



Sectoral Skills Assessment
Agriculture, Forestry & Fishing
February 2022

Agriculture, Forestry & Fishing

The sector encompasses: Crop and animal production, hunting and related service activities, forestry, logging, fishing and aquaculture.

The Sectoral Skills Assessments (SSAs) look at current and future skills demand in the key sectors across Scotland. From 2022/23, the SSAs will be published by SDS on an annual basis, and will continue to review new data, evidence and insight.

This SSA for **Agriculture, Forestry & Fishing** will examine:



The SSAs are part of a suite of labour market insight publications by SDS. Please also see:

Regional Skills Assessments

- The Regional Skills Assessments (RSAs) provide a coherent evidence base to inform future investment in skills.
- Covering all Regional Outcome Agreement areas and all City and Growth Deal Regions, the RSAs offer a detailed picture of the effect the COVID-19 pandemic is having on local labour markets across the country.
- The July 2021 release of the RSAs can be accessed [here](#) alongside the accompanying Data Matrix. The next update is planned for March 2022.

COVID-19 Labour Market Insights

- The COVID-19 Labour Market Insights provides succinct and up-to-date evidence on the impact of the pandemic on Scotland's economy, businesses and people.
- It includes sectoral and regional insight and summarises the key challenges alongside the ongoing response from SDS.
- The January 2022 release can be accessed [here](#) alongside previously published reports.

For any further information or queries on the SSAs or any of our other products, please contact: RSA@sds.co.uk



The Context for Scotland's Labour Market



COVID-19 has hit Scotland's economy hard, exacerbating a number of pre-existing issues and challenges. In addition to the drivers listed here, the emergence of complex challenges such as labour shortages, supply chain disruption and inflationary pressures will impact Scotland's future course.¹ The development of fit-for-purpose skills has an important role in supporting continued economic recovery and inclusive growth. An effective skills system helps support and attract inward investment, increase productivity and tackle inequality and deprivation.²

The Economy & Productivity



At the time of writing, the Scottish economy is forecast to recover to pre-pandemic levels by Quarter 2 2022.³ However, the emergence of the Omicron variant presents a downside risk to the economy.¹

Measuring productivity during the pandemic has been challenging, but at a high level, variance in productivity performance is expected across sectors, and in turn regions.⁴

Increasing productivity in a competitive global environment is an ongoing challenge for the sector.

Demographic Change



As with many economies in the developed world, Scotland's population is ageing. By 2045, the number of people of pensionable age in Scotland is expected to increase by 20.6% (205,800 people), whilst the working-age population is projected to decline by 2.4% (84,400 people). This suggests the possibility for a tighter labour market in future and an increasing dependency ratio.⁵

An ageing workforce is a characteristic of the Agriculture, Forestry & Fishing sector.

Equality & Inclusive Growth



The Scottish Government's focus on Fair Work remains, supporting 'growth that combines increases in prosperity with greater equity, creates opportunities for all and distributes the dividends of increased prosperity fairly'.⁶

COVID-19 has had an uneven impact on some groups in society including young people, older workers, women, disabled people, ethnic minority groups, low paid and low income households.⁷

Automation



Advances in technological developments continue unabated and these are changing the world of work. In Scotland around 46% of jobs have high potential for automation, some 1.2m jobs.⁸ Many jobs are expected to evolve rather than disappear, for example skilled machine operatives rather than manual labour.

There will also be the creation of new high-quality jobs and opportunities for more flexible working, which has been expedited by the pandemic. Increased automation has been a feature of the sector over decades, although demand remains for elementary occupations.

Climate Change



The Scottish Government has set 2045 as the target for achieving a net zero carbon economy. The 2021 Energy Position Statement⁹ ahead of COP26 cemented Scottish Government priorities. The labour market will be affected by changes to climate change legislation and consumer behaviours as the economy moves towards greater sustainability.¹⁰ 'Green jobs' are at the forefront of the government's plans for recovery.

Demand for green jobs (and green skills) is expected to increase rapidly as a result of policy and legislative drivers and consumer choice. This will include those in land-based sectors.

