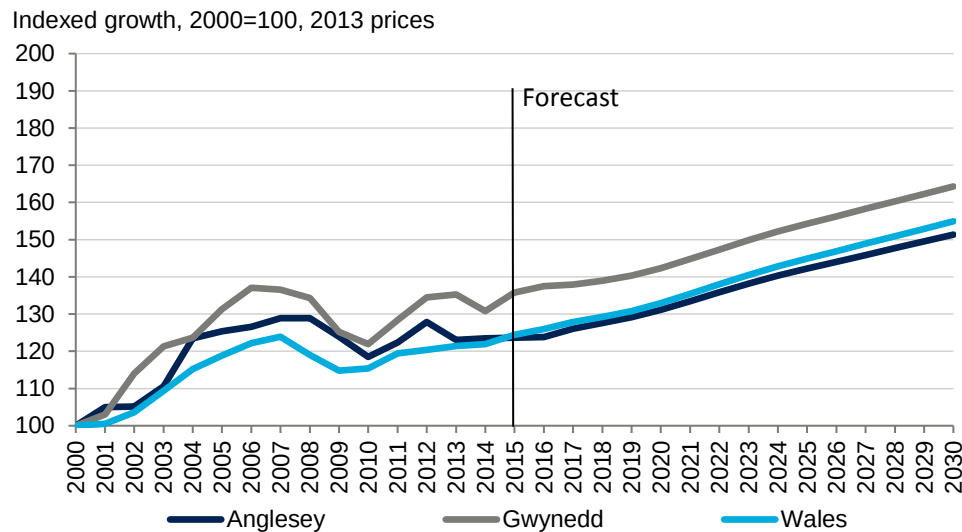
Gwynedd at 71. However, large agriculture sectors in both Council areas have had a strong contribution. Agriculture accounted for almost one quarter of all businesses in both Anglesey and Gwynedd, significantly higher than the regional average (14 percent).

Figure 3.14: Business intensity, Welsh local authorities, 2016



3.2.2 Productivity growth drives increases in economic output

We estimate that, over the period from 2010 to 2015, growth in gross value added (GVA) in Anglesey lagged behind Gwynedd, Wales and the UK. It averaged 0.9 percent a year compared to 2.2 percent, 1.5 percent and 2.1 percent respectively. We estimate that the value of all goods and services produced in Anglesey and Gwynedd equated to £3.2 billion in 2015 (2013 constant prices), or 5.8 percent of the Welsh economy. Of this total Anglesey contributed £926 million, making the local economy the third smallest in Wales in terms of GVA.

Figure 3.15: GVA growth, Anglesey and comparators, 2000-2030

Improving economic performance is both a function of employment growth and/or output per job. Given the outlook for job creation is flat in Anglesey, growth in GVA is likely to come from improved productivity (as measured by output per job). Productivity in Anglesey is estimated to have reached £38,500 in 2015, up from £36,900 in 2014. However, this level of productivity is only slightly higher than the regional average (£38,100), which in itself is significantly lower than the national average (£47,700). In the case of Gwynedd, productivity remained below Anglesey, and the UK and Welsh average at £35,000 in 2015.

Despite the productivity gap between Anglesey and the UK average, the local economy has experienced strong convergence to the regional average over the five years to 2015. This in turn has had an impact on local GVA growth. Productivity growth in Gwynedd has however lagged significantly behind the comparator areas over the period. This is due to the fact Gwynedd realised a marginally stronger rate of growth in GVA compared to employment, averaging 2.2 percent a year relative to 2 percent respectively.

Figure 3.16: Output per job growth, Anglesey and comparators, 2010-2015

	£000, 2013 prices		% growth
	2010	2015	
Anglesey	36.1	38.5	6.9%
Gwynedd	34.7	35.0	0.9%
Wales	37.0	38.1	3.0%
UK	46.4	47.7	2.9%

Source: Oxford Economics

Although we expect a higher rate of productivity growth in Anglesey relative to the region, job creation is projected to remain flat over the 2015-2030 period. As a result

Anglesey's baseline GVA growth is forecast to be slightly below Wales as a whole, averaging 1.4 percent annually compared to 1.5 percent. Despite this, growth in the local economy will be among the best performing in Wales. Gwynedd's economy is however predicted to grow at a slightly weaker pace, averaging 1.3 percent a year over the same period – below both Anglesey and the Welsh average.

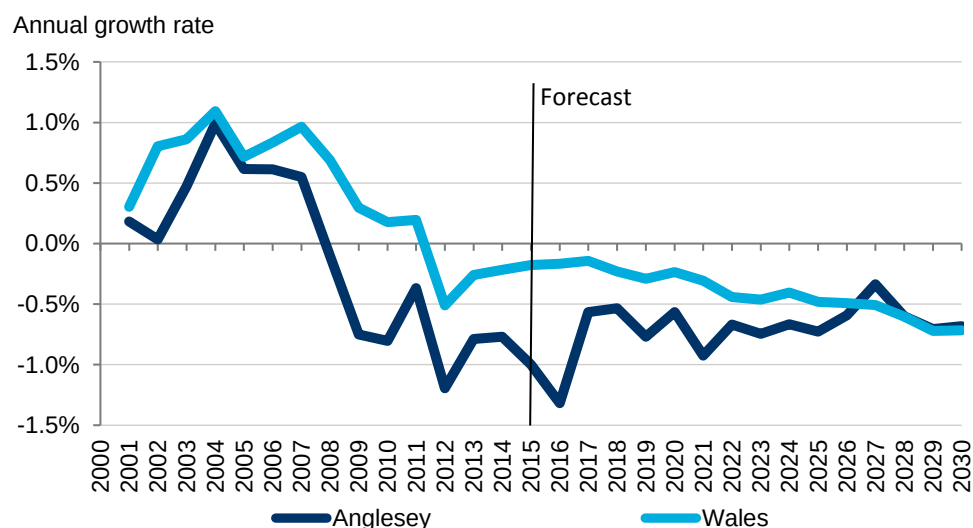
3.4 Demographics

3.3.1 Deteriorating demographics places pressure on economic growth

An important enabler of economic growth is an increase in the working age population, and hence potentially, an increase in the labour force. However, over the decade to 2015 Anglesey's working age population declined, averaging a fall of 0.3 percent a year. This compares to muted growth of 0.1 percent a year at the regional level. Gwynedd fared slightly better than Anglesey, recording neither a decline nor an increase over the period. As a result the working age share of Anglesey's total population, as elsewhere, is on a downward trend, accounting for 58.1 percent of the local economy's total population in 2015. This share is below Gwynedd (61 percent), and the Welsh and UK average (62.1 percent and 63.4 percent respectively).

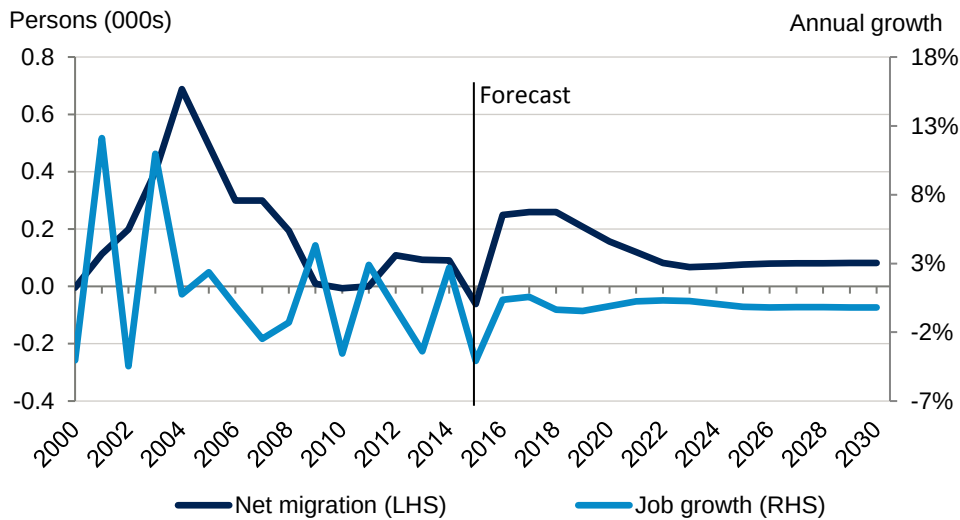
Going forward we expect working age population to decline across all local Councils in Wales. As the working age population falls as a share of the total population, the dependency rate rises making it harder to finance support for economic development.

Figure 3.17: Working age population growth, Anglesey and Wales, 2000-2030



Source: Oxford Economics

Since 2000 net migration has generally remained positive. This trend is expected to hold going forward. Despite the slight contraction in net employment levels, replacement demand will attract new people (or ex-residents) to the economy.

Figure 3.18: Net migration and job growth, Anglesey, 2000-2030

Source: Oxford Economics

3.3.2 Strong wage growth expected to ease

Recent wage growth in both Anglesey and Gwynedd has outperformed both the regional and national averages. Anglesey's average workplace wage experienced the largest uplift in the region since 2010 – increasing by almost 23 percent over five years. However, average wage growth in both areas had remained relatively depressed throughout the recessionary years and actually fell in Anglesey in 2010 and 2011. Therefore, recent strong growth may reflect some degree of catch up in terms of wage bargaining.

Figure 3.19: Nominal wage levels, Anglesey and comparators, 2010-2015

	Avg. weekly workplace wages		Avg. weekly residence wages	
	2010	2015	2010	2015
Anglesey	£400	£490	£400	£470
Gwynedd	£370	£400	£370	£410
Wales	£420	£450	£430	£460
UK	£490	£520	£490	£510

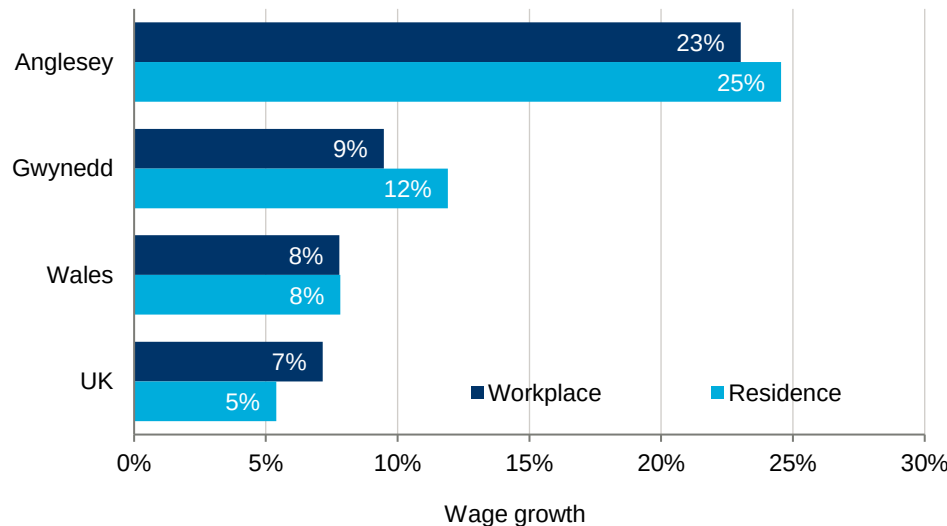
Source: Oxford Economics

Particularly strong improvement in Anglesey's workplace wage levels have meant those who are employed in the area are on average among the highest paid in Wales, behind Cardiff. Likewise, average residence wages in the local area stood at a higher level than the Welsh average in 2015.

However, average wages among Gwynedd's residents and those locally employed remain among the lowest in Wales. Between 2010 and 2015, Gwynedd's average residence wage has grown more strongly than the workplace equivalent, suggesting that local residents have been gaining increasing access to better paid jobs outside the local Council area. Elsewhere, Anglesey's average workplace wages in the area has

grown stronger than residence-based wages. Most likely as a consequence of net commuting into the area from non-residents who choose to work within Anglesey's higher value-added roles.

Figure 3.20: Nominal wage growth, Anglesey and comparators, 2010-2015



Source: Oxford Economics

Residence and workplace wage growth in both local economies are expected to ease going forward – to a greater degree in Anglesey rather than Gwynedd. We expect that, between 2015 and 2030, average residence wage growth in Anglesey will grow by 1.8 percent annually. This rate of growth is projected to be in line with the regional and UK average over the period. The local economy's recent strong workplace wage growth is likely to weaken significantly, averaging 4.2 percent a year between 2010 and 2015 down to 1.9 percent over the forecast period.

Figure 3.21: Nominal wage growth forecast, Anglesey and comparators, 2015-2030

	Workplace wages	Residence wages
	15 year % y/y	15 year % y/y
Anglesey	1.9%	1.8%
Gwynedd	1.6%	1.9%
Wales	1.8%	1.8%
UK	1.9%	1.8%

Source: Oxford Economics

3.3.3 Housing affordability improves but remains below the regional average

Average house prices remain above average in the Môn a Menai Council areas—despite relatively weak price growth. Over the five-year period 2010-15, house prices in Wales increased by 5.8 percent, significantly weaker than the 16.1 percent increase realised nationally. Equivalent growth rates in Anglesey and Gwynedd were however

significantly lower than the regional rate of growth (3.3 percent and 2.5 percent increase respectively). Despite this, average house prices in the two local economies were notably higher than the regional average.

