

Priority Sector Evidence

Engineering & Advanced Manufacturing (Automation/AI/Machine Learning)

Now – Strengths and Weaknesses

- **39,000 Staffordshire jobs** equivalent to 11% of all employment well above 7% seen nationally¹
- 90% full-time and 10% part-time¹
- High demand for science engineering and production technicians; production managers and directors; mechanical engineers; welders; electricians²
- **Average salary £31,700**² – well above the average pay in Staffordshire of £28,100³
- **Male dominated sector** – 3 in 4 workers are males²
- **Ageing workforce** – 1 in 5 workers over 55 years of age²
- **Worth £2.8bn in GVA** equivalent to 16% of total economy (largest of all sectors)⁴
- Overall lower adult skill levels (NVQ level 3 & 4) to fill advanced roles⁵
- **Businesses struggle to recruit people with the right STEM skills and experience**⁶
- **Lack of employer investment in training** with 3 in 5 businesses not having training plans/budgets or workforce strategies⁶
- **Decline in apprenticeships**⁷
- **Institute of Technology** is developing high tech provision and increasing skills levels

Future – Opportunities and Challenges

- Growth sector generating **high value, high skilled and better paid jobs**
- **New technologies** driving growth in advanced manufacturing including automation, AI & Machine Learning - need to retrain and upskill lower skilled workers displaced by new technologies
- **Green economy** - potential to be a centre of energy innovation e.g. A50/A500 Hydrogen Corridor and low carbon adoption/renewable energy/electric cars e.g., JCB/JLR
- **Productivity gains** to help close the gap to national average
- Supporting **traditional manufacturing base** to adopt new technologies and efficient production methods to help drive productivity and sustainability
- **Require high skilled flexible workforce** to be able to adapt to new technologies quickly
- Male dominated sector with further **female engagement required**
- Potential for **apprenticeship growth**

Source: UK Business Counts 2022 - 2,170 Staffordshire businesses

¹ Source: Business Register and Employment Survey (BRES) 2021 – only wholesale & retail (65,000) and health & social care (48,000) have more jobs

² Source: Lightcast 2021

³ Source: Annual Survey of Hours and Earnings (ASHE) 2021

⁴ Source: Regional gross value added (balanced) by industry 2020

⁵ Source: Annual Population Survey Adult Skills Levels 2021

⁶ Source: SSLEP SAP Skills for Growth Survey 2022

⁷ Source: DfE apprenticeships and traineeships data 2021/22

Staffordshire Employment and Skills Strategy 2023-2030

Top Engineering and Advanced Manufacturing Occupations in Demand – job postings in Staffordshire 2022

Top Posted Occupations

Occupation (SOC)	Total/Unique (Jan 2022 - Dec 2022)	Posting Intensity	Median Postin Duratio
 Science, Engineering and Production Technicians n.e.c.	3,027 / 1,255	2 : 1 	32 day
 Engineering Technicians	3,238 / 1,170	3 : 1 	32 day
 Production Managers and Directors in Manufacturing	1,205 / 589	2 : 1 	33 day
 Engineering Professionals n.e.c.	1,216 / 564	2 : 1 	33 day
 Mechanical Engineers	1,066 / 480	2 : 1 	33 day
 Welding Trades	1,080 / 434	2 : 1 	32 day
 Electricians and Electrical Fitters	960 / 406	2 : 1 	34 day
 Electrical Engineers	922 / 392	2 : 1 	34 day
 Electrical and Electronic Trades n.e.c.	841 / 381	2 : 1 	33 day
 Quality Assurance Technicians	570 / 298	2 : 1 	32 day
 Quality Control and Planning Engineers	573 / 279	2 : 1 	31 day
 Quality Assurance and Regulatory Professionals	563 / 278	2 : 1 	32 day
 Civil Engineers	570 / 262	2 : 1 	35 day
 Metal Machining Setters and Setter-operators	732 / 260	3 : 1 	34 day
 Planning, Process and Production Technicians	549 / 252	2 : 1 	34 day
 Production and Process Engineers	521 / 249	2 : 1 	32 day
 Metal Working Production and Maintenance Fitters	564 / 240	2 : 1 	32 day
 Design and Development Engineers	395 / 223	2 : 1 	29 day
 Electronics Engineers	179 / 81	2 : 1 	28 day
 Skilled Metal, Electrical and Electronic Trades Supervisors	162 / 80	2 : 1 	37 day

