

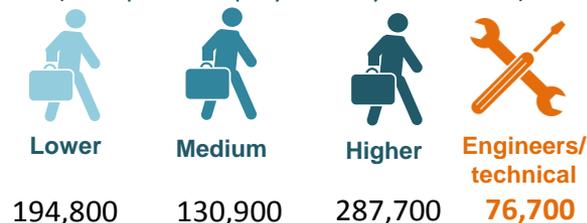


## Farnborough: a premier location for Aerospace & Defence and Advanced Engineering

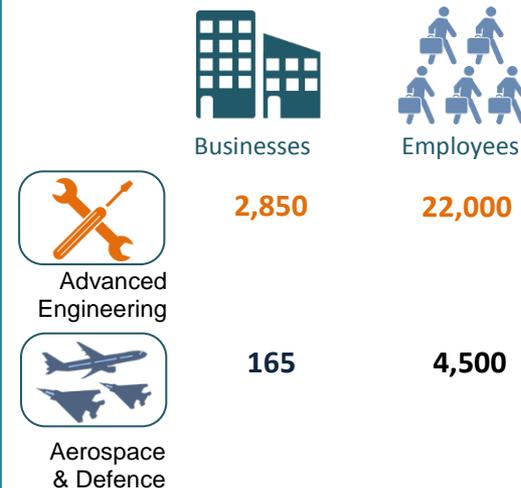
Hampshire Economic Development Team – June 2017

- The Farnborough area\* is a prime location for Aerospace & Defence and Advanced Engineering firms in the UK and Europe.
- The area is unique in the UK in its concentration of advanced engineering and aerospace & defence firms, employees and research establishments as well as universities and specialist technical colleges.
- There are 300,000 residents with university degrees in the Farnborough Catchment Area and a further 140,000 residents with intermediate and technical skills.
- The Catchment Area boasts 76,000 workers in engineering, technology, science and research. In the Farnborough City 1 in 5 resident (10,000) workers are found in this occupational group .
- Farnborough Airport is a prime business airport in the UK and the area is home to a large number of small, medium and large engineering and aerospace & defence firms.
- There are 2,850 advanced engineering firms in the Farnborough Catchment Area, 215 of which are found in Farnborough City. The concentration of engineering firms in Farnborough City is close to 1.3 times the UK average (30% above the UK average).
- There are over 22,000 employees in advanced engineering in the Farnborough Catchment area, 2,500 of which are found in Farnborough City. Employee concentration in the Farnborough City is 1.5 time the national average. In neighbouring Woking the concentration of employees in advanced engineering is approximately 2.3 times the national average.
- The strong military presence in the area and the proximity of three airports (including Gatwick and Heathrow) has resulted in a significant clustering of aerospace & defence activities in Farnborough City and its larger Catchment Area.
- There are 165 aerospace & defence firms in the Farnborough Catchment Area with 45 firms clustered in and around the airport. The concentration of aerospace & defence firms in the Farnborough Catchment Area is 1.5 times the UK average with Farnborough City having 6.0 times the national average concentration of aerospace & defence firms.
- The Catchment Area has 4,500 employees in aerospace & defence. The Farnborough City accounts for almost 1 in 4 of all employees in this sector in the Area. The concentration of employees in aerospace & defence in the Farnborough City is about 4 times the UK average.
- The area is home to leading aerospace and engineering universities and national centres for vocational excellence in aerospace and engineering.

