

A satellite with solar panels is shown in space, with a large, blue-tinted planet in the background.

Labour Market Intelligence Update Buckinghamshire

2018

A large crowd of people is gathered on a trade show floor, with various booths and displays visible.

Buckinghamshire
Thames Valley LOCAL ENTERPRISE
PARTNERSHIP
THE ENTREPRENEURIAL HEART OF BRITAIN

A stylized white swoosh logo.

**BUCKINGHAMSHIRE
BUSINESS FIRST**

**YOUR LOCAL
GROWTH HUB**

A logo consisting of three vertical bars of increasing height.

**BUCKINGHAMSHIRE
SKILLS HUB**

Welcome to our second LMI update

Today's young people and adults face tough competition for jobs, yet many employers report difficulties in recruiting people with the right skills. The working world has changed fundamentally over the past generation, creating an employment challenge caused by the demise of the job for life, the emergence of the knowledge economy and the loss of many unskilled and semi-skilled jobs due to technological and globalisation changes.

To compete successfully in a rapidly changing global economy, employers need a workforce equipped with a broad range of skills, knowledge and attributes. One which has the ability to think critically and is enterprising, innovative, adaptable, and self-motivated.

While it is difficult to predict the future labour landscape, awareness of local labour market intelligence, looking as far ahead as possible, can improve our understanding of the skills, qualifications and wider attributes that are needed for the future. Economies and policies change – so do students' aspirations and circumstances – so it is also important that the range of skills and attributes developed are transferrable and will enhance, and ultimately aim to future proof, everyone's lifelong employability.

On the 4th December 2017, the Government launched its long-awaited Careers Strategy which is part of the Government's plan to make Britain fairer, improve social mobility and offer opportunity to everyone. It is aligned to the recently published Industrial Strategy which focusses on building a Britain fit for the future by investing in the development of skills to meet the changing needs of business, increase productivity and drive growth across the country. The careers strategy aims to support

everyone, whatever their age to go as far as their talents will take them and have a rewarding career, and sets out a plan to achieve just that working closely with various stakeholders. Employers have an important part to play in supporting individuals to grow and develop.

BTVLEP's Buckinghamshire Skills Hub supports careers inspiration and skills development activities in schools and colleges in Buckinghamshire to improve the work preparedness of our young people by connecting businesses to educators and young people. Through its Enterprise Adviser Network, and OppsinBucks.org and WANNABEbucks.org platforms, it works across the majority of the secondary schools in the county and supported or facilitated over 52,000 student-employer encounters in 2016-17. Encounters encompass careers talks, skills development workshops, industry-led challenges and competitions, careers events, work place visits, and work placements.

The second Bucks Skills Show took place in October 2017, where 1700 young people came and interacted with a broad range of employers and listened to industry speakers from our key growth sectors which include creative industries, high performance engineering, space industries, life sciences, health and social care, and construction.

STEM (Science, technology, engineering and maths) skills often underpin these sectors and it is recognised nationally that "We have particular skills shortages in sectors that depend on STEM subjects, where we need more of these graduates to compete successfully in a global economy", according to HM Government (2017, 16) Building Our Industrial Strategy Green Paper. STEM jobs are expected to grow at double the rate of other occupations, creating 142,000 jobs between now and 2023. In particular, it is important to encourage more women to go into STEM occupations to not only address the skills shortages but to also work towards eliminating the gender pay gap. In response to this, we are currently piloting a Buckinghamshire Skills Hub and STEM Now initiative which sees our dynamic Enterprise Advisers partnered with STEM Ambassadors to ensure schools' employer engagement and career inspiration activities include a STEM focus.

We look forward to working with you to build a dynamic future workforce that meets the needs of industry in order to drive productivity and growth both in Buckinghamshire and beyond.

Jackie Campbell
Skills Development Manager
Bucks Skills Hub, BTVLEP

Buckinghamshire's labour market

Population:



534,700 people living in Buckinghamshire,



Projected to rise to by an average of 0.8 per cent per annum to reach

591,300 by 2030

Jobs:



242,000 people in employment in Buckinghamshire in 2016

Buckinghamshire has a strong economy, with 34,175 businesses and their 242,000 workers generating £16.1bn in Gross Value Added (GVA). Buckinghamshire's impact can be seen across the globe. The films and screen content produced at Pinewood Studios are famous the world over; innovations driven by motorsport technology from the Silverstone cluster are being adopted by business sectors from mining to aerospace; and the pioneering work at Stoke Mandeville Hospital led to the birth of the Paralympic movement and a realisation of the limitless potential of human achievement.

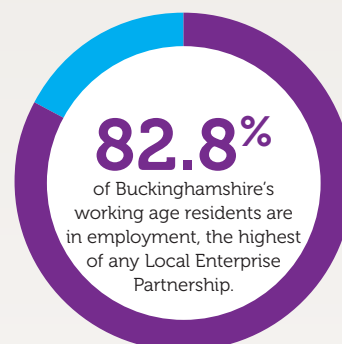
It is also an exciting time for Buckinghamshire located at the heart of the Oxford-Milton Keynes-Cambridge growth corridor which will bring extensive investment and opportunity to the county and adjoining Greater London. Our newly published growth strategy will seek to strengthen our existing world leading economic assets at Pinewood and Silverstone and build upon the potential of our Enterprise Zones to create growth in sectors such as the space propulsion industry where development in Buckinghamshire already allows Britain to lead the global race.

Table 1: Businesses, jobs and output in Buckinghamshire

	Enterprises	Jobs	GVA (£m)	GVA per job
Aylesbury Vale	10,525	77,800	4,911	63,123
Chiltern	6,560	36,200	2,702	74,641
South Bucks	5,530	38,500	2,690	69,870
Wycombe	10,455	89,500	5,794	64,737
Buckinghamshire	33,070	242,000	16,098	66,521

Sources: IDBR, ONS, 2017, BRES, ONS, 2017, Regional Accounts, ONS, 2017

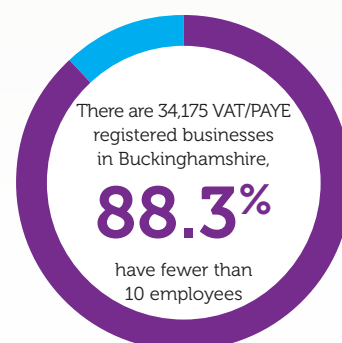
Employment:



Education:

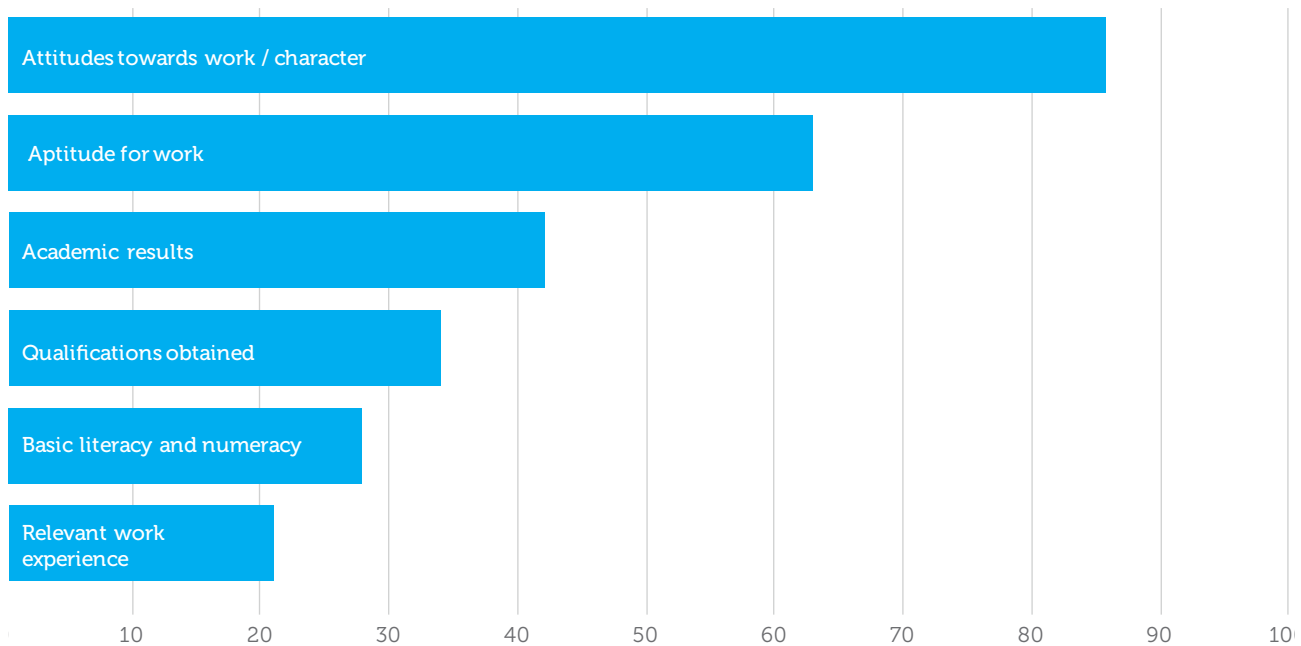


Businesses:



Local vacancy information

Chart 1: Most important factors in recruiting school / college leavers



Source: CBI & Pearson (2017) Education & skill survey

Table 2: Top locations of vacancies, year to end of August

Town	Job openings 2016	Job opening 2017	% Change
High Wycombe	13,866	15,730	13.4
Aylesbury	11,471	12,174	6.1
Marlow	3,087	4,093	32.6
Beaconsfield	1,954	2,832	44.9
Amersham	2,425	2,797	15.3
Buckingham	1,880	2,058	9.5
Gerrards Cross	1,076	1,238	15.1
Chesham	1,085	1,237	14.0
Bourne End	842	862	2.4
Iver	556	751	35.1
Princes Risborough	328	385	17.4
Buckinghamshire	59,088	63,822	8.0

Source: Labour Insight, 2017



Table 3: Most sought skills, year to August 2017

Specialised skill	Job postings no.	%	Baseline skill	Job postings no.	%
Customer Service	5,284	8.3	Communication Skills	15,327	24.0
Microsoft Excel	5,091	8.0	Organisational Skills	8,873	13.9
Business Management	3,748	5.9	Planning	4,870	7.6
Microsoft Office	3,381	5.3	Team Work/ Collaboration	4,508	7.1
Project Management	3,124	4.9	Detail-Orientated	4,502	7.1
Sales	2,942	4.6	Writing	4,238	6.6
Teaching	2,872	4.5	Problem Solving	3,147	4.9
Product Sales	2,513	3.9	English	2,747	4.3
Accountancy	2,417	3.8	Creativity	2,657	4.2
Contract Management	2,182	3.4	Leadership	2,159	3.4
Key Performance Indicators	2,159	3.4	Mathematics	2,107	3.3
SQL	2,033	3.2	Research	2,020	3.2
Budgeting	1,990	3.1	Computer Skills	1,914	3.0
Business Development	1,966	3.1	Time Management	1,850	2.9
Invoicing	1,874	2.9	Quality Assurance and Control	1,624	2.5
Customer Contact	1,858	2.9	Presentation Skills	1,546	2.4

Source: Labour Insight, 2017

Many employers in Buckinghamshire who are keen to help young people develop these skills and understand business expectations can be contacted through the Opps in Bucks website - www.oppsinbucks.org.



Local vacancy information

Table 4: Most sought occupations in Buckinghamshire, year to end of August 2017

Occupation	Job opening no.	%
Programmers and software development professionals	2,655	4.2
Business sales executives	1,875	2.9
Other administrative occupations n.e.c.	1,832	2.9
Nurses	1,673	2.6
IT user support technicians	1,403	2.2
Secondary education teaching professionals	1,391	2.2
Sales accounts and business development managers	1,201	1.9
Marketing associate professionals	1,177	1.8
Care workers and home carers	1,129	1.8
Web design and development professionals	1,108	1.7
Chartered and certified accountants	1,094	1.7
Managers and proprietors in other services n.e.c.	1,047	1.6
Book-keepers, payroll managers and wages clerks	1,014	1.6
Sales related occupations n.e.c.	981	1.5
IT business analysts, architects and systems designers	925	1.4
Human resources and industrial relations officers	905	1.4
Managers and directors in retail and wholesale	885	1.4
Chefs	859	1.3
Primary and nursery education teaching professionals	833	1.3
Finance and investment analysts and advisers	817	1.3
Customer service occupations n.e.c.	772	1.2
Sales Supervisors	768	1.2
Management consultants and business analysts	666	1.0
Vehicle technicians, mechanics and electricians	661	1.0
Marketing and sales directors	640	1.0
Financial managers and directors	619	1.0
Financial accounts managers	613	1.0

Source: Labour Insight, 2017



Table 5: Vacancies by industry in Buckinghamshire, year to July 2017

Industry	Job Postings no.	%
Education	4,198	6.6
Human health activities	3,912	6.1
Food and beverage service activities	2,454	3.8
Social work activities without accommodation	1,517	2.4
Retail trade, except of motor vehicles and motorcycles	1,371	2.1
Legal and accounting activities	869	1.4
Wholesale and retail trade and repair of motor vehicles and motorcycles	751	1.2
Advertising and market research	749	1.2
Office administrative, office support and other business support activities	682	1.1
Accommodation	652	1.0
Real estate activities	632	1.0
Scientific research and development	581	0.9
Insurance, reinsurance and pension funding, except compulsory social security	506	0.8
Other professional, scientific and technical activities	445	0.7
Specialised construction activities	443	0.7
Activities of membership organisations	438	0.7
Residential care activities	410	0.6
Manufacture of food products	373	0.6
Land transport and transport via pipelines	327	0.5
Financial service activities, except insurance and pension funding	326	0.5
Wholesale trade, except of motor vehicles and motorcycles	280	0.4
Construction of buildings	244	0.4
Employment activities	226	0.4