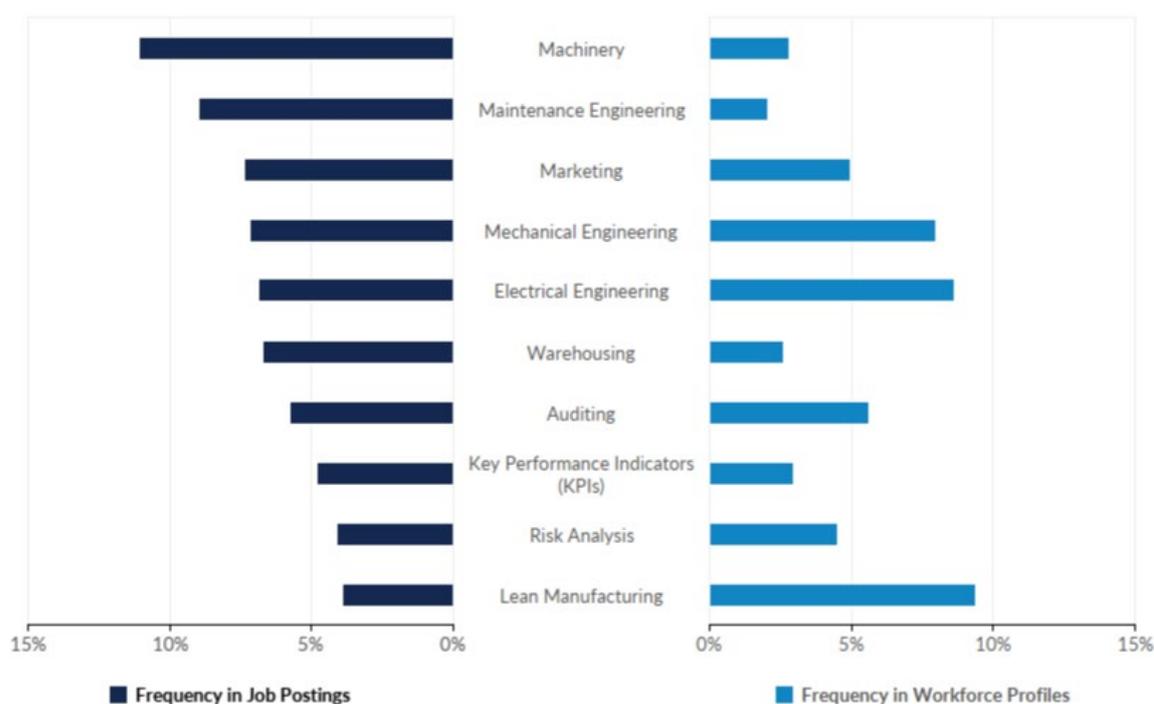
To find out more about what these occupations and more entail visit the Department for Education (DfE) funded LMI For All website - https://www.lmiforall.org.uk/explore_lmi/

Top Engineering and Advanced Manufacturing Technical Skills in Demand – job postings in Staffordshire 2022

The following provides insight into the supply and demand of relevant skills by comparing the frequency of skills present in job postings against skills present in today's workforce. Along with Lightcast's job posting analytics, this comparison leverages Lightcast's dataset of more than 100M online resumés and profiles. All resumés and profiles used in these comparisons have been updated within the last three years.

*The skills associated with workforce profiles represent workers of all education and experience levels.