Figure 3.22: Average house prices, Anglesey and comparators, 2010-2030

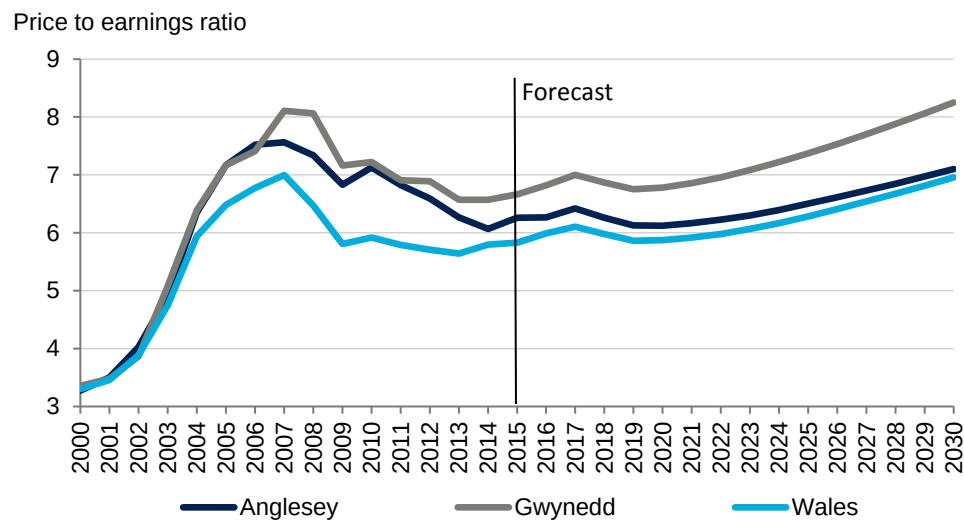
	2015	2010-15	2015-30
	Average house prices	Five year % y/y	15 year % y/y
Anglesey	154,400	0.7%	2.7%
Gwynedd	141,200	0.5%	3.3%
Wales	138,600	1.1%	3.0%
UK	197,900	3.0%	3.8%

Source: Oxford Economics

Given that housing supply is generally “sticky”, relatively weak demand locally is likely to be the driver of subdued house price growth. Population growth in both Anglesey and Gwynedd has been below the national average between 2010 and 2015. During this period Anglesey’s population growth remained flat while in Gwynedd it grew by a muted 0.3 percent a year on average, notably below the national average (0.7 percent). Relatively weak population growth coupled with a decline in the number of jobs in Anglesey, both strong housing demand factors, have contributed to weak house price growth in the local economy.

The combination of above average house prices, and low wages in the case of Gwynedd, has meant that the price to earnings ratio remains relatively high within the local housing market. The average price to earnings ratio approached a multiple of eight at its peak in 2007/08 – significantly higher than Wales as a whole. However, subdued house price growth combined with a resurgence in wage growth has pushed this down to under 7. We estimate that Anglesey’s average house price to earnings ratio was 6.3 in 2015, above the regional average (5.8). The gap between the local and regional economy is expected to narrow over the forecast period.

Figure 3.23: Housing affordability, Anglesey, Gwynedd and Wales, 2000-2030



Source: Oxford Economics

Our baseline forecast indicates that house price growth will strengthen in both Anglesey and Gwynedd over the forecast period. Growth in Gwynedd is set to outpace Wales as a whole between 2015 and 2030, averaging growth of 3.3 percent a year compared to 3 percent. House price growth in Anglesey is expected to lag behind Wales as a whole in comparison, with growth averaging 2.7 percent annually over the period. Nonetheless growth in both local economies will remain weaker than the UK average, which is expected to grow on average by 3.8 percent annually.

3.5 Summary

Job creation in Anglesey and Gwynedd, combined area, has fared better than Wales as a whole over recent years. Nonetheless the rate of growth lagged behind the national average and varied significantly across the two local economies. Anglesey experienced job losses, which were offset by the gains in Gwynedd overall. Going forward job creation is expected to remain muted at best across the local economies.

Despite recent improvements in the rate of unemployment in both local areas, long-term unemployment remains an important issue – particularly in Anglesey but also more recently in Gwynedd. This in turn could prove a challenge for local councils as they may need to assign funds towards retraining and skills development so that the unemployed are prepared for opportunities in future growth sectors. Indeed over the forecast period the rate of ILO unemployment will remain above that of the regional average in both local areas.

Economic output (GVA) growth has been more positive in Anglesey, driven by significant improvements in productivity. Going forward we expect a slightly higher rate of productivity growth in Anglesey compared to Wales as a whole, however, the local economy's job market is projected to remain flat. This in turn will mean that GVA growth is likely to be below the Welsh average.

Furthermore, wage growth has picked up locally—especially for those employed within Anglesey. Relatively high workplace wages will likely further strengthen inward commuting patterns into Anglesey.

The downbeat employment picture has helped to dampen demand within the housing markets of both Anglesey and Gwynedd. Relatively weak house price growth alongside improving wage levels have helped to soften housing affordability issues within both areas.

4 Planned developments

In this section, we present various developments being planned for Anglesey. We present the scale of each of the four developments before discussing the likelihood of displacement.

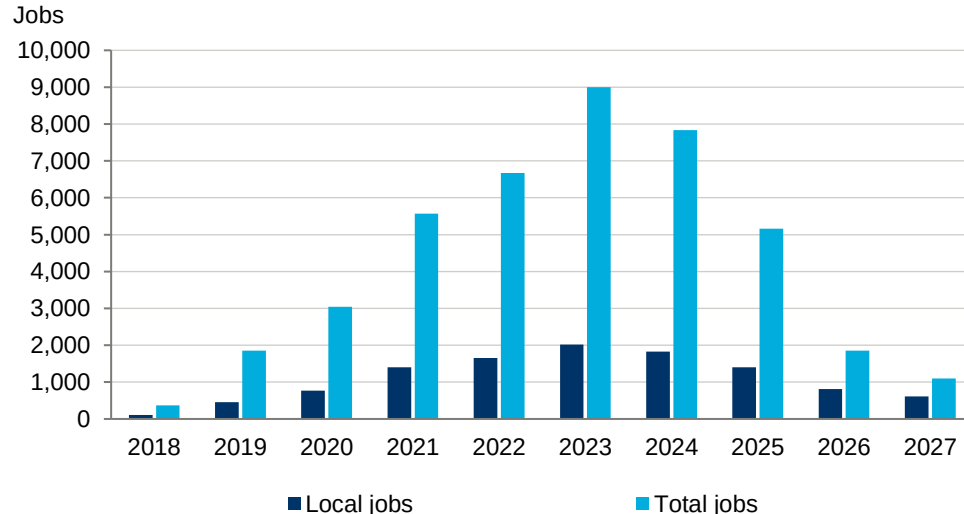
4.1 Direct impacts: Wylfa Nuclear new build

The Wylfa nuclear new build will have a number of impacts that require modelling. Firstly, there are the direct jobs created during the construction of the development, however care needs to be taken when modelling these jobs as a large proportion will be taken by non-home based workers. Secondly the non-home based workers will provide an injection of demand through their consumer spending, and lastly a proportion of the capital costs of the development will be realised locally. We discuss each in turn below.

LABOUR FORCE REQUIREMENTS

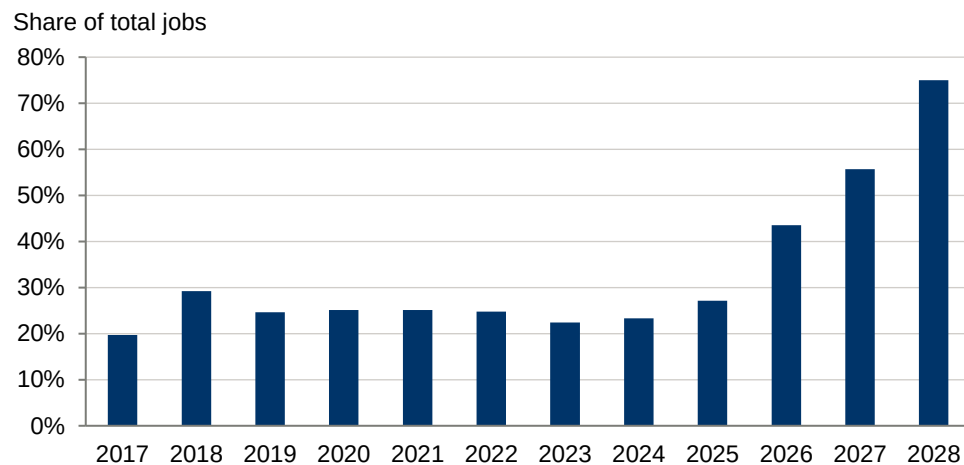
Information provided by Horizon / Jacobs shows the estimated workforce numbers required to construct the nuclear power plant. At its peak in 2023, they estimate 9,000 workers will be required. Figure 4.1 presents the annualised workforce profile from 2018 to 2027. Appendix C presents more detail on the breakdown of the worker profile.

Figure: 4.1: Direct construction related jobs, 2016-2028



Source: Oxford Economics

Jacobs' central assumption is that that 22.4 percent of the total 2023 workforce will be sourced by 'local workers' (local workers refers to employment within a 90-minute commute). Given the mix of job types from year to year the share of jobs open to local labour fluctuates from over the construction period before rising notably at the end of the period as the development becomes operational.

Figure: 4.2: Local jobs as a share of total jobs

Source: Oxford Economics

Considering displacement

There is some debate around the appropriate definition for displacement when modelling the impact of the Wylfa Newydd nuclear new build. The Homes and Community Agency (HCA) “Additionality Guide” states:

“Displacement arises where the intervention takes market share (called product market displacement) or labour, land or capital (referred to as factor market displacement) from other existing local firms or organisations.”

Indeed, the guidance also notes:

“In terms of factor market displacement, an intervention may result in an increase in demand for construction workers. If these are in short supply, the result may be in delays to this or other interventions or an increase in costs”.

Therefore, the definition adopted by Government when accounting for displacement from public investments / interventions accounts for both the change in market share and the increase in demand for certain types of labour in a local market.

From a product market point of view, the development of the nuclear reactor will displace the need for other electricity generating sources. However, with electricity demand forecast to rise⁵, and with existing reactors due to be decommissioned, the scale of displacement is likely to be low or zero.

From a labour market point of view, the nuclear new build will require just over 2,000 people during the construction phase from the local market. If the economy were at full capacity, then this would in theory result in 100% displacement as the labour would be taken from existing firms. It would also likely result in wage inflation making the

⁵ <https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2016>

industry less competitive. At the time of writing the OBR estimated a positive output gap which is associated with higher rates of resource utilisation⁶. Their central estimate of the output gap was 0.2 percent. In other words, the UK economy was estimated to be at capacity.

Oxford Economics have undertaken separate analysis on displacement (which was shared with the Council and Horizon. We concluded that it is difficult to gauge the level of displacement that is likely to arise from the project. Given the scale of future employment creation compared to the level of current employment in associated sectors (see Figure 7.11 later), the uncertainty around the volume of unemployed and inactive labour that will be made available and the training required, it would be useful to run a range of displacement scenarios in the modelling.

The actual level of displacement assumptions is subjective, but in this paper we follow the HCA Additionality Guide and model the impact of low (25% displacement), medium (50% displacement) and high (75% displacement) levels of displacement on the local element of the construction workforce.

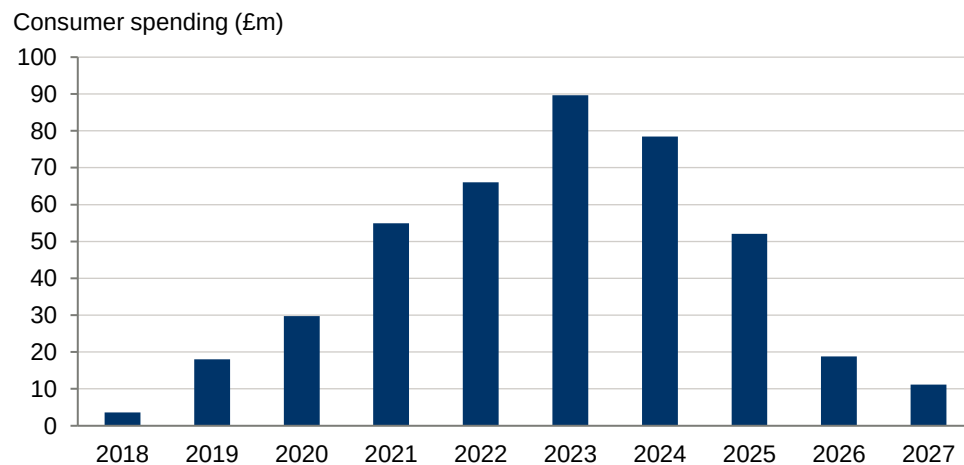
For the operational phase, we have assumed displacement will be negligible and therefore have set displacement to zero percent in the modelling (though this can be changed if new data becomes available).

NON-HOME BASED WORKERS AND CONSUMER SPENDING

A significant number of construction phase jobs will be taken by non-home based workers. While these jobs will not affect headline unemployment figures directly, they will have an impact on the local economy through consumption spending.

Jacobs' Gravity modelling has estimated the split of non-home based workers staying within Anglesey and elsewhere and by accommodation type. Jacobs "Consultancy report: Accommodation and Distribution of Workers Assessment" (June 2016) suggests that non-home based workers will be provided a daily allowance of £37.10 per night. We have used this figure to estimate the spending power of those Anglesey residents staying in hotels, caravans and latent accommodation. For those staying in owned or private-rented accommodation, we assume they have the same spending power as Anglesey residents. Consequently, we estimate that consumers spending of non-home based workers would peak in 2023 at £89.7m.

⁶ <http://budgetresponsibility.org.uk/forecasts-in-depth/the-economy-forecast/potential-output-and-the-output-gap/>

Figure: 4.3: Consumer spending of non-home based workers in Anglesey

Source: Oxford Economics

CAPITAL SPENDING

At the time of writing, the capital cost of the Nuclear new build was estimated at £10bn. According to Jacobs, it is assumed that 60.0 percent of the costs will be realised in UK but it is not clear how much will be spent locally. Jacobs have reviewed similar projects and found that they delivered between 2.0 percent (Flamanville 3) and 4.0 percent (Sizewell B) of their total project value locally. Given the above we assume 3.0 percent of the capital costs will be realised in the Daily Construction Commuting Zone (DCCZ).