Source: Labour Insight, 2017

Table 6: Advertised salaries for openings in Buckinghamshire, year to end of August 2017

Salary	Job postings no.	%
More than £90,000	616	1.6
£80,000 to £89,999	383	1.0
£70,000 to £79,999	674	1.7
£60,000 to £69,999	1,428	3.7
£50,000 to £59,999	2,488	6.4
£40,000 to £49,999	4,601	11.9
£30,000 to £39,999	8,327	21.6
£20,000 to £29,999	12,190	31.6
£15,000 to £19,999	6,292	16.3
£10,000 to £14,999	1,087	2.8
Less than £10,000	526	1.4

Source: Labour Insight, 2017



Employment by sector to 2030

Employment in Buckinghamshire is forecast to rise by 8.5 per cent, or 24,000 jobs, between 2018 and 2030 at an average annual rate of increase of 0.8 per cent. Residential care and social work is forecast to have the strongest growth in both absolute and relative terms to 2030, both in Buckinghamshire and across the UK as a whole. In Buckinghamshire the sector's workforce is forecast to grow by 32.0 per cent to 17,700 in 2030.

Health, wholesale, accommodation and food service, professional services are forecast to see the next highest

growth in the number of jobs to 2030. Together these five sectors account for 64.1 per cent of all additional jobs in Buckinghamshire to 2030.

Construction employment is forecast to rise by 3,600 jobs (15.7 per cent) to 2030, with specialised construction activities growing more and at a faster rate than construction of buildings.

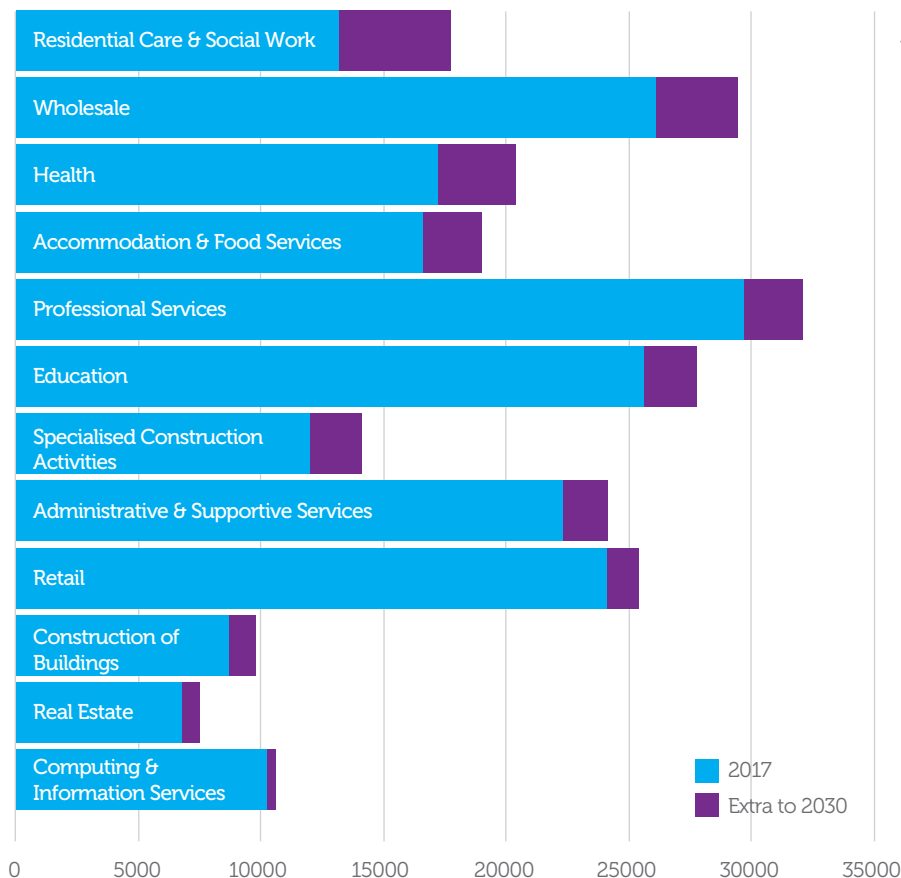
Professional services, including legal and accounting services, management consultancy and market research, is Buckinghamshire's largest

sector, providing 29,900 jobs. The strong growth seen to 2018 is forecast to moderate to 2030, with the average growth rate annual of 1.5 per cent seen from 2011 to 2018 more than halving to 0.6 per cent from 2018 to 2030.

Although forecast to grow more slowly than the economy overall, retail is still expected to generate 1,100 additional jobs to 2030, taking total employment in the sector to 25,400.

By industrial grouping, construction is forecast to show the highest rate of growth in Buckinghamshire to 2030 ahead of services, with both production and agriculture forecast to see falling workforce jobs. Jobs in services are forecast to grow slightly faster than the labour market overall to represent a new high of 85.1 per cent of all jobs in Buckinghamshire by 2030.

Chart 2: Forecast employment growth by sector, 2018-2023



Source: Experian, Local Market Forecasts ©, December 2017



Occupational change

From 2012 to 2017 the number of people employed in the UK rose by 2.68m or 9.2 per cent. Just as this increase was not felt evenly across all industries, so the occupational mix of the UK labour market has changed. Employment in managerial, professional and technical occupations has risen by 17.6 per cent since 2012, accounting for almost two thirds of employment growth since 2012 and now account for 45.1 per cent all jobs in the UK. These occupations now account for 45.1 per cent of all jobs in the UK and 47.3 per cent in Buckinghamshire.

