The aerospace industry in Lancashire: (manufacturing sub-sectors 3030 and 3316)

Summary

At the latest count, the 2014 Business Register Employment Survey (BRES) estimated that there were 13,200 jobs in the Lancashire-14 area classified directly to the aerospace industry, making it the largest manufacturing sector in the county. Aerospace represented 15.6% of the total manufacturing workforce in the county or 2.1% of all employment in the Lancashire-14 area. In a wider context, its importance is reflected in the fact that Lancashire accounted for 14.6% of aerospace jobs in Great Britain.

There are 39 Local Enterprise Partnerships (LEPs) across England that focus on driving economic growth and creating jobs. The Lancashire Local Enterprise Partnership area has the second highest number of jobs allocated to the aerospace sector out of the 39 LEPs.

Land at the two BAe sites in Lancashire (Samlesbury and Warton) is being developed to form a single enterprise zone with a focus is on attracting high-value manufacturing jobs in the aerospace and other industrial sectors.

The official definition of the aerospace industry is not a market-based one and in many respects under-states the importance of the industry as a core generator of jobs. Many large and medium-sized aerospace companies have taken to out-sourcing "non-core" services (security, catering, IT systems, human resources etc) which were previously undertaken in-house. Also other companies form part of the "hidden" aerospace infrastructure because their direct work for the aerospace sector forms only a proportion of their total workload, and the jobs are classified to other sectors such as precision engineering.

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Introduction

The aerospace industry is one of the largest and most strategically important industries in the UK. It is one of the country's most globally competitive industries with a significant presence in all of the major civil and defence programmes, and has world leading companies across a range of products and technologies.

Its critical role in terms of job opportunities and wealth creation, in developing and applying advanced technologies and its importance to national defence is reflected in the high profile it enjoys in not just the policies but also the priorities of central government.

Lancashire has a dynamic and outward-looking world-class aerospace industry. The county's unique aerospace 'know-how' and skills base has an enviable record extending over many years and has played a major part in developing and producing some of the industry's most advanced and innovative products and processes.

Identifying Employment in Aerospace

The most detailed regular count of jobs in Lancashire is the business register employment survey (BRES) conducted by the Office for National Statistics (ONS). The survey provides information on the number of employee jobs by place of work, classified by detailed industrial sectors. It includes estimates of working owners in addition to the employee numbers. Working owners are said to be people who receive drawings or a share of the profits of an organisation but are not paid via PAYE.