To allocate the 3.0 percent to sectors we used previous work undertaken by Oxford Economics for BIS / DECC⁷ as a guide. In this earlier work, we found that the UK nuclear supply chain could deliver approximately 44.0 percent of the costs of a nuclear new build (Figure 4.4 shows how this splits across type of work). Focusing on the capital costs only, we assume Anglesey can deliver 6.0 percent of the costs of Civil Construction & Installation, the Non-Nuclear Island, and the Infrastructure (which totals 3.0 percent of the overall costs). We exclude the other categories given their service sector orientation or the UK's limited capacity for delivery.

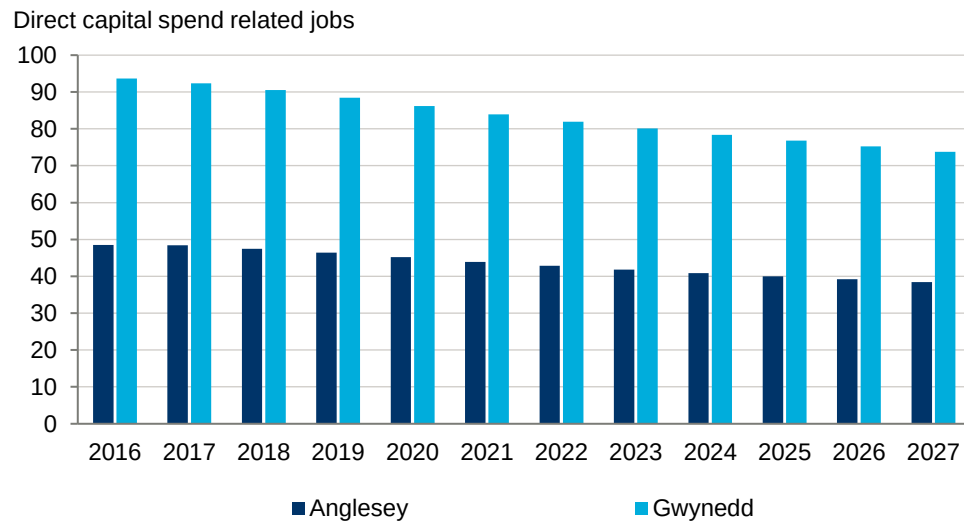
⁷ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/168017/bis-13-633-the-economic-benefit-of-improving-the-uk-nuclear-supply-chain-capabilities.pdf

Figure: 4.4: Capital spending by type

	Reactor Value (£m)	UK share	Share of work being undertaken in Anglesey	Value of DCCZ based activity	Assumptions
Pre-licensing technical & design	469	90.0%		0	Not capital
Regulatory, licensing & public enquiry	6	90.0%		0	Not capital
Programme & construction management	499	50.0%		0	Not capital
Civil construction & installation	3,000	60.0%	6.0%	180	
Nuclear steam supply system	1,250	10.0%		0	UK limited capability so Anglesey unlikely to benefit
Balance of nuclear island	1,250	30.0%		0	UK limited capability so Anglesey unlikely to benefit
Non-nuclear island	2,000	40.0%	6.0%	120	
Instrumentation & control	1,200	35.0%		0	UK limited capability so Anglesey unlikely to benefit
Fuel	315	50.0%		0	UK limited capability so Anglesey unlikely to benefit
Infrastructure	10	100.0%	6.0%	1	
Total	10,000	44.0%	3.0%	301	

Source: Oxford Economics

We allocate this spend to Anglesey, Gwynedd and the rest of the DCCZ based on sectoral employment shares. In addition, the capital spend is allocated evenly across the construction period. Converting spend to GVA and applying local sectoral productivity estimates, we calculate Anglesey could benefit from between 40 and 50 gross jobs per annum, while Gwynedd could benefit from around 70 to 90 gross jobs per annum over the period (the direct employment estimates fall over time given general improvements in productivity).

Figure: 4.5: Direct capital spend related jobs

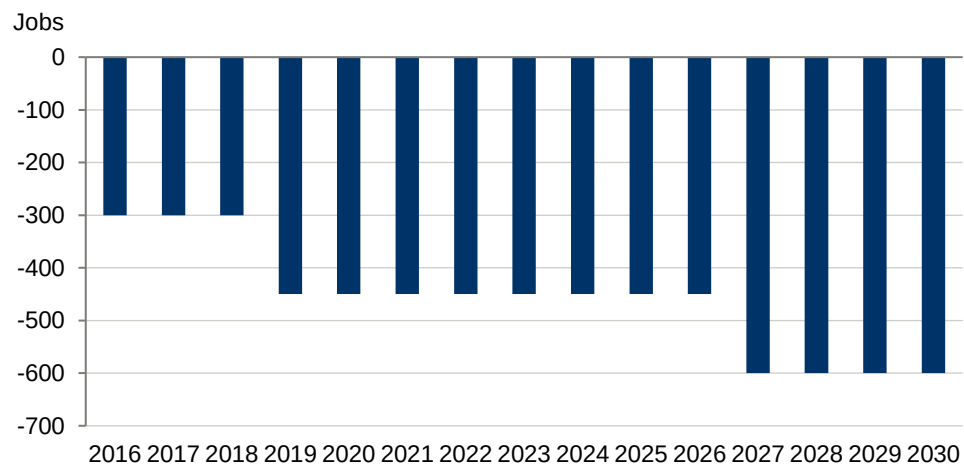
Source: Oxford Economics

Considering displacement

In line with our general assumptions we will model a range of displacement rates when considering the capital spend during the construction phase of the nuclear new build.

4.2 The decommissioning of existing power plants

Despite some small-scale job creation to decommission the existing power plants, the operational job losses from closing the plants will lead to net job losses in Anglesey over the period 2016 to 2030 (Figure 4.6). Note we model the impact in 2016 as the latest employment data for Anglesey only covers 2015. Although this represents a significant number of net job losses for the local economy in isolation, they are masked by the scale of the job opportunities from the construction of Wylfa Newydd new build.

Figure: 4.6: Direct job losses from decommissioning, 2016-2030

Source: Oxford Economics

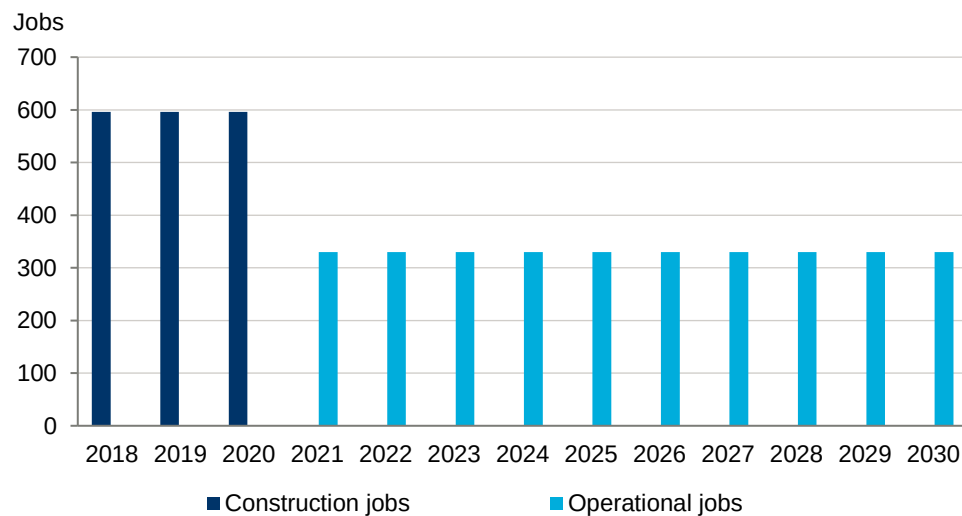
It is worth noting that despite the job losses being more than compensated for by the nuclear new build, the short term loss to GVA is much more significant. Productivity levels in the nuclear and wider electricity generating sector are notably higher than other sectors (with the exception of real estate which is inflated due to imputed rents). So, the loss of these jobs has a substantial negative effect on GVA in Anglesey.

Considering displacement

Given the specialist nature of the job creation during decommissioning, we have assumed negligible displacement and have therefore set displacement assumptions to zero. This can be changed if new data becomes available.

4.3 Land and Lakes development

The Land and Lakes development will provide a tourism asset offering a range of lodges, cottages, hotel rooms and on-site activities. The Regeneris report "Penrhos Leisure Village Scheme: Economic and Tourism Need & Benefits" (November 2012) provides estimates of the direct construction and operational job creation arising from the development. We understand that only the Penrhos element of the plans will be taken forward and it is estimated that 596 full time equivalent direct jobs will be created during the construction phase from 2018 to 2020. They also estimate the need for some 330 FTE operational jobs starting in 2021. Figure 4.7 shows the resulting profile of direct gross job creation at the development.

Figure 4.7: Direct job creation, Land and Lakes, 2017-2030

Source: Oxford Economics

Considering displacement

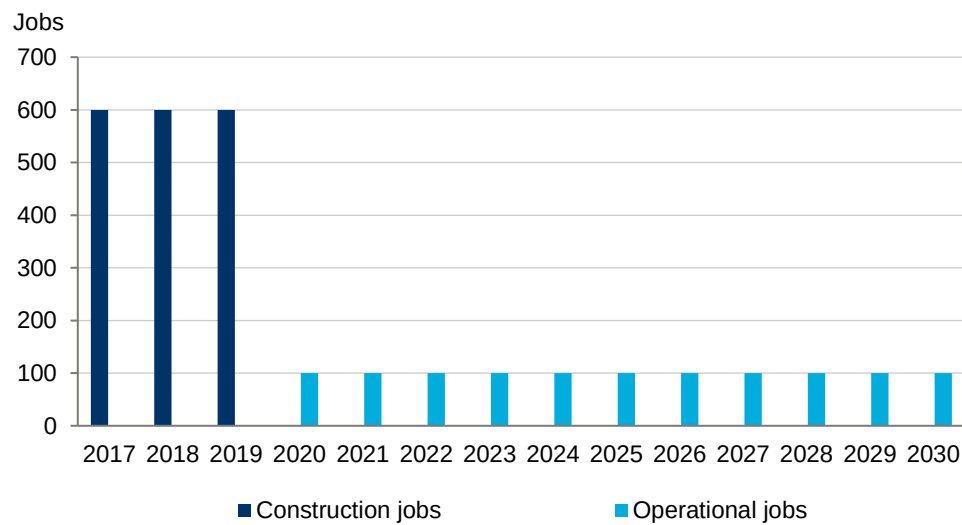
The construction sector in Anglesey has shed an estimated 350 jobs from 2010 to 2015. However, the sector has grown by 440 jobs in Gwynedd over the same period. In addition, a consultation exercise undertaken on previous versions of this report found there were concerns that the sector was already suffering from skills gaps across North Wales. Consequently, we assume there is likely to be some displacement from a project of this level, though in isolation it is likely to be low. In this case the guidance suggests a modelling assumption of 25.0 percent displacement, which we apply to the construction jobs.

In addition to the direct construction and operational employment on site, the tourism development will have a direct impact on the tourism sector. The Regeneris work finds that approximately 30 FTE jobs could be sustained or created through the additional tourism spend of visitors. We have therefore included this in the modelling and apportioned the jobs out to sectors based on data from Tourism Satellite Accounts. We assume zero displacement with regards these tourism jobs.

4.4 A Biomass waste management plant and ecopark

We have limited data on the potential job creation from the construction and operation of the Biomass waste management plant and Ecopark. Figure 4.8 provides an overview of the direct job creation we use in the modelling. It is assumed that construction will start in 2017 and take three years to complete. It is estimated that an average of 600 FTE gross jobs are required per annum over the construction period.

The exact profile of these jobs are unlikely to match that in the figure below. More people are likely to be required on site in the middle year than in years 1 and 3. Though in the absence of detailed construction workforce data, we have assumed demand is even over the period. Once complete the development will provide 100 FTE on-going jobs.

Figure: 4.8: Direct job creation, Biomass plant and Ecopark, 2017-2030

Source: Oxford Economics

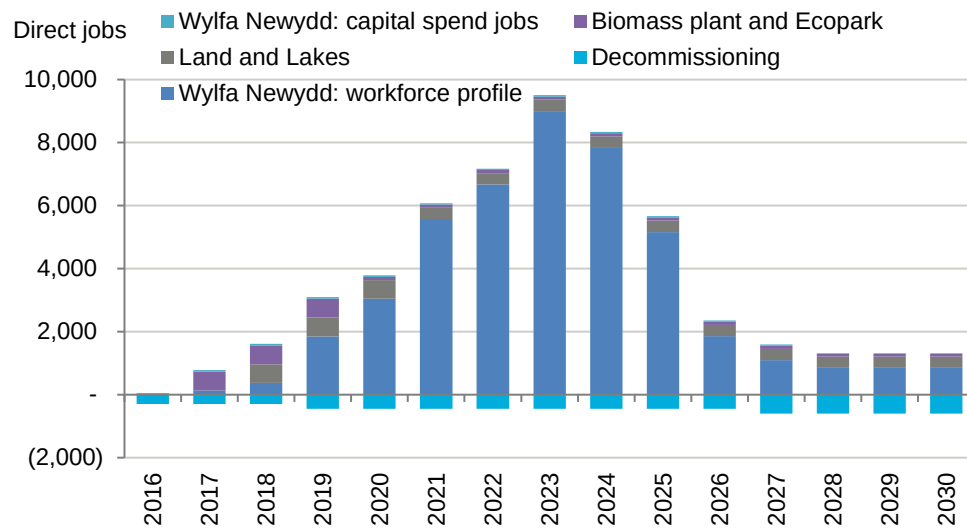
Considering displacement

The Biomass plant requires similar levels of construction employment as Land and Lakes. Therefore we adopt the same displacement assumption of 25.0 percent for the construction phase. Given the nature of the operational jobs, we assume displacement will be negligible and therefore fix our displacement assumption at zero percent.