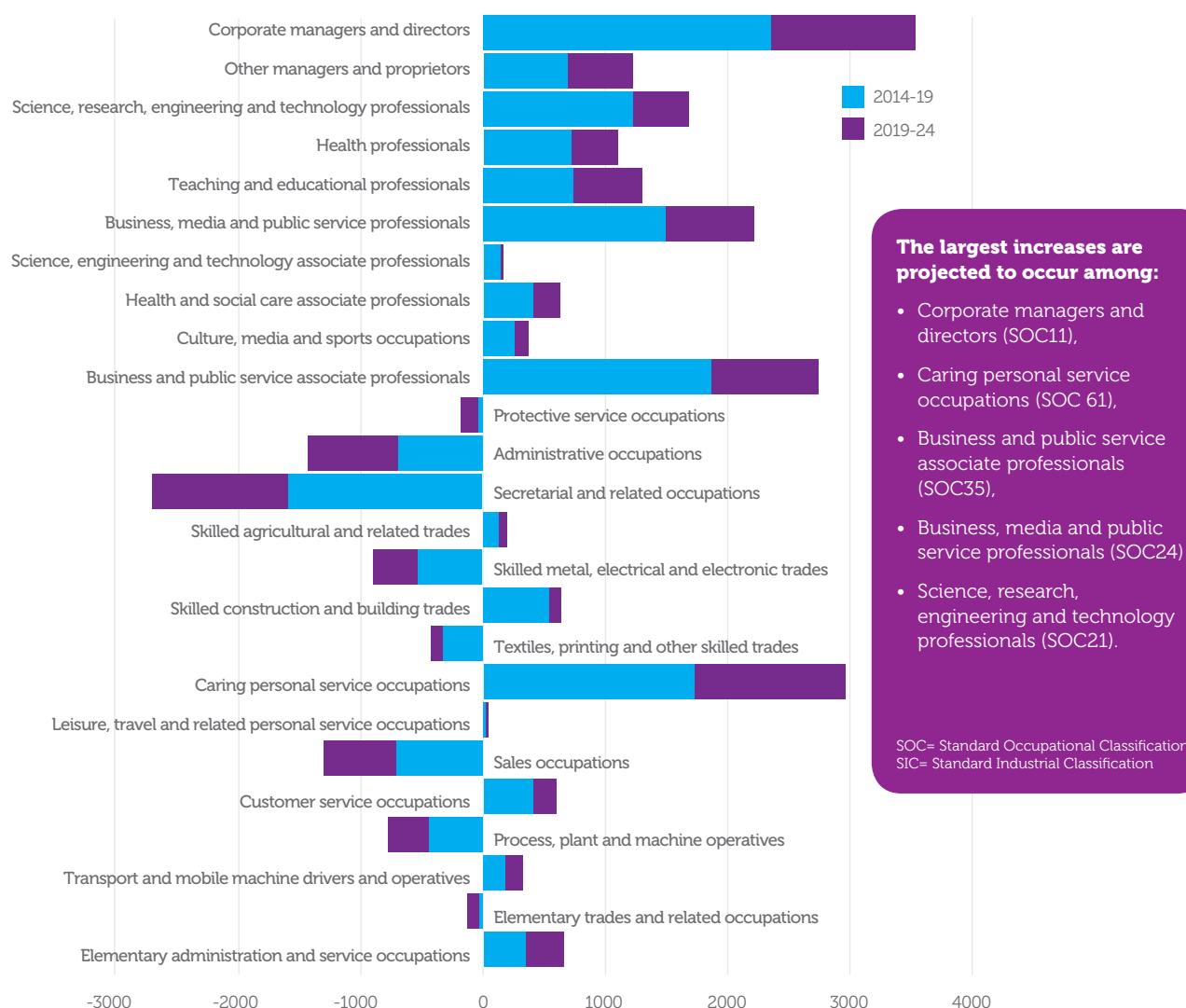
However, the strongest growth since 2012 has been recorded in personal service occupations, where the number of people employed has risen by 13.7 per cent, rising to 14.6 per cent for caring personal service occupations, including jobs such as care worker, dental nurse, support worker and home carer.

The smallest increase since 2012, of just 1.2 per cent, has been in sales and customer service occupations. Within that sector sales occupations have fallen by 3.1 per cent while customer service roles have

risen by 16.1 per cent across the UK. Administrative roles rose by 1.3 per cent.

These trends are expected to continue. From 2014 to 2024, employment in Buckinghamshire is projected to increase by 12,600 (4.8 per cent) to reach 278,000. Over this period employment in managerial, professional and technical occupations is projected to increase by 14,800 (11.8 per cent) to account for almost half (49.3 per cent) of all employment in the county.

Chart 3: Occupational projection, 2014-2024



Source: Working Futures, UKCES, 2016

Chart 4: Projected employment by occupation in Buckinghamshire, 2024

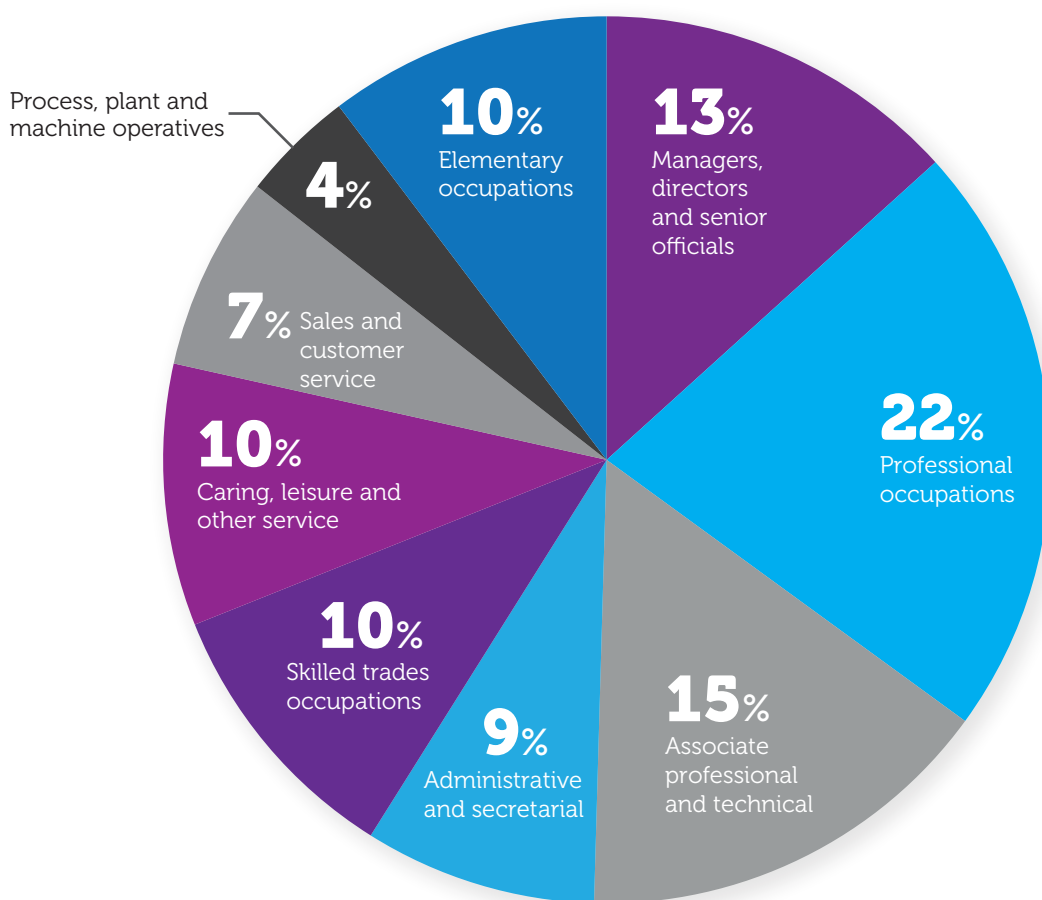


Table 7: Pay and entry routes to occupations projected to show most growth to 2026