## - Highly Skilled Labour - (workplace employment by skills' level)



## - Firm and Employee Concentrations - (number of firms and workplace Employees)

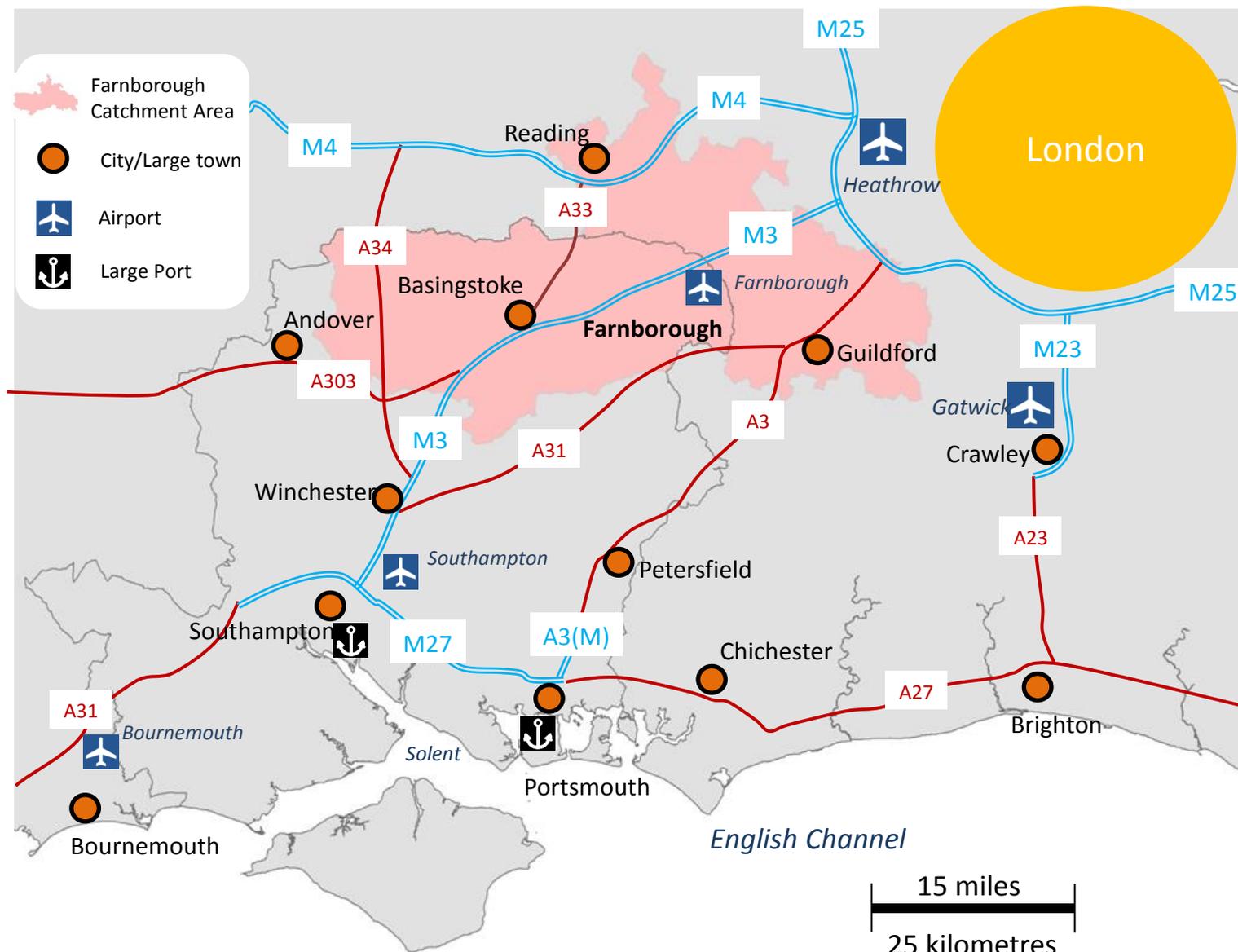


## - World Class Training Establishments - (Universities and Specialist Technical Colleges)



\*The Farnborough Catchment Area is based on an extended local authority version of the North Hampshire Journey to Work Catchment Area (JTWA).

\*\*businesses with 250+ employees . Farnborough City covers the local authority of Rushmoor.

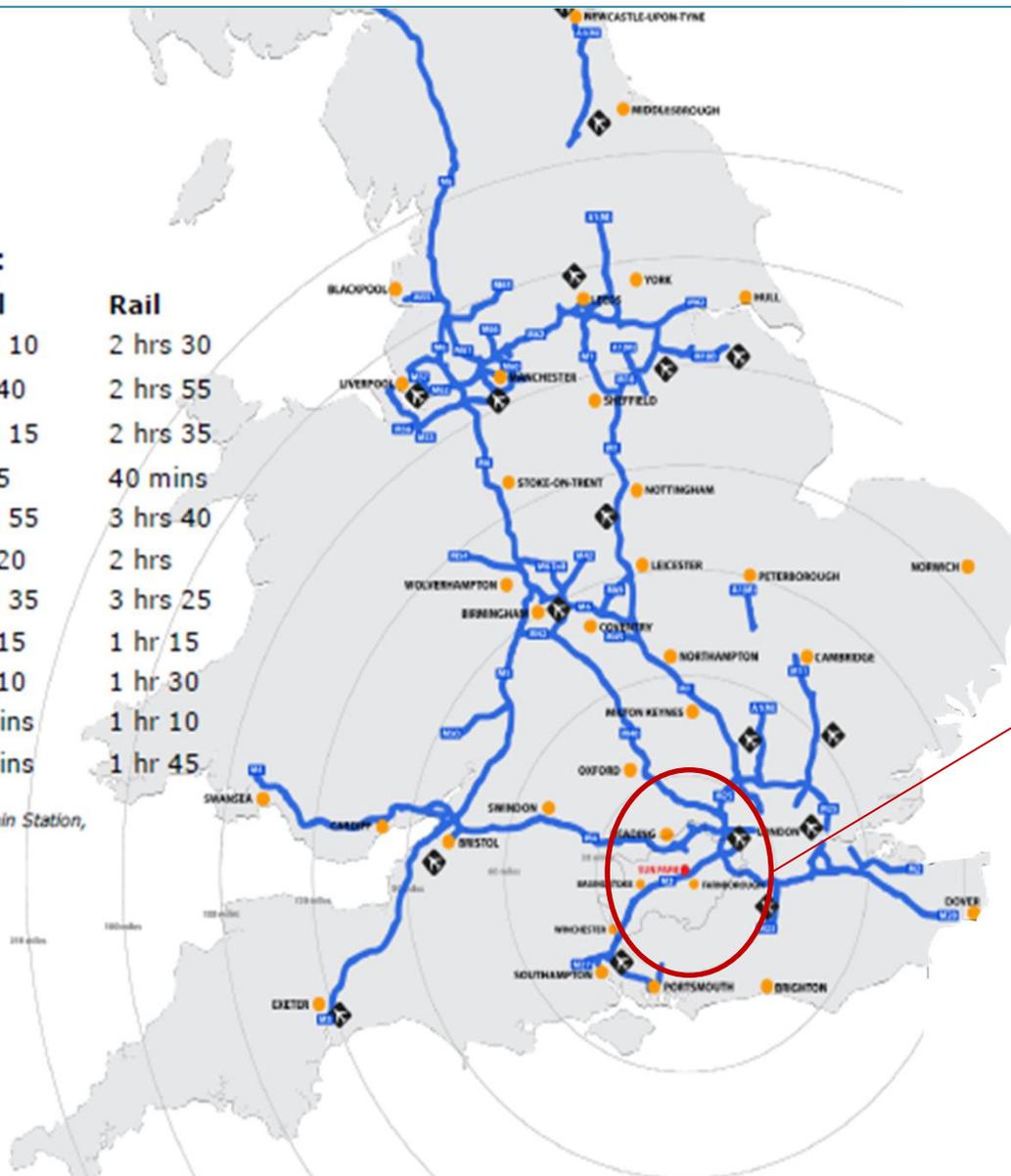


## The Location

### Average Travel Times:

	Road	Rail
Birmingham	2 hrs 10	2 hrs 30
Bristol	1 hr 40	2 hrs 55
Cardiff	2 hrs 15	2 hrs 35
Central London	1 hr 5	40 mins
Manchester	3 hrs 55	3 hrs 40
Milton Keynes	1 hr 20	2 hrs
Nottingham	2 hrs 35	3 hrs 25
Oxford	1 hr 15	1 hr 15
Swindon	1 hr 10	1 hr 30
Gatwick Airport	55 mins	1 hr 10
Heathrow Airport	25 mins	1 hr 45

