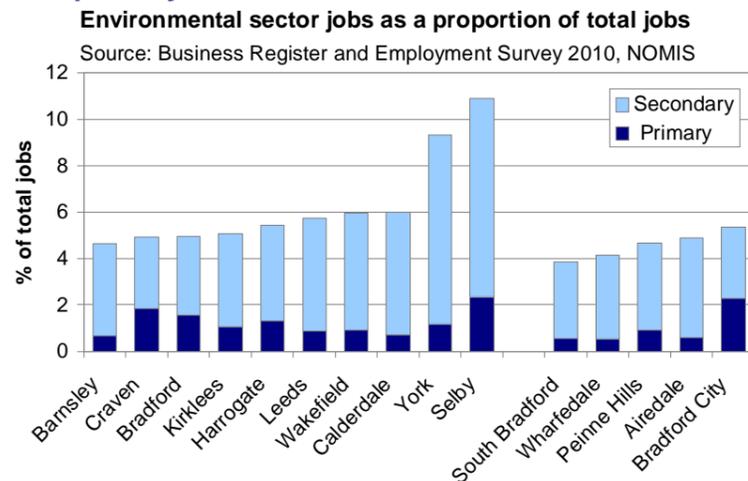


## Key points

- There are around 10,000 environmental sector jobs (see definition below) in Bradford district.
- Around two thirds of these (6,900) are in the secondary environmental sector with around one third in the primary environmental sector (3,100).
- Bradford contains almost a quarter of all primary environmental sector jobs in Leeds City Region (LCR).
- Potential areas for green job growth in the district include waste recycling, biomass and low carbon retrofit.
- Bradford has the potential to have a relatively large share of Leeds City Region's total electricity generation from hydro, micro-generation and energy-from-waste by 2020.
- Regarding heat resources, the total potential for Bradford is estimated to be about 140 MWth - 13% of the LCR total.
- R&D activities into the environment and green jobs are undertaken at the University of Bradford in environmental engineering, materials processing and water management.
- Bradford College has been awarded the National Skills Academy hub status in Environmental Technologies.

## Bradford has a relatively large proportion of jobs in the primary sub-sector



## Sector definition:

The definition is based on that used in a report on behalf of the Yorkshire Cities (YC) network, "The prospects for green jobs to 2020". This definition incorporates environmental goods and services concerned with the management and protection of natural resources and includes those firms: established to help industry meet the requirements of environmental regulations; involved in resource management; based in the more traditionally defined sectors such as engineering that are diversifying in response to new opportunities; using new technologies less harmful to the environment than relevant alternatives and those that clean up pollution. A distinction was made by YC between primary green jobs ie those whose activities are wholly or mainly involved in the green economy and secondary green jobs ie those partially involved in the green economy. The YC definition has largely been adhered to but with the notable omissions of the following sub-sectors (for which data wasn't available): environmental consultancy and management and supply chain companies associated with the water industry. N.B. The definition for this sector relates to jobs, rather than employees as used in the other sector studies in this series.

## Almost a quarter of all primary environmental sector jobs in LCR are located in Bradford

### Employment in the environmental sector by area at 2010

	Primary	Secondary	All environmental jobs	Environmental jobs as % of all jobs in each area
Great Britain	314,500	1,821,200	2,135,700	7.7
Yorks & Humber	25,900	140,500	166,400	7.2
LCR	14,200	63,500	77,800	6.0
<b>Bradford</b>	<b>3,100</b>	<b>6,900</b>	<b>10,000</b>	<b>5.0</b>
Airedale	200	1,700	1,900	5.0
Bradford City	2,600	3,500	6,100	5.5
South Bradford	100	800	900	3.9
Pennine Hills	100	300	300	4.8
Wharfedale	100	700	700	4.1

Source: Business Register & Employment Survey, NOMIS  
Numbers in the table are rounded to the nearest 100

There are around 10,000 jobs in the environmental sector in the district. Slightly over three quarters (6,900 in total) of these are in the secondary sub-sector (such as energy equipment manufacture, plumbing, heating and electrical installation, electricity supply and transmission and architectural and surveying activities). A further 3,100 jobs are in the primary sub-sector (mainly in water supply and use and wastewater treatment). As such Bradford has a relatively large share of Leeds City Region's total primary jobs (22%) but around 11% of LCR's total secondary environmental jobs.