4.5 Total direct jobs

Figure 4.9 summarises the direct gross job impact of the four developments in Anglesey from 2016 to 2030. Peak gross employment creation is estimated to occur in 2023, with nearly an additional 9,052 FTE jobs in the local economy. To put this in context, it is equivalent to nearly 37.3% of the workplace jobs that we forecast for Anglesey in 2023 under our baseline outlook (i.e. excluding the developments).

It is worth noting that the direct job impact in Figure 4.9 does not include the impact of the consumer spending from non-home based workers. Therefore, the gross impacts are likely to be higher.

Figure: 4.9: Direct gross job creation by development, 2016-2030

Source: Oxford Economics

Figure 4.10 shows the direct gross jobs created / lost by sector over the same period. As can be seen, the significant increase in jobs from 2021 to 2025 in Figure 4.9 above is driven by an increase in construction and engineering related activities.

Figure 4.10: Direct job creation by sector across all developments, 2016-2030

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Manufacture of fabricated metal	30	30	30	30	20	20	20	20	20	20	20	20	0	0	0
Electricity, gas, steam and air con	-600	-600	-590	-580	-420	-330	-230	-100	30	180	330	350	350	350	350
Water collection, treatment	300	300	300	0	0	0	0	0	0	0	0	0	0	0	0
Construction of buildings	0	670	1,360	1,980	1,660	1,920	2,420	4,060	3,350	1,790	450	180	0	0	0
Civil engineering	0	30	70	550	770	1,530	1,370	1,610	1,070	530	60	0	0	0	0
Specialised construction activities	0	0	0	150	150	150	150	150	150	150	150	0	0	0	0
Land transport and transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accommodation	0	0	0	0	0	330	330	330	330	330	330	330	330	330	330
Food and beverage service activities	0	0	40	100	180	320	440	480	460	350	150	20	10	10	10
Architectural and engineering	20	40	70	320	790	1,370	1,800	2,030	2,010	1,500	270	80	0	0	0
Rental and leasing activities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Travel agency, tour operator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Security and investigation activities	0	0	40	100	180	300	420	460	450	340	130	0	0	0	0
Creative, arts and entertainment act	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sports activities and amusement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	-250	480	1,310	2,640	3,330	5,630	6,720	9,050	7,880	5,210	1,910	990	710	710	710

Source: Oxford Economics

The scale of job creation is even more striking when compared to current sectoral employment levels. Figure 4.11 shows employment levels in selected industries in Anglesey in 2016 compared to peak job creation in 2023. It shows:

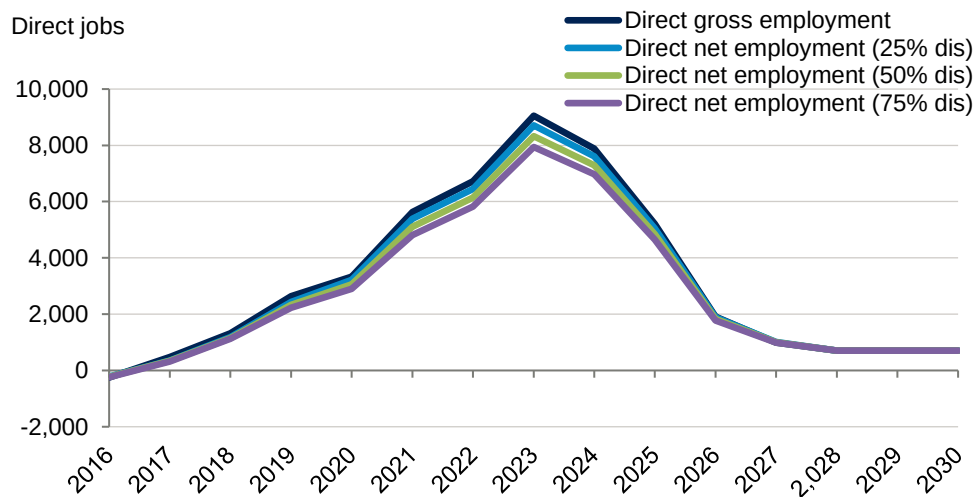
- Estimates of gross job creation available to local labour is highest in the 'Construction of buildings' sector at 550. This is equivalent to 69.6 percent of jobs in the sector currently;
- The largest mismatch between current capacity and future need is in the 'Security and investigation activities' sector where there is a need for 350 jobs by 2023;
- However, a potentially more difficult area to find appropriately skilled residents will be in the 'Civil engineering' sector where job creation is expected to be 21.7% larger than the current size of the sector; and
- Likewise, the peak level of 'Architectural and engineering' jobs available to local labour will be equivalent to 70.9 percent of the current level of jobs in the sector in Anglesey.

Figure: 4.11: Anglesey employment versus job creation, 2016-2030

Employment	Current employment levels in Anglesey	Peak employment creation (2023)		Peak job creation for local labour as a share of current levels
		Local labour	Total labour	
Manufacture of fabricated metal	184	20	20	10.9%
Electricity, gas, steam and air con	523	-330	-100	-63.0%
Construction of buildings	790	550	4,060	69.6%
Civil engineering	288	350	1,610	121.7%
Specialised construction activities	973	150	150	15.4%
Accommodation	1,466	330	330	22.5%
Food and beverage service activities	1,546	370	480	23.9%
Architectural and engineering	366	260	2,030	70.9%
Security and investigation activities	7	350	460	5078.1%
Total	6,143	2,068	9,040	33.7%

Of course, the direct gross jobs are reduced once we apply our displacement assumptions on the jobs available to the local labour force. For example, our peak employment creation falls from 9,040 jobs to:

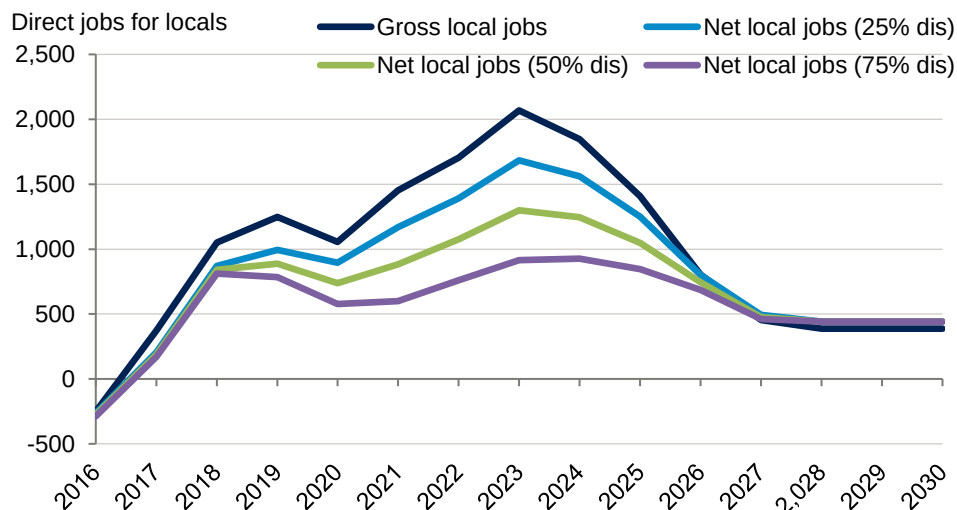
- Just over 8,700 with a displacement assumption of 25% on Wylfa Newydd's local impact;
- 8,325 with a displacement assumption of 50% on Wylfa Newydd's local impact; and
- 7,940 with a displacement assumption of 75% on Wylfa Newydd's local impact.

Figure 4.12: Direct gross and net job creation, 2016-2030

Source: Oxford Economics

In addition, it must be remembered that a large proportion of the jobs are assumed to be filled by transient labour that will flow into the area for the time required to complete the specific work. Consequently, the direct job creation that we assume is available to local labour is much lower. Direct gross employment available for local workers peaks at over 2,068 in 2023. When we include our displacement assumptions the net employment effect for residents stands at:

- Just over 1,680 with displacement of 25% on Wylfa Newydd's local impact;
- Nearly 1,300 with displacement of 50% on Wylfa Newydd's local impact; and
- 915 with displacement of 75% on Wylfa Newydd's local impact.

Figure 4.13: Direct job creation from all developments, 2016-2030

Source: Oxford Economics

Figures 4.14, 4.15 and 4.16 present the sectoral breakdown of the net home based jobs.

Figure: 4.14: Direct net home based jobs from all developments, 2016-2030 (assuming 25% displacement on local labour demand from Wylfa Newydd)

Net home based jobs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2,028	2029	2030
Manufacture of fabricated metal	20	20	20	19	19	18	18	17	17	16	16	15	0	0	0
Electricity, gas, steam and air con	-600	-600	-595	-593	-467	-430	-387	-332	-242	-122	17	82	82	82	82
Water collection, treatment	300	300	300	0	0	0	0	0	0	0	0	0	0	0	0
Construction of buildings	0	458	1,063	1,151	741	275	289	414	314	164	33	11	0	0	0
Civil engineering	0	5	11	91	128	251	225	266	176	87	10	0	0	0	0
Specialised construction activities	0	0	0	150	150	150	150	150	150	150	150	0	0	0	0
Land transport and transport	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3
Accommodation	0	0	0	0	0	330	330	330	330	330	330	330	330	330	330
Food and beverage service activities	0	3	30	76	139	248	336	367	356	271	117	18	15	15	15
Architectural and engineering	16	17	21	42	83	135	173	193	191	146	36	19	0	0	0
Rental and leasing activities	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
Travel agency, tour operator	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4
Security and investigation activities	0	2	23	57	104	175	241	264	256	192	77	2	0	0	0
Creative, arts and entertainment act	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4
Sports activities and amusement	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4
Total	-264	206	871	994	896	1,168	1,390	1,684	1,562	1,250	801	493	442	442	442

Source: Oxford Economics and Jacobs

Figure: 4.15: Direct net home based jobs from all developments, 2016-2030 (assuming 50% displacement on local labour demand from Wylfa Newydd)

Net home based jobs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2,028	2029	2030
Manufacture of fabricated metal	14	13	13	13	12	12	12	11	11	11	11	10	0	0	0
Electricity, gas, steam and air con	-600	-600	-595	-593	-467	-430	-387	-332	-242	-122	17	82	82	82	82
Water collection, treatment	300	300	300	0	0	0	0	0	0	0	0	0	0	0	0
Construction of buildings	0	455	1,057	1,116	693	183	193	276	209	109	22	7	0	0	0
Civil engineering	0	3	7	60	85	168	150	177	117	58	7	0	0	0	0
Specialised construction activities	0	0	0	150	150	150	150	150	150	150	150	0	0	0	0
Land transport and transport	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3
Accommodation	0	0	0	0	0	330	330	330	330	330	330	330	330	330	330
Food and beverage service activities	0	3	30	76	139	248	336	367	356	271	117	18	15	15	15
Architectural and engineering	11	12	14	28	56	90	115	128	128	97	24	13	0	0	0
Rental and leasing activities	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
Travel agency, tour operator	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4
Security and investigation activities	0	2	15	38	69	116	161	176	170	128	51	2	0	0	0
Creative, arts and entertainment act	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4
Sports activities and amusement	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4
Total	-276	188	841	889	736	883	1,075	1,299	1,244	1,049	744	477	442	442	442

Source: Oxford Economics and Jacobs

Figure: 4.16: Direct net home based jobs from all developments, 2016-2030 (assuming 75% displacement on local labour demand from Wylfa Newydd)

Net home based jobs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2,028	2029	2030
Manufacture of fabricated metal	7	7	7	6	6	6	6	6	6	5	5	5	0	0	0
Electricity, gas, steam and air con	-600	-600	-595	-593	-467	-430	-387	-332	-242	-122	17	82	82	82	82
Water collection, treatment	300	300	300	0	0	0	0	0	0	0	0	0	0	0	0
Construction of buildings	0	453	1,052	1,081	644	92	96	138	105	55	11	4	0	0	0
Civil engineering	0	2	4	30	43	84	75	89	59	29	3	0	0	0	0
Specialised construction activities	0	0	0	150	150	150	150	150	150	150	150	0	0	0	0
Land transport and transport	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3
Accommodation	0	0	0	0	0	330	330	330	330	330	330	330	330	330	330
Food and beverage service activities	0	3	30	76	139	248	336	367	356	271	117	18	15	15	15
Architectural and engineering	5	6	7	14	28	45	58	64	64	49	12	6	0	0	0
Rental and leasing activities	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
Travel agency, tour operator	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4
Security and investigation activities	0	1	8	19	35	58	80	88	85	64	26	1	0	0	0
Creative, arts and entertainment act	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4
Sports activities and amusement	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4
Total	-288	171	811	784	577	598	760	915	927	847	687	461	442	442	442

Source: Oxford Economics and Jacobs

5 Estimated total impacts on Anglesey

Using the sectoral breakdown of the above direct construction and operational jobs, we estimate the indirect and induced impacts for Anglesey, Gwynedd, Rest of Wales and Rest of the UK. It is worth noting at this stage that despite Horizon having assumptions on the likely source of labour we have undertaken our own estimates of who takes the jobs. Again, Annex A provides a detailed explanation of how the modelling works.