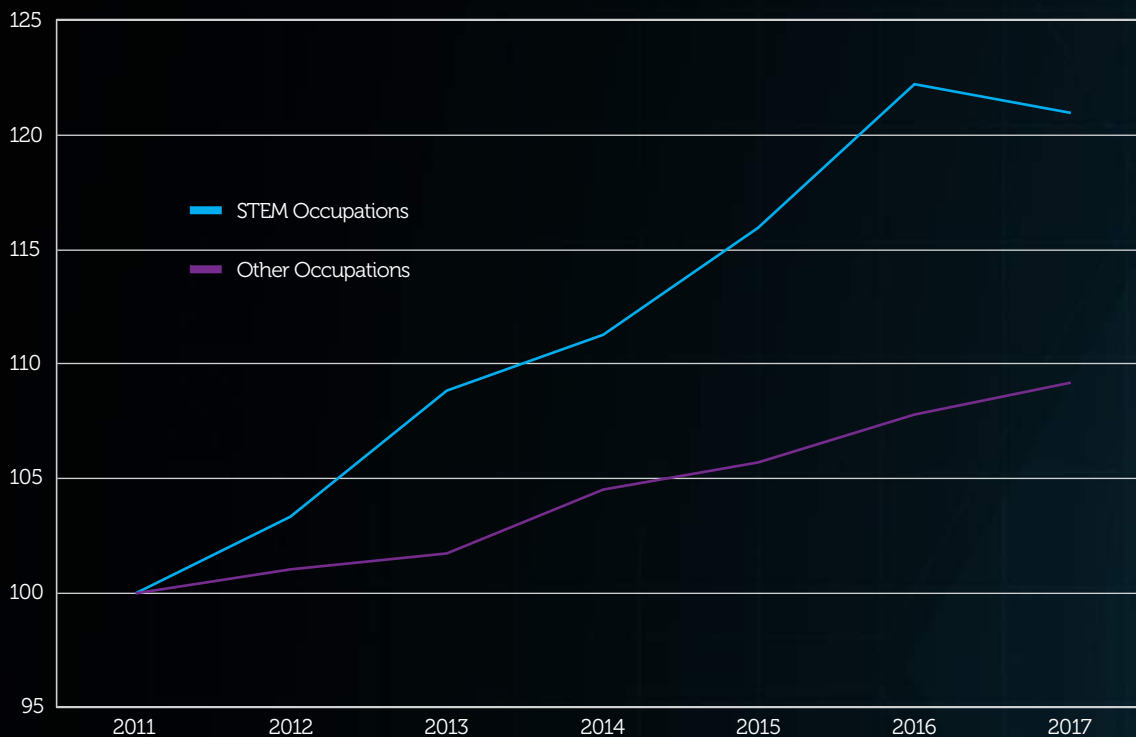
Occupational classification	Gross median full-time annual pay, 2017	Entry routes and qualifications	Job titles include:	Number in Buckinghamshire, 2017
Corporate Managers and Directors	46,369	By appointment or internal promotion	Chief executive, account director, shopkeeper, garage owner	23,800
Science, Research, Engineering and Technology Professionals	41,508	Degree / accredited degree	Internet developer, aerospace engineer, civil engineer, criminologist	14,300
Business, Media and Public Service Professionals	38,547	Degree / accredited degree	Accountant, architect, social worker, solicitor	11,400
Business and Public Service Associate Professionals	33,812	Formal qualification not always needed, professional qualification available	Buyers, insurance broker, air traffic controller, taxation expert	21,400
Caring Personal Service Occupations	17,714	No formal entry requirements	Ambulance staff, home carer, dental nurse, undertaker	16,200

Sources: ONS, 2010, ASHE, ONS, 2017, Labour Force Survey, 2017

Scientific, technical, engineering and mathematics in the labour market

Between 2011 and 2017 employment in the UK rose by 10.1 per cent. Over the same period, employment in STEM occupations has risen by 22.2 per cent, taking their share of total employment in the UK to 9.1 per cent.

Chart 5: The rise of STEM occupations



Source: Labour Force Survey (table EMP04), ONS, 2017

Growth has not been even across STEM occupations. More than half (58.2 per cent) of the increase from 2011 to 2017 has been in SOC 21 (science research, engineering and technology professionals), although the fastest rate of growth has been in SOC 35 (business and public service associate professionals). These

are two of the groups projected to see the fastest rate of growth in Buckinghamshire's labour market in the next ten years.

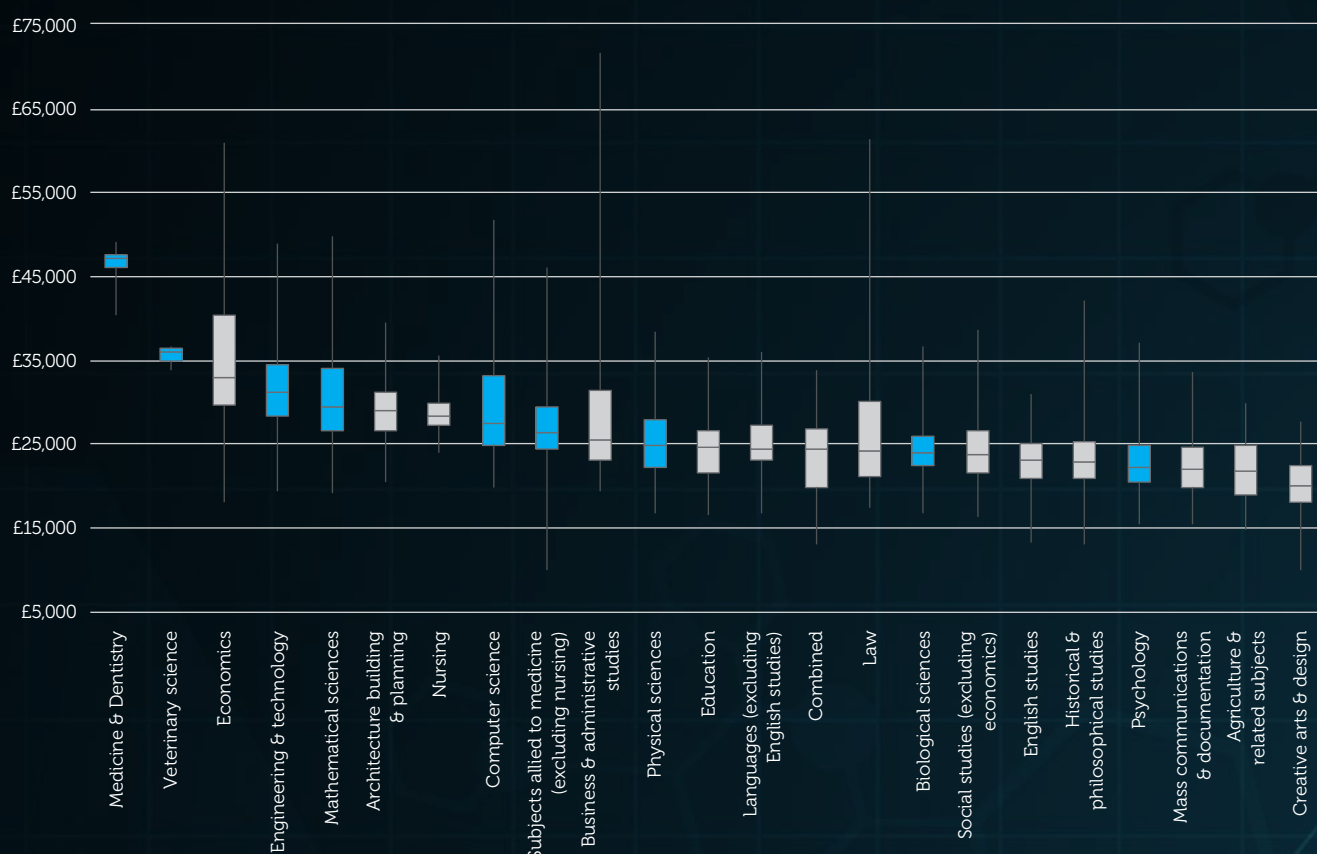
As well as showing strong growth, STEM subjects offer better pay than most others, as shown in chart 6 below and stronger employment prospects.



