



Funded by
UK Government



Advanced Manufacturing & Engineering

Dorset Local Skills Improvement Plan

LMI Sector Insights | December 2023



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www.dorsetchamber.co.uk/lsip

Data notes

- This sector dashboard uses a combination of data published via the Office of National Statistics (ONS) and also utilises vacancy data via [Lightcast](#)
- Lightcast is a global leader in labour market analytics. This dashboard primarily uses Lightcast job posting analytics and focuses on the Dorset LSIP area and trends over time
- It is important to note that the analysis here only reflects jobs that are posted online. It effectively ‘scrapes’ a range of job websites, alongside candidate profiles
- Lightcast uses sophisticated software to try remove duplicates i.e. jobs posted repeatedly, but recognises that this may remain an issue for some postings
- Because it captures online job postings only, it cannot capture informal job vacancies and recruitment. It is important to recognise that in some sectors such as construction recruitment tends to be more ‘informal’ and will not be reflected in the data here. This may also be more prevalent in small and micro businesses
- It is also important to note that the analysis attempts to differentiate between sectors and ‘occupational pathways’. That is, some of the requirements for certain skills do not necessarily occur in tightly defined sectors. For example, digital skills are important across a whole range of sectors, whilst many people working in construction do not necessarily work in the construction sector per. This utilises the [Lightcast Occupation Taxonomy](#) – see later slide around definition
- Given there will be some short-term volatility in job posting data, the analysis here covers the period Jan 2022 to Sept 2023. This will serve to ‘smooth’ some of the data and for the use Dorset LSIP analysis – longer-term trends are important
- Christchurch is defined within Lightcast as being in the Dorset Council area – this classification does not reflect the post-April 2019 Local Government restructure

Definitions (1)

Standard Industrial Classification (SIC) based approach – slides 4 and 5

26 : Manufacture of computer, electronic and optical products
27 : Manufacture of electrical equipment
28 : Manufacture of machinery and equipment n.e.c.
2540 : Manufacture of weapons and ammunition
3030 : Manufacture of air and spacecraft and related machinery
3250 : Manufacture of medical and dental instruments and supplies
3313 : Repair of electronic and optical equipment
3314 : Repair of electrical equipment
3316 : Repair and maintenance of aircraft and spacecraft
7112 : Engineering activities and related technical consultancy

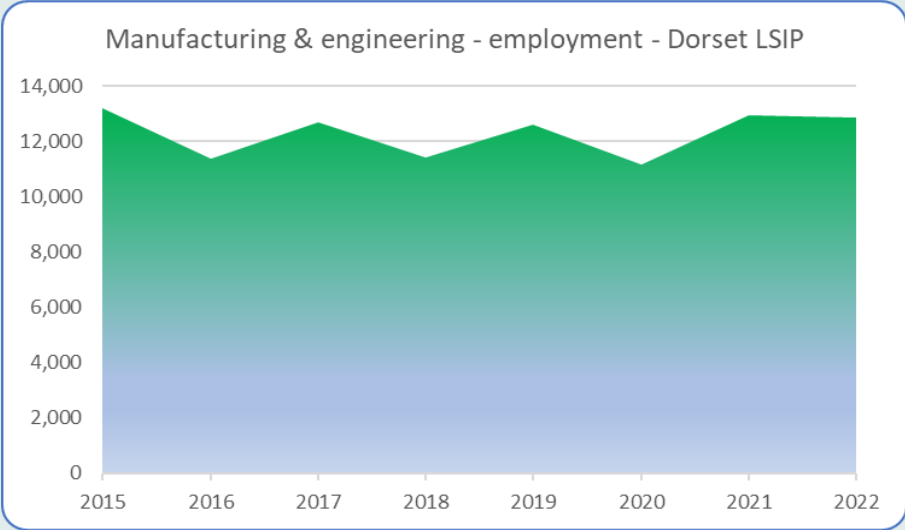
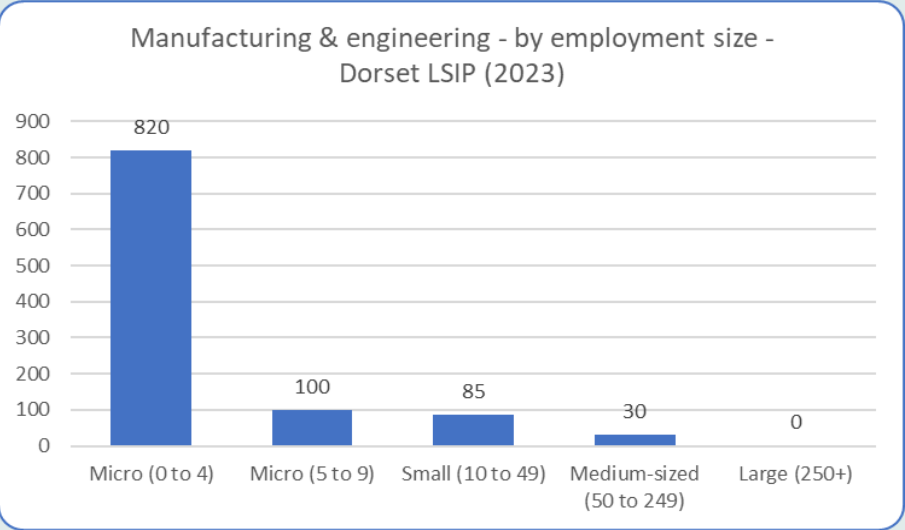
Working Futures analysis – slide 6