Using an input-output framework (see Annex A for details) we have estimated the indirect and induced impacts of the above projects. We find that workplace employment could grow from between 8,900 jobs to 9,800 jobs depending on the displacement assumptions on Wylfa Newydd. The limited spare capacity in the economy means that unemployment falls by around 400 people in each growth scenario⁸.

Figure: 5.1: Headline results in Anglesey at peak, 2023

Anglesey: Key Indicators	Baseline	Scenario					
		25% displacement		50% displacement		75% displacement	
		No.	Difference	No.	Difference	No.	Difference
Population (000s)	71.2	78.4	7.2	78.0	6.7	77.8	6.6
Population aged 16+	38.3	45.4	7.1	45.0	6.7	44.8	6.6
Workplace employment (000s)	24.3	34.1	9.8	33.6	9.3	33.2	8.9
Employment growth (p.a. 2016 to 2030)	-0.3	2.1	2.4	2.0	2.3	1.9	2.2
Total employment (people, 000s)	23.5	32.9	9.5	32.5	9.0	32.0	8.6
Resident employment (people, 000s)	31.1	40.0	8.8	39.6	8.4	39.2	8.1
Resident employment rate (%)	81.3	88.0	6.7	87.9	6.6	87.4	6.1
Unemployment (000s)	1.8	1.4	-0.4	1.4	-0.4	1.4	-0.4
Unemployment rate (%)	5.6	3.4	-2.1	3.5	-2.1	3.5	-2.1
Net migration (000s)	0.1	2.0	1.9	1.7	1.7	1.7	1.6
GVA (£m, 2013 prices)	1,029	1,325	296.5	1,311	282.4	1,297	268.2
GVA % growth (p.a. 2016 to 2030)	1.3	3.1	1.8	3.0	1.8	3.0	1.7
Productivity (£s per job, 2013 prices)	42,344	38,874	-3,470.6	38,997	-3,347.6	39,123	-3,221.0
Productivity (p.a. 2016 to 2030)	1.6	1.0	-0.6	1.0	-0.6	1.1	-0.6

Source: Oxford Economics

The inflow of non-home based workers working on the Wylfa new build along with migrants attracted to the area because of the job opportunities boost working age population by between 6,600 and 7,100 by 2023 and the resident employment rate jumps by as much as 6.7 percentage points to 88.0 percent. In addition, the additional jobs mean GVA is between 26 and 29 percent higher than under the baseline outlook.

We also find that by 2030, once the nuclear new build, Land & Lakes and Biomass plant are operational (and our construction phase displacement assumptions have fallen out of the analysis), workplace jobs could be 800 higher than under our baseline outlook (growth of 3.4 percent). We discuss these trends in more detail in the sub-sections below.

⁸ Unemployment rates will only fall so far given there will be a continual flow of individuals into unemployment as businesses and sectors decline, while skills mismatch and a lack of work readiness skills will stop others from leaving.

Figure 5.2: Headline results in Anglesey, 2030

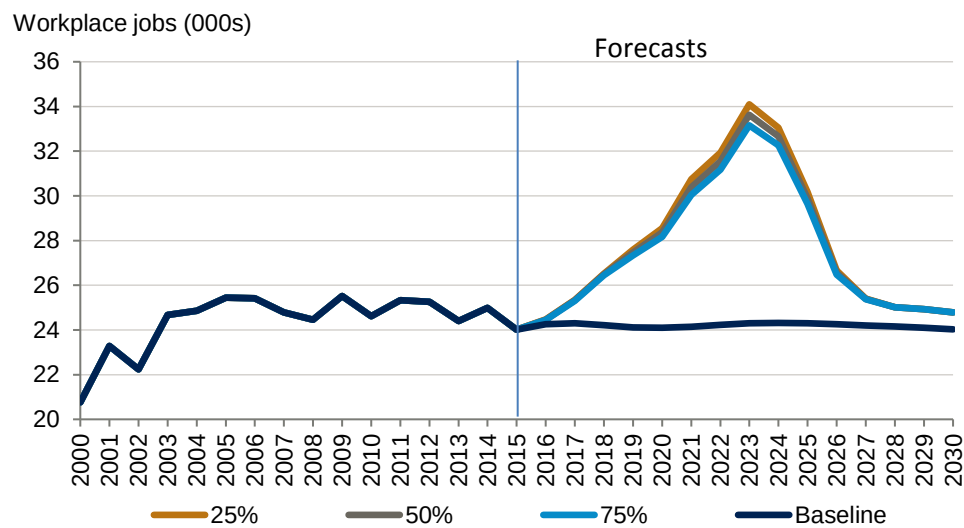
Key Indicators	Baseline	Scenario	Difference
Population (000s)	71.6	71.6	0.0
Population aged 16+	36.6	36.6	0.0
Workplace employment (000s)	24.0	24.8	0.8
Employment growth (p.a. 2016 to 2030)	-0.1	0.1	0.2
Total employment (people, 000s)	23.1	23.8	0.7
Resident employment (people, 000s)	30.7	31.3	0.7
Resident employment rate (%)	83.8	85.6	1.9
Unemployment (000s)	1.9	1.8	-0.2
Unemployment rate (%)	5.9	5.3	-0.6
Net migration (000s)	0.1	0.1	0.0
GVA (£m, 2013 prices)	1,119	1,196	77.0
GVA % growth (p.a. 2016 to 2030)	1.4	2.0	0.6
Productivity (£s per job, 2013 prices)	46,586	48,265	1,679.6
Productivity (p.a. 2016 to 2030)	1.4	1.9	0.5

Source: Oxford Economics

5.1 The labour market

Figure 5.3 compares our baseline jobs forecasts for the local economy to the likely outlook for employment if all developments are delivered. We provide three alternative outlooks based on the range of displacement assumptions that could be applied to Wylfa Newydd. Overall, we find that there is little material difference between the three growth scenarios given the scale of the nuclear new build activity.

From 2016 to 2020 we estimate a substantial increase in workplace jobs in Anglesey. Under the baseline we expect a contraction in jobs by -0.2 percent per annum. Under the high percent displacement scenario we expect growth of 3.6 per annum over the period. This rises to 3.9 percent under the low displacement scenario. This means that by 2020 there are an additional 4,100 jobs.

Figure 5.3: Baseline and scenario workforce jobs, Anglesey, 2000-2030

Source: Oxford Economics

From 2020 the level of workforce jobs jumps dramatically. From 2020 to 2023 workforce jobs grows by between 5.6 and 6.1 percent per annum (assuming 25.0 percent and 15.0 percent home based jobs respectively). Therefore, at its peak, Anglesey is estimated to have between 8,900 and 9,800 additional workplace jobs in 2023, compared to our baseline forecasts. As the labour required to construct Wylfa Newydd scales back post 2023, so too does the level of workplace jobs in our faster growth scenarios.

The jobs created to operate Wylfa Newydd, the Biomass plant and Land and Lakes, along with the jobs created through additional tourism spend, more than offset the jobs lost in the decommissioning. Therefore, by 2030 we project an additional 825 workplace jobs above baseline in Anglesey.

Long-term potential

It is worth noting that post construction on the Wylfa Newydd development, local companies and individuals could have unique skills and experience in nuclear related activity which can be sold elsewhere. Therefore, employment levels could be notably above projected scenario levels at the end of the period.

In addition, if there are investments in supporting / enabling infrastructure such as roads, broadband, etc. then there could be a boost to productivity and jobs. The training of individuals to work on site and to back fill jobs in Anglesey could also boost productivity and wage levels on the island.

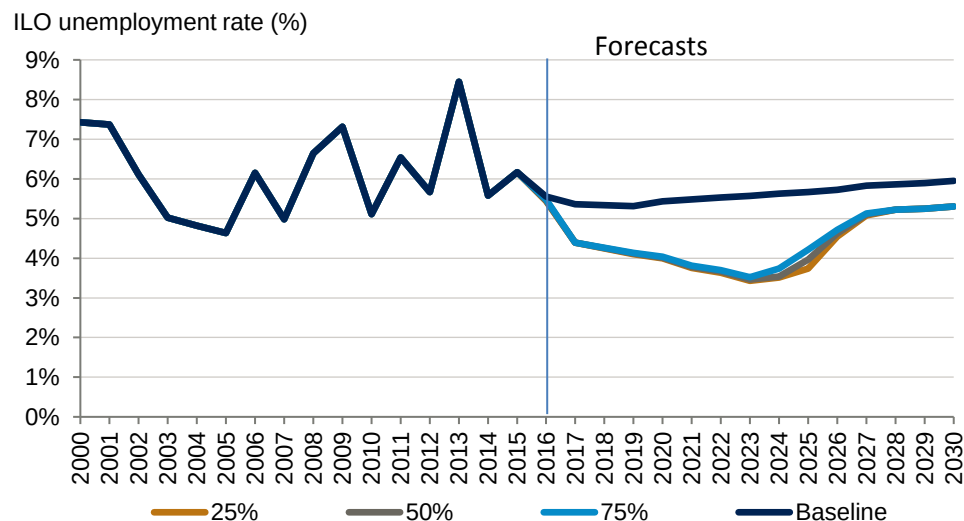
Despite the significant growth in headline workplace jobs, the impact on unemployment in Anglesey is estimated to be less dramatic given:

- Firstly, the volume of the additional jobs that will be taken by temporary labour to the area and therefore not open to residents; and

- Secondly the limited spare capacity in the labour market. The ILO unemployment rate is already near record low levels. This means the impact on unemployment is relatively identical across all three growth scenarios.

We estimate that the ILO unemployment rate could fall to a low of 3.4 percent in 2023. By the end of the forecast period ILO unemployment rates are below baseline levels due to the additional jobs created at Wylfa, Land & Lakes and the Biomass plant.

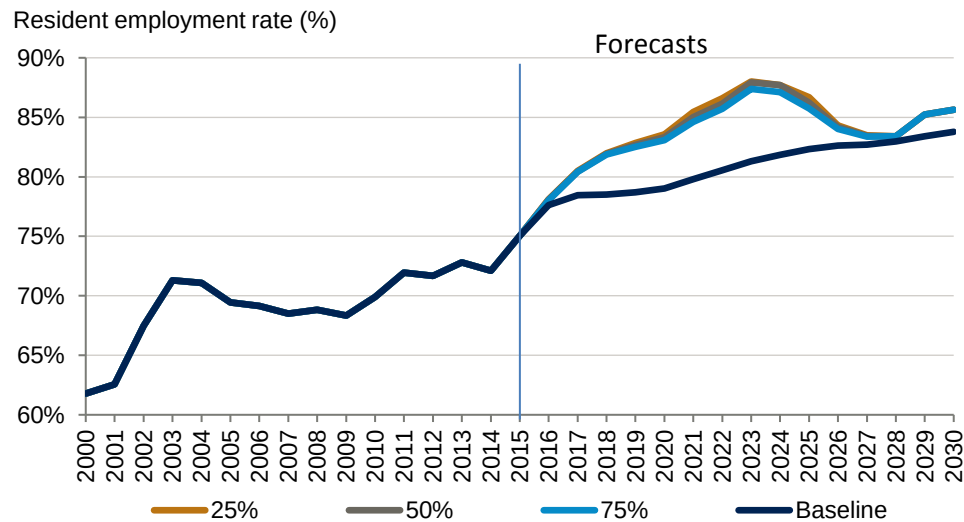
Figure: 5.4: Baseline and scenario ILO unemployment rate, Anglesey, 2000-2030



Source: Oxford Economics

As expected, the resident employment rate will increase as jobs are created over the forecast period. Given a significant proportion of jobs will be taken by temporary labour to the area (see discussion of migration and working age population below), the resident employment rate rises to a peak of 88% percent in 2023.

Figure: 5.5: Baseline and scenario resident employment rate, Anglesey, 2000-2030

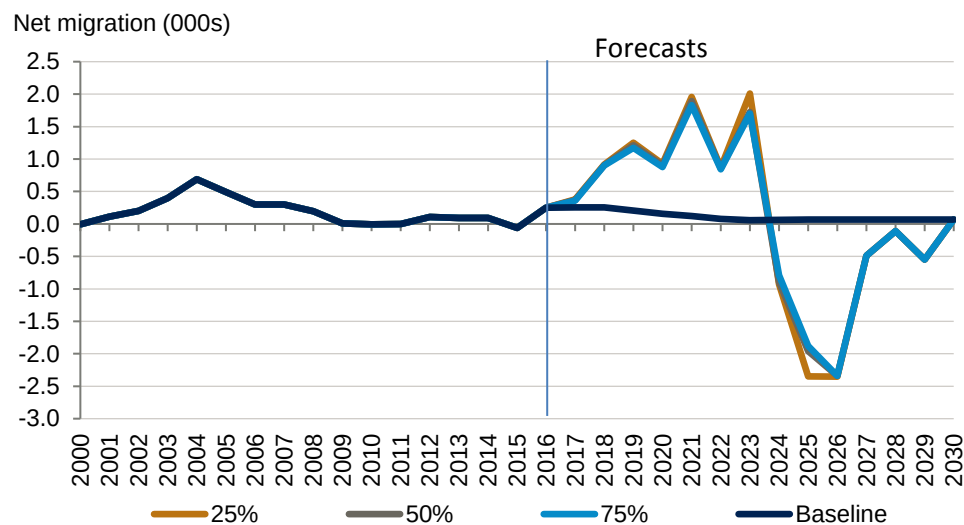


Source: Oxford Economics

5.2 Migration and population

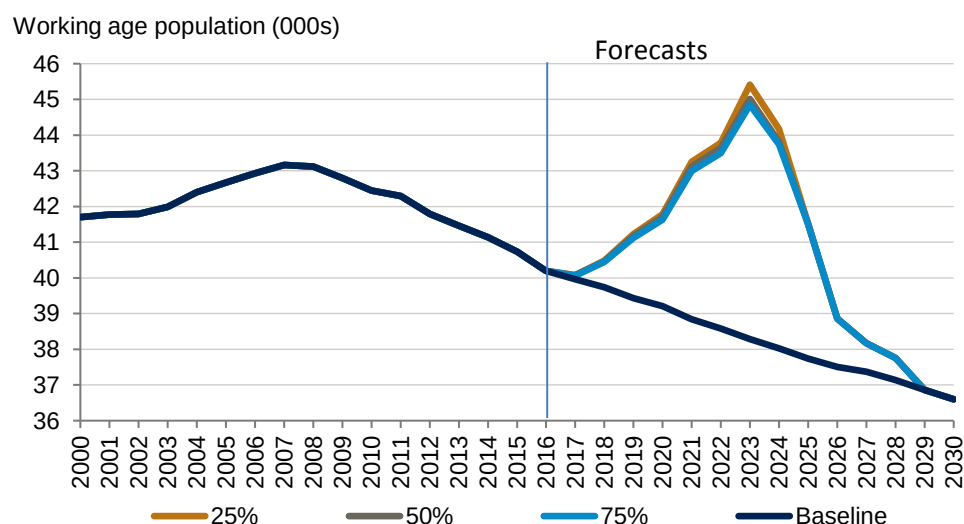
Net migration over the forecast period is expected to fluctuate considerably reflecting the profile of labour required to construct Wylfa Newydd. The net migration in the scenario projections in Figure 8.6 capture the flow of temporary labour and the flow of labour more generally reacting to job opportunities that are available to the local labour force.