Brexit

Prior to the pandemic, Brexit was a key source of uncertainty, and this created downwards pressure across productivity, business investment, retail sales and trade. The number of EU workers in Scotland declined due to reduced in-migration and/or increased return migration. Ongoing Brexit concerns, and new COVID-19 considerations, create heightened uncertainty regarding the supply of migrant labour from the EU and further afield.¹¹ The Agriculture, Forestry & Fishing sector has a large contract-based and mobile labour force and there have been challenges replacing migrant labour in certain sub-sectors and locations in particular.



Gross Value Added (GVA)²

The COVID-19 pandemic led to a noticeable fall in activity in **Agriculture, Forestry & Fishing**, with the sector experiencing a similar contraction to the Scottish economy as a whole.

Agriculture, Forestry & Fishing is forecast to make a gradual and prolonged recovery over the next ten years, with GVA activity not expected to return to pre-pandemic levels in the near future.



Total **Agriculture, Forestry & Fishing** GVA in 2021:
£2,053m
down 9% from 2011

Agriculture, Forestry & Fishing forecast GVA in 2031:
£2,234m
up 9% from 2021

Total **Scotland** GVA in 2021:
£146,920m
up 12% from 2011

Scotland forecast GVA in 2031:
£175,430m
up 19% from 2021

Productivity (GVA per job)

COVID-19 has impacted on productivity, and has created challenges in how it is accurately measured.³ Due to data availability at sector level, a jobs-based measure is presented below. If data supported an hours worked based measure, the data presented below would likely differ due to the impact of interventions like the Coronavirus Job Retention Scheme (CJRS). Under this scheme furloughed individuals are categorised as being employed but working no hours. The CJRS ended on 30 September 2021.



Agriculture, Forestry & Fishing productivity in 2021:
£34,600

Agriculture, Forestry & Fishing forecast productivity in 2031:
£38,300

Productivity across **all sectors** in 2021:
£53,000

Productivity across **all sectors** in 2031:
£60,300

Fair Work⁴

Fair Work is work that offers all individuals an effective voice, opportunity, security, fulfilment and respect. The impact of COVID-19 has challenged Scotland's progress in working towards Fair Work. However, at a time when many employers are redesigning their business models, the opportunity to build in Fair Work has never been greater.

One element of Fair Work relates to pay, and an associated measure is the number of employed individuals earning the Living Wage or more:

Agriculture, Forestry & Fishing

2020: **76.3%**

2021: **No data**

All sectors

2020: **84.9%**

2021: **85.6%**



Gender Pay Gap⁴

The impact of COVID-19 may put further pressure on the gender pay gap as periods of part-time employment or unemployment have long-term effects on pay and progression.

Gender Pay Gap for median full-time hourly earnings:^{5,6}

Agriculture, Forestry & Fishing

2020: **No data**

2021: **16.0%**

Scotland

2020: **3.0%**

2021: **3.6%**



1. Forecasts by Oxford Economics (unless otherwise stated). See Page 11 for full list of source references.

2. GVA is the measure of the value of goods and services produced within the economy. GVA in constant 2019 prices.

3. See Technical Note on our website for more information.

4. Due to data availability, a 'best fit SIC code approach' has been used, so the sectoral definitions and totals in this section may vary from those we have used elsewhere.

5. Estimates for employees aged 16+ on the PAYE system on adult rates whose pay for the survey period was not affected by absence. Estimates for 2020 and 2021 include employees who have been furloughed under the

Coronavirus Job Retention Scheme.

6. A 4% gender pay gap denotes that women earn 4% less, on average than men. Conversely, a -4% gender pay gap denotes that women earn 4% more, on average, than men.