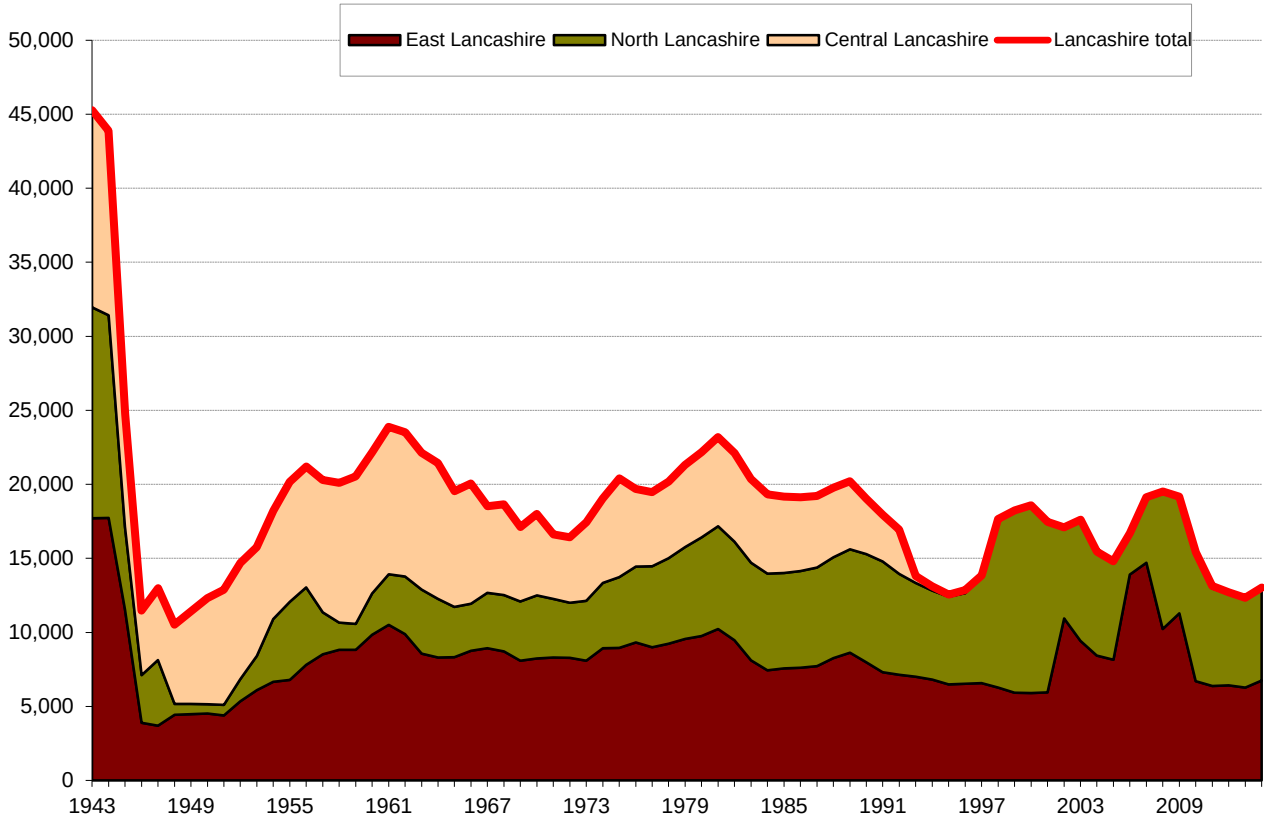
The industrial sector classification identifies two sub-sectors that we have used to calculate aerospace employment in Lancashire: 3030: manufacture of air and spacecraft and 3316: repair and maintenance of aircraft and spacecraft. Employee and working owner numbers in these two sectors have been added together to form the total of aerospace jobs in Lancashire.

Other business may have a major or minor role in the aerospace sector, but if they have not been classified to one of these codes, they will not be included in the aerospace employment total for Lancashire.

Employment trends

The employment impact associated with aerospace activity in Lancashire for over 70 years is illustrated in Figure 1. After the exceptional circumstances occasioned by the Second World War, when several aircraft and aero-engine plants were established locally, the number of aerospace jobs in Lancashire fell dramatically as the economy reverted to civilian production. By 1946 the number of people employed in aerospace production had fallen to only a quarter of the war-time peak. However, by this time the industry was firmly established and most of the core war-time plants and infrastructure remained in place. Aircraft manufacturing and repair became a highly successful post-war industry with employment fluctuating in tandem with particular aircraft programmes. Over much of the 1950s the local industry was buoyant and employment expanded rapidly, only to fall off again over the 1960s when the TSR2 aircraft project was scrapped. The introduction of the Tornado programme fuelled another period of extended expansion over much of the 1970s and 1980s.

Figure 1 Employment in Lancashire aerospace, 1943-2014



Source: Ministry of Labour; ONS: ERII Employment Records; Annual Business Inquiry/Survey
East Lancashire = Blackburn with Darwen, Burnley, Hyndburn, Pendle, Ribble Valley and Rossendale local authority areas
Central Lancashire = Preston, Chorley, South Ribble and West Lancashire local authority areas
North Lancashire = Blackpool, Fylde, Lancaster and Wyre local authority areas.
Figure 1 uses employees plus working owners from 2008 onwards. This represents a minor difference from the data sets prior to 2008 that were published for employees only. Working owners are people who receive drawings or a share of the profits of an organisation but are not paid via PAYE. By its very nature, the aerospace sector is not one that encompasses many working owners and the Lancashire figures contain only a very small number.

