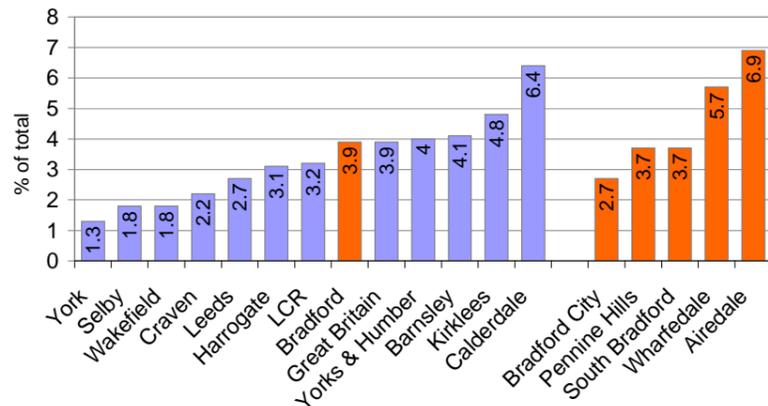


Key points

- There are around 500 advanced engineering and materials (AEM) businesses in Bradford with approximately 7,500 employees.
- The sector accounts for 3.9% of all employees in the district – the same proportion as the GB average.
- 6.9% of all Airedale employees work in this sector compared to the district average of 3.9%.
- Employee numbers fell between 2008 and 2009 and the rate of decline was quite steep compared to the national average (-16.9% compared with -4.9%) although not much greater than the regional decrease (-13.8%).
- Employment is forecast to remain roughly stable over the period to 2026, while output is forecast to increase from the £430million it was in 2008.
- Average gross weekly earnings in this sector are relatively high indicating relatively high skill levels and productivity.

AEM share of employment in Bradford is on a par with the region and national averages

Advanced engineering & materials employees as a proportion of total Business Register and Employment Survey, 2009, NOMIS.



Sector definition:

Industries included in this sector are the manufacture of machinery and equipment, fabricated metal products, manufacture of other parts and accessories for motor vehicles and manufacture of bodies for motor vehicles or trailers.

This definition is based Yorkshire Forward revised 2008 AEM industries definition but has been updated using the ONS Standard Industrial Classification (2007). AEM is identified as a significant sector for analysis due to its continuous growth, forecasted output increase and shift from lower to high skilled level work.

Employment in AEM

There are approximately 7,500 employees working in AEM industries in Bradford district. Of this total around 3,500 work in the manufacture of machinery and equipment, 2,500 in fabricated metal products, around 900 in the manufacture of other parts and accessories for motor vehicles and 300 are employed in the manufacture of bodies for motor vehicles or trailers.

Employees in AEM 2009

Area	no. AEM employees	% of total employees in each area
Great Britain	1,027,800	3.9
Yorkshire and Humber	88,700	4.0
LCR	40,700	3.2
Bradford	7,500	3.9
Airedale	2,500	6.9
Bradford City	2,900	2.7
Pennine Hills	200	3.7
South Bradford	900	3.7
Wharfedale	1,000	5.7

Source: Business Register and Employment Survey, NOMIS (Numbers rounded to nearest 100)

Bradford has the same proportion of employees engaged in the AEM sector as Great Britain (3.9%) but has a higher proportion than Leeds City Region (LCR) (3.2%). There are just three districts in LCR that have a greater proportion of employees working in the AEM sector than Bradford. In terms of absolute numbers of employees in this sector, Bradford is second only to Leeds (7,500 and 10,900 employees respectively).

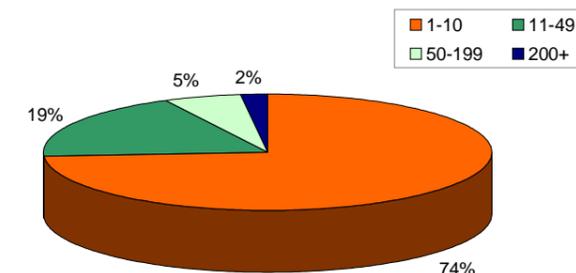
Airedale has a higher proportion of employees working in the AEM sector than any other sub-district in Bradford with 6.9% of all employees engaged in AEM industries.