*Rail travel times are from Farnborough Main Station, a 10 minute drive from Sun Park.*



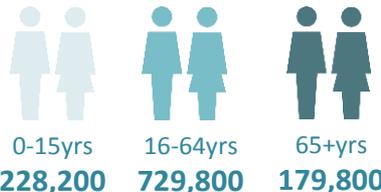
60 minutes from Farnborough

- **Demographics & Labour Supply .....1**
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- **Large Aerospace & Defence and Engineering Firms in the Area .....13**

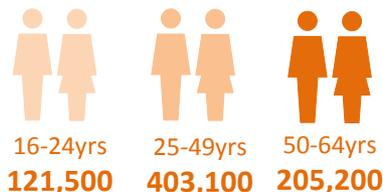
# Demographics & Labour Supply – large and growing population 1

Farnborough Catchment Area

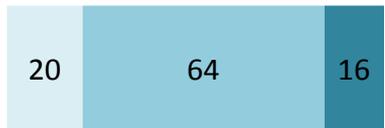
**Total Population 1.14 million**



**Working Age Population 729,800**



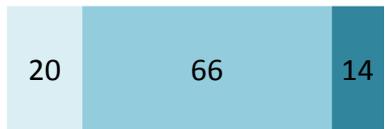
Farnborough Catchment Area



Farnborough Catchment Area



Farnborough city area



Farnborough city area

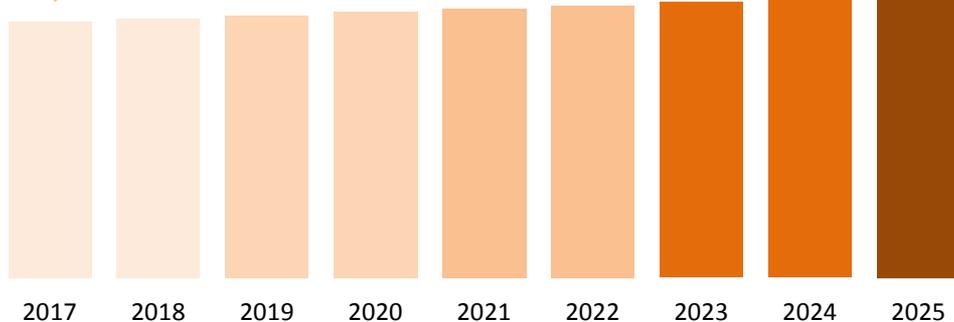


0% 25% 50% 75% 100%

0% 25% 50% 75% 100%

**736,300**

**750,200**



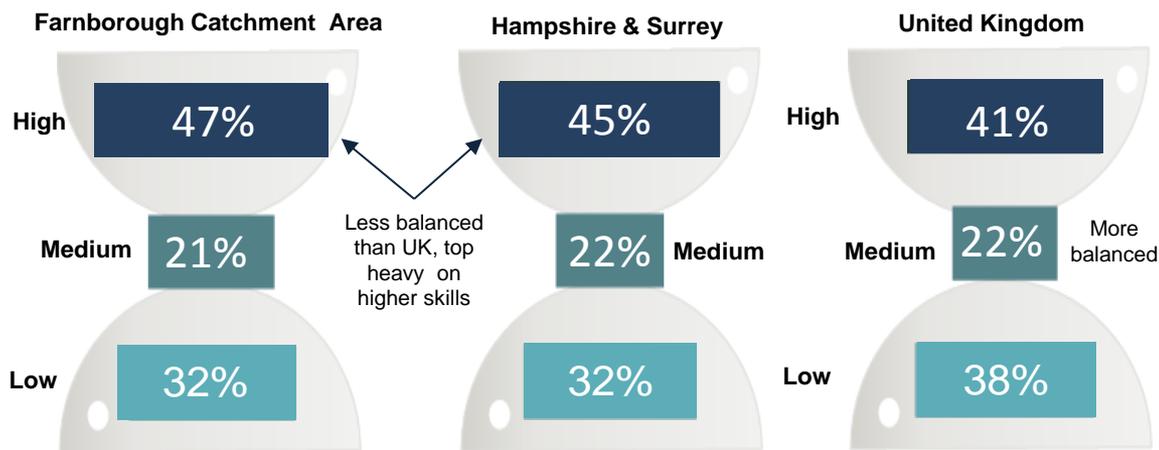
**Increase of 13,900 working age individuals over the next 8 years (0.23% p.a)**

**South East (0.3%)**

- Almost 1.14 million people live within the Farnborough Catchment Area. Two thirds (66%) are of working age (16-64yrs), while there are more children (0-15yrs) than older residents (65yrs+).
- Proportionately the Farnborough Catchment Area and the Farnborough city area both have marginally larger working age populations than Surrey, Hampshire, the South East or the UK average.
- There are close to 730,000 working age residents in Farnborough Catchment Area. Just over half (55%) are in the core labour market age group (25-49yrs), while roughly one in six are young people who will be studying or starting their careers and close to 30% who are mature workers.
- Farnborough city area has approximately 63,000 working age residents, and proportionately the largest core working age group with 58% aged 25-49yrs.
- Other than Farnborough the main population centres are Basingstoke, Bracknell, Camberley, Fleet, Guildford, Reading, Woking, and Wokingham.
- The Catchment Area is projected to experience a steady growth in the population of working age. By 2025 its population of working age is projected to increase by about 14,000.