2 digit SIC codes 10-33

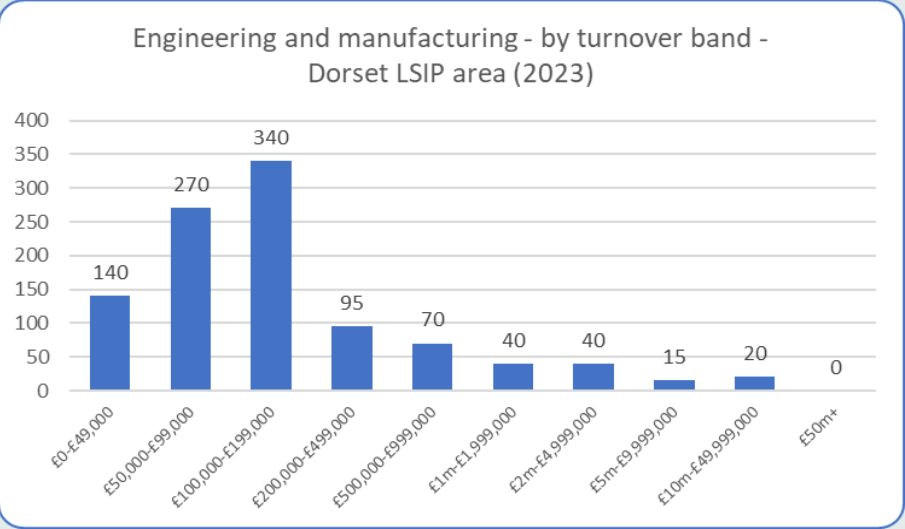
Lightcast occupational taxonomy – slides 10 to 14