Bradford City contains the largest share of environmental jobs in the district; 61% of the total or 6,100 jobs. This is not surprising given that Yorkshire Water is located within Bradford City and has around 1,600 employees. Airedale has the next largest share of environmental jobs in the district with 1,900 or around 20% of the district total.



## Environmental sector employment has seen strong growth in Bradford

While employment in environmental industries declined in Great Britain as a whole, between 2009 and 2010, the Yorkshire & Humber region saw significant gains in this sector. Bradford district experienced a faster rate of employment growth than both the Y&H region and the LCR – increasing by around 900 or 9.6% over the year.

The table below shows that the rise in employment was mainly due to growth in the primary sub-sector. In Bradford employment growth was particularly strong in green infrastructure and water and waste water. Employment numbers in these two industries alone rose by around 600 between 2009 and 2010.

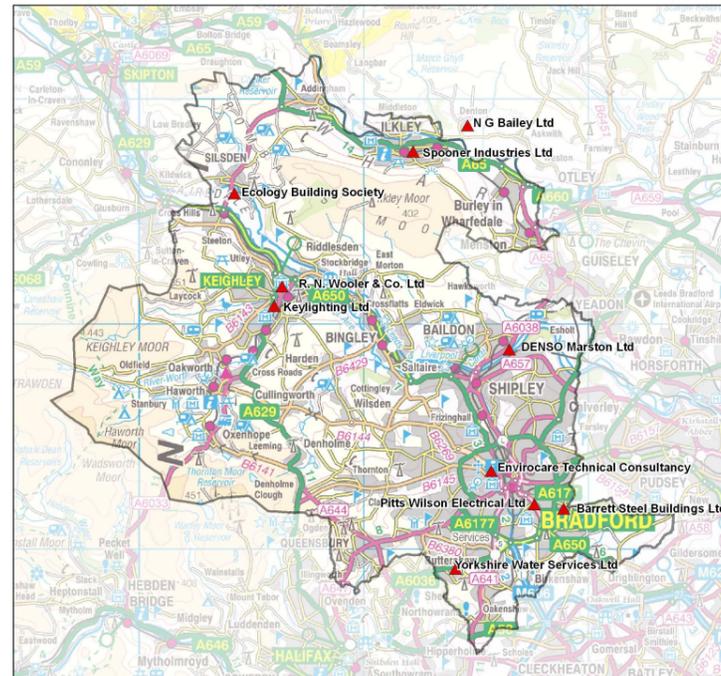
Three sub-districts in Bradford appear to have had particularly significant growth, South Bradford, Pennine Hills and Wharfedale, but the numbers involved were very small. Bradford City, however, did see a substantial rise in employment and again this was due to increases in the primary sub-sector.

### Change in employment in the environmental sector 2009 to 2010

Area	Change in employment 2009 to 2010			
	Primary	Secondary	All environmental Number	% change
Great Britain	24,100	-92,700	-68,600	-3.1
Yorkshire & Humber	6,700	1,400	8,100	5.1
LCR	4,100	800	4,800	6.6
<b>Bradford</b>	<b>600</b>	<b>200</b>	<b>900</b>	<b>9.6</b>
Airedale	0	100	100	6.8
Bradford City	500	0	500	8.8
South Bradford	100	100	100	17.9
Pennine Hills	0	0	100	18.8
Wharfedale	0	0	100	10.9

Source: Business Register & Employment Survey, NOMIS  
Numbers in the table are rounded to the nearest 100

## Location of major environmental sector employers



Source: Key Companies, Bradford Central Library, CBMDC

### Case study 1: Yorkshire Water

Yorkshire Water, which is based in Bradford, is one of around 20 water supply companies in the UK and is a main subsidiary of Kelda Group. The company has a total of approximately 2,100 employees, 1,600 of whom are based in Bradford - making it one of the district's biggest private sector employers.

Yorkshire Water manages the collection, treatment and distribution of water in Yorkshire, supplying around 1.24 billion litres of drinking water per day. The company also collects, treats and disposes of around one billion litres of waste water safely back into the environment. In total Yorkshire Water provides water and waste water services to more than 5 million people and 138,000 businesses. Yorkshire Water plan to invest £3.5 billion between 2010 and 2015.