## The Distribution of Skills – a top heavy hour glass structure

The Percentage of Residents Aged 16 -64yrs by High, Medium and Low Qualification Levels\*



### Key to Qualifications Levels

- High (NVQ Level 4+: degrees, higher degrees and their equivalents e.g. NVQ4-5, HNC, HND)
- Medium (NVQ Level 3: 2 A-levels, AS levels and equivalents e.g. BTEC ONS, plus trade apprenticeships)
- Low (NVQ Levels 1 and 2: O-level, CSE and GCSE and their equivalent qualifications , plus those with no formal qualifications)

\*Excludes 'other qualifications' that include vocational/work-related qualifications not included under the levels above and foreign qualifications (not stated/level unknown), and accounts for just 5% to 6% of all qualifications.

### The Number of Residents Aged 16 -64yrs by High, Medium and Low Qualification Levels

	High	Medium	Low
Farnborough Catchment Area	319,300	143,7000	221,900
Hampshire and Surrey	654,800	325,100	469,100
United Kingdom	15.5 million	8.3 million	14.4 million

- The shape of most modern economies increasingly resemble an hour glass structure with its stratification of skills (and earnings) built upon more jobs in higher and lower skilled occupations that is offset by a decline in middle occupations.
- Highly skilled residents are rightly seen as the key drivers of competitiveness and firm productivity growth, and close to half of all working residents in Farnborough Catchment Area (47%) meet this criteria.
- Businesses investing in the Farnborough Catchment Area will have access to over 300,000 residents with degree or higher-level qualifications. Within the Farnborough city area there are over 21,000 degree educated residents.
- Across the two counties, Hampshire and Surrey combined has a similar profile to Farnborough, and access to over 650,000 highly skilled residents.
- Equally, maintaining a core medium skilled workforce is important for many technical and skilled trade occupations that are necessary in developing engineering skills.
- The distribution of medium skills in the Area and the two counties is similar to the national average. The Farnborough Catchment Area has over 140,000 residents with high-school and/or technical qualifications.
- Across the two counties (Hampshire and Surrey) there are over 325,000 residents of working age with medium skills.

## Current Supply

In Employment Aged 16-64 yrs by Skills Level of Occupation

	 Lower	 Medium	 Higher	 Engineers/tech
<b>Residents</b> (live and work in Farnborough CA or out-commute)	150,500	118,600	334,500	86,900 (14%)
<b>Workplace</b> (live and work in Farnborough CA or in-commuters)	194,800	130,900	287,700	76,700 (14%)

## Future Supply of skilled workers

 Higher Education Institution	Total HE students 2015/16	 Further Education (College)	Total Achievements 2015/16
Portsmouth	22,100	FE All levels and ages	46,140
Reading	14,980	FE Full Level 3 Under 19yrs (e.g. A-levels, BTEC )	10,860
Royal Holloway*	9,985	FE Apprenticeships all levels and ages	4,490
Southampton Solent	11,300	FE Apprenticeships aged 19-24 (advanced, high & intermediate)	1,600
Southampton	24,900		
Surrey	15,050		
Winchester	7,500		
<b>Total</b>	<b>105,815</b>		

- Firms located in the Farnborough Catchment Area (CA) have a large workplace and resident pool of skilled labour to draw on.
- There is a highly skilled workforce of nearly 290,000 workers in the area and a resident pool of some 334,500 highly skilled residents.
- There is a high concentration of workers and residents in the Farnborough Catchment Area whose occupations are in engineering, technology, science and research activities.
- There are over 76,000 workplace workers in engineering, technology, science and research in the Farnborough Catchment Area, or 14% of the total workforce.
- One in five or some 10,000 employees in the Farnborough City are skilled engineers and technicians. The concentration of skilled engineers and technicians in the Farnborough city is 2.7 times greater than the UK average.
- A network of leading universities and specialist technical colleges in the area provides ample training opportunities and it will ensure steady supply of supply of skilled labour.
- The Farnborough Catchment Area has seven higher education institutions with over 100,000 students. Further Education (FE) providers saw over 46,000 learners and over 4,000 apprenticeship achievements last year.
- The area is home to a leading aerospace & engineering university and a national centre for vocational excellence in engineering.

# Skills & Qualifications: a number of world class universities and specialist technical colleges offer training opportunities



UNIVERSITY OF  
**Southampton**

One of the top 15 research universities in the UK, with teaching and research excellence in Engineering Sciences



UNIVERSITY OF  
**SURREY**

Teaching and research excellence in: Aeronautical and Manufacturing Engineering; and Electronic Engineering



ROYAL  
HOLLOWAY  
UNIVERSITY  
OF LONDON

A research intensive university, internationally renewed for teaching and strong research in engineering

**Engineering and Aerospace & Defence firms are supported by a network of world class universities and specialist technical colleges**



Farnborough College  
of Technology

A centre of vocational excellence in Engineering, regional resource centre for Advanced Manufacturing in Aerospace and Space



BCOT

Vocational training in engineering, nationally recognised for training provided to industry



Farnham College | CEMAST

The Centre of Excellence in Engineering, Manufacturing and Advanced Skills Training

## Farnborough College of Technology (FCOT)

**About:** Farnborough College of Technology offers exceptional teaching and learning facilities, providing first class courses with a strong vocational orientation. Based within the town that is home to British aviation, FCOT has an exceptional Aerospace and Aeronautical Academy. Combined with the opportunities for highly relevant work placements with our industry partners, students at the College are equipped with the skills and experience to compete for roles in specialised areas of industry.

### Aerospace Related Courses

- A-Levels (Mathematics & Physics).
- Apprenticeships: Advanced Apprenticeship in Engineering and Intermediate Apprenticeship in Engineering.
- Diplomas: Level 3 BTEC Extended Diploma Aeronautical Engineering, Level 3 Aircraft Maintenance Engineering, Level 2 EAL Diploma in Engineering and Technology, Level 2 in Performing Engineering Operations, Level 3 BTEC Extended Diploma in Engineering and Practical Engineering Level 2 (Performing Engineering Operations).