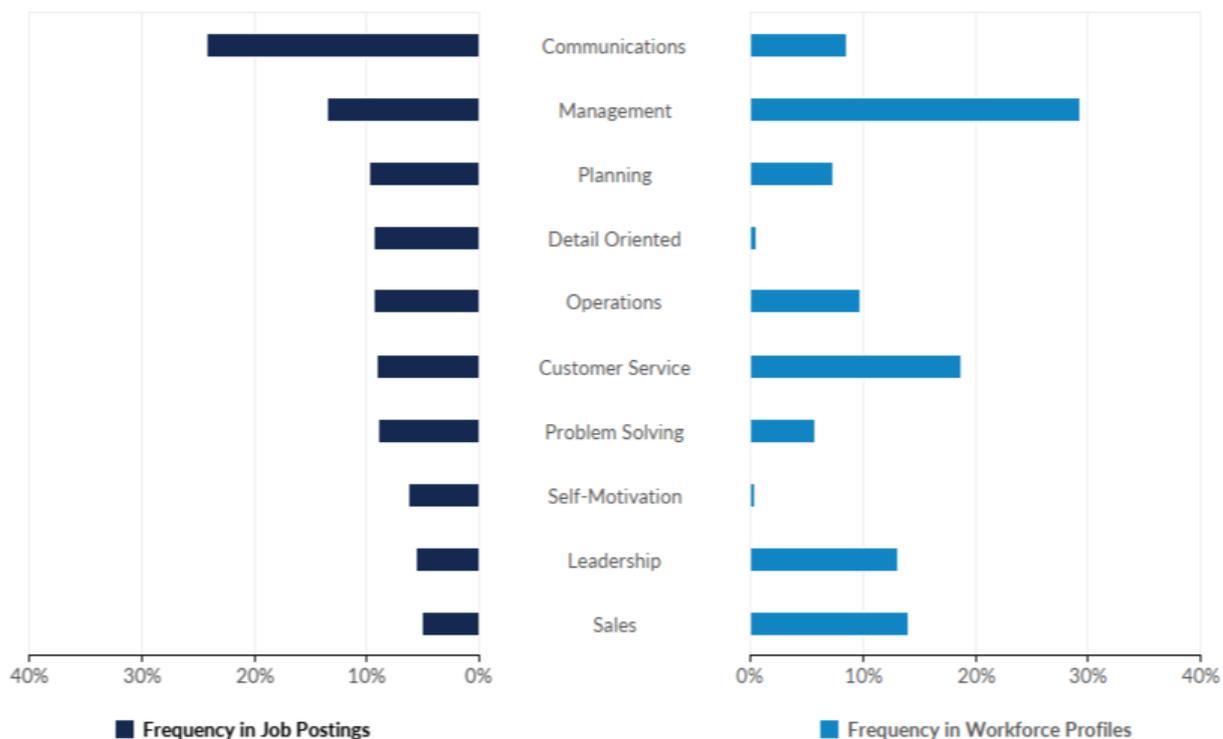
Top Specialized Skills



Skill	Frequency in Postings	Postings with Skill / Total Postings (Jan 2022 - Dec 2022)	Frequency in Profiles	Profiles with Skill / Total Profiles (2021 - 2023)
Machinery	11%	942 / 8,514	3%	119 / 4,218
Maintenance Engineering	9%	765 / 8,514	2%	87 / 4,218
Marketing	7%	628 / 8,514	5%	210 / 4,218
Mechanical Engineering	7%	612 / 8,514	8%	336 / 4,218
Electrical Engineering	7%	585 / 8,514	9%	363 / 4,218
Warehousing	7%	573 / 8,514	3%	111 / 4,218
Auditing	6%	493 / 8,514	6%	237 / 4,218
Key Performance Indicators (KPIs)	5%	408 / 8,514	3%	125 / 4,218
Risk Analysis	4%	350 / 8,514	5%	191 / 4,218
Lean Manufacturing	4%	335 / 8,514	9%	395 / 4,218

Staffordshire Employment and Skills Strategy 2023-2030

Top Engineering and Advanced Manufacturing Transferable Skills in Demand – job postings in Staffordshire 2022



Skill	Frequency in Postings	Postings with Skill / Total Postings (Jan 2022 - Dec 2022)	Frequency in Profiles	Profiles with Skill / Total Profiles (2021 - 2023)
Communications	24%	2,058 / 8,514	9%	359 / 4,218
Management	14%	1,151 / 8,514	29%	1,234 / 4,218
Planning	10%	833 / 8,514	7%	313 / 4,218
Detail Oriented	9%	801 / 8,514	0%	20 / 4,218
Operations	9%	793 / 8,514	10%	414 / 4,218
Customer Service	9%	777 / 8,514	19%	788 / 4,218
Problem Solving	9%	768 / 8,514	6%	244 / 4,218
Self-Motivation	6%	530 / 8,514	0%	19 / 4,218
Leadership	6%	483 / 8,514	13%	555 / 4,218
Sales	5%	437 / 8,514	14%	592 / 4,218