### Case study 2: Pitts Wilson Electrical (PWE)

PWE is a leading specialist in the provision of electrical installations in commercial and industrial environments including pre-design projects, design and development as well as installation of services and project management. The company has an annual turnover of £20m and employs 40 administrative and engineering staff and over 120 field-based operatives. The company was established in Bradford in 1910. Its head quarters remain in Bradford.

## Bradford has many potential areas for growth

The YC report (see overleaf) identifies the following as potential areas for green job growth in the district:

- Low carbon retrofit relating to energy efficiency in houses and small businesses as well as commercial and industrial buildings.
- Supply chain opportunities in offshore wind and Carbon Capture and Storage markets based on local engineering strengths.
- Biomass based on local sources of wood fuel/wood waste and the presence of a local biomass boilers manufacturer.
- Waste recycling and reuse based on existing strengths in the diversion of waste from landfill.

## Bradford is expected to have a relatively large share of hydro, micro-generation and energy-from-waste by 2020

The Low Carbon and Renewable Energy Capacity Study for Bradford (Feb 2011) shows that Bradford has the potential to account for about 10% of the LCR's total renewable electricity resource by 2020. There is an expectation that Bradford's share will be higher than the average share in LCR in hydro, micro-generation, and energy-from-waste which includes sewage gas generation as well as energy from municipal and commercial and industrial wastes. Planning permission was granted to BioGen Power in April 2010 to build a major waste gasification facility capable of processing 160,000 tonnes of residual waste per annum.

In the case of heat resources, the total potential for Bradford is estimated to be about 140 MWth which is around 13% of the LCR total. Micro-generation (solar, water and heat pumps) and biomass are expected to account for the majority of this total but there is also significant potential for district heating and energy-from-waste.

## The role of the University of Bradford and Bradford College

There is much research and development activity at the University of Bradford related to the environment and green jobs, especially in the areas of environmental engineering, materials processing, water management and resources and the built environment. There is also an established Environment and Infrastructure Research Group at the University and the Centre for Polymer, Micro & Nano Technology.

Bradford College is one of only two Further Education Institutions in the Yorkshire and Humber region to be awarded the National Skills Academy (NSA) hub status

in Environmental Technologies (with Leeds College of Building). The college will lead a cluster of training providers to deliver high quality training that meets national occupational standards for existing environmental technologies and new technologies as they emerge. Once fully operational the academy will support nearly 2,000 learners per annum mainly on short courses with almost all learners being employed. This up-skilling will be centred around the Building Services Engineering sector giving local businesses and learners the opportunity to access training and skills in the design, installation and maintenance of environmental technologies.

## National & regional outlook

Government policy and legislation is aimed at achieving a rapid transition to a low carbon economy in the UK over the next 20 years and beyond. If suppliers of low carbon/green products and services can successfully exploit the market opportunities associated with this transition there is real potential for significant job and wealth creation.

However, in terms of actual investment in green growth, in 2010 the UK fell from being third in the world to 13<sup>th</sup> place – behind developing countries such as Brazil. Investment in alternative energy and clean technology which had reached £7bn in the UK in 2009 fell to just £2bn in 2010 (according to The Pew report quoted in the Yorkshire Cities Green Jobs report 2011). The fall was blamed on a sharp decline in offshore wind energy investments and uncertainty surrounding government policy.

Trends to 2010 showed that many environmental/low carbon sectors were depressed but there are positive signs that investment may pick-up in the near future. For example the development of the Humber Gateway wind farm (completion due Spring 2015) and plans by Siemens to invest in a wind turbine plant in Hull (completion expected in 2014). In addition Renewables UK published figures showing that wind energy employment in the UK increased by 91% between 2007/08 and 2009/10 at a time when overall employment shrank by 3.4%. At a regional level, data to 2010 for Y&H showed employment growth in the environmental sector between 2009 and 2010.

### Produced by:

**Strategic Support**

**Department of Business Support**

**City of Bradford Metropolitan District Council**

**Email:** [mary.johnston@bradford.gov.uk](mailto:mary.johnston@bradford.gov.uk)

**Phone:** 01274 434035

**Web:** [www.bradfordeconomy.com](http://www.bradfordeconomy.com)