Metal Working Production and Maintenance Fitters
Food, Drink and Tobacco Process Operatives
Vehicle Technicians, Mechanics and Electricians
IT Business Analysts, Architects and Systems Designers
Carpenters and Joiners
Construction and Building Trades n.e.c.
Engineering Professionals n.e.c.
Packers, Bottlers, Canners and Fillers
Engineering Technicians
Construction Operatives n.e.c.
Mechanical Engineers
Laboratory Technicians
Telecoms and Related Network Installers and Repairers
Civil Engineers
Metal Machining Setters and Setter-operators
Metal Working Machine Operatives
Electrical Engineers
Aerospace Engineers
Science, Engineering and Production Technicians n.e.c.
Glaziers, Window Fabricators and Fitters
Production and Process Engineers
Biochemists and Biomedical Scientists
Assemblers (Electrical and Electronic Products)
Welding Trades
Computer System and Equipment Installers and Servicers
Assemblers and Routine Operatives n.e.c.
Quality Assurance Technicians
Chemical and Related Process Operatives
Bricklayers
Electrical Service and Maintenance Mechanics and Repairers
Electronics Engineers
Skilled Metal, Electrical and Electronic Trades Supervisors
Engineering Project Managers and Project Engineers
Production, Factory and Assembly Supervisors
Electrical and Electronics Technicians
Pharmaceutical Technicians
Electrical and Electronic Trades n.e.c.
Furniture Makers and Other Craft Woodworkers

Engineering & manufacturing – overview (1)



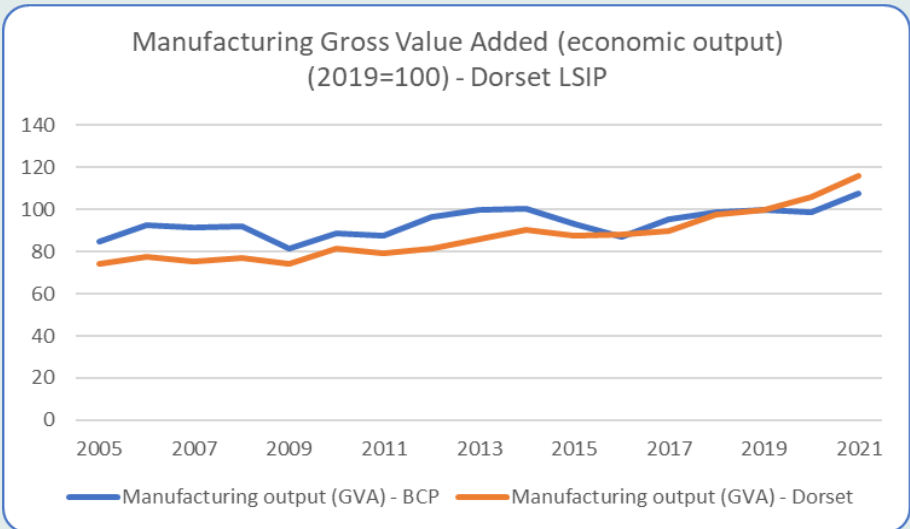
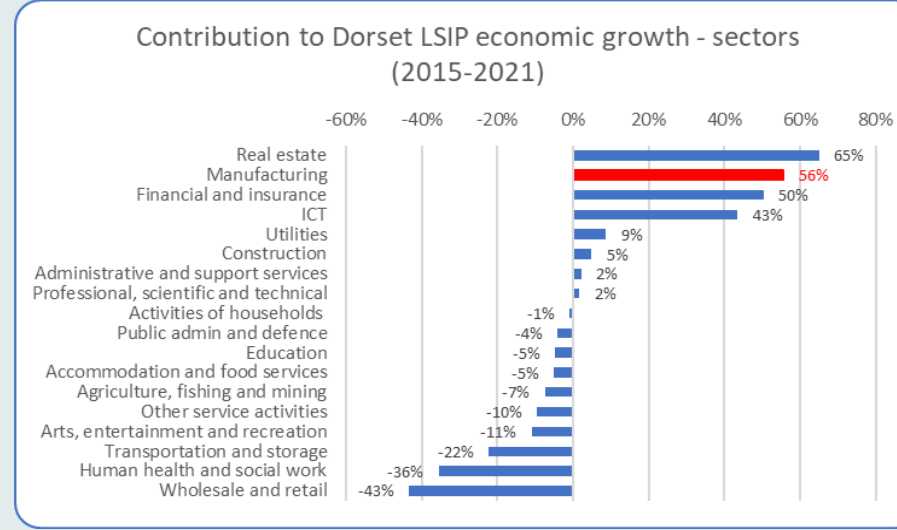
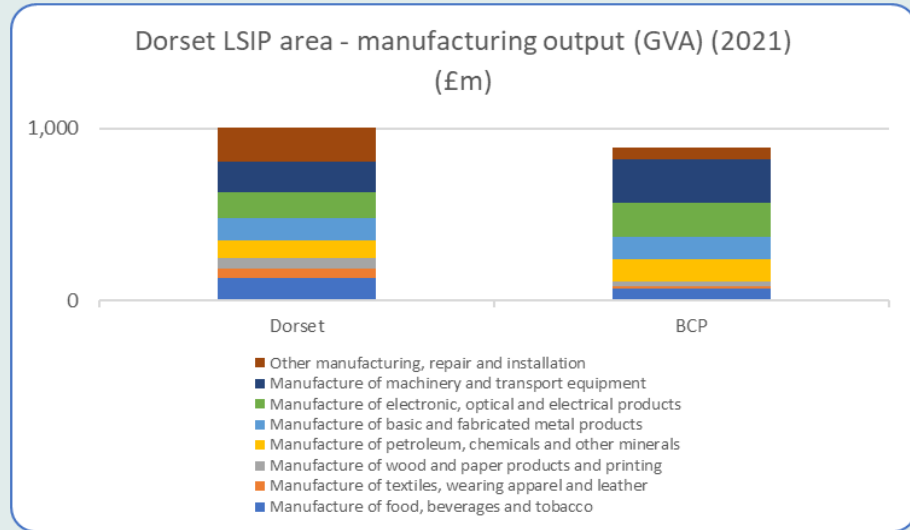
It is important to note that this data is based on a definition of 'advanced manufacturing and engineering'. It does not include all manufacturing activity.