Post-1990 in particular, the industry entered into an era of enforced rationalisation linked with the unprecedented combination of falling real defence equipment expenditure, a recession in the world-wide civil aircraft market and greatly increased global competition. The result was considerable over capacity and the deepest recession ever felt by the post-war aircraft industry that was reflected in Lancashire and across the whole of the UK. Locally, there were a number of large plant closures, including the

large BAe Strand Road engineering works in Preston within the Central Lancashire sub-region. In excess of 8,000 direct aerospace jobs were shed with further indirect losses amongst the large base of supplier and service companies. There was some consolation for Lancashire in that restructuring and closures elsewhere in the UK, led in some cases, to residual work being relocated to the county.

This period of local downsizing ended in about 1994 and by the middle of the decade real confidence had returned to the industry. Whilst many jobs were lost or "out-sourced" over the recession, capabilities were retained and competitiveness greatly enhanced. Many companies once again entered into new investment, recruitment and training as they participated in new military projects and a sustained recovery in civil aircraft markets that continued well into the new millennium. The events on the 11th September 2001 in New York heralded another major slow down for civil aviation and reduced new aircraft purchases. Civil aircraft production remained subdued for some while, but over the preceding years employment levels did re-bound.

Recent employment

At the latest count, the 2014 business register employment survey (BRES) estimated that there were 13,200 jobs in the Lancashire-14 area that are classified to the aerospace industry, making it the largest manufacturing sector in the sub-region. This employment base represented 15.6% of the total manufacturing workforce in the county ad or 2.1% of all employment in the Lancashire-14 area. In a national context its importance may be gauged by the fact that Lancashire accounted for 14.6% of Great Britain's total employment allocated to aerospace. Major local work centre concentrations are to be found in the districts of Burnley, Fylde, Pendle, and Ribble Valley.

The figures for 2010 to 2014 are well below the result for 2009. This was at the time primarily, but not totally, due to the reallocation of thousands of jobs from the aerospace sector in one authority to the 'wholesale of other machinery and equipment' sector in the same district. In 2014, these jobs were removed from the district's employment total.

It would appear that this very large number of jobs reflected the international nature of aerospace contracts and their allocation to Lancashire was an administrative requirement that had little impact on actual local employment within the county. Their removal from the aerospace sector resulted in a more accurate assessment of the direct aerospace employment in Lancashire. The analysis of short and long-term aerospace employment trends is not straightforward because of these types of administrative and classification changes.

Other aerospace-related jobs

The official standard industrial classification (SIC, 2007) definition of the aerospace industry is not a market-based one and in many respects under-states the importance of the industry as a core generator of jobs. In particular, many large and medium-sized aerospace companies have taken to out-sourcing "non-core" services which were previously undertaken in-house. These activities - ranging from information technology and technical design, testing and documentation to industrial cleaning, catering, security and logistics - are now classified to other industrial or service headings within official statistics even though they continue to provide aerospace related services. Similarly, 'primes' (major employers such as Rolls Royce and BAE Systems) have, over the years, boosted the amount of direct aerospace work that is sub-contracted through the supply chain. The jobs which accompany this process are often classified under a non-aerospace activity heading such as "treatment and coating of metals", "manufacture of turbines", or "general mechanical engineering" which includes many sub-contract precision engineers.

Other engineering, manufacturing, IT and service companies classified elsewhere within the SIC will doubtless undertake varying degrees of related sub-contacted work for the aerospace sector. Total employment in the aerospace sector is therefore likely to be understated for Lancashire.

The aerospace infrastructure

The result of the long association with aircraft production is today a huge industry in Lancashire. It includes the major design, manufacturing, assembly, systems engineering capability and flight testing facilities of BAE Systems at the Warton and Samlesbury sites, and the Rolls Royce aero-engine plant in Barnoldswick in East Lancashire, where Whittle's first jet engines were developed and produced. The Barnoldswick site has for many years led the development and manufacture of the wide chord fan blade for engines such as the RB211 and Trent. Rolls Royce is a market leader in powering wide body aircraft and uses the very latest leading edge technology.

The prime contractors at the pinnacle of the aerospace supply chain buy-in a large proportion of their requirements and are supported in depth by many other significant original equipment manufacturers. A number of these businesses are located in Lancashire, and many form part of multi-national organisations.

These include local players such as a UK site for Safran Aircelle, which is a very large private-sector employer in Burnley. The organisation produces large and small nacelles, thrust reversers and aero-structures. The firm has a presence in all the market segments from regional and business aircraft to the largest airliners including the Airbus A380.

