



Regional Growth into a Low Carbon Economy Staffordshire Briefing

Version 1.0

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1 Introduction

In 2009 the West Midlands Regional Observatory and Advantage West Midlands commissioned Atkins to produce a review of the opportunities for growth into the low carbon economy within the West Midlands¹.

The report was focused on the existing business base of the region and how it might take advantage of the drive towards a low carbon economy. The aim was to produce an understanding of the opportunities for diversification and decarbonisation.

In parallel the Observatory took analysis of potential vulnerability to carbon constraints² that was produced at regional level by URS³ during the development of the West Midlands Economic Strategy and applied it to local authority level data.

The main report also set out to identify the barriers to taking these opportunities and tried to identify regional level policy interventions that could help to reduce these barriers.

While the report was very much a regional level report there are some useful messages at local authority level. This paper sets out the highlights of the report for Staffordshire. The report also produced an evidence base that are we keen to share with local authorities to help them with any more detailed local work.

¹ Low Carbon Economy in the West Midlands, Atkins, February 2010

² 'Regional Growth into a Low Carbon Economy (Stage One)' WMRO, February 2010

³ Low Carbon Evidence Base for the West Midlands Regional Economic Strategy, URS (2007)

2 Vulnerabilities to carbon constraints

A key challenge in developing a low carbon economy and a low carbon economic strategy is that the economic strategy has to help business. Therefore understanding how the business base is affected by environmental policies is of real importance.

In order to have a greater understanding of the constraints and also the areas of opportunity within the region we undertook a review of URS's work with the aim of replicating the analysis at local authority level. The finer grain of detail should allow those individual authorities to understand better the challenges faced in their particular area.

The vulnerabilities are considered in terms of the sector's operations and its products or services. The data is then analysed in terms of the proportion of businesses or employment within that sector in Staffordshire.

The proportion of sectors with high levels of exposure to carbon constraints on operations represents 15 per cent of the businesses and involves 33 per cent of the employees in Staffordshire (Fig 1). Businesses in Staffordshire were slightly more vulnerable to carbon constraints on operations than the West Midlands (+1 percentage point). Staffordshire's employment was also slightly more vulnerable (+1 percentage point) to carbon constraints on operations than the region.

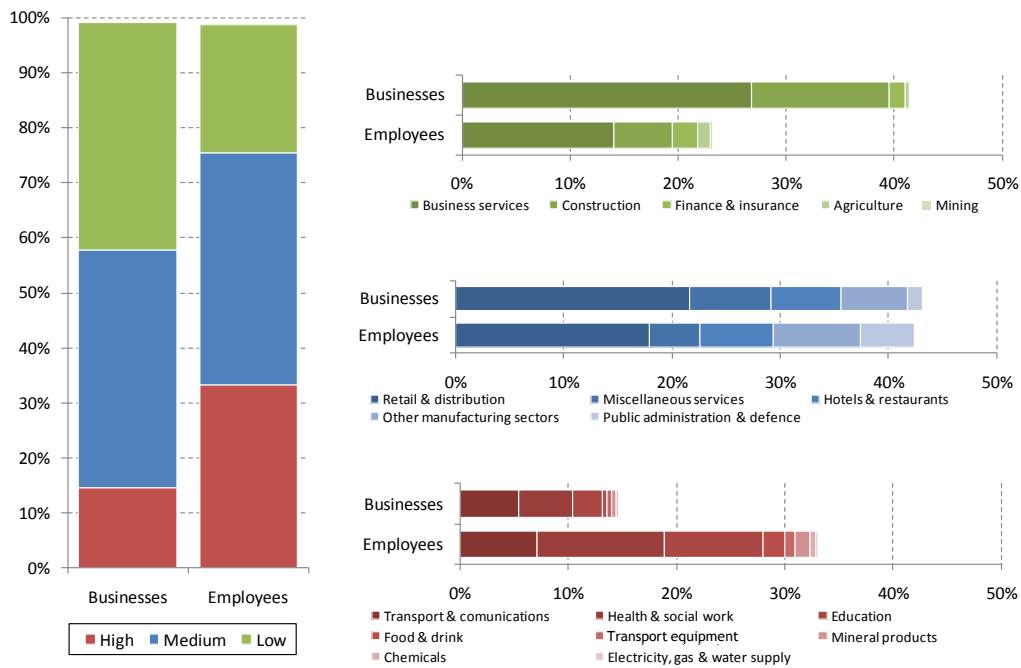
The sectors with high vulnerability to carbon constraints on operations in Staffordshire are: health & social work, transport equipment, transport & communications, electricity, gas & water supply, education, and other manufacturing sectors. The sectors with low vulnerability are: business services, construction, finance & insurance, agriculture and mining.