Employment within engineering and manufacturing activities across the Dorset LSIP area have remained broadly constant over the past few years. It has several businesses that have significant turnover (noting this data relates to enterprises, there are also other 'local units' which represent the local presence of engineering/manufacturing businesses which may be headquartered elsewhere). However, the majority of businesses involved in manufacturing and engineering (as defined) across the Dorset LSIP area tend to be small – employing fewer than 10 people and generating an annual turnover of <£200,000.

Source: ONS (Business Register and Employment Survey and UK Business Counts)

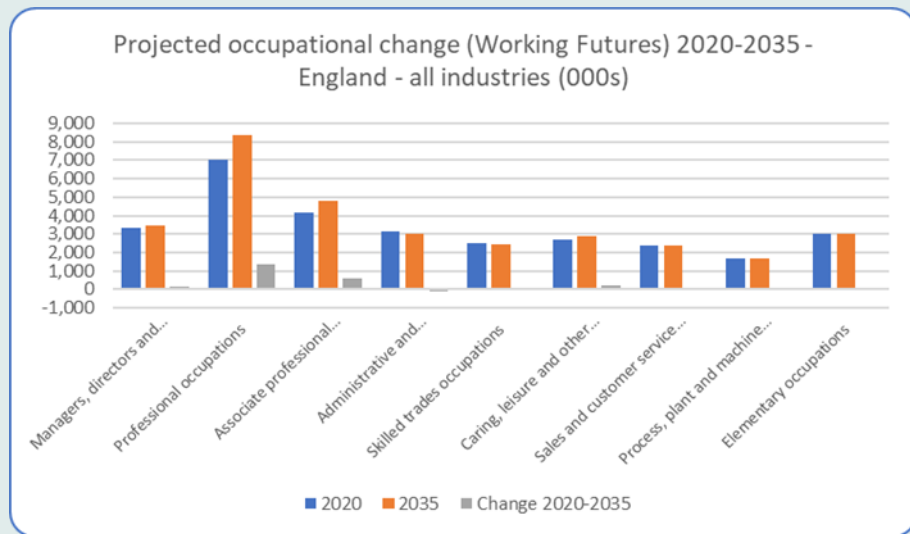
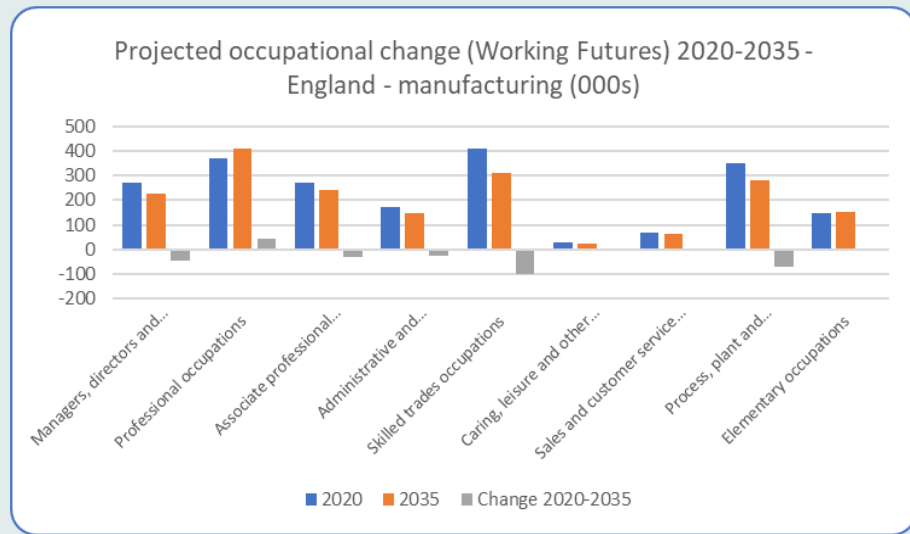
Engineering & manufacturing – overview (2)



The (broad) manufacturing sector is slightly larger in Dorset County than in BCP, although – as measured by output – there is a reasonably even distribution across the two local authority areas (top left chart). The sector has experienced steady growth over the past 10-15 years, with indications that it has grown slightly more strongly across Dorset (bottom left chart).

It has been an important contributor to overall economic growth across the Dorset LSIP area. The data (above right chart) indicates that it played a particularly important role during Covid, when other sectors obviously shutdown and experienced negative growth. Several local manufacturing businesses experienced strong growth as consumer demand shifted during that time.

Engineering & manufacturing – future projections



Source: Working Futures 2020-2035

The latest Labour Market and Skills projections produced through the Working Futures programme - covering the period 2020-2035 and the first produced in a post-Covid environment – projects that overall employment in engineering and manufacturing (defined in quite broad terms) will fall over the 10-15 years. The data presented here is at a national (England) level.