Net migration is projected to be strongly positive from 2016 to 2022. Over the period we estimate an annual average inflow of between 890 and 940 people. As workplace jobs fall back from 2023, net migration turns negative, reaching a maximum net outflow of 2,400 people in 2026. By 2030 annual net migration has settled back to baseline levels.

Figure 5.6: Baseline and scenario net migration, Anglesey, 2000-2030

Source: Oxford Economics

As expected, working age population levels receive a substantial boost from the general job creation in the local economy and the inflow of temporary labour for Wylfa Newydd. By 2023 working age population levels are around 6,600 to 7,100 higher than in our baseline outlook. However, levels are expected to revert back to the baseline outlook by 2029.

Figure 5.7: Baseline and scenario working age population in Anglesey, 2000 to 2030

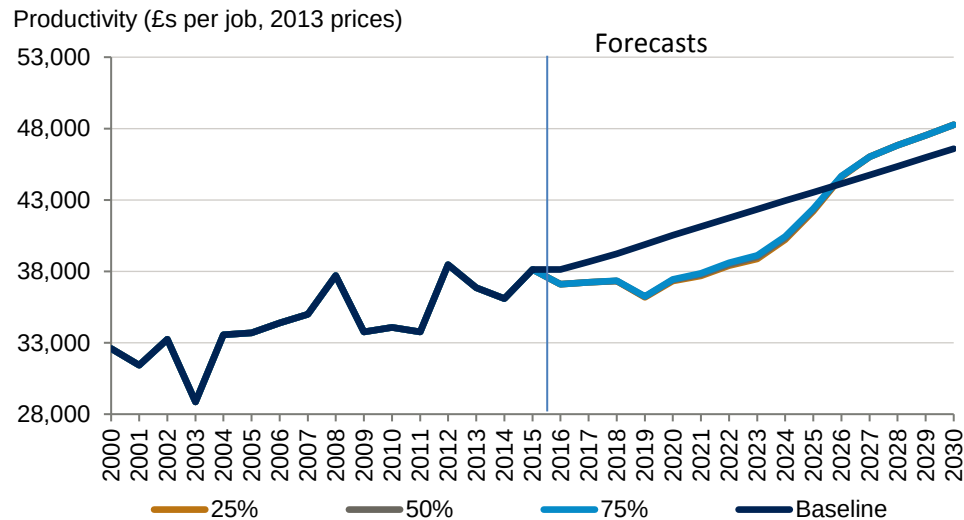
Source: Oxford Economics

5.3 Productivity and GVA contributions

The loss of nuclear related employment through the decommissioning process has a significant negative impact on average productivity levels in Anglesey over most of the forecast period. We estimate productivity in the electricity, gas and steam sector in

Anglesey was nearly £124,000 (in 2013 prices) in 2016, compared to just over £38,000 for the Anglesey average. The loss of 600 jobs in the nuclear sector, mixed with the creation of relatively low value added jobs, means that average productivity in the economy is estimated to fall from 2015 to 2019.

Figure 5.8: Baseline and scenario productivity, Anglesey, 2000-2030



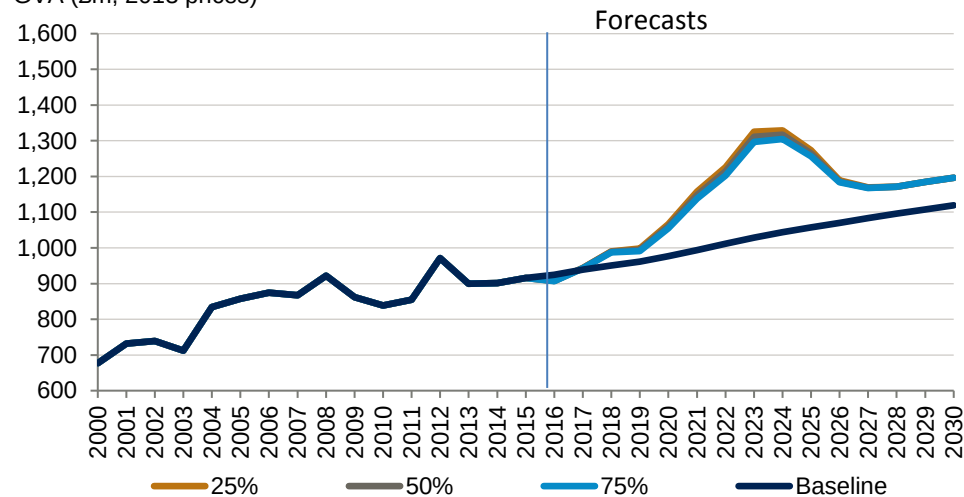
Source: Oxford Economics

It is not until 2026 that average productivity overtakes our baseline forecasts (which do not include the decommissioning activity). The convergence with, and eventual surpassing of, baseline levels coincides with the gradual increase in operational staff at the new nuclear plant.

Despite the general uplift in employment in Anglesey, headline GVA remains close to baseline levels until 2019, after which the substantial job creation at Wylfa Newydd pushes GVA to over £1.3bn in 2023 and 2024. Under the low displacement growth scenario, GVA levels peak at £1.329bn, some 27.3 percent above baseline projections. As the developments enter their operational phase, the additional jobs and presence of high productive nuclear related activity mean GVA levels are 6.9 percent above the baseline projections.

Figure 5.9: Baseline and scenario GVA, Anglesey, 2000-2030

GVA (£m, 2013 prices)



Source: Oxford Economics

5.4 Summary

Our scenario analysis shows that the construction of the Wylfa Newydd plant dominates the results of our modelling:

- the volume of labour required to develop Wylfa Newydd has a significant impact on headline economic variables:
 - Both workplace employment and GVA levels are dramatically higher from 2021 to 2024;
 - Indeed, the profile of future workplace jobs and GVA is heavily influenced by the profile of labour required at the nuclear new build.
- Interestingly, however, the loss of highly productive nuclear jobs through decommissioning limits the increase in GVA. It is not until 2026 when operational jobs are increasingly phased in, does productivity levels jump back up and surpass baseline projections.
- Unemployment levels and rates improve, but the local economy is already close to record low levels, and there is a limit on how much unemployment can fall.
- Given spare capacity and the scale of non-home based employment at Wylfa, net migration levels will fluctuate considerably over the period.
- As expected, population and working age population will jump significantly as mainly non-home based workers arrive in Anglesey.
- By the end of the period employment, GVA, and productivity are above our baseline projections given Wylfa, Land & Lakes and the Biomass plant are operational.

It is worth noting that the model assumes there is no long-term benefit from early experience of working on a nuclear new build but if local companies and individuals can maximise the opportunities that could arise

from their experience of nuclear construction, then there would be opportunities to export those skills / services / products to the rest of the UK and indeed the rest of the world.

It is not possible to model the scale of these opportunities at present, partly because the scale of investment in nuclear in the UK is unknown, as is the degree to which local companies will engage with these opportunities. However, it is safe to suggest that future levels of employment and GVA could be boosted if the local business community engages with the project and successfully applies the experience elsewhere.

6 Conclusion

6.1 A unique opportunity

This study has shown that the local economy of Anglesey is about to enter a unique period of economic activity driven primarily by the construction of Wylfa Newydd, and partly by decommissioning at the old reactors, and developments of a biomass plant and a new tourism asset.

The scale of labour required to deliver all four projects is significant, but a large proportion of that labour will flow from outside of North Wales into Anglesey and surrounding local authorities. The labour will be temporary in nature so although it will affect headline economic variables such as workplace jobs and GVA, it will do so for a limited period.

The real economic benefits over the next 15 years for Anglesey are the nuclear construction jobs that Horizon estimate are available for “local” workers and the employment associated with the other projects. Of course, once we account for likely displacement, the volume of net new job creation falls.

6.2 Important to maximise the opportunities

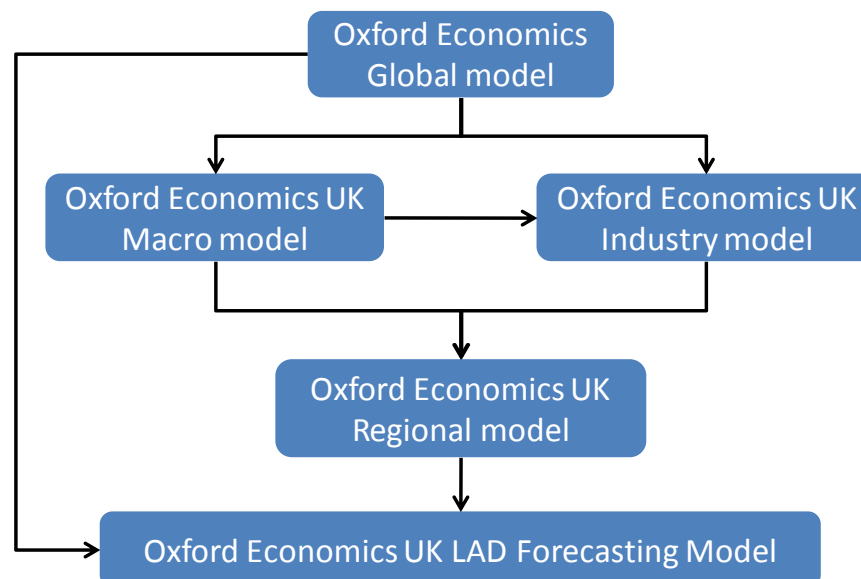
As noted, the modelling shows that if allowed, the economy could revert to levels close to baseline projections by the end of the period. There is a real risk, that apart from the operation of the new developments, Anglesey’s residents and businesses fail to grasp the opportunities associated with early involvement in what is hoped to be a new wave of nuclear new builds across the UK. That would represent a missed opportunity for a peripheral area of Wales and the UK that might find significant increases in demand hard to achieve in the future.

Key growth sectors in the UK tend to be in high value added business services which are concentrated in large urban areas. The risk is that Anglesey and surrounding local areas could experience slower rates of growth than city economies. Therefore, young people and the highly skilled are more likely to migrate to the city growth engines exacerbating the different speeds of economic and social trends in peripheral and city economies.

Technical annex A: Baseline forecasts

The baseline forecasts provided were produced within Oxford Economics Local Authority District Forecasting Model. The model covers all local authorities within the UK and sits within the Oxford suite of forecasting models. Such a modelling framework ensures that global and national factors (such as developments in the Eurozone and UK Government fiscal policy) have an appropriate impact on the forecasts at a local authority level. This empirical framework (or set of 'controls') is critical in ensuring that the forecasts are much more than just an extrapolation of historical trends. Rather, the trends in our global, national and sectoral forecasts have an impact on the local area forecasts. In the current economic climate this means most, if not all, local areas will face challenges in the short-term, irrespective of how they have performed over the past 15 years.