SOC= Standard Occupational Classification, SIC= Standard Industrial Classification

The below chart shows the range of graduates' annualised median pay five years after graduating by subject of study and institution. The centre of the box shows median annualised pay with edges of the box representing the upper and lower quartiles with the ends of the whiskers showing the maximum and minimum median annualised pay. STEM subjects are shown in blue.

Chart 6: Pay by quartile by subject studied, five years after graduation



Source: Longitudinal Education Outcomes, Department for Education, 2017

Women make up 55.4 per cent of all undergraduates in the UK but less than half of those engaged in scientific subjects, falling to just 14.8 per cent in computer science. At A level, just 38.7 per cent of mathematics A levels are taken by women and falling to 21.6 per cent in physics.

The job market for STEM skills is strong and growing in Buckinghamshire. In the last year a record 12,235 job openings were posted for STEM occupations, almost

a fifth of the total. The most commonly sought STEM occupations were: programmers and software development professionals; IT user support technicians; web design and development professionals; IT business analysts, architects and systems designers; Information technology and telecommunications professionals and IT operations technicians.

The most commonly sought specialised skills were dominated by programming

languages including SQL, JavaScript, Microsoft C# and .NET programming. Other highly specialised skills included project management, technical support, software development and customer service. While communication skills, organisational skills, problem solving, planning and team work were the most sought baseline skills.

Creative industries

Buckinghamshire's creative industries employ 17,500 people in 4,525 businesses, with computer consultancy activities making the single largest contribution to the total with 6,500 jobs, ahead of computer programming activities

(2, 100), motion picture, video and television programme production activities (1,600) and advertising agencies (1,400).

The jobs most commonly associated with the creative industries are listed below,

giving the number of people currently employed in those roles across the UK, median hourly pay and the number of job openings advertised in Buckinghamshire in the year to July 2016.

Table 8: Availability and pay of jobs in the creative industries

Sub-sector	Name	Jobs in UK	Median hourly pay, 2017	Openings in Buckinghamshire in last year
Advertising and marketing	Marketing and sales directors	210,851	36.33	607
	Advertising and public relations directors	31,846	28.92	83
	Public relations professionals	54,301	16.05	83
	Advertising accounts managers and creative directors	43,436	19.00	20
	Marketing associate professionals	195,734	13.79	1,176
Architecture	Architects	52,932	19.52	110
	Town planning officers	28,810	18.21	53
	Chartered architectural technologists	-	-	52
	Architectural and town planning technicians	27,812	14.78	65
Crafts	Smiths and forge workers	5,829	11.31	2
	Weavers and knitters	5,719	9.94	1
	Glass and ceramics makers, decorators and finishers	11,744	9.67	9
	Furniture makers and other craft woodworkers	27,599	9.97	31
	Other skilled trades n.e.c.	43,079	11.03	147
Design: product, graphic, and fashion design	Graphic designers	103,732	12.93	203
	Product, clothing and related designers	89,316	13.79	89
Film, television, video, radio and photography	Arts officers, producers and directors	96,615	17.20	50
	Photographers, audio-visual and broadcasting equipment operators	68,577	12.94	19
IT, software and computer services	Information technology and telecommunications directors	98,138	34.55	72
	IT business analysts, architects and systems designers	110,912	23.04	955
	Programmers and software development professionals	292,024	20.77	2,674
	Web design and development professionals	63,601	15.64	952
Publishing	Journalists, newspaper and periodical editors	72,908	17.35	102
	Authors, writers and translators	91,673	14.08	104
Museums, galleries and libraries	Librarians	30,754	13.08	7
	Archivists and curators	19,533	14.25	5
Music, performing and visual arts	Artists	48,348	13.72	39
	Actors, entertainers and presenters	45,216	-	35
	Dancers and choreographers	21,280	-	11
	Musicians	44,117	18.52	12

Sources: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017



Employers recruiting to these roles
in Buckinghamshire in the last year
have included:



Digital economy

There were 22,000 people employed in the digital sector in Buckinghamshire in 2016 in 3,935 businesses. At 9.2 per cent, Buckinghamshire has a higher share of employment in the digital economy than any other county council area, ranking 2nd among England's 38 Local Enterprise Partnerships. In Wycombe and South Bucks the sector accounts for 12.7 and 9.2 per cent of all jobs respectively to rank 11th and 25th of all 380 local authorities in Great Britain.

Computer consulting activities is the largest sub-sector, with 6,500 jobs in 1,825 businesses, ahead of the wholesale of computers, computer peripheral equipment and software (3,300, 45), computer programming activities (2,100, 450) other telecommunication activities (1,800, 85), motion picture, video and television programme production activities (1,600, 415), other information technology and computer service activities (1,600, 310) and computer

programming activities (1,700, 450).

The jobs most commonly associated with the digital economy are listed below, together with number of people currently employed in those roles across the UK, median hourly pay and the number of job openings advertised in Buckinghamshire in the year to November 2017.