The projections expect employment to fall in most of the broad occupational classifications, apart from professional occupations. Some of the largest (absolute and proportional) falls are expected in skilled trade occupations and process, plant and machine operatives. This is expected to reflect the impact of ongoing technological change and how it will shape the future engineering and manufacturing workforce.

The projections are intended to provide a statistical foundation for reflection and debate among all those with an interest in the demand for and supply of skills. They are produced because historical evidence shows that changing patterns of employment by sector and occupation tend to largely dominated by longer-term trends rather than the cyclical position of the economy or short-term impacts. However, it is obvious that these projections are subject to high degrees of uncertainty and therefore we would urge careful interpretation of these projections. They are intended as a starting point for further analysis rather than a projection of what is most likely to happen. They represent one possible future.

Manufacturing and engineering – key research findings

- Overriding evidence is that manufacturers and engineering businesses continue to face difficulties in accessing the skilled workforce to drive innovation and growth
- Manufacturers now need a workforce with the ability to adapt rapidly and take on new tasks and responsibilities that require different and often higher skillsets
- Manufacturing and engineering businesses remain one of the sectors that faces skills shortages – and this has been accentuated by post-pandemic workforce expectations around desire to work remotely, focusing on jobs which offer a more sustainable work-life balance etc.
- Current workforce is aging, new recruits with right skills are in short supply and overseas workers now not able to fill gap
- Rapid pace of technological change demands more modular and flexible training courses. Because much of the future demand will fall on incumbent workforce, the creation of higher technical qualifications comprised of discrete, credit-bearing modules could be suitable model for upskilling
- In comparison with international competitors, the UK has limited capability and capacity to deliver higher technical skills