The proportion of sectors with high levels of exposure to carbon constraints on products and services represents 13 per cent of the businesses and involves 7 per cent of the employees in Staffordshire (Fig 2). Staffordshire businesses are more vulnerable (+3 percentage points) to carbon constraints on products and services than West Midlands' businesses. Staffordshire's employment is equally vulnerable to carbon constraints as the region.

Two sectors are highly vulnerable to carbon constraints on products and services in Staffordshire, these are: construction; and manufacturing of transport equipment. The sectors with low vulnerability are: business services, hotels & restaurants, transport & communications, public administration & defence, retail & distribution, other manufacturing sectors, education, agriculture, miscellaneous services, health & social work, electricity, gas & water and finance & insurance.

Fig 1: Exposure to carbon constraints on operations in Staffordshire

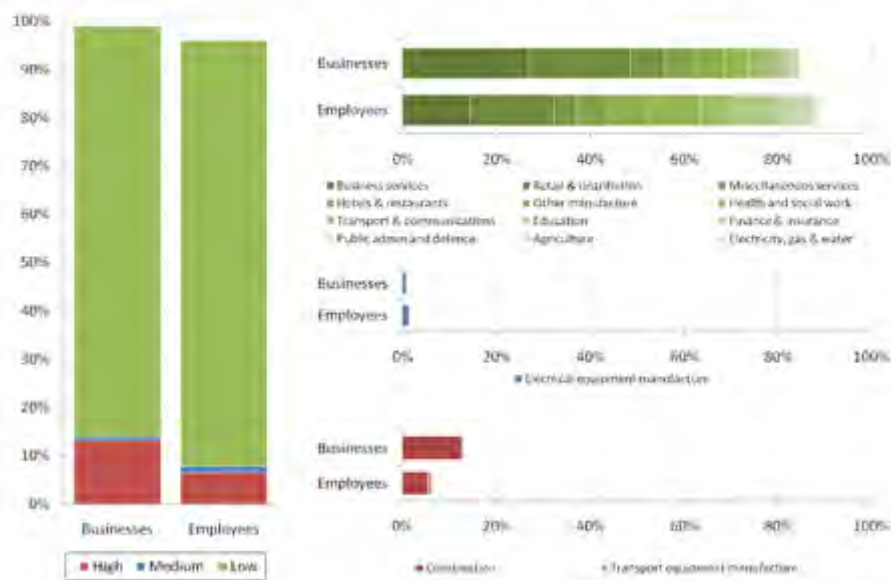
Sectors by level of exposure to carbon legislation on operations in Staffordshire



West Midlands Regional Observatory 2009

Fig 2: Exposure to carbon constraints on products & services in Staffordshire

Sectors by level of exposure to carbon legislation on products and services in Staffordshire



West Midlands Regional Observatory 2009

3 Sub-regional strengths

Within the main report Atkins identified eight key sectors that presented the largest opportunities for the West Midlands region. This work on identifying strengths was then mapped to the local authorities to identify those opportunity sectors that had a significant presence (Fig 3).

The analysis showed that six opportunity sectors had a '*highly significant*' presence in Staffordshire, these were:

- Manufacture of non-metallic mineral goods;
- Manufacture of automotive and transport equipment;
- Manufacture of metals and fabricated metal products and electrical equipment;
- Construction;
- Transport, storage and communications; and
- Public services

Two opportunity sectors had a 'significant' presence in Staffordshire, these were:

- Environmental goods and services; and
- Manufacture of food and beverages

Fig 3: Identification of Sub-regional strengths

Table 5.8 - Opportunity Analysis By Sub-Region

	Birmingham	Sandwell	Walsall	Dudley	Coventry	Solihull	Wolverhampton	Staffordshire	Worcestershire	Warwickshire	Herefordshire	Shropshire	Stoke on Trent	Telford & Wrekin
Manufacture of non-metallic mineral goods	L	L	L	L	L	L	L	H	L	L	L	L	L	L
Manufacture of automotive and transport equipment	H	L	L	L	H	L	L	H	L	L	L	H	M	H
Manufacture of metals and fabricated metal products and electrical equipment	H	H	H	L	L	L	L	H	H	L	L	L	L	L
Construction	H	L	L	L	L	L	H	H	H	H	M	H	H	H
Manufacture of food and beverages	L	M	L	L	L	L	L	M	L	L	M	M	L	L
Environmental goods and services ¹⁴	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Transport, storage and communications	H	L	L	L	H	L	L	H	L	H	L	H	L	H
Public Services	H	H	H	H	H	H	H	H	L	L	L	H	L	H

High (H) – Industry has a *highly significant* presence in the sub-region (>2% employees)

Medium (M) – Industry has a *significant* presence in the sub-region (1 – 2% employees or local specialism (LQ analysis))

Low (L) – Industry has a *minor* presence in the sub-region (<1% employees)

The Atkins technical report has detailed breakdowns of the opportunities that exist for each of these sectors and can be used to help identify possible interventions to support businesses within the sectors.