Main Contact: Ms Virginia Barrett, FCOT Principal  
[info@farn-ct.ac.uk](mailto:info@farn-ct.ac.uk)

## CEMAST:

*The Centre of Excellence in Engineering, Manufacturing and Advanced Skills Training*

**About:** The Centre of Excellence in Engineering, Manufacturing and Advanced Skills Training, or CEMAST, is located on the Daedalus airfield in Lee-on-the-Solent. The site is the central training facility for over 900 Full Time and Part Time Students and acts as the main learning centre for students in apprenticeship programmes with partner companies such as BAE Systems, GE Aviation and Virgin Atlantic.

### Aerospace Related Courses

- Level 2 in Aerospace Engineering
- Level 2 Performing Engineering Operations  
Aeronautical Engineering
- Level 3 BTEC in Aerospace Engineering  
Diploma & Extended Diploma
- HNC/D in Aeronautical Engineering Level 4/5

The college is also delivering the New Apprenticeship Standards in Aerospace Manufacturing Electrical/Mechanical and Systems Fitter and Aircraft Maintenance Fitter/Technician (fixed and rotary winged)



Main Contact: Steve Dingsdale, Deputy Principal & MD  
[steve.dingsdale@fareham.ac.uk](mailto:steve.dingsdale@fareham.ac.uk)



## University of Southampton

**About:** The University of Southampton is a global centre for excellence in research and education and a founding member of the Russell Group of the top research intensive universities. The University has gained prestigious recognition for their successes and history of world-changing achievements, particularly in the areas of aeronautics, sensor technology and general aerospace engineering.

### Aerospace Related Courses

#### Undergraduate:

##### *Electronic Engineering:*

- BEng Aerospace Electronic Engineering
- MEng Aerospace Electronic Engineering (4 years)

##### *Mechanical Engineering:*

- MEng Mechanical Engineering / Aerospace (4 years)

#### Postgraduate Taught:

##### *Aeronautics and Astronautics:*

- MSc Aerodynamics and Computation
- MSc Race Car Aerodynamics
- MSc Space Systems Engineering
- MSc Unmanned Aircraft Systems Design

#### Professional development:

- Advanced Course in Aeroacoustics



UNIVERSITY OF  
Southampton

Main Contact: Roger Gardner, Aerospace Sector Adviser  
[r.gardner@soton.ac.uk](mailto:r.gardner@soton.ac.uk)

## University of Surrey

**About:** The University of Surrey is one of the UK's top professional, scientific and technological universities. Named as The Times and Sunday Times University of the Year 2016, Surrey has a world-class profile and a leading reputation in teaching and research.

### Aerospace Related Courses:

#### Aerospace Engineering BEng (Hons) or MEng (Hons)

The Aerospace Engineering programme encompasses advanced materials, aerodynamics, space systems, thermodynamics and the latest in computational and simulation tools.

Students benefit from extensive facilities for aerodynamics and materials testing, a demonstrator jet engine and flight simulator.

For more information on the course see:

<https://www.surrey.ac.uk/undergraduate/aerospace-engineering>

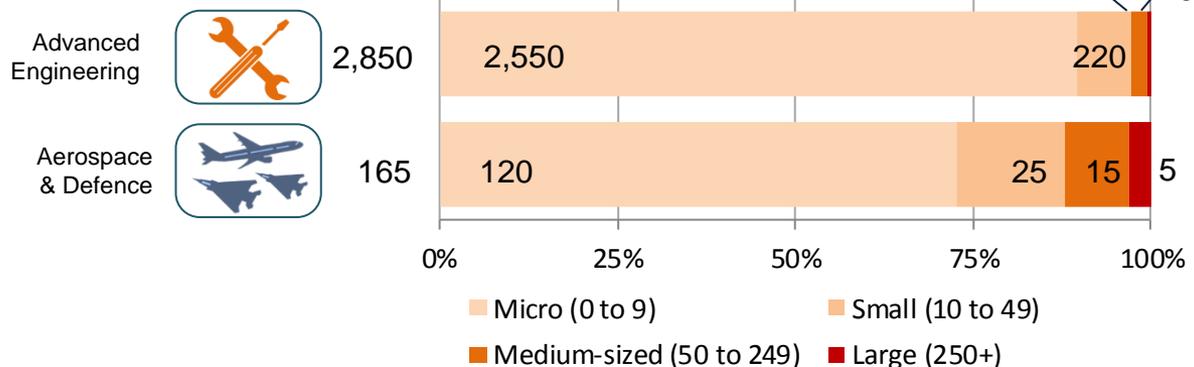
Other Mechanical Engineering Science courses can be found here:

<https://www.surrey.ac.uk/subjects/mechanical-engineering-sciences>

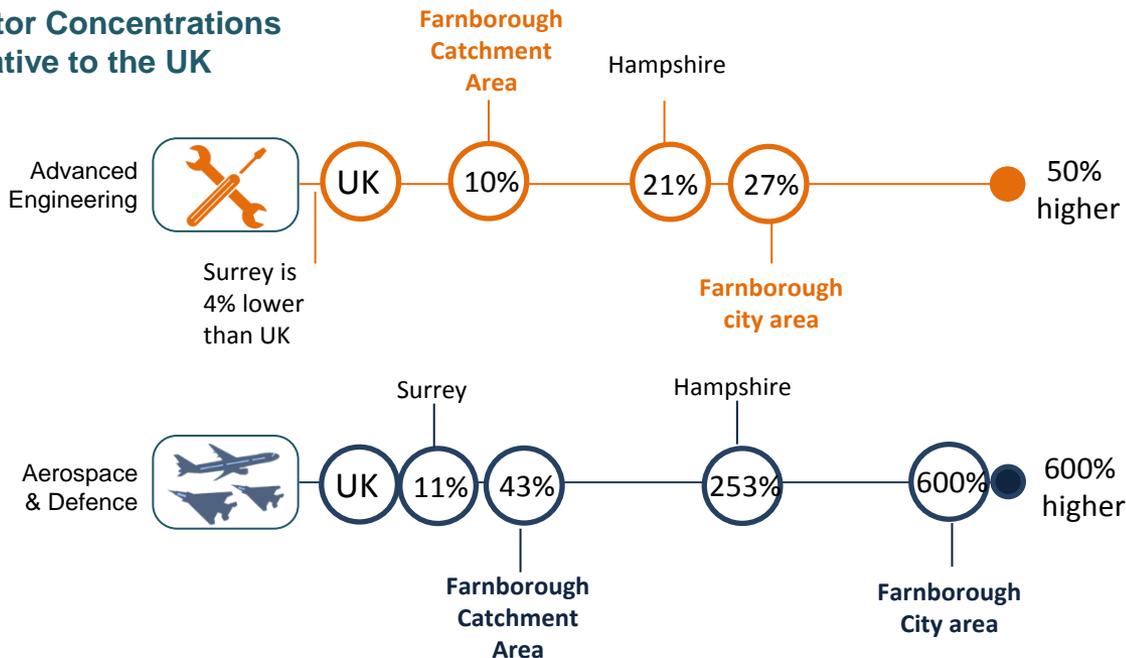


Main Contact: Main Contact: Nick Hills, Head of Department of Mechanical Engineering Sciences  
[n.hills@surrey.ac.uk](mailto:n.hills@surrey.ac.uk)

## Number of Farnborough Catchment Area Businesses by Sizeband

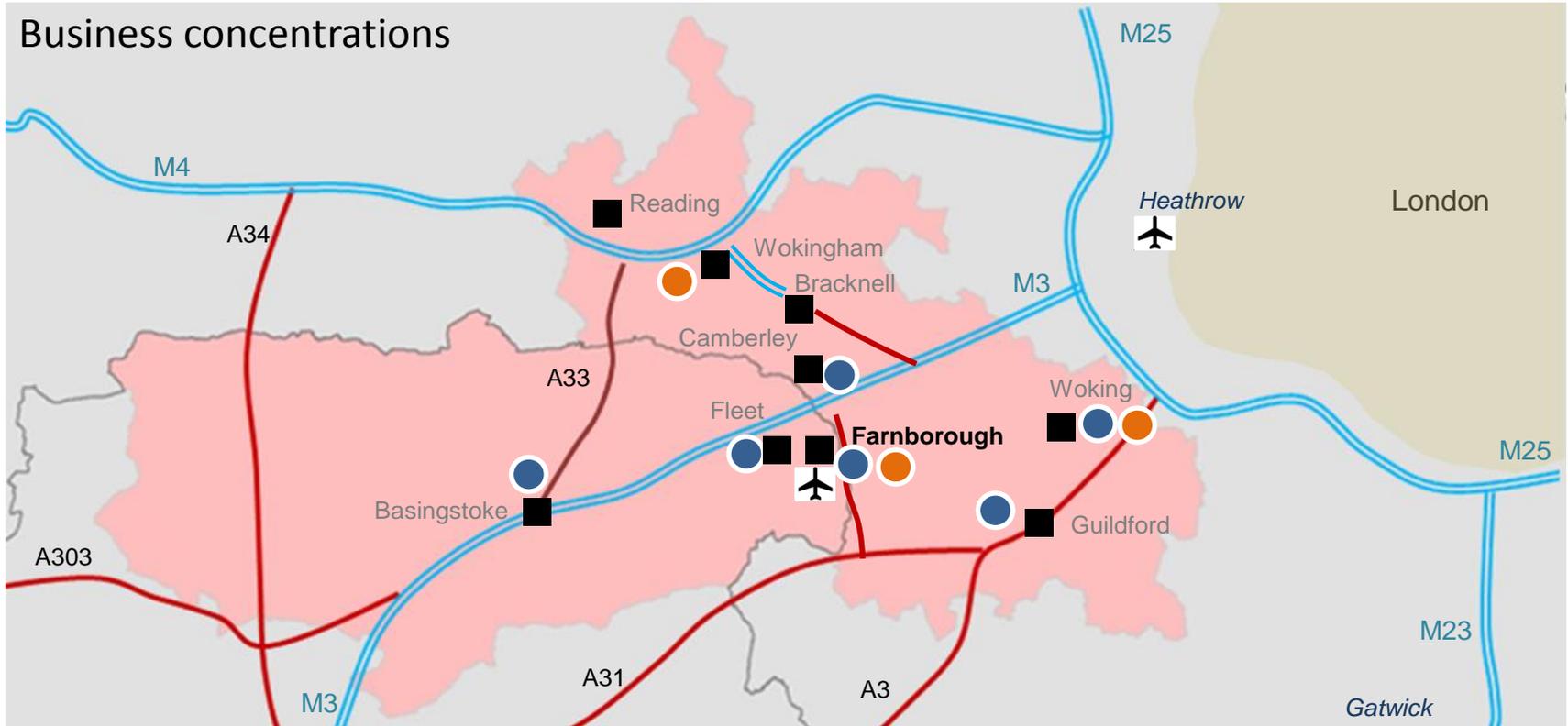


## Sector Concentrations Relative to the UK



- The concentration of advanced engineering firms in the Farnborough Catchment Area is 10% above the UK average.
- There are over 2,800 advanced engineering businesses in the Farnborough Catchment Area, of which 86% are micro-businesses. There are 15 large employers and 285 small and medium sized enterprises (SMEs).
- Since 2010 the sector has seen over 600 new businesses. Total number of engineering firms in the area has increased by 27% since 2010 compared to 24% in the South East England.
- The concentration of engineering firms in the Farnborough City is close to 1.3 times (+27%) above the national average. The city is home to 215 advanced engineering businesses.
- There is even greater concentrations of aerospace and defence firms in the area. The concentration of aerospace and defence firms in the Farnborough city is 6 times the national average (+600%). Some 45 firms are clustered in and round the airport.
- The concentration of firms in this sectors in the Farnborough Catchment Area is almost 1.5 times (+43%) above the national average.
- There are 165 aerospace and defence firms in the Farnborough Catchment Area, 73% of which are micro firms, five are large and 40 are SMEs. Since 2010 over 30 new firms have moved in the area or been created, a growth rate of 27%, faster than the South East average.