Current Demand¹

Agriculture, Forestry & Fishing Employment



Workforce size 2021:
39,300 people



The workforce was expected to shrink between 2020 and 2021:
down by 4.0% or 1,600 people



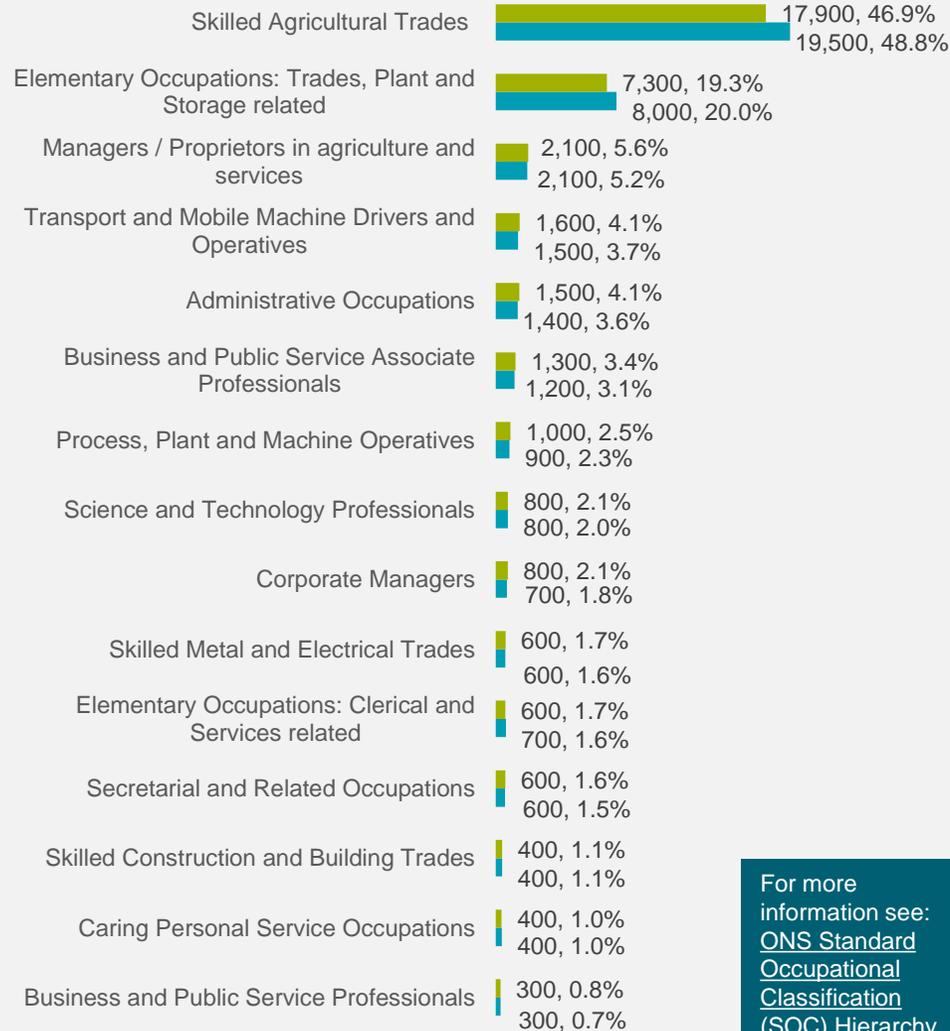
Compared to a Scotland wide decrease of **0.3% or 7,500 people**

Workforce Qualifications, 2021

Workforce qualifications data is unavailable for this sector.

Top Employing Occupations (people), 2021

■ 2021 ■ 2020



For more information see: [ONS Standard Occupational Classification \(SOC\) Hierarchy](#)

Top Employing Regions, 2021

Agriculture, Forestry & Fishing employment tends to be more concentrated in Scotland's rural regions such as the Highlands and Islands and the South of Scotland.

Highlands and Islands
10,500 people

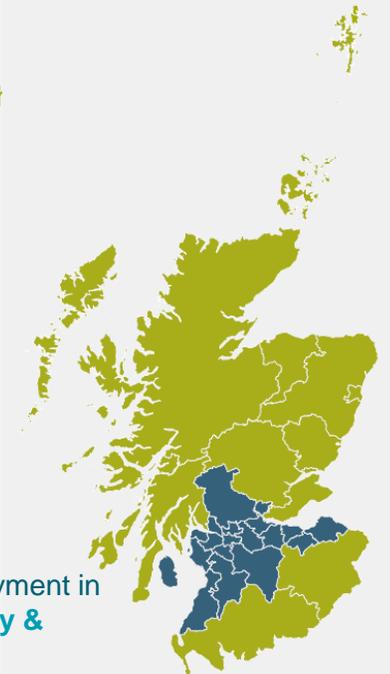
Tayside
8,200 people

South of Scotland
7,700 people

Aberdeen City and St
5,700 people

Fife
2,600 people

Scotland total employment in Agriculture, Forestry & Fishing :
39,300



¹. Forecasts by Oxford Economics (unless otherwise stated). See Page 11 for full list of source references.