Table 9: Availability and pay of jobs in the digital economy

Name	Jobs in UK	Median hourly pay, 2017	Openings in Buckinghamshire in last year
Information technology and telecommunications directors	98,138	34.55	72
IT specialist managers	194,267	24.36	250
IT project and programme managers	73,170	26.42	331
IT business analysts, architects and systems designers	110,912	23.04	955
Programmers and software development professionals	292,024	20.77	2,674
Web design and development professionals	63,601	15.64	952
Information technology and telecommunications professionals n.e.c.	188,485	19.44	620
IT operations technicians	110,112	14.66	582
IT user support technicians	98,423	14.45	1,416
Telecommunications engineers	66,221	15.88	165
IT engineers	42,681	13.70	62

Sources: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017



Employers recruiting to these roles in Buckinghamshire in the last year have included:

dun & bradstreet 

 NetworkRail 

 Johnson & Johnson

Engineering and manufacturing

Buckinghamshire's manufacturing sector provides 17,000 jobs, 7.0 per cent of all employment in the county, in 1,425 businesses. The manufacture of computer, electronic and optical products provides the most jobs in the sector (2,300), ahead of the manufacture of metal fabricated products (2,000) other transport

equipment (1,500) and the manufacture of furniture (1,000). There is a large engineering services sector in the county and associated roles in research and development.

Manufacturing employment is forecast to fall by 0.8 per cent per annum to 2027, having fallen by an average of 1.0 per

cent per annum for the last five years. In contrast, having seen employment fall by 2.2 per cent per annum since 2012, engineering is forecast to see growth of 0.2 per cent per annum to 2028.

The jobs most commonly associated with manufacturing are listed below.

Table 10: Availability and pay of jobs in engineering

Name	Jobs in UK	Median hourly pay (£), 2017	Openings in Buckinghamshire in last year
Production managers and directors in manufacturing	285,305	22.68	401
Mechanical engineers	64,586	21.29	192
Electrical engineers	55,060	22.42	119
Electronics engineers	31,900	20.73	131
Design and development engineers	55,403	20.63	531
Production and process engineers	42,881	19.67	150
Engineering professionals n.e.c.	123,427	20.34	252
Electrical and electronics technicians	39,505	15.64	20
Engineering technicians	105,455	16.61	506
Planning, process and production technicians	26,127	15.61	80
Science, engineering and production technicians n.e.c.	46,175	12.73	354
Precision instrument makers and repairers	31,762	12.08	16
Assemblers (electrical and electronic products)	28,852	10.13	73
Assemblers (vehicles and metal goods)	52,292	15.49	70

Source: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017

High Performance Engineering, including micro-electronics, test and measurement; and aerospace, defence and space) is one of Buckinghamshire's priority sectors and the focus of the Enterprise Zones at Silverstone and Westcott. Since 2016 over 12,500m² of commercial floorspace office space has been delivered at these locations helping create up to 8,000 new jobs and drive major national and international investment.

Employers recruiting to these roles in Buckinghamshire in the last year have included:



Brexit

There were 11,244 EU passport holders employed in Buckinghamshire in 2011.

The food and beverage service industry employed more EU passport holders than any other in 2011, with 1,110 working in the sector, ahead of retail (907), construction (892), education (798) and human health activities (647). The 408 EU passport holders working in accommodation accounted for 17.3 per cent of all employment in the sector making it the most dependant on EU workers in

Buckinghamshire ahead of food and beverage service activities (12.4 per cent); scientific research and development (9.9); services to buildings and landscape activities (9.8); and residential care activities (9.5) and the manufacture of food products (8.2).

By occupation EU nationals were most commonly employed in elementary occupations, (1,969) ahead of employment in professional occupations (1,829), skilled trades (1,544), personal service occupations (1,271)

and associate professional occupations (1,249).

Occupation and industry of employment of EU passport holders in Buckinghamshire are considered together at a lower level of disaggregation in the table below. This allows clearer identification of the roles that are carried out by these workers in Buckinghamshire. Of the 1,518 EU passport holders working in the accommodation and food service industry, 648 are employed in elementary roles. In contrast of the

Table 11: EU passport holders employed in Buckinghamshire by occupation and industry, 2011 (green <50, amber 50-199, red >200)

	1	2	3	4	5	6	7	8	9	Total
Total	1,151	1,829	1,249	842	1,544	1,271	640	749	1,969	11,244
A Agriculture, forestry and fishing	3	0	2	3	24	4	1	8	25	70
B Mining and quarrying	0	2	0	0	0	0	0	0	0	2
C Manufacturing	133	143	161	67	215	4	29	175	99	1,026
D Electricity, gas, steam and air conditioning supply	2	3	1	1	4	0	2	1	0	14
E Water supply; sewerage, waste management and remediation activities	8	9	8	13	4	1	7	34	25	109
F Construction	76	88	26	40	471	9	5	101	76	892
G Wholesale and retail trade; repair of motor vehicles and motor cycles	284	104	177	132	172	31	437	85	240	1,662
H Transport and storage	27	7	28	34	18	34	8	169	112	437
I Accommodation and food service activities	197	14	54	66	373	74	56	36	648	1,518
J Information and communication	74	242	138	47	45	11	14	15	19	605
K Financial and insurance activities	35	25	52	59	1	2	11	1	3	189
L Real estate activities	25	7	25	23	9	9	2	2	6	108
M Professional, scientific and technical activities	103	321	240	103	24	21	24	33	19	888
N Administrative and support service activities	38	19	66	61	96	86	12	45	412	835
O Public administration and defence; compulsory social security	29	38	58	63	6	9	6	4	19	232
P Education	8	383	58	38	20	190	3	13	85	798
Q Human health and social work activities	64	392	71	55	19	608	12	13	110	1,344
R Arts, entertainment and recreation	26	10	51	13	20	23	5	8	29	185
S Other service activities	18	22	30	23	20	92	6	6	32	249
T Activities of households as employers; producing activities of households	0	0	0	0	3	63	0	0	10	76
U Activities of extraterritorial organisations and bodies	1	0	3	1	0	0	0	0	0	5

Source: Census, 2011, ONS, 2017

1 Managers, directors and senior officials 2 Professional 3 Associate professional and technical
4 Administrative and secretarial 5 Skilled trades 6 Caring, leisure and other service 7 Sales and customer service
8 Process, plant and machine operatives 9 Elementary

888 EU passport holders employed in the professional, scientific and technical sector, 321 were employed in professional occupations with a further 240 employed as associate professionals, employment in both occupational groups usually demanding high levels of education attainment. In the construction sector, more than half of EU passport holders were employed in the skilled trades, almost half of those employed in human health and social work activities being in caring and personal service occupations. In wholesale and retail although the highest number of EU passport holders were employed in sales and customer service roles there was a more even distribution of employment across the occupational classification.



The Fourth Industrial Revolution

"[The] fourth industrial revolution is of a scale, speed and complexity that is unprecedented ... it will disrupt nearly every sector in every country, creating new opportunities and challenges for people, places and businesses to which we must respond"

HM Government (2017, 32) Industrial Strategy

The main areas of technological change include artificial intelligence (AI), robotics, the internet of things (IoT), connected autonomous vehicles (CAVs), 3D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing.