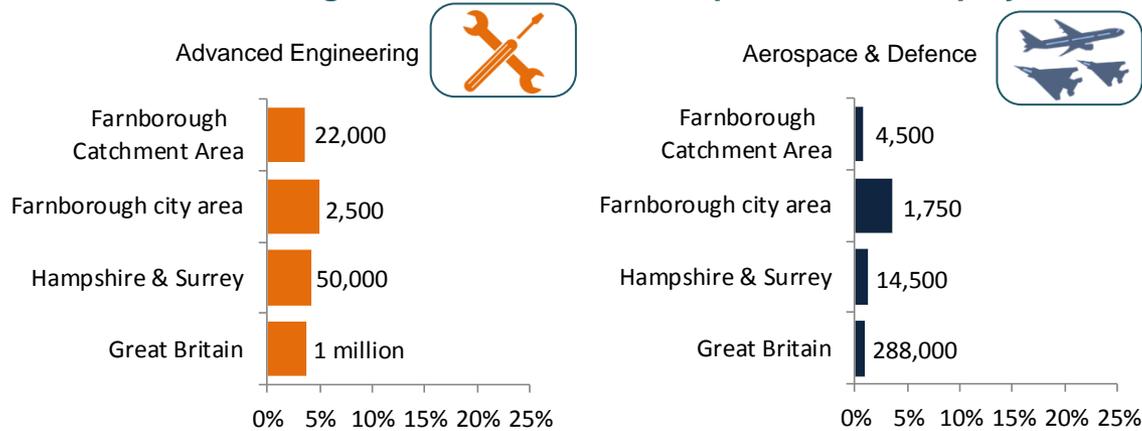
## Business concentrations



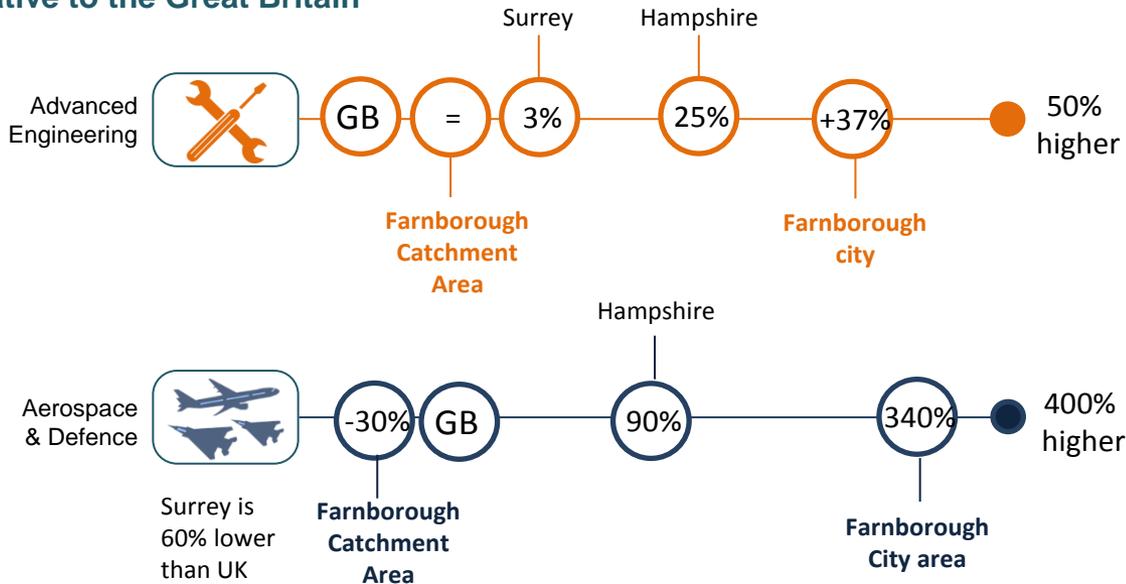
- 2,800 Advanced Engineering firms in the Farnborough Catchment Area; 1.1 times more concentrated than in the UK
- 215 firms in the Farnborough City; 1.3 times more concentrated than the national average
- Firm concentrations of at least 1.2 times the national average are found in the neighbouring Woking and Wokingham.

- 165 Aerospace and Defence firms in the Catchment Area; 1.5 times more concentrated than the UK average.
- Firm concentration in the Farnborough City is 6 times the UK average with 45 aerospace and defence firms in and around the airport.
- Firm concentrations of at least 1.2 times the national average are found in Basingstoke, Camberley, Fleet, Guildford and Woking.