Impact of COVID-19

The COVID-19 pandemic has had a major impact on the Scottish economy. Compared to the pre-pandemic level in 2019 as a whole, GDP output in 2020 overall contracted 9.6% in real terms. However, the first estimate of 2021 Quarter 3 (July to September) GDP was 7.1% higher than the same quarter in 2020.¹

All sectors in Scotland have been impacted by COVID-19, with some sectors disproportionately affected. The emergence of new COVID-19 variants has and will likely continue to cause disruption, leading to differences in sectoral recovery.

Furlough

Jobs supported by the furlough scheme (as at 30 September 2021):^{2,3}



Other (contains Agriculture, Forestry and Fishing): 3,240 jobs



Scotland: 80,800 jobs

Skills Gaps

The Employer Skills Survey (ESS) gathers information on skills gaps and needs among employers:^{8,9}



Employers reporting **skills gaps**:
Primary Sector & Utilities*:
2017: 11% 2020: 10%

All sectors:
2017: 16% 2020: 12%



Top 3 **upskilling needs** in **Primary Sector & Utilities** (2020):
Adapting to new equipment: **62%**
Computer literacy/basic IT skills: **45%**
Team working: **43%**

* Based on [ESS Sector Groupings](#)

1, 2, 4, 6, 8. See Page 11 for source references.
3. Sector groupings have been defined by HMRC.
5. Disclosure control has been applied where figures are less

Partnership Action for Continuing Employment

Partnership Action for Continuing Employment (PACE) aims to help minimise the impact for people and businesses facing redundancy.^{4,5}

PACE information provision (individuals):

Sector	2020/21	1 Apr 21- 31 Dec 21
Agriculture, Forestry & Fishing	No data	20
All Sectors	7,995	5,195

PACE information provision (employers):

Sector	2020/21	1 Apr 21- 31 Dec 21
Agriculture, Forestry & Fishing	No data	5
All Sectors	300	170

than five or where such numbers can be identified through differencing. (Data rounded to nearest 5).
7. Disclosure control has been applied where figures are less than five or where such small numbers can be

Modern Apprenticeships^{6,7}

COVID-19 has fundamentally changed the context in which apprenticeship training is delivered, and the statistics must be considered in this context. In addition, fluctuations throughout the year are expected. Due to the lower number of MA starts, comparisons with the same point year, should be treated with caution.

Data is for Quarter 2 (Apr – Sept 2020/21 and 2021/22)



MA starts:
Agriculture, Forestry and Fishing^:
Q2 2020/21: **60** Q2 2021/22: **95**

Scotland:
Q2 2020/21: **3,633** Q2 2021/22: **11,104**

^ Includes the following frameworks: Agriculture, Aquaculture, Aquaculture Management Technical Apprenticeship and Trees and Timber



MA redundancies:
Animal Care, Land & Water Based*:
Q2 2020/21: **0** Q2 2021/22: **0**

Scotland:
Q2 2020/21: **540** Q2 2021/22: **135**

* Based on [SDS Occupational Groupings](#).

identified through differencing.
9. Figures for 2017 and 2020 are weighted percentages based on establishments interviewed as part of the ESS. Skills are either Technical/practical or People/personal.

Job Postings in Agriculture, Forestry & Fishing



Number of job postings from 1st January 2021 to 31st December 2021:

510



Farm Workers
60 job postings
accounting for 12%



Forestry Workers
30 job postings
accounting for 5%



Biological Scientists and Biochemists
20 job postings
accounting for 3%

Salary 2021

Median real-time
advertised salary in
**Agriculture, Forestry
& Fishing:**

£26,000*

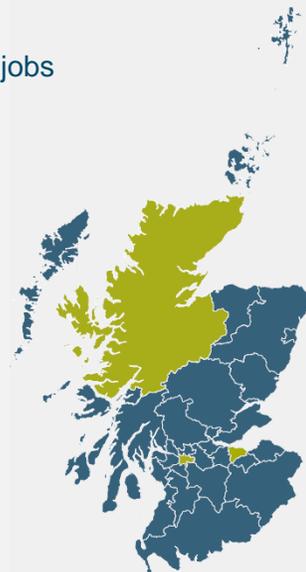


Within **Agriculture, Forestry & Fishing**, the locations with the most jobs advertised were:

City of Edinburgh
110 job postings
accounting for 21%

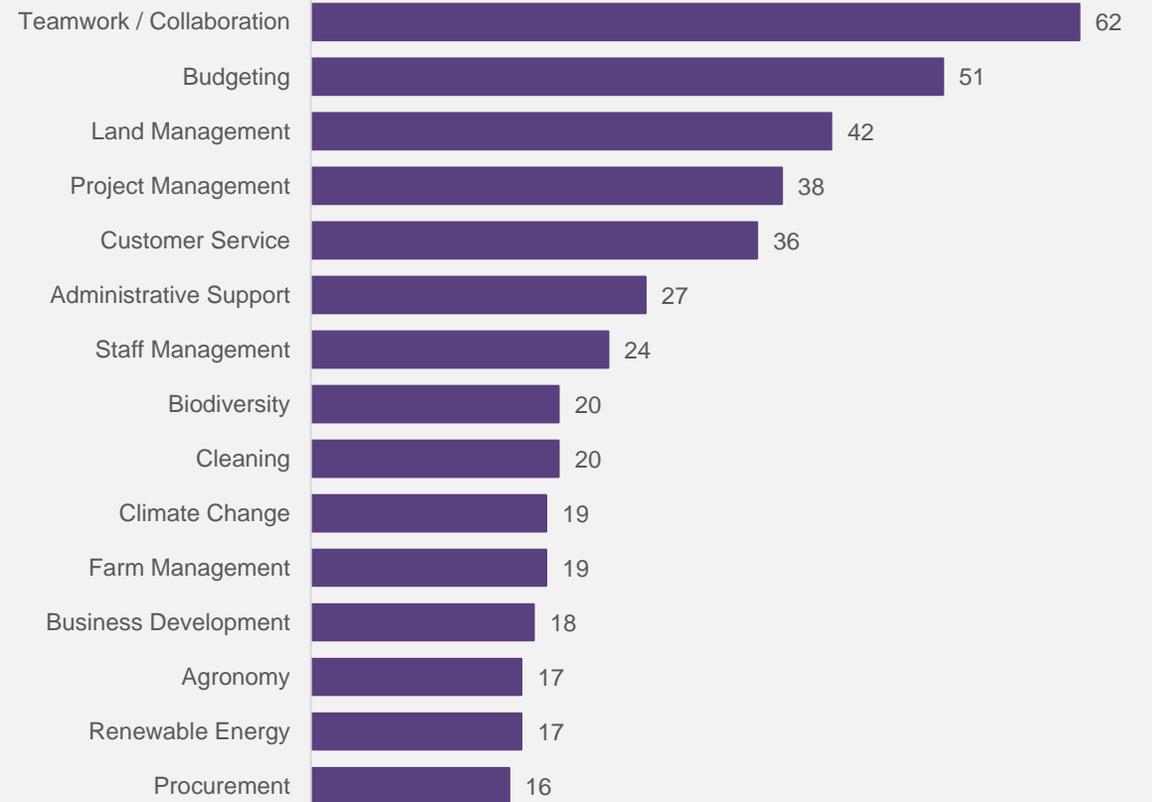
Glasgow City
60 job postings
accounting for 11%

Highland
50 job postings
accounting for 10%



Skills

Not all job postings specify the skills required for the role, likewise the detail varies between adverts. Based on information from approximately **57%** of job postings in **Agriculture, Forestry & Fishing** the most requested specialised skills were:



Online job postings data provides a useful barometer for the health of the jobs market. It is important to note that the data does not capture all activity, so it should be considered as an estimate of activity only.