There is also a whole infrastructure of other companies supplying sub-contract products and services to the local primes and indeed, to both the wider civil and military aerospace markets world-wide. The 'capabilities search' section of the North West Aerospace Alliance website details a large number of Lancashire and other companies.

Kilgour Industries based at Thornton near Fleetwood was set-up as a family business in 1996 and manufactures hitech parts for aircraft engines and brakes systems.

Merc Aerospace in Barrowford has supplied the aerospace sector for over 40 years, and specialises in high precision components for aero engines, airframes and thrust reversers.

The notes to Figure 1 mention that the aerospace sector encompasses both manufacturers of new products and firms that specialise in the repair and maintenance of aircraft and spacecraft. A good example of the latter is Euravia, which is located in Kelbrook, a small village in Pendle district. The company provides repair and overhaul services for aero engines, plus various airframe components and accessories.

MB Aerospace has a site in Burnley, and the organisation provides complex engineering solutions to some of the key names in the Aerospace sector.

Kaman Tooling Ltd., part of the Aerosystems Division of Kaman Aerospace, had the official opening of its new tooling centre of excellence on the site in May 2014

Companies that are fully-integrated solution providers that operate across a variety of industrial sectors can be difficult to accurately classify. They could be allocated to either of the two aerospace sectors or even to a non-aerospace related industrial sector. An example of such a firm is Paradigm Precision, a multi-national organisation with a site in Burnley that is involved both with the manufacturer of new components, and repair and maintenance.

The activities of such companies (some of which are not officially classified to "aerospace" and which thus form part of the "hidden" aerospace infrastructure) are extraordinarily wide. They range from the design, manufacture, final assembly and testing of complete military and civil aircraft and major sub-assemblies to missiles, aero-engines, avionics, ground support equipment, in-flight equipment and all manner of detailed fabrications and components for both airframes and engines as well as servicing the increasingly important after-market.

These are backed up by sophisticated engineering and other services in tooling, treatments, materials, technical analysis and testing, information technology, technical documentation and a raft of other ancillary support activities. Such local capabilities are unsurpassed by any other region in the United Kingdom and form a world-class centre of excellence. For many of the smaller supplier companies in particular the demanding quality and cost standards of aerospace work provide a key baseline activity

enabling them to be successful in their own right competing for business in other demanding industries quite removed from aerospace.

Regional Aerospace Enterprise Zone

The Lancashire Local Enterprise Partnership (LEP) was approved in April 2011 and covers the Lancashire-14 area. The LEP membership has a strong focus on the private sector, and an integral part of the organisation's strategy is development of the single enterprise zone that covers the two BAe sites in Lancashire at Samlesbury and Warton. Enterprise zones are areas where financial incentives and a simplified planning structure are designed to encourage businesses and create employment.

There are a number of Local Enterprise Partnerships cross the country and in 2014 the Lancashire LEP had the second highest number of jobs allocated to the aerospace sector out of 39 LEPs. It was behind the LEP for Derby, Derbyshire, Nottingham and Nottinghamshire.

The North West Aerospace Alliance

The North West Aerospace Alliance (NWAA) provides a strong voice and focus for the industry and the individual businesses. The Alliance's mission is to provide a fully integrated support structure for aerospace companies. It encourages investment in the region and markets internationally the advanced infrastructure, in particular the region's outstanding technology and skills base. It represents hundreds of member companies across the North West and beyond who are prime contractors and sub-contractors in the aerospace and high technology engineering industries. These companies cover every facet of the industry, from small component manufacture through to complete systems integration and end product capability. The NWAA is further supported by associate and educational members who have an interest in the prosperity of the aerospace industry.

The Regional Growth Fund (RGF) is a £2.6 billion fund operating across England from 2011 to 2016. It supports projects and programmes that lever private sector investment to create economic growth and sustainable employment. The list of round two approved programmes includes the NWAA's Gamma programme. Please also see the NWAA website for information of other projects.

ADS

ADS is said to be the premier trade organisation advancing the UK aerospace, defence, security and space industries.

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