## Number of Farnborough Catchment Area Workplace based Employees

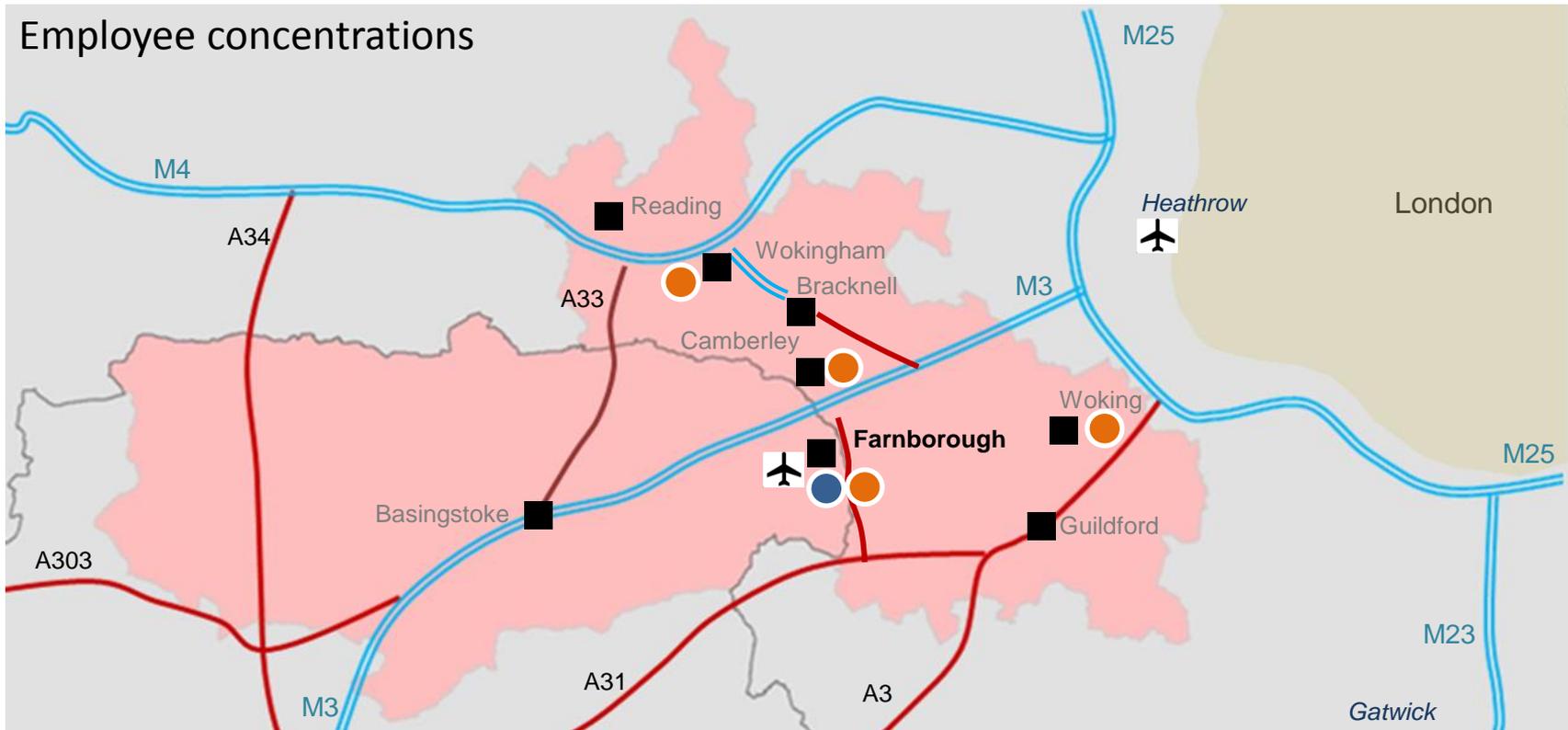


## Sector Concentrations Relative to the Great Britain



- In addition to a high concentration of engineering and aerospace & defence firms in the Farnborough City and the Farnborough Catchment area a large number of employees in the two sectors is found in the area.
- With 2,500 employees, advanced engineering is about 1.5 times more concentrated in the Farnborough city area than in the UK.
- The neighbouring Woking has 4,000 employees in this sector and employee concentration of 2.25 times the national average.
- In total there are 22,000 advanced engineering employees in the Farnborough Catchment Area.
- The Farnborough Catchment Area has the same concentration of engineering employees as the national average, although this is held back by the Surrey area. Hampshire is 1.25 times (+25%) above the national average.
- Farnborough city area has 1,750 employees in aerospace & defence or almost 1 in 4 of all employees in this sector in the Catchment Area.
- The concentration of employees in aerospace & defence in the Farnborough City area is about 4 times the national average
- There are 4,500 aerospace and defence employees in the Farnborough Catchment Area but there is a larger pool of employees in the rest of Hampshire and neighbouring Berkshire.

## Employee concentrations



- 22,000 employees in advanced Engineering in the Farnborough Catchment Area
- 2,500 employees in the Farnborough City Area; 1.5 times more concentrated than the UK average
- Engineering employee concentrations of at least 20% above the national average (1.2 times the national average) are found in Woking (2.25 times the national average), Camberley and Wokingham

- 4,500 Aerospace and Defence employees in the Farnborough Catchment Area.
- 1,750, or 1 in 4 of all employees in this sector in the Catchment Area are found in the Farnborough City; employee concentration in aerospace & defence is 4 times the UK average
- Aerospace & defence employee concentrations of at least 1.2 times the national average are found in Farnborough and Aldershot.

# Some of the leading global players in the aerospace industry are located in the Area, ...



# ... and the area boasts a number of leading advanced Manufacturing firms in the world

Stannah United Technologies  
MECHANICAL ENGINEERING  
capricorn

ST BERNARD COMPOSITE ENGINEERS FORMAPLEX  
velocity composites  
ARRK COMPOSITES  
TISICS Titanium Composite CMT

Sondex  
TOOLS & PROCESS EQUIPMENT  
NATCO Motion

Strong presence of engineering and advanced manufacturing firms is found throughout the area

NATS Raytheon UK  
INSTRUMENTATION & TELEMETRY  
GARMIN McLaren APPLIED TECHNOLOGIES

R.E. THOMPSON  
CONTRACT ELECTRONICS & PRECISION MACHINING  
PHOENIX SYSTEMS UK Ltd sti  
Williams AEROSPACE ENGINEERING

PQL Plasma Quest Limited  
PLASTIC ELECTRONICS  
DeLaRue



## Data Sources

The report draws on the most recent and relevant official data from the UK Office for National Statistics. The official data has been modified in places to reflect the true recruitment area for typical employers.

Several estimates for the area are proxy estimates which reflects the true nature of the data set (survey-based estimates) and the fuzziness of the geographical boundary.

Additional information including a comprehensive set of demographic, skills & labour market, industrial, knowledge intensive & exports and commercial development data for the area is available from the Economic & Business Intelligence Service (EBIS).



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Hampshire County Council 2017

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