Manufacturing and engineering – key research findings

- Major themes that will/are influencing the approach to skills in manufacturing and engineering businesses include:
 - greater emphasis on future planning – events such as the pandemic has forced many businesses to rethink their efforts to build their workforce, reassessing previous approaches to training, development of talent pipeline and retention
 - educating and reaching out to school age – many businesses recognise the need to reach out to young people early and educate them about manufacturing
 - the importance of upskilling – the emphasis on current workforce remains a priority for many manufacturers
 - importance of company values and culture – becoming increasingly important recruitment tools, particularly for younger workers
- Sector still tends to be male-dominated, with 1-in-5 of the workforce female
- Digital and green skills still need to be fully embrace, with skills gaps in those areas i.e. moving to Industry 4.0 and producing in a more sustainable way

Advanced Manufacturing and Engineering (SSA2)

Autumn 23 update

Data covering 2022 – 2023 (to date)

Manufacturing and engineering job postings – associated occupations

Associated Occupations

We have associated the following occupations with the chosen course areas.

Occupation	2022 Jobs	Annual Openings	Median Wages	Growth (2022 - 2023)	Employment Concentration (2022)
Metal Working Production and Maintenance Fitters	1,977	71	£15.00/hr	+0.15%	0.97
Food, Drink and Tobacco Process Operatives	1,889	110	£11.22/hr	+3.28%	1.03
Vehicle Technicians, Mechanics and Electricians	1,807	80	£13.36/hr	+0.22%	1.03
IT Business Analysts, Architects and Systems Designers	1,644	69	£29.36/hr	+0.67%	0.89
Carpenters and Joiners	1,613	78	£14.51/hr	+1.61%	1.26
Construction and Building Trades n.e.c.	1,404	56	£15.40/hr	+1.64%	1.28
Engineering Professionals n.e.c.	1,382	76	£20.10/hr	+2.17%	1.04
Packers, Bottlers, Canners and Fillers	1,311	91	£10.27/hr	+2.06%	0.76
Engineering Technicians	1,157	68	£19.85/hr	+2.94%	1.42
Construction Operatives n.e.c.	954	53	£13.12/hr	+2.20%	1.31
Mechanical Engineers	782	38	£19.90/hr	+1.02%	1.28
Laboratory Technicians	692	38	£13.87/hr	+1.88%	0.81
Telecoms and Related Network Installers and Repairers	650	31	£15.41/hr	+2.15%	0.96
Civil Engineers	605	24	£18.23/hr	-0.17%	0.79
Metal Machining Setters and Setter-operators	592	29	£15.34/hr	+1.52%	1.28
Metal Working Machine Operatives	546	24	£12.37/hr	+1.83%	0.85
Electrical Engineers	545	30	£23.73/hr	+2.57%	1.05
Aerospace Engineers	477	33	£21.36/hr	+3.35%	1.14
Science, Engineering and Production Technicians n.e.c.	474	24	£14.85/hr	+1.27%	1.02
Glaziers, Window Fabricators and Fitters	470	26	£11.81/hr	+2.98%	1.16

An alternative method of estimating the scale of manufacturing and engineering jobs across the Dorset LSIP area is to understand what types of jobs/occupations tend to be filled by those individuals who undertook manufacturing and/or engineering training (at SSA 2 level). In effect this represents the ‘occupational pathways’ (as described in the data notes slide). This analysis is available via [Lightcast](#) (utilised for this analysis) which have developed the [Lightcast Occupation Taxonomy](#) which aims to link skills acquisition to occupations. Based on this methodological approach, it is estimated that there were c31,500 jobs in 2022 across the Dorset LSIP area in occupations associated with engineering and manufacturing courses (SSA2) – which engineering and manufacturing technologies. The number of jobs in associated occupations has increased by 1.8% between 2022 and 2023 across the Dorset LSIP area.