1. See Page 11 for source references.

2. Job postings data is rounded to the nearest 10.

*Median salary based on 51% of records that contain salary information

Future Demand in the mid-term (2021-2024)¹

In **Agriculture, Forestry & Fishing**, the labour market is forecast to continue to face some challenges. The forecasts for the mid-term (2021-2024) however suggest there could be some jobs growth and opportunities created as a result of the need to replace workers leaving the labour market due to retirement and other reasons.

Whilst positive, caution is needed as there are still a wide range of unknowns concerning Scotland's post COVID-19 recovery, including the threat of new COVID-19 variants. The jobs market could also be competitive, with the number of people seeking jobs outnumbering the opportunities available. Skills mismatches and job quality will also be important factors to consider.

Agriculture, Forestry & Fishing Total Employment, 2021-2024



Workforce size 2024:
39,600 people



The workforce is expected to grow between 2021 and 2024:
up by 0.7% or 300 people



Compared to a Scotland wide increase of
2.8% or 72,500 people

Agriculture, Forestry & Fishing Job Openings, 2021-2024



Agriculture, Forestry & Fishing is forecast to account for **2.7%** of Scotland's total number of job openings in the mid-term (2021-2024)



Top Employing Occupations (people), 2024



Skilled Agricultural Trades
Total Employment:
18,200



Elementary Occupations: Trades, Plant and Storage related
Total Employment:
7,400



Managers/Proprietors in Agriculture and Services
Total Employment:
2,200



Administrative Occupations
Total Employment:
1,600



Transport and Mobile Machine Drivers and Operatives
Total Employment:
1,500

1. All data on this page sourced from Oxford Economics, 2021. Total requirement for people is made up of expansion and replacement demand. Expansion demand is the measure of an increase/decrease in jobs as a result of

economic growth or contraction; replacement demand is the number of job openings generated through labour market churn (i.e. those who retire, move away or change jobs). N.B. figures are rounded to the nearest 100 and as a result totals

may not equal the sum of the constituent parts.

Future Demand in the long-term (2024-2031)¹

The forecasts for the long-term (2024-2031) highlight that jobs growth is not forecast in **Agriculture, Forestry & Fishing**. However, it is expected that there could be an ongoing requirement for skilled people to fill opportunities created by people leaving the labour market. This feature of the labour market is known as the replacement requirement.

The long-term forecast is changeable and could be influenced by a range of factors both related and not to Scotland's post COVID-19 recovery. National and local policy, investment and initiatives could all influence the long-term outlook presented.

Agriculture, Forestry & Fishing Total Employment, 2024-2031



Workforce size 2031:
38,400 people



The workforce is expected to shrink between 2024 and 2031:
down by 3.1% or 1,200 people



Compared to a Scotland wide increase of
1.0% or 25,900 people

Agriculture, Forestry & Fishing Job Openings, 2024-2031



Agriculture, Forestry & Fishing is forecast to account for **2.9%** of Scotland's total number of job openings in the long-term (2024-2031)



Top Employing Occupations (people), 2031



Skilled Agricultural Trades
Total Employment:
17,600



Elementary Occupations: Trades, Plant and Storage related
Total Employment:
6,900



Managers/Proprietors in Agriculture and Services
Total Employment:
2,200



Administrative Occupations
Total Employment:
1,600



Transport and Mobile Machine Drivers and Operatives
Total Employment:
1,500

1. All data on this page sourced from Oxford Economics, 2021. Total requirement for people is made up of expansion and replacement demand. Expansion demand is the measure of an increase/decrease in jobs as a result of

economic growth or contraction; replacement demand is the number of job openings generated through labour market churn (i.e. those who retire, move away or change jobs). N.B. figures are rounded to the nearest 100 and as a result totals

may not equal the sum of the constituent parts.



The impact of Brexit has led to labour shortages in key areas, particularly seasonal workers, as the availability of EU workers has declined. There is the potential opportunity to attract indigenous workers into these roles.



The challenges around climate emergency and net zero targets will require the development of new skillsets, targeted upskilling/reskilling and Continuing Professional Development (CPD). Opportunities to develop a Toolkit to support small businesses will assist in accessing knowledge and skills support.