4 Understanding the type of opportunity

Atkins classified the opportunities that arose into 4 categories:

- **Low carbon techniques**, which refers to improved processes, techniques and materials. This area covers more closely carbon mitigation policies but as these are closely linked to opportunities they need to be broadly understood.
- Opportunities to **diversify into new low carbon products**, which looks at opportunities to begin producing low carbon products. For example, producing low carbon vehicles.

- Opportunities to ***decarbonise existing products***. This examines how existing products can be decarbonised. This is very important as these are still key innovations and can help safeguard products and services.
- Areas where there is ***minimal opportunity***.

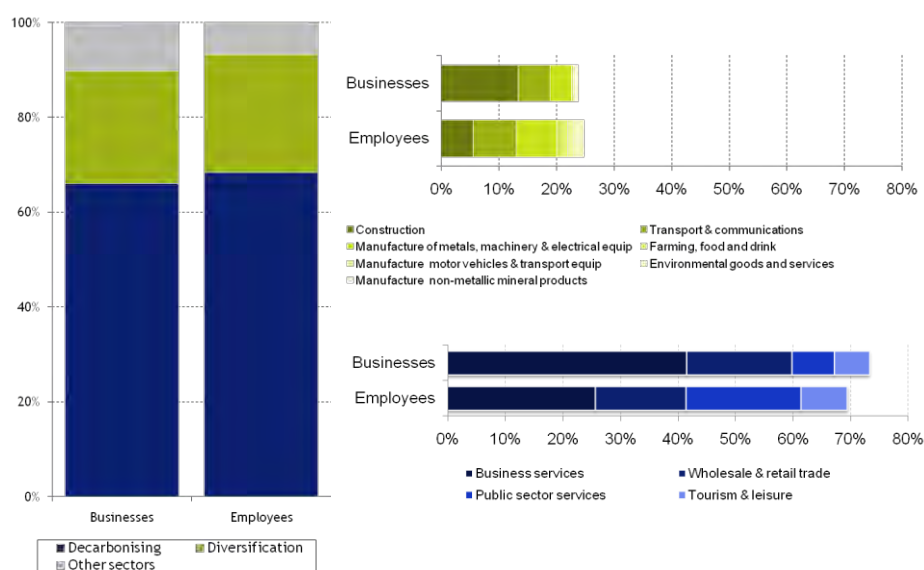
We have taken this and the more detailed analysis in the report and applied it to the sector profile of Staffordshire. For ease of use we have focused on two elements (decarbonising and diversifying). That does not rule out decarbonising opportunities for those classed as diversifying and vice versa just that the clearer opportunities are in the selected category (Fig 4).

Most opportunities are classed as decarbonising (66 per cent of businesses) in Staffordshire, in line with the region (69 per cent). Of these opportunity sectors, the public sector employs the most people in Staffordshire (26 per cent of employment) and the region (27 per cent of employment). In contrast, the business services sector has most businesses in both Staffordshire (28 per cent of businesses) and the region (30 per cent of businesses).

The analysis shows that 24 per cent of Staffordshire's businesses are in sectors with opportunities for diversification into the low carbon economy compared to 21 per cent in the region.

Fig 4: Understanding the opportunities in Staffordshire

Low Carbon Opportunities in Staffordshire



West Midlands Regional Observatory 2010

5 The impact of the public sector

In addition to the specific opportunities associated with clusters of industry in specific sub-regions, the report demonstrated that there are specific opportunities associated with the public sector and low carbon opportunities across the region. This is also important, as individual authorities can influence the development of low carbon initiatives directly.

The key opportunity for the public sector is associated with low carbon procurement by local authorities.

The regional solutions and options for the public sector across the region include:

- Provide guidance on sustainable/low carbon procurement for public sector;
- Demonstrate best practice in own procurement and funding methods;
- Develop carbon calculation tools in assessing the carbon footprint of different products and options.

Through low carbon procurement policies local authorities will be in a position to influence other sectors of the economy develop low carbon products; for example, construction materials associated with retro-fitting social housing stock to improve the energy efficiency of housing stock and specifying the increased use of recycled aggregates in buildings and highways.