One of the explanations of the difference between the two job figures shown in this slide pack (slide 4 versus slide 11) is that manufacturing and engineering occupations can be found in industries outside of those defined as ‘advanced manufacturing and engineering’. The other explanation is that the earlier approach was based on a definition of ‘advanced manufacturing’, rather than manufacturing per se. The two cannot be directly compared.

Engineering and manufacturing job postings - volume

Job Postings Overview



There were 44,727 total job postings for your selection from January 2022 to October 2023, of which 18,917 were unique. These numbers give us a Posting Intensity of 2-to-1, meaning that for every 2 postings there is 1 unique job posting.

This is close to the Posting Intensity for all other occupations and companies in the region (3-to-1), indicating that they are putting average effort toward hiring for this position.

There c19,000 job postings across 2022 and 2023 (to date) relating to the occupations associated with manufacturing and engineering courses (SSA2).

Typically, jobs are posted twice before being filled (posting intensity of 2:1), and this has remained broadly stable over time.

Top Five Industries by Total Jobs that Employ the Target Occupations at 2-Digit SIC

Industry	Occupation Group Jobs in Industry (2022)	% of Occupation Group in Industry (2022)	% of Total Jobs in Industry (2022)
Specialised Construction Activities	3,110	9.8%	27.6%
Manufacture of Fabricated Metal Products, Except Machinery and Equipment	1,957	6.2%	48.5%
Wholesale and Retail Trade and Repair of Motor Vehicles and Motorcycles	1,875	5.9%	25.2%
Manufacture of Food Products	1,788	5.7%	49.8%
Manufacture of Other Transport Equipment	1,603	5.1%	39.0%

Source: Lightcast, 2023

Engineering and manufacturing job postings – location and recruiters

Top Cities Posting

City	Total/Unique (Jan 2022 - Oct 2023)	Posting Intensity	Median Posting Duration
Poole, Bournemouth and Poole	14,103 / 5,613	3 : 1	34 days
Bournemouth, Bournemouth and Poole	11,812 / 5,168	2 : 1	34 days
Dorchester, Dorset CC	3,177 / 1,227	3 : 1	33 days
Christchurch, Dorset CC	2,671 / 1,146	2 : 1	33 days
Weymouth, Dorset CC	2,453 / 1,006	2 : 1	33 days
Wimborne, Dorset CC	1,880 / 894	2 : 1	33 days
Ferndown, Dorset CC	1,955 / 823	2 : 1	35 days
Blandford Forum, Dorset CC	1,440 / 628	2 : 1	31 days
Wareham, Dorset CC	785 / 354	2 : 1	33 days
Portland, Dorset CC	648 / 316	2 : 1	35 days

* Christchurch is defined within Lightcast as being in the Dorset Council area – this classification does not reflect the post-April 2019 Local Government restructure

One of the aspects to note is that - in terms of top recruiters – this includes recruitment/employment agencies, indicating that some recruitment goes via third parties. The other aspect to note is that some of the largest recruiters are organisations that would not be defined as ‘manufacturers’ i.e. the NHS.