AEM businesses

Of the total 500 businesses in the AEM sector in Bradford around three quarters are small, employing between one and ten employees with a further 19% employing between 11 and 49. Very few employ more than 50 employees. This is a similar profile to that of GB and Y&H and LCR.

Proportion of AEM businesses in Bradford in each employee sizeband
Source: Annual Business Inquiry 2008, NOMIS



Total AEM businesses = 500

Bradford City contains half of all AEM businesses in the district and accounts for around 40% of all employees. However the sector has greater importance in terms of its share of employment and businesses in Airedale. Over a quarter (27%) of all AEM businesses in the district are in Airedale (over 100 in total) with several employing more than 200 employees.

Employment trends

Data from the Annual Business Inquiry shows employee numbers in this sector fell by 1,900 between 1998 and 2008, representing a fall of -16.5% from 1998.

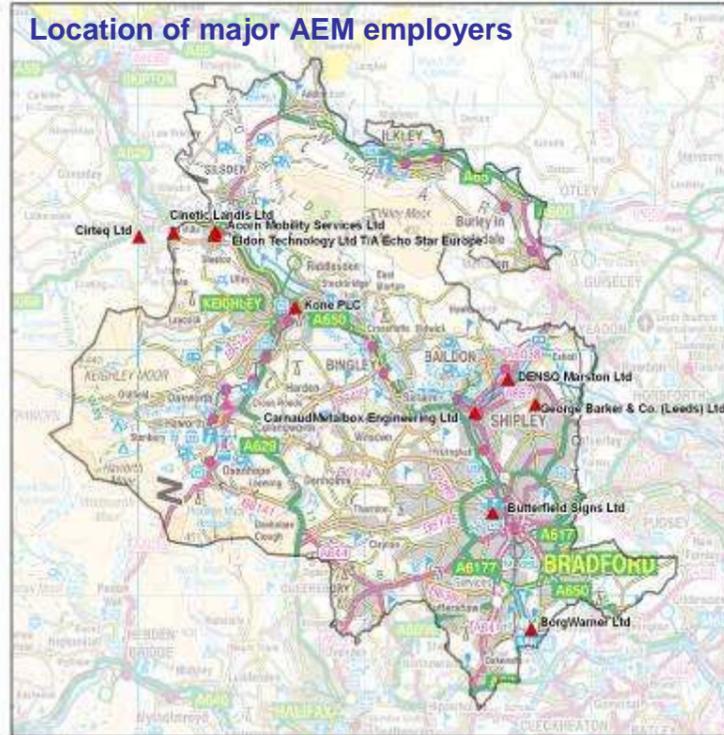
More recently, between 2008 and 2009, Bradford's fall in employment was higher than regional and national rates, losing around 1,600 employee over the year – a decrease of 16.9%. Within the district Airedale had the greatest loss in AEM employment although it still has the second largest number of AEM employees of all economic sub-districts in Bradford.

Change in employee numbers

Area	Change 2008 - 2009	
	No.	%
Great Britain	-53,300	-4.9
Y&H	-14,100	-13.8
LCR	-5,400	-11.8
Bradford	-1,600	-16.9
Airedale	-900	-25.9
Bradford City	-600	-16.1
South Bradford	-200	-19.2
Pennine Hills	0	0.0
Wharfedale	200	14.2

Source: Business Register and Employment Survey, NOMIS (Numbers rounded to nearest 100)

Location of major AEM employers



Source: Key Companies, Bradford Central Library, CBMDC

Case study: Denso Marston Ltd

In 1989 DENSO purchased IMI Radiators Ltd based in Shipley – a manufacturer of automotive radiators - and named the new company DENSO Marston Limited. The company has over the past few years made a successful switch from the production of car radiators for Nissan and Toyota (which was low value, high volume work) to the production of radiators for heavy plant and equipment and generating equipment radiators (which is high value, low volume). The change has resulted in more staff being recruited to the Bradford site.