Figure A.1: Hierarchical structure of Oxford Economics' suite of models



The baseline forecasts for the Isle of Anglesey or Gwynedd local authority areas are essentially shaped by three factors:

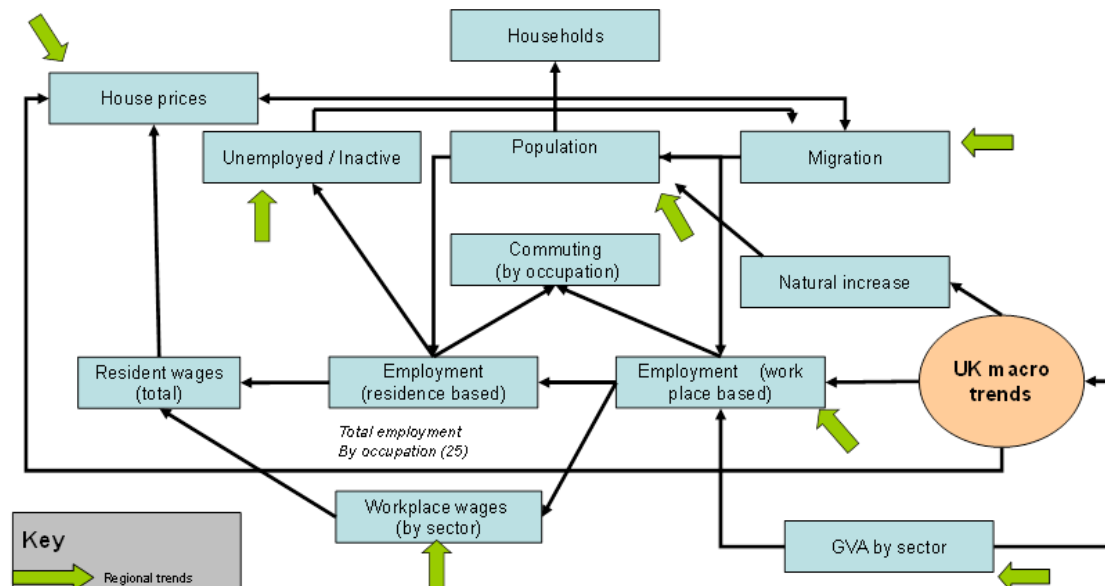
- International, national and regional outlooks - all the local area forecasts produced by Oxford Economics are fully consistent with broader regional, national and international models and forecasts. This ensures global events that impact on the performance of UK local economies, such as the strength of global trade which is particularly important for sea port activity, are fully captured in the forecasts for a local area. So too are national level growth and policies, whether that be the impact of monetary policy on consumer spending or government spending on locally provided public services;
- Historical trends in an area, which implicitly factor in supply side factors affecting demand, combined with Oxford Economics' staff knowledge of local areas and the patterns of local economic development. This ensures for example, that we recognise and factor in to the forecasts any evidence of particularly high/low levels of competitiveness that local economies have in particular activities. It also

means national policy programs that have a particular local impact and that are very likely to happen - such as the Government's Northern powerhouse agenda - are appropriately reflected in the forecasts; and

- Fundamental economic relationships which interlink the various elements of the outlook. Oxford Economics' models ensure full consistency between variables in a local area. For example, employment, commuting, migration and population are all affected by one another.

The forecasts are produced within a fully-integrated system, which makes assumptions about migration, commuting and activity rates when producing employment and population forecasts. The main internal relationships between variables are summarised in Figure A.2.

Figure A.2: Main Relationships



Technical annex B: Impact modelling approach

The baseline forecasts are ‘policy neutral’ – they do not account for any future policy changes or developments (note that the forecasts will be based on existing policy since the historical data and trends are essentially the product of past policies).

An input-output framework

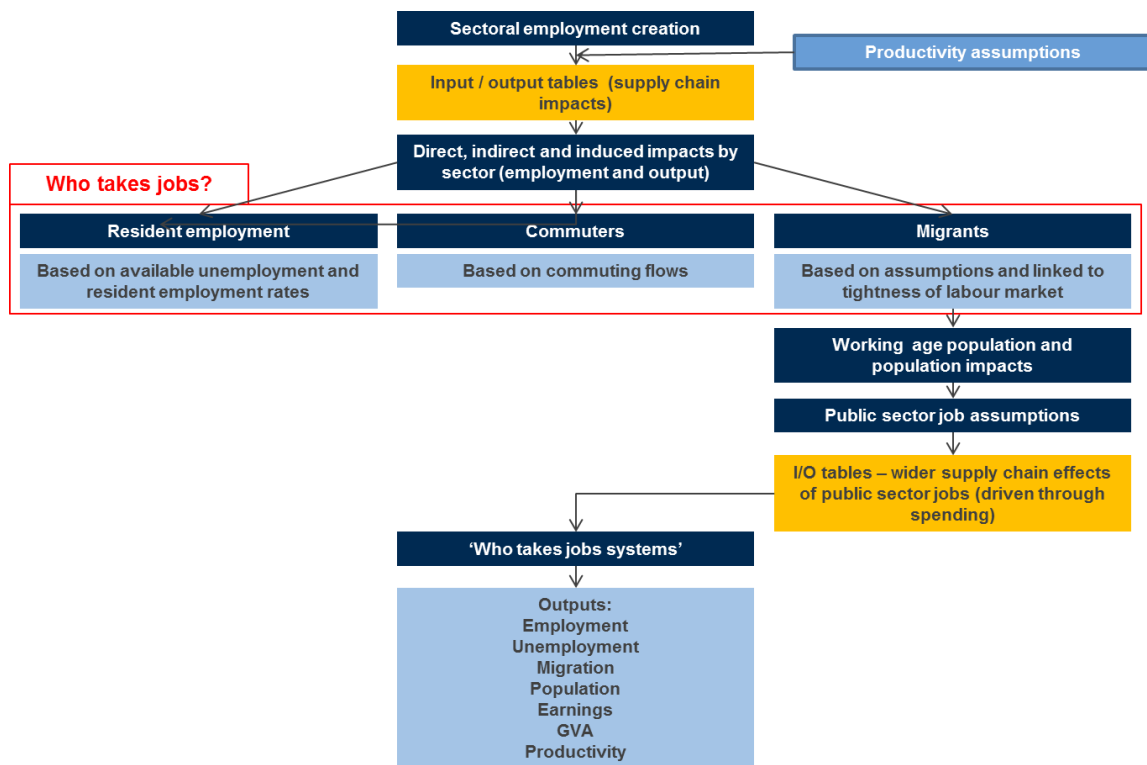
To model the implications of the various investments on the Isle of Anglesey, an impact model was developed based on an input-output framework. An input-output model gives a snapshot of an economy at any point in time. The model shows the major spending flows from “final demand” (i.e. consumer spending, government spending, investment and exports to the rest of the world); intermediate spending patterns (i.e. what each sector buys from every other sector – the supply chain in other words); how much of that spending stays within the economy; and the distribution of income between employment incomes and other income (mainly profits). In essence an input-output model is a table which shows who buys what from whom in the economy.

Once a scenario is inputted, the model has the capacity to estimate the associated direct, indirect and induced impacts of such developments. The framework is summarised in figure B.1.

General approach to modelling an investment

In summary, the ‘direct’ change in sectoral employment that follows an investment in the local economy is inputted into the model. Using input-output tables, the model estimates how many further jobs will be created / lost through the supply chain. With estimates of the direct and indirect employment effects within the economy, the model then estimates the additional induced employment creation (mainly in the retail, hospitality and other personal services sectors) within the economy.

Given the increase in jobs, the model estimates where the required labour is sourced from. Broadly, the jobs are taken from one of three groups of people: a) commuters, b) residents and c) migrants. This will obviously have a knock on impact on unemployment and resident employment rates. Using commuting patterns and sectoral profiles the model estimates the likely number of commuters that will be attracted in to take up some of the new jobs. Those remaining will be taken by new migrants coming to the area. New migrants will have knock on impacts on population size and demand for public services (and further jobs), which will be estimated within the model.

Figure B.1: Scenario model flows

Modelling Wylfa Newydd

The Wylfa Newydd development is unique in that:

- It will provide a significant amount of construction phase jobs over the short to medium term;
- Only a fraction of these jobs will be available or open for local residents and those living in neighbouring economies, and therefore the direct impact on unemployment is more limited than it might first appear;
- Yet the remainder of jobs will be on the Island and therefore will be counted in headline workplace job figures. Associated wages and GVA should also appear in headline performance data even though they are generated by (in the most part) temporary labour;
- The transient or non-local temporary labour force staying in Anglesey or Gwynedd will obviously push up population and working age population levels and have a dramatic impact on net migration;
- The presence of thousands of additional employed people will also contribute a significant amount to consumer spending in the local economy creating further job opportunities in the local economy; and
- There will also be further demand in the local economy from capital investment by Horizon.

Therefore, our treatment / modelling of the nuclear new build is slightly different from the general approach outlined above.

Modelling Wylfa Newydd jobs for residents

Jacobs provided us with a breakdown of workforce requirements for Wylfa Newydd. We assigned the various roles to the standard sectors of the economy in agreement with Jacobs.

Figure B.2: Mapping jobs at Wylfa Newydd

Type of job as documented in Gravity Model	Allocation to SIC07 sectors of the economy
Supervisory /managerial	Architectural and engineering
Operational Staff	Electricity, gas, steam and air con
Site Services, security &B clerical staff	50% of Food and beverage service activities 50% Security and investigation activities
Civil engineering operatives	50% Construction of buildings 50% Civil engineering
Mechanical & electrical engineering operatives	Construction of buildings

Modelling Wylfa Newydd's transient labour

Although the non-home based jobs do not in themselves impact on unemployment, we do add their numbers to the final workplace employment, population, working age population and migration figures.

In addition, we estimate the impact of their consumption in the Isle of Anglesey. To inform our modelling of non-home based worker's consumers spending we use the "Accommodation and Distribution of Workers Assessment" report. It provides estimates of home and non-home workers and where they will live. It also suggests a daily allowance of £37.10 per worker might be payable. We apply this to non-home workers staying in hotels, caravans, and latent accommodation.

For those non-home workers expected to find their own living arrangements (i.e. not hotels, caravans, etc) we assume they have the same average consumer spending power as other Anglesey residents.

Using input-output tables we can allocate this spend across sectors of the economy and estimate the resulting effects in the model.

Modelling Wylfa Newydd's capital spend locally

At the time of writing, the cost of the Nuclear new build was estimated at £10bn. According to Jacobs, it is assumed that 60% of the costs will be realised in the UK. It

is not clear, however, how much will be spent locally. Looking at benchmarking information, other nuclear new build projects have delivered between 2.0 percent (Flamanville 3) and 4.0 percent (Sizewell B) of their total project value locally. Considering the more remote location of the Wylfa Newydd Development Area (compared to the examples above) and the different technology being installed, Jacobs estimate that between 1.0 percent and 2.0 percent may be achievable as a local investment contribution. That works out at £10m to £20m over the construction period.

Technical annex C: Additional information

Figure C.1: Wylfa workforce profile

Wylfa workforce profile	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Site Services, security & clerical staff	9	79	200	328	392	475	522	493	372	206	8	0
Supervisory /managerial	16	53	299	766	1,355	1,778	2,007	1,995	1,486	248	61	0
Civil engineering operatives	61	134	1,099	1,548	3,051	2,732	3,226	2,135	1,060	123	0	0
Mechanical & electrical engineering operatives	43	94	237	289	392	1,054	2,450	2,284	1,262	384	175	0
Operational Staff	0	11	16	77	166	267	396	526	682	834	850	850
Off-Site Services, security & clerical staff	0	0	0	35	218	365	399	399	300	62	0	0
Total	129	371	1,852	3,042	5,573	6,671	9,000	7,833	5,162	1,857	1,094	850

Source: Horizon

Figure C.2: Wylfa workforce profile for home workers

Wylfa workforce profile: local labour	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Site Services, security & clerical staff	7	60	153	250	299	363	399	377	284	158	6	0
Supervisory /managerial	2	6	35	91	161	211	238	236	176	29	7	0
Civil engineering operatives	13	29	242	340	671	600	709	469	233	27	0	0
Mechanical & electrical engineering operatives	3	8	19	23	32	85	197	184	102	31	14	0
Operational Staff	0	5	7	33	70	113	168	258	378	517	582	638
Off-Site Services, security & clerical staff	0	0	0	27	167	279	305	305	229	47	0	0
Total	25	108	456	764	1,399	1,652	2,016	1,829	1,402	809	610	638

Source: Horizon

Technical annex D: Wylfa Newydd results

In this annex, we present the results for Wylfa Newydd only. In other words, we remove the decommissioning, Land and Lakes and Biomass plant. In summary, the net effect is a boost to the economy as the direct, indirect and induced impacts of removing 600 jobs through decommissioning does not happen.

We find that workplace employment could grow by as much as 9,900 jobs (100 higher than our previous results). Unemployment again falls by around 400 people, the limited spare capacity limiting further falls⁹. Given the slightly higher level of job creation working age population is larger than our previous results in Section 8 (by around 200). Interestingly the additional working age population help to dampen the increase in the resident employment rate which rises to as much as 87.8 percent (compared to 88 percent previously).

Figure: D.1: Headline results in Anglesey at peak, 2023

Anglesey: Key Indicators	Baseline	Scenario					
		25% displacement		50% displacement		75% displacement	
		No.	Difference	No.	Difference	No.	Difference
Population (000s)	71.2	78.6	7.4	78.1	6.9	77.9	6.7
Population aged 16+	38.3	45.6	7.3	45.1	6.8	44.9	6.7
Workplace employment (000s)	24.3	34.2	9.9	33.7	9.4	33.2	8.9
Employment growth (p.a. 2016 to 2030)	-0.3	2.1	2.5	2.0	2.4	1.9	2.3
Total employment (people, 000s)	23.5	33.0	9.5	32.6	9.1	32.1	8.6
Resident employment (people, 000s)	31.1	40.0	8.9	39.6	8.5	39.3	8.1
Resident employment rate (%)	81.3	87.8	6.5	87.9	6.6	87.4	6.0
Unemployment (000s)	1.8	1.4	-0.4	1.4	-0.4	1.4	-0.4
Unemployment rate (%)	5.6	3.4	-2.2	3.5	-2.1	3.5	-2.1
Net migration (000s)	0.1	2.1	2.0	1.7	1.7	1.7	1.6
GVA (£m, 2012 prices)	1,029	1,399	370.3	1,385	356.2	1,371	342.1
GVA % growth (p.a. 2016 to 2030)	1.3	3.5	2.2	3.4	2.2	3.4	2.1
Productivity (£s per job, 2012 prices)	42,344	40,931	-1,413.3	41,082	-1,261.9	41,238	-1,106.2
Productivity (p.a. 2016 to 2030)	1.6	1.4	-0.2	1.4	-0.2	1.4	-0.2

Source: Oxford Economics

The main difference however is GVA levels which are as much as 36 percent higher than the baseline forecasts for 2023. Without the removal of energy jobs through decommissioning average productivity is around £41,000 (compared to £39,000 when we run the remaining developments).