Top Companies Posting

Company	Total/Unique (Jan 2022 - Oct 2023)	Posting Intensity	Median Posting Duration
Rubicon Recruitment	1,781 / 766	2 : 1	33 days
Rise Technical Recruitment Ltd	1,310 / 483	3 : 1	32 days
NHS	1,737 / 478	4 : 1	33 days
Holt Engineering	1,051 / 366	3 : 1	39 days
Adecco	1,024 / 333	3 : 1	36 days
Ultra Group Company Limited	654 / 332	2 : 1	60 days
Perfect Placement Uk	383 / 259	1 : 1	39 days
Randstad	597 / 209	3 : 1	34 days
Matchtech	415 / 199	2 : 1	34 days
Imi Critical Engineering	414 / 111	4 : 1	37 days
Curtiss-Wright	267 / 110	2 : 1	30 days
Reed	255 / 110	2 : 1	34 days
Auto Skills Uk Logistics LTD	392 / 104	4 : 1	34 days
Hays	357 / 103	3 : 1	27 days
JPMorgan Chase	150 / 90	2 : 1	33 days
Haven Holidays	222 / 87	3 : 1	33 days
Kingston Barnes Limited	180 / 86	2 : 1	35 days
Bennett & Game Recruitment Limited	308 / 82	4 : 1	39 days
Spectrum It Recruitment	287 / 79	4 : 1	22 days
Fawkes & Reece	179 / 76	2 : 1	42 days

Source: Lightcast, 2023

Engineering and manufacturing job postings – role demand

Top Posted Job Titles

Job Title	Total/Unique (Jan 2022 - Oct 2023)	Posting Intensity	Median Posting Duration
Production Operatives	1,532 / 570	3 : 1	33 days
Vehicle Technicians	1,519 / 536	3 : 1	36 days
Carpenters	1,227 / 425	3 : 1	33 days
Machine Operators	895 / 390	2 : 1	33 days
Assemblers	676 / 279	2 : 1	34 days
Design Engineers	651 / 257	3 : 1	37 days
Maintenance Engineers	581 / 250	2 : 1	33 days
Systems Engineers	520 / 227	2 : 1	31 days
Mechanical Design Engineers	710 / 226	3 : 1	32 days
Field Service Engineers	573 / 204	3 : 1	31 days
Gas Engineers	400 / 187	2 : 1	32 days
Assembly Operators	470 / 186	3 : 1	34 days
Welders/Fabricators	380 / 186	2 : 1	32 days
Quality Inspectors	370 / 170	2 : 1	34 days
Production Engineers	414 / 161	3 : 1	36 days
Electronics Engineers	383 / 158	2 : 1	31 days
Handymen	259 / 148	2 : 1	34 days
Quality Engineers	242 / 131	2 : 1	37 days
Apprentices	228 / 128	2 : 1	40 days
Maintenance People	224 / 128	2 : 1	30 days

The most common job postings within the associated occupations are production operatives, vehicle technicians, machine operators etc. Again, this data is using a taxonomy that charts the roles/jobs that tend to be filled by individuals that undertook manufacturing and/or engineering courses (SSA2 level).

The data indicated that those roles that are most in demand (as measured by online job postings) tend to be low-to-medium skill levels. However, there has also been a reasonable level of demand for roles such as design, system and electronic engineers across recruiting organisations.

It is important to note that this slide details the job vacancy postings i.e. dynamic demand. This compares to some earlier slides (e.g. slide 9) which illustrated the level of job roles across the Dorset LSIP area.

Source: Lightcast, 2023

Engineering and manufacturing job postings - skills

Top Common Skills

Skill	Postings with Skill
Communications	3,832
Detail Oriented	2,278
Management	1,943
Customer Service	1,708
Problem Solving	1,541
Operations	1,116
English Language	1,095
Planning	1,038
Self-Motivation	881
Mathematics	768
Sales	724
Leadership	710
Teamwork	687
Willingness To Learn	650
Innovation	624
Enthusiasm	558
Computer Literacy	549
Quality Control	549
Organizational Skills	541
Time Management	517

Top Specialized Skills

Skill	Postings with Skill
Machinery	1,231
Carpentry	1,116
Mechanical Engineering	1,081
Project Management	968
Systems Engineering	757
Plumbing	741
Machining	715
Electrical Engineering	707
Maintenance Engineering	689
New Product Development	685
Technical Drawing	637
Electrical Wiring	625
Marketing	624
Construction	559
Manufacturing Processes	544
Power Tool Operation	534
Auditing	513
Electronics	505
Engineering Drawings	504
Lean Manufacturing	488

Source: Lightcast, 2023