These technologies will disrupt and may even destroy some well-established industries and markets with up to 30 per cent of UK jobs 'at risk of automation' by the early 2030s. The likely impact on employment will vary by sector: Transportation and Storage could see more than half of jobs lost, manufacturing 46 per cent, while wholesale and retail may lose 44 per cent of jobs. By skills level, it is estimated that close to half of UK workers educated to GCSE-level education were at risk, compared to around 12 per cent of those with at least an undergraduate degree.

However, the net impact of automation on total employment remains unclear because new automation technologies in areas like AI and robotics will create new jobs and, through productivity

gains, generate additional wealth and spending that will support additional jobs, for example in the service sector.

This process of 'creative destruction' is likely to produce winners and losers. To navigate successfully this process of change, Buckinghamshire must to make the most of our 'domain expertise'; the deep knowledge we possess in space, automotive/low-emission vehicles, digital and creative industries, and healthcare and medicine, plus business expertise in our significant cluster of micro-businesses. We need to leverage the knowledge and spin-out potential of Oxford, Cambridge and London; and to attract and retain graduates and higher level apprentices, especially in STEM subjects, if we are to utilise the potential of our existing knowledge and innovation assets.

Equipping people with the skills needed for the jobs of the future is a central aim of the government's Industrial Strategy and of the Buckinghamshire Strategic Economic Plan and Growth Strategy.

Life sciences and agri-tech

There are 34,500 jobs in 8,205 businesses in Buckinghamshire's agri-tech sector, including 20,500 jobs in 3,100 businesses not in management and

computer consultancy. Employment in the sector has grown at an average of 3.8 per cent per year over the last five years.

The jobs most commonly associated with agri-tech are listed below.

Table 12: Availability and pay of jobs in life sciences and agri-tech

Name	Jobs in UK, 2017	Median hourly pay (£), 2017	Openings in Buckinghamshire in last year
Managers and proprietors in agriculture and horticulture	35,258	12.53	1
Chemical scientists	24,001	18.17	27
Biological scientists and biochemists	83,425	18.96	145
Research and development managers	51,410	22.86	57
Laboratory technicians	79,767	10.06	124
Science, engineering and production technicians n.e.c.	46,175	12.73	354
Farmers	125,150	11.19	15
Horticultural trades	16,109	8.33	6
Farm workers	64,324	8.68	3

Source: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017



Employers recruiting to these roles in Buckinghamshire in the last year have included:



Construction

There are 13,000 jobs in 3,600 businesses in Buckinghamshire's construction sector. House building is the largest component, accounting for 3,000 jobs, ahead of electrical installation, plumbing, heat and

air-conditioning installation (1,500), construction of other civil engineering projects, including sports stadiums (1,200), development of building projects (1,000) and the construction of commercial premises (900).

Since 2009 the number of jobs in construction in Buckinghamshire has fallen by an average of 1.5 per cent per annum, despite this the sector is forecast to grow by 1.0 per cent per annum to 2030, adding an extra 3,600 jobs .

Table 13: Availability and pay of jobs in construction

Name	Jobs in UK	Median hourly pay (£), 2017	Openings in Buckinghamshire in last year
Production managers and directors in construction	195,177	20.35	338
Civil engineers	77,535	19.90	288
Architects	52,932	19.52	110
Town planning officers	28,810	18.21	53
Quantity surveyors	46,334	20.38	311
Business and financial project management professionals	221,211	23.90	196
Chartered architectural technologists	-	-	52
Construction project managers and related professionals	68,887	17.32	28
Building and civil engineering technicians	29,080	12.89	14
Architectural and town planning technicians	27,812	14.78	65
Science, engineering and production technicians n.e.c.	264,799	14.38	229
Steel erectors	7,358	11.74	2
Bricklayers and masons	69,932	11.80	41
Roofers, roof tilers and slaters	51,332	11.85	15
Plumbers and heating and ventilating engineers	191,478	14.35	212
Carpenters and joiners	231,760	12.24	135
Glaziers, window fabricators and fitters	40,573	9.65	5
Construction and building trades n.e.c.	244,347	11.50	115
Plasterers	58,156	11.85	8
Floorers and wall tilers	27,936	11.80	8
Painters and decorators	120,426	11.23	58
Construction and building trades supervisors	63,569	15.07	51
Scaffolders, staggers and riggers	29,852	15.60	14
Road construction operatives	23,582	11.50	9
Rail construction and maintenance operatives	6,152	12.15	-
Construction operatives n.e.c.	97,945	9.61	81
Elementary construction occupations	183,963	9.80	307

Sources: Labour Force Survey, ONS, 2017; ASHE, ONS, 2017; Labour Insight, 2017

Employers recruiting to these roles in Buckinghamshire in the last year have included:



Health and social care

Buckinghamshire's health and social care sector provides 26,500 jobs in 1,170 businesses. Of those jobs 11,000 are part-time. Hospital activities are the largest sub-sector providing

7,500 jobs, ahead of other human health activities (4,300), residential care activities for the elderly and disabled (2,500), social work activities without accommodation for

the elderly and disabled (2,400), child day care activities (2,100) and general medical practice activities (2,000).

Table 13: Availability and pay of jobs in health and social care

Name	Jobs in UK, 2017	Median hourly pay (£), 2017	Openings in Buckinghamshire in last year
Health services and public health managers and directors	66,855	22.86	227
Social services managers and directors	38,195	19.52	11
Medical practitioners	271,498	33.52	567
Psychologists	28,665	22.96	67
Pharmacists	55,381	20.50	61
Ophthalmic opticians	21,578	21.04	22
Dental practitioners	46,086	-	16
Medical radiographers	33,326	18.22	85
Podiatrists	12,292	18.01	6
Health professionals n.e.c.	69,953	16.74	56
Physiotherapists	53,620	17.90	133
Occupational therapists	40,015	17.61	65
Speech and language therapists	14,450	16.13	38
Therapy professionals n.e.c.	45,614	18.87	15
Nurses	659,289	16.76	1,755
Midwives	42,840	19.07	12
Paramedics	23,157	18.13	14
Dispensing opticians	7,419	13.99	16
Pharmaceutical technicians	33,503	10.99	24
Medical and dental technicians	40,712	14.16	73
Health associate professionals n.e.c.	74,755	13.39	306
Youth and community workers	59,362	12.56	68
Child and early years officers	42,090	12.25	53
Housing officers	49,990	13.89	46
Counsellors	25,615	14.07	72
Welfare and housing associate professionals n.e.c.	129,480	11.74	194
Nursing auxiliaries and assistants	331,131	9.86	184
Ambulance staff (excluding paramedics)	22,290	10.86	26
Dental nurses	49,772	9.92	106
Houseparents and residential wardens	39,753	10.48	40
Care workers and home carers	778,113	8.82	1,124
Senior care workers	80,325	9.20	123
Care escorts	12,703	8.33	4
Hospital porters	15,176	9.19	3

Sources: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017

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Employers recruiting to these roles in
Buckinghamshire in the last year have included:

Johnson & Johnson

sodexo

BMI Healthcare

NHS

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