We also find that by 2030, workplace jobs could be 1,000 higher than under our baseline outlook, while GVA stands at close to £1.3bn (nearly £100 million higher than our estimates in Section 8).

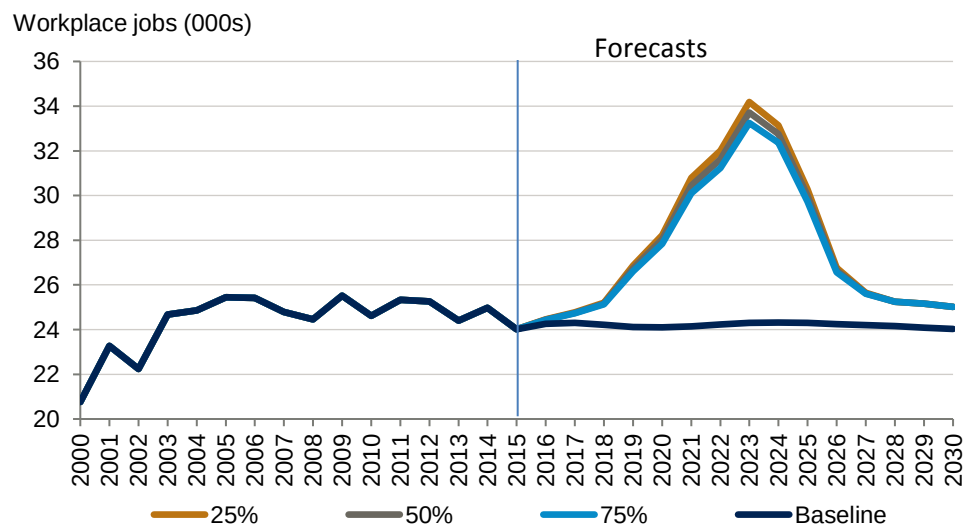
⁹ Unemployment rates will only fall so far given there will be a continual flow of individuals into unemployment as businesses and sectors decline, while skills mismatch and a lack of work readiness skills will stop others from leaving.

Figure: D.2: Headline results in Anglesey, 2030

Key Indicators	Baseline	Scenario	Difference
Population (000s)	71.6	71.6	0.0
Population aged 16+	36.6	36.6	0.0
Workplace employment (000s)	24.0	25.0	1.0
Employment growth (p.a. 2016 to 2030)	-0.1	0.2	0.2
Total employment (people, 000s)	23.1	24.0	1.0
Resident employment (people, 000s)	30.7	31.5	0.9
Resident employment rate (%)	83.8	86.2	2.4
Unemployment (000s)	1.9	1.6	-0.4
Unemployment rate (%)	5.9	4.8	-1.2
Net migration (000s)	0.1	0.1	0.0
GVA (£m, 2012 prices)	1,119	1,294	174.8
GVA % growth (p.a. 2016 to 2030)	1.4	2.4	1.0
Productivity (£s per job, 2012 prices)	46,586	51,714	5,128.1
Productivity (p.a. 2016 to 2030)	1.4	2.2	0.8

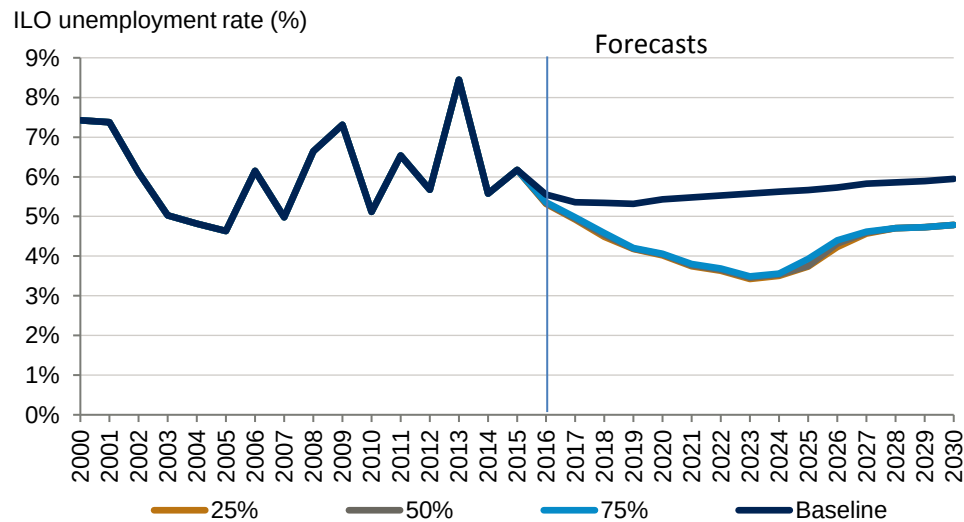
Source: Oxford Economics

The charts that follow depict the slightly more improved position of the Anglesey economy given the avoidance of high value added job losses from 2013.

Figure: D.3: Baseline and scenario workforce jobs, Anglesey, 2000-2030

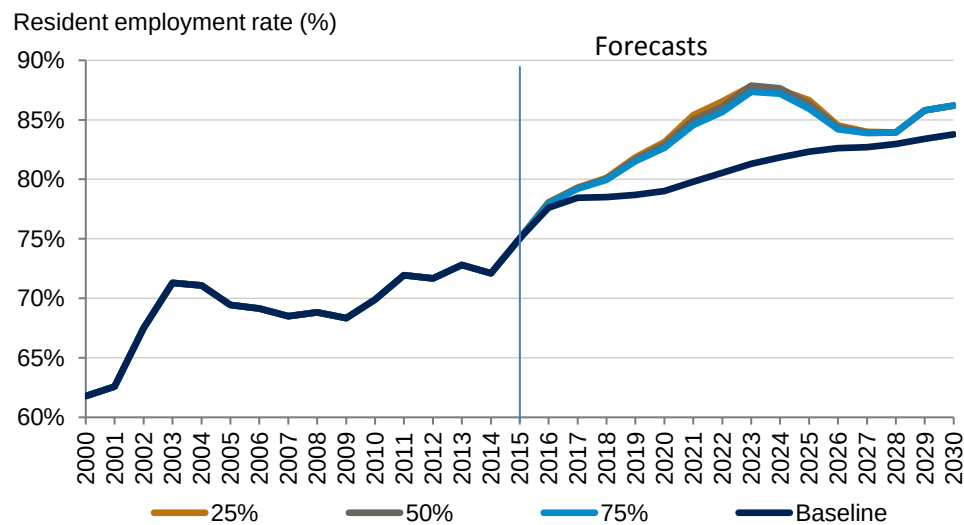
Source: Oxford Economics

Figure: D.4: Baseline and scenario ILO unemployment rate, Anglesey, 2000-2030

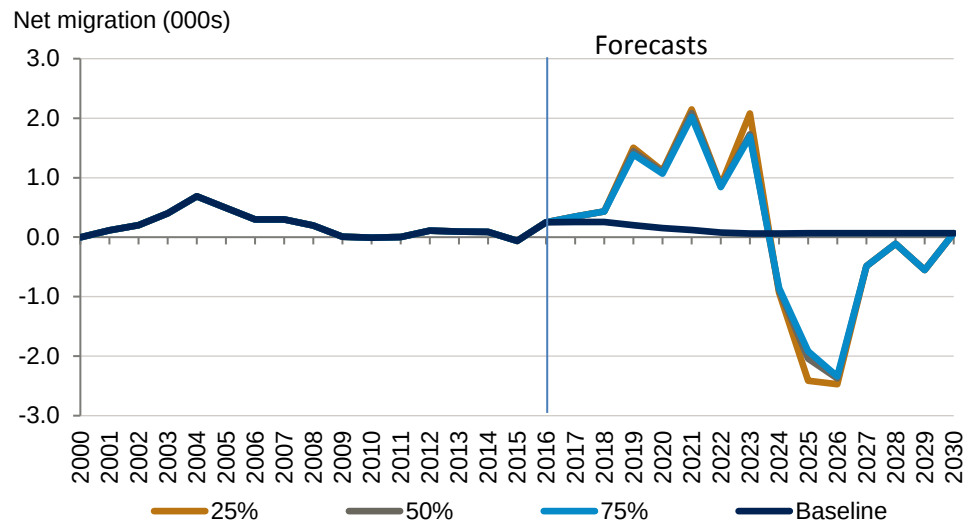


Source: Oxford Economics

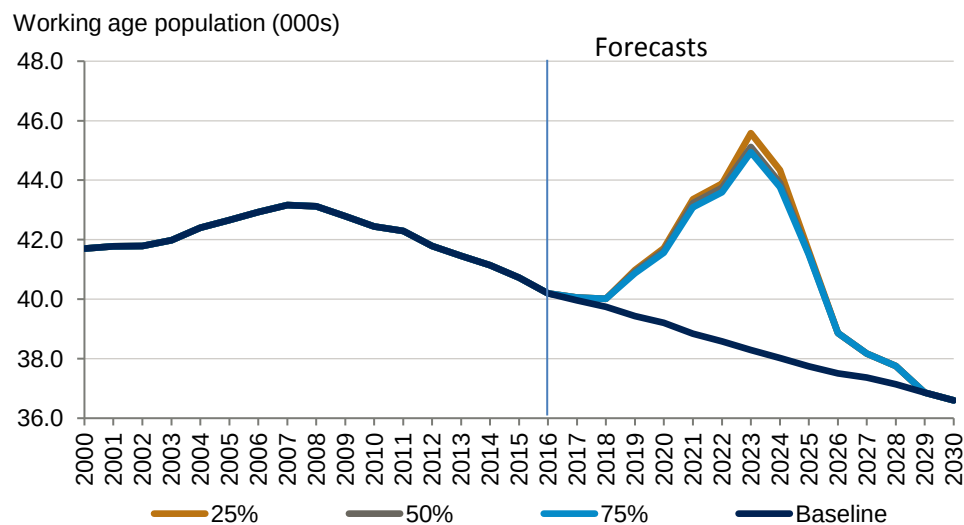
Figure: D.5: Baseline and scenario resident employment rate, Anglesey, 2000-2030



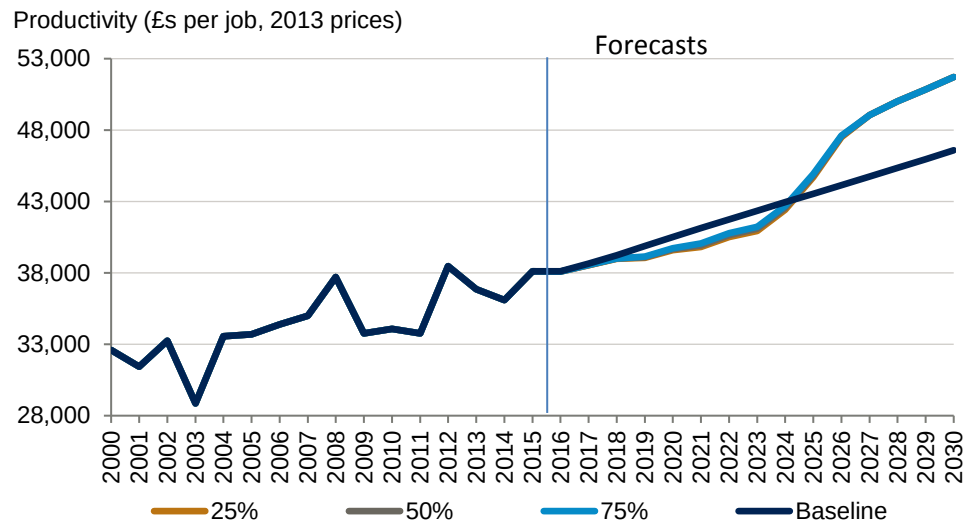
Source: Oxford Economics

Figure D.6: Baseline and scenario net migration, Anglesey, 2000-2030

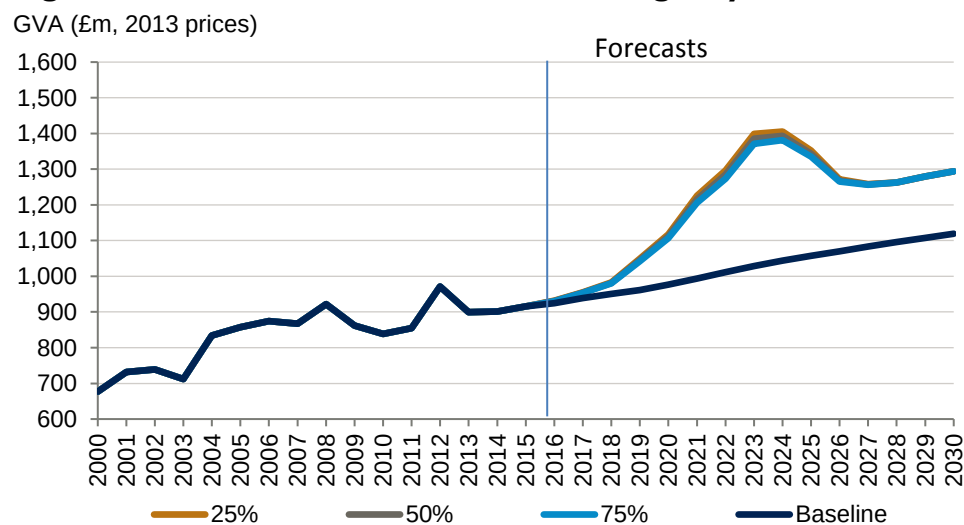
Source: Oxford Economics

Figure D.7: Baseline and scenario working age population in Anglesey, 2000 to 2030

Source: Oxford Economics

Figure D.8: Baseline and scenario productivity, Anglesey, 2000-2030

Source: Oxford Economics

Figure D.9: Baseline and scenario GVA, Anglesey, 2000-2030

Source: Oxford Economics



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