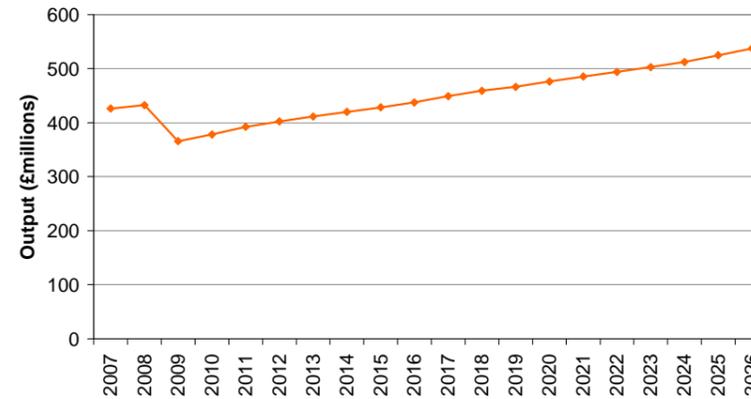
Denso Marston Ltd now has 575 employees and produces cooling systems for the car, truck and tractor markets. It is the largest Japanese owned manufacturing company in the Yorkshire and Humber region.

Denso are clear that investment in R&D is a priority for the company with approximately €1.8 billion (8% of consolidated net sales) invested in the 2007 fiscal year.

Relatively strong growth in AEM output and stable employment levels

Advanced engineering & materials output (£millions) - Bradford

Source: Regional Econometrics Model, Yorkshire



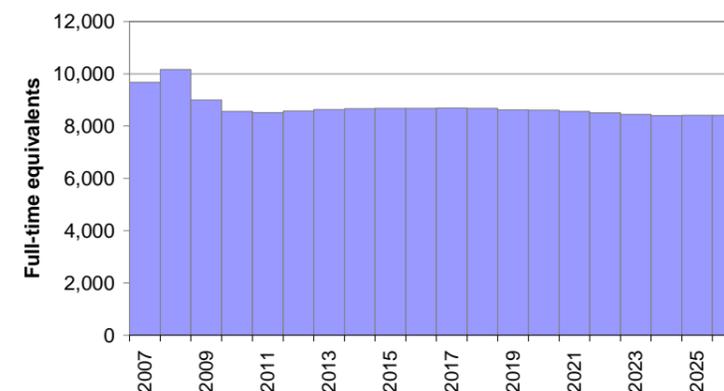
Output is expected to increase significantly from 2010/11 onwards for the forecast period. Coupled with a stable workforce in this sector this indicates that productivity will rise in the district. The downturn in output experienced during the recession is therefore anticipated to be a short-term trend.

The Regional Econometrics Model (REM) data used for the AEM forecast charts is based on a slightly different definition to that used elsewhere in this report.

Nevertheless, the data is still useful in indicating the most likely employment projection for this sector. Having declined during the recession employment is forecast to remain roughly stable from 2011 onwards – declining by just 100 between 2011 and 2026.

Advanced engineering & materials employment trends and forecast - Bradford

Source: Regional Econometrics Model, Yorkshire Forward/Experian



Additional AEM sector analysis

Regional earnings data indicates that the AEM sector is a relatively high paying sector with full-time workers earning on average around £500 per week (significantly above the manufacturing and overall earnings averages). This suggests that skill levels in this sector are relatively high and that the industry has relatively high productivity levels.

National and regional outlook

The Government identifies the Advanced Manufacturing sector as a whole as a priority sector, believing that it will help the UK economy achieve sustained, sustainable and balanced growth. It has set out its ambitions for the sector through the Business, Innovation and Skills Department 'Growth Review Framework for Advanced Manufacturing' (Dec 2010).

AEM is one of the region's largest activities. The region is widely recognised as having expertise in high-precision engineering, metals and alloy production and high quality design and manufacturing of components for a wide range of global industries.

- The **metals** industry generates £1.3bn of gross value-added (GVA) for the region.
- The region is at the forefront of the **automotive industry**, with over 500 automotive suppliers employing around 13,500 people.
- Defence** generates over £800m of economic value-added (EVA) in Y&H through a diverse range of products
- The region is home to the largest concentration of **orthopaedic and medical** device companies in the UK.

Leeds City Region also identifies manufacturing/Advanced Manufacturing as a priority sector and aims to improve skills to boost employment and take advantage of inward investment and new market opportunities. Although a decline in overall jobs within the sector is profiled in LCR this is expected to be greater at lower skill levels, representing a shift from lower skilled to higher skilled jobs in the sector.

Produced by:

Strategic Support

Department of Business Support

City of Bradford Metropolitan District Council

Email: mary.johnston@bradford.gov.uk

Phone: 01274 434035

Web: www.bradfordeconomy.com