Pre-Apprenticeship models and National Progression Awards continue to raise awareness of the sector amongst young people, and build a pipeline of new recruits. Recent developments include flexible delivery to address seasonality. Strong partnerships at a local and national level have helped drive innovation and business engagement.



The Skills for Farming Group is playing a key role in articulating pathways into the sector, and ensuring provision is meeting the needs of business. The Group is also developing a plan to support recommendations from the National Farmers Union of Scotland (NFUS) on how to engage with members and stimulate demand for skills and learning interventions.

References

Page 3	<ol style="list-style-type: none">1. Scottish Government (2021). Monthly Economic Brief: December 2021. Available online at: https://www.gov.scot/publications/monthly-economic-brief-december-2021/2. Scottish Government (2020). Towards a robust, resilient wellbeing economy for Scotland. Available online at: https://www.gov.scot/publications/towards-robust-resilient-wellbeing-economy-scotland-report-advisory-group-economic-recovery/3. Scottish Fiscal Commission (2021). Scotland's Economic and Fiscal Forecasts – December 2021. Available online at: https://www.fiscalcommission.scot/publications/scotlands-economic-and-fiscal-forecasts-december-2021/4. Office for National Statistics (2020). Coronavirus and the effects on UK productivity measures. Available online at: https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/articles/coronavirusandtheeffectsonukproductivitymeasures/2020-05-195. National Records for Scotland (2022). Projected population of Scotland (2020-based): National population projections by sex and age, with UK comparisons. Available online at: https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections/population-projections-scotland/2020-based6. Scottish Government (2015). Scotland's Economic Strategy. Available online at: https://www.gov.scot/publications/scotlands-economic-strategy/7. Skills Development Scotland (June 2021). Scotland's Labour Market and Skills Update (collated from various sources).8. IPPR (2018). Preparing for Automation and Ageing. Available online at: https://www.ippr.org/research/publications/preparing-for-automation-and-ageing9. Scottish Government (2021). Energy strategy: position statement. Available online at: https://www.gov.scot/publications/scotlands-energy-strategy-position-statement/10. International Labour Office (2019). Skills for a Greener Future: a global view. Available online at: https://www.ilo.org/skills/pubs/WCMS_732214/lang--en/index.htm11. Skills Development Scotland (June 2021). Scotland's Labour Market and Skills Update (collated from various sources).
Page 4	<ol style="list-style-type: none">1. SDS (2021). Oxford Economics forecasts (October 2021).5. Scottish Government (2021). Annual Survey of Hours and Earnings: 2021. Available online at: https://www.gov.scot/publications/annual-survey-of-hours-and-earnings-2021/6. Scottish Government (2020). Coronavirus (COVID-19): impact on equality (research). Available online at: https://www.gov.scot/publications/the-impacts-of-covid-19-on-equality-in-scotland/
Page 5	<ol style="list-style-type: none">1. SDS (2021). Oxford Economics Forecasts (October 2021).
Page 6	<ol style="list-style-type: none">1. Scottish Government (2021). First estimate of GDP: 2021 Q3. Available online at: https://www.gov.scot/publications/first-estimate-of-gdp-2021-q3/2. HMRC (2021). Coronavirus Job Retention Scheme statistics. 16 December 2021. Available online at: https://www.gov.uk/government/collections/hmrc-coronavirus-covid-19-statistics4. SDS (2022). Internal source. PACE data relating to unique individuals and employers.6. SDS (2021). Modern Apprenticeship Statistics, Quarter 2, 2021-22. Available online at: https://www.skillsdevelopmentscotland.co.uk/publications-statistics/statistics/modern-apprenticeships/?page=1&statisticCategoryId=4&order=date-desc8. Scottish Government (2021). Scottish Employer Skills Survey 2020. Available online at: https://www.gov.scot/publications/scottish-employer-skills-survey-2020-2/documents/
Page 7	<ol style="list-style-type: none">1. Burning Glass Technologies (2022).
Page 8	<ol style="list-style-type: none">1. SDS (2021). Oxford Economics Forecasts (October 2021).
Page 9	<ol style="list-style-type: none">1. SDS (2021). Oxford Economics Forecasts (October 2021).
Page 10	<ol style="list-style-type: none">1. Insight provided by Sector Managers who work closely